

DEPARTMENT OF COMMERCE AND LABOR
BUREAU OF THE CENSUS

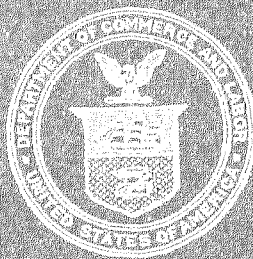
B. DANA DURAND, DIRECTOR

THIRTEENTH CENSUS OF THE UNITED STATES
TAKEN IN THE YEAR 1910

STATISTICS
FOR
MASSACHUSETTS

CONTAINING STATISTICS OF POPULATION,
AGRICULTURE, MANUFACTURES, AND
MINING FOR THE STATE, COUNTIES,
CITIES, AND OTHER DIVISIONS

REPRINT OF THE SUPPLEMENT FOR MASSACHUSETTS PUBLISHED IN CONNECTION WITH THE
ABSTRACT OF THE CENSUS



WASHINGTON
GOVERNMENT PRINTING OFFICE
1913

THIRTEENTH CENSUS PUBLICATIONS.

The results of the Thirteenth Decennial Census will be published in two forms: A comprehensive report in 12 volumes, and a condensed report, the Abstract of the Thirteenth Census, which is being issued with Supplements for the different states.

The material contained in the Supplements embraces for each state all of the census results published concerning the state, its counties, cities, and other civil divisions, except as to occupations. This material is bound up in one volume with the Abstract of the Thirteenth Decennial Census. The result is a series of editions of the Abstract each with a different State Supplement, with the purpose of furnishing those who receive the Abstract with the statistics of the state in which they reside.

The material contained in the various State Supplements will also be printed by subjects in the final reports. The chapters relating to Population for all of the states will be assembled in two volumes of the final report on Population; those relating to Agriculture, in two volumes of the final report on that subject; those relating to Manufactures, in one volume of the final report on Manufactures; and those relating to Mining, in the final report on Mining.

The present pamphlet is a reprint of the State Supplement. It contains no material which is not available in the bound volume of the Abstract for the state to which it refers, or in the complete final report of the Thirteenth Census, and has been issued in a very limited edition for special purposes.

SUPPLEMENT FOR MASSACHUSETTS



POPULATION
AGRICULTURE
MANUFACTURES
MINES AND QUARRIES

75030°—13—37

(565)

CHAPTER 1.

NUMBER OF INHABITANTS.

Introduction.—This chapter gives the population of Massachusetts by counties and minor civil divisions, as enumerated at the Thirteenth Census, taken as of April 15, 1910, with comparative statements of population where possible, and a statement and discussion for the state as a whole of the population living in urban and in rural territory. The statistics are given in detail in two general tables.

Table 1 (p. 574) shows the population of Massachusetts, distributed according to counties and minor civil divisions, at the last three Federal censuses, namely, those of 1910, 1900, and 1890. The arrangement of counties and of the minor civil divisions in each county is alphabetical. All divisions of counties in Massachusetts are primary divisions. The changes in boundaries, name, or form of organization that have taken place since 1900 are indicated in the footnotes to the table. For changes between 1890 and 1900 reference must be made to the census report of 1900.

Table 2 (p. 578) shows the cities of Massachusetts and also the towns having, in 1910, 2,500 inhabitants or more, alphabetically arranged, with their population in 1910, 1900, and 1890.

The population of Massachusetts, by counties, at each of the last five Federal censuses, from 1870 to 1910, inclusive; the increase during the last two decades; the density of population at the census of 1910; and the distribution of the population at the last two Federal censuses according to urban and rural districts are given in Table I of Chapter 2.

The census usage in regard to certain terms is explained as follows:

Density of population.—The density of population of a state or county is obtained by dividing its total population by the number of square miles in its land area.

Minor civil divisions.—The counties are divided generally into smaller political units, which bear different designations in the

different parts of the country, such as towns, townships, election precincts, etc. Of these minor civil divisions those which rank next to the county as geographic areas are termed primary divisions. In many instances, however, these primary divisions contain political units of still smaller area, such as cities, incorporated villages, towns, or boroughs. These smaller political units are referred to as secondary divisions.

Urban and rural population defined.—The Census Bureau, for purposes of discussion, has defined urban population as that residing in cities and other incorporated places of 2,500 inhabitants or more. In the New England States, in addition to cities having this population, all towns having a population of 2,500 or more have also been classed as urban, without regard to the population of the villages (whether incorporated as such or not) which they may contain. The result is that the "urban areas" in New England include some population which in other sections of the United States would be segregated as "rural." This departure from the general rule, rendered necessary by local conditions in New England, probably makes no great change in the proportions of urban and rural population in those sections where population is dense and generally devoted to manufacturing. In other sections a considerable variation doubtless results, but there is no reason to suppose that it materially affects the distinguishing characteristics of urban and rural population as defined by census statistics. Urban population being thus defined, the remainder of the state or county is classed as rural. In the New England States, therefore, the rural population consists of the population outside of towns and cities having 2,500 inhabitants or more. Such population in Massachusetts is located wholly in towns.

The comparisons of the urban and rural population in 1910 with that at earlier enumerations may be made either with respect to the varying proportions of the two classes at successive enumerations or with respect to the increase between enumerations. In order to contrast the *proportion* of the total population living in urban or rural territory at the census of 1910 with the proportion urban or rural at the preceding census, it is necessary to classify the territory according to the conditions as they existed at each census.

In this comparison a place having less than 2,500 inhabitants in 1900 and over 2,500 in 1910 is classed with the rural population for 1900 and with the urban for 1910. On the other hand, in order to present fairly the contrast between urban and rural communities, as regards their *rate of growth*, it is necessary to consider the

HISTORICAL NOTE.—Massachusetts takes its name from the Massachusetts Indians, a tribe which, at the time of the settlement of the colony, lived along the shores of Massachusetts Bay. The original significance of the word in the Indian tongue was probably "at the great hills," although other definitions have been suggested by different writers.

The region now constituting Massachusetts was included in the grants made in the patent of "Acadie" to the Sieur de Monts (French, 1603), the first charter of Virginia (English, 1606), and the charter of New England (1620). The English claim to this region was based on the discovery of the mainland of North America by the Cabots toward the close of the fifteenth century. The first permanent settlement was made by the Pilgrims, a band of about 100 Englishmen, who, landing at Plymouth in December, 1620, founded the Plymouth Colony. Between 1622 and 1628 several scattered settlements were made in and near Boston Harbor.

In 1628 the first permanent settlement in the colony of Massachusetts Bay was established, when a few settlers at Salem were found and joined by a party of English Puritans under the leadership of John Endicott, one of the proprietors of a land company which had obtained a grant extending from a line 3 miles north of the River Merrimac to a line 3 miles south of the River Charles, and from the Atlantic westward to the "South Sea." A charter for this territory was obtained from Charles I in the following year.

The charter of New England was surrendered to the Crown in 1635.

In 1684 the charter of Massachusetts Bay colony was declared forfeited, and the government was later placed in the hands of a royal governor and council. A new charter was granted in 1691, by the terms of which Massachusetts Bay, the colony of New Plymouth, the province of Maine, and the territory called Acadia or Nova Scotia were united under the name of Massachusetts Bay. This charter went into effect in the following year.

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Massachusetts was one of the original thirteen states.

After the close of the Revolution (1783) Nova Scotia remained in the possession of England. In 1785 Massachusetts ceded to the United States all claims, based on its early charters, to territory west of New York. In 1820 Maine became a separate state. After these modifications the area of Massachusetts was substantially as at present, although minor changes in its boundaries have since been made.

According to censuses taken prior to the first Federal census, in 1790, the population of the colony of Massachusetts at different dates was as follows: 1764, 245,718; 1776, 291,147; 1784 (partly estimated), 346,653.

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changes in population for the same territory which have occurred from one decennial census to another. For this purpose the territory which in 1910 was urban or rural, as the case may be, is taken as the basis, and the population in 1900 for the same territory (so far as separately reported at that census) is presented, even though part of the territory may, on the basis of its population at the earlier

census, have then been in a different class. This avoids the disturbing effect on comparisons which would arise from the passage, for example, of communities formerly classed as rural into the urban group. These two distinct forms of comparison are made in Table 1 of Chapter 2 for the state as a whole and for each county separately for the last two Federal censuses.

TOTAL POPULATION, INCREASE, AND DISTRIBUTION.

Population of the state.—The population of Massachusetts is 3,366,416. Compared with a population of 2,805,346 in 1900, this represents an increase during the last decade of 561,070, or 20 per cent. During the same period the total population of the United States increased 21 per cent. The percentage of increase for the state during this decade is smaller

than that shown at any Federal census since 1870. The following table shows the population of Massachusetts at each Federal census from 1790 to 1910, inclusive, together with the increase and per cent of increase during each decade, in comparison with the per cent of increase for the United States as a whole.

CENSUS YEAR.	Population.	INCREASE OVER PRECEDING CENSUS.		Per cent of increase for the United States.
		Number.	Per cent.	
1910.....	3,366,416	561,070	20.0	21.0
1900.....	2,805,346	566,399	25.3	20.7
1890.....	2,238,947	455,862	25.6	25.5
1880.....	1,783,085	325,734	22.4	30.1
1870.....	1,457,351	226,285	18.4	22.6
1860.....	1,231,066	236,552	23.8	35.6
1850.....	994,514	256,815	34.8	35.9
1840.....	737,699	127,291	20.9	32.7
1830.....	610,408	87,121	16.6	33.5
1820.....	523,287	51,247	10.9	33.1
1810.....	472,040	49,195	11.6	36.4
1800.....	422,845	44,058	11.6	35.1
1790.....	378,787			

¹ Includes population (4) specially enumerated.

It will be noticed from this table that the earlier censuses showed a somewhat smaller rate of increase of population for the state than have the later ones. From 1790 to 1840 the average rate of increase per decade was 14.3 per cent; since 1840 the average rate of increase has been 24.3 per cent. During the 90 years from 1790 to 1880 the absolute increase in the population of the state was 1,404,298, while during the 30 years since 1880 the gain has been 1,583,331.

A comparison of the rates of increase for the state with those for the United States, as given in the preceding table, shows that from 1790 to 1880 the increase during each decade was much less rapid for the state than for the country as a whole, except for the decade from 1860 to 1870, when the rate of increase for the state was only about 4 per cent less than that for the whole country, and for the decade from 1840 to 1850, when the two rates were nearly equal. From 1880 to 1900 the state grew in population faster than the country as a whole; and during the last decade the increase for the state has been at a rate only 1 per cent below that for the United States. The population of the state in 1910 was a little less than nine times as large as in 1790, when the First Census was taken, while the population of the United States in 1910 was more than twenty-three times that in 1790.

In 1790 Massachusetts had 37.5 per cent of the total population of New England, which was 1,009,408. The proportion of New England's population in

Massachusetts decreased steadily until 1830 when it was 31.2 per cent. Since 1830 it has increased steadily until, in 1910, in an aggregate population of 6,552,681 in the New England States, Massachusetts was represented by 51.4 per cent. Since the First Census the population of the New England States has increased more than six times, while that of Massachusetts has increased nearly nine times.

Principal cities.—Massachusetts has 33 cities. Twenty-four of the cities have a population of 25,000 or more. There is also 1 town, Brookline, which has over 25,000 inhabitants. Boston, the largest city, has a population of 670,585, while Worcester, the second city, has a population of 145,986. Cambridge, Fall River, and Lowell are the only other cities in the state having over 100,000 inhabitants. There are 7 cities having from 50,000 to 100,000 inhabitants, and 12 from 25,000 to 50,000. There are 9 cities having from 10,000 to 25,000 inhabitants, the smallest of these being Marlborough, with a population of 14,579.

Table 2 shows the population in 1910 of all the cities of the state with comparative figures, where possible, for 1900 and 1890. The table on page 569 shows the population of the 24 cities having in 1910 over 25,000 inhabitants, at each Federal census since their organization as towns, and of Brookline town, so far as figures are available, together with the increase during each decade.

CITY AND CENSUS YEAR.	Population.	INCREASE ¹ OVER PRE- CEDING CENSUS.		CITY AND CENSUS YEAR.	Population.	INCREASE ¹ OVER PRE- CEDING CENSUS.	
		Number.	Per cent.			Number.	Per cent.
Boston:				Fitchburg—Continued.			
1910.....	670,585	109,693	19.6	1830.....	2,169	433	24.9
1900.....	560,892	112,415	25.1	1820.....	1,736	170	10.9
1890.....	448,477	85,638	23.6	1810.....	1,506	176	12.7
1880.....	362,839	112,313	44.8	1800.....	1,330	239	20.8
1870.....	250,526	72,686	40.9	1790.....	1,151		
1860.....	177,840	40,959	29.9	Haverhill:			
1850.....	130,851	45,498	46.6	1910.....	44,115	6,940	18.7
1840.....	93,352	31,991	34.3	1900.....	37,175	9,763	26.6
1830.....	61,352	18,094	41.8	1890.....	27,412	8,940	48.4
1820.....	43,288	9,511	28.1	1880.....	18,472	5,350	41.1
1810.....	33,757	8,850	35.5	1870.....	13,092	3,097	31.0
1800.....	24,927	6,617	36.1	1860.....	9,995	4,118	70.1
1790.....	18,320			1850.....	5,877	1,541	35.5
Brockton:				1840.....	4,336	1,440	33.2
1910.....	56,878	16,815	42.0	1830.....	3,896	826	26.9
1900.....	40,063	12,789	46.8	1820.....	3,070	358	14.5
1890.....	27,284	13,686	100.6	1810.....	2,682	-48	-1.8
1880.....	13,608	5,601	70.0	1800.....	2,730	322	13.4
1870.....	8,007	1,423	21.6	1790.....	2,408		
1860.....	6,584	2,645	67.1	Holyoke:			
1850.....	3,939	1,323	50.6	1910.....	57,730	12,018	26.3
1840.....	2,616	663	33.9	1900.....	45,712	10,075	28.3
1830.....	1,953			1890.....	35,637	13,722	62.6
Brookline town:				1880.....	21,915	11,182	104.2
1910.....	27,792	7,857	39.4	1870.....	10,733	5,736	114.8
1900.....	19,935	7,832	64.7	1860.....	4,997	1,752	54.0
1890.....	12,103	4,046	50.2	1850.....	3,245		
1880.....	8,057	1,407	21.2	Lawrence:			
1870.....	6,650	1,486	28.3	1910.....	85,892	23,333	37.3
1860.....	5,164	2,648	105.2	1900.....	62,559	17,965	40.1
1850.....	2,516	1,351	84.3	1890.....	44,654	5,503	14.1
1840.....	1,365	322	30.9	1880.....	39,151	10,230	35.4
1830.....	1,043	143	15.9	1870.....	28,921	11,282	64.0
1820.....	900	116	14.8	1860.....	17,639	9,367	113.0
1810.....	784	179	29.6	1850.....	8,282		
1800.....	605	121	26.0	Lowell:			
1790.....	484			1910.....	106,294	11,325	11.9
Cambridge:				1900.....	94,969	17,273	22.2
1910.....	104,839	12,953	14.1	1890.....	77,696	18,221	30.6
1900.....	91,886	21,858	31.2	1880.....	59,475	18,547	45.3
1890.....	70,028	17,659	35.0	1870.....	40,928	4,101	11.1
1880.....	52,069	13,085	32.9	1860.....	36,827	3,444	10.3
1870.....	39,634	13,674	62.1	1850.....	33,383	12,587	60.5
1860.....	26,060	10,345	71.3	1840.....	20,796	14,322	221.2
1850.....	15,215	6,806	60.9	1830.....	6,474		
1840.....	8,409	2,337	38.5	Lynn:			
1830.....	6,072	2,777	84.3	1910.....	69,836	20,823	30.4
1820.....	3,295	2,072	41.8	1900.....	65,513	12,786	22.0
1810.....	2,323	-130	-5.3	1890.....	55,727	17,453	45.6
1800.....	2,453	338	16.0	1880.....	38,274	10,041	35.6
1790.....	2,115			1870.....	28,233	9,150	47.0
Chelsea:				1860.....	19,083	4,826	33.9
1910.....	32,452	-1,620	-4.8	1850.....	14,257	4,880	52.2
1900.....	34,072	6,163	22.1	1840.....	9,367	3,229	52.6
1890.....	27,909	6,127	25.1	1830.....	6,138	1,623	35.9
1880.....	21,782	3,235	17.4	1820.....	4,515	428	10.5
1870.....	18,547	6,152	38.5	1810.....	4,087	1,250	44.1
1860.....	13,395	6,094	99.9	1800.....	2,837	546	23.8
1850.....	6,701	4,311	180.4	1790.....	2,291		
1840.....	2,390	1,610	210.0	Malden:			
1830.....	771	129	20.1	1910.....	44,404	10,740	31.9
1820.....	642	48	8.1	1900.....	33,664	10,633	46.2
1810.....	594	-255	-30.0	1890.....	23,031	11,014	91.7
1800.....	849	377	79.9	1880.....	12,017	4,650	63.1
1790.....	472			1870.....	7,307	1,502	25.6
Chicopee:				1860.....	5,865	2,345	66.6
1910.....	25,401	6,234	32.5	1850.....	3,520	1,066	40.0
1900.....	19,167	5,117	36.4	1840.....	2,614	504	25.1
1890.....	14,050	2,764	24.5	1830.....	2,010	279	16.1
1880.....	11,286	1,679	17.5	1820.....	1,731	347	25.1
1870.....	9,607	2,346	32.3	1810.....	1,384	325	30.7
1860.....	7,261	-1,030	-12.4	1800.....	1,059	26	2.5
1850.....	8,291			1790.....	1,033		
Everett:				New Bedford:			
1910.....	33,484	9,148	37.6	1910.....	96,652	34,210	54.8
1900.....	24,336	13,268	119.9	1900.....	62,442	21,709	53.3
1890.....	11,068	6,909	166.1	1890.....	40,733	13,888	51.7
1880.....	4,169	1,939	87.3	1880.....	26,845	5,525	25.9
1870.....	2,220			1870.....	21,320	-980	-4.4
Fall River:				1860.....	22,300	5,857	35.6
1910.....	119,295	14,432	13.8	1850.....	16,443	4,356	36.0
1900.....	104,863	30,465	40.9	1840.....	12,087	4,495	59.2
1890.....	74,398	25,437	52.0	1830.....	7,592	3,645	92.3
1880.....	48,961	22,195	82.9	1820.....	3,947	-1,704	-30.2
1870.....	26,766	12,740	90.8	1810.....	5,651	1,290	29.6
1860.....	14,026	2,602	21.0	1800.....	4,361	1,048	31.6
1850.....	11,524	4,786	71.0	1790.....	3,313		
1840.....	6,738	2,580	62.0	Newton:			
1830.....	4,158	2,564	160.9	1910.....	39,806	6,219	18.5
1820.....	1,594	298	23.0	1900.....	33,587	9,208	37.8
1810.....	1,296			1890.....	24,379	7,384	43.4
Fitchburg:				1880.....	16,926	4,170	32.5
1910.....	37,826	6,295	20.0	1870.....	12,826	4,443	53.0
1900.....	31,531	9,494	43.1	1860.....	8,382	3,124	59.4
1890.....	22,037	9,608	77.3	1850.....	5,258	1,907	56.9
1880.....	12,429	1,169	10.4	1840.....	3,351	975	41.0
1870.....	11,260	3,455	44.3	1830.....	2,376	528	28.4
1860.....	7,805	2,685	52.4	1820.....	1,850	141	8.3
1850.....	5,120	2,516	96.6	1810.....	1,709	218	14.6
1840.....	2,604	485	20.1	1800.....	1,491	131	9.6
				1790.....	1,360		

¹A minus sign (-) denotes decrease.

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		Number.	Per cent.			Number.	Per cent.
Pittsfield:				Springfield—Continued.			
1910.....	32,121	10,355	47.6	1880.....	33,340	6,637	24.9
1900.....	21,766	4,485	20.6	1870.....	26,703	11,504	75.7
1890.....	17,281	3,917	29.3	1860.....	15,199	3,433	29.2
1880.....	13,364	2,252	20.3	1850.....	11,766	781	7.1
1870.....	11,112	3,067	38.1	1840.....	10,985	4,201	61.9
1860.....	8,045	2,173	37.0	1830.....	6,784	2,870	73.3
1850.....	5,872	2,125	56.7	1820.....	3,914	1,147	41.5
1840.....	3,747	188	5.3	1810.....	2,707	455	19.7
1830.....	3,559	791	28.6	1800.....	2,312	738	46.9
1820.....	2,768	103	3.9	1790.....	1,574		
1810.....	2,665	404	17.9	Taunton:			
1800.....	2,261	269	13.5	1910.....	34,250	3,223	10.4
1790.....	1,992			1900.....	31,036	5,588	20.0
Quincy:				1890.....	25,448	4,235	20.0
1910.....	32,642	8,743	36.6	1880.....	21,213	2,584	13.9
1900.....	23,899	7,176	42.9	1870.....	18,629	3,253	21.2
1890.....	16,723	6,153	58.2	1860.....	15,376	4,935	47.3
1880.....	10,570	3,128	42.0	1850.....	10,441	2,796	36.6
1870.....	7,442	604	9.8	1840.....	7,645	1,603	26.5
1860.....	6,778	1,761	35.1	1830.....	6,042	1,522	33.7
1850.....	5,017	1,531	43.9	1820.....	4,520	613	15.7
1840.....	3,486	1,285	58.4	1810.....	3,907	47	1.2
1830.....	2,201	578	35.6	1800.....	3,800	50	1.5
1820.....	1,623	342	26.7	1790.....	3,804		
1810.....	1,281	200	18.5	Waltham:			
1800.....	1,081			1910.....	27,834	4,353	18.5
Salem:				1900.....	23,481	4,774	25.5
1910.....	43,697	7,741	21.5	1890.....	18,707	6,995	58.7
1900.....	35,956	5,155	16.7	1880.....	11,712	2,647	29.2
1890.....	30,801	3,238	11.7	1870.....	9,065	2,068	41.7
1880.....	27,563	3,446	14.3	1860.....	6,397	1,933	43.3
1870.....	24,117	1,805	8.4	1850.....	4,464	1,960	78.3
1860.....	22,252	1,988	9.8	1840.....	2,504	647	34.8
1850.....	20,264	5,182	34.4	1830.....	1,857	180	10.7
1840.....	15,082	1,187	8.5	1820.....	1,677	663	65.4
1830.....	13,895	2,549	22.5	1810.....	1,014	111	12.3
1820.....	11,346	-1,267	-10.0	1800.....	903	21	2.4
1810.....	12,613	3,156	33.4	1790.....	882		
1800.....	9,457	1,536	19.4	Worcester:			
1790.....	7,921			1910.....	145,086	27,565	23.3
Somerville:				1900.....	118,421	33,700	39.9
1910.....	77,236	15,593	25.3	1890.....	84,655	26,304	45.2
1900.....	61,643	21,491	53.5	1880.....	58,261	17,180	41.8
1890.....	40,152	15,219	61.0	1870.....	41,105	16,145	64.7
1880.....	24,933	10,248	69.8	1860.....	24,960	7,911	46.4
1870.....	14,685	6,060	83.0	1850.....	17,049	9,552	127.4
1860.....	8,025	4,485	126.7	1840.....	7,497	3,324	79.7
1850.....	3,540			1830.....	4,173	1,211	40.9
Springfield:				1820.....	2,962	385	14.9
1910.....	88,026	26,867	43.3	1810.....	2,577	166	6.9
1900.....	62,059	17,880	40.5	1800.....	2,411	316	15.1
1890.....	44,179	10,839	32.5	1790.....	2,095		

¹A minus sign (-) denotes decrease.

Of the places included in the foregoing table, New Bedford shows the highest percentage of increase during the last decade, namely, 54.8 per cent, and Taunton the lowest, 10.4 per cent, while Chelsea shows a decrease of 4.8 per cent. Boston, while having an absolute increase in population from 1900 to 1910 of more than 100,000, has a lower percentage of increase than for any previous decade. Worcester also shows a much reduced percentage of increase, the rate during the past decade being less than for any other since 1820. Of the 25 places considered, there are only 5 for which the rate of increase during the past decade exceeds that during the preceding decade, namely, Lynn, New Bedford, Pittsfield, Salem, and Springfield.

Counties.—Massachusetts has 14 counties. The population of these counties ranges from 2,962 in Nantucket County to 731,388 in Suffolk County.

The following territorial changes in the counties of Massachusetts have been made since 1900: Part of Newton city, Middlesex County, was annexed to Brookline town, Norfolk County, in 1907; part of Northampton city, Hampshire County, was annexed to Holyoke city, Hampden County, in 1909; the bound-

ary line between Boston city, Suffolk County, and Cambridge city, Middlesex County, was changed in 1910.

Eleven counties in the state have increased in population during the last decade, the percentages of increase ranging from 5.8 per cent in Franklin County to 31.8 per cent in Hampden County; and the absolute increases from 2,391 in Franklin County to 119,971 in Suffolk County, which contains the city of Boston. In the case of five counties the percentages of increase are larger than that for the state as a whole, which, as before stated, is 20 per cent. The three counties which have decreased in population show decreases ranging from 1 to 1.5 per cent and an aggregate loss of population amounting to 385. Only three counties show higher rates of increase for this decade than for the preceding decade.

A map on page 573 shows the increase or decrease in the total population of each county of Massachusetts during the last decade. In the counties shown in white the population decreased; for the other counties the different rates of increase are indicated by differences in shading.

Density of population.—The total land area of the state is 8,039 square miles. The average number of persons to the square mile is 418.8; in 1900 and 1890 it was 349 and 278.5, respectively. The average number per square mile for the United States as a whole in 1910 was 30.9.

In density of population Massachusetts ranks second among the states, being surpassed only by Rhode Island.

The density of population is given by counties in Table I of Chapter 2 and in a map on page 573.

Suffolk County has the highest density, namely, 14,340.9 persons per square mile, and Dukes County the lowest, namely, 42.1. Worcester County has the largest land area (1,556 square miles), while Nantucket and Suffolk Counties have the smallest land area (51 square miles each) of the counties in the state.

Minor civil divisions.—The political divisions into which counties are subdivided are collectively termed "Minor civil divisions." In Massachusetts the counties are divided into 354 primary divisions, comprising 321 towns and 33 cities. Villages are not incorporated as such in this state.

Urban and rural population compared.—The following table presents the population of Massachusetts at the Federal censuses of 1910, 1900, and 1890, respectively, distributed among cities and towns grouped according to specified limits of population, together with the percentage of the total population contained in each group at each of the censuses named. The classification is based upon the population of each place as it existed at each census.

CLASS OF PLACES.	1910		1900		1890		PER CENT OF TOTAL POPULATION.		
	Number of places.	Population.	Number of places.	Population.	Number of places.	Population.	1910	1900	1890
Total population.....	354	3,366,416	353	2,805,346	351	2,238,947	100.0	100.0	100.0
Urban territory.....	152	3,125,367	150	2,567,098	149	2,003,854	92.8	91.5	89.5
Cities and towns of—									
500,000 inhabitants or more.....	1	670,585	1	560,892	1	448,477	19.9	20.0	20.0
100,000 to 500,000 inhabitants.....	4	476,414	2	223,284	1	362,504	14.2	8.0	16.2
50,000 to 100,000 inhabitants.....	7	552,650	7	504,071	5	344,219	16.4	18.0	16.4
25,000 to 50,000 inhabitants.....	13	465,833	10	348,917	10	310,886	13.5	12.4	14.3
10,000 to 25,000 inhabitants.....	30	450,898	27	413,698	21	250,050	13.4	14.7	11.2
5,000 to 10,000 inhabitants.....	49	342,831	46	310,720	35	278,718	10.2	11.1	12.4
2,500 to 5,000 inhabitants.....	48	176,156	57	205,516	77		5.2	7.3	
Rural territory².....	202	241,049	203	238,248	202	235,093	7.2	8.5	10.5

¹ Includes population (4) specially enumerated.

² Towns of less than 2,500 inhabitants.

The population of the state classified as urban in 1910 is contained in 33 cities and 119 towns. The groups of places having 25,000 inhabitants or more comprise 24 cities and 1 town. The group of places having from 10,000 to 25,000 population comprises 9 cities and 21 towns. The other groups of urban places are made up of 97 towns of 2,500 to 10,000 inhabitants. The rural territory of the state consists of 202 towns of less than 2,500 inhabitants.

The urban territory of the state in 1910—that is, the cities and towns of 2,500 inhabitants or more—contained 3,125,367 inhabitants, or 92.8 per cent of the total population, while 241,049 inhabitants, or 7.2 per cent, lived in rural territory. The urban territory as it existed in 1900—that is, the cities and towns then having 2,500 inhabitants or more—contained 2,567,098 inhabitants, or 91.5 per cent of the total population, while 238,248 inhabitants, or 8.5 per cent, lived in rural territory. There has thus been a slight increase in the proportion of urban population. For the United States as a whole the urban population constituted 46.3 per cent of the total population in 1910 and 40.5 per cent of the total population in 1900.

A comparison of the figures for 1910, 1900, and 1890, as given in the above table, shows that there has been a marked increase in the proportion of the population in the combined groups comprising cities of 100,000 inhabitants or more, namely, from 20 per cent in 1890

to 28 per cent in 1900 and 34.1 per cent in 1910, and that there have been fluctuations in the proportions in the three groups comprising cities and towns of 10,000 to 100,000 inhabitants, while a decrease has occurred in the proportions in each group of smaller urban places as well as in rural territory.

Table I of Chapter 2 shows 11 counties which had a larger proportion of urban population in 1910 than in 1900. Suffolk County, the most populous county in the state, is wholly urban, while the proportion of urban population is also very high in Middlesex and Essex Counties, which rank next in total population.

In order to compare the *rate of growth* in urban and rural communities it is necessary in each case, as previously explained, to consider the changes in population which have occurred in the *same* territory and from one decennial census to another. With this end in view places classed as urban or rural according to their population in 1910 are taken as a basis and the aggregate population in 1910 and in 1900 of the same places is then compared. Thus, as shown in the table on the next page, the total population in 1910 of those cities and towns which at that time had 2,500 inhabitants or more was 3,125,367; in 1900 the total population of these same places was 2,569,494. It may be noted that the latter figure exceeds the total population in 1900 of those places which at that time had over 2,500 inhabitants each, 2,567,098 (see table above), by 2,396. The

difference is due to two things: First, five towns having less than 2,500 inhabitants each in 1900, with a combined population of 10,801, had more than 2,500 inhabitants each in 1910; and second, three towns having more than 2,500 inhabitants each in 1900, with a combined population of 8,405, had less than 2,500 inhabitants each in 1910. In the case of one of these last-mentioned towns the loss was due to the fact that part of its territory was taken in 1905 to form a new town.

The comparison of the total population in 1910 of places having a population of not less than 2,500 each with the total population of the same places in 1900, as given in the following table, shows an increase of 21.6 per cent. During the same period the rural population, comprising that of the remainder of the state, increased 2.2 per cent. Urban population thus increased nearly ten times as rapidly as rural. For the United States as a whole urban population increased 34.9 per cent in the last decade and rural population 11.2 per cent. As shown by Table I of Chapter 2 there were six counties in Massachusetts in which the population living in rural territory decreased.

For the state as a whole the population classified as urban is still further distributed in the following table, which shows, for 1910 and 1900, the population of the city of Boston, the combined population of the other cities having 100,000 inhabitants or more in 1910, the population of the cities and towns having from 25,000 to 100,000 and from 2,500 to 25,000 inhab-

itants in 1910, respectively, and the population of the remainder of the state.

CLASS OF PLACES.	POPULATION.		INCREASE: 1900-1910	
	1910	1900	Number.	Per cent.
The state.....	3,366,416	2,805,346	561,070	20.0
Urban territory in 1910.....	3,125,367	2,568,494	555,873	21.6
City of Boston.....	670,585	560,892	109,693	16.6
Other cities of 100,000 or more in 1910.....	476,414	410,130	66,275	16.2
Cities and towns of 25,000 to 100,000 in 1910.....	1,008,483	772,596	235,887	30.5
Cities and towns of 2,500 to 25,000 in 1910.....	669,885	825,867	144,018	17.4
Remainder of the state.....	241,049	236,852	5,197	2.2

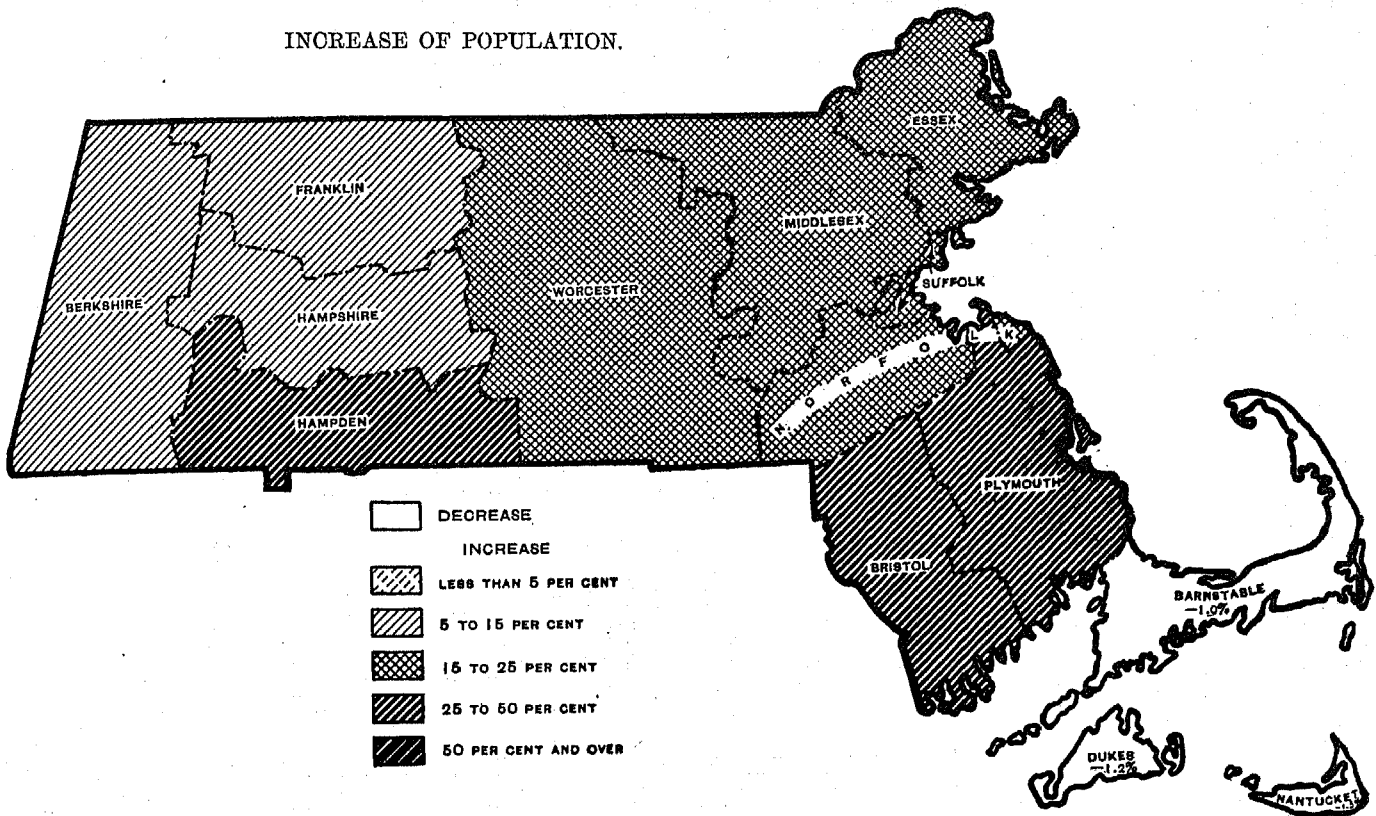
As shown by the above table, the city of Boston increased in population during the last decade at about the same rate as the population of the state as a whole, while the group comprising the other cities of over 100,000 inhabitants, as well as the group of places having from 2,500 to 25,000 inhabitants, increased somewhat more slowly than the population of the state as a whole. The group of places having from 25,000 to 100,000 inhabitants, however, increased in population slightly more than one and one-half times as fast as the state as a whole. The rate of increase for rural population is about one-ninth of the rate for the state.

From this table it also appears that of the decennial increase in population, namely, 561,070, very nearly three-fourths was in cities and towns of over 25,000 inhabitants.

INCREASE AND DENSITY OF POPULATION OF MASSACHUSETTS, BY COUNTIES: 1910.

In case of decrease the per cent is inserted under the county name.

INCREASE OF POPULATION.



DENSITY OF POPULATION.

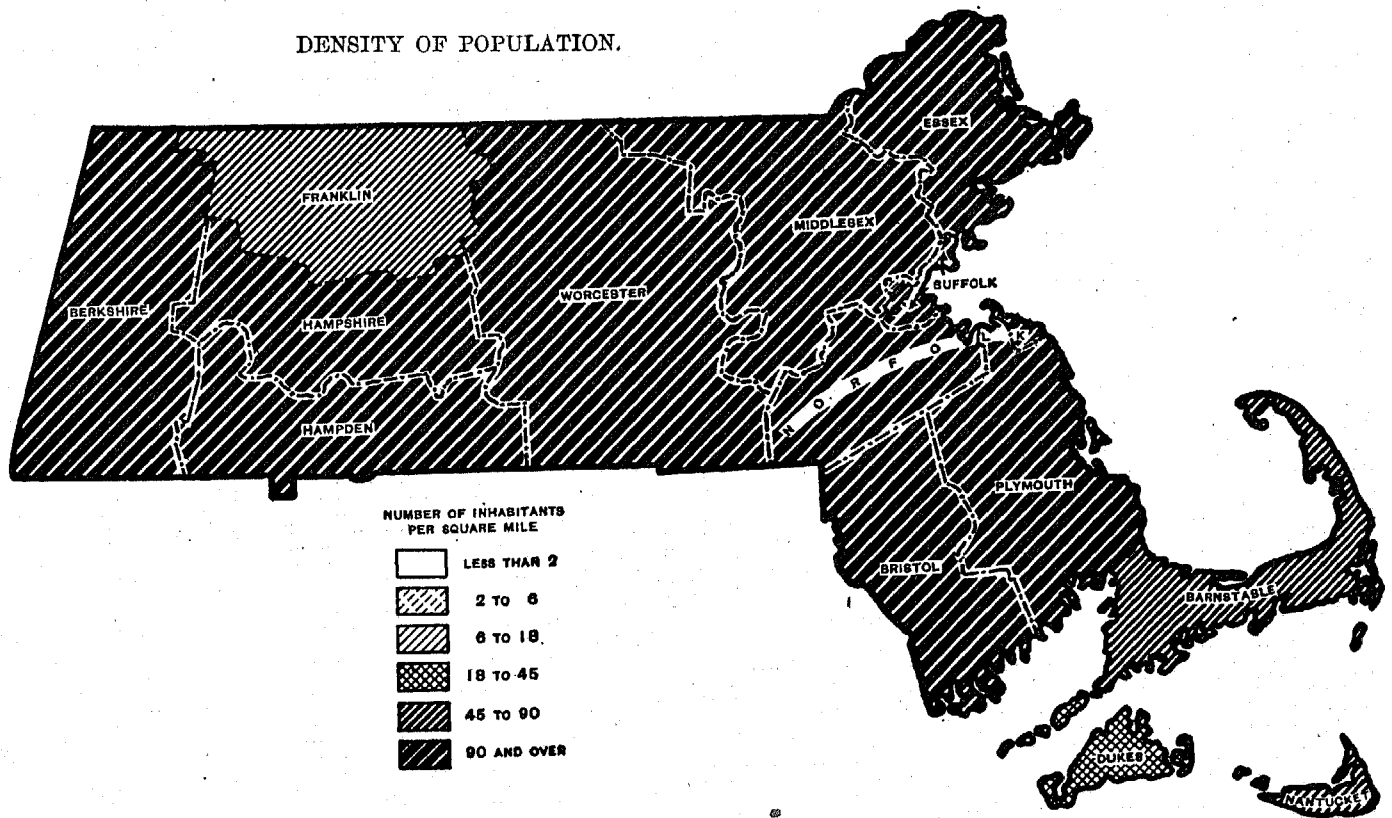


TABLE 1.—POPULATION OF MINOR CIVIL DIVISIONS: 1910, 1900, AND 1890.

[For changes in boundaries, etc., between 1900 and 1910, see footnotes; for those between 1890 and 1900, see Reports of the Twelfth Census: 1900, Vol. I, Table 5.]

MINOR CIVIL DIVISION.	1910	1900	1890	MINOR CIVIL DIVISION.	1910	1900	1890
Barnstable County	27,542	27,826	29,172	Bristol County—Continued.			
Barnstable town.....	4,676	4,364	4,023	Swansea town.....	1,978	1,645	1,456
Bourne town.....	2,474	1,657	1,442	Taunton city.....	34,259	31,036	25,448
Brewster town.....	631	829	1,003	Ward 1.....	3,554		
Chatham town.....	1,564	1,749	1,954	Ward 2.....	3,368		
Dennis town.....	1,919	2,333	2,899	Ward 3.....	3,804		
Eastham town.....	518	502	602	Ward 4.....	4,552		
Falmouth town.....	3,144	3,500	2,567	Ward 5.....	6,024		
Harwich town.....	2,115	2,334	2,734	Ward 6.....	3,779		
Mashpee town ¹	303	303	278	Ward 7.....	3,767		
Orleans town.....	1,077	1,123	1,219	Ward 8.....	7,031		
Provincetown town.....	4,369	4,247	4,642	Westport town.....	2,928	2,890	2,569
Sandwich town ¹	1,638	1,448	1,819				
Truro town.....	655	787	919	Dukes County	4,504	4,561	4,369
Wellfleet town.....	1,022	988	1,291	Chilmark town.....	282	324	353
Yarmouth town.....	1,420	1,682	1,760	Edgartown town.....	1,191	1,209	1,166
				Gay Head town.....	162	173	139
Berkshire County	105,259	95,667	81,108	Gosnold town.....	152	164	135
Adams town.....	13,026	11,134	9,213	Oak Bluffs town ²	1,084	1,100	1,080
Alford town.....	275	272	297	Tisbury town.....	1,196	1,149	1,506
Becket town.....	959	994	946	West Tisbury town.....	437	442	
Cheshire town.....	1,508	1,221	1,308				
Clarksburg town.....	1,207	943	884	Essex County	436,477	357,030	299,995
Dalton town.....	3,588	3,014	2,885	Amesbury town.....	9,894	9,473	9,798
Egremont town.....	605	758	845	Andover town.....	7,301	6,813	6,142
Florida town.....	395	390	436	Beverly city.....	13,650	13,884	10,821
Great Barrington town.....	5,926	5,854	4,612	Ward 1.....	4,304		
Hancock town.....	465	451	506	Ward 2.....	3,892		
Hinsdale town.....	1,116	1,485	1,739	Ward 3.....	3,454		
Lanesborough town.....	947	780	1,018	Ward 4.....	3,422		
Lee town.....	4,106	3,596	3,785	Ward 5.....	3,882		
Lenox town.....	3,000	2,942	2,880	Ward 6.....	1,896		
Monterey town.....	388	455	495	Boxford town.....	718	704	865
Mount Washington town.....	110	122	148	Danvers town.....	9,407	8,542	7,454
New Ashford town.....	92	107	125	Essex town.....	1,621	1,663	1,713
New Marlborough town.....	1,124	1,282	1,805	Georgetown town.....	1,958	1,900	2,117
North Adams city.....	22,019	24,200	16,074	Gloucester city.....	24,398	26,121	24,651
Ward 1.....	5,183			Ward 1.....	3,715		
Ward 2.....	3,338			Ward 2.....	4,779		
Ward 3.....	3,357			Ward 3.....	3,988		
Ward 4.....	4,130			Ward 4.....	3,047		
Ward 5.....	3,941			Ward 5.....	3,938		
Ward 6.....	3,742			Ward 6.....	3,423		
Ward 7.....	3,744			Ward 7.....	1,955		
Otis town.....	494	476	583	Ward 8.....	1,653		
Peru town.....	237	253	305	Groveland town.....	2,253	2,376	2,191
Pittsfield city.....	32,121	21,766	17,281	Hamilton town.....	1,749	1,614	961
Ward 1.....	4,671			Haverhill city.....	44,115	37,176	27,412
Ward 2.....	6,328			Ward 1.....	3,785		
Ward 3.....	4,435			Ward 2.....	3,905		
Ward 4.....	4,181			Ward 3.....	4,067		
Ward 5.....	4,148			Ward 4.....	4,304		
Ward 6.....	6,485			Ward 5.....	14,008		
Ward 7.....	3,493			Ward 6.....	3,219		
Richmond town.....	650	679	796	Ward 7.....	6,453		
Sandisfield town.....	566	661	807	Ipswich town.....	5,777	4,658	4,439
Savoy town.....	503	506	569	Lawrence city.....	85,802	62,559	44,654
Sheffield town.....	1,817	1,804	1,954	Ward 1.....	14,186		
Stockbridge town.....	1,933	2,081	2,132	Ward 2.....	15,671		
Tyringham town.....	382	386	412	Ward 3.....	14,236		
Washington town.....	277	377	434	Ward 4.....	15,631		
West Stockbridge town.....	1,271	1,158	1,492	Ward 5.....	16,189		
Williamstown town.....	3,708	5,019	4,221	Ward 6.....	14,193		
Windsor town.....	404	507	612	Lynn city.....	89,386	68,513	55,727
				Ward 1.....	3,454		
Bristol County	318,578	252,029	186,465	Ward 2.....	5,464		
Acushnet town.....	1,692	1,221	1,027	Ward 3.....	18,065		
Attleborough town.....	16,215	11,335	7,577	Ward 4.....	16,047		
Berkley town.....	990	949	894	Ward 5.....	19,211		
Dartmouth town.....	4,378	3,669	3,122	Ward 6.....	23,637		
Dighton town.....	2,235	1,802	1,689	Ward 7.....	4,660		
Easton town.....	5,139	4,837	4,493	Lynnfield town.....	911	888	787
Fairhaven town.....	5,122	3,507	2,919	Manchester town.....	2,673	2,622	1,789
Fall River city.....	119,295	104,863	74,398	Marblehead town.....	7,338	7,582	8,202
Ward 1.....	20,491			Merrimac town.....	2,202	2,131	2,633
Ward 2.....	13,247			Methuen town.....	11,448	7,512	4,814
Ward 3.....	15,249			Middleton town.....	1,129	839	924
Ward 4.....	13,312			Nahant town.....	1,184	1,152	880
Ward 5.....	11,876			Newbury town.....	1,482	1,601	1,427
Ward 6.....	17,110			Newburyport city.....	14,949	14,478	13,947
Ward 7.....	11,876			Ward 1.....	3,658		
Ward 8.....	6,048			Ward 2.....	3,555		
Ward 9.....	9,860			Ward 3.....	3,705		
Freestone town.....	1,471	1,394	1,417	Ward 4.....	3,016		
Mansfield town.....	5,133	4,006	3,432	Ward 5.....	3,529		
New Bedford city.....	96,652	62,442	40,733	Ward 6.....	3,936		
Ward 1.....	28,132			North Andover town.....	5,520	4,243	3,742
Ward 2.....	11,285			Peabody town.....	15,721	11,523	10,158
Ward 3.....	8,423			Rockport town.....	4,211	4,592	4,087
Ward 4.....	9,255			Rowley town.....	1,308	1,391	1,243
Ward 5.....	13,785			Salem city.....	43,697	35,950	30,801
Ward 6.....	25,773			Ward 1.....	6,453		
North Attleborough town.....	9,562	7,263	6,727	Ward 2.....	6,449		
Norton town.....	2,544	1,826	1,785	Ward 3.....	5,388		
Raynham town.....	1,725	1,540	1,340	Ward 4.....	6,017		
Rehoboth town.....	2,001	1,840	1,786	Ward 5.....	14,079		
Seekonk town.....	2,397	1,673	1,817	Ward 6.....	6,313		
Somerset town.....	2,798	2,241	2,106				

¹ Part of Sandwich town annexed to Mashpee town in 1905
² Name changed from Cottage City in 1907.

³ County total includes population (3,720) of Bradford town, annexed to Haverhill city between 1890 and 1900.

STATISTICS OF POPULATION.

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TABLE 1.—POPULATION OF MINOR CIVIL DIVISIONS: 1910, 1900, AND 1890—Continued.

[For changes in boundaries, etc., between 1900 and 1910, see footnotes; for those between 1890 and 1900, see Reports of the Twelfth Census: 1900, Vol. I, Table 5.]

MINOR CIVIL DIVISION.	1910	1900	1890	MINOR CIVIL DIVISION.	1910	1900	1890
Essex County—Continued.				Hampshire County—Continued.			
Salsbury town.....	1,658	1,558	1,316	Granby town.....	761	761	765
Saugus town.....	8,047	5,084	3,673	Greenwich town.....	452	491	528
Swampscott town.....	6,204	4,548	3,198	Hadley town.....	1,099	1,789	1,669
Topsfield town.....	1,174	1,030	1,022	Hatfield town.....	1,986	1,500	1,240
Wenham town.....	1,010	847	886	Huntington town.....	1,473	1,475	1,385
West Newbury town.....	1,473	1,558	1,796	Middlefield town.....	354	410	455
				Northampton city ¹	19,431	18,643	14,990
Franklin County.....				Ward 1.....	2,778		
Ashfield town.....	959	955	1,025	Ward 2.....	2,948		
Barnardston town.....	741	792	770	Ward 3.....	3,971		
Buckland town.....	1,573	1,446	1,570	Ward 4.....	3,468		
Charlemont town.....	1,001	1,094	972	Ward 5.....	2,488		
Colrain town.....	1,741	1,749	1,671	Ward 6.....	1,980		
Conway town.....	1,230	1,458	1,451	Ward 7.....	1,880		
Deerfield town.....	2,209	1,969	2,910	Pelham town.....	467	462	486
Erving town.....	1,148	973	972	Plainfield town.....	406	404	435
Gill town.....	942	1,015	960	Prescott town.....	320	380	376
Greenfield town.....	10,427	7,927	5,252	South Hadley town.....	4,894	4,526	4,261
Hawley town.....	424	429	515	Southampton town.....	870	1,012	1,017
Heath town.....	346	441	503	Ware town.....	8,774	8,263	7,329
Leverett town.....	728	744	702	Westhampton town.....	423	469	477
Leyden town.....	363	379	407	Williamsburg town.....	2,132	1,926	2,057
Monroe town.....	246	305	282	Worthington town.....	569	675	714
Montague town.....	6,866	6,150	6,296				
New Salem town.....	639	807	856	Middlesex County².....			
Northfield town.....	1,642	1,966	1,869	Acton town.....	2,136	2,120	1,897
Orange town.....	5,282	5,520	4,568	Arlington town ³	11,187	8,603	5,629
Rowe town.....	456	549	541	Ashby town.....	885	876	825
Shelburne town.....	1,498	1,508	1,553	Ashland town.....	1,682	1,625	2,532
Shutesbury town.....	267	382	453	Ayer town.....	2,797	2,446	2,148
Sunderland town.....	1,047	771	663	Bedford town.....	1,231	1,208	1,062
Warwick town.....	477	619	565	Belmont town ⁴	5,542	3,929	2,098
Wendell town.....	502	492	505	Billerica town.....	2,789	2,775	2,380
Whately town.....	846	769	779	Boxborough town.....	317	316	325
				Burlington town.....	591	593	617
Hampden County¹.....				Cambridge city ⁴	104,839	91,886	70,028
Agawam town.....	3,501	2,536	2,352	Ward 1.....	7,285		
Blandford town.....	717	836	871	Ward 2.....	6,512		
Brimfield town.....	866	941	1,096	Ward 3.....	11,407		
Chester town.....	1,377	1,450	1,295	Ward 4.....	11,070		
Chicopee city.....	25,401	19,167	14,050	Ward 5.....	9,066		
Ward 1.....	3,841			Ward 6.....	13,016		
Ward 2.....	2,684			Ward 7.....	11,593		
Ward 3.....	4,060			Ward 8.....	8,652		
Ward 4.....	3,720			Ward 9.....	9,321		
Ward 5.....	3,959			Ward 10.....	7,122		
Ward 6.....	2,808			Ward 11.....	9,300		
Ward 7.....	4,545			Carlisle town.....	551	480	481
East Longmeadow town.....	1,553	1,187		Chelmsford town.....	5,010	3,984	2,695
Granville town.....	781	1,050	1,061	Concord town.....	6,421	5,652	4,427
Hampden town.....	645	782	831	Dracont town.....	3,461	3,253	1,996
Holland town.....	145	169	201	Dunstable town.....	408	427	416
Holyoke city ¹	57,730	45,712	35,637	Everett city.....	33,484	24,336	11,068
Ward 1.....	9,379			Ward 1.....	4,370		
Ward 2.....	10,709			Ward 2.....	6,317		
Ward 3.....	8,908			Ward 3.....	9,945		
Ward 4.....	8,904			Ward 4.....	4,149		
Ward 5.....	6,220			Ward 5.....	4,097		
Ward 6.....	7,758			Ward 6.....	5,108		
Ward 7.....	6,854			Framingham town.....	12,948	11,302	9,239
Longmeadow town.....	1,084	811	2,133	Groton town.....	2,155	2,052	2,057
Ludlow town.....	4,948	3,536	1,939	Holliston town.....	2,711	2,598	2,619
Monson town.....	4,758	3,402	3,650	Hopkinton town.....	2,462	2,623	4,088
Montgomery town.....	217	273	266	Hudson town.....	6,743	5,454	4,670
Palmer town.....	8,610	7,801	6,520	Lexington town.....	4,918	3,831	3,197
Russell town.....	965	793	879	Lincoln town.....	1,175	1,127	987
Southwick town.....	1,020	1,040	914	Littleton town.....	1,229	1,179	1,025
Springfield city.....	88,926	62,059	44,179	Lowell city ⁵	106,294	94,969	77,696
Ward 1.....	16,274			Ward 1.....	9,901		
Ward 2.....	10,825			Ward 2.....	14,525		
Ward 3.....	6,369			Ward 3.....	11,590		
Ward 4.....	9,170			Ward 4.....	9,971		
Ward 5.....	7,950			Ward 5.....	10,089		
Ward 6.....	9,358			Ward 6.....	21,001		
Ward 7.....	14,258			Ward 7.....	9,890		
Ward 8.....	15,724			Ward 8.....	9,476		
Tolland town.....	180	275	393	Ward 9.....	10,351		
Wales town.....	345	773	700	Malden city.....	44,404	33,664	23,031
West Springfield town.....	9,224	7,105	5,077	Ward 1.....	5,588		
Westfield town.....	16,044	12,310	9,805	Ward 2.....	6,240		
Wilbraham town.....	2,332	1,595	1,814	Ward 3.....	5,091		
				Ward 4.....	5,807		
Hampshire County¹.....				Ward 5.....	6,674		
Amherst town.....	5,112	5,028	4,512	Ward 6.....	6,927		
Belcherstown town.....	2,054	2,292	2,120	Ward 7.....	8,577		
Chesterfield town.....	536	611	608	Marlborough city.....	14,579	13,609	13,805
Cummington town.....	637	748	787	Ward 1.....	2,119		
Easthampton town.....	8,524	5,603	4,395	Ward 2.....	2,073		
Enfield town.....	874	1,036	952	Ward 3.....	2,459		
Goshen town.....	279	316	297	Ward 4.....	2,559		
				Ward 5.....	1,756		
				Ward 6.....	1,619		
				Ward 7.....	1,894		
				Ward 8.....	6,390	3,142	2,700

¹ Part of Northampton city, Hampshire County, annexed to Holyoke city, Hampden County, in 1909.

² Part annexed to Norfolk County in 1907. Boundary line between Cambridge city, Middlesex County, and Boston city, Suffolk County, changed in 1910.

³ Boundary line between Arlington town and Somerville city changed in 1910.

⁴ Parts of Watertown town and Cambridge city annexed in 1903 and 1906, respectively.

⁵ Part annexed to Belmont town in 1906. Boundary line between Cambridge city, Middlesex County, and Boston city, Suffolk County, changed in 1910.

⁶ Part of Tewksbury town annexed in 1906.

TABLE 1.—POPULATION OF MINOR CIVIL DIVISIONS: 1910, 1900, AND 1890—Continued.

[For changes in boundaries, etc., between 1900 and 1910, see footnotes; for those between 1890 and 1900, see Reports of the Twelfth Census: 1900, Vol. I, Table 5.]

MINOR CIVIL DIVISION.	1910	1900	1890	MINOR CIVIL DIVISION.	1910	1900	1890
Middlesex County—Continued.				Norfolk County—Continued.			
Medford city.....	23,150	18,244	11,079	Norwood town.....	8,014	5,480	3,733
Ward 1.....	2,825			Plainville town ⁶	1,385		
Ward 2.....	3,520			Quincy city.....	32,642	23,899	16,723
Ward 3.....	2,595			Ward 1.....	5,067		
Ward 4.....	3,909			Ward 2.....	5,199		
Ward 5.....	4,843			Ward 3.....	6,727		
Ward 6.....	5,802			Ward 4.....	5,531		
Ward 7.....	1,495			Ward 5.....	4,940		
Melrose city.....	15,715	12,062	8,510	Ward 6.....	4,238		
Ward 1.....	1,816			Randolph town.....	4,301	3,993	3,946
Ward 2.....	2,508			Sharon town.....	2,310	2,060	1,634
Ward 3.....	2,252			Stoughton town.....	6,310	5,442	4,852
Ward 4.....	1,790			Walpole town.....	4,892	3,572	2,604
Ward 5.....	2,122			Wellesley town.....	5,413	5,072	3,600
Ward 6.....	2,606			Westwood town.....	1,266	1,112	
Ward 7.....	2,012			Weymouth town.....	12,895	11,324	10,856
Natick town.....	9,866	9,488	9,118	Wrentham town ⁵	1,743	2,720	2,563
Newton city ¹	39,806	33,587	24,379				
Ward 1.....	5,364			Plymouth County.....			
Ward 2.....	7,201				144,397	119,985	92,700
Ward 3.....	6,400			Abington town.....	5,455	4,489	4,260
Ward 4.....	4,261			Bridgewater town.....	7,688	5,808	4,249
Ward 5.....	6,856			Brookline city.....	56,878	40,003	27,294
Ward 6.....	6,397			Ward 1.....	6,124		
Ward 7.....	3,307			Ward 2.....	6,050		
North Reading town.....	1,059	1,035	874	Ward 3.....	8,469		
Pepperell town.....	2,953	3,701	3,127	Ward 4.....	6,597		
Reading town.....	5,818	4,969	4,088	Ward 5.....	8,640		
Sherborn town.....	1,423	1,483	1,381	Ward 6.....	10,311		
Shirley town.....	2,139	1,680	1,191	Ward 7.....	8,087		
Somerville city ²	77,236	61,643	40,152	Carver town.....	1,063	1,104	994
Ward 1.....	10,398			Duxbury town.....	1,088	2,075	1,908
Ward 2.....	13,025			East Bridgewater town.....	3,363	3,025	2,911
Ward 3.....	7,753			Halifax town.....	550	522	562
Ward 4.....	7,523			Hanover town.....	2,326	2,152	2,093
Ward 5.....	11,246			Hanson town.....	1,854	1,455	1,267
Ward 6.....	14,455			Hingham town.....	4,965	5,059	4,564
Ward 7.....	12,353			Hull town.....	2,103	1,703	989
Stoneham town.....	7,090	6,197	6,155	Kingston town.....	2,445	1,955	1,659
Stow town.....	1,115	1,002	903	Lakeville town.....	1,141	958	935
Sudbury town.....	1,120	1,197	1,107	Marion town.....	1,460	902	871
Tewksbury town ³	3,750	3,683	2,515	Marshfield town.....	1,738	1,810	1,713
Townsend town.....	1,781	1,804	1,750	Mattapoisett town.....	1,233	1,061	1,148
Tyngsborough town.....	829	773	662	Middleborough town.....	8,214	6,885	6,065
Wakefield town.....	11,404	9,290	6,982	Norwell town.....	1,410	1,560	1,635
Waltham city.....	27,834	23,431	18,707	Pembroke town.....	1,336	1,240	1,320
Ward 1.....	4,144			Plymouth town.....	12,141	9,592	7,314
Ward 2.....	4,140			Plympton town.....	561	488	597
Ward 3.....	4,080			Rochester town.....	1,090	986	1,012
Ward 4.....	3,904			Rockland town.....	6,928	5,327	5,213
Ward 5.....	3,525			Selma town.....	2,432	2,470	2,318
Ward 6.....	4,743			Wareham town.....	4,102	3,432	3,451
Ward 7.....	3,223			West Bridgewater town.....	2,231	1,711	1,917
Watertown town ⁴	12,875	9,706	7,073	Whitman town.....	7,202	6,155	4,441
Wayland town.....	2,206	2,303	2,030				
Westford town.....	2,851	2,624	2,250	Suffolk County⁶.....			
Weston town.....	2,100	1,834	1,064		731,888	611,417	484,780
Wilmington town.....	1,858	1,590	1,213	Boston city ⁴	670,585	500,892	448,477
Winchester town.....	9,309	7,243	4,861	Ward 1.....	29,076		
Woburn city.....	15,308	14,254	13,499	Ward 2.....	28,819		
Ward 1.....	2,703			Ward 3.....	16,359		
Ward 2.....	3,014			Ward 4.....	18,294		
Ward 3.....	2,563			Ward 5.....	12,811		
Ward 4.....	2,622			Ward 6.....	36,768		
Ward 5.....	1,473			Ward 7.....	14,913		
Ward 6.....	2,055			Ward 8.....	21,910		
Ward 7.....	890			Ward 9.....	20,427		
				Ward 10.....	25,320		
Nantucket County.....				Ward 11.....	27,444		
	2,982	3,006	3,268	Ward 12.....	24,224		
Nantucket town.....	2,982	3,006	3,268	Ward 13.....	21,661		
				Ward 14.....	23,634		
Norfolk County¹.....				Ward 15.....	21,210		
	187,508	151,539	118,950	Ward 16.....	25,033		
Avon town.....	2,013	1,741	1,384	Ward 17.....	26,426		
Bellingham town.....	1,696	1,632	1,334	Ward 18.....	22,755		
Braintree town.....	8,090	5,931	4,845	Ward 19.....	51,714		
Brookline town ¹	27,792	19,335	12,103	Ward 20.....	56,720		
Canton town.....	4,797	4,584	4,538	Ward 21.....	50,511		
Cohasset town.....	2,585	2,750	2,448	Ward 22.....	29,076		
Dedham town.....	9,284	7,457	7,123	Ward 23.....	50,098		
Dover town.....	798	656	727	Ward 24.....	57,749		
Foxborough town.....	3,863	3,266	2,933	Ward 25.....	26,575		
Franklin town.....	5,641	5,017	4,474	Chelsea city.....	32,452	34,072	27,909
Holbrook town.....	2,816	2,220	2,374	Ward 1.....	6,640		
Hyde Park town.....	15,567	13,244	10,193	Ward 2.....	10,074		
Medfield town.....	3,466	2,926	1,493	Ward 3.....	4,347		
Medway town.....	2,696	2,701	2,985	Ward 4.....	6,487		
Millis town.....	1,399	1,033	786	Ward 5.....	6,604		
Milton town.....	7,924	6,378	4,273	Revere town.....	18,219	10,395	5,668
Needham town.....	5,025	4,016	3,035	Winthrop town.....	10,132	6,058	2,726
Norfolk town.....	960	980	913				

¹ Part of Newton city, Middlesex County, annexed to Brookline town, Norfolk County, in 1907.
² Boundary line between Arlington town and Somerville city changed in 1910.
³ Part annexed to Lowell city in 1906.

⁴ Part annexed to Belmont town in 1903.
⁵ Plainville town organized from part of Wrentham town in 1905.
⁶ Boundary line between Boston city, Suffolk County, and Cambridge city, Middlesex County, changed in 1910.

STATISTICS OF POPULATION.

TABLE 1.—POPULATION OF MINOR CIVIL DIVISIONS: 1910, 1900, AND 1890—Continued.

[For changes in boundaries, etc., between 1900 and 1910, see footnotes; for those between 1890 and 1900, see Reports of the Twelfth Census: 1900, Vol. I, Table 5.]

MINOR CIVIL DIVISION.	1910	1900	1890	MINOR CIVIL DIVISION.	1910	1900	1890
Worcester County	399,657	346,958	280,787	Worcester County—Continued.			
Ashburnham town.....	2,107	1,882	2,074	Northbridge town.....	8,807	7,036	4,603
Athol town.....	8,536	7,061	6,319	Oakham town.....	552	588	738
Auburn town.....	2,420	1,621	1,532	Oxford town.....	3,361	2,677	2,616
Barre town.....	2,957	2,059	2,239	Paxton town.....	416	469	445
Berlin town.....	904	1,003	884	Petersham town.....	757	853	1,050
Blackstone town.....	5,648	5,721	6,138	Phillipston town.....	426	441	502
Bolton town.....	764	770	827	Princeton town.....	818	975	982
Boylston town.....	714	1,364	770	Royalston town.....	792	958	1,030
Brookfield town.....	2,204	3,062	3,352	Rutland town.....	1,743	1,334	980
Charlton town.....	2,032	1,860	1,847	Shrewsbury town.....	1,946	1,626	1,449
Clinton town.....	13,075	13,697	10,424	Southborough town.....	1,745	1,921	2,114
Dana town.....	736	790	700	Southbridge town.....	12,592	10,025	7,655
Douglas town.....	2,152	2,113	1,908	Spencer town.....	6,740	7,627	8,747
Dudley town.....	4,267	3,553	2,944	Sterling town.....	1,359	1,420	1,244
Fitchburg city.....	37,826	31,531	22,037	Sturbridge town.....	1,957	2,058	2,074
Ward 1.....	6,527			Sutton town.....	3,078	3,328	3,180
Ward 2.....	11,718			Templeton town.....	3,756	3,489	2,999
Ward 3.....	6,939			Upton town.....	2,071	1,937	1,878
Ward 4.....	3,799			Uxbridge town.....	4,671	3,599	3,408
Ward 5.....	3,716			Warren town.....	4,188	4,417	4,681
Ward 6.....	7,188			Webster town.....	11,509	8,804	7,031
Gardner town.....	14,699	10,813	8,424	West Boylston town.....	1,270	2,314	3,019
Grafton town.....	5,705	4,869	5,002	West Brookfield town.....	1,327	1,448	1,592
Hardwick town.....	3,524	3,203	2,922	Westborough town.....	5,446	5,400	5,195
Harvard town.....	1,034	1,139	1,095	Westminster town.....	1,353	1,327	1,688
Holden town.....	2,147	2,464	2,623	Winchendon town.....	5,678	5,001	4,390
Hopedale town.....	2,188	2,087	1,176	Worcester city.....	145,986	118,421	84,655
Hubbardston town.....	1,073	1,227	1,346	Ward 1.....	14,273		
Lancaster town.....	2,464	2,478	2,201	Ward 2.....	17,548		
Leicester town.....	3,237	3,416	3,120	Ward 3.....	18,714		
Leominster town.....	17,580	12,392	7,266	Ward 4.....	16,071		
Lunenburg town.....	1,393	1,332	1,146	Ward 5.....	18,325		
Mendon town.....	880	911	919	Ward 6.....	15,049		
Millford town.....	13,056	11,376	8,780	Ward 7.....	12,941		
Millbury town.....	4,740	4,460	4,428	Ward 8.....	10,921		
New Braintree town.....	464	500	573	Ward 9.....	11,637		
North Brookfield town.....	3,075	4,587	3,871	Ward 10.....	10,509		
Northborough town.....	1,713	2,164	1,952				

TABLE 2.—POPULATION OF ALL CITIES, AND OF TOWNS HAVING, IN 1910, 2,500 INHABITANTS OR MORE: 1910, 1900, AND 1890.

CITY OR TOWN.	County.	1910	1900	1890	CITY OR TOWN.	County.	1910	1900	1890
CITIES.					TOWNS—continued.				
Beverly.....	Essex.....	18,650	13,884	10,821	Hudson.....	Middlesex.....	6,743	5,454	4,670
Boston.....	Suffolk.....	670,585	560,892	448,477	Hyde Park.....	Norfolk.....	15,507	13,244	10,193
Brookton.....	Plymouth.....	56,878	40,063	27,294	Ipswich.....	Essex.....	5,777	4,658	4,439
Cambridge.....	Middlesex.....	104,839	91,886	70,028	Lee.....	Berkshire.....	4,106	3,596	3,785
Chelsea.....	Suffolk.....	32,452	34,072	27,909	Leicester.....	Worcester.....	3,237	3,416	3,120
Chicopee.....	Hampden.....	25,401	19,187	14,050	Lenox.....	Berkshire.....	3,060	2,942	2,889
Everett.....	Middlesex.....	33,484	24,336	11,068	Leominster.....	Worcester.....	17,580	12,392	7,260
Fall River.....	Bristol.....	119,295	104,863	74,398	Lexington.....	Middlesex.....	4,918	3,831	3,197
Fitchburg.....	Worcester.....	37,820	31,631	22,037	Ludlow.....	Hampden.....	4,948	3,536	1,939
Gloucester.....	Essex.....	24,398	26,121	24,651	Manchester.....	Essex.....	2,673	2,622	1,789
Haverhill.....	Essex.....	44,115	37,175	27,412	Mansfield.....	Bristol.....	5,183	4,006	3,432
Holyoke.....	Hampden.....	57,730	45,712	35,637	Marblehead.....	Essex.....	7,338	7,582	8,202
Lawrence.....	Essex.....	85,892	62,659	44,654	Maynard.....	Middlesex.....	6,390	3,142	2,700
Lowell.....	Middlesex.....	100,294	94,969	77,696	Medford.....	Norfolk.....	3,468	2,928	1,493
Lynn.....	Essex.....	89,336	68,613	56,727	Medway.....	Norfolk.....	2,600	2,761	2,885
Malden.....	Middlesex.....	44,404	33,664	23,031	Methuen.....	Essex.....	11,448	7,512	4,814
Marlborough.....	Middlesex.....	14,570	13,609	13,805	Middleborough.....	Plymouth.....	8,214	6,885	6,065
Medford.....	Middlesex.....	23,150	18,244	11,079	Milford.....	Worcester.....	13,055	11,376	8,780
Methuen.....	Middlesex.....	15,715	12,962	8,519	Millbury.....	Worcester.....	4,740	4,460	4,428
New Bedford.....	Bristol.....	96,652	62,442	40,733	Milton.....	Norfolk.....	7,924	6,578	4,278
Newburyport.....	Essex.....	14,949	14,478	13,047	Monson.....	Hampden.....	4,758	3,402	3,650
Newton.....	Middlesex.....	39,806	33,587	24,379	Montague.....	Franklin.....	6,866	6,150	6,296
North Adams.....	Berkshire.....	22,019	24,200	16,074	Nantucket.....	Nantucket.....	2,962	3,006	3,268
Northampton.....	Hampshire.....	19,431	18,643	14,990	Natick.....	Middlesex.....	9,866	9,488	9,118
Pittsfield.....	Berkshire.....	32,121	21,760	17,281	Needham.....	Norfolk.....	5,026	4,016	3,035
Quincy.....	Norfolk.....	32,642	23,899	16,723	North Andover.....	Essex.....	5,529	4,243	3,742
Salem.....	Essex.....	43,697	35,956	30,801	North Attleborough.....	Bristol.....	9,562	7,263	6,727
Somerville.....	Middlesex.....	77,236	61,643	40,152	North Brookfield.....	Worcester.....	3,075	4,587	3,871
Springfield.....	Hampden.....	88,926	62,069	44,179	Northbridge.....	Worcester.....	8,807	7,036	4,608
Taunton.....	Bristol.....	34,259	31,036	25,448	Norton.....	Bristol.....	2,544	1,826	1,785
Walham.....	Middlesex.....	27,834	23,481	18,707	Norwood.....	Norfolk.....	8,014	5,480	3,733
Woburn.....	Middlesex.....	15,308	14,254	13,499	Orange.....	Franklin.....	5,282	5,520	4,568
Worcester.....	Worcester.....	145,986	118,421	84,655	Oxford.....	Worcester.....	3,361	2,677	2,616
TOWNS.					Palmer.....	Hampden.....	8,610	7,801	6,520
Abington.....	Plymouth.....	5,455	4,489	4,260	Peabody.....	Essex.....	15,721	11,523	10,158
Adams.....	Berkshire.....	13,026	11,134	9,213	Pepperell.....	Middlesex.....	2,953	3,701	3,127
Agawam.....	Hampden.....	3,501	2,536	2,352	Plymouth.....	Plymouth.....	12,141	9,592	7,314
Amesbury.....	Essex.....	9,894	9,473	9,798	Provincetown.....	Barnstable.....	4,369	4,247	4,642
Amherst.....	Hampshire.....	5,112	5,028	4,512	Randolph.....	Norfolk.....	4,301	3,993	3,946
Andover.....	Essex.....	7,301	6,813	6,142	Reading.....	Middlesex.....	5,818	4,909	4,088
Arlington.....	Middlesex.....	11,187	8,603	5,629	Revere.....	Suffolk.....	18,219	10,395	5,668
Athol.....	Worcester.....	8,536	7,061	6,319	Rockland.....	Plymouth.....	6,928	5,327	5,213
Attleborough.....	Bristol.....	16,215	11,335	7,577	Rockport.....	Essex.....	4,211	4,592	4,087
Ayer.....	Middlesex.....	2,797	2,446	2,148	Saugus.....	Essex.....	8,047	5,084	3,673
Barnstable.....	Barnstable.....	4,676	4,364	4,023	Somerset.....	Bristol.....	2,241	2,241	2,106
Barre.....	Worcester.....	2,957	2,059	2,239	South Hadley.....	Hampshire.....	4,894	4,526	4,261
Belmont.....	Middlesex.....	5,542	3,929	2,098	Southbridge.....	Worcester.....	12,592	10,025	7,655
Billerica.....	Middlesex.....	2,739	2,775	2,380	Spencer.....	Worcester.....	6,740	7,627	8,747
Blackstone.....	Worcester.....	5,648	5,721	6,138	Stoneham.....	Middlesex.....	7,000	6,197	6,155
Braintree.....	Norfolk.....	8,066	5,981	4,848	Stoughton.....	Norfolk.....	6,316	5,442	4,852
Bridgewater.....	Plymouth.....	7,088	5,806	4,249	Sutton.....	Worcester.....	3,078	3,328	3,180
Brookline.....	Norfolk.....	27,792	19,935	12,103	Swampscott.....	Essex.....	6,204	4,548	3,188
Canton.....	Norfolk.....	4,797	4,584	4,538	Templeton.....	Worcester.....	3,750	3,489	2,999
Chelmsford.....	Middlesex.....	5,010	3,984	2,695	Tewksbury.....	Middlesex.....	3,750	3,683	2,515
Clinton.....	Worcester.....	13,075	13,667	10,424	Uxbridge.....	Worcester.....	4,671	3,599	3,408
Cohasset.....	Norfolk.....	2,585	2,759	2,448	Wakefield.....	Middlesex.....	11,404	9,290	6,982
Concord.....	Middlesex.....	6,421	5,652	4,427	Walpole.....	Norfolk.....	4,892	3,572	2,604
Dalton.....	Berkshire.....	3,568	3,014	2,885	Ware.....	Hampshire.....	8,774	8,263	7,329
Danvers.....	Essex.....	9,407	8,542	7,454	Wareham.....	Plymouth.....	4,102	3,432	3,451
Dartmouth.....	Bristol.....	4,378	3,669	3,122	Warren.....	Worcester.....	4,188	4,417	4,681
Dedham.....	Norfolk.....	9,284	7,457	7,123	Watertown.....	Middlesex.....	12,879	9,706	7,078
Dracut.....	Middlesex.....	3,461	3,263	1,996	Webster.....	Worcester.....	11,509	8,804	7,031
Dudley.....	Worcester.....	4,267	3,583	2,944	Wellesley.....	Norfolk.....	5,413	5,072	3,600
East Bridgewater.....	Plymouth.....	3,363	3,025	2,911	West Springfield.....	Hampden.....	9,224	7,105	5,077
Easthampton.....	Hampshire.....	8,524	5,603	4,395	Westborough.....	Worcester.....	5,446	5,400	5,195
Easton.....	Bristol.....	5,139	4,837	4,403	Westfield.....	Hampden.....	16,044	12,310	9,805
Fairhaven.....	Bristol.....	5,122	3,567	2,919	Westford.....	Middlesex.....	2,851	2,624	2,250
Falmouth.....	Barnstable.....	3,144	3,500	2,567	Westport.....	Bristol.....	2,928	2,890	2,599
Foxborough.....	Norfolk.....	3,363	3,266	2,933	Weymouth.....	Norfolk.....	12,895	11,324	10,866
Framingham.....	Middlesex.....	12,948	11,302	9,239	Whitman.....	Plymouth.....	7,292	6,155	4,441
Franklin.....	Norfolk.....	5,641	5,017	4,831	Williamstown.....	Berkshire.....	3,708	5,013	4,221
Gardner.....	Worcester.....	14,699	10,813	8,424	Winchendon.....	Worcester.....	5,678	5,001	4,390
Grafton.....	Worcester.....	5,705	4,869	5,002	Winchester.....	Middlesex.....	9,309	7,248	4,861
Great Barrington.....	Berkshire.....	5,926	5,854	4,612	Winthrop.....	Suffolk.....	10,132	6,058	2,726
Greenfield.....	Franklin.....	10,427	7,927	5,252					
Hardwick.....	Worcester.....	3,524	3,203	2,922					
Hingham.....	Plymouth.....	4,965	5,059	4,564					
Holbrook.....	Norfolk.....	2,816	2,229	2,474					
Holliston.....	Middlesex.....	2,711	2,598	2,619					

CHAPTER 2.

COMPOSITION AND CHARACTERISTICS OF THE POPULATION.

Introduction.—The first chapter having given the number of inhabitants of Massachusetts by counties and minor civil divisions, the decennial increase and the density of population, and the proportions urban and rural, the present chapter deals with the composition and characteristics of the population. The two chapters cover all the principal topics of the population census except occupations and ownership of homes.

Description of the tables.—The greater part of this chapter consists of five general tables, which present statistics of color, nativity, parentage, sex, citizenship, illiteracy, school attendance, and dwellings and families, as follows: Table I for the state and counties; Table II for the 24 cities and one town of more than 25,000 inhabitants; Table III for cities and towns of 10,000 to 25,000; Table IV for towns of 2,500 to 10,000; and Table V for wards of cities of more than 50,000.

A series of summary tables (numbered 1 to 16) reproduces from the general tables the more important state and city totals, and presents also certain additional data relative to state of birth, age, and marital condition.

On account of the wide differences in characteristics among the different classes of the population, the statistics on each subject are shown according to race, and for the whites according to nativity and parentage. Classification according to nativity and parentage is scarcely necessary for the other races, since nearly all negroes and Indians are native born of native parentage, and nearly all Chinese and Japanese either foreign born or of foreign parentage.

The white population is divided into four groups: (1) Native, native parentage—that is, having both parents born in the United States; (2) native, foreign parentage—having both parents born abroad; (3) native, mixed parentage—having one parent native and the other foreign born; (4) foreign born. As the second and third classes do not differ greatly in characteristics, they are combined in some of the tables; in a few cases all three native white classes are combined.

Since marked differences often exist between urban and rural communities with respect to the composition and characteristics of the population, it is desirable that the two classes be distinguished in presenting census data. The Bureau of the Census has undertaken to do this by classifying as urban all incorporated places of 2,500 inhabitants or more. In New England, however, where many villages of considerable size are not separately incorporated, it was deemed best to classify also towns of 2,500 inhabitants or more as urban,

although this classification is not very satisfactory because such towns generally include more or less population that is essentially rural.

The census inquiry as to school attendance was merely as to whether the person enumerated had attended any kind of school at any time between September 1, 1909, and the date of enumeration, April 15, 1910.

The Census Bureau classifies as illiterate any person 10 years of age or over who is unable to write, regardless of ability to read.

Color and nativity (Table 1).—Of the total population of Massachusetts, 1,103,429, or 32.8 per cent, are native whites of native parentage; 1,170,447, or 34.8 per cent, are native whites of foreign or mixed parentage; 1,051,050, or 31.2 per cent, are foreign-born whites; and 38,055, or 1.1 per cent, are negroes. The corresponding percentages in 1900 were 36.8, 32, 29.9, and 1.1, respectively, the proportion of native whites of native parentage having decreased during the decade. In 8 of the 14 counties more than one-fourth of the population is foreign-born white, the maximum percentage—37.6—being that for Bristol County. In 10 counties the population is more than one-fourth native white of foreign or mixed parentage, the maximum percentage—38.2—being that for Suffolk. (See maps on page 591.)

Of the urban population, 30.8 per cent are native whites of native parentage; of the rural, 58.6 per cent. The corresponding proportions for native whites of foreign or mixed parentage are 35.7 and 22.5 per cent, respectively. The percentage of foreign-born whites is 32.3 in the urban population and 17.6 in the rural; the percentage of negroes, 1.1 in the urban and 1.2 in the rural.

Sex (Tables 2 and 15).—In the total population of the state there are 1,655,248 males and 1,711,168 females, or 96.7 males to 100 females. In 1900 the ratio was 95.1 to 100. Among native whites the ratio is 95.3 to 100; among foreign-born whites, 99.5 to 100. In the urban population there are 96.2 males to 100 females, and in the rural, 103.3.

State of birth (Tables 3 and 4).—Of the total native population—that is, population born in the United States—80.7 per cent were born in Massachusetts and 19.3 per cent outside the state; of the native white population, 18.8 per cent were born outside the state, and of the native negro, 53.1 per cent. Persons born outside the state constitute approximately the same proportion of the native population in urban as in rural communities.

Foreign nationalities (Tables 5 and 12).—Of the foreign-born white population of Massachusetts, persons born in Canada represent 28.1 per cent (those of French parentage, 12.8, and all others, 15.3); Ireland, 21.2; Russia, 11.2; England, 8.8; Italy, 8.1; Sweden, 3.8; Austria, 3.4; Germany, 2.9; Scotland, 2.7; Portugal, 2.4; all other countries, 7.4 per cent. Of the total white stock of foreign origin, which includes persons born abroad and also natives having one or both parents born abroad, Ireland contributed 28.5 per cent; Canada, 27.2 (French stock, 13.3, and all others, 13.9); England, 8.3; Russia, 7.9; Italy, 5.9; Germany, 3.5; Sweden, 3.1; Scotland, 2.5; Austria, 2.4 per cent.

Voting and militia ages (Table 6).—The total number of males 21 years of age and over is 1,021,669, representing 30.3 per cent of the population. Of these, 32.7 per cent are native whites of native parentage, 21.4 per cent native whites of foreign or mixed parentage, 44.4 per cent foreign-born whites, and 1.2 per cent negroes. Of the 453,601 foreign-born white males of voting age, 189,126, or 41.7 per cent, are naturalized. Males of militia age—18 to 44—number 760,324.

Age (Tables 7, 8, and 13).—Of the total population, 9.8 per cent are under 5 years of age, 17.3 per cent from 5 to 14 years, inclusive, 18.5 per cent from 15 to 24, 32.5 per cent from 25 to 44, and 21.9 per cent 45 and over. The foreign-born white population comprises comparatively few children, only 5.7 per cent of this class being under 15 years of age, while more than three-fourths (76.4 per cent) are 25 years of age and over. Of the native whites of foreign or mixed parentage, 32.6 per cent are 25 and over and of the native whites of native parentage, 56.4 per cent.

As compared with the rural population, the urban shows a somewhat larger proportion of persons in the prime of life and a markedly smaller proportion in the more advanced ages. Migration to the city explains this at least in part. Of the urban population, 32.9 per cent are from 25 to 44 years of age, and of the rural 28 per cent, while the proportion 45 and over is for the urban 21.3 per cent, and for the rural, 30.2.

School attendance (Table 9).—The total number of persons of school age—that is, from 6 to 20 years, inclusive—is 881,024, of whom 588,029, or 66.7 per cent, attended school. In addition to these, 29,845 persons under 6 and 12,245 of 21 and over attended school. For boys from 6 to 20 years, inclusive, the percentage attending school was 66.9; for girls, 66.6. For children from 6 to 14 years, inclusive, the percentage attending school was 92.9. The percentage for children of this age among native whites of native parentage was 93.9; among native whites of foreign or mixed parentage, 93.1; among foreign-born whites, 88.1; among negroes, 92. (See Table I.) There is little difference between urban population and rural as regards school attendance for children of this age, but for persons from 15 to 20 years the percentage is considerably higher in rural communities.

Illiteracy (Table 10).—There are 141,541 illiterates in the state, representing 5.2 per cent of the total population 10 years of age and over, as compared with

5.9 per cent in 1900. The percentage of illiteracy is 12.7 among foreign-born whites, 0.5 among native whites, and 8.1 among negroes.

For all classes combined, the percentage of illiterates in the urban population (5.2) is greater than in the rural (4.2), the number of foreign-born whites being relatively greater in the urban. For each class separately the rural percentage exceeds the urban.

For persons from 10 to 20 years of age, inclusive, whose literacy depends largely upon present school facilities and school attendance, the percentage of illiteracy is 1.9. (See Table I.)

Marital condition (Tables 11 and 14).—In the population 15 years of age and over, 40 per cent of the males are single and 36.9 per cent of the females. The percentage married is 54.7 for males and 51.2 for females, and the percentage widowed 4.7 and 11.4, respectively. The percentages of those reported as divorced, 0.4 and 0.5, respectively, are believed to be too small, because of the probability that many divorced persons class themselves as single or widowed.

That the percentage single is so much smaller for women than for men is due largely to the fact that women marry younger. Thus 4.8 per cent of the females from 15 to 19 years of age are married, as compared with 0.6 per cent of the males, and 33.8 per cent of the females from 20 to 24 years are married, as compared with 18.1 per cent of the males. In the next age group, 25 to 34 years, the difference is not so great, the percentages being 62.6 for females and 57.5 for males, while in the age groups 35 to 44 and 45 and over the proportion married is greater among males. That there is a larger proportion of widows than of widowers may indicate that men more often remarry than women, but, since husbands are generally older than their wives, the marriage relationship is more often broken by death of the husband than by death of the wife.

For the main elements of the population the percentages of married persons among those 15 years of age and over are as follows: Foreign-born whites, 62.8 for males and 60.3 for females; native whites of native parentage, 57 and 49.3, respectively; native whites of foreign or mixed parentage, 38.7 and 39.8; negroes, 51.9 and 49.6.

These percentages by no means indicate the relative tendency of the several classes as regards marriage. To determine that, the comparison should be made by age periods, since the proportion married in any class is determined largely by the proportion who have reached the marrying age. Similarly, the proportion widowed depends largely on the proportion past middle life. The percentage married, both for males and females, is somewhat higher in the rural population than in the urban.

Dwellings and families.—The total number of dwellings in Massachusetts is 511,926, and the total number of families 734,013, there being 143.4 families to each 100 dwellings. (See Table I.) The average number of persons per dwelling is 6.6, and the average number per family, 4.6.

TABLE 7.—AGE, FOR THE STATE.

Table with columns for AGE PERIOD, TOTAL POPULATION (1910, 1900, Male, Female), NATIVE WHITE (Native parentage, Foreign or mixed parentage), FOREIGN-BORN WHITE, NEGRO, and INDIAN, CHINESE, JAPANESE, AND ALL OTHER. Includes rows for 'All ages, number', 'All ages, per cent.', and various age groups from 'Under 5 years' to '65 years and over'.

TABLE 8.—AGE, FOR URBAN AND RURAL POPULATION.

Table with columns for AGE PERIOD, TOTAL (Male, Female), NATIVE WHITE (Male, Female), FOREIGN-BORN WHITE (Male, Female), and NEGRO (Male, Female). Includes rows for 'All ages, number', 'All ages, per cent.', and various age groups from 'Under 5 years' to '65 years and over'.

TABLE 9.—SCHOOL ATTENDANCE.

Table with columns for AGE PERIOD, TOTAL (Number, Attending school), NATIVE WHITE (Native parentage, Foreign or mixed parentage), FOREIGN-BORN WHITE, and NEGRO (Attending school). Includes rows for 'THE STATE' (6 to 20 years, 0 to 9 years, etc.), 'URBAN POPULATION', and 'RURAL POPULATION'.

STATISTICS OF POPULATION.

TABLE 10.—ILLITERATE PERSONS 10 YEARS OF AGE AND OVER.

CLASS OF POPULATION.	BOTH SEXES.		MALE.		FEMALE.		CLASS OF POPULATION.	BOTH SEXES.		MALE.		FEMALE.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
THE STATE.													
Total illiterate, 1910.....	141,541	5.2	67,647	5.0	73,894	5.3	Total illiterate, 1910.....	133,259	5.2	62,805	5.1	70,454	5.4
Native white.....	9,103	0.5	4,591	0.6	4,572	0.5	Native white.....	7,872	0.5	3,814	0.5	4,058	0.5
Native parentage.....	3,428	0.4	1,944	0.4	1,484	0.3	Native parentage.....	2,693	0.3	1,483	0.4	1,210	0.3
Foreign or mixed parentage.....	5,735	0.7	2,647	0.7	3,088	0.8	Foreign or mixed parentage.....	5,179	0.7	2,331	0.6	2,848	0.7
Foreign-born white.....	129,412	12.7	61,402	12.1	68,010	13.3	Foreign-born white.....	122,924	12.0	57,668	11.9	65,256	13.2
Negro.....	2,584	8.1	1,286	8.2	1,298	8.1	Negro.....	2,086	7.1	959	6.7	1,127	7.4
RURAL POPULATION.													
Total illiterate, 1910.....	134,043	5.9	59,414	5.4	74,629	6.4	Total illiterate, 1910.....	8,282	4.2	4,842	4.8	3,440	3.5
Native white.....	10,739	0.8	5,313	0.8	5,426	0.7	Native white.....	1,291	0.8	777	1.0	514	0.7
Native parentage.....	3,912	0.5	2,206	0.5	1,706	0.4	Native parentage.....	735	0.6	401	0.8	374	0.5
Foreign or mixed parentage.....	6,827	1.2	3,107	1.1	3,720	1.3	Foreign or mixed parentage.....	556	1.5	316	1.7	240	1.3
Foreign-born white.....	119,582	14.0	52,040	13.3	67,542	15.9	Foreign-born white.....	6,488	15.0	3,734	16.0	2,754	14.5
Negro.....	2,853	10.7	1,207	9.3	1,646	12.1	Negro.....	498	22.7	327	25.0	171	19.4

TABLE 11.—MARITAL CONDITION OF PERSONS 15 YEARS OF AGE AND OVER.

CLASS OF POPULATION AND AGE PERIOD.	MALES 15 YEARS OF AGE AND OVER.						FEMALES 15 YEARS OF AGE AND OVER.							
	Total. ¹	Single.		Married.		Wid-owed.	Di-voiced.	Total. ¹	Single.		Married.		Wid-owed.	Di-voiced.
		Number.	Per cent.	Number.	Per cent.				Number.	Per cent.	Number.	Per cent.		
THE STATE.														
Total, 1910.....	1,197,828	479,048	40.0	655,740	54.7	56,800	4,331	1,259,896	465,040	36.9	644,631	51.2	143,519	5,968
Total, 1900.....	983,459	397,243	40.4	589,005	59.8	48,368	2,451	1,064,269	394,320	37.4	624,698	49.8	128,174	3,380
15 to 19 years.....	145,630	144,623	99.3	845	0.6	8	3	150,931	143,462	95.1	7,280	4.8	56	26
20 to 24 years.....	156,906	127,921	81.5	28,452	18.1	254	75	168,476	110,626	65.7	56,888	33.8	608	212
25 to 34 years.....	293,043	120,982	41.3	168,881	57.5	2,643	746	300,807	105,082	34.9	188,510	62.6	5,718	1,870
35 to 44 years.....	249,333	48,172	19.3	192,551	77.2	7,038	1,375	251,016	51,173	20.4	181,247	72.2	16,600	1,907
45 years and over.....	350,801	36,642	10.4	266,008	75.5	46,756	2,127	387,346	54,201	14.0	210,966	54.3	120,315	2,244
Age unknown.....	2,115	708	33.5	503	23.8	101	5	1,320	496	37.6	460	34.8	222	9
Native white:														
Native parentage ²	388,440	140,370	36.1	221,584	57.0	23,078	2,503	418,954	148,497	35.4	206,461	49.3	60,210	3,487
15 to 24 years.....	89,460	80,784	90.3	8,494	9.5	76	25	93,331	76,167	81.6	16,779	18.0	218	104
25 to 44 years.....	150,619	44,110	29.3	102,587	68.1	2,686	1,082	156,109	46,651	29.2	102,774	65.8	5,748	1,884
45 years and over.....	147,276	15,197	10.3	110,291	74.9	20,289	1,391	168,872	26,469	15.7	86,677	51.3	54,148	1,495
Foreign or mixed parentage ²	298,033	174,172	58.4	115,191	38.7	7,548	878	329,011	178,439	54.2	131,046	39.8	18,192	1,077
15 to 24 years.....	118,778	111,468	93.8	7,082	6.0	77	28	125,831	109,388	86.9	16,064	12.8	172	72
25 to 44 years.....	128,244	53,564	41.8	71,552	55.8	2,481	573	146,163	56,810	38.9	83,118	56.9	5,443	698
45 years and over.....	50,834	9,045	17.8	36,502	71.8	4,980	277	56,836	12,131	21.3	31,812	56.0	12,558	306
Foreign-born white ² :														
15 to 24 years.....	404,256	157,136	31.8	310,195	62.8	25,379	859	497,089	133,251	26.8	299,648	60.3	62,623	1,299
25 to 44 years.....	90,725	77,174	85.1	13,288	14.6	101	19	96,617	65,918	68.2	30,327	31.4	250	54
45 years and over.....	254,202	67,898	26.7	181,373	71.3	4,278	412	241,955	51,971	21.5	178,805	73.9	10,275	828
Age unknown.....	148,540	11,748	7.9	115,302	77.6	20,955	428	158,054	16,187	9.6	90,344	57.2	52,001	417
Negro ¹ :														
15 to 24 years.....	14,237	5,941	41.7	7,391	51.9	753	87	14,576	4,783	32.8	7,232	49.6	2,447	100
25 to 44 years.....	3,132	2,708	86.5	403	12.9	7	6	3,569	2,575	72.1	959	26.9	24	8
45 years and over.....	7,678	2,768	36.1	4,617	60.1	222	51	7,484	1,797	24.0	4,778	63.8	842	64
Age unknown.....	3,378	456	13.5	2,387	70.1	523	30	3,489	401	11.5	1,490	42.7	1,571	28
URBAN POPULATION.														
Total.....	1,107,075	445,834	40.3	604,862	54.6	51,006	3,799	1,171,764	439,155	37.5	594,803	50.8	131,546	5,481
15 to 24 years.....	282,643	254,487	90.0	27,548	9.7	254	76	301,206	240,026	79.7	60,078	19.9	623	223
25 to 44 years.....	507,888	158,293	31.2	338,161	66.6	9,092	1,937	518,826	149,047	28.7	345,087	66.5	21,266	3,229
45 years and over.....	314,750	32,434	10.3	238,711	75.8	41,578	1,782	350,538	49,629	14.2	189,221	54.0	109,495	2,021
Age unknown.....	1,794	620	34.6	442	24.7	82	4	1,194	453	37.9	417	34.9	192	8
Native white—Native parentage.....														
Native white—Foreign or mixed par.....	335,675	123,034	36.7	190,632	56.8	10,093	2,082	365,359	133,108	36.4	177,178	48.5	51,691	3,112
Foreign-born white.....	283,369	166,181	58.6	109,013	38.5	7,103	827	313,907	171,734	54.7	123,628	39.4	17,294	1,027
Negro.....	472,302	149,019	31.7	296,996	62.9	24,088	810	478,536	129,711	27.1	287,125	60.0	60,214	1,241
RURAL POPULATION.														
Total.....	90,753	33,214	36.6	50,878	56.1	5,794	532	88,132	25,885	29.4	49,728	56.4	11,973	487
15 to 24 years.....	19,893	18,057	90.8	1,749	8.8	8	2	18,201	14,052	77.3	4,070	22.4	41	15
25 to 44 years.....	34,438	10,861	31.5	22,771	66.0	589	184	32,997	7,208	21.8	24,470	74.2	1,052	248
45 years and over.....	36,051	4,208	11.7	26,977	72.9	5,178	345	36,808	4,572	12.4	21,145	57.4	10,850	223
Age unknown.....	321	88	27.4	61	19.0	19	1	126	43	34.1	43	34.1	30	1
Native white—Native parentage.....														
Native white—Foreign or mixed par.....	52,765	17,336	32.9	30,902	58.6	3,983	421	53,595	15,389	28.7	29,283	54.6	8,519	375
Foreign-born white.....	14,070	7,981	56.5	6,178	42.1	445	51	15,104	6,705	44.4	7,418	49.1	928	50
Negro.....	21,954	7,217	32.9	13,199	60.1	1,291	49	18,553	3,540	19.1	12,523	67.5	2,409	58
Age unknown.....	1,159	537	46.4	520	44.9	65	8	762	219	28.7	436	57.2	101	2

¹ Total includes persons whose marital condition is unknown.

² Totals include persons of unknown age.

SUPPLEMENT FOR MASSACHUSETTS.

TABLE 15.—SEX, FOR CITIES OF 25,000 OR MORE.

[See also Table 13.]

CITY.	1910			1900			CITY.	1910			1900		
	Male.	Female.	Males to 100 females.	Male.	Female.	Males to 100 females.		Male.	Female.	Males to 100 females.	Male.	Female.	Males to 100 females.
Boston.....	329,703	340,882	96.7	274,922	285,970	96.1	Lynn.....	44,585	44,751	99.6	33,300	35,213	94.6
Brockton.....	28,293	28,585	99.0	19,933	20,130	99.0	Malden.....	20,927	23,477	89.1	15,099	17,965	87.4
Brookline town.....	11,038	16,754	65.9	8,304	11,631	71.4	New Bedford.....	47,781	48,921	97.6	29,706	32,736	90.7
Cambridge.....	50,161	54,678	91.7	44,477	47,400	93.8	Newton.....	17,801	22,005	80.9	15,034	18,553	81.0
Chelsea.....	16,709	15,743	106.1	16,758	17,314	96.8	Pittsfield.....	16,130	15,991	100.9	10,257	11,509	89.1
Chicopee.....	12,736	12,665	100.6	9,408	9,750	96.4	Quincy.....	16,454	16,188	101.6	11,943	11,956	99.9
Everett.....	16,313	17,171	95.0	11,980	12,356	97.0	Salem.....	21,201	22,406	95.0	17,044	18,912	90.1
Fall River.....	57,627	61,668	93.4	50,260	54,603	92.0	Somerville.....	36,628	40,608	90.2	29,434	32,209	91.4
Fitchburg.....	18,764	19,062	98.4	15,557	15,974	97.4	Springfield.....	43,221	45,705	94.6	29,616	32,443	91.3
Haverhill.....	21,607	22,508	96.0	17,693	19,482	90.8	Taunton.....	16,722	17,537	95.4	15,317	15,719	97.4
Holyoke.....	27,671	30,059	92.1	21,744	23,068	90.7	Waltham.....	12,049	14,885	87.0	10,782	12,699	84.9
Lawrence.....	42,858	43,034	99.6	30,263	32,296	93.7	Worcester.....	73,424	72,562	101.2	59,082	59,399	99.6
Lowell.....	51,525	54,769	94.1	44,949	50,020	89.9							

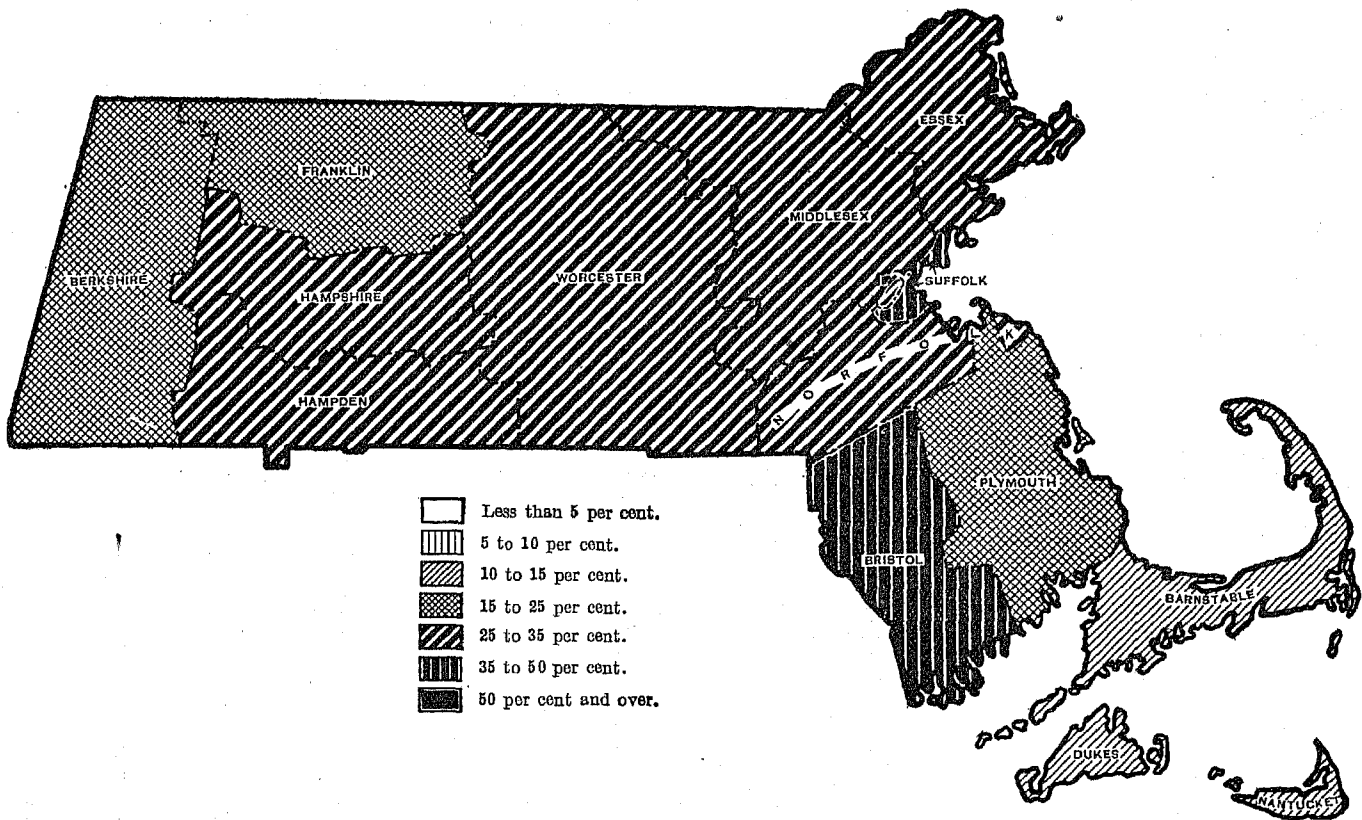
TABLE 16.—INDIAN, CHINESE, AND JAPANESE POPULATION, BY COUNTIES.

COUNTY.	INDIAN.			CHINESE.			JAPANESE.			COUNTY.	INDIAN.			CHINESE.			JAPANESE.		
	1910	1900	1890	1910	1900	1890	1910	1900	1890		1910	1900	1890	1910	1900	1890	1910	1900	1890
The state.....	688	587	1,428	2,582	2,968	984	151	53	18	Hampshire.....	14	14	3	39	32	15	3	2	3
Barnstable.....	272	231	140	6	8			1		Middlesex.....	31	30	19	379	507	137	34	6	1
Berkshire.....	1	3	9	54	66	23	2			Nantucket.....				1	2				
Bristol.....	40	86	13	160	179	58	1			Norfolk.....	39	12	8	89	134	36	19	6	
Dukes.....	147	154	133		1	3				Plymouth.....	23	10	27	46	91	26	2		2
Essex.....	6	3	2	316	320	102	4	3	1	Suffolk.....	59	3	29	1,237	1,259	467	69	29	6
Franklin.....			1	14	17	11	6	2		Worcester.....	50	34	21	145	246	50	8		2
Hampden.....	9	1	13	96	106	47	3	4											

¹ Includes 4 Indians specially enumerated in 1890, not distributed by counties.

PROPORTION OF FOREIGN-BORN WHITE AND NATIVE WHITE OF FOREIGN OR MIXED PARENTAGE OF MASSACHUSETTS, BY COUNTIES: 1910.

PER CENT OF FOREIGN-BORN WHITE IN TOTAL POPULATION.



PER CENT OF NATIVE WHITE OF FOREIGN OR MIXED PARENTAGE IN TOTAL POPULATION.

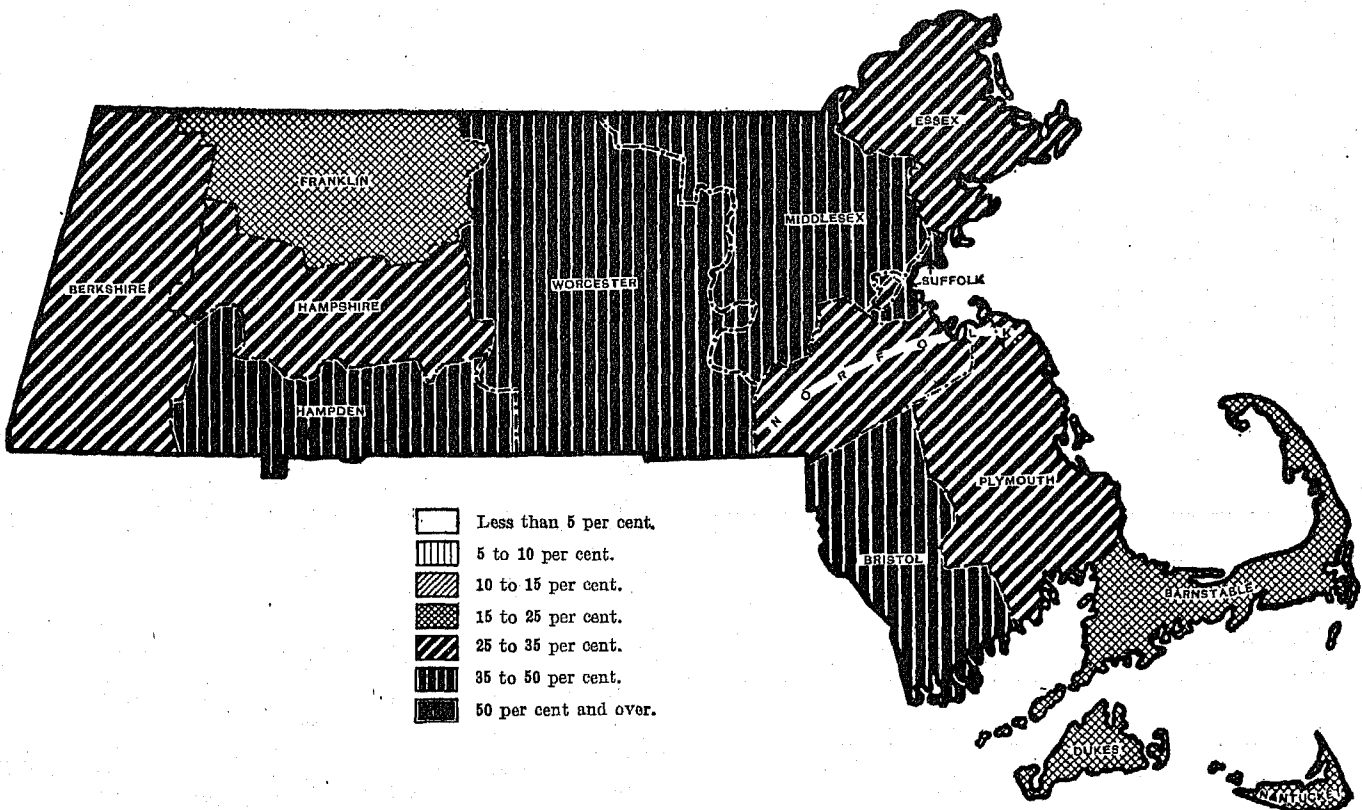


TABLE I.—COMPOSITION AND CHARACTERISTICS OF THE

[Per cent not shown where base is less than 100.]

SUBJECT.	THE STATE.	Barnstable.	Berkshire.	Bristol.	Dukes.	Essex.	Franklin.
POPULATION							
Total population, 1910.....	3,366,416	27,542	105,259	318,573	4,504	436,477	43,600
1900.....	2,805,846	27,826	95,067	262,029	4,561	357,030	41,209
1890.....	2,238,947	29,172	81,108	186,465	4,369	299,995	38,610
1880.....	1,783,085	31,897	69,032	139,040	4,300	244,535	36,001
1870.....	1,457,351	32,774	64,827	102,886	3,787	200,843	32,636
Increase, 1900-1910.....	560,570	-284	9,592	66,544	-57	79,447	2,391
Per cent of increase.....	20.0	-1.0	10.0	26.4	-1.2	22.3	5.8
Increase, 1890-1900.....	1,566,899	-1,346	14,559	65,564	192	57,085	2,599
Per cent of increase.....	25.3	-4.6	18.0	35.2	4.4	19.0	6.7
Land area (square miles).....	8,039	409	906	507	107	497	697
Population per square mile, 1910.....	418.8	67.3	109.0	501.9	42.1	878.2	697
URBAN AND RURAL TERRITORY.							
Urban, 1910—Places of 2,500 or more in 1910.....	3,125,367	12,189	87,534	304,075	.....	414,587	22,575
Same places in 1900.....	2,599,494	12,111	77,519	239,905	.....	335,778	19,597
Per cent of increase, 1900-1910.....	21.6	0.6	12.9	26.7	.....	23.5	15.2
Rural, 1910—Remainder of county in 1910.....	241,049	15,353	17,725	14,498	4,504	21,890	21,025
Same territory in 1900.....	235,852	15,715	18,148	12,004	4,561	21,252	21,612
Per cent of increase, 1900-1910.....	2.2	-2.3	-2.3	20.2	-1.2	5.0	-2.7
Urban, 1900—Places of 2,500 or more in 1900.....	2,597,098	12,111	77,519	235,898	.....	335,778	19,597
Rural, 1900—Remainder of county in 1900.....	238,248	15,715	18,148	16,131	4,561	21,252	21,612
Per cent in places of 2,500 or more, 1910.....	92.8	44.3	83.2	95.4	.....	95.0	51.8
Per cent in places of 2,500 or more, 1900.....	91.5	43.5	81.0	93.6	.....	94.0	47.6
COLOR AND NATIVITY							
White.....	3,324,926	26,307	104,053	314,369	4,164	434,127	43,461
Number in 1900.....	2,789,763	26,971	94,303	249,015	4,266	354,757	41,072
Number in 1890.....	2,216,373	28,650	79,892	184,002	4,101	298,243	38,514
Negro.....	38,055	897	1,149	4,003	193	2,024	119
Number in 1900.....	31,974	615	1,295	2,749	150	1,947	118
Number in 1890.....	28,144	376	1,183	2,590	132	1,642	84
Black.....	24,100	200	843	1,494	130	1,415	90
Mulatto.....	13,955	637	306	2,509	63	609	29
Indian, Chinese, Japanese, and all other (see Tables 1 and 16).....	3,435	278	57	201	147	326	20
Native white—Native parentage.....	1,103,429	17,693	44,674	77,146	2,706	154,760	24,814
Number in 1900.....	1,032,864	20,285	42,019	71,464	2,998	147,525	25,607
Native white—Foreign or mixed parentage.....	1,170,447	4,905	34,882	117,325	810	140,980	10,856
Number in 1900.....	897,382	8,799	30,486	32,010	645	105,050	8,702
Native white—Foreign parentage.....	846,820	2,973	23,677	88,408	513	97,979	7,232
Native white—Mixed parentage.....	323,627	1,932	11,205	28,917	303	43,001	3,624
Foreign-born white.....	1,051,050	3,769	24,497	110,898	642	138,387	7,791
Number in 1900.....	840,114	2,887	21,798	95,541	618	102,182	6,768
PER CENT OF TOTAL POPULATION.							
Native white—Native parentage.....	32.8	64.2	42.4	24.2	60.1	35.5	56.9
Per cent in 1900.....	36.8	72.9	43.9	28.4	65.6	41.3	62.1
Native white—Foreign or mixed parentage.....	34.8	17.8	33.1	36.8	14.9	32.3	24.9
Per cent in 1900.....	38.0	19.7	31.0	32.5	14.1	29.4	21.1
Foreign-born white.....	31.2	13.7	23.3	37.6	14.3	31.7	17.9
Per cent in 1900.....	29.9	10.4	22.8	37.9	13.5	28.0	16.4
Negro.....	1.1	3.3	1.1	1.3	4.3	0.5	0.3
Per cent in 1900.....	1.1	2.2	1.4	1.1	3.3	0.5	0.3
FOREIGN NATIONALITIES							
FOREIGN-BORN WHITE: Born in—							
Atlantic islands.....	11,128	193	4	0,388	102	676	1
Austria.....	35,455	4	2,304	5,483	.....	3,625	941
Belgium.....	1,745	3	11	133	.....	843	5
Canada—French.....	194,659	71	4,093	32,543	8	21,111	1,103
Canada—Other.....	160,972	552	758	4,856	86	24,262	708
Denmark.....	8,408	12	39	159	4	285	18
England.....	92,465	257	1,851	23,890	49	14,444	595
Finland.....	10,744	262	50	148	3	1,320	6
France.....	5,916	21	1,009	503	2	1,094	23
Germany.....	30,554	33	2,083	1,550	8	3,073	718
Greece.....	11,413	2	45	387	.....	3,087	14
Holland.....	1,592	7	21	27	3	.....	2
Hungary.....	1,996	7	186	55	.....	130	33
Ireland.....	222,862	322	4,629	11,854	30	23,793	953
Italy.....	85,056	390	3,059	2,026	.....	11,809	302
Newfoundland.....	1,761	4	5	43	1	613	.....
Norway.....	5,432	14	51	164	8	444	36
Portugal.....	25,445	1,303	7	15,890	220	807	1
Russia.....	117,200	32	1,612	4,712	2	14,307	1,660
Scotland.....	28,411	74	1,039	2,118	9	4,361	135
Sweden.....	39,560	93	280	1,052	9	3,274	421
Turkey in Asia.....	12,546	7	175	530	.....	3,490	8
Turkey in Europe.....	3,592	1	64	419	.....	808	8
Wales.....	1,513	2	202	171	1	123	10
Other foreign countries.....	5,580	37	210	491	1	421	89
NATIVE WHITE: Both parents born in—							
Austria.....	17,313	.....	1,235	2,718	3	1,183	566
Canada—French.....	111,952	44	4,428	25,672	.....	16,324	1,102
Canada—Other.....	61,275	177	288	1,625	13	8,933	410
Denmark.....	1,706	13	31	67	5	135	3
England.....	45,220	95	1,048	12,870	27	6,656	413
France.....	2,026	3	596	116	1	136	20
Germany.....	34,142	39	2,294	1,313	10	3,420	1,022
Ireland.....	315,425	359	8,358	16,955	38	34,447	1,615
Italy.....	42,607	136	1,334	1,082	1	4,118	121
Norway.....	2,170	2	13	50	.....	154	37
Russia.....	56,962	43	904	2,913	2	5,638	785
Scotland.....	14,602	40	653	1,138	1	1,901	75
Sweden.....	25,149	55	159	1,042	.....	1,858	400
All others of foreign parentage ²	116,271	1,067	2,330	21,141	412	12,986	723

¹ State total includes population (4) specially enumerated in 1890, not distributed by counties.

STATISTICS OF POPULATION.

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POPULATION FOR THE STATE AND FOR COUNTIES.

A minus sign (-) denotes decrease.]

SUBJECT.	THE STATE.	Barnstable.	Berkshire.	Bristol.	Dukes.	Essex.	Franklin.
SEX							
Total.. Male.....	1,655,248	13,564	52,184	156,537	2,201	216,803	22,109
Female.....	1,711,168	13,978	53,075	162,036	2,303	219,674	21,491
White.. Male.....	1,633,487	12,915	51,564	154,309	2,017	215,481	22,018
Female.....	1,691,439	13,452	52,489	160,060	2,147	218,646	21,443
Negro.. Male.....	18,748	507	563	2,052	101	1,004	71
Female.....	19,307	390	586	1,951	92	1,020	48
MALES OF VOTING AGE							
Total number.....	1,021,669	8,883	31,736	91,374	1,478	136,351	13,740
Number in 1900.....	845,465	8,753	27,990	69,716	1,520	103,703	12,372
Native white—Native parentage.....	334,346	5,892	12,492	22,711	972	48,546	7,748
Number in 1900.....	320,043	6,035	11,659	21,514	1,071	46,951	8,110
Native white—Foreign or mixed parentage.....	218,484	851	7,853	18,113	123	26,128	2,126
Number in 1900.....	167,534	693	6,586	12,071	101	19,103	1,536
Native white—Mixed parentage.....	106,905	544	5,853	14,543	71	19,284	1,525
Foreign-born white.....	51,579	2,000	3,570	6,570	52	6,844	601
Number in 1900.....	453,001	1,700	10,994	49,087	274	60,711	3,811
Negro.....	345,522	1,216	8,311	35,254	258	41,772	5,173
Number in 1900.....	12,591	276	344	1,307	64	670	41
Indian, Chinese, Japanese, and all other.....	10,450	163	301	876	75	372	31
Number in 1900.....	2,047	84	53	156	45	296	14
PER CENT OF TOTAL.							
Native white—Native parentage.....	32.7	66.5	39.4	24.9	65.8	35.6	56.4
Native white—Foreign or mixed parentage.....	21.4	9.6	24.7	19.8	8.3	19.2	15.5
Foreign-born white.....	44.4	19.9	34.6	53.7	18.5	44.5	27.7
Negro.....	1.2	3.1	1.1	1.4	4.3	0.5	0.3
CITIZENSHIP OF FOREIGN-BORN WHITE.							
Naturalized.....	189,126	506	4,830	18,166	102	24,246	1,337
Having first papers.....	30,016	89	436	2,012	15	3,398	126
Alien.....	212,033	1,090	5,164	26,758	142	30,569	2,112
Unknown.....	22,426	75	514	2,151	14	2,498	236
ILLITERACY							
ILLITERATE MALES OF VOTING AGE.							
Total number illiterate.....	61,909	506	1,718	11,878	133	9,174	867
Per cent illiterate.....	6.1	5.7	5.4	13.0	9.0	6.7	6.3
Per cent in 1900.....	6.4	7.5	7.4	12.1	8.8	6.2	6.0
Native white, number illiterate.....	3,872	50	325	617	16	366	110
Per cent illiterate.....	0.7	0.7	1.6	1.5	1.5	0.5	1.1
Foreign-born white, number illiterate.....	56,504	373	1,352	10,948	102	8,671	750
Per cent illiterate.....	12.5	21.2	12.3	22.3	37.2	14.3	19.7
Negro, number illiterate.....	1,186	83	37	290	12	87	6
Per cent illiterate.....	9.4	30.1	10.8	22.2	.....	13.0	.....
PERSONS 10 YEARS OLD AND OVER.							
Total number.....	2,742,684	22,836	85,273	252,676	3,769	357,817	35,542
Number illiterate.....	141,541	1,104	3,679	27,281	274	20,406	1,698
Per cent illiterate.....	5.2	4.8	4.3	10.8	7.3	5.7	4.8
Native white, number.....	1,687,135	13,318	60,541	134,039	2,880	221,943	27,775
Number illiterate.....	9,163	129	622	1,604	29	943	199
Per cent illiterate.....	0.5	0.7	1.0	1.2	1.0	0.4	0.7
Foreign-born white, number.....	1,020,594	3,650	23,748	115,286	620	133,951	7,644
Number illiterate.....	129,412	789	2,990	24,977	216	19,258	1,491
Per cent illiterate.....	12.7	21.6	12.6	21.7	34.8	14.4	19.5
Negro, number.....	31,718	662	927	3,154	151	1,700	103
Number illiterate.....	2,584	185	63	672	26	154	7
Per cent illiterate.....	8.1	27.9	6.8	21.3	17.2	9.1	6.8
PERSONS 10 TO 20 YEARS, INCLUSIVE.							
Total number.....	646,530	4,571	21,139	65,250	708	82,603	8,221
Number illiterate.....	12,133	62	265	2,585	10	2,370	133
Per cent illiterate.....	1.9	1.4	1.3	4.0	1.4	2.9	1.7
SCHOOL AGE AND ATTENDANCE							
Total number 6 to 20 years, inclusive.....	881,024	6,368	28,784	89,598	989	111,569	11,199
Number attending school.....	588,929	4,681	18,898	55,030	741	73,651	7,591
Per cent attending school.....	66.7	73.5	65.7	61.4	74.9	66.0	67.8
Number 6 to 9 years.....	234,494	1,797	7,645	24,348	281	28,966	2,978
Number attending school.....	213,229	1,614	6,951	21,434	233	26,619	2,653
Number 10 to 14 years.....	284,960	2,236	9,404	28,644	358	35,790	3,662
Number attending school.....	269,200	2,127	8,891	26,405	348	33,829	3,470
Number 15 to 17 years.....	171,635	1,270	5,711	17,775	182	22,016	2,210
Number attending school.....	77,989	737	2,297	5,254	121	9,920	1,082
Number 18 to 20 years.....	189,635	1,065	6,024	18,831	168	24,797	2,349
Number attending school.....	27,611	203	759	1,837	34	3,283	386
PERSONS 6 TO 14 YEARS, INCLUSIVE.							
Total number.....	519,454	4,033	17,049	52,992	639	64,756	6,640
Number attending school.....	482,429	3,741	15,842	47,889	586	60,448	6,123
Per cent attending school.....	92.9	92.8	92.9	90.4	91.7	93.3	92.2
Native white—Native parentage, number.....	168,704	2,298	8,295	12,239	295	22,577	3,841
Number attending school.....	158,385	2,146	7,733	11,427	274	21,430	3,580
Per cent attending school.....	93.9	93.4	93.2	93.4	92.9	94.9	93.2
Native white—Foreign or mixed parentage, number.....	297,757	1,321	7,489	33,035	261	35,341	2,541
Number attending school.....	277,139	1,231	6,982	29,903	239	32,980	2,316
Per cent attending school.....	93.2	93.2	93.2	90.5	91.6	93.3	91.1
Foreign-born white, number.....	47,596	162	1,074	7,188	33	6,551	234
Number attending school.....	41,941	145	952	6,088	31	5,776	207
Per cent attending school.....	88.1	89.5	88.6	84.7	.....	88.2	88.5
Negro, number.....	5,226	201	191	525	18	284	23
Number attending school.....	4,806	172	175	467	15	259	19
Per cent attending school.....	92.0	85.6	91.6	89.0	.....	91.2	.....
DWELLINGS AND FAMILIES							
Dwellings, number.....	511,926	7,571	20,270	42,052	1,315	70,826	9,168
Families, number.....	734,013	8,020	23,047	68,571	1,379	96,734	10,610

² Native whites having both parents born in countries other than specified, and also those having both parents of foreign birth but born in different countries.

TABLE I.—COMPOSITION AND CHARACTERISTICS OF THE

SUBJECT.	Hampden. ¹	Hampshire. ¹	Middlesex. ¹	Nantucket.	Norfolk. ¹	Plymouth.	Suffolk. ¹	Worcester.
POPULATION								
Total population, 1910.....	231,369	63,327	669,915	2,962	187,506	144,337	731,388	399,697
1900.....	175,003	58,820	565,090	3,006	151,539	113,085	611,417	346,958
1890.....	135,713	51,859	431,167	3,268	118,950	92,700	484,780	280,787
1880.....	104,142	47,232	317,830	3,727	96,507	74,018	387,927	226,897
1870.....	78,409	44,388	274,353	4,123	80,443	65,365	270,802	192,716
Increase, 1900-1910.....	55,766	4,507	104,210	-44	35,967	30,352	119,971	52,699
Per cent of increase.....	31.8	7.7	18.4	-1.5	23.7	26.6	19.6	15.2
Increase, 1890-1900.....	39,890	6,961	134,529	-262	32,580	21,285	126,637	60,171
Per cent of increase.....	29.4	13.4	31.2	-8.0	27.4	23.0	26.1	23.6
Land area (square miles).....	636	585	832	51	410	675	51	1,566
Population per square mile, 1910.....	363.8	108.3	805.2	58.1	457.3	213.8	14,340.9	260.8
URBAN AND RURAL TERRITORY.								
Urban, 1910—Places of 2,500 or more in 1910.....	219,142	40,735	639,482	2,962	173,936	117,026	731,388	353,736
Same places in 1900.....	163,028	42,003	536,510	3,006	139,535	89,833	611,417	298,532
Per cent of increase, 1900-1910.....	35.6	11.1	19.2	-1.5	24.7	30.3	19.6	18.5
Rural, 1910—Remainder of county in 1910.....	12,227	10,592	30,433	.....	13,570	27,311	.....	45,921
Same territory in 1900.....	11,975	10,767	29,186	.....	12,004	24,152	.....	45,426
Per cent of increase, 1900-1910.....	2.1	-1.0	4.3	.....	13.0	13.1	.....	-5.2
Urban, 1900—Places of 2,500 or more in 1900.....	163,028	42,003	536,687	3,006	140,026	89,833	611,417	299,535
Rural, 1900—Remainder of county in 1900.....	11,975	10,767	29,009	.....	11,513	24,152	.....	47,423
Per cent in places of 2,500 or more, 1910.....	94.7	78.7	95.5	100.0	92.8	81.1	100.0	88.5
Per cent in places of 2,500 or more, 1900.....	93.2	71.5	94.9	100.0	92.4	78.8	100.0	86.3
COLOR AND NATIVITY								
White.....	229,504	62,990	660,888	2,926	186,562	141,782	716,126	397,607
Number in 1900.....	174,180	58,322	557,888	2,958	150,658	112,752	597,718	344,859
Number in 1890.....	134,532	51,566	427,400	3,228	118,480	92,040	476,433	279,222
Negro.....	1,757	281	8,583	35	797	2,484	13,886	1,847
Number in 1900.....	1,312	390	7,259	46	784	1,732	12,408	1,319
Number in 1890.....	1,071	278	5,604	40	477	1,005	8,845	1,485
Black.....	1,338	171	6,455	8	593	898	9,076	1,399
Mulatto.....	419	110	2,128	27	204	1,046	4,810	458
Indian, Chinese, Japanese, and all other (see Tables 1 and 16).....	108	56	444	1	147	71	1,376	203
Native white—Native parentage.....	73,675	26,148	227,105	1,922	74,726	70,174	175,120	132,766
Number in 1900.....	62,168	27,547	207,724	2,255	65,320	65,714	163,847	127,316
Native white—Foreign or mixed parentage.....	89,262	20,087	294,450	580	60,990	38,834	279,112	142,762
Number in 1900.....	69,897	17,062	180,017	458	46,614	25,348	223,571	116,345
Native white—Foreign parentage.....	61,344	14,384	105,689	279	42,230	20,408	211,391	103,813
Native white—Mixed parentage.....	21,918	5,803	68,761	307	18,790	12,426	67,721	38,949
Foreign-born white.....	72,567	16,165	199,333	418	50,846	32,774	261,894	122,079
Number in 1900.....	52,716	15,785	170,155	266	39,719	21,690	210,300	101,709
PER CENT OF TOTAL POPULATION.								
Native white—Native parentage.....	31.8	41.3	33.9	64.9	39.9	48.6	23.9	33.2
Per cent in 1900.....	35.4	46.8	36.7	74.4	45.1	57.7	26.8	36.8
Native white—Foreign or mixed parentage.....	36.0	32.7	35.0	19.8	32.5	26.9	38.2	35.7
Per cent in 1900.....	35.8	29.0	31.8	15.2	30.1	22.2	36.6	33.2
Foreign-born white.....	31.4	25.5	29.8	14.1	27.1	22.7	35.8	30.5
Per cent in 1900.....	30.0	23.4	30.1	8.8	26.2	19.0	34.4	29.3
Negro.....	0.8	0.4	1.3	1.2	0.4	1.7	1.9	0.5
Per cent in 1900.....	0.7	0.7	1.3	1.5	0.5	1.0	2.0	0.5
FOREIGN NATIONALITIES								
FOREIGN-BORN WHITE: Born in—								
Atlantic islands.....	2	.....	239	.....	36	182	173	42
Austria.....	11,605	2,460	2,799	.....	276	105	2,612	3,221
Belgium.....	46	4	310	1	21	16	799	53
Canada—French.....	10,384	4,020	20,959	3	1,819	2,343	3,038	25,958
Canada—Other.....	3,064	778	47,661	56	10,959	0,020	51,732	9,479
Denmark.....	190	29	890	1	208	123	1,097	358
England.....	4,088	1,000	10,064	38	4,541	2,415	15,261	7,365
Finland.....	187	9	1,494	1	1,180	288	467	5,323
France.....	621	63	585	2	227	138	1,117	421
Germany.....	3,169	1,020	3,079	4	1,663	811	9,089	3,015
Greece.....	643	78	4,664	1	133	191	1,526	642
Holland.....	23	2	179	2	70	88	515	642
Hungary.....	335	70	355	2	83	46	448	246
Ireland.....	14,751	3,000	51,835	62	14,413	0,206	68,041	22,307
Italy.....	4,786	362	11,142	.....	4,812	3,411	33,084	9,207
Newfoundland.....	18	4	233	.....	72	40	610	108
Norway.....	89	5	1,318	.....	490	156	2,021	636
Portugal.....	21	6	4,040	210	144	1,348	1,267	52
Russia.....	0,730	2,508	13,832	9	3,090	4,278	40,386	15,022
Scotland.....	3,205	414	5,333	11	2,803	665	5,506	2,737
Sweden.....	1,018	121	7,875	10	3,020	3,104	7,433	10,560
Turkey in Asia.....	395	21	2,003	.....	288	313	2,475	2,822
Turkey in Europe.....	174	36	510	.....	47	142	635	758
Wales.....	62	12	265	1	123	60	338	88
Other foreign countries.....	307	117	1,010	4	313	179	2,024	377
NATIVE WHITE: Both parents born in—								
Austria.....	6,088	1,524	1,234	.....	104	46	1,199	1,473
Canada—French.....	13,454	3,652	10,155	1	1,595	2,432	2,040	25,053
Canada—Other.....	1,200	247	10,128	13	4,358	2,127	10,352	3,404
Denmark.....	145	17	521	.....	108	36	373	242
England.....	1,998	554	8,320	21	2,241	1,162	6,150	3,650
France.....	231	20	204	.....	139	64	405	91
Germany.....	3,339	1,098	3,008	7	2,041	895	10,908	4,091
Ireland.....	21,434	4,898	72,538	87	17,911	10,033	92,224	34,828
Italy.....	2,456	174	5,844	.....	2,504	1,957	18,338	4,042
Norway.....	18	7	688	.....	163	33	697	308
Russia.....	3,230	1,242	6,042	5	1,454	1,711	25,254	6,839
Scotland.....	1,588	275	2,080	10	1,432	352	2,613	1,548
Sweden.....	1,095	82	4,943	5	1,703	2,292	3,742	7,713
All others of foreign parentage.....	5,071	1,094	22,559	130	6,417	3,268	27,030	10,531

¹ For changes in boundaries, etc., see page 612.

STATISTICS OF POPULATION.

POPULATION FOR THE STATE AND FOR COUNTIES—Continued.

SUBJECT.	Hampden. ¹	Hampshire. ¹	Middlesex. ¹	Nantucket.	Norfolk. ¹	Plymouth.	Suffolk. ¹	Worcester.
SEX								
Total.. Male.....	113,624	30,700	321,474	1,361	39,439	73,707	360,261	201,284
Female.....	117,745	32,627	348,441	1,601	38,067	70,630	371,127	198,373
White.. Male.....	112,712	30,518	317,095	1,347	38,978	72,143	352,173	200,217
Female.....	116,792	32,472	343,793	1,579	37,584	69,639	363,953	197,390
Negro.. Male.....	808	134	3,963	13	338	1,605	6,802	887
Female.....	949	147	4,620	22	459	979	7,084	960
MALES OF VOTING AGE								
Total number.....	68,080	18,142	197,018	941	55,936	48,527	226,841	122,642
Number in 1900.....	60,434	16,995	166,116	952	45,162	37,185	191,160	105,903
Native white—Native parentage.....	21,519	7,266	67,518	638	22,402	23,358	53,404	39,880
Number in 1900.....	18,535	7,858	63,804	746	19,595	21,670	48,472	39,512
Native white—Foreign or mixed parentage.....	15,005	3,946	42,653	113	11,902	8,505	54,824	26,342
Number in 1900.....	10,286	3,219	31,747	112	8,832	5,457	44,556	21,325
Native white—Foreign parentage.....	11,712	3,109	32,104	54	8,785	6,380	42,248	20,693
Native white—Mixed parentage.....	3,293	837	10,549	59	3,117	2,125	12,576	5,649
Foreign-born white.....	30,941	6,830	84,132	181	21,289	15,610	112,262	55,719
Number in 1900.....	21,139	5,773	68,058	86	16,374	9,671	87,247	44,269
Negro.....	524	77	2,328	8	232	1,001	5,160	559
Number in 1900.....	372	109	2,020	6	223	423	4,684	558
Indian, Chinese, Japanese, and all other.....	91	23	387	1	111	53	1,191	142
PER CENT OF TOTAL.								
Native white—Native parentage.....	31.6	40.1	34.3	67.3	40.0	48.1	23.5	32.5
Native white—Foreign or mixed parentage.....	22.0	21.8	21.6	12.0	21.3	17.5	24.2	21.5
Foreign-born white.....	45.4	37.6	42.7	19.2	38.1	32.2	49.5	45.4
Negro.....	0.8	0.4	1.2	0.9	0.4	2.1	2.3	0.5
CITIZENSHIP OF FOREIGN-BORN WHITE.								
Naturalized.....	11,258	2,468	38,495	31	9,542	6,149	51,882	20,114
Having first papers.....	1,767	238	5,068	15	1,544	1,000	11,323	2,934
Alien.....	16,269	3,671	36,094	96	8,853	7,653	44,271	29,291
Unknown.....	1,647	453	4,475	39	1,350	808	4,786	3,380
ILLITERACY								
ILLITERATE MALES OF VOTING AGE.								
Total number illiterate.....	5,323	1,167	7,705	77	2,003	2,526	10,285	5,537
Per cent illiterate.....	7.8	6.4	3.9	8.2	3.6	5.2	4.5	7.0
Per cent in 1900.....	9.6	9.3	5.0	3.9	4.1	4.9	4.5	8.5
Native white, number illiterate.....	375	144	381	11	137	279	197	864
Per cent illiterate.....	1.0	1.3	0.3	1.5	0.4	0.9	0.2	1.3
Foreign-born white, number illiterate.....	4,897	1,015	7,134	65	1,840	1,917	9,800	7,640
Per cent illiterate.....	15.8	14.9	8.5	35.9	8.6	12.3	8.7	13.7
Negro, number illiterate.....	37	4	129	1	13	352	137	18
Per cent illiterate.....	7.1	.....	5.5	.....	5.6	33.2	2.7	3.2
PERSONS 10 YEARS OLD AND OVER.								
Total number.....	186,176	51,455	548,079	2,528	154,414	119,968	588,501	323,650
Number illiterate.....	11,992	2,592	17,795	130	4,347	4,563	27,016	18,664
Per cent illiterate.....	6.4	5.0	3.2	5.1	2.8	3.8	4.5	5.8
Native white, number.....	114,343	35,378	346,119	2,086	103,918	86,033	330,456	203,406
Number illiterate.....	932	278	1,094	19	371	431	589	1,923
Per cent illiterate.....	0.8	0.8	0.3	0.9	0.4	0.5	0.2	0.9
Foreign-born white, number.....	70,263	15,784	194,547	407	49,662	31,945	254,571	118,516
Number illiterate.....	10,966	2,302	16,269	110	3,925	3,625	25,831	16,683
Per cent illiterate.....	15.6	14.6	8.4	27.0	7.9	11.3	10.1	14.1
Negro, number.....	1,464	238	6,981	34	692	1,919	12,152	1,541
Number illiterate.....	78	8	368	1	32	499	431	60
Per cent illiterate.....	5.3	3.4	5.3	.....	4.6	26.0	3.5	3.9
PERSONS 10 TO 20 YEARS, INCLUSIVE.								
Total number.....	47,200	13,010	128,050	439	34,234	25,689	135,797	79,619
Number illiterate.....	1,053	241	1,416	8	363	320	1,774	1,528
Per cent illiterate.....	2.2	1.9	1.1	1.8	1.1	1.2	1.3	1.9
SCHOOL AGE AND ATTENDANCE								
Total number 6 to 20 years, inclusive.								
Number attending school.....	63,946	17,502	174,507	618	46,929	34,879	185,724	108,414
Per cent attending school.....	41,113	11,358	121,309	381	33,536	23,740	126,474	69,526
Number attending school.....	64.3	64.9	69.5	61.9	71.5	68.1	68.1	64.1
Number 6 to 9 years.....	16,746	4,492	46,457	177	12,695	9,190	49,927	28,795
Number attending school.....	15,009	4,049	42,945	89	11,782	8,450	45,829	25,517
Number 10 to 14 years.....	20,108	5,667	56,767	208	15,462	11,345	60,706	34,603
Number attending school.....	18,928	5,333	54,003	197	14,848	10,812	57,880	32,329
Number 15 to 17 years.....	12,436	3,463	34,050	116	9,033	6,718	35,171	21,484
Number attending school.....	5,267	1,406	17,770	71	5,167	3,358	17,011	8,538
Number 18 to 20 years.....	14,656	3,880	37,233	115	9,739	7,626	39,920	23,532
Number attending school.....	1,919	570	6,591	24	1,739	1,120	5,954	3,142
PERSONS 6 TO 14 YEARS, INCLUSIVE.								
Total number.....	36,854	10,159	103,224	385	28,157	20,535	110,633	63,398
Number attending school.....	33,937	9,382	96,948	286	26,630	19,282	103,509	57,846
Per cent attending school.....	92.1	92.4	93.9	74.3	94.6	93.8	93.6	91.2
Native white—Native parentage, number.....	11,948	4,487	33,602	219	11,051	9,602	27,149	21,101
Number attending school.....	11,235	4,199	31,722	166	10,455	9,082	25,450	19,486
Per cent attending school.....	94.0	93.0	94.4	75.8	94.8	94.0	93.7	92.3
Native white—Foreign or mixed parentage, number.....	21,204	5,010	60,776	149	15,311	9,275	69,583	36,461
Number attending school.....	19,449	4,610	57,305	109	14,534	8,710	65,504	33,267
Per cent attending school.....	91.7	92.0	94.3	73.2	94.9	93.9	94.1	91.2
Foreign-born white, number.....	3,438	597	7,382	13	1,674	1,326	12,392	5,322
Number attending school.....	3,001	514	6,538	7	1,526	1,190	11,148	4,818
Per cent attending school.....	87.3	86.1	88.6	.....	91.2	89.7	90.0	87.1
Negro, number.....	259	61	1,455	4	109	329	1,476	288
Number attending school.....	247	55	1,375	4	104	277	1,376	261
Per cent attending school.....	95.4	.....	94.5	.....	95.4	84.2	93.2	90.6
DWELLINGS AND FAMILIES								
Dwellings, number.....	32,033	11,738	113,865	817	35,091	27,330	82,270	57,580
Families, number.....	48,308	13,657	147,630	915	41,507	34,618	152,631	86,386

¹ Native whites having both parents born in countries other than specified, and also those having both parents of foreign birth but born in different countries.

STATISTICS OF POPULATION.

POPULATION FOR CITIES OF 25,000 OR MORE—Continued.

SUBJECT.	Lowell. ¹	Lynn.	Malden.	New Bedford.	Newton. ¹	Pittsfield. ¹	Quincy.	Salem.	Somerville. ¹	Springfield.	Taunton.	Waltham.	Worcester.
MALES OF VOTING AGE													
Total number	31,300	29,171	12,218	28,263	10,817	10,236	9,820	12,629	22,883	27,360	10,236	7,952	45,601
Number in 1900	27,059	21,485	9,496	17,162	9,265	6,187	6,816	10,097	18,148	18,473	9,216	6,689	35,743
Native white—Native parentage	5,889	11,167	4,379	5,778	4,615	3,936	2,787	3,869	9,226	10,906	3,511	3,015	12,343
Number in 1900	6,259	10,233	4,143	4,967	4,129	2,833	2,258	3,721	7,733	8,467	3,445	2,682	11,819
Native white—Foreign or mixed parentage	7,156	5,642	2,296	4,353	2,011	2,985	1,997	2,980	4,728	6,008	2,421	1,834	9,988
Number in 1900	6,892	5,766	1,564	2,486	1,433	1,869	1,478	2,297	5,237	3,779	1,982	1,367	7,441
Native white—Foreign parentage	5,738	4,007	1,667	3,561	1,473	2,205	1,533	2,296	3,390	4,526	1,881	1,391	7,883
Native white—Mixed parentage	1,418	1,635	629	792	538	780	464	684	1,338	1,482	540	443	2,105
Foreign-born white	18,191	12,038	5,404	17,151	4,061	3,176	4,996	5,696	8,814	9,942	4,206	3,068	22,816
Number in 1900	16,305	7,802	3,658	9,134	3,538	1,898	3,351	3,989	7,021	5,888	3,663	2,682	16,541
Negro	44	218	119	934	100	103	15	53	54	450	91	9	384
Number in 1900	47	227	109	517	116	78	6	54	43	294	108	14	339
Indian, Chinese, Japanese and all other	50	106	20	47	30	36	25	31	61	54	7	26	70
PER CENT OF TOTAL.													
Native white—Native parentage	18.7	38.3	35.8	20.4	42.7	38.5	28.4	30.6	40.3	39.9	34.3	37.9	27.1
Native white—Foreign or mixed parentage	22.9	19.3	18.8	15.4	18.6	29.2	20.3	23.6	20.7	22.0	23.7	21.9	21.9
Foreign-born white	58.1	41.3	44.2	60.7	37.5	31.0	50.9	45.1	38.5	36.3	41.1	38.6	50.0
Negro	0.1	0.7	1.0	3.3	0.9	1.0	0.2	0.4	0.2	1.6	0.9	0.1	0.8
CITIZENSHIP OF FOREIGN-BORN WHITE.													
Naturalized	7,028	4,931	2,941	5,441	1,829	1,540	2,367	2,443	4,263	4,182	1,506	1,525	9,126
Having first papers	427	978	536	788	310	135	527	221	671	792	117	216	1,514
Alien	9,897	5,522	1,789	10,084	1,689	1,353	1,922	2,708	3,403	4,520	2,200	1,146	11,184
Unknown	839	607	188	838	233	199	180	234	477	448	383	181	992
ILLITERACY													
ILLITERATE MALES OF VOTING AGE.													
Total number illiterate	2,266	1,000	285	4,085	572	447	280	1,015	538	1,434	1,267	279	2,732
Per cent illiterate	7.2	3.4	1.8	14.5	5.3	4.4	2.9	8.0	2.4	5.2	12.4	3.5	6.0
Per cent in 1900	9.6	2.7	2.4	13.2	3.7	4.8	3.8	8.5	2.7	4.7	8.2	5.0	5.0
Native white, number illiterate	81	46	7	149	6	23	15	37	22	87	77	61	90
Per cent illiterate	0.6	0.3	0.1	1.5	0.1	0.3	0.3	0.5	0.2	0.6	1.3	1.3	0.4
Foreign-born white, number illiterate	2,183	928	202	3,712	551	417	262	965	501	1,316	1,147	213	2,627
Per cent illiterate	12.0	7.7	3.7	21.6	13.6	13.1	5.2	16.9	5.7	13.2	27.3	6.9	11.5
Negro, number illiterate	1	15	9	217	10	4			5	24	41	2	9
Per cent illiterate		6.9	7.6	23.2	10.0	3.9				5.3			2.3
PERSONS 10 YEARS OLD AND OVER.													
Total number	86,486	74,420	35,772	77,088	32,987	26,388	25,916	34,823	63,249	73,464	27,671	23,391	118,555
Number illiterate	5,172	2,261	774	9,350	1,231	963	621	2,083	1,232	3,311	2,601	773	5,977
Per cent illiterate	6.0	3.0	2.2	12.1	3.7	3.6	2.4	6.0	1.9	4.5	9.4	3.3	5.0
Native white, number	44,146	47,219	22,308	34,197	21,558	19,577	15,378	21,551	42,672	49,861	17,952	15,798	70,265
Number illiterate	240	112	28	387	31	70	43	105	47	231	190	227	291
Per cent illiterate	0.5	0.2	0.1	1.1	0.1	0.4	0.3	0.5	0.1	0.5	1.1	1.4	0.4
Foreign-born white, number	42,170	26,506	13,061	40,578	10,999	6,518	10,474	13,098	20,334	22,288	9,496	7,508	47,181
Number illiterate	4,928	2,102	709	8,423	1,159	882	572	1,961	1,163	3,015	2,337	537	5,641
Per cent illiterate	11.7	7.9	5.4	20.8	10.5	13.5	5.5	15.0	5.7	13.5	24.6	7.2	12.0
Negro, number	113	577	382	2,247	394	257	36	143	181	1,253	216	56	1,031
Number illiterate	3	36	30	532	35	8	1	4	12	58	72	6	36
Per cent illiterate	2.7	6.2	7.9	23.7	8.9	3.1		2.8	6.6	4.6	33.3		3.5
PERSONS 10 TO 20 YEARS, INCLUSIVE.													
Total number	21,107	10,083	8,983	19,754	7,544	5,957	6,527	8,592	13,757	16,520	6,550	5,534	28,001
Number illiterate	436	241	27	908	137	65	49	224	55	199	204	130	475
Per cent illiterate	2.1	1.5	0.3	4.9	1.8	1.1	0.8	2.6	0.4	1.2	3.1	2.3	1.7
SCHOOL AGE AND ATTENDANCE													
Total number 6 to 20 years, inclusive	28,570	21,328	12,296	26,784	10,255	8,067	9,086	11,829	18,993	22,158	8,991	7,309	38,277
Number attending school	13,781	13,781	8,642	15,300	7,700	5,230	6,380	7,881	13,923	15,182	5,507	5,092	24,928
Per cent attending school	61.6	64.6	70.3	57.1	75.1	64.8	70.1	66.6	73.3	68.5	61.3	69.7	65.1
Number 6 to 9 years	7,463	5,295	3,313	7,030	2,711	2,110	2,569	3,237	5,236	5,638	2,441	1,775	10,276
Number attending school	6,741	4,920	2,937	6,021	2,569	1,978	2,386	3,041	4,937	5,242	2,148	1,619	9,089
Number 10 to 14 years	8,656	6,635	4,171	8,296	3,290	2,513	3,022	3,770	6,333	6,905	2,849	2,344	12,637
Number attending school	7,979	6,298	3,981	7,479	3,174	2,390	2,921	3,540	6,037	6,079	2,605	2,205	11,333
Number 15 to 17 years	5,722	4,293	2,353	5,371	2,012	1,590	1,689	2,281	3,645	4,407	1,571	1,529	7,392
Number attending school	2,126	1,948	1,297	1,276	1,347	648	825	1,008	2,123	2,379	567	901	3,202
Number 18 to 20 years	6,729	5,105	2,459	6,087	2,242	1,854	1,816	2,541	3,779	5,148	1,920	1,661	8,572
Number attending school	757	616	427	524	610	214	248	292	776	882	186	367	1,304
PERSONS 6 TO 14 YEARS, INCLUSIVE.													
Total number	10,119	11,930	7,484	15,326	6,001	4,623	5,591	7,007	11,569	12,603	5,290	4,119	22,313
Number attending school	14,720	11,218	6,918	13,500	5,743	4,368	5,307	6,581	11,024	11,921	4,754	3,324	20,422
Per cent attending school	91.3	94.0	92.4	88.1	95.7	94.5	94.9	93.9	95.3	94.0	89.9	82.8	91.5
Native white—Native parentage, number	3,235	4,125	1,917	2,537	2,356	2,401	1,511	2,237	3,986	4,933	1,939	1,436	6,388
Number attending school	3,024	3,899	1,780	2,341	2,203	2,273	1,440	2,153	3,796	4,078	1,802	1,324	5,917
Per cent attending school	93.5	94.5	92.9	92.3	96.1	94.7	95.3	96.2	95.2	94.3	92.9	92.2	92.6
Native white—Foreign or mixed parentage	10,966	6,460	4,788	9,455	3,277	1,892	3,520	4,098	6,993	6,305	2,872	2,417	13,741
Number attending school	10,054	6,108	4,448	8,396	3,148	1,797	3,343	3,826	6,635	6,091	2,581	2,261	12,543
Per cent attending school	91.7	94.6	92.9	88.8	96.1	95.0	95.0	93.4	95.7	95.2	89.9	93.5	91.3
Foreign-born white, number	1,906	1,235	685	2,965	306	280	556	650	607	1,036	432	249	2,011
Number attending school	1,632	1,111	601	2,435	274	254	521	583	553	950	327	224	1,800
Per cent attending school	85.6	90.0	87.7	82.1	89.5	90.7	93.7	89.7	91.1	91.7	75.7	90.0	89.5
Negro, number	12	110	94	367	60	50	3	19	43	204	47	16	170
Number attending school	10	100	89	327	57	44	3	16	40	197	44	14	159
Per cent attending school		90.9		89.1						96.6			93.5
DWELLINGS AND FAMILIES													
Dwellings, number	15,056	13,112	7,419	11,504	7,403	5,834	6,128	5,917	12,139	13,352	5,407	4,723	15,109
Families, number	21,932	19,786	9,895	20,820	8,236	6,748	7,081	9,265	13,440	19,968	7,276	5,796	30,743

¹ Native whites having both parents born in countries other than specified, and also those having both parents of foreign birth but born in different countries.

TABLE III.—COMPOSITION AND CHARACTERISTICS OF THE POPULATION FOR CITIES AND TOWNS OF 10,000 TO 25,000.

Table with columns for SUBJECT, TOTAL PLACES NAMED, and 13 cities/towns (Adams town to Melrose city). Rows include COLOR AND NATIVITY, FOREIGN NATIONALITIES, NATIVE WHITE: Both parents born in, SEX, MALES OF VOTING AGE, CITIZENSHIP OF FOREIGN-BORN WHITE, ILLITERACY, SCHOOL AGE AND ATTENDANCE, and DWELLINGS AND FAMILIES.

1 For changes in boundaries, etc., see page 612.

2 Native whites having both parents born in countries other than specified, and also those having both parents of foreign birth but born in different countries.

TABLE IV.—COMPOSITION AND CHARACTERISTICS OF THE POPULATION FOR TOWNS OF 2,500 TO 10,000.

SUBJECT.	TOTAL, TOWNS NAMED.	Abing-ton.	Agaw-am.	Ames-bury.	Am-herst.	An-dover.	Athol.	Ayer.	Barn-stable.	Barre.	Bel-mont.	Bille-rica.
SEX, COLOR, AND NATIVITY												
Total population, 1910.....	518,987	5,455	3,501	9,894	5,112	7,301	8,536	2,797	4,676	2,957	5,542	2,789
1900.....	451,140	4,489	2,530	9,473	5,028	6,813	7,001	2,440	4,304	2,059	3,929	2,775
Male.....	256,955	2,696	1,791	4,864	2,358	3,343	4,326	1,427	2,285	1,546	2,556	1,351
Female.....	262,032	2,759	1,710	5,030	2,754	3,958	4,210	1,370	2,391	1,411	2,986	1,438
Native white—Native parentage.....	221,734	3,205	1,429	4,021	3,273	2,739	5,005	1,413	3,267	1,366	2,126	1,106
Native white—Foreign or mixed parentage.....	102,614	1,841	1,226	3,226	1,007	2,190	1,874	798	681	638	1,826	998
Foreign-born white.....	130,871	885	826	2,685	661	2,227	1,038	574	502	952	1,572	662
Negro.....	3,426	19	18	10	146	144	15	12	138	.....	15	22
Indian, Chinese, and Japanese.....	342	5	2	2	26	1	4	.....	28	1	3	1
MALES OF VOTING AGE												
Total number.....	160,165	1,812	1,058	3,026	1,470	2,117	2,839	938	1,507	967	1,639	848
Native white—Native parentage.....	67,802	1,040	404	1,256	962	766	1,618	468	1,110	444	603	375
Native white—Foreign or mixed parentage.....	33,243	355	271	624	209	478	433	191	105	105	332	185
Foreign-born white.....	57,801	1,841	399	3,781	259	826	770	275	224	417	639	283
Naturalized.....	21,410	153	155	403	83	340	176	112	66	57	275	180
Negro.....	1,100	4	5	4	34	47	6	4	51	.....	2	4
ILLITERACY												
Total number 10 years old and over.....	425,771	4,579	2,748	8,248	4,294	6,182	7,125	2,318	3,901	2,424	4,569	2,287
Number illiterate.....	19,787	64	201	567	62	161	214	51	107	228	111	37
Native white 10 years old and over.....	295,279	3,702	1,024	5,091	3,510	3,014	5,531	1,743	3,235	1,532	3,014	1,619
Number illiterate.....	2,369	3	34	51	7	18	18	10	12	28	1	5
Foreign-born white 10 years old and over.....	127,388	857	810	2,548	642	2,157	1,570	563	543	891	1,537	652
Number illiterate.....	17,001	61	166	515	54	131	195	41	75	200	108	31
Negro 10 years old and over.....	2,785	15	12	7	118	11	12	108	.....	.....	15	15
Number illiterate.....	377	.....	1	1	1	12	1	20	.....	.....	2	1
Illiterate males of voting age.....	9,405	24	94	250	30	61	101	18	58	115	61	15
SCHOOL AGE AND ATTENDANCE												
Total number 6 to 20 years, inclusive.....	134,365	1,293	972	2,611	1,294	1,829	2,039	691	1,056	752	1,298	723
Number attending school.....	90,262	925	646	1,586	932	1,217	1,231	496	793	456	901	516
PERSONS 6 TO 14 YEARS, INCLUSIVE.												
Native white, number.....	73,574	722	551	1,292	693	885	1,102	302	507	344	754	408
Number attending school.....	68,522	669	521	1,179	656	842	941	376	550	315	654	387
Foreign-born white, number.....	5,177	30	41	106	25	121	63	19	28	70	38	20
Number attending school.....	4,461	30	30	86	22	108	56	14	27	55	33	18
Negro, number.....	554	8	2	2	34	29	4	.....	24	.....	6	6
Number attending school.....	495	8	2	2	30	27	.....	.....	20	.....	6	6
DWELLINGS AND FAMILIES												
Dwellings, number.....	101,187	1,169	694	2,085	1,051	1,492	1,607	565	1,283	618	931	653
Families, number.....	116,767	1,431	787	2,369	1,231	1,645	2,036	680	1,327	655	1,153	666

SUBJECT.	Black-stone.	Brain-tree.	Bridge-water.	Canton.	Chelms-ford.	Cohas-set.	Con-oord.	Dalton.	Dan-vers.	Dart-mouth.	Ded-ham.	Dracut.
SEX, COLOR, AND NATIVITY												
Total population, 1910.....	5,648	8,066	7,688	4,797	5,010	2,585	6,421	3,568	9,407	4,378	9,284	3,461
1900.....	5,721	5,081	5,806	4,684	3,084	2,759	5,652	3,014	8,542	3,660	7,457	3,253
Male.....	2,796	3,066	4,091	2,352	2,524	1,241	3,500	1,685	4,578	2,256	4,504	1,755
Female.....	2,852	4,100	2,697	2,445	2,486	1,344	2,921	1,883	4,829	2,122	4,780	1,706
Native white—Native parentage.....	1,424	3,770	2,969	1,772	1,911	1,288	2,631	1,053	4,033	2,187	2,980	996
Native white—Foreign or mixed parentage.....	2,533	2,416	2,271	1,840	1,740	750	2,108	1,105	2,855	1,065	3,529	1,424
Foreign-born white.....	1,690	1,857	2,317	1,156	1,350	520	1,640	492	1,908	1,072	2,719	1,055
Negro.....	10	10	126	17	8	26	28	46	6	24	54	6
Indian, Chinese, and Japanese.....	1	4	5	3	1	1	5	2	5	.....	3	.....
MALES OF VOTING AGE												
Total number.....	1,544	2,450	4,025	1,362	1,428	793	2,112	1,007	3,059	1,306	2,786	1,041
Native white—Native parentage.....	312	1,105	1,220	497	502	404	832	481	1,549	737	801	320
Native white—Foreign or mixed parentage.....	473	416	1,090	807	527	100	527	314	714	72	755	237
Foreign-born white.....	758	832	1,023	489	575	217	738	199	790	483	1,206	452
Naturalized.....	418	352	482	252	280	86	292	138	385	116	520	231
Negro.....	.....	3	81	7	1	11	13	11	2	9	21	2
ILLITERACY												
Total number 10 years old and over.....	4,432	6,472	6,729	3,913	4,064	2,137	5,457	2,913	8,080	3,384	7,518	2,727
Number illiterate.....	229	121	676	86	58	115	135	80	151	399	469	160
Native white 10 years old and over.....	2,780	4,060	4,321	2,771	2,749	1,602	3,789	2,420	6,190	2,331	4,796	1,698
Number illiterate.....	28	1	133	10	13	11	8	23	25	14	10	16
Foreign-born white 10 years old and over.....	1,651	1,801	2,283	1,125	1,307	511	1,695	457	1,870	1,034	2,673	1,024
Number illiterate.....	200	117	504	76	45	104	125	56	125	381	478	144
Negro 10 years old and over.....	.....	7	120	14	7	23	23	34	6	10	46	5
Number illiterate.....	.....	.....	38	.....	.....	.....	1	1	.....	4	1	.....
Illiterate males of voting age.....	94	63	572	34	10	62	81	37	64	194	264	68
SCHOOL AGE AND ATTENDANCE												
Total number 6 to 20 years, inclusive.....	1,802	2,071	1,243	1,389	1,523	610	1,834	941	2,126	1,221	2,337	964
Number attending school.....	1,190	1,442	831	1,038	1,140	484	1,009	654	1,506	807	1,652	633
PERSONS 6 TO 14 YEARS, INCLUSIVE.												
Native white, number.....	1,061	1,157	664	322	328	355	778	563	1,165	758	1,348	537
Number attending school.....	956	1,109	636	709	895	393	727	541	1,125	682	1,280	541
Foreign-born white, number.....	72	69	43	62	77	11	30	8	43	45	65	26
Number attending school.....	63	62	40	60	68	11	25	8	36	37	58	24
Negro, number.....	.....	2	3	2	2	2	.....	.....	.....	5	9	.....
Number attending school.....	.....	2	3	2	2	2	.....	.....	.....	5	8	.....
DWELLINGS AND FAMILIES												
Dwellings, number.....	921	1,792	1,062	980	1,033	558	1,163	689	1,630	964	1,771	713
Families, number.....	1,199	1,873	1,211	1,029	1,106	606	1,203	800	1,944	1,013	1,956	753

1 For changes in boundaries, etc., see page 612.

STATISTICS OF POPULATION.

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TABLE IV.—COMPOSITION AND CHARACTERISTICS OF THE POPULATION FOR TOWNS OF 2,500 TO 10,000—Contd.

SUBJECT.	Dudley.	East Bridge- water.	East- hamp- ton.	Easton.	Fair- haven.	Fal- mouth.	Fox- borough.	Frank- lin.	Grafton.	Great Bar- rington.	Hard- wick.	Hing- ham.
SEX, COLOR, AND NATIVITY												
Total population, 1910.....	4,267	3,363	8,524	5,139	5,122	3,144	3,863	5,641	5,705	5,926	3,524	4,965
1900.....	3,553	3,025	5,603	4,837	3,567	3,500	3,266	5,017	4,869	5,854	3,203	5,059
Male.....	2,196	1,689	4,142	2,907	2,424	1,575	2,048	2,807	2,779	2,820	1,836	2,289
Female.....	2,071	1,674	4,382	2,532	2,698	1,569	1,815	2,834	2,926	3,106	1,688	2,676
Native white—Native parentage.....	755	1,923	2,078	2,047	2,429	1,779	2,205	2,221	2,095	2,864	801	2,688
Native white—Foreign or mixed parentage.....	1,927	889	3,344	1,704	1,407	654	927	1,907	1,820	1,645	1,182	1,259
Foreign-born white.....	1,579	547	3,077	1,371	1,232	544	698	1,504	1,753	1,309	1,541	943
Negro.....	6	3	8	16	48	160	31	6	33	104	.....	75
Indian, Chinese, and Japanese.....	.....	1	17	1	6	7	2	3	4	4	.....	.....
MALES OF VOTING AGE												
Total number.....	1,160	1,076	2,337	1,641	1,442	1,006	1,429	1,737	1,781	1,754	1,075	1,492
Native white—Native parentage.....	187	653	528	628	726	625	788	627	697	793	223	817
Native white—Foreign or mixed parentage.....	266	169	577	310	161	73	255	382	389	376	187	273
Foreign-born white.....	704	253	1,227	698	538	245	377	722	681	555	665	388
Naturalized.....	172	113	404	380	173	79	125	248	187	199	136	153
Negro.....	3	.....	.....	4	15	61	7	3	11	26	.....	14
ILLITERACY												
Total number 10 years old and over.....	3,185	2,742	6,820	4,165	4,138	2,549	3,311	4,581	4,823	4,805	2,828	4,204
Number illiterate.....	530	67	702	78	324	158	36	268	490	303	324	133
Native white 10 years old and over.....	1,650	2,207	3,823	2,815	2,890	1,894	2,598	3,105	3,108	3,427	1,342	3,222
Number illiterate.....	36	9	69	14	27	15	5	20	131	19	13	11
Foreign-born white 10 years old and over.....	1,529	531	2,973	1,334	1,203	528	690	1,467	1,680	1,291	1,486	921
Number illiterate.....	494	58	633	63	291	110	30	247	354	278	311	121
Negro 10 years old and over.....	6	3	7	15	39	121	21	6	31	83	.....	61
Number illiterate.....	.....	.....	.....	1	5	33	1	.....	5	6	.....	1
Illiterate males of voting age.....	242	33	286	51	152	76	18	114	242	105	160	73
SCHOOL AGE AND ATTENDANCE												
Total number 6 to 20 years, inclusive.....	1,366	840	2,508	1,353	1,363	759	837	1,405	1,511	1,578	1,097	1,180
Number attending school.....	735	578	1,511	919	918	612	611	937	867	1,031	589	855
PERSONS 6 TO 14 YEARS, INCLUSIVE.												
Native white, number.....	737	521	1,179	782	805	445	453	782	741	850	454	676
Number attending school.....	620	479	1,093	716	731	425	433	707	674	795	421	638
Foreign-born white, number.....	81	15	148	53	53	21	18	53	91	22	86	27
Number attending school.....	63	11	128	39	48	17	17	41	69	15	74	20
Negro, number.....	.....	.....	.....	4	5	30	16	1	5	14	.....	9
Number attending school.....	.....	.....	.....	3	4	27	15	1	5	13	.....	8
DWELLINGS AND FAMILIES												
Dwellings, number.....	582	774	1,415	1,039	1,070	845	778	1,078	956	1,276	507	1,171
Families, number.....	812	853	1,684	1,222	1,269	864	915	1,304	1,129	1,364	598	1,228

SUBJECT.	Hol- brook.	Hollis- ton.	Hudson.	Ipswich.	Lee.	Leces- ter.	Lenox.	Lexing- ton.	Ludlow.	Man- chester.	Mans- field.	Marble- head.
SEX, COLOR, AND NATIVITY												
Total population, 1910.....	2,818	2,711	6,743	5,777	4,106	3,237	3,060	4,918	4,948	2,673	5,183	7,338
1900.....	2,229	2,598	5,454	4,658	3,596	3,416	2,942	3,831	3,536	2,522	4,006	7,532
Male.....	1,316	1,316	3,377	2,874	2,076	1,582	1,534	2,338	2,426	1,428	2,643	3,446
Female.....	1,500	1,395	3,366	2,903	2,030	1,655	1,526	2,580	2,522	1,247	2,540	3,892
Native white—Native parentage.....	1,700	1,402	2,686	2,178	2,024	1,371	1,195	2,275	1,082	1,083	2,835	4,886
Native white—Foreign or mixed parentage.....	733	790	2,248	1,337	1,154	1,221	1,128	1,473	1,550	740	1,306	1,569
Foreign-born white.....	382	516	1,790	2,251	841	644	754	1,143	2,309	847	1,020	865
Negro.....	1	1	15	8	87	1	52	25	5	2	15	14
Indian, Chinese, and Japanese.....	1	2	4	3	.....	.....	1	2	2	2	7	4
MALES OF VOTING AGE												
Total number.....	841	849	2,180	1,827	1,321	910	960	1,499	1,293	937	1,666	2,294
Native white—Native parentage.....	502	420	769	740	542	346	332	672	305	367	887	1,592
Native white—Foreign or mixed parentage.....	173	198	538	212	305	287	265	301	184	191	291	375
Foreign-born white.....	165	230	863	872	443	267	350	517	799	437	470	308
Naturalized.....	96	88	293	175	161	142	178	242	158	165	141	187
Negro.....	.....	.....	6	1	26	.....	12	7	3	.....	5	6
ILLITERACY												
Total number 10 years old and over.....	2,307	2,269	5,623	4,853	3,441	2,700	2,471	4,112	3,847	2,201	4,261	6,197
Number illiterate.....	16	56	198	505	49	85	73	104	292	56	130	72
Native white 10 years old and over.....	1,932	1,771	3,860	2,638	2,559	2,061	1,688	2,949	1,644	1,372	3,267	5,323
Number illiterate.....	3	7	5	11	17	10	4	4	50	4	15	22
Foreign-born white 10 years old and over.....	374	495	1,749	2,204	810	638	738	1,137	2,197	826	978	857
Number illiterate.....	13	49	193	491	30	75	67	99	240	52	115	48
Negro 10 years old and over.....	.....	1	10	3	72	1	44	24	4	1	11	13
Number illiterate.....	.....	.....	2	2	.....	.....	2	.....	1	.....	.....	1
Illiterate males of voting age.....	2	27	106	173	28	34	36	55	140	46	51	28
SCHOOL AGE AND ATTENDANCE												
Total number 6 to 20 years, inclusive.....	708	664	1,704	1,607	1,095	985	805	1,151	1,589	607	1,324	1,623
Number attending school.....	517	455	1,097	854	710	656	587	920	928	462	902	1,174
PERSONS 6 TO 14 YEARS, INCLUSIVE.												
Native white, number.....	445	375	923	662	603	581	470	675	666	353	742	968
Number attending school.....	435	342	850	634	515	529	444	661	629	345	692	936
Foreign-born white, number.....	6	32	58	106	32	18	15	190	23	50	11	11
Number attending school.....	6	22	50	80	26	14	16	15	180	23	46	9
Negro, number.....	.....	.....	.....	.....	15	.....	.....	2	1	.....	2	1
Number attending school.....	.....	.....	2	.....	15	.....	10	1	1	.....	1	1
DWELLINGS AND FAMILIES												
Dwellings, number.....	630	627	1,279	1,057	823	619	653	1,006	778	557	1,150	1,556
Families, number.....	709	713	1,538	1,222	925	718	659	1,098	824	640	1,272	2,041

TABLE IV.—COMPOSITION AND CHARACTERISTICS OF THE POPULATION FOR TOWNS OF 2,500 TO 10,000—Contd.

SUBJECT.	Maynard.	Medfield.	Medway.	Middleborough.	Millbury.	Milton.	Monson.	Montague.	Nantucket.	Natick.	Needham.	North Andover.
SEX, COLOR, AND NATIVITY												
Total population, 1910.....	6,390	3,466	2,696	8,214	4,740	7,924	4,758	6,866	2,962	9,866	5,026	5,529
1900.....	3,142	2,926	2,761	6,885	4,400	6,578	3,402	6,150	3,006	9,488	4,016	4,243
Male.....	3,317	1,448	1,322	4,124	2,359	3,533	2,327	3,492	1,361	4,773	2,372	2,701
Female.....	3,073	2,018	1,374	4,090	2,381	4,391	2,431	3,374	1,601	5,093	2,654	2,828
Native white—Native parentage.....	963	1,741	1,390	4,830	1,500	3,344	2,251	2,097	1,922	4,438	1,660	1,585
Native white—Foreign or mixed parentage.....	2,421	641	772	1,746	2,033	2,344	1,559	2,830	586	3,401	1,706	2,133
Foreign-born white.....	3,002	1,141	537	1,527	1,204	2,185	904	1,936	418	1,907	1,584	1,828
Negro.....	2	42	0	100	1	44	42	35	29	29	25	1
Indian, Chinese, and Japanese.....	2	1	1	11	2	7	2	3	1	1	1	2
MALES OF VOTING AGE												
Total number.....	2,071	1,186	855	2,670	1,967	2,121	1,522	2,016	941	3,139	1,444	1,674
Native white—Native parentage.....	274	634	442	1,559	413	950	727	626	638	1,277	462	459
Native white—Foreign or mixed parentage.....	391	152	195	340	403	405	380	465	113	926	329	409
Foreign-born white.....	1,403	382	210	709	544	743	399	923	181	926	644	804
Naturalized.....	349	65	112	225	202	402	156	375	31	499	268	379
Negro.....	1	17	.....	57	.....	13	15	.....	8	9	8	.....
ILLITERACY												
Total number 10 years old and over.....	5,014	3,249	2,272	6,882	3,795	6,619	4,076	5,426	2,528	8,364	4,126	4,475
Number illiterate.....	389	263	38	214	157	30	324	400	130	121	113	135
Native white 10 years old and over.....	2,109	2,070	1,757	5,309	2,621	4,404	3,143	3,516	2,086	6,373	2,502	2,718
Number illiterate.....	6	95	7	13	33	4	185	21	10	13	1	10
Foreign-born white 10 years old and over.....	2,902	1,130	512	1,475	1,171	2,167	894	1,907	417	1,905	1,542	1,754
Number illiterate.....	388	152	29	165	123	26	127	378	110	108	112	125
Negro 10 years old and over.....	1	42	2	87	1	41	37	.....	34	25	21	1
Number illiterate.....	.....	16	2	30	.....	.....	12	.....	1	.....	.....	.....
Illiterate males of voting age.....	180	85	12	111	44	10	116	182	77	53	48	49
SCHOOL AGE AND ATTENDANCE												
Total number 6 to 20 years, inclusive.....	1,523	396	655	2,011	1,357	2,051	1,181	1,958	616	2,439	1,293	1,443
Number attending school.....	832	271	479	1,273	876	1,603	725	1,257	351	1,805	897	1,018
PERSONS 6 TO 14 YEARS, INCLUSIVE.												
Native white, number.....	690	212	370	1,092	784	1,150	628	1,081	368	1,405	637	794
Number attending school.....	608	207	363	1,000	708	1,096	562	1,016	275	1,349	646	753
Foreign-born white, number.....	143	8	37	77	43	36	29	46	13	51	63	100
Number attending school.....	120	7	36	63	39	32	23	41	7	44	56	95
Negro, number.....	1	1	2	9	.....	6	7	.....	4	3	7	.....
Number attending school.....	.....	2	2	8	.....	6	6	.....	4	3	7	.....
DWELLINGS AND FAMILIES												
Dwellings, number.....	1,115	383	641	1,706	798	1,509	777	1,163	817	1,077	1,061	1,135
Families, number.....	1,239	419	731	2,104	1,083	1,635	953	1,532	915	2,384	1,152	1,214

SUBJECT.	North Attleborough.	North Brookfield.	Northbridge.	Norton.	Norwood.	Orange.	Oxford.	Palmer.	Pep-perell.	Providence-town.	Randolph.	Reading.
SEX, COLOR, AND NATIVITY												
Total population, 1910.....	9,562	3,075	8,807	2,544	8,014	5,282	3,361	8,610	2,953	4,369	4,301	5,816
1900.....	7,263	4,587	7,086	1,826	5,480	5,520	2,677	7,801	3,701	4,247	3,993	4,999
Male.....	4,783	1,452	4,706	1,311	4,129	2,561	1,638	4,312	1,492	2,196	2,091	2,770
Female.....	4,779	1,623	4,101	1,233	3,885	2,721	1,723	4,298	1,461	2,173	2,210	3,048
Native white—Native parentage.....	3,425	1,630	1,005	1,232	2,328	3,371	1,502	2,267	1,474	1,292	2,057	3,285
Native white—Foreign or mixed parentage.....	3,506	944	3,330	650	3,078	1,073	1,108	3,236	877	1,799	1,556	1,517
Foreign-born white.....	2,490	572	3,560	648	2,555	835	730	3,074	572	1,207	672	1,012
Negro.....	68	29	2	14	18	1	5	31	30	70	14	21
Indian, Chinese, and Japanese.....	15	.....	1	.....	35	2	10	2	.....	1	2	3
MALES OF VOTING AGE												
Total number.....	3,092	927	2,808	842	2,521	1,672	968	2,500	948	1,312	1,310	1,757
Native white—Native parentage.....	1,054	453	554	412	695	1,103	439	615	482	370	370	1,055
Native white—Foreign or mixed parentage.....	1,877	209	933	125	515	177	237	525	177	295	426	288
Foreign-born white.....	1,133	261	1,619	300	1,289	420	286	1,354	280	630	303	421
Naturalized.....	508	109	503	77	521	185	78	282	92	171	176	191
Negro.....	10	4	1	5	.....	.....	1	4	9	16	5	10
ILLITERACY												
Total number 10 years old and over.....	7,934	2,613	6,909	2,050	6,334	4,450	2,718	6,598	2,488	3,437	3,543	4,856
Number illiterate.....	252	188	514	154	311	66	257	776	22	511	35	109
Native white 10 years old and over.....	5,434	2,028	3,580	1,419	3,800	3,629	2,000	3,571	1,897	2,203	2,809	3,845
Number illiterate.....	27	23	69	10	5	12	60	32	.....	21	10	7
Foreign-born white 10 years old and over.....	2,436	566	3,386	618	2,489	818	703	3,005	563	1,180	662	987
Number illiterate.....	213	114	445	135	301	54	196	743	432	24	24	96
Negro 10 years old and over.....	49	19	2	13	13	1	5	20	26	53	10	21
Number illiterate.....	3	1	.....	3	.....	.....	.....	1	1	8	1	3
Illiterate males of voting age.....	150	53	236	95	140	38	117	365	9	239	13	54
SCHOOL AGE AND ATTENDANCE												
Total number 6 to 20 years, inclusive.....	2,271	751	2,591	574	2,166	1,316	989	2,417	783	1,204	1,173	1,414
Number attending school.....	1,358	519	1,574	370	1,524	960	600	1,465	540	808	856	1,088
PERSONS 6 TO 14 YEARS, INCLUSIVE.												
Native white, number.....	1,183	418	1,236	314	1,248	736	529	1,233	444	720	722	833
Number attending school.....	1,050	393	1,120	292	1,168	703	473	1,100	414	649	634	787
Foreign-born white, number.....	88	9	263	25	82	25	80	117	10	52	21	31
Number attending school.....	72	8	225	24	71	24	51	95	9	45	17	26
Negro, number.....	10	8	.....	3	4	.....	.....	6	4	20	4	.....
Number attending school.....	9	6	.....	2	4	.....	.....	6	3	17	4	.....
DWELLINGS AND FAMILIES												
Dwellings, number.....	1,702	655	1,445	537	1,430	1,155	699	1,384	682	928	923	1,288
Families, number.....	2,161	808	1,728	595	1,713	1,400	812	1,724	726	1,123	1,012	1,429

STATISTICS OF POPULATION.

TABLE IV.—COMPOSITION AND CHARACTERISTICS OF THE POPULATION FOR TOWNS OF 2,500 TO 10,000—Contd.

SUBJECT.	Rock-land.	Rock-port.	Saugus.	Somerset.	South Hadley.	Spencer.	Stoneham.	Stoughton.	Sutton.	Swampscott.	Templeton.	Tewksbury. ¹	Uxbridge.
SEX, COLOR, AND NATIVITY													
Total population, 1910.....	6,928	4,211	8,047	2,798	4,894	6,740	7,090	6,316	3,078	6,204	3,756	3,750	4,671
1900.....	5,327	4,592	5,084	2,241	4,526	7,627	6,197	5,442	3,328	4,548	3,489	3,683	3,599
Male.....	3,438	2,103	3,965	1,387	2,332	3,306	3,471	3,099	1,892	2,998	2,054	2,003	2,391
Female.....	3,490	2,108	4,082	1,411	2,562	3,434	3,619	3,217	1,386	3,206	1,702	1,747	2,280
Native white—Native parentage.....	3,614	1,844	3,812	1,174	1,580	2,597	3,526	2,850	1,022	3,364	2,038	1,330	1,737
Native white—Foreign or mixed parentage.....	2,179	1,333	2,428	916	1,993	2,546	2,176	2,017	1,083	1,450	993	723	1,685
Foreign-born white.....	1,110	1,029	1,750	706	1,317	1,206	1,362	1,439	972	1,369	706	1,070	1,243
Negro.....	23	3	55	2	2	2	25	9	1	14	10	23	4
Indian, Chinese, and Japanese.....	2	2	2	.....	2	.....	1	1	1	7	9	4	2
MALES OF VOTING AGE													
Total number.....	2,262	1,290	2,268	783	1,302	1,988	2,220	1,917	955	1,934	1,241	1,597	1,414
Native white—Native parentage.....	1,124	617	1,131	335	423	632	1,087	802	311	1,080	681	528	496
Native white—Foreign or mixed parentage.....	628	191	308	151	339	772	510	446	216	260	214	192	313
Foreign-born white.....	502	478	751	295	538	594	615	666	428	580	342	872	601
Naturalized.....	276	200	416	102	239	271	316	266	84	250	89	89	144
Negro.....	8	2	16	2	.....	.....	7	3	.....	7	2	2	2
ILLITERACY													
Total number 10 years old and over.....	5,828	3,369	6,221	2,232	3,903	5,591	5,849	5,110	2,411	5,125	2,982	3,325	3,683
Number illiterate.....	60	64	123	184	162	280	99	424	386	83	338	75	196
Native white 10 years old and over.....	4,716	2,361	4,488	1,542	2,629	4,323	4,484	3,714	1,498	3,762	2,286	1,655	2,486
Number illiterate.....	14	9	9	6	21	59	11	16	83	1	165	7	25
Foreign-born white 10 years old and over.....	1,089	1,003	1,680	688	1,275	1,267	1,342	1,889	912	1,342	681	1,647	1,191
Number illiterate.....	46	55	110	158	140	220	84	408	303	82	170	67	171
Negro 10 years old and over.....	21	3	51	2	2	1	22	6	.....	14	9	19	4
Number illiterate.....	.....	.....	3	.....	1	1	4	.....	.....	.....	3	1	.....
Illiterate males of voting age.....	22	21	47	80	75	103	36	216	222	47	196	34	103
SCHOOL AGE AND ATTENDANCE													
Total number 6 to 20 years, inclusive.....	1,664	1,112	2,203	818	1,402	1,852	1,648	1,639	942	1,413	1,052	520	1,318
Number attending school.....	1,084	813	1,691	588	936	1,129	1,243	1,129	585	1,141	660	313	878
PERSONS 6 TO 14 YEARS, INCLUSIVE.													
Native white, number.....	897	695	1,321	481	783	1,013	958	898	407	827	601	252	751
Number attending school.....	805	656	1,275	440	713	946	925	860	453	810	511	229	716
Foreign-born white, number.....	31	35	100	39	64	37	31	57	84	40	37	21	49
Number attending school.....	28	33	93	34	53	33	30	49	73	39	28	16	41
Negro, number.....	3	.....	6	.....	.....	.....	.....	2	.....	.....	6	1	.....
Number attending school.....	3	.....	6	.....	.....	.....	5	1	.....	.....	4	1	.....
DWELLINGS AND FAMILIES													
Dwellings, number.....	1,511	910	1,642	632	838	1,102	1,572	1,314	587	1,267	735	337	893
Families, number.....	1,694	1,103	1,843	680	1,055	1,595	1,757	1,474	640	1,488	825	348	1,023

SUBJECT.	Wal-pole.	Ware.	Ware-ham.	Warren.	Welles-ley.	West Spring-field.	West-borough.	West-ford.	West-port.	Whit-man.	Will-hams-town.	Win-ches-ton.	Win-ches-ter.
SEX, COLOR, AND NATIVITY													
Total population, 1910.....	4,892	8,774	4,102	4,188	5,413	9,224	5,446	2,851	2,928	7,292	3,708	5,678	9,309
1900.....	3,572	8,263	3,432	4,417	5,072	7,105	5,400	2,624	2,890	6,155	5,013	5,001	7,248
Male.....	2,586	4,108	2,123	2,028	2,306	4,599	2,608	1,417	1,480	3,580	1,764	2,918	4,363
Female.....	2,306	4,666	1,979	2,160	3,107	4,625	2,838	1,434	1,448	3,712	1,944	2,760	4,946
Native white—Native parentage.....	1,824	1,833	2,335	1,400	2,233	3,920	2,844	830	1,635	4,284	2,146	2,809	3,819
Native white—Foreign or mixed parentage.....	1,746	3,708	737	1,520	1,589	3,181	1,459	825	882	1,841	927	1,592	2,721
Foreign-born white.....	1,306	3,233	588	1,260	1,559	2,100	1,107	1,196	591	1,108	510	1,274	2,486
Negro.....	13	2	440	7	29	21	32	.....	20	63	122	3	281
Indian, Chinese, and Japanese.....	3	3	2	1	3	2	4	.....	.....	6	3	.....	2
MALES OF VOTING AGE													
Total number.....	1,492	2,284	1,389	1,171	1,467	2,751	1,646	864	930	2,322	1,046	1,688	2,640
Native white—Native parentage.....	546	462	763	353	641	1,113	852	281	566	1,362	625	844	1,073
Native white—Foreign or mixed parentage.....	307	552	160	253	271	689	377	147	92	468	199	305	479
Foreign-born white.....	635	1,266	280	563	550	943	409	436	261	481	186	537	1,027
Naturalized.....	230	471	76	131	234	372	141	138	68	218	95	160	366
Negro.....	1	1	185	1	3	4	4	.....	11	18	33	2	59
ILLITERACY													
Total number 10 years old and over.....	3,801	6,901	3,326	3,287	4,626	7,390	4,909	2,352	2,383	6,205	3,062	4,529	7,618
Number illiterate.....	106	325	302	245	65	310	46	122	143	97	94	282	206
Native white 10 years old and over.....	2,519	3,731	2,443	2,034	3,050	5,350	3,788	1,236	1,790	5,070	2,463	3,817	4,984
Number illiterate.....	15	60	20	2	26	9	5	10	14	39	51	51	2
Foreign-born white 10 years old and over.....	1,271	3,165	573	1,246	1,547	2,025	1,085	1,116	574	1,080	496	1,209	2,445
Number illiterate.....	104	307	117	225	63	284	37	117	132	81	52	211	201
Negro 10 years old and over.....	8	2	308	6	26	13	32	.....	19	39	100	3	287
Number illiterate.....	.....	.....	125	.....	.....	.....	.....	.....	1	2	3	.....	1
Illiterate males of voting age.....	60	130	161	109	34	120	17	51	72	36	42	122	113
SCHOOL AGE AND ATTENDANCE													
Total number 6 to 20 years, inclusive.....	1,316	2,620	967	1,204	1,317	2,575	1,344	831	773	1,839	1,079	1,666	2,392
Number attending school.....	957	1,602	654	792	1,006	1,721	1,034	482	483	1,248	767	1,034	1,716
PERSONS 6 TO 14 YEARS, INCLUSIVE.													
Native white, number.....	806	1,381	523	668	695	1,517	663	333	466	1,021	629	907	1,320
Number attending school.....	771	1,282	469	622	676	1,407	633	321	417	971	578	809	1,228
Foreign-born white, number.....	53	138	25	37	35	89	65	110	25	80	21	98	50
Number attending school.....	48	126	23	33	32	73	61	99	19	28	17	70	43
Negro, number.....	7	.....	57	2	7	5	8	.....	3	8	16	1	60
Number attending school.....	7	.....	43	2	7	5	8	.....	5	5	15	1	55
DWELLINGS AND FAMILIES													
Dwellings, number.....	943	1,318	1,004	789	1,055	1,619	860	539	722	1,581	797	1,159	1,812
Families, number.....	1,047	1,681	1,082	891	1,188	2,086	1,008	589	761	1,857	882	1,293	1,972

¹ For changes in boundaries, etc., see page 612.

TABLE V.—COMPOSITION AND CHARACTERISTICS OF THE POPULATION FOR WARDS OF CITIES OF 50,000 OR MORE.

BOSTON.

Table with columns for SUBJECT, THE CITY, and WARD (1-12). Rows include SEX, COLOR, AND NATIVITY; MALES OF VOTING AGE; ILLITERATE AND SCHOOL ATTENDANCE; DWELLINGS AND FAMILIES. Data is presented in multiple columns for each ward.

STATISTICS OF POPULATION.

TABLE V.—COMPOSITION AND CHARACTERISTICS OF THE POPULATION FOR WARDS OF CITIES OF 50,000 OR MORE—Continued.

BROCKTON.

SUBJECT.	THE CITY.	WARD.						
		1	2	3	4	5	6	7
SEX, COLOR, AND NATIVITY								
Total population, 1910.....	56,878	8,124	6,650	8,469	6,597	8,640	10,311	8,087
Male.....	28,293	3,996	3,128	4,174	3,269	4,403	5,375	3,948
Female.....	28,585	4,128	3,522	4,295	3,328	4,237	4,936	4,139
Native white—Native parentage.....	23,008	4,562	3,342	3,483	1,988	2,534	3,322	3,777
Native white—Foreign or mixed parentage.....	17,882	1,894	1,862	2,562	2,065	3,114	3,299	2,286
Foreign-born white.....	15,425	1,570	1,404	2,316	1,920	2,702	3,557	1,956
Negro.....	531	52	39	5	21	289	32	63
Indian, Chinese, and Japanese.....	32	16	3	3	3	1	1	5
FOREIGN-BORN WHITE: Born in—								
Austria.....	43	4	2	.....	3	20	7	7
Canada—French.....	917	91	63	56	73	265	277	92
Canada—Other.....	2,662	522	368	305	259	395	387	426
Denmark.....	49	8	4	17	7	.....	5	8
England.....	1,026	101	87	77	70	138	178	375
Finland.....	49	.....	4	21	19	1	2	2
Germany.....	110	20	10	10	7	18	24	21
Greece.....	149	49	23	1	3	15	52	6
Ireland.....	2,891	360	472	182	627	508	449	293
Italy.....	986	127	190	42	82	250	105	190
Norway.....	85	5	9	29	22	7	6	7
Russia.....	3,178	62	42	44	68	913	1,703	346
Scotland.....	245	53	28	38	10	26	46	44
Sweden.....	2,608	99	67	1,456	620	71	191	104
Turkey.....	208	36	19	11	16	31	83	12
Other foreign countries.....	219	33	16	27	34	44	42	23
MALES OF VOTING AGE								
Total number.....	17,905	2,845	2,189	2,564	1,984	2,499	3,299	2,525
Native white—Native parentage.....	7,198	1,583	1,097	1,096	609	688	973	1,153
Native white—Foreign or mixed parentage.....	3,494	517	462	424	477	580	567	467
Foreign-born white.....	7,033	717	613	1,041	888	1,144	1,750	890
Naturalized.....	3,167	316	293	608	494	523	522	411
Negro.....	151	13	16	.....	7	86	9	20
ILLITERACY AND SCHOOL ATTENDANCE								
Total number 10 years old and over.....	46,970	7,111	5,777	6,968	5,356	6,739	8,279	6,740
Number illiterate.....	1,222	58	79	58	105	176	446	300
Illiterate males of voting age.....	543	21	21	17	31	55	241	157
Total number 6 to 20 years, inclusive.....	14,505	1,711	1,397	2,221	1,802	2,572	2,846	1,956
Number attending school.....	9,793	1,142	964	1,542	1,224	1,774	1,820	1,327
DWELLINGS AND FAMILIES								
Dwellings, number.....	8,246	1,141	977	1,371	1,094	1,190	1,319	1,244
Families, number.....	13,161	1,894	1,637	2,091	1,565	1,854	2,135	1,985

CAMBRIDGE.

SUBJECT.	THE CITY.	WARD.										
		1	2	3	4	5	6	7	8	9	10	11
SEX, COLOR, AND NATIVITY												
Total population, 1910.....	104,839	7,285	6,542	11,407	11,070	9,066	13,016	11,398	8,652	9,321	7,182	9,800
Male.....	50,161	3,804	3,377	5,807	5,523	3,964	6,502	5,384	3,869	3,877	3,153	4,841
Female.....	54,678	3,421	3,165	5,600	5,547	5,102	6,514	6,014	4,783	5,444	4,029	4,959
Native white—Native parentage.....	25,615	793	725	1,132	1,929	3,383	3,215	2,777	2,785	3,629	2,839	2,458
Native white—Foreign or mixed parentage.....	39,794	3,406	3,048	5,194	4,169	3,024	4,479	4,118	2,966	2,815	2,374	4,201
Foreign-born white.....	34,608	3,073	2,762	4,781	3,864	2,471	4,490	3,351	2,456	2,744	1,720	2,896
Negro.....	4,707	9	2	291	1,095	180	816	1,139	484	113	241	337
Indian, Chinese, and Japanese.....	115	4	5	9	13	8	16	13	11	20	8	8
FOREIGN-BORN WHITE: Born in—												
Austria.....	156	24	13	29	15	4	16	19	11	5	3	17
Canada—French.....	1,445	37	24	59	109	33	108	71	41	40	159	764
Canada—Other.....	8,447	335	468	535	1,017	971	1,300	1,321	663	655	464	720
England.....	1,954	86	69	169	160	390	285	185	184	106	146	146
France.....	130	4	6	6	8	22	8	8	6	17	6	39
Germany.....	728	62	85	64	76	63	56	58	63	71	43	92
Greece.....	102	12	1	1	15	6	67	.....	2	8	.....	.....
Ireland.....	10,636	937	1,167	1,605	960	737	681	854	1,114	1,180	635	766
Italy.....	1,546	191	136	179	221	39	245	88	48	244	57	98
Norway.....	244	5	3	10	48	11	52	4	14	25	19	13
Portugal.....	1,857	903	361	361	116	39	85	6	25	.....	.....	11
Russia.....	3,663	279	297	1,227	492	128	826	262	22	27	74	29
Scotland.....	809	41	23	62	129	63	184	77	75	68	44	93
Sweden.....	1,797	35	40	179	373	149	480	134	94	160	94	59
Turkey.....	414	79	58	148	25	2	65	34	18	8	2	5
Other foreign countries.....	680	43	73	73	91	49	127	90	75	52	14	44
MALES OF VOTING AGE												
Total number.....	30,262	2,175	1,919	3,205	3,333	2,719	3,998	3,279	2,498	2,467	1,875	2,794
Native white—Native parentage.....	7,048	222	145	203	509	1,007	960	820	767	996	800	619
Native white—Foreign or mixed parentage.....	7,093	526	433	752	695	707	787	811	646	559	416	780
Foreign-born white.....	14,636	1,415	1,330	2,100	1,761	934	2,015	1,323	943	861	580	1,938
Naturalized.....	7,162	534	601	969	790	593	880	672	609	489	300	725
Negro.....	1,384	8	.....	83	358	63	241	314	131	33	64	89
ILLITERACY AND SCHOOL ATTENDANCE												
Total number 10 years old and over.....	84,566	5,515	5,056	8,528	8,764	7,902	10,536	9,293	7,367	7,918	5,904	7,783
Number illiterate.....	2,540	498	250	607	384	124	187	167	64	117	69	73
Illiterate males of voting age.....	978	216	97	238	143	37	81	40	25	50	21	30
Total number 6 to 20 years, inclusive.....	27,426	2,271	2,010	3,421	3,017	1,843	3,349	2,932	1,989	2,057	1,790	2,747
Number attending school.....	19,152	1,577	1,336	2,375	2,066	1,330	2,228	2,019	1,425	1,469	1,344	1,983
DWELLINGS AND FAMILIES												
Dwellings, number.....	14,577	1,053	820	1,217	1,320	1,222	1,672	1,682	1,302	1,526	1,216	1,547
Families, number.....	22,765	1,384	1,291	2,335	2,374	2,079	2,929	2,651	2,011	2,025	1,608	2,078

TABLE V.—COMPOSITION AND CHARACTERISTICS OF THE POPULATION FOR WARDS OF CITIES OF 50,000 OR MORE—Continued.

FALL RIVER.

SUBJECT.	THE CITY.	WARD.								
		1	2	3	4	5	6	7	8	9
SEX, COLOR, AND NATIVITY										
Total population, 1910.....	119,295	20,491	12,247	15,249	12,812	11,876	17,110	6,048	9,850	14,112
Male.....	57,027	9,994	5,878	7,505	5,080	5,951	8,367	2,989	4,337	6,869
Female.....	61,068	10,497	6,369	7,084	6,032	5,925	8,743	3,062	5,513	7,243
Native white—Native parentage.....	15,858	2,769	1,292	871	1,779	851	759	2,004	3,332	2,201
Native white—Foreign or mixed parentage.....	52,125	9,246	5,314	6,207	5,947	5,370	8,041	2,220	3,645	6,120
Foreign-born white.....	50,874	8,427	5,014	8,078	4,670	5,000	8,301	1,724	2,813	5,741
Negro.....	355	41	22	84	1	52	1	65	52	87
Indian, Chinese, and Japanese.....	83	8	5	9	0	3	8	20	8	4
FOREIGN-BORN WHITE: Born in—										
Atlantic Islands.....	056	10	4	233	12	042	16	2	37	.....
Austria.....	2,014	915	471	522	267	305	33	85	4	12
Canada—French.....	16,277	2,381	1,812	1,825	1,292	1,371	4,310	422	384	1,480
Canada—Other.....	961	183	77	56	112	43	112	113	158	107
England.....	10,995	2,244	1,040	732	1,167	1,040	1,050	375	809	1,329
France.....	144	45	18	8	13	11	10	14	15	10
Germany.....	234	56	47	11	21	20	29	11	16	23
Greece.....	130	10	18	18	11	3	8	44	1	17
Ireland.....	5,194	829	301	775	1,011	521	177	407	634	449
Italy.....	1,025	93	203	8	25	543	17	31	90	15
Portugal.....	9,305	1,128	710	2,031	188	462	1,308	32	409	2,142
Russia.....	2,143	209	107	790	285	430	178	71	24	40
Scotland.....	803	207	83	37	88	45	101	73	98	51
Sweden.....	102	13	0	2	0	12	3	11	14	29
Turkey.....	484	.....	.....	63	37	68	308	0	1	1
Other foreign countries.....	387	49	15	07	38	55	41	27	59	36
MALES OF VOTING AGE										
Total number.....	31,647	5,327	3,154	4,074	3,299	3,215	4,297	2,092	2,595	3,594
Native white—Native parentage.....	3,661	500	200	123	331	136	111	655	881	504
Native white—Foreign or mixed parentage.....	7,090	1,389	709	743	1,131	701	614	605	665	782
Foreign-born white.....	20,181	3,358	2,172	3,149	1,827	2,209	3,206	787	1,032	2,291
Naturalized.....	8,368	1,504	1,001	814	028	878	1,250	395	636	933
Negro.....	133	13	8	50	1	16	.....	19	13	13
ILLITERACY AND SCHOOL ATTENDANCE										
Total number 10 years old and over.....	92,806	15,650	9,471	11,612	9,866	9,045	12,080	5,285	8,116	10,781
Number illiterate.....	12,276	1,716	1,203	3,077	742	1,205	1,804	339	487	1,703
Illiterate males of voting age.....	4,942	714	453	1,283	236	457	788	149	142	720
Total number 6 to 20 years, inclusive.....	36,235	6,281	3,840	4,702	3,470	3,720	5,765	1,333	2,538	4,496
Number attending school.....	22,819	3,997	2,434	2,824	2,099	2,270	3,597	866	1,736	2,966
DWELLINGS AND FAMILIES										
Dwellings, number.....	10,962	1,982	1,210	1,058	1,075	904	1,327	728	1,259	1,419
Families, number.....	24,378	4,203	2,439	2,831	2,759	2,435	3,274	1,366	2,160	2,911

HOLYOKE.

SUBJECT.	THE CITY.	WARD.						
		1	2	3	4	5	6	7
SEX, COLOR, AND NATIVITY								
Total population, 1910.....	57,730	9,379	10,709	8,906	8,904	5,220	7,758	6,854
Male.....	27,071	4,542	5,225	4,342	4,383	2,412	3,682	3,085
Female.....	30,059	4,837	5,484	4,564	4,521	2,808	4,076	3,769
Native white—Native parentage.....	9,141	877	629	1,019	318	1,237	1,477	2,084
Native white—Foreign or mixed parentage.....	25,280	4,430	4,789	3,903	3,907	2,513	3,257	2,367
Foreign-born white.....	23,288	4,062	5,290	3,316	4,008	1,468	3,001	1,498
Negro.....	45	8	1	0	10	5	12	8
Chinese.....	20	2	.....	2	1	2	11	2
FOREIGN-BORN WHITE: Born in—								
Austria.....	2,396	00	82	249	1,887	43	54	21
Canada—French.....	8,035	2,557	3,051	308	589	273	510	147
Canada—Other.....	552	63	45	95	16	91	92	150
Denmark.....	42	.....	1	0	.....	3	17	12
England.....	1,365	70	79	373	43	81	375	338
France.....	391	11	224	41	7	11	04	3
Germany.....	1,565	16	264	830	12	30	274	139
Greece.....	181	4	161	2	.....	11	2	1
Hungary.....	80	2	3	13	00	.....	2	.....
Ireland.....	5,246	1,048	201	631	1,197	713	1,020	446
Italy.....	368	52	105	15	40	42	76	29
Russia.....	1,084	74	280	470	009	71	65	16
Scotland.....	1,024	81	48	287	23	78	337	170
Sweden.....	95	0	0	35	1	0	14	18
Turkey.....	93	1	23	22	5	3	30	.....
Other foreign countries.....	121	8	24	27	20	4	30	8
MALES OF VOTING AGE								
Total number.....	15,528	2,237	3,338	2,357	2,408	1,436	2,812	1,940
Native white—Native parentage.....	2,239	168	112	340	62	312	418	322
Native white—Foreign or mixed parentage.....	3,806	564	605	550	370	550	644	523
Foreign-born white.....	9,457	1,503	2,121	1,466	1,972	571	1,240	534
Naturalized.....	3,765	544	677	763	470	379	620	312
Negro.....	10	.....	.....	.....	3	1	6	.....
ILLITERACY AND SCHOOL ATTENDANCE								
Total number 10 years old and over.....	45,963	7,211	8,443	6,986	6,639	4,273	6,603	5,808
Number illiterate.....	3,108	737	561	310	1,106	137	221	30
Illiterate males of voting age.....	1,305	314	270	130	472	34	64	12
Total number 6 to 20 years, inclusive.....	17,907	3,350	3,655	2,876	2,098	1,307	2,192	1,739
Number attending school.....	10,742	1,705	2,078	2,025	1,300	907	1,309	1,323
DWELLINGS AND FAMILIES								
Dwellings, number.....	4,841	488	474	1,124	474	540	507	1,228
Families, number.....	11,265	1,089	2,122	1,707	1,475	1,098	1,006	1,568

STATISTICS OF POPULATION.

TABLE V.—COMPOSITION AND CHARACTERISTICS OF THE POPULATION FOR WARDS OF CITIES OF 50,000 OR MORE—Continued.

LAWRENCE.

SUBJECT.	THE CITY.	WARD.					
		1	2	3	4	5	6
SEX, COLOR, AND NATIVITY							
Total population, 1910	85,892	14,188	13,571	14,236	13,581	16,180	14,138
Male	42,858	7,040	7,054	7,220	6,787	7,813	6,944
Female	43,034	7,146	6,517	7,016	6,794	8,367	7,194
Native white—Native parentage	11,699	1,693	1,814	1,212	1,483	2,505	2,992
Native white—Foreign or mixed parentage	32,553	4,991	4,576	5,129	5,160	6,545	6,152
Foreign-born white	41,319	7,475	7,168	7,858	6,804	6,983	4,971
Negro	265	21	6	27	51	145	15
Chinese	56	6	7	10	23	2	8
FOREIGN-BORN WHITE: Born in—							
Austria	1,450	915	137	181	161	41	15
Belgium	314	55	80	29	4	138	8
Canada—French	7,098	99	112	715	2,351	3,240	1,181
Canada—Other	1,800	340	206	169	204	405	416
England	5,659	755	591	597	1,158	1,428	1,130
France	788	178	117	124	32	248	89
Germany	2,301	1,489	380	133	152	41	106
Greece	171	2	5	32	107	20	5
Ireland	5,943	859	1,007	1,433	889	548	1,207
Italy	6,493	1,721	3,341	1,374	75	26	156
Portugal	389	4	48	323	4	4	6
Russia	4,366	725	771	950	1,346	448	126
Scotland	1,336	188	138	122	164	322	402
Sweden	121	13	15	6	9	20	58
Turkey	2,077	85	183	1,645	108	34	22
Other foreign countries	213	47	37	25	40	20	44
MALES OF VOTING AGE							
Total number	25,983	4,344	4,630	4,350	4,338	4,373	3,948
Native white—Native parentage	3,113	440	502	237	492	645	797
Native white—Foreign or mixed parentage	5,274	756	797	761	931	935	1,094
Foreign-born white	17,414	3,137	3,324	3,300	2,858	2,728	2,047
Naturalized	6,588	1,223	907	1,046	1,029	1,272	1,111
Negro	128	6	1	22	34	63	3
ILLITERACY AND SCHOOL ATTENDANCE							
Total number 10 years old and over	68,928	11,509	11,109	11,325	11,178	12,669	11,137
Number illiterate	9,067	2,636	1,524	2,235	1,895	808	469
Illiterate males of voting age	3,852	1,144	738	771	598	442	159
Total number 6 to 20 years, inclusive	23,520	3,829	3,218	4,013	3,564	4,817	4,079
Number attending school	14,063	2,060	1,886	2,480	1,980	2,976	2,681
DWELLINGS AND FAMILIES							
Dwellings, number	10,413	1,657	1,457	1,296	1,354	2,366	2,283
Families, number	17,142	2,895	2,406	2,516	2,755	3,538	3,032

LOWELL.

SUBJECT.	THE CITY.	WARD.								
		1	2	3	4	5	6	7	8	9
SEX, COLOR, AND NATIVITY										
Total population, 1910	106,294	9,601	14,325	11,590	9,971	10,089	21,001	9,890	9,476	10,351
Male	51,525	4,623	8,062	5,399	4,782	4,990	9,981	4,509	4,471	4,708
Female	54,769	4,978	6,263	6,191	5,189	5,099	11,020	5,381	5,005	5,643
Native white—Native parentage	20,703	2,787	1,295	4,230	1,292	1,217	1,449	2,445	3,417	3,571
Native white—Foreign or mixed parentage	41,942	3,329	4,807	3,890	4,400	4,334	8,802	4,525	3,516	4,339
Foreign-born white	43,457	3,466	8,208	3,447	4,252	4,515	10,739	2,910	2,510	3,420
Negro	133	7	4	18	26	17	6	9	33	13
Indian, Chinese, and Japanese	59	22	11	5	1	6	5	1	—	8
FOREIGN-BORN WHITE: Born in—										
Austria	1,948	287	303	30	11	417	820	3	9	68
Belgium	174	2	108	1	3	—	54	2	2	2
Canada—French	12,291	634	1,755	767	182	172	7,073	1,193	174	341
Canada—Other	4,049	623	248	782	197	322	455	469	517	430
England	4,568	539	264	393	473	504	687	287	535	886
France	100	7	29	9	6	3	28	8	6	4
Germany	205	21	12	21	2	14	50	11	64	10
Greece	3,782	91	3,269	6	45	34	305	20	4	8
Ireland	9,983	732	1,739	401	1,762	1,757	982	765	075	1,170
Italy	259	50	21	15	90	32	26	13	8	4
Portugal	1,449	57	184	18	716	327	25	—	117	10
Russia	1,840	138	27	628	372	570	49	—	49	7
Scotland	1,139	148	68	159	154	96	122	69	167	156
Sweden	37	9	72	59	25	12	35	123	260	260
Turkey	637	60	160	65	143	172	25	4	—	8
Other foreign countries	395	30	12	85	37	70	28	31	60	44
MALES OF VOTING AGE										
Total number	31,800	3,225	5,198	3,474	2,879	3,088	5,310	2,618	2,777	2,731
Native white—Native parentage	5,859	945	395	1,344	283	290	324	606	1,014	673
Native white—Foreign or mixed parentage	7,156	739	767	735	801	847	979	819	709	760
Foreign-born white	18,191	1,516	4,026	1,382	1,806	1,940	4,001	1,189	1,044	1,287
Naturalized	7,028	725	898	603	787	779	1,075	715	668	773
Negro	44	4	1	8	8	5	1	3	10	4
ILLITERACY AND SCHOOL ATTENDANCE										
Total number 10 years old and over	86,486	8,197	12,059	9,663	8,035	8,212	16,076	7,931	7,840	8,473
Number illiterate	5,172	294	472	392	964	677	1,894	157	175	147
Illiterate males of voting age	2,266	134	212	149	411	305	899	48	50	58
Total number 6 to 20 years, inclusive	28,570	2,110	3,927	2,703	2,624	2,596	6,618	2,805	2,362	2,825
Number attending school	17,603	1,379	1,785	1,869	1,569	1,574	3,872	2,025	1,560	1,970
DWELLINGS AND FAMILIES										
Dwellings, number	15,056	1,556	1,477	2,038	1,204	1,290	2,108	1,636	1,890	1,857
Families, number	21,932	1,990	2,603	2,770	2,148	2,014	3,971	2,028	2,176	2,232

TABLE V.—COMPOSITION AND CHARACTERISTICS OF THE POPULATION FOR WARDS OF CITIES OF 50,000 OR MORE—Continued.

LYNN.

SUBJECT.	THE CITY.	WARD.						
		1	2	3	4	5	6	7
SEX, COLOR, AND NATIVITY								
Total population, 1910.....	89,336	2,454	5,464	18,063	16,047	19,211	23,537	4,560
Male.....	44,585	1,209	2,654	8,555	7,956	9,509	12,422	2,280
Female.....	44,751	1,245	2,810	9,508	8,091	9,702	11,115	2,280
Native white—Native parentage.....	33,180	1,476	2,988	8,856	6,493	6,482	5,459	1,426
Native white—Foreign or mixed parentage.....	27,994	588	1,405	5,081	4,720	5,914	8,561	1,719
Foreign-born white.....	27,344	382	1,060	3,674	4,737	6,748	9,345	1,388
Negro.....	700	7	10	440	33	40	153	17
Indian, Chinese, and Japanese.....	118	1	1	12	58	27	19	.....
FOREIGN-BORN WHITE: Born in—								
Austria.....	264	1	1	8	12	65	171	6
Canada—French.....	2,360	22	54	230	618	724	665	58
Canada—Other.....	7,511	204	523	1,639	1,507	1,418	1,759	371
England.....	1,020	32	81	370	345	290	642	154
Germany.....	350	11	13	37	89	63	150	31
Greece.....	958	.....	10	46	120	43	359	10
Ireland.....	5,153	34	115	604	845	1,031	2,088	346
Italy.....	1,354	21	13	172	310	655	181	2
Newfoundland.....	120	.....	32	7	5	13	65	4
Norway.....	157	8	4	15	38	8	52	29
Russia.....	3,880	1	18	81	246	1,479	2,035	20
Scotland.....	661	9	8	78	98	109	312	47
Sweden.....	1,399	29	57	124	246	194	470	279
Turkey in Asia.....	610	.....	22	118	107	117	233	13
Turkey in Europe.....	213	.....	88	1	20	70	25	3
Other foreign countries.....	419	10	21	51	90	93	129	26
MALES OF VOTING AGE								
Total number.....	29,171	744	1,677	5,460	5,838	6,439	7,682	1,331
Native white—Native parentage.....	11,167	480	926	2,838	2,422	2,319	1,753	420
Native white—Foreign or mixed parentage.....	5,642	89	261	1,082	1,203	1,201	1,429	287
Foreign-born white.....	12,038	164	484	1,397	2,050	2,885	4,435	617
Naturalized.....	4,931	80	182	760	920	1,102	1,545	333
Negro.....	218	1	5	132	15	11	47	7
ILLITERACY AND SCHOOL ATTENDANCE								
Total number 10 years old and over.....	74,420	2,009	4,461	15,042	14,100	16,351	18,603	3,515
Number illiterate.....	2,261	30	57	202	198	503	1,198	73
Illiterate males of voting age.....	1,000	10	29	66	50	188	623	28
Total number 6 to 20 years, inclusive.....	21,328	657	1,333	4,276	3,040	4,384	6,386	1,252
Number attending school.....	19,781	490	944	2,037	1,855	2,087	4,004	884
DWELLINGS AND FAMILIES								
Dwellings, number.....	13,112	520	1,134	3,236	2,639	2,423	3,000	700
Families, number.....	19,786	615	1,379	4,576	3,377	4,033	4,785	1,021

NEW BEDFORD.

SUBJECT.	THE CITY.	WARD.					
		1	2	3	4	5	6
SEX, COLOR, AND NATIVITY							
Total population, 1910.....	96,652	28,132	11,285	8,423	9,255	13,785	25,772
Male.....	47,731	14,503	5,448	3,857	4,470	6,531	12,922
Female.....	48,921	13,629	5,837	4,566	4,785	7,254	12,850
Native white—Native parentage.....	18,738	2,004	2,589	4,610	4,217	3,927	1,391
Native white—Foreign or mixed parentage.....	32,336	9,995	4,403	1,903	2,102	3,961	9,882
Foreign-born white.....	42,625	16,116	4,224	1,407	1,836	4,574	14,468
Negro.....	2,885	8	9	490	998	1,318	5
Indian and Chinese.....	68	9	.....	7	42	5	5
FOREIGN-BORN WHITE: Born in—							
Atlantic Islands.....	6,407	51	98	81	156	2,443	3,638
Austria.....	1,837	1,243	37	18	17	19	593
Canada—French.....	12,241	7,851	987	168	140	71	3,015
Canada—Other.....	933	70	125	170	230	182	160
England.....	9,410	2,748	1,091	221	247	402	4,101
France.....	333	77	16	6	13	9	212
Germany.....	777	365	114	21	65	61	151
Greece.....	172	114	5	8	16	6	23
Ireland.....	2,583	389	577	280	453	389	495
Italy.....	660	145	197	127	124	13	60
Portugal.....	3,834	1,760	112	53	136	320	1,447
Russia.....	1,707	764	73	53	47	427	343
Scotland.....	590	109	113	55	38	50	219
Sweden.....	279	18	34	43	80	72	32
Turkey.....	354	274	8	60	10	.....	2
Other foreign countries.....	442	132	37	43	55	104	71
MALES OF VOTING AGE							
Total number.....	28,263	8,233	3,234	2,593	3,091	3,934	7,178
Native white—Native parentage.....	5,778	545	708	1,467	1,424	1,233	396
Native white—Foreign or mixed parentage.....	4,353	1,092	747	403	503	559	1,049
Foreign-born white.....	17,151	6,587	1,778	591	798	1,693	5,704
Naturalized.....	5,441	1,509	952	323	350	532	1,686
Negro.....	934	2	1	128	339	440	24
ILLITERACY AND SCHOOL ATTENDANCE							
Total number 10 years old and over.....	77,088	21,857	9,120	7,188	7,895	11,121	19,907
Number illiterate.....	9,350	3,277	410	199	394	1,737	3,324
Illiterate males of voting age.....	4,085	1,537	166	85	167	681	1,449
Total number 6 to 20 years, inclusive.....	26,784	8,522	3,129	1,822	1,986	3,421	7,994
Number attending school.....	15,300	4,515	2,016	1,190	1,304	2,126	4,683
DWELLINGS AND FAMILIES							
Dwellings, number.....	11,504	2,309	1,525	1,618	1,650	1,935	2,408
Families, number.....	20,820	5,475	2,010	2,234	2,304	3,191	5,066

STATISTICS OF POPULATION.

TABLE V.—COMPOSITION AND CHARACTERISTICS OF THE POPULATION FOR WARDS OF CITIES OF 50,000 OR MORE—Continued.

SOMERVILLE.

SUBJECT.	THE CITY.	WARD.						
		1	2	3	4	5	6	7
SEX, COLOR, AND NATIVITY								
Total population, 1910.....	77,236	10,398	13,023	7,738	7,523	11,246	14,455	12,853
Male.....	36,628	5,143	6,647	3,540	3,504	5,253	6,779	5,856
Female.....	40,608	5,255	6,376	4,192	4,019	5,993	7,676	6,997
Native white—Native parentage.....	29,573	3,531	1,977	3,563	3,774	4,636	5,636	6,456
Native white—Foreign or mixed parentage.....	26,632	3,986	6,166	2,319	2,106	3,949	4,652	3,454
Foreign-born white.....	20,751	2,861	4,851	1,843	1,625	2,627	4,140	2,799
Negro.....	217	12	4	4	9	24	15	132
Chinese and Japanese.....	63	8	8	4	9	30	12	12
FOREIGN-BORN WHITE: Born in—								
Atlantic Islands.....	88	—	48	2	—	25	7	6
Austria.....	143	14	18	22	6	13	52	18
Canada—French.....	587	77	124	44	30	162	87	63
Canada—Other.....	7,493	1,011	827	877	863	890	1,527	1,508
England.....	1,538	159	236	158	141	232	337	275
Germany.....	412	60	89	34	30	36	81	82
Ireland.....	5,320	927	1,877	401	232	713	796	294
Italy.....	1,777	115	745	40	73	111	580	137
Newfoundland.....	102	53	40	2	5	2	—	—
Norway.....	143	6	34	5	4	15	53	26
Portugal.....	335	23	152	18	31	39	57	15
Russia.....	794	121	357	19	73	100	76	43
Scotland.....	704	84	77	86	56	122	173	106
Sweden.....	710	49	135	41	39	59	210	141
Turkey.....	161	68	12	4	1	27	36	13
Other foreign countries.....	444	94	80	35	26	51	86	72
MALES OF VOTING AGE								
Total number.....	22,883	3,081	3,582	2,408	2,387	3,186	4,342	3,887
Native white—Native parentage.....	9,226	1,104	440	1,157	1,257	1,417	1,778	2,073
Native white—Foreign or mixed parentage.....	4,728	718	843	500	454	637	871	655
Foreign-born white.....	8,814	1,248	2,287	746	673	1,068	1,679	1,113
Naturalized.....	4,263	620	961	391	346	601	833	511
Negro.....	54	4	4	1	4	4	3	34
ILLITERACY AND SCHOOL ATTENDANCE								
Total number 10 years old and over.....	63,249	8,249	9,884	6,691	6,423	9,202	11,996	10,804
Number illiterate.....	1,232	188	581	25	88	130	166	54
Illiterate males of voting age.....	538	76	310	10	32	46	48	16
Total number 6 to 20 years, inclusive.....	18,993	2,742	3,897	1,675	1,571	2,918	3,360	2,830
Number attending school.....	13,923	2,012	2,831	1,260	1,168	2,084	2,467	2,101
DWELLINGS AND FAMILIES								
Dwellings, number.....	12,139	1,657	1,696	1,205	1,336	1,886	2,188	2,271
Families, number.....	18,440	2,436	2,808	1,902	1,985	2,580	3,515	3,214

SPRINGFIELD.

SUBJECT.	THE CITY.	WARD.							
		1	2	3	4	5	6	7	8
SEX, COLOR, AND NATIVITY									
Total population, 1910.....	88,826	16,274	10,825	5,369	9,170	7,950	9,356	14,258	15,724
Male.....	43,221	7,952	5,643	2,887	4,180	3,557	4,796	6,614	7,592
Female.....	45,705	8,322	5,182	2,482	4,990	4,393	4,560	7,644	8,132
Native white—Native parentage.....	35,732	6,204	1,891	1,807	4,661	3,966	2,525	8,213	6,465
Native white—Foreign or mixed parentage.....	28,656	6,137	4,173	1,655	2,450	2,113	3,414	3,648	5,016
Foreign-born white.....	22,999	3,857	4,669	1,650	1,971	1,499	3,166	2,175	4,052
Negro.....	1,475	22	83	234	86	399	257	213	181
Indian, Chinese, and Japanese.....	64	4	9	23	2	3	4	9	10
FOREIGN-BORN WHITE: Born in—									
Austria.....	1,357	86	230	58	17	16	34	17	899
Canada—French.....	3,078	498	142	268	134	135	644	245	1,014
Canada—Other.....	1,453	293	107	85	180	128	130	296	254
England.....	1,433	253	108	82	133	163	119	325	250
Finland.....	112	47	24	8	6	3	2	17	5
France.....	83	5	5	8	7	11	5	26	16
Germany.....	975	197	71	87	106	78	79	164	193
Greece.....	213	29	84	36	17	3	13	—	31
Ireland.....	5,679	1,426	1,211	234	729	537	490	500	552
Italy.....	2,915	53	169	598	379	76	1,466	84	100
Russia.....	2,916	490	2,093	81	31	20	71	55	75
Scotland.....	901	146	55	39	85	86	36	191	263
Sweden.....	1,076	248	47	29	115	156	33	197	251
Switzerland.....	73	12	2	10	3	7	6	13	20
Turkey.....	437	10	283	15	13	13	12	2	84
Other foreign countries.....	298	64	38	14	31	37	26	43	45
MALES OF VOTING AGE									
Total number.....	27,360	4,793	3,381	2,121	3,059	2,321	3,041	4,150	4,494
Native white—Native parentage.....	10,906	1,773	623	752	1,613	1,161	768	2,383	1,833
Native white—Foreign or mixed parentage.....	6,008	1,281	665	457	647	483	688	868	919
Foreign-born white.....	9,942	1,730	2,050	811	773	570	1,490	843	1,675
Naturalized.....	4,182	970	657	304	367	332	492	492	595
Negro.....	450	6	35	79	24	105	92	52	57
ILLITERACY AND SCHOOL ATTENDANCE									
Total number 10 years old and over.....	73,464	13,298	8,567	4,651	8,224	6,807	7,583	11,741	12,593
Number illiterate.....	3,311	250	1,139	251	120	96	690	143	622
Illiterate males of voting age.....	1,434	81	521	105	38	36	346	48	259
Total number 6 to 20 years, inclusive.....	22,158	4,319	3,147	1,063	1,693	1,843	2,315	3,445	4,333
Number attending school.....	15,182	3,155	2,129	633	1,081	1,298	1,455	2,538	2,893
DWELLINGS AND FAMILIES									
Dwellings, number.....	13,352	2,334	1,059	590	1,362	1,469	1,287	2,093	2,578
Families, number.....	19,968	3,627	2,229	1,139	2,093	1,929	2,024	3,550	3,377

TABLE V.—COMPOSITION AND CHARACTERISTICS OF THE POPULATION FOR WARDS OF CITIES OF 50,000 OR MORE—Continued.

WORCESTER.

SUBJECT.	THE CITY.	WARD.									
		1	2	3	4	5	6	7	8	9	10
SEX, COLOR, AND NATIVITY											
Total population, 1910.....	145,986	14,273	17,546	18,714	16,071	18,325	15,049	12,941	10,921	11,637	10,509
Male.....	78,424	8,971	8,845	10,215	8,101	9,600	7,826	6,205	4,974	5,646	4,972
Female.....	72,593	7,302	8,701	8,499	7,970	8,656	7,223	6,736	5,947	5,991	5,537
Native white—Native parentage.....	41,421	5,523	4,651	2,940	1,774	1,050	1,688	5,589	5,659	5,543	6,098
Native white—Foreign or mixed parentage.....	54,751	4,645	6,181	8,060	7,601	8,399	7,047	4,381	3,112	3,253	2,072
Foreign-born white.....	48,492	3,920	6,254	7,605	6,686	7,902	6,311	2,943	2,104	2,476	2,231
Negro.....	1,241	181	449	98	5	4	.....	20	39	345	100
Indian, Chinese, and Japanese.....	81	4	11	11	5	4	3	8	7	20	8
FOREIGN-BORN WHITE: Born in—											
Austria.....	362	26	9	23	81	188	10	12	5	7	1
Canada—French.....	5,010	173	303	1,223	354	1,218	202	549	314	472	137
Canada—Other.....	3,377	465	557	293	130	132	105	386	406	482	421
Denmark.....	205	76	18	10	8	14	28	13	5	7	28
England.....	3,113	237	215	135	185	402	770	401	245	233	194
Finland.....	1,452	263	654	40	6	3	328	20	68	9	71
Germany.....	580	67	88	48	61	82	45	54	47	56	33
Ireland.....	10,535	944	1,131	1,615	1,974	1,734	954	686	505	489	503
Italy.....	2,889	15	89	2,538	54	110	14	10	8	42	9
Norway.....	358	38	85	31	14	20	87	32	17	23	11
Russia.....	8,767	182	248	471	3,359	3,529	748	71	59	40	60
Scotland.....	870	104	95	77	37	78	64	148	93	100	74
Sweden.....	8,036	1,185	2,157	228	363	126	2,859	393	194	164	367
Turkey in Asia.....	2,050	106	458	720	25	96	2	47	99	290	204
Turkey in Europe.....	413	5	87	90	2	36	1	67	.....	40	76
Other foreign countries.....	469	44	60	40	33	104	28	54	39	22	45
MALES OF VOTING AGE											
Total number.....	45,601	4,299	5,698	6,194	4,558	5,549	4,429	3,890	3,415	3,941	3,622
Native white—Native parentage.....	12,343	1,713	1,435	786	297	347	308	1,635	1,792	1,816	2,124
Native white—Foreign or mixed parentage.....	9,988	810	1,085	1,458	1,200	1,364	932	956	798	862	523
Foreign-born white.....	22,816	1,719	3,027	3,909	3,055	3,833	3,097	1,288	807	1,146	935
Naturalized.....	9,126	862	1,291	1,154	1,286	1,169	1,437	647	435	501	344
Negro.....	384	53	141	30	1	1	.....	5	11	103	39
ILLITERACY AND SCHOOL ATTENDANCE											
Total number 10 years old and over.....	118,555	11,578	14,461	14,595	12,404	14,181	11,026	10,758	9,491	10,165	9,296
Number illiterate.....	5,977	122	413	1,891	1,086	1,671	523	113	78	80	100
Illiterate males of voting age.....	2,732	55	214	940	433	699	240	37	19	30	65
Total number 6 to 20 years, inclusive.....	38,277	3,577	4,279	5,186	4,803	5,632	4,653	3,247	2,357	2,533	2,010
Number attending school.....	24,928	2,565	2,977	3,346	3,144	3,622	2,662	2,099	1,557	1,613	1,343
DWELLINGS AND FAMILIES											
Dwellings, number.....	15,109	1,009	1,773	1,489	1,194	1,441	1,525	1,566	1,392	1,241	1,519
Families, number.....	30,743	3,205	3,506	3,407	3,098	3,513	3,048	2,994	2,672	2,740	2,582

NOTES REGARDING CHANGES IN BOUNDARIES, ETC.

COUNTIES.

HAMPDEN.—Part of Hampshire annexed in 1909.
 HAMPSHIRE.—Part annexed to Hampden in 1909.
 MIDDLESEX.—Part of Suffolk annexed in 1872; part annexed to Suffolk in 1873 and part annexed to Norfolk in 1907. Boundary line between Cambridge city, Middlesex County, and Boston city, Suffolk County, changed in 1910.
 NORFOLK.—Part of Suffolk annexed in 1872; parts annexed to Suffolk in 1872, 1873, and 1874; part of Middlesex annexed in 1907.
 SUFFOLK.—Parts annexed to Middlesex and Norfolk in 1872; part of Middlesex annexed in 1873; parts of Norfolk annexed in 1872, 1873, and 1874. Boundary line between Cambridge city, Middlesex County, and Boston city, Suffolk County, changed in 1910.

CITIES AND TOWNS.

ARLINGTON TOWN.—Boundary line between Arlington town and Somerville city changed in 1910.
 BELMONT TOWN.—Parts of Watertown town and Cambridge city annexed in 1903 and 1906, respectively.
 BOSTON CITY.—Boundary line between Boston city, Suffolk County, and Cambridge city, Middlesex County, changed in 1910.
 BROCKTON CITY.—Part of West Bridgewater town annexed between 1890 and 1900.

BROOKLINE TOWN.—Part of Newton city, Middlesex County, annexed in 1907.
 CAMBRIDGE CITY.—Part of Belmont town annexed and part annexed to Belmont town between 1890 and 1900; part annexed to Belmont town in 1906. Boundary line between Cambridge city, Middlesex County, and Boston city, Suffolk County, changed in 1910.
 CHICOPEE CITY.—Formerly Chicopee town; incorporated as a city between 1890 and 1900.
 EVERETT CITY.—Formerly Everett town; incorporated as a city between 1890 and 1900.
 HAVERHILL CITY.—Bradford town annexed between 1890 and 1900.
 HOLYOKE CITY.—Part of Northampton city, Hampshire County, annexed in 1909.
 LOWELL CITY.—Part of Tewksbury town annexed in 1906.
 NEWTON CITY.—Part annexed to Brookline town, Norfolk County, in 1907.
 NORTHAMPTON CITY.—Part annexed to Holyoke city, Hampden County, in 1909.
 PITTSFIELD CITY.—Formerly Pittsfield town; incorporated as a city between 1890 and 1900.
 SOMERVILLE CITY.—Boundary line between Arlington town and Somerville city changed in 1910.
 TEWKSBURY TOWN.—Part annexed to Lowell city in 1906.
 WATERTOWN TOWN.—Part annexed to Belmont town in 1903.

CHAPTER 3.

STATISTICS OF AGRICULTURE FOR THE STATE AND ITS COUNTIES.

Introduction.—This chapter presents a complete statement of the statistics of agriculture for Massachusetts collected at the census of 1910. Statistics of farms and farm property relate to April 15, 1910; those of farm products, expenses, and receipts are for the calendar year 1909.

Definitions.—To assist in securing comparability for its statistics of agriculture, the Bureau of the Census provided the enumerators with certain definitions and instructions, the more important of which were essentially as given below.

Farm.—A "farm" for census purposes is all the land which is directly farmed by one person managing and conducting agricultural operations, either by his own labor alone or with the assistance of members of his household or hired employees. The term "agricultural operations" is used as a general term referring to the work of growing crops, producing other agricultural products, and raising animals, fowls, and bees. A "farm" as thus defined may consist of a single tract of land, or of a number of separate and distinct tracts, and these several tracts may be held under different tenures, as where one tract is owned by the farmer and another tract is hired by him. Further, when a landowner has one or more tenants, renters, croppers, or managers, the land operated by each is considered a "farm."

In applying the foregoing definition of a "farm" for census purposes, enumerators were instructed to report as a "farm" any tract of 3 or more acres used for agricultural purposes, and also any tract containing less than 3 acres which produced at least \$250 worth of farm products in the year 1909.

Farmer.—A "farmer" or "farm operator," according to the census definition, is a person who directs the operations of a farm. Hence owners of farms who do not themselves direct the farm operations are not reported as "farmers." Farmers are divided by the Bureau of the Census into three general classes according to the character of their tenure, namely, owners, tenants, and managers.

Farm owners include (1) farmers operating their own land only, and (2) those operating both their own land and some land hired from others. The latter are sometimes referred to in the census reports as "part owners," the term "owners" being then restricted to those owning all their land.

Farm tenants are farmers who, as tenants, renters, or croppers, operate hired land only. They were reported in 1910 in three classes: (1) *Share tenants*—those who pay a certain share of the products, as one-half, one-third, or one-quarter; (2) *share-cash tenants*—those who pay a share of the products for part of the land rented by them and cash for part; and (3) *cash tenants*—those who pay a cash rental or a stated amount of labor or products, such as \$7, 10 bushels of wheat, or 100 pounds of seed cotton per acre.

Managers are farmers who are conducting farm operations for the owner for wages or a salary.

Farm land.—Farm land is divided into (1) improved land, (2) woodland, and (3) all other unimproved land. The same classification was followed in 1880. At former censuses, except that of 1880, farm land was divided into improved land and unimproved land, woodland being included with unimproved land. *Improved*

land includes all land regularly tilled or mowed, land pastured and cropped in rotation, land lying fallow, land in gardens, orchards, vineyards, and nurseries, and land occupied by farm buildings. *Woodland* includes all land covered with natural or planted forest trees, which produce, or later may produce, firewood or other forest products. *All other unimproved land* includes brush land, rough or stony land, swamp land, and any other land which is not improved or in forest. The census classification of farm land as "improved land," "woodland," and "other unimproved land" is one not always easy for the farmers or enumerators to make, and the statistics therefore must be considered at best only a close approximation.

Total value of farm products.—No attempt has been made at this census to compute or even to estimate approximately the total value of farm products. Among the numerous difficulties which stand in the way of obtaining a total which would be at once comprehensive, free from duplication, and confined exclusively to the products of a definite period of time are the following:

(1) The duplication resulting from the feeding of farm crops to farm live stock, when the value both of the products derived from such live stock and of the crops are included in the same total. In 1900 an attempt was made to eliminate this duplication by means of an inquiry as to the total value of the products of each farm fed to the live stock on that farm, but, aside from the fact that this would not eliminate the duplication where the products of one farm are fed to the live stock of another farm, it is believed that the farmers were unable to make even approximately accurate answers to the inquiry, and it was accordingly not included in the schedule for 1910.

(2) The fact that farmers may buy domestic animals during the census year, which are subsequently sold or slaughtered during the same year, and that it is impossible to eliminate the duplication accurately; and the further fact that the value of domestic animals sold or slaughtered, or of forest products cut, during a given year (as well as some other minor items) does not usually represent a value created wholly during that year, and that it is quite impossible to ascertain the value created during the year.

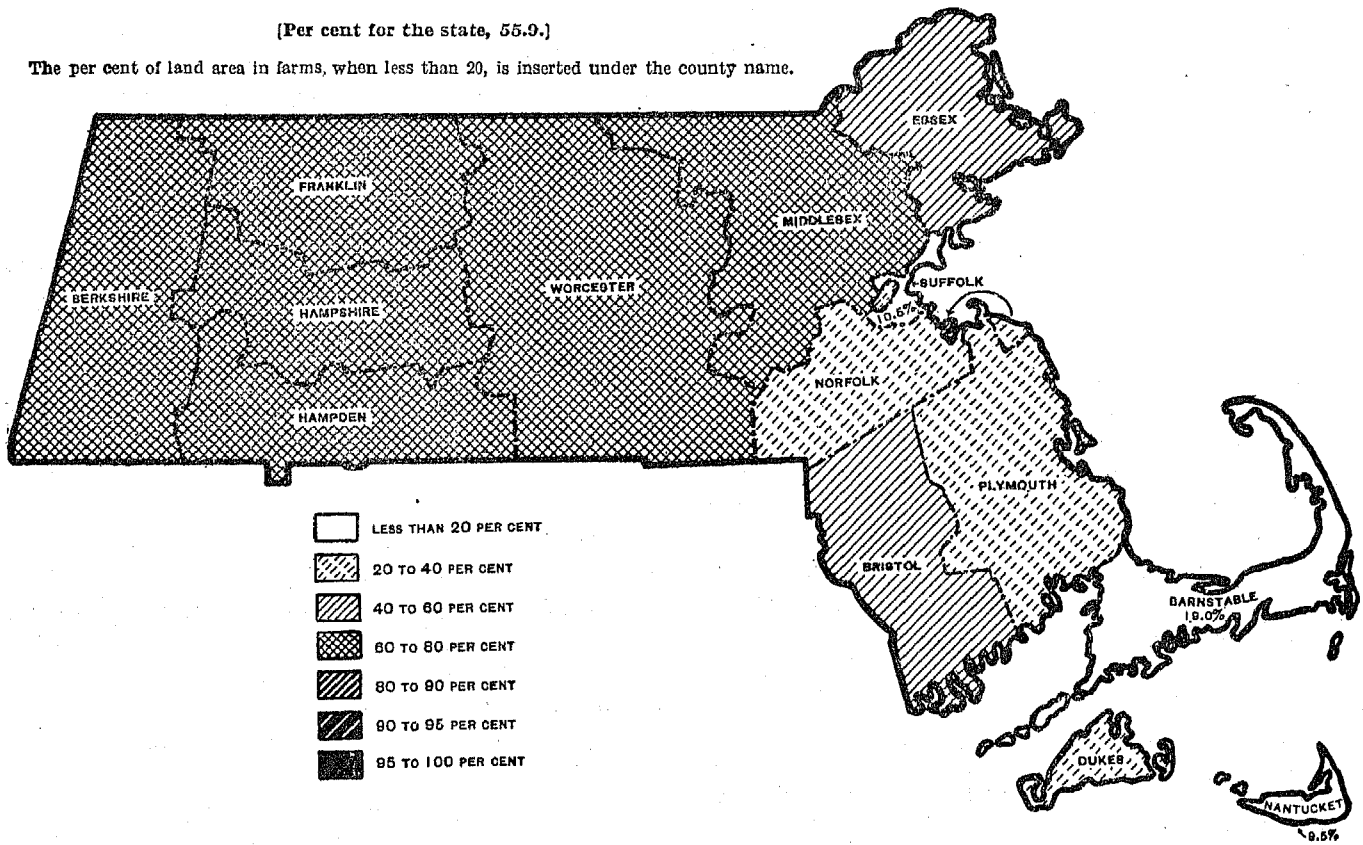
(3) The fact that the returns for some products are incomplete. The returns for all products are to a considerable extent estimates made by the farmers. Special difficulty was encountered in cases where the person in possession of the farm in April, 1910, when the census was taken, was not in possession of it during the crop year 1909. In such cases the farmer was not always able to report completely and accurately the products of the land for the preceding year. It is probable that the returns for the principal crops are in general fairly accurate, but that those for minor crops and for dairy and poultry products are frequently understatements, particularly because the home consumption was disregarded or underestimated. In the belief that no accurate result could be obtained from such an inquiry, the Bureau of the Census did not even attempt to ascertain the total quantity and value of certain by-products, such as straw and cornstalks, which are of considerable importance, the schedule calling only for the value of such by-products sold.

PER CENT OF LAND AREA IN FARMS, AND AVERAGE VALUE OF FARM LAND PER ACRE, IN MASSACHUSETTS, BY COUNTIES: 1910.

PER CENT OF LAND AREA IN FARMS:

[Per cent for the state, 55.9.]

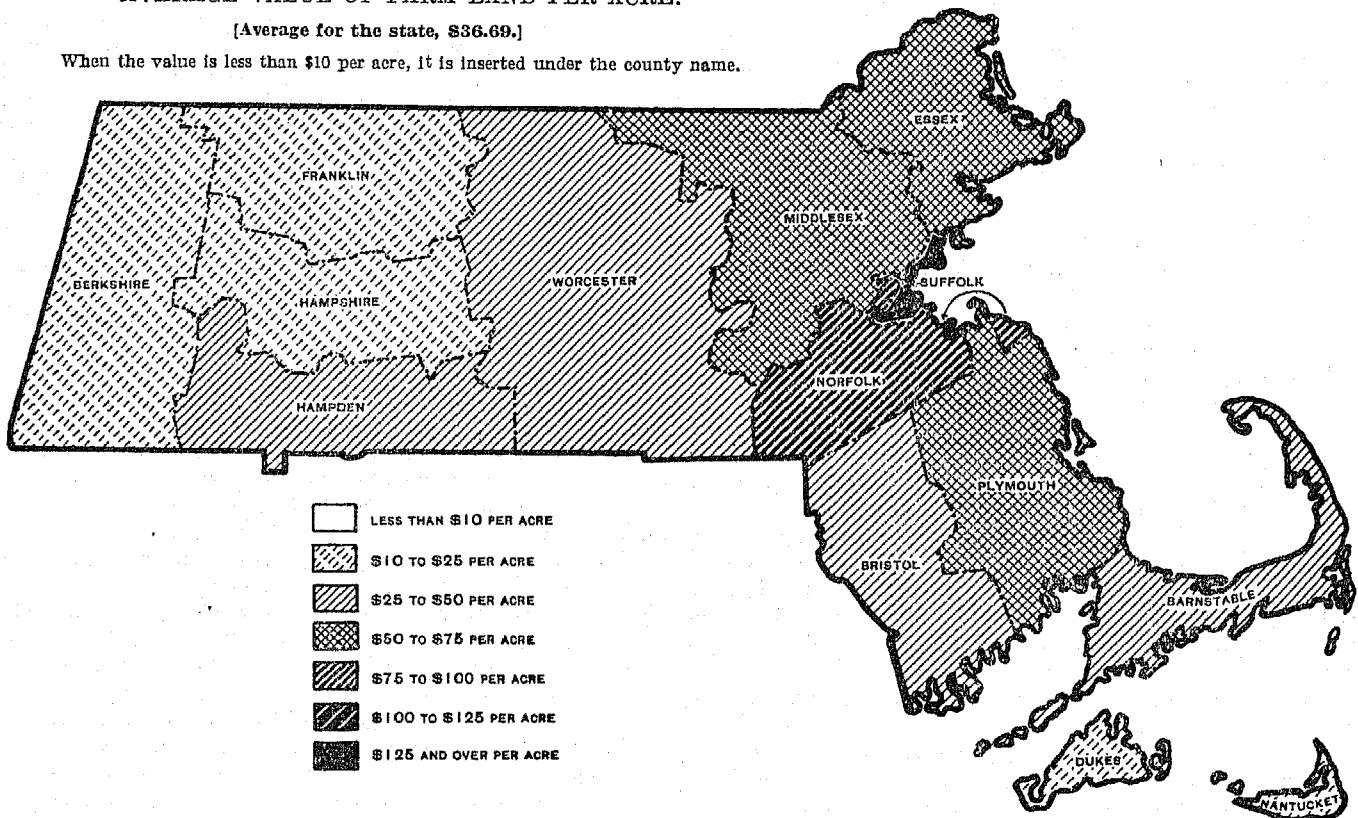
The per cent of land area in farms, when less than 20, is inserted under the county name.



AVERAGE VALUE OF FARM LAND PER ACRE.

[Average for the state, \$36.69.]

When the value is less than \$10 per acre, it is inserted under the county name.



FARMS AND FARM PROPERTY.

Massachusetts ranks forty-fourth in area and sixth in population among the states and territories of continental United States. The state is divided into four principal physical regions: The low coastward plain, the eastern highlands, the Connecticut Basin with the included Holyoke Range, and the western highlands with the infolded Berkshire Valley.

While in their general features the soils of Massachusetts fall within a few classes, yet nearly every square mile of the state contains a considerable number of soils which differ in detail. These soils are derived either directly or indirectly from the glaciation of the entire area of the state. Through this glaciation, the higher mountainous ridges have been swept nearly bare of all fine-grained soil-forming material, but deep deposits of glacial till have been made at all the lower elevations over the sloping flanks of the ridges, and over the crests of the lower hills. With this glaciation of the upland, and particularly with the retreat of the ice, there has been extensive deposition of sandy and gravelly outwash material which was laid down not only in the Connecticut Basin, but also, less extensively, in practically every one of the larger and lower-lying valleys of the state. Along the eastern coast the till-covered upland is bordered by sandy and gravelly outwash plains which occupy all the lower elevations and are only interrupted by low rolling hills, with their heavier till soils, which rise above the general level of the surface.

On lands along the borders of the streams, upon more level areas, and wherever the soil is finely textured, corn and hay are the chief crops. Numerous small bogs of a peaty or swampy nature in the southeastern part of the state constitute extremely valuable

cranberry soils. The sandy and sandy loam soils in the vicinity of Boston and in the valleys of the Merrimac and its tributaries are largely used for the production of market-garden vegetables wherever transportation facilities to city markets are available. The level terrace soils of the Connecticut Basin form some of the best farm lands within the state. It is upon these soils that the tobacco culture of the state has been most widely developed, and more recently market-garden and trucking crops, particularly onions, have been extensively produced. These soils also give good yields of corn, oats, and grass. In the Berkshire Valley, in the western part of the state, the soils have been derived through the glaciation of the underlying limestone, and are among the best in the state for the growth of grass and corn. Throughout the highland portion of the state the steeper slopes are used as mountain pastures or form wood lot and forest areas. The more gentle slopes are occupied by tilled fields.

The two maps on the opposite page show, by counties, the proportion of the total land area which is in farms and the average value of farm land per acre. Of the state's entire land area, 55.9 per cent is in farms, and the first map shows that in every inland county between three-fifths and four-fifths of the total land area is in farms. In two of the remaining counties the proportion is between 40 and 60 per cent, in three between 20 and 40 per cent, and in three it is less than 20 per cent.

Progress during the decade 1900 to 1910.—The following table summarizes for the state the more significant facts relating to population and land area, the number, value, and acreage of farms, and the value of all other farm property in 1910 and 1900:

NUMBER, AREA, AND VALUE OF FARMS.	1910 (April 15)	1900 (June 1)	INCREASE. ¹	
			Amount.	Per cent.
Population.....	3,366,416	2,805,346	561,070	20.0
Number of all farms.....	36,917	37,715	-798	-2.1
Approximate land area of the state.....acres.	5,144,960	5,144,960		
Land in farms.....acres.	2,875,941	3,147,064	-271,123	-8.6
Improved land in farms.....acres.	1,164,501	1,292,132	-127,631	-9.9
Average acres per farm.....	77.9	83.4	-5.5	-6.6
Value of farm property:				
Total.....	\$226,474,025	\$182,646,704	\$43,827,321	24.0
Land.....	105,532,616	86,925,410	18,607,206	21.4
Buildings.....	88,636,149	71,093,880	17,542,269	24.7
Implements and machinery.....	11,563,894	8,828,950	2,734,944	31.0
Domestic animals, poultry, and bees.....	20,741,366	15,798,464	4,942,902	31.3
Average value of all property per farm.....	\$6,135	\$4,843	\$1,292	26.7
Average value of land per acre.....	\$36.69	\$27.62	\$9.07	32.8

¹A minus sign (-) denotes decrease.

The average value of farm land per acre for the whole state is \$36.69. For Suffolk County, which includes the city of Boston, it is \$1,178.35 per acre, and for Norfolk, \$88.11. The second map shows that

in Essex, Middlesex, and Plymouth Counties the figure is between \$50 and \$75; in Barnstable, Bristol, Hampden, and Worcester, between \$25 and \$50; and in the remaining counties, between \$10 and \$25.

Between 1900 and 1910 there was an increase of 561,070, or 20 per cent, in the population of the state, while there was a decrease of 798, or 2.1 per cent, in the number of farms, and a decrease of 271,123 acres, or 8.6 per cent, in the area of farm land. The improved land in farms decreased 127,631 acres, or 9.9 per cent, and the average size of farms fell from 83.4 to 77.9 acres.

Farm property, which includes land, buildings, implements and machinery, and live stock (domestic animals, poultry, and bees), has increased in value during the decade \$43,827,000, or 24 per cent. This increase was chiefly made up of an increase of \$18,607,000 in the value of land and of \$17,542,000 in the value of buildings. There was also an increase of \$7,678,000 in the value of farm equipment, of which almost two-thirds represents a gain in the value of live stock and the remainder an increase in the value of implements and machinery. In considering the increase of values in agriculture the general increase in the prices of all commodities in the last 10 years should be borne in mind.

The average value of a farm with its equipment in 1900 was \$4,843, while 10 years later it was \$6,135. The average value of land rose from \$27.62 per acre in 1900 to \$36.69 in 1910, an increase of 32.8 per cent. This advance was accompanied by increases in the average values per farm of buildings, of implements and machinery, and of live stock.

Population, number of farms, and farm acreage: 1850 to 1910.—The table following presents, for the state as a whole for each census from 1850 to 1910, inclusive, a statement of the total population, the number of farms, and the acreage of farm land and of improved land in farms. It also gives the percentage of the land area in farms, the percentage of farm land improved, and the percentage of increase during each decade in the number of farms and in the land in farms.

CENSUS YEAR.	Popula-tion.	FARMS.		LAND IN FARMS.			Per cent of land area in farms.	Per cent of farm land im-prov-ed.
		Num-ber.	Per cent of in-crease. ¹	All land.		Improved land (acres).		
				Acres.	Per cent of in-crease. ¹			
1910.....	3,386,416	36,917	-2.1	2,875,941	-8.6	1,164,501	55.9	40.5
1900.....	2,805,346	37,715	9.7	3,147,064	5.0	1,292,132	61.2	41.1
1890.....	2,238,947	34,374	-10.5	2,998,282	-10.7	1,657,024	58.3	55.3
1880.....	1,783,085	38,406	44.9	3,359,079	23.0	2,128,311	65.3	63.4
1870.....	1,457,351	26,500	-25.6	2,730,283	-18.2	1,736,221	53.1	63.6
1860.....	1,231,066	35,001	4.5	3,338,724	-0.5	2,155,512	64.9	64.6
1850.....	994,514	34,069	.....	3,356,012	.....	2,183,436	65.2	63.6

¹ A minus sign (-) denotes decrease.

In the last 60 years the population of the state has increased 2,371,902, and in 1910 it was more than three times as great as in 1850.

There were 36,917 farms in Massachusetts in 1910, or 2,848 more than in 1850. This increase was not continuous, but was interrupted by a decrease during

each alternate decade. In 1880 the number reached 38,406, the highest figure for any of the years shown. The decrease during the last decade was very general, being shared by all but four counties.

The land surface of Massachusetts is approximately 5,144,960 acres. Of this area, 2,875,941 acres, or 55.9 per cent, are included in farms. Of the farm acreage, 1,164,501 acres, or 40.5 per cent, are reported as improved land, representing 22.6 per cent of the total land area of the state. Between 1900 and 1910 the total acreage of farm land decreased 8.6 per cent, and the acreage of improved land decreased 9.9 per cent; hence the percentage of farm land which is improved fell slightly.

The year 1880 shows the maximum acreage of land in farms, though the figures for this year are only slightly larger than those for 1850. The acreage of improved land, likewise, and the percentage of land improved were approximately the same in 1880 as in 1850. Between 1880 and 1910 there was an almost general decline in all these items. The net decrease in the whole farm land area during these 30 years amounted to 14.4 per cent; the area of improved land decreased without interruption until in 1910 it was only about one-half what it was in 1880; and the percentage of farm land improved declined steadily throughout the period from 63.4 per cent in 1880 to 40.5 per cent in 1910.

Values of farm property: 1850 to 1910.—The agricultural changes in Massachusetts since 1850, as reflected in the values of the several classes of farm property, are shown in the table which follows:

CENSUS YEAR.	FARM PROPERTY.							
	Total.		Land and buildings.		Implements and machinery.		Domestic animals, poultry, and bees.	
	Value.	Per cent of increase. ¹	Value.	Per cent of increase. ¹	Value.	Per cent of increase.	Value.	Per cent of increase. ¹
1910.....	\$226,474,025	24.0	\$194,168,765	22.9	\$11,563,894	31.0	\$20,741,360	31.3
1900.....	182,646,704	23.7	158,019,290	23.9	8,828,950	48.7	15,798,404	11.3
1890.....	147,677,402	-10.1	127,538,284	-12.8	5,938,940	15.7	14,200,178	9.6
1880.....	164,288,956	48.3	146,197,415	57.0	5,134,537	28.3	12,957,004	-5.0
1870.....	110,786,313	-20.8	93,146,227	-24.4	4,000,703	2.7	13,639,383	7.1
1860.....	139,888,600	14.7	123,255,948	13.0	3,894,968	21.4	12,737,744	32.0
1850.....	121,933,641	.....	109,076,347	.....	3,209,584	.....	9,647,710	.....

¹ A minus sign (-) denotes decrease.

² Computed gold values, being 80 per cent of the currency values reported.

The total wealth in the form of farm property is \$226,474,000, of which 85.7 per cent is represented by land and buildings, 5.1 per cent by implements and machinery, and 9.2 per cent by live stock. The total value of farm property increased during the last 10 years by \$43,827,000, or 24 per cent, a slightly greater relative increase than that in the preceding decade. From 1860 to 1870 and again from 1880 to 1890 the total value of farm property decreased, but by reason of greater increases in other decades the value in 1910 was nearly double that in 1850. The greatest increase was from 1870 to 1880.

Average acreage and values per farm: 1850 to 1910.—The changes which have taken place during the past 60 years in the average acreage of Massachusetts farms and in the average values of the various classes of farm property, as well as in the average value per acre of land and buildings, are shown in the following table:

CENSUS YEAR.	Average acres per farm.	AVERAGE VALUE PER FARM. ¹				Average value of land and buildings per acre.
		All farm property.	Land and buildings.	Implements and machinery.	Domestic animals, poultry, and bees.	
1910.....	77.9	\$6,135	\$5,260	\$313	\$562	\$67.51
1900.....	83.4	4,843	4,190	234	419	50.21
1890.....	87.2	4,296	3,710	173	413	42.54
1880.....	87.5	4,278	3,807	134	337	43.52
1870 ²	103.0	4,181	3,515	151	515	34.12
1860.....	93.8	3,929	3,462	109	358	36.92
1850.....	98.5	3,579	3,202	94	283	32.50

¹ Averages are based on "all farms" in state.
² Computed gold values, being 80 per cent of the currency values reported.

In average size the Massachusetts farm decreased from 98.5 acres in 1850 to 77.9 acres in 1910. The highest figure, 103 acres, was reached in 1870, since which time the decrease has been continuous.

The average value of a Massachusetts farm, including its equipment, has grown continuously from \$3,579 in 1850 to \$6,135 in 1910. Of the latter value, \$5,260 represents the value of land and buildings, \$562 that of live stock, and \$313 that of implements and machinery. The increase in the value per farm of all farm property during the last decade was slightly greater than that during the preceding half century. During the last decade the average value of land and buildings has increased \$17.30 per acre, or about as much as during the preceding half century, and the value per farm of equipment, which includes implements and machinery and live stock, is more than twice as great as in 1850.

Farm tenure: 1880 to 1910.—The following table shows the distribution of the farms of the state according to character of tenure at each census since 1880:

TENURE.	1910	1900	1890	1880
Number of all farms.....	36,917	37,715	34,374	38,406
Farms operated by owners and managers.....	33,938	34,112	31,177	35,266
Farms consisting of owned land only.....	30,705	31,002	(¹)	(¹)
Farms consisting of owned and hired land.....	1,370	1,579	(¹)	(¹)
Farms operated by managers.....	1,863	1,531	(¹)	(¹)
Farms operated by tenants.....	2,979	3,603	3,197	3,140
Share tenants.....	214	482	893	848
Share-cash tenants ²	43			
Cash tenants.....	2,115	3,121	2,304	2,292
Tenure not specified ³	607			
Per cent of farms operated by—				
Owners and managers.....	91.9	90.4	90.7	91.8
Tenants.....	8.1	9.6	9.3	8.2
Share and share-cash.....	0.7	1.3	2.6	2.2
Cash and nonspecified.....	7.4	8.3	6.7	6.0

¹ Not reported separately.
² Share-cash tenants were doubtless largely included with share tenants in 1900, 1890, and 1880.
³ Prior to 1910 nonspecified tenants were included with cash tenants.

During the last decade there was a decrease of 798 in the total number of farms, which decrease was made up of a loss of 174 in the number operated by owners and managers and a loss of 624 in the number operated by tenants. In 1910, 8.1 per cent of all farms were operated by tenants. In 1880 the proportion was approximately the same, but in the intervening decades it was higher, rising to 9.3 per cent in 1890 and to 9.6 per cent in 1900.

Cash tenancy (including nonspecified) is the prevailing form of tenancy, being reported in 1910 for 2,722, or 91.4 per cent, of the 2,979 farms operated by tenants, while share tenancy and share-cash tenancy were reported for only 257, or 8.6 per cent, of these farms. The number of farms operated by cash tenants, though less than in 1900, was somewhat greater than in 1890 or 1880, while the number operated by share tenants has decreased steadily since 1890, when it was highest, 893.

The following table shows the acreage, improved acreage, and value of land and buildings for farms operated by owners (including part owners), managers, and tenants, respectively:

FARMS OPERATED BY—	ALL LAND IN FARMS (ACRES).		IMPROVED LAND IN FARMS (ACRES).		VALUE OF LAND AND BUILDINGS.	
	1910	1900	1910	1900	1910	1900
Total.....	2,875,941	3,147,064	1,164,501	1,292,132	\$194,168,765	\$153,019,290
Owners.....	2,343,103	2,646,113	931,621	1,085,254	144,241,398	123,581,180
Managers.....	330,914	234,034	150,206	92,019	36,745,990	20,602,010
Tenants.....	201,924	266,917	82,674	114,859	13,181,377	13,836,100

The following table shows the per cent distribution by tenure groups of the items in the preceding table, and also of the number of farms:

FARMS OPERATED BY—	PER CENT OF TOTAL.							
	Number of farms.		All land in farms.		Improved land in farms.		Value of land and buildings.	
	1910	1900	1910	1900	1910	1900	1910	1900
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Owners.....	86.9	86.4	81.5	84.1	80.0	84.0	74.3	78.2
Managers.....	5.0	4.1	11.5	7.4	12.9	7.1	18.9	13.0
Tenants.....	8.1	9.6	7.0	8.5	7.1	8.9	6.8	8.8

It will be seen that, in 1910, 81.5 per cent of all land in farms was in farms operated by their owners (including part owners), 11.5 per cent in farms operated by managers, and 7 per cent in farms operated by tenants, the percentages for owners and for tenants being lower and that for managers higher than in 1900.

As shown by the next table, the average size of farms operated by managers in 1910 (177.6 acres) was more than twice as great as that of farms operated by owners (73.1 acres), which was in turn somewhat larger than that of farms operated by tenants (67.8 acres). The average size of farms operated by managers increased between 1900 and 1910, while that of

farms operated by owners and by tenants decreased. In 1910 the percentage of farm land improved was highest for farms operated by managers, and lowest for those operated by owners.

FARMS OPERATED BY—	AVERAGE ACRES PER FARM.				PER CENT OF FARM LAND IMPROVED.		AVERAGE VALUE OF LAND AND BUILDINGS.			
	All land.		Improved land.		1910	1900	Per farm.		Per acre.	
	1910	1900	1910	1900			1910	1900	1910	1900
Total.....	77.9	83.4	31.5	34.3	40.5	41.1	\$5,260	\$4,190	\$67.51	\$50.21
Owners.....	73.1	81.2	29.0	33.3	39.8	41.0	4,497	3,793	61.56	46.70
Managers.....	177.6	152.9	80.6	60.1	45.4	39.3	19,724	13,457	111.04	88.03
Tenants.....	67.8	74.1	27.8	31.9	40.9	43.0	4,425	3,840	65.28	51.84

Farm mortgages: 1890 to 1910.—The Eleventh Census (1890) was the first to collect data relating to mortgage debt on farms. The basis of the returns was the "farm home" occupied by its owner. The same class of information was secured by the population schedules of the Twelfth Census (1900). The agricultural schedules of the Thirteenth Census (1910) secured practically the same information, except that the basis was "owned farms" instead of "owned farm homes"—a difference involving, however, no appreciable incomparability.

The following table relates to farms operated by persons owning all or part of the land, and shows for 1910 (1) the number of such farms reported as free from mortgage; (2) the number reported as mortgaged; and (3) the number for which no mortgage reports were secured. Comparable items are included for 1900 and 1890.

CLASS.	OWNED FARMS. ¹		OWNED FARM HOMES.		OWNED FARM HOMES. ²	
	1910		1900		1890	
	Number.	Per cent. ³	Number.	Per cent. ³	Number.	Per cent.
Total.....	32,075	—	31,587	—	29,870	—
Free from mortgage.....	18,768	59.1	18,971	61.4	20,425	69.5
Mortgaged.....	13,014	40.9	11,941	38.6	8,945	30.5
Unknown.....	293	—	675	—	—	—

¹ Includes all farms owned in whole or in part by the operator.
² The 153 "owned farm homes" for which no reports were secured were distributed between "free from mortgage" and "mortgaged" in 1890.
³ Per cent of combined total of "free from mortgage" and "mortgaged."

In 1910 the total number of farms owned in whole or in part by the operators was 32,075. Of this number, 18,768 were reported as free from mortgage; 13,014 were reported as mortgaged; and for 293 no report relative to mortgage indebtedness was obtained. The number of mortgaged farms constituted 40.9 per cent of the total number of owned farms, exclusive of those for which no mortgage report was obtained. The percentage is only slightly larger than it was in 1900 but considerably larger than it was in 1890. It may be noted that the percentages given for the three censuses are comparable, but that the number of mortgaged and unmortgaged farms reported in 1890 is not entirely comparable with the numbers reported at the

later censuses because at the census of 1890 the farms for which no reports were secured were distributed between the two classes of mortgaged and unmortgaged farms. It can be seen, however, that from 1890 to 1910 the number of mortgaged farms increased considerably while the number free from mortgage decreased.

The statement of mortgage debt and of the value of mortgaged farm property is restricted to the farms of those farmers who own all of their land and report the amount as well as the fact of indebtedness. Of the 13,014 farms reported as mortgaged, 12,432 are wholly owned by the farmers, and for 12,030 of these the amount of mortgage debt is reported. Only these last-mentioned farms are included for 1910 in the next table, which presents data relating to mortgaged farms for 1910 and 1890. In this connection it should be noted that in 1890 the amount of mortgaged debt of farms with incomplete reports was estimated according to the percentages and averages obtained from farms with full reports, but that no such estimate is here made for 1910. The table gives a comparative statement of the value of mortgaged farms owned entirely by their operators and the amount of indebtedness, together with the average value of such farms, the average debt per farm, and the average equity per farm for 1910 and 1890. Data regarding the amount of mortgage debt were not obtained in 1900.

	OWNED FARMS OR FARM HOMES MORTGAGED.		INCREASE.	
	1910 ¹	1890 ²	Amount.	Per cent.
Number.....	12,030	8,945	—	—
Value—Land and buildings.....	\$49,742,396	\$28,249,173	—	—
Amount of mortgage debt.....	\$16,371,484	\$11,831,941	—	—
Per cent of debt to value.....	32.9	41.9	—	—
Average value per farm.....	\$4,135	\$3,158	\$977	30.9
Average debt per farm.....	\$1,361	\$1,323	\$38	2.9
Average equity per farm.....	\$2,774	\$1,835	\$939	51.2

¹ Includes only farms consisting wholly of owned land and reporting value of farm and amount of debt.

² Includes all owned farm homes, estimates being made of value of farms and amount of debt for all defective reports.

The average debt of mortgaged farms increased in 20 years from \$1,323 to \$1,361, or 2.9 per cent, while the average value of such farms rose from \$3,158 to \$4,135, or 30.9 per cent. Thus the owner's equity increased from \$1,835 to \$2,774, or 51.2 per cent. As a result of the greater relative increase in farm value than in farm debt, the ratio of the mortgage indebtedness to the value of the mortgaged farms, which was 41.9 per cent in 1890, had decreased in 1910 to 32.9 per cent.

Farms by size groups: 1910 and 1900.—About 46 out of every 100 Massachusetts farms are between 20 and 99 acres in size. A study of the distribution of farms by size groups discloses the fact that much the greatest relative gain in number from 1900 to 1910 was in the group ranging from 3 to 9 acres. The farms containing from 10 to 19 acres and those containing 1,000 acres and over also increased in number, while those between 20 and 49 acres showed practically no relative change. The number

of places of less than 3 acres reported as farms decreased 118, or 12.4 per cent. This decrease may be due to a different interpretation by the enumerators of what constitutes a small farm, or may represent an actual decrease in that type of farm. A decrease is shown for each group of farms falling between 50 and 999 acres, the aggregate decrease being 2,548, or 12.8 per cent.

The following table shows the distribution of farms by size groups at the censuses of 1910 and 1900:

SIZE GROUP.	NUMBER OF FARMS.		INCREASE. ¹		PER CENT OF TOTAL.	
	1910	1900	Number.	Per cent.	1910	1900
Total.....	36,917	37,715	-798	-2.1	100.0	100.0
Under 3 acres.....	833	951	-118	-12.4	2.3	2.5
3 to 9 acres.....	4,817	3,614	1,203	33.3	13.0	9.6
10 to 19 acres.....	4,956	4,324	632	14.6	13.4	11.5
20 to 49 acres.....	8,890	8,875	15	0.2	24.1	23.5
50 to 99 acres.....	7,981	8,910	-929	-10.4	21.6	23.6
100 to 174 acres.....	5,703	6,660	-957	-14.4	15.4	17.7
175 to 250 acres.....	2,147	2,533	-386	-15.2	5.8	6.7
250 to 499 acres.....	1,178	1,434	-256	-17.9	3.2	3.8
500 to 999 acres.....	319	339	-20	-5.9	0.9	0.9
1,000 acres and over.....	93	75	18	24.0	0.3	0.2

¹ A minus sign (-) denotes decrease.

The following table shows the total and improved acreage and the value of land and buildings for farms of various size groups, consolidating into one group the farms of less than 20 acres (numbering in all 10,606), and also the farms of between 175 and 499 acres (numbering 3,325):

SIZE GROUP.	ALL LAND IN FARMS (ACRES).		IMPROVED LAND IN FARMS (ACRES).		VALUE OF LAND AND BUILDINGS.	
	1910	1900	1910	1900	1910	1900
Total.....	2,875,941	3,147,064	1,164,501	1,292,132	\$194,168,765	\$158,019,290
Under 20 acres.....	96,041	84,038	69,869	61,232	39,272,566	25,942,830
20 to 49 acres.....	287,509	290,522	156,902	158,836	36,665,199	29,582,340
50 to 99 acres.....	554,699	618,783	252,447	284,900	40,939,114	35,858,140
100 to 174 acres.....	721,710	825,328	290,707	347,356	34,863,149	31,420,880
175 to 499 acres.....	840,139	997,933	278,531	356,133	32,098,128	28,148,110
500 to 999 acres.....	197,218	210,173	47,817	62,506	6,375,095	5,306,020
1,000 acres and over.....	178,825	120,287	68,228	21,169	3,955,524	1,760,970

The following table shows the per cent distribution by size groups of the items in the preceding table, and also of the number of farms:

SIZE GROUP.	PER CENT OF TOTAL.							
	Number of farms.		All land in farms.		Improved land in farms.		Value of land and buildings	
	1910	1900	1910	1900	1910	1900	1910	1900
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 20 acres.....	28.7	23.6	3.3	2.7	6.0	4.7	20.2	16.4
20 to 49 acres.....	24.1	23.5	10.0	9.2	13.5	12.3	18.9	18.7
50 to 99 acres.....	21.6	23.6	19.3	19.7	21.7	22.0	21.1	22.7
100 to 174 acres.....	15.4	17.7	25.1	26.2	25.0	25.9	18.0	19.9
175 to 499 acres.....	9.0	10.5	29.2	31.7	23.9	27.6	16.5	17.8
500 to 999 acres.....	0.9	0.9	6.9	6.7	4.1	4.8	3.3	3.4
1,000 acres and over.....	0.3	0.2	6.2	3.8	5.9	1.6	2.0	1.1

Of the total farm acreage of the state in 1910, 25.1 per cent was in farms of 100 to 174 acres, and 29.2 per cent in farms of 175 to 499 acres, these two being from the standpoint of aggregate acreage the most

important size groups. The most noteworthy change between 1900 and 1910 was the increase in the proportion of the total acreage which was in farms of less than 20 acres and in farms of 1,000 acres and over.

In general, as shown by the table below, the percentage of farm land improved diminishes as the size of the farms increases. For this reason and also because buildings have normally a higher value in proportion to farm acreage on small than on large farms, the average value of land and buildings per acre of land also diminishes with the increase in the size of the farms; it is very much higher for the farms under 20 acres in size than for those of any other group. Many of the small farms in Massachusetts are primarily places of residence of wealthy persons, with expensive buildings, and many others are highly improved truck farms.

SIZE GROUP.	PER CENT OF FARM LAND IMPROVED.		AVERAGE VALUE OF LAND AND BUILDINGS.			
	1910	1900	Per farm.		Per acre.	
			1910	1900	1910	1900
Total.....	40.5	41.1	\$5,280	\$4,190	\$67.51	\$50.21
Under 20 acres.....	72.8	72.9	3,703	2,919	408.91	308.70
20 to 49 acres.....	54.6	54.7	4,124	3,333	127.53	101.82
50 to 99 acres.....	45.5	46.1	5,130	4,024	73.80	57.95
100 to 174 acres.....	40.3	42.1	6,113	4,718	48.31	38.07
175 to 499 acres.....	33.2	35.7	9,654	7,096	38.21	28.21
500 to 999 acres.....	24.2	29.7	19,985	15,652	32.33	25.25
1,000 acres and over.....	38.2	17.6	42,533	23,480	22.14	14.64

Color and nativity of farmers: 1910.—Prior to the present census no attempt was made to secure information on the farm schedules concerning the nativity of farmers. The table which follows shows the color and nativity of farm operators by character of tenure for 1910:

COLOR AND NATIVITY.	FARM OPERATORS.								
	Total.			Own-ers.	Ten-ants.	Man-agers.	Per cent of total.		
	Num-ber.	Per cent distri-bution.	Own-ers.				Ten-ants.	Man-agers.	
Total.....	36,917	100.0	32,075	2,979	1,863	86.9	8.1	5.0	
Native white.....	28,431	77.0	24,857	2,173	1,401	87.4	7.6	4.9	
Foreign-born white.....	8,362	22.7	7,109	795	458	85.0	9.5	5.5	
Negro and other nonwhite.....	124	0.3	109	11	4	87.9	8.9	3.2	

Of all Massachusetts farmers, 77 per cent were in 1910 native whites, 22.7 per cent foreign-born whites, and only 0.3 per cent negroes and other nonwhites. Of the nonwhites, 103 were negroes and 21 Indians. Of the native white farmers, 7.6 per cent were tenants and 4.9 per cent managers, while the corresponding percentages for the foreign-born white farmers were 9.5 and 5.5, and for the nonwhite farmers, 8.9 and 3.2.

Of the 8,362 foreign-born farmers in 1910, those born in Canada numbered 2,277; Ireland, 1,572; England, 994; Germany, 598; and Sweden, 520. Austria, France, Italy, Poland, Russia, and Scotland each

had between 100 and 500 representatives, while Bohemia, Denmark, Holland, Hungary, Norway, Switzerland, and Wales each had less than 100.

Other European countries were represented by 585 farmers and non-European countries other than Canada by 106.

DOMESTIC ANIMALS, POULTRY, AND BEES.

Domestic animals on farms: 1910.—The census of 1910 was taken as of April 15, and that of 1900 as of June 1. Since a great many domestic animals are born during the six weeks between April 15 and June 1, and on the other hand a considerable number of older animals are slaughtered or die during the same period, the numbers of the different classes of animals for the two censuses are not closely comparable, and the same is true in somewhat less degree of the values. For this reason the figures for 1900 are not presented in this chapter, but in the general reports of the census the figures for the several states will be presented and the extent to which their comparability is affected by the change in the date of enumeration will be discussed.

The following table summarizes the statistics of domestic animals on farms for the state, recorded as of April 15, 1910. Cattle and sheep are divided into age and sex groups, while horses, mules, and swine are presented by age groups only.

AGE AND SEX GROUP.	FARMS REPORTING.		ANIMALS.		
	Number.	Per cent of all farms.	Number.	Value.	Average value.
Total.....	32,099	86.9	.....	\$19,208,712	.....
Cattle.....	27,532	74.6	252,416	9,348,076	\$37.03
Dairy cows (cows and heifers kept for milk, born before Jan. 1, 1909).....	27,193	73.7	171,936	7,815,701	45.46
Other cows (cows and heifers not kept for milk, born before Jan. 1, 1909).....	6,286	17.0	20,100	512,381	25.49
Heifers born in 1909.....	9,487	25.7	24,587	420,164	17.09
Calves born after Jan. 1, 1910.....	9,529	25.8	25,571	167,200	6.54
Steers and bulls born in 1909.....	2,479	6.7	4,834	114,821	23.75
Steers and bulls born before Jan. 1, 1909.....	3,196	8.7	5,388	317,809	58.98
Horses.....	28,173	76.3	64,283	8,671,997	134.90
Mares, stallions, and geldings born before Jan. 1, 1909.....	28,136	76.2	63,161	8,576,453	135.79
Colts born in 1909.....	709	1.9	948	86,054	90.77
Colts born after Jan. 1, 1910.....	121	0.3	174	9,490	54.54
Mules.....	155	0.4	268	43,365	161.88
Mules born before Jan. 1, 1909.....	149	0.4	259	42,905	165.66
Mule colts born in 1909.....	5	(¹)	5	365	73.00
Mule colts born after Jan. 1, 1910.....	3	(¹)	4	115	28.75
Asses and burros.....	19	0.1	21	1,777	84.62
Swine.....	11,005	29.8	103,018	978,989	9.50
Hogs and pigs born before Jan. 1, 1910.....	9,209	24.9	62,368	809,431	12.98
Pigs born after Jan. 1, 1910.....	3,904	10.6	40,650	169,558	4.17
Sheep.....	1,028	2.8	32,708	156,498	4.78
Ewes born before Jan. 1, 1910.....	947	2.6	20,912	111,140	5.31
Rams and wethers born before Jan. 1, 1910.....	430	1.2	1,787	13,898	7.78
Lambs born after Jan. 1, 1910.....	700	1.9	10,009	31,460	3.14
Goats.....	201	0.6	1,251	7,990	6.39

¹ Less than one-tenth of 1 per cent.

The total value of live stock on farms, including domestic animals, poultry, and bees in 1910 was \$20,741,000, of which domestic animals contributed \$19,209,000. The value of cattle represented 45.1 per cent of the total value of live stock; that of horses, 41.8 per cent; that of swine, 4.7 per cent; that of sheep and lambs, 0.8 per cent; and that of poultry, 7.2 per cent, the other classes being insignificant.

Of the total number of farms enumerated, 32,099, or 86.9 per cent, report domestic animals of some kind, the number without any domestic animals being 4,818.

Of all the farms in the state, 74.6 per cent report cattle, 73.7 per cent report "dairy cows," but only 17 per cent "other cows." Only 339 farms have cattle without having dairy cows. The farms reporting dairy cows show an average of over 6 per farm.

Horses are reported by 76.3 per cent of all the farms in the state, but only 1.9 per cent report colts born in 1909 and only 0.3 per cent report spring colts. The average value of mature horses is reported at \$135.79.

Only one farmer in every two hundred and fifty reports mules. The average value of mature mules is considerably higher than that of horses.

Sheep and lambs are reported from only 1,028 farms, or 2.8 per cent of all the farms in the state. Of these 1,028 farms, 68.1 per cent report spring lambs, the number of the latter being equal to 47.9 per cent of the number of ewes. This comparatively small proportion is doubtless due to the early date of enumeration. For the farms reporting ewes the average is 22 per farm.

Of all farms, 29.8 per cent report swine, the average number being over 9 per farm reporting. The average value of the swine reported as "hogs and pigs born before January 1, 1910," is \$12.98, while that of spring pigs is about one-third as much.

Poultry on farms: 1910 and 1900.—The following table gives the numbers of the various kinds of poultry reported in 1910 and 1900, together with their value and the number of farms reporting each kind in 1910:

KIND.	1910 (April 15)				1900 (June 1)
	Farms reporting.		Number of fowls.	Value.	Number of fowls.
	Number.	Percent of all farms.			
Total.....	28,154	76.3	1,798,380	\$1,492,961	1,680,693
Chickens.....	28,018	75.9	1,709,934	1,402,977	1,626,269
Turkeys.....	692	1.9	2,645	8,729	3,018
Ducks.....	1,888	5.1	23,153	23,255	40,017
Geese.....	896	2.4	12,313	26,867	6,389
Guinea fowls.....	812	2.2	4,446	3,548	(¹)
Pigeons.....	948	2.6	44,830	24,310	(²)
Pheasants.....	3	(³)	1,055	3,200	(³)
Peafowls.....	2	(³)	4	75	(³)

¹ Included with chickens. ² Not reported. ³ Less than one-tenth of 1 per cent.

The increase in the number of fowls on Massachusetts farms during the last decade amounts to 7 per cent, while the value shows an increase from \$1,018,000 to \$1,493,000, or 46.6 per cent. The number of farms reporting poultry decreased from 30,504 to 28,154, but the average number of fowls per farm reporting increased from 55 to 64. More than three-fourths of all farms report chickens, and the value of this most common variety of poultry constitutes more than nine-tenths of the value of all poultry in the state. The value of poultry and the number of farms reporting were obtained in 1900 for the total of fowls only, and not for each kind, as in 1910.

Bees on farms: 1910 and 1900.—The number of farms reporting bees has decreased from 1,799 in 1900 to 1,597 in 1910, or 11.2 per cent. The number of colonies of bees decreased from 8,381 to 7,464, or 10.9 per cent, and their value increased from \$35,751 to \$39,683, or 11 per cent. The average value per colony was \$5.32 in 1910, as against \$4.27 in 1900. The average value of bees per farm reporting was \$19.87 in 1900 and \$24.85 in 1910. About four farms in every one hundred report bees.

Domestic animals not on farms: 1910.—Most of the domestic animals not on farms are found in cities, towns, and villages. Statistics for such animals are shown below. No provision was made by law to secure data pertaining to poultry and bees not on farms. In the next table age groups are omitted for the sake of brevity, but it may be noted that in cities and villages a comparatively small proportion of the animals of each class are in the younger age groups.

As would be expected, horses are by far the most important class of domestic animals not on farms, both

in number and in value; cattle, consisting mainly of dairy cows, rank next in importance.

KIND.	Number of inclosures reporting.	ANIMALS.		
		Number.	Value.	Average value.
Total.....	43,063		\$20,482,394	.....
All cattle.....	9,502	19,896	875,189	\$43.99
Dairy cows.....	9,410	16,082	794,095	49.33
Horses.....	37,059	115,156	19,423,642	168.63
Mules.....	112	271	44,778	165.22
Asses and burros.....	26	36	1,587	44.08
Swine.....	3,571	12,010	113,577	9.46
Sheep.....	92	4,329	18,792	4.84
Goats.....	359	643	4,829	7.51

Domestic animals on farms and not on farms: 1910.—The following table gives the total number and value of domestic animals, distinguishing those on farms from those not on farms:

KIND.	DOMESTIC ANIMALS.					
	Total.		On farms.		Not on farms.	
	Number.	Value.	Number.	Value.	Number.	Value.
Total.....		\$39,691,106		\$19,208,712		\$20,482,394
All cattle.....	272,312	10,223,265	252,416	9,348,076	19,896	875,189
Dairy cows.....	183,018	8,609,796	171,936	7,815,701	16,082	794,095
Horses.....	179,469	28,095,639	64,283	8,671,997	115,186	19,423,642
Mules.....	539	88,163	268	43,385	271	44,778
Asses and burros.....	57	3,364	21	1,777	36	1,587
Swine.....	115,028	1,092,566	103,018	978,989	12,010	113,577
Sheep.....	37,037	175,290	32,708	156,498	4,329	18,792
Goats.....	1,894	12,819	1,251	7,990	643	4,829

The total value of all domestic animals in the state in 1910 was \$39,691,000, of which the value of animals not on farms represented 51.6 per cent, this high proportion being attributable to the predominantly urban character of the population in Massachusetts. The number of horses not on farms was nearly four-fifths greater than the number on farms.

LIVE STOCK PRODUCTS.

The returns for live stock products obtained at the census of 1910, like those for crops, relate to the production of the calendar year 1909. It is impossible to give a total representing the annual production of live stock products for the reason that, as shown further on, the net value of products from the business of raising domestic animals for use, sale, or slaughter can not be calculated from the census returns. Even if this value could be ascertained and were added to the value of the crops the sum would not correctly represent the total value of farm products, because, as already more fully explained, duplication would result from the fact that part of the crops are fed to the live stock.

Dairy products: 1909 and 1899.—The next table shows the principal statistics relative to dairy products in 1909, with certain comparative statistics for 1899.

The number of farms reporting dairy cows on April 15, 1910, was 27,193, but only 26,349 reported the production of any kind of dairy products in 1909.

That there should be this small difference is not surprising. Doubtless some farmers who had dairy cows in 1910 had none in 1909, while other farmers neglected to give information for the preceding year, or were unable to do so, perhaps because the farm was then in other hands. Dairy products in general are somewhat less accurately reported than the principal crops. This is particularly the case as regards the quantity of milk produced. The number of farms which made any report of milk produced during 1909 was 25,713 (somewhat less than the total number reporting dairy products), and the number of dairy cows on such farms on April 15, 1910, was 164,000. The amount of milk reported was 86,304,000 gallons; assuming that there were the same number of cows in 1909 as in 1910, this would represent an average of 526 gallons per cow. In considering this average, however, it should be borne in mind that the quantity of milk reported is probably deficient and that the distinction between dairy and other cows is not always strictly observed in the census returns.

	FARMS REPORTING.		Number or quantity.	Unit.	VALUE.	
	Number.	Per cent of all farms.			Total.	Average per unit.
Dairy cows on farms, April 15, 1910.....	27,193	73.7	171,936	Head		
On farms reporting dairy products in 1909.....	26,349	71.4	168,959	Head		
On farms reporting milk produced in 1909.....	25,713	69.7	163,967	Head		
Specified dairy products, 1909:						
Milk reported.....			86,304,347	Gals		
Butter made.....	9,035	24.5	3,364,516	Lbs.	\$1,041,482	\$0.31
Cheese made.....	80	0.2	45,753	Lbs.	5,311	0.12
Milk sold.....	15,703	42.5	64,496,632	Gals	13,297,634	0.21
Cream sold.....	905	2.5	501,876	Gals	475,824	0.95
Butter fat sold.....	1,123	3.0	1,143,019	Lbs.	367,523	0.32
Butter sold.....	4,557	12.3	2,226,311	Lbs.	696,336	0.31
Cheese sold.....	45	0.1	32,490	Lbs.	3,610	0.11
Total receipts from sales, 1909.....					14,840,927	
Total value of milk, cream, and butter fat sold and butter and cheese made, 1909.....					15,187,774	
Specified dairy products, 1909:						
Butter made.....	11,560	31.3	4,980,262	Lbs.		
Cheese made.....	84	0.2	19,629	Lbs.		
Butter sold.....			3,634,698	Lbs.	894,575	0.24
Cheese sold.....			15,138	Lbs.	1,996	0.13

By reason of the incompleteness of the returns for milk produced, the Census Bureau has made no attempt to determine the total value of dairy products for 1909. For convenience a partial total has been presented comprising the reported value of milk, cream, and butter fat sold and the reported value of butter and cheese made, whether for home consumption or for sale. The total thus obtained for 1909 is \$15,188,000, which may be defined as the total value of dairy products exclusive of milk and cream used on the farm producing.

A very large proportion of the milk produced in Massachusetts in 1909 was sold as such. Comparatively little milk and cream was sold on the butter fat basis. The butter made on farms in 1909 was valued at \$1,041,000.

Comparisons are made between 1909 and 1899 for but few of the census items relating to dairy products, for the reason that in 1899 estimates were made for farms with incomplete reports, which was not done at the present census. The figures for milk produced and milk sold are particularly affected, but those for butter and cheese are approximately comparable. The table shows a material decrease between 1899 and 1909 in the amount of butter made, but a marked relative increase in the production of cheese, which, however, is still comparatively small.

Wool: 1909 and 1899.—The next table gives statistics as to the production of wool on farms, the figures being partly based on estimates.¹

The total number of sheep of shearing age in Massachusetts on April 15, 1910, was 22,699, representing a decrease of 33 per cent as compared with

the number on June 1, 1900 (33,869). The approximate production of wool during 1909 was 21,667 fleeces, weighing 127,897 pounds, and valued at \$33,670. Of these totals about one-sixth represents estimates. The number of fleeces produced in 1909 was about 38 per cent less than in 1899. The average weight per fleece in 1909 was 5.9 pounds, as compared with 5.6 pounds in 1899, and the average value per pound was 26 cents, as compared with 21 cents in 1899.

	Number of farms reporting.	Sheep of shearing age.	WOOL PRODUCED.		
			Fleeces (number).	Weight (pounds).	Value.
Sheep of shearing age on farms, April 15, 1910.....	975	22,699			
Wool produced, as reported, 1909.....	716		19,235	113,766	\$28,916
On farms reporting sheep, April 15, 1910.....	657	18,938	18,077	106,706	28,061
On other farms.....	59		1,158	7,050	1,825
Total production of wool (partly estimated):					
1909.....			21,667	127,897	33,670
1899.....			35,067	195,876	40,261
Decrease, 1899 to 1909.....			13,400	67,979	6,621
Per cent of decrease.....			38.2	34.7	16.4

Goat hair and mohair: 1909 and 1899.—Although 201 farmers reported 1,251 goats and kids on their farms April 15, 1910, only 35 reported the production of goat hair or mohair during 1909. These farmers reported 536 fleeces, weighing 1,695 pounds and valued at \$509. Although the production is still unimportant, some increase is shown over that in 1899. Many farmers who have goats do not produce goat hair or mohair, but it is believed that the report is somewhat short of the actual production.

Poultry products: 1909 and 1899.—The next statement gives data relative to the production and sale of eggs and poultry.

The total number of fowls on Massachusetts farms on April 15, 1910, was 1,798,000. Of the 28,154 farms reporting fowls, 2,814 did not report any eggs produced in 1909 and 3,727 did not report any poultry raised in 1909. The production of eggs actually reported for the year 1909 was 13,306,000 dozens, valued at \$4,026,000. According to the Twelfth Census re-

¹ Farmers should be able in general to report the production of wool more accurately than that of dairy products. There were, however, 318 farmers who reported the possession of 3,761 sheep of shearing age on April 15, 1910, without reporting any wool produced in 1909. Probably in a large proportion of cases this failure was due to the fact that they did not have these sheep, or did not occupy the same farm, during the preceding year. The returns of farms reporting wool in 1909 but no sheep of shearing age on April 15, 1910, would partially make up this deficiency, but it is believed that in many cases enumerators having found that a farm had no sheep in 1910 omitted the inquiry as to wool produced in 1909 and thus missed more or less wool actually produced. It is a fairly safe assumption that the entire production of wool in 1909 bore the same relation to the entire number of sheep of shearing age April 15, 1910, as the production of wool on those farms reporting both production and sheep bore to the number of sheep reported on such farms. Statistics for this group of farms are given in the table, and the total wool product, estimated on the basis of the above assumption, is also given.

ports the production of eggs in 1899 was 12,929,000 dozens, the value being \$2,571,000. The latter figures, however, are somewhat in excess of the actual returns at that census, because they include estimates made to cover those cases where the schedules reported fowls on hand without reporting the production of eggs. In order to make the returns for 1909 comparable with those published for 1899 similar estimates have been made, the method of estimate and the justification therefor being substantially the same as in the case of wool. The total production of eggs in 1909, including these estimates, was 14,145,000 dozens, valued at \$4,280,000. The total production of poultry in 1909, including estimates made on the same basis as for eggs, was 3,212,000 fowls, valued at \$2,411,000.

	Number of farms reporting.	Number of fowls on hand.	PRODUCT.	
			Quantity.	Value.
Fowls on farms April 15, 1910	28,154	1,798,380		
On farms reporting eggs produced in 1909	25,340	1,696,811		
On other farms	2,814	101,569		
Eggs produced, as reported, 1909	27,337		Dozens. 13,305,540	\$4,026,346
Total production of eggs (partly estimated):				
1909			14,145,240	4,280,445
1899			12,928,630	2,571,341
Increase, 1899 to 1909			1,216,610	1,709,104
Per cent of increase			9.4	66.5
Eggs sold, as reported, 1909	21,084		9,614,504	2,914,755
Fowls on farms April 15, 1910:				
On farms reporting poultry raised in 1909	24,427	1,665,296		
On other farms	3,727	133,084		
Poultry raised, as reported, 1909	26,731		No. of fowls. 2,974,619	2,232,653
Total poultry raised (partly estimated):				
1909			3,212,339	2,411,078
1899			1,407,681	1,003,397
Increase, 1899 to 1909				1,003,397
Per cent of increase				71.3
Fowls sold, as reported, 1909	16,742		1,596,472	1,287,829

Honey and wax: 1909.—Although, as noted elsewhere, 1,597 farms reported 7,464 colonies of bees on hand April 15, 1910, 645 of these farms, with 2,037 colonies on hand April 15, 1910, made no report of honey or wax produced in 1909. The actual returns show the production of 96,802 pounds of honey, valued at \$18,806, and 1,019 pounds of wax, valued at \$370; the true totals are doubtless somewhat above these figures.

Sale and slaughter of domestic animals: 1909 and 1899.—The next statement presents statistics relating

to the sale and slaughter of domestic animals by Massachusetts farmers during the year 1909, with certain items for 1899.

The total value of domestic animals sold during 1909 was \$5,014,000, and that of animals slaughtered on farms \$1,006,000, making an aggregate of \$6,020,000. This total, however, involves considerable duplication, resulting from the resale or slaughter of animals which had been purchased by the farmers during the same year.

The value of the cattle (including calves) sold during 1909 represented over 70 per cent of the total value of animals sold.

The census of 1900 called for the receipts from the sale of all domestic animals raised on the farms reporting and the total value of those slaughtered during 1899, which amounted, respectively, to \$1,284,000 and \$932,000.

The item of sales is not closely comparable with that for 1909, when the inquiry covered all sales whether of animals raised on the farms reporting or elsewhere. It is believed, however, that in many cases the returns for 1899 also included receipts from sales of animals not actually raised on the farms reporting.

	FARMS REPORTING.		Number of animals.	VALUE.	
	Number.	Percent of all farms.		Total.	Average.
1909—All domestic animals: ¹					
Sold				\$5,014,442	
Slaughtered				1,006,068	
Calves:					
Sold	12,412	33.6	95,486	425,770	\$4.56
Slaughtered	995	2.7	14,187	95,175	6.71
Other cattle:					
Sold	9,927	26.9	81,661	3,177,121	38.91
Slaughtered	2,021	5.5	13,521	360,860	26.69
Horses:					
Sold	1,991	5.4	5,963	833,141	139.72
Mules:					
Sold	9	(*)	16	3,330	208.13
Swine:					
Sold	3,885	10.5	63,930	531,093	8.31
Slaughtered	7,183	19.5	27,754	537,079	19.35
Sheep:					
Sold	385	1.0	6,558	32,637	4.98
Slaughtered	202	0.5	2,412	12,887	5.34
1899—All domestic animals:					
Sold ²				1,284,454	
Slaughtered				932,411	

¹ Includes small amounts for asses and burros, and goats, not listed separately.

² Less than one-tenth of 1 per cent.

³ Schedules called for receipts from sale of animals raised on the farms reporting.

CROPS.

Summary: 1909 and 1899.—The first table on the next page summarizes the census data relative to all of the farm crops of 1909 and 1899. It includes not only general farm crops, but also flowers and plants, nursery products, and forest products of farms. In comparing one year with the other it should be borne in mind that acreage is on the whole a better index of the general

changes or tendencies of agriculture than either the quantity or the value of the crops, since variations in quantity may be due largely to temporarily favorable or unfavorable climatic conditions, and variations in the value of the crops are largely affected by changes in prices. (See also discussion of "Total value of farm products.")

	ACRES.				PER CENT OF IMPROVED LAND OCCUPIED.		VALUE OF PRODUCTS.						
	1909	1899	Increase. ¹		1909	1899	1909	1899	Increase. ¹		Per cent of total.		
			Amount.	Per cent.					Amount.	Per cent.	1909	1899	
All crops.....								\$31,948,095	\$23,157,544	\$8,790,551	38.0	100.0	100.0
Crops with acreage reports.....													
Cereals.....	654,844	735,134	-80,290	-10.9	56.2	56.9	27,062,235	19,893,681	7,168,554	38.0	84.7	85.9	
Cereals.....	55,267	53,385	1,882	3.5	4.7	4.1	1,617,131	922,127	695,004	75.4	5.1	4.0	
Other grains and seeds.....	486	751	-265	-35.3	(*)	0.1	13,541	17,219	-3,678	-21.4	(*)	0.1	
Hay and forage.....	519,503	610,023	-90,520	-14.8	44.6	47.2	11,280,989	9,056,854	2,224,135	25.6	35.3	39.1	
Tobacco.....	5,221	3,826	1,395	44.3	0.5	0.3	1,218,060	956,399	261,661	27.4	3.8	4.1	
Sugar crops.....	77	77	0	0	(*)	(*)	9,769	9,769	0	0	(*)	(*)	
Sundry minor crops.....	2	25	-23	(*)	(*)	(*)	400	1,243	-843	-67.3	(*)	(*)	
Potatoes and sweet potatoes and yams.....	24,466	27,521	-3,055	-11.1	2.1	2.1	1,994,356	1,800,948	193,408	10.7	6.2	7.0	
Other vegetables.....	37,220	29,779	7,441	25.0	3.2	2.3	6,189,857	3,745,348	2,444,509	50.3	19.4	16.2	
Flowers and plants and nursery products.....	2,750	1,478	1,272	56.1	0.2	0.1	3,061,342	1,899,829	1,161,513	61.1	9.0	8.2	
Small fruits.....	9,552	8,346	1,206	14.5	0.8	0.6	1,676,790	1,493,714	183,076	12.3	5.2	6.5	
Crops with no acreage reports.....													
Seeds.....							4,885,860	3,263,863	1,621,997	49.7	15.3	14.1	
Fruits and nuts.....							4,454	41,079	-36,625	-89.2	(*)	0.0	
Maple sugar and sirup.....							2,108,769	1,218,659	890,110	73.0	6.6	5.0	
Forest products of farms.....							77,559	48,238	29,321	60.8	0.2	0.2	
Miscellaneous.....							2,668,410	1,944,714	723,696	37.2	8.4	8.4	
							26,638	11,175	15,463	138.4	0.1	(*)	

¹ A minus sign (-) denotes decrease.
² Less than one-tenth of 1 per cent.

³ Per cent not calculated when base is less than 100.

⁴ Includes value of raisins and other dried fruits, wine, cider, vinegar, etc.

The total value of crops in 1909 was \$31,948,000. Of this amount, 84.7 per cent was contributed by crops for which the acreage as well as the value was reported, the remainder consisting of the value of by-products (straw, garden and grass seeds, etc.) derived from the same land as other crops reported, or of orchard fruits, nuts, forest products, and the like. The combined acreage of crops for which acreage was reported was 654,844, representing 56.2 per cent of the total improved land in farms (1,164,501 acres). Most of the remaining improved land doubtless consisted of improved pasture, land lying fallow, house and farm yards, and land occupied by orchards and vineyards, the acreage for which was not reported.

The general character of Massachusetts agriculture is indicated by the fact that only 5.1 per cent of the total value of crops in 1909 was contributed by the cereals, while over one-third (35.3 per cent) was contributed by hay and forage, and one-fourth (25.6 per cent) by potatoes and other vegetables. The remainder, representing in value 34 per cent of the total, consisted mostly of flowers and plants, nursery products, fruits and nuts, and forest products.

The total value of crops in 1909 was 38 per cent greater than that in 1899. This increase was clearly due to higher prices, as the quantity of the most important products decreased. There was a decrease of 10.9 per cent in the total acreage of crops for which acreage was reported, but this was almost wholly due to the decrease in the acreage of hay and forage and of potatoes, all of the other crops of any importance having increased in acreage.

General farm crops, minor grains and seeds, and sundry minor crops: 1879 to 1909.—The next table presents statistics for 1909 regarding cereals, other grains and seeds, hay and forage, potatoes, tobacco, and sundry minor crops.

The leading crops covered by the table, in the order of their importance as judged by value, are hay and forage, \$11,281,000; potatoes, \$1,994,000; corn,

\$1,372,000; tobacco, \$1,218,000. It should be noted, however, that some of the crops reported in the later tables are both absolutely and relatively more important than corn or tobacco.

Of the hay and forage crops, "timothy and clover mixed" has the greatest acreage and by far the greatest value; "other tame or cultivated grasses" ranks second in acreage and third in value; and "timothy alone" ranks third in acreage and second in value. These three classes represent over six-sevenths of the acreage and over four-fifths of the value of all hay and forage.

CROP.	Farms reporting.	Acres harvested.	QUANTITY.		Value.
			Amount.	Unit.	
Cereals, total.....		55,287	2,402,738	Bu....	\$1,617,131
Corn.....	14,755	41,755	2,020,361	Bu....	1,372,144
Oats.....	2,181	7,927	268,500	Bu....	157,381
Wheat, total.....	81	109	2,404	Bu....	2,515
Common winter.....	55	73	1,710	Bu....	1,739
Common spring.....	25	34	672	Bu....	748
Durum or macaroni.....	1	2	22	Bu....	28
Emmer and spelt.....	1	1	6	Bu....	5
Barley.....	197	349	9,021	Bu....	7,177
Buckwheat.....	867	1,630	32,926	Bu....	24,678
Rye.....	1,804	3,476	59,183	Bu....	52,396
Kafir corn and milo maize.....	9	21	1,317	Bu....	835
Other grains and seeds with acreage report, total¹.....		486	5,524	Bu....	13,541
Dry edible beans.....	1,252	440	4,979	Bu....	12,382
Dry peas.....	58	30	480	Bu....	944
Seeds with no acreage report, total².....					4,454
Clover seed.....	2	(*)	50	Bu....	575
Millet seed.....	8	(*)	2,998	Bu....	2,870
Hay and forage, total.....	33,569	519,503	831,955	Tons.	11,280,980
Timothy alone.....	9,945	106,802	153,622	Tons.	2,858,598
Timothy and clover mixed.....	14,302	185,821	249,317	Tons.	4,338,406
Clover alone.....	612	1,920	3,145	Tons.	51,352
Alfalfa.....	96	232	394	Tons.	6,147
Millet or Hungarian grass.....	3,081	6,774	15,276	Tons.	178,910
Other tame or cultivated grasses.....	10,678	155,663	150,723	Tons.	2,244,396
Wild, salt, or prairie grasses.....	2,976	25,290	25,645	Tons.	258,240
Grains cut green.....	6,368	15,522	45,701	Tons.	409,295
Coarse forage.....	4,652	21,342	186,657	Tons.	921,380
Root forage.....	197	137	1,475	Tons.	15,875
Potatoes.....	24,757	24,459	2,946,178	Bu....	1,993,923
Sweet potatoes and yams.....	22	7	548	Bu....	433
Tobacco.....	910	5,521	9,549,306	Lbs..	1,218,060
Sundry minor crops, total.....		2			400

¹ Includes small amounts of soy beans, peanuts, and broom corn seed.
² Includes small amounts of other varieties of grass seeds, flower and garden seeds, etc.
³ The entire acreage from which these seeds were secured is believed to be included in the acreage given elsewhere for hay and forage crops, flowers and plants, etc.

The fluctuations in the acreages of some of the principal crops during the past 30 years are shown in the following table:

CROP YEAR.	ACRES HARVESTED.					
	Corn.	Oats.	Rye.	Hay and forage.	Potatoes.	Tobacco.
1909.....	41,755	7,927	3,476	519,503	24,459	5,521
1899.....	39,131	6,702	4,557	610,023	27,521	3,826
1889.....	34,010	14,331	10,665	627,385	26,873	2,012
1879.....	52,555	20,659	21,666	630,493	31,054	3,353

Between 1879 and 1889 the acreage of corn decreased over one-third; since 1889 there has been an increase, the percentage of gain during the last two decades being 15.1 and 6.7, respectively. The acreage of oats in 1909, though 18.3 per cent greater than in 1899, was only about two-fifths as great as in 1879. Rye had an acreage in 1909 less than one-sixth as great as in 1879, since which time the decrease has been continuous. The acreage of hay and forage has fallen off throughout the 30-year period, the decrease during the last decade, 14.8 per cent, being greater than that during either of the preceding decades shown. The potato acreage has fluctuated somewhat, but is less than at any of the three earlier censuses and represents a loss of more than one-fifth, as compared with 1879. The acreage of tobacco declined 40.1 per cent between 1879 and 1889, but it gained rapidly from that time on, so that in 1909 it was 64.4 per cent greater than in 1879.

The following table shows for 1909 and 1899 the percentage which the farms reporting specified crops represented of all farms, the percentage of improved land devoted to these crops, and the percentage of increase or decrease in the acreage of each crop during the decade, together with the average yields and average values per acre for 1909:

CROP.	PER CENT OF FARMS REPORTING.		PER CENT OF IMPROVED LAND.		Per cent of increase in acres: 1899 to 1909 ¹	AVERAGE YIELD PER ACRE.	AVERAGE VALUE PER ACRE.
	1909	1899	1909	1899			
Corn.....	40.0	38.6	3.6	3.0	6.7	48.6 Bu.	\$32.86
Oats.....	5.9	5.8	0.7	0.5	18.3	33.9 Bu.	19.85
Buckwheat.....	2.3	2.8	0.1	0.2	-27.9	20.2 Bu.	15.14
Rye.....	3.5	4.4	0.3	0.4	-23.7	17.0 Bu.	15.07
Dry edible beans.....	3.4	4.3	(²)	(²)	-29.1	11.2 Bu.	27.76
Hay and forage.....	90.9	90.9	44.6	47.2	-14.8	1.60 Tons.	21.71
Potatoes.....	67.1	72.8	2.1	2.1	-11.1	120.5 Bu.	81.52
Tobacco.....	2.5	2.7	0.5	0.3	44.3	1,729.6 Lbs.	220.62

¹ A minus sign (-) denotes decrease. ² Less than one-tenth of 1 per cent.

Out of every 100 farmers in the state about 91 report hay and forage, 67 report potatoes, 40 report corn, and 6 report oats. The proportions reporting corn and oats have increased slightly, but the proportions reporting the other crops included in the preceding table, with the exception of hay and forage, have decreased. These eight crops cover about 52 per cent of the improved acreage of the state. The hay and forage crop contributes by far the greater share, its acreage being about six times as great as that of the other seven combined.

The average value per acre of the combined cereals is \$29.26. Corn is the only cereal of any importance for which the value per acre exceeded this average. The average value per acre of hay and forage is about three-fourths that of the combined cereals.

About five-eighths of the corn acreage of the state is reported from Hampshire, Worcester, Franklin, and Hampden Counties. More than half of the acreage of hay and forage is reported from Worcester, Berkshire, and Middlesex Counties. Substantially all the tobacco is reported from Hampshire, Franklin, and Hampden Counties.

Vegetables, flowers and plants, and nursery products: 1909 and 1899.—The table which follows shows details with regard to vegetables (not including potatoes and sweet potatoes and yams, which appear elsewhere), and also with regard to flowers and plants and nursery products:

CROP.	FARMS REPORTING: 1909		ACRES.		VALUE OF PRODUCTS.	
	Number.	Per cent of all farms.	1909	1899	1909	1899
Vegetables, other than potatoes and sweet potatoes and yams, total.....	28,887	78.2	37,220	29,779	\$6,189,857	\$3,745,348
Farms reporting a product of \$500 or over.....	1,961	5.3	17,269	.....	4,277,296	.....
All other farms.....	26,926	72.9	19,951	.....	1,912,561	.....
Flowers and plants, total.....	814	2.2	1,203	584	2,455,467	1,639,760
Farms reporting a product of \$250 or over.....	643	1.7	.....	.....	2,431,659	.....
All other farms.....	171	0.5	.....	.....	23,808	.....
Nursery products, total.....	119	0.3	1,547	804	605,375	260,069
Farms reporting a product of \$250 or over.....	67	0.2	.....	.....	599,256	.....
All other farms.....	52	0.1	.....	.....	6,619	.....

¹ Does not include 276 farms which reported that they had vegetable gardens, but gave no information as to their products.

In 1909 the total acreage of potatoes and other vegetables was 61,686 and their value \$8,184,000. Excluding (so far as reported separately ¹) potatoes and sweet potatoes and yams, the acreage of vegetables was 37,220 and their value \$6,190,000, both acreage and value being decidedly greater than in 1899. The table distinguishes between farms which make the raising of vegetables a business of some importance (having produced vegetables valued at \$500 or more in 1909) and other farms, on most of which vegetables are raised mainly for home consumption. While there were in 1909 only 1,961 farms in the first class, they reported nearly half of the total acreage of vegetables and more than two-thirds of the total value, the average acreage of vegetables per farm for these farms being 8.8 and the average value per acre \$248.

The raising of flowers and plants and of nursery products is also relatively important in Massachusetts, 2,750 acres being devoted to it in 1909, and the output being valued at \$3,061,000. Most of the product was

¹ It is probable that some of the potatoes and sweet potatoes and yams raised in farm gardens were not reported separately by farmers, but were included in their returns for vegetables.

raised on a few farms where these branches of agriculture were carried on as an important business.

Small fruits: 1909 and 1899.—The following table shows data with regard to small fruits on farms:

CROP.	Number of farms reporting: 1909	ACRES.		Quantity (quarts): 1909	Value: 1909
		1909	1899		
Small fruits, total.....	9,552	8,346	29,260,143	\$1,676,790	
Strawberries.....	4,654	2,015	2,027	495,438	
Blackberries and dewberries.....	1,308	287	365	31,454	
Raspberries and loganberries.....	1,309	388	413	55,757	
Currants.....	1,526	243	190	19,904	
Gooseberries.....	330	42	39	5,007	
Cranberries.....	1,350	6,577	5,125	1,062,205	
Other berries.....	61	193	71,020	7,025	

Cranberries are by all odds the most important of the small fruits grown in Massachusetts, with strawberries ranking next. The total acreage of small fruits in 1909 was 9,552 and in 1899, 8,346, an increase of 14.5 per cent. The production in 1909 was 29,260,000 quarts, as compared with 25,882,000 quarts in 1899, and the value \$1,677,000, as compared with \$1,494,000. The quantity and value of products thus increased somewhat less, relatively, than the acreage.

Orchard fruits, grapes, and nuts: 1909 and 1899.—The following table presents data with regard to orchard fruits, grapes, and nuts. The acreage devoted to these products was not ascertained. In comparing one year with the other the number of trees or vines of bearing age is, on the whole, a better index of the general changes or tendencies than the quantity of product, but the data for the censuses of 1910 and 1900 are not closely comparable and the product is therefore compared, although variations may be due largely to temporarily favorable or unfavorable climatic conditions.

CROP.	TREES OR VINES OF BEARING AGE: 1910		TREES OR VINES NOT OF BEARING AGE: 1910		PRODUCT.		
	Farms reporting.	Number.	Farms reporting.	Number.	1909		1899
					Quantity. ¹	Value.		Quantity.^{1}
Orchard fruits, total	1,698,220		591,796		2,763,679	\$2,074,270	1,58,781
Apples.....	27,937	1,367,379	9,278	355,868	2,550,259	1,780,290	3,023,436
Peaches and nectarines.....	5,038	154,592	3,252	162,114	91,756	138,716	27,006
Pears.....	13,930	113,365	3,535	38,378	96,071	110,069	89,011
Plums and prunes.....	6,057	41,345	2,932	23,871	17,814	28,253	5,919
Cherries.....	3,902	13,366	1,602	6,776	4,761	10,848	6,043
Apricots.....	172	3,654	89	258	148	326	25
Quinces.....	1,708	7,484	804	4,531	2,863	5,754	(²)
Mulberries.....	2	5			7	14	(²)
Unclassified.....							³ 0,441
Grapes	6,003	58,277	1,204	14,261	1,132,838	30,858	1,308,300
Nuts, total	46,720		42,030		434,320	43,671	462,800
Black walnuts.....	280	1,910	41	434	40,064	1,219	(²)
Butternuts.....	268	1,691	21	179	60,151	954	(²)
Hickory nuts.....	188	1,672	20	1,306	23,834	904	(²)
Unclassified.....							³ 462,800

¹ Expressed in bushels for orchard fruits and pounds for grapes and nuts.
² Included with "unclassified."
³ Consists of products, not separately named by the enumerator, but grouped under the designation "all other."
⁴ Includes chestnuts, almonds, hazelnuts, and beechnuts.

The total quantity of orchard fruits produced in 1909 was 2,764,000 bushels, valued at \$2,074,000. Apples contributed more than nine-tenths of this quantity;

peaches and pears most of the remainder. The production of grapes and nuts was relatively unimportant. The nuts consisted chiefly of black walnuts, butternuts, and hickory nuts.

The value of orchard fruits increased from \$1,171,000 in 1899 to \$2,074,000 in 1909, but that of grapes declined from \$35,685 in 1899 to \$30,858 in 1909. It should be noted in this connection that the values for 1899 include the value of more advanced products derived from orchard fruits or grapes, such as cider, vinegar, dried fruits, and the like, and may therefore involve some duplication, while the values shown for 1909 relate only to the products in their original condition.

The following table shows the quantities of the more advanced products manufactured by farmers from orchard fruits and grapes. Values were not called for on the schedule.

PRODUCT.	FARMS REPORTING: 1909		QUANTITY PRODUCED.		
	Number.	Per cent of all farms.	Unit.	1909	1899
Cider.....	6,562	17.8	Gals.....	1,004,392	1,114,029
Vinegar.....	1,651	4.5	Gals.....	133,653	135,482
Wine and grape juice.....	632	1.4	Gals.....	12,937	10,236
Dried fruits.....	25	0.1	Lbs.....	465	7,530

Sugar crops: 1909 and 1899.—The table below shows data with regard to maple trees and their products, and also for sugar beets and sorghum cane, which in this state are unimportant. The total value of maple sugar and sirup produced in 1909 was \$77,559, as compared with \$48,236 in 1899.

PRODUCT.	FARMS REPORTING.		Acres.	PRODUCT.		
	Number.	Per cent of all farms.		Amount.	Unit.	Value.
Maple sugar and sirup:						
Total, 1909.....	1,525	4.1	256,501			\$77,559
Sugar made.....	442	1.2		156,652	Lbs..	22,277
Sirup made.....	1,457	3.9		53,091	Gals..	55,282
Total, 1899.....	1,000	2.7				48,236
Sugar made.....				192,900	Lbs..	21,124
Sirup made.....				27,174	Gals..	27,112
Sugar beets, 1909 ²	65	0.2	74	742	Tons..	9,269
Sorghum cane, 1909 ²	1	(⁴)	3	30	Tons..	500

¹ Number of trees.
² Used as coarse forage.
³ Used as root forage.
⁴ Less than one-tenth of 1 per cent.

Forest products: 1909 and 1899.—The census schedules for 1910 called for the "value of all firewood, fencing material, logs, railroad ties, telegraph and telephone poles, materials for barrels, bark, naval stores, or other forest products cut or produced in 1909, whether used on farm, sold, or on hand April 15, 1910;" and also, in a separate item, for the "amount received from sale of standing timber in 1909." There were 17,468 farms in Massachusetts (47.3 per cent of all farms in the state) which reported forest products in 1909, the total value of such products being \$2,668,410, as compared with \$1,944,714 in 1899, an increase of 37.2 per cent. Of the value in

1909, \$873,125 was reported as that of products used or to be used on the farms themselves, \$1,240,383 as that of products sold or for sale, and \$554,902 as the amount received for standing timber. It should be noted that forest products not produced on farms are not included in this report.

Miscellaneous crops: 1909.—Straw and cornstalks derived as by-products from the production of grain and corn have a considerable value for feed and other

purposes. They are, however, mainly consumed on the farms producing them. The Census Bureau made no attempt to ascertain the total quantity or value of these products, but the schedules called for the quantity and value of those sold during the year 1909. The returns show that 313 farmers in Massachusetts sold, during 1909, 1,066 tons of straw, for which they received \$13,416, and that 555 farmers sold 2,042 tons of cornstalks and leaves, for which they received \$13,222.

SELECTED FARM EXPENSES AND RECEIPTS.

Farm expenses: 1909 and 1899.—The following table shows the number of farms reporting expenditures for labor, feed, and fertilizer at the census of 1910, as well as the sums expended in 1909 and 1899:

EXPENSE.	1909		Amount.	1899	INCREASE.	
	Farms reporting.			Amount.	Amount.	Per cent.
	Number.	Percent of all farms.				
Labor.....	26,758	72.5	\$12,101,959	\$7,457,280	\$4,614,679	61.6
Feed.....	30,500	82.6	10,878,178	(¹)	.....	.....
Fertilizer.....	21,689	58.8	1,905,682	1,320,600	645,082	48.8

¹ Not reported at the census of 1900.

Nearly three-fourths of the farmers hire labor, and the average amount expended by those hiring is \$452. Of the amount thus spent, 18.1 per cent is in the form of rent and board. During the last decade the total expenditure for labor increased \$4,615,000, or 61.6 per cent. At prior censuses no tabulation was made of the number of farmers reporting expenditures for labor.

About five farmers out of every six report some expenditure for feed, and about three out of every five

report the purchase of fertilizer. The average expenditure for fertilizer per farm reporting is \$91. The total amount paid for this item is about one and one-half times as great as the amount thus spent in 1899.

Receipts from sale of feedable crops: 1909.—An effort was made at the census of 1910 to secure as complete a statement as possible of the sales as well as the production of the more important feedable crops (that is, crops ordinarily fed to live stock). The following table summarizes the data reported:

CROP.	FARMS REPORTING.		QUANTITY SOLD.		Amount received.
	Number.	Percent of all farms.	Amount.	Unit.	
Total.....					
Corn.....	316	0.9	30,082	Bu.....	\$738,987
Oats.....	66	0.2	4,901	Bu.....	20,026
Barley.....	3	(¹)	20	Bu.....	3,074
Hay and coarse forage.....	4,282	11.6	43,908	Tons...	24
					715,863

¹ Less than one-tenth of 1 per cent.

Whereas more than 30,000 farmers purchased feed during the year 1909, less than 5,000 sold any kind of feed. The total amount expended for feed by those who reported purchases greatly exceeded the receipts from sales by those reporting sales.

COUNTY TABLES.

Tables 1 to 6, which follow, present by counties the more important agricultural data collected at the Thirteenth Census, 1910.

Table 1 shows the population, number of farms, land and farm area, value of farm property, and number and value of domestic animals and of poultry and bees, as of April 15, 1910. Comparative data for June 1, 1900, are given in italics for certain items.

Table 2 gives the number of farms, the farm acreage, and the value of farm property operated by owners, tenants, and managers, collected as of April 15, 1910. Statistics of farm mortgages are included in this table. (See explanation in text.) Comparative data for June 1, 1900, are given in italics for certain items.

Table 3 gives statistics pertaining to the products of live stock on farms (dairy products, poultry and eggs, honey and wax, and wool and mohair); also the number and value of domestic animals sold and slaughtered for the year 1909.

Table 4 shows the total value of farm crops and the principal classes thereof, together with the acreage (or trees of bearing age) and production of the principal crops for the crop year 1909.

Table 5 gives statistics relating to selected farm expenses for 1909, and also shows the receipts from the sale of feedable crops.

Table 6 shows the number and value of domestic animals in barns and inclosures not on farms, by classes, together with the number of dairy cows and mature horses and mules, on April 15, 1910.

Change of boundaries.—In comparing the data secured in 1910 with those for 1900, the following changes in county boundaries should be considered: A part of Hampshire County was annexed to Hampden County in 1909; and a part of Middlesex County was annexed to Norfolk County in 1907. A change in boundary line between Boston city, in Suffolk County, and Cambridge city, in Middlesex County, was made in 1910.

TABLE 1.—FARMS AND FARM PROPERTY,

[Comparative data for June 1, 1900, in italics.]

	THE STATE.	Barnstable.	Berkshire.	Bristol.	Dukes.	Essex.	Franklin.
1 Population.....	3,366,416	27,542	105,259	318,573	4,504	436,477	43,600
2 <i>Population in 1900.....</i>	<i>2,806,348</i>	<i>27,320</i>	<i>96,067</i>	<i>252,089</i>	<i>4,561</i>	<i>357,030</i>	<i>41,209</i>
3 Number of all farms.....	36,917	864	2,947	3,637	136	2,883	3,113
4 <i>Number of all farms in 1900.....</i>	<i>37,715</i>	<i>809</i>	<i>2,947</i>	<i>3,459</i>	<i>212</i>	<i>2,942</i>	<i>3,230</i>
5 Color and nativity of farmers:							
6 Native white.....	23,431	734	2,336	2,608	102	2,355	2,562
7 Foreign-born white.....	8,362	113	593	1,019	19	525	544
8 Negro and other nonwhite.....	124	17	18	10	15	3	7
9 Number of farms, classified by size:							
10 Under 3 acres.....	833	21	16	104	1	158	17
11 3 to 9 acres.....	4,817	158	277	579	10	434	318
12 10 to 19 acres.....	4,956	146	225	607	9	474	263
13 20 to 49 acres.....	8,890	259	407	1,046	26	778	586
14 50 to 99 acres.....	7,981	142	541	782	33	582	703
15 100 to 174 acres.....	5,703	77	725	331	27	288	717
16 175 to 259 acres.....	2,147	29	415	90	12	92	305
17 260 to 499 acres.....	1,178	23	270	34	10	47	166
18 500 to 999 acres.....	319	6	53	9	5	24	29
19 1,000 acres and over.....	93	3	18	5	3	6	9
LAND AND FARM AREA							
20 Approximate land area..... acres	5,144,960	261,760	618,240	362,880	68,480	318,080	446,080
21 Land in farms..... acres	2,875,941	49,798	385,353	190,285	19,209	171,893	314,700
22 <i>Land in farms in 1900.....</i> acres	<i>3,147,064</i>	<i>44,263</i>	<i>478,288</i>	<i>195,694</i>	<i>34,188</i>	<i>176,889</i>	<i>350,032</i>
23 Improved land in farms..... acres	1,164,501	17,379	159,703	76,766	4,981	82,007	92,591
24 <i>Improved land in farms in 1900.....</i> acres	<i>1,292,132</i>	<i>16,963</i>	<i>200,034</i>	<i>73,919</i>	<i>14,461</i>	<i>89,874</i>	<i>127,736</i>
25 Woodland in farms..... acres	1,064,553	25,115	146,610	75,938	3,758	54,240	125,824
26 Other unimproved land in farms..... acres	646,887	7,304	82,040	37,581	10,470	35,586	96,285
27 Per cent of land area in farms.....	55.9	19.0	62.8	52.4	28.1	54.0	70.5
28 Per cent of farm land improved.....	40.5	24.9	41.1	40.3	25.9	47.7	29.4
29 Average acres per farm.....	77.9	57.6	131.8	52.3	141.2	59.6	101.1
30 Average improved acres per farm.....	31.5	20.1	54.2	21.1	36.6	28.5	29.7
VALUE OF FARM PROPERTY							
31 All farm property..... dollars	226,474,025	4,475,952	19,314,342	17,394,954	662,117	24,978,227	12,170,694
32 <i>All farm property in 1900.....</i> dollars	<i>132,618,704</i>	<i>2,518,098</i>	<i>16,625,767</i>	<i>15,649,594</i>	<i>861,436</i>	<i>13,211,469</i>	<i>10,235,437</i>
33 Per cent increase, 1900-1910.....	24.0	93.1	16.2	27.4	22.2	37.2	18.9
34 Land..... dollars	105,532,616	2,343,456	9,289,704	7,170,917	321,408	12,184,946	4,944,353
35 <i>Land in 1900.....</i> dollars	<i>82,925,410</i>	<i>1,045,530</i>	<i>7,265,550</i>	<i>5,787,000</i>	<i>423,240</i>	<i>9,293,650</i>	<i>4,345,182</i>
36 Buildings..... dollars	88,636,149	1,678,709	7,212,563	7,504,486	231,630	9,791,853	4,847,733
37 <i>Buildings in 1900.....</i> dollars	<i>71,093,880</i>	<i>952,360</i>	<i>6,432,550</i>	<i>6,909,030</i>	<i>814,100</i>	<i>6,607,280</i>	<i>3,897,580</i>
38 Implements and machinery..... dollars	11,563,894	198,579	885,773	922,906	32,905	1,169,304	787,577
39 <i>Implements, etc., in 1900.....</i> dollars	<i>8,328,850</i>	<i>146,860</i>	<i>676,070</i>	<i>750,510</i>	<i>35,080</i>	<i>618,980</i>	<i>645,710</i>
40 Domestic animals, poultry, and bees..... dollars	20,741,366	255,143	1,953,302	1,796,645	76,124	1,832,124	1,580,731
41 <i>Domestic animals, etc., in 1900.....</i> dollars	<i>15,798,684</i>	<i>173,884</i>	<i>1,554,684</i>	<i>1,222,864</i>	<i>79,006</i>	<i>1,391,616</i>	<i>1,289,237</i>
42 Per cent of value of all property in—							
43 Land.....	46.6	52.4	48.1	41.2	48.5	48.6	40.6
44 Buildings.....	39.1	37.5	37.3	43.1	35.0	39.2	39.8
45 Implements and machinery.....	5.1	4.4	4.4	5.3	5.0	4.7	6.5
46 Domestic animals, poultry, and bees.....	9.2	5.7	10.1	10.3	11.5	7.5	13.1
47 Average values:							
48 All property per farm..... dollars	6,135	5,181	6,554	4,783	4,869	8,664	3,910
49 Land and buildings per farm..... dollars	5,260	4,655	5,000	4,035	4,067	7,606	3,146
50 Land per acre..... dollars	35.69	47.06	23.92	37.69	15.73	70.90	15.71
51 <i>Land per acre in 1900.....</i> dollars	<i>27.62</i>	<i>23.63</i>	<i>16.36</i>	<i>29.57</i>	<i>12.38</i>	<i>52.54</i>	<i>12.41</i>
DOMESTIC ANIMALS (farms and ranges)							
52 Farms reporting domestic animals.....	32,099	682	2,675	3,109	133	2,464	2,803
53 Value of domestic animals..... dollars	19,208,712	220,528	1,863,936	1,560,479	69,712	1,736,725	1,520,376
54 Cattle:							
55 Total number.....	252,416	2,281	27,945	17,629	825	20,239	23,571
56 Dairy cows.....	171,936	1,598	17,478	13,174	491	15,188	13,925
57 Other cows.....	20,100	145	2,075	801	33	1,190	2,906
58 Yearling heifers.....	24,587	239	3,263	1,186	112	1,423	3,084
59 Calves.....	25,671	178	3,768	1,895	98	1,858	2,326
60 Yearling steers and bulls.....	4,534	70	776	193	38	237	709
61 Other steers and bulls.....	5,885	51	585	380	61	315	621
62 Value..... dollars	9,248,076	87,109	849,395	733,058	27,487	805,509	736,899
63 Horses:							
64 Total number.....	64,283	947	6,455	5,755	241	5,313	5,511
65 Mature horses.....	63,161	943	6,217	5,596	240	5,278	5,361
66 Yearling colts.....	945	4	190	48	1	26	136
67 Spring colts.....	174	17	48	10	9	9	14
68 Value..... dollars	8,671,997	123,500	901,502	749,703	29,130	810,100	675,768
69 Mules:							
70 Total number.....	268	13	13	11	.....	21	21
71 Mature mules.....	259	13	13	11	.....	21	21
72 Yearling colts.....	5	.....	.....	.....	.....	.....	.....
73 Spring colts.....	4	.....	.....	.....	.....	.....	.....
74 Value..... dollars	43,385	.....	1,060	1,220	.....	4,050	2,640
75 Asses and burros:							
76 Number.....	21	1	4	1	.....	2	.....
77 Value..... dollars	1,777	25	975	25	.....	75	.....
78 Swine:							
79 Total number.....	103,018	1,128	7,012	9,583	302	10,192	6,218
80 Mature hogs.....	62,368	622	3,638	5,233	137	6,163	3,372
81 Spring pigs.....	40,650	506	3,374	4,350	165	4,029	2,846
82 Value..... dollars	978,989	9,290	64,377	79,949	2,412	110,229	61,262
83 Sheep:							
84 Total number.....	32,708	92	9,364	446	3,961	987	9,310
85 Rams, ewes, and wethers.....	22,690	80	6,368	285	3,721	673	5,947
86 Spring lambs.....	10,009	12	2,998	161	240	314	3,363
87 Value..... dollars	156,498	582	45,319	2,147	10,675	6,401	43,564
88 Goats:							
89 Number.....	1,251	7	162	68	4	70	24
90 Value..... dollars	7,990	22	1,308	377	8	361	243
POULTRY AND BEES							
91 Number of poultry of all kinds.....	1,798,380	44,360	121,959	261,792	8,231	158,909	98,485
92 Value..... dollars	1,492,961	33,993	85,470	220,603	6,412	141,314	67,444
93 Number of colonies of bees.....	7,484	111	772	706	.....	678	592
94 Value..... dollars	39,683	627	3,896	3,473	4,085	2,911

¹ Change of boundary. (See explanation at close of text.)

² Decrease.

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BY COUNTIES: APRIL 15, 1910.

[Comparative data for June 1, 1900, in italics.]

	Hampden. ¹	Hampshire. ¹	Middlesex. ¹	Nantucket.	Norfolk. ¹	Plymouth.	Suffolk. ¹	Worcester.
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LAND AND FARM AREA								
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VALUE OF FARM PROPERTY								
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DOMESTIC ANIMALS (farms and ranges)								
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POULTRY AND BEES								
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¹ Includes deer, valued at \$10.

TABLE 2.—NUMBER, ACREAGE, AND VALUE OF FARMS CLASSIFIED BY TENURE, COLOR

[Comparative data for June 1, 1900, in italics.]

	THE STATE.	Barnstable.	Berkshire.	Bristol.	Dukes.	Essex.	Franklin.
FARMS OPERATED BY OWNERS							
1	Number of farms.....	32,075	761	2,390	3,096	123	2,342
2	Number of farms in 1900.....	<i>52,581</i>	<i>749</i>	<i>2,819</i>	<i>2,893</i>	<i>193</i>	<i>2,482</i>
3	Per cent of all farms.....	86.9	88.1	81.1	85.1	90.4	81.2
4	Per cent of all farms in 1900.....	86.4	92.6	82.0	85.6	91.0	84.4
5	Land in farms.....acres.....	2,343,165	40,236	284,165	160,615	14,432	125,829
6	Improved land in farms.....acres.....	931,621	13,953	117,813	64,074	4,039	62,088
7	Value of land and buildings.....dollars.....	144,241,398	2,790,750	10,201,147	11,203,123	438,978	13,046,095
Degree of ownership:							
8	Farms consisting of owned land only.....	30,705	690	2,292	2,963	115	2,146
9	Farms consisting of owned and hired land.....	1,370	71	98	133	8	196
Color and nativity of owners:							
10	Native white.....	24,857	648	1,905	2,239	91	1,973
11	Foreign-born white.....	7,109	97	409	848	18	367
12	Negro and other nonwhite.....	109	16	16	9	14	2
FARMS OPERATED BY TENANTS							
13	Number of farms.....	2,979	38	324	388	4	292
14	Number of farms in 1900.....	<i>3,603</i>	<i>51</i>	<i>443</i>	<i>463</i>	<i>9</i>	<i>853</i>
15	Per cent of all farms.....	8.1	4.4	11.0	10.7	2.9	10.1
16	Per cent of all farms in 1900.....	9.6	3.8	12.9	15.4	4.2	11.5
17	Land in farms.....acres.....	201,924	2,125	44,572	15,745	405	19,571
18	Improved land in farms.....acres.....	82,674	1,159	18,783	7,174	290	7,477
19	Value of land and buildings.....dollars.....	13,181,377	129,175	1,382,555	1,258,975	11,290	1,611,560
Form of tenancy:							
20	Share tenants.....	214	2	31	12	.....	15
21	Share-cash tenants.....	43	.....	3	2	.....	1
22	Cash tenants.....	2,115	28	211	316	2	208
23	Tenure not specified.....	607	8	79	58	2	68
Color and nativity of tenants:							
24	Native white.....	2,173	30	253	253	2	231
25	Foreign-born white.....	795	7	71	134	1	60
26	Negro and other nonwhite.....	11	1	.....	1	1	.....
FARMS OPERATED BY MANAGERS							
27	Number of farms.....	1,863	65	233	153	9	249
28	Number of farms in 1900.....	<i>1,651</i>	<i>29</i>	<i>174</i>	<i>108</i>	<i>10</i>	<i>122</i>
29	Land in farms.....acres.....	390,914	7,437	59,016	13,925	4,372	26,493
30	Improved land in farms.....acres.....	150,206	2,267	23,107	5,513	652	12,502
31	Value of land and buildings.....dollars.....	36,745,990	1,102,300	4,918,565	2,213,405	102,820	7,269,144
MORTGAGE DEBT REPORTS:							
For all farms operated by owners:							
32	Number free from mortgage debt.....	18,768	622	1,412	1,955	109	1,418
33	Number with mortgage debt.....	13,014	134	958	1,089	14	900
34	Number with no mortgage report.....	293	5	20	52	.....	24
For farms consisting of owned land only:							
35	Number reporting debt and amount.....	12,030	114	868	1,009	13	793
36	Value of their land and buildings.....dollars.....	49,742,360	368,640	3,501,535	3,432,030	42,150	4,310,188
37	Amount of mortgage debt.....dollars.....	16,371,454	94,492	1,078,050	1,258,020	10,805	1,275,549
38	Per cent of value of land and buildings.....	32.9	23.7	30.8	36.7	25.9	29.6

¹ Change of boundary. (See explanation at close of text.)

TABLE 3.—LIVE STOCK PRODUCTS, AND DOMESTIC

LIVE STOCK PRODUCTS							
Dairy Products							
1	Dairy cows on farms reporting dairy products.....number.....	168,959	1,579	17,109	12,838	475	15,001
2	Dairy cows on farms reporting milk produced.....number.....	163,967	1,575	16,285	12,632	474	14,783
3	Milk—Produced.....gallons.....	86,304,347	758,754	7,830,891	7,624,529	179,631	8,561,954
4	Sold.....gallons.....	64,496,692	548,851	3,405,899	6,859,367	125,586	7,657,674
5	Cream sold.....gallons.....	501,876	647	136,280	11,451	1,380	14,812
6	Butter fat sold.....pounds.....	1,148,019	.....	183,604	.....	.....	200
7	Butter—Produced.....pounds.....	3,364,516	24,230	978,576	50,204	6,576	68,878
8	Sold.....pounds.....	2,220,311	10,836	723,108	16,405	3,015	33,204
9	Cheese—Produced.....pounds.....	45,753	.....	4,840	10,602	.....	1,625
10	Sold.....pounds.....	32,490	.....	3,530	9,752	.....	1,600
11	Value of dairy products, excluding home use of milk and cream.....dollars.....	15,187,774	149,831	1,057,903	1,545,713	37,562	1,781,364
12	Receipts from sale of dairy products.....dollars.....	14,840,927	145,687	980,670	1,535,369	36,439	1,770,294
Poultry Products							
13	Poultry—Raised.....number.....	2,974,619	102,761	184,216	496,285	8,710	252,458
14	Sold.....number.....	1,596,472	74,374	71,679	296,979	6,266	134,211
15	Eggs—Produced.....dozens.....	13,305,540	367,774	794,774	1,933,992	55,075	1,253,201
16	Sold.....dozens.....	9,614,504	277,454	497,142	1,607,771	40,195	901,400
17	Value of poultry and eggs produced.....dollars.....	6,258,999	183,062	333,790	970,344	22,990	593,123
18	Receipts from sale of poultry and eggs.....dollars.....	4,202,584	141,744	190,269	741,965	29,508	394,455
Honey and Wax							
19	Honey produced.....pounds.....	96,802	1,197	11,569	5,838	.....	7,553
20	Wax produced.....pounds.....	1,019	10	123	100	.....	61
21	Value of honey and wax produced.....dollars.....	19,176	211	2,207	1,199	.....	1,692
Wool, Mohair, and Goat Hair							
22	Wool, fleeces shorn.....number.....	19,235	10	5,200	160	2,873	408
23	Mohair and goat hair, fleeces shorn.....number.....	536	.....	132	25	.....	5
24	Value of wool and mohair produced.....dollars.....	30,425	18	7,830	257	3,891	629
DOMESTIC ANIMALS SOLD OR SLAUGHTERED							
25	Calves—Sold or slaughtered.....number.....	109,673	458	8,514	8,690	159	8,813
26	Other cattle—Sold or slaughtered.....number.....	95,132	375	8,721	6,737	149	8,770
27	Horses, mules, and asses and burros—Sold.....number.....	5,980	66	459	399	6	754
28	Swine—Sold or slaughtered.....number.....	91,684	1,211	8,830	7,785	219	6,452
29	Sheep and goats—Sold or slaughtered.....number.....	9,204	10	2,729	106	251	422
30	Receipts from sale of animals.....dollars.....	5,014,442	24,746	328,695	410,335	5,892	472,484
31	Value of animals slaughtered.....dollars.....	1,006,088	14,512	131,368	60,482	2,996	108,306

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AND NATIVITY OF FARMERS; AND MORTGAGE DEBT, BY COUNTIES: APRIL 15, 1910.

[Comparative data for June 1, 1900, in italics.]

	Hampden. 1	Hampshire. 1	Middlesex. 1	Nantucket.	Norfolk. 1	Plymouth.	Suffolk. 1	Worcester.	
FARMS OPERATED BY OWNERS									
1	Number of farms.....	2,451	2,684	4,605	22	1,881	2,260	55	6,616
2	Number of farms in 1900.....	<i>2,505</i>	<i>3,209</i>	<i>4,803</i>	<i>47</i>	<i>1,839</i>	<i>2,266</i>	<i>104</i>	<i>6,616</i>
3	Per cent of all farms.....	88.2	92.0	86.1	91.7	85.4	90.0	59.8	88.6
4	Per cent of all farms in 1900.....	<i>89.0</i>	<i>91.2</i>	<i>84.8</i>	<i>87.0</i>	<i>83.1</i>	<i>89.5</i>	<i>64.2</i>	<i>86.3</i>
5	Land in farms.....acres.....	212,259	248,422	254,700	2,659	81,184	111,757	1,128	518,006
6	Improved land in farms.....acres.....	84,927	94,586	117,849	1,100	35,667	41,601	959	208,285
7	Value of land and buildings.....dollars.....	10,011,858	10,128,060	23,751,768	80,800	11,942,943	10,197,142	1,342,656	25,196,936
Degree of ownership:									
8	Farms consisting of owned land only.....	2,388	2,560	4,403	22	1,825	2,153	47	6,466
9	Farms consisting of owned and hired land.....	63	124	202	.....	56	107	8	150
Color and nativity of owners:									
10	Native white.....	1,835	2,063	3,477	18	1,266	1,872	41	5,091
11	Foreign-born white.....	614	616	1,117	4	606	330	14	1,515
12	Negro and other nonwhite.....	2	5	11	.....	9	8	.....	10
FARMS OPERATED BY TENANTS									
13	Number of farms.....	229	154	440	2	172	136	17	528
14	Number of farms in 1900.....	<i>227</i>	<i>226</i>	<i>439</i>	<i>7</i>	<i>241</i>	<i>168</i>	<i>45</i>	<i>687</i>
15	Per cent of all farms.....	8.2	5.3	8.2	8.3	7.8	5.4	18.5	7.1
16	Per cent of all farms in 1900.....	<i>8.3</i>	<i>6.4</i>	<i>8.8</i>	<i>13.0</i>	<i>10.9</i>	<i>6.1</i>	<i>26.5</i>	<i>9.1</i>
17	Land in farms.....acres.....	18,775	14,551	20,024	450	7,744	5,559	303	36,656
18	Improved land in farms.....acres.....	7,648	4,499	9,798	150	3,718	2,380	272	14,581
19	Value of land and buildings.....dollars.....	928,096	511,600	2,577,521	7,000	901,925	494,095	999,071	1,903,659
Form of tenancy:									
20	Share tenants.....	21	15	17	.....	2	16	.....	18
21	Share-cash tenants.....	9	8	5	.....	2	1	.....	4
22	Cash tenants.....	159	108	325	2	126	68	8	420
23	Tenure not specified.....	40	23	93	.....	42	51	9	86
Color and nativity of tenants:									
24	Native white.....	178	129	298	2	117	110	10	401
25	Foreign-born white.....	51	25	139	.....	53	26	7	125
26	Negro and other nonwhite.....	.....	.....	3	.....	2	.....	.....	2
FARMS OPERATED BY MANAGERS									
27	Number of farms.....	99	79	301	.....	150	116	20	320
28	Number of farms in 1900.....	<i>57</i>	<i>82</i>	<i>299</i>	.....	<i>152</i>	<i>116</i>	<i>15</i>	<i>348</i>
29	Land in farms.....acres.....	22,364	13,081	74,910	.....	15,114	19,599	2,004	60,454
30	Improved land in farms.....acres.....	7,856	4,188	55,233	.....	6,875	6,215	1,405	21,464
31	Value of land and buildings.....dollars.....	1,367,396	603,163	5,664,505	.....	3,762,317	2,546,746	2,439,942	4,437,698
MORTGAGE DEBT REPORTS:									
For all farms operated by owners:									
32	Number free from mortgage debt.....	1,389	1,451	2,594	16	985	1,463	29	3,682
33	Number with mortgage debt.....	1,049	1,227	1,981	6	853	775	13	2,995
34	Number with no mortgage report.....	13	6	50	.....	43	22	13	39
For farms consisting of owned land only:									
35	Number reporting debt and amount.....	993	1,147	1,795	6	808	712	10	2,736
36	Value of their land and buildings.....dollars.....	3,888,300	4,424,215	9,990,580	18,000	3,936,417	2,816,270	303,950	9,512,665
37	Amount of mortgage debt.....dollars.....	1,260,370	1,469,641	3,282,137	5,100	1,310,578	890,216	50,500	3,360,667
38	Per cent of value of land and buildings.....	32.4	33.2	32.7	28.3	33.3	31.6	16.6	35.3

* No mortgage reports were secured for farms operated by tenants and managers. (See explanation in text.)

ANIMALS SOLD OR SLAUGHTERED ON FARMS, BY COUNTIES: 1909.

LIVE STOCK PRODUCTS									
Dairy Products									
1	Dairy cows on farms reporting dairy products.....number.....	11,771	13,791	26,318	260	9,057	6,417	620	40,002
2	Dairy cows on farms reporting milk produced.....number.....	11,642	12,988	26,032	260	8,970	6,180	612	39,017
3	Milk—Produced.....gallons.....	5,586,730	5,923,940	14,786,509	89,135	5,505,193	3,317,865	500,701	20,119,458
4	Sold.....gallons.....	3,562,809	3,242,250	12,808,138	69,764	4,592,126	2,745,593	439,718	15,806,216
5	Cream sold.....gallons.....	16,359	57,730	29,529	348	16,110	20,391	335	98,659
6	Butter fat sold.....pounds.....	81,305	475,026	.....	.....	900	.....	.....	12,906
7	Butter—Produced.....pounds.....	388,141	272,149	136,784	3,717	50,780	52,370	4,910	741,322
8	Sold.....pounds.....	282,173	136,800	53,938	2,037	11,901	11,734	.....	477,140
9	Cheese—Produced.....pounds.....	4,100	3,090	3,085	.....	7,350	620	.....	8,141
10	Sold.....pounds.....	3,460	2,222	2,080	.....	5,650	.....	.....	2,146
11	Value of products, excluding home use of milk and cream.....dollars.....	776,211	856,617	2,842,259	20,163	1,116,968	750,088	112,376	3,334,833
12	Receipts from sale of dairy products.....dollars.....	744,403	816,716	2,815,988	19,539	1,104,910	737,271	111,224	3,252,657
Poultry Products									
13	Poultry—Raised.....number.....	161,104	162,243	435,392	5,433	253,577	279,187	4,127	493,603
14	Sold.....number.....	68,388	81,843	212,336	3,655	159,799	173,229	2,038	244,874
15	Eggs—Produced.....dozens.....	784,486	779,036	2,083,629	15,745	936,168	1,045,999	29,315	2,606,854
16	Sold.....dozens.....	534,449	537,294	1,480,273	13,250	666,127	749,867	8,420	1,785,406
17	Value of poultry and eggs produced.....dollars.....	348,180	320,808	977,225	9,698	528,635	562,519	15,445	1,112,204
18	Receipts from sale of poultry and eggs.....dollars.....	208,337	205,074	628,007	7,037	353,049	389,633	5,427	723,522
Honey and Wax									
19	Honey produced.....pounds.....	8,502	6,611	8,143	.....	3,654	9,107	566	22,471
20	Wax produced.....pounds.....	88	55	133	.....	33	57	.....	273
21	Value of honey and wax produced.....dollars.....	1,631	1,323	1,670	.....	762	1,689	137	4,442
Wool, Mohair, and Goat Hair									
22	Wool, fleeces shorn.....number.....	1,458	1,368	576	120	120	70	18	1,029
23	Mohair and goat hair, fleeces shorn.....number.....	77	77	47	.....	78	7	.....	59
24	Value of wool and mohair produced.....dollars.....	2,419	2,186	1,126	120	327	135	18	1,777
DOMESTIC ANIMALS SOLD OR SLAUGHTERED									
25	Calves—Sold or slaughtered.....number.....	7,659	8,887	17,576	50	5,025	3,543	126	29,876
26	Other cattle—Sold or slaughtered.....number.....	5,362	7,763	15,316	23	7,038	2,971	285	20,786
27	Horses, mules, and asses and burros—Sold.....number.....	317	552	1,224	2	332	832	2	947
28	Swine—Sold or slaughtered.....number.....	6,165	7,168	20,563	22	5,159	2,818	524	14,673
29	Sheep and goats—Sold or slaughtered.....number.....	289	852	463	75	80	62	.....	681
30	Receipts from sale of animals.....dollars.....	275,794	390,627	937,051	1,510	378,722	197,218	15,351	1,037,884
31	Value of animals slaughtered.....dollars.....	85,342	99,965	108,820	207	29,516	37,875	6,332	207,727

TABLE 4.—VALUE OF ALL CROPS AND PRINCIPAL CLASSES THEREOF, AND

		THE STATE.	Barnstable.	Berkshire.	Bristol.	Dukes.	Essex.	Franklin.
VALUE OF ALL CROPS								
1	Total	dollars 31,948,095	672,183	2,221,180	2,308,535	64,208	2,796,491	2,784,973
2	Cereals.....	dollars 1,617,131	10,370	240,298	132,856	6,530	70,371	210,838
3	Other grains and seeds.....	dollars 17,995	362	691	1,188	93	2,432	4,194
4	Hay and forage.....	dollars 11,280,989	88,220	1,148,007	868,093	28,743	1,043,739	986,921
5	Vegetables.....	dollars 8,184,213	94,062	332,757	740,518	15,369	917,983	563,117
6	Fruits and nuts.....	dollars 3,785,589	433,334	145,808	172,967	7,497	257,201	297,804
7	All other crops.....	dollars 7,062,178	45,825	283,019	397,313	5,946	504,760	721,854
SELECTED CROPS (acres and quantity)								
8	Cereals:							
9	Total.....	acres 55,267	352	10,608	4,206	292	1,834	6,908
10	bushels.....	2,402,738	12,499	397,962	179,773	7,674	99,663	312,031
11	Corn.....	acres 41,755	321	3,985	3,587	220	1,653	6,092
12	bushels.....	2,029,381	11,723	193,494	164,334	6,231	92,612	292,331
13	Oats.....	acres 4,927	12	4,751	388	41	103	463
14	bushels.....	268,500	477	165,894	11,121	1,040	4,595	13,973
15	Wheat.....	acres 109	2	45	12	2	10	10
16	bushels.....	2,404	31	810	321	19	220	38
17	Barley.....	acres 349	91	25	6	30	74	116
18	bushels.....	9,021	1	2,577	692	100	1,055	1,787
19	Buckwheat.....	acres 1,630	1	975	7	2	43	2,978
20	bushels.....	32,926	30	21,857	147	20	191	2,978
21	Rye.....	acres 3,476	16	755	187	21	1,401	2,978
22	bushels.....	59,183	238	12,524	3,158	264	3	3
23	Other grains:							
24	Dry peas.....	acres 30	1	2	2	2	137	508
25	bushels.....	480	2	33	33	42	38	508
26	Dry edible beans.....	acres 446	11	10	88	2	785	49,022
27	bushels.....	4,979	96	214	490	34	77,520	46,115
28	Hay and forage:							
29	Total.....	acres 519,503	4,386	80,349	31,333	1,398	45,131	49,022
30	All tame or cultivated grasses.....	tons 831,956	5,754	98,837	53,372	1,833	77,520	77,139
31	Timothy alone.....	acres 106,802	598	8,529	3,020	142	13,522	56,956
32	bushels.....	153,622	788	11,381	13,187	150	18,785	7,496
33	Timothy and clover mixed.....	acres 185,821	1,614	28,059	11,006	578	12,687	18,620
34	bushels.....	249,317	2,052	32,719	16,474	733	16,575	27,044
35	Clover alone.....	acres 1,920	30	358	135	5	306	212
36	bushels.....	3,145	48	530	241	6	464	338
37	Alfalfa.....	acres 232	3	12	5	40	2	38
38	bushels.....	294	6	24	15	94	352	886
39	Millet or Hungarian grass.....	acres 6,774	38	447	528	8	598	21,294
40	bushels.....	15,276	79	641	1,143	15	1,387	21,104
41	Other tame or cultivated grasses.....	acres 155,663	698	39,011	7,226	355	6,057	8,813
42	bushels.....	150,723	724	31,106	7,769	444	5,955	8,458
43	Wild, salt, or prairie grasses.....	acres 25,290	1,283	606	1,119	120	1,219	695
44	bushels.....	25,645	1,587	554	1,050	162	5,542	1,684
45	Grains cut green.....	acres 15,522	115	1,278	1,009	140	1,879	18,172
46	bushels.....	45,701	231	2,655	3,813	231	10	10
47	Coarse forage.....	acres 21,342	78	2,044	1,652	12	182	17
48	bushels.....	180,657	235	19,063	9,489	113	24	24
49	Root forage.....	acres 137	2	14	17	3	10	2
50	bushels.....	1,475	30	182	182	24	105	105
51	Special crops:							
52	Potatoes.....	acres 24,459	289	3,019	2,853	81	1,555	1,904
53	bushels.....	2,940,178	24,968	378,898	316,748	6,606	191,324	277,076
54	All other vegetables.....	acres 37,227	614	1,361	3,588	96	4,743	2,311
55	Tobacco.....	acres 6,521	73	110	1	105	1,634	2,659,969
56	Maple trees.....	pounds 9,549,306	44,953	300	300	95,038	46,754	22,821
57	Maple sugar (made).....	pounds 250,501	20,839	100	100	100	100	100
58	Maple sirup (made).....	gallons 156,952	63,091	9,524	9,524	100	100	100
FRUITS AND NUTS								
59	Orchard fruits:							
60	Total.....	trees 1,698,220	10,487	121,391	78,175	2,074	160,616	178,913
61	bushels.....	2,763,679	7,986	265,977	90,891	1,129	177,105	377,090
62	Apples.....	trees 1,307,379	6,494	108,619	53,424	1,381	123,875	158,344
63	bushels.....	2,650,259	6,126	255,973	74,097	899	153,408	365,621
64	Peaches and nectarines.....	trees 154,592	1,550	839	11,403	348	16,381	9,207
65	bushels.....	91,756	562	553	7,079	86	8,409	4,404
66	Pears.....	trees 113,865	1,825	6,654	9,392	183	14,624	5,158
67	bushels.....	96,071	1,056	6,808	7,776	81	13,191	4,478
68	Plums and prunes.....	trees 41,345	302	3,435	3,006	100	4,203	4,001
69	bushels.....	17,814	108	1,922	1,695	42	1,392	2,043
70	Cherries.....	trees 13,396	55	1,516	566	12	1,201	1,128
71	bushels.....	4,761	21	548	99	16	416	330
72	Grapes.....	vines 58,277	692	1,084	2,447	100	3,327	3,128
73	pounds.....	1,132,838	11,837	23,511	78,564	1,543	98,945	89,699
74	Small fruits:							
75	Total.....	acres 9,552	2,917	92	527	67	425	109
76	Strawberries.....	quarts 29,260,143	10,066,295	139,275	1,267,418	135,978	839,793	174,644
77	Raspberries and loganberries.....	acres 2,015	96	81	343	4	229	50
78	Cranberries.....	quarts 5,518,867	250,968	85,324	1,107,778	9,344	648,239	111,611
79	bushels.....	376,136	6,502	23,141	16,782	110	43,888	20,382
80	Nuts.....	acres 6,577	2,807	1	146	63	95	3
81	bushels.....	22,714,496	9,803,584	288	119,200	125,952	77,632	1,120
82	pounds.....	6,720	227	20	20	615	1,298	1,298
83	bushels.....	134,920	8,405	460	460	8,450	28,060	28,060

TABLE 5.—SELECTED FARM EXPENSES

1	Labor							
2	Farms reporting.....	dollars 26,758	676	2,068	3,214	90	2,221	2,079
3	Cash expended.....	dollars 8,906,209	314,951	708,538	708,381	30,484	1,129,143	418,619
4	Rent and board furnished.....	dollars 2,195,760	18,902	166,670	180,254	4,452	233,678	134,259
5	Fertilizer							
6	Farms reporting.....	dollars 1,905,682	21,620	85,687	176,148	5,209	169,194	196,094
7	Amount expended.....	dollars 30,500	675	2,447	3,058	119	2,421	2,588
8	Feed							
9	Farms reporting.....	dollars 10,878,178	185,128	644,515	1,279,441	29,446	1,164,590	586,916
10	Amount expended.....	dollars 738,987	6,121	90,354	73,029	1,545	119,543	54,703
11	Receipts from sale of feedable crops							

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ACREAGE AND PRODUCTION OF PRINCIPAL CROPS, BY COUNTIES: 1909.

		Hampden.	Hampshire.	Middlesex.	Nantucket.	Norfolk.	Plymouth.	Suffolk.	Worcester.
VALUE OF ALL CROPS									
1	Total.....	dollars.. 2,342,710	2,837,923	6,472,399	22,001	1,514,821	2,069,624	366,392	5,474,650
2	Cereals.....	dollars.. 183,476	255,620	158,713	1,449	30,252	48,326	715	267,218
3	Other grains and seeds.....	dollars.. 1,604	1,713	1,171	.....	625	627	70	5,075
4	Hay and forage.....	dollars.. 778,831	900,940	1,672,455	11,588	534,647	503,950	32,000	2,036,659
5	Vegetables.....	dollars.. 552,291	598,542	2,435,695	8,544	331,969	378,781	139,553	1,016,687
6	Fruits and nuts.....	dollars.. 192,713	167,958	695,614	170	101,256	723,059	9,349	650,789
7	All other crops.....	dollars.. 633,705	915,140	1,508,752	250	516,072	415,795	184,405	920,242
SELECTED CROPS (acres and quantity)									
Cereals:									
8	Total.....	acres.. 7,529	8,366	4,436	57	934	1,511	19	8,215
9	.....	bushels.. 269,610	365,130	246,172	2,333	42,312	63,159	1,365	403,044
10	Corn.....	acres.. 5,717	7,402	3,844	44	780	1,351	13	6,732
11	.....	bushels.. 240,403	346,949	222,964	1,988	39,260	59,547	945	356,598
12	Oats.....	acres.. 461	255	272	10	57	48	5	1,061
13	.....	bushels.. 12,270	7,591	9,451	300	1,664	1,702	400	38,023
14	Wheat.....	acres.. 10	3	6	.....	6	5	.....	8
15	.....	bushels.. 157	45	257	.....	141	123	.....	280
16	Barley.....	acres.. 32	20	30	.....	2	2	.....	75
17	.....	bushels.. 818	607	885	.....	56	75	.....	1,413
18	Buckwheat.....	acres.. 253	147	30	.....	4	7	.....	88
19	Rye.....	bushels.. 3,865	2,921	512	.....	98	121	.....	1,568
20	.....	acres.. 1,052	539	254	3	70	98	.....	240
21	.....	bushels.. 11,947	7,026	12,078	45	1,093	1,561	20	4,820
Other grains:									
22	Dry peas.....	acres.. 8	3	.....	.....	.....	5	.....	8
23	.....	bushels.. 108	30	11	.....	10	55	10	177
24	Dry edible beans.....	acres.. 20	19	26	.....	27	12	.....	54
25	.....	bushels.. 445	593	322	.....	186	263	36	1,067
Hay and forage:									
26	Total.....	acres.. 38,541	46,699	66,151	503	19,592	18,381	1,298	116,839
27	.....	tons.. 56,810	69,531	120,036	672	38,920	32,225	2,483	196,742
28	All tame or cultivated grasses.....	acres.. 35,342	43,095	55,136	450	16,255	15,806	964	103,555
29	.....	tons.. 42,477	52,630	77,437	566	23,448	22,931	1,387	130,830
30	Timothy alone.....	acres.. 8,369	9,231	20,593	10	6,154	4,908	366	23,757
31	.....	tons.. 12,191	9,104	30,382	25	9,054	7,451	627	33,711
32	Timothy and clover mixed.....	acres.. 9,975	18,772	22,056	23	6,775	6,018	417	49,221
33	.....	tons.. 13,935	25,579	31,474	33	9,877	8,882	608	63,052
34	Clover alone.....	acres.. 166	105	131	.....	35	70	.....	267
35	.....	tons.. 238	179	253	.....	62	135	.....	601
36	Alfalfa.....	acres.. 35	10	21	.....	5	2	.....	76
37	.....	tons.. 51	27	47	.....	8	4	.....	80
38	Millet or Hungarian grass.....	acres.. 458	535	1,095	.....	462	323	2	1,628
39	.....	tons.. 745	1,201	2,393	.....	1,167	966	6	4,047
40	Other tame or cultivated grasses.....	acres.. 16,339	17,442	11,240	417	2,824	4,485	99	28,206
41	.....	tons.. 15,317	16,540	12,888	508	3,280	5,513	146	29,429
42	Wild, salt, or prairie grasses.....	acres.. 851	1,183	5,264	1	1,193	1,245	35	3,049
43	.....	tons.. 941	1,062	5,767	2	1,319	1,350	33	2,957
44	Grains cut green.....	acres.. 1,081	887	2,141	46	848	589	24	4,850
45	.....	tons.. 3,048	2,248	9,054	82	2,844	1,792	155	12,890
46	Coarse forage.....	acres.. 1,228	1,529	3,599	6	1,289	731	243	5,368
47	.....	tons.. 10,255	13,554	27,651	22	11,168	5,969	886	50,293
48	Root forage.....	acres.. 5	11	.....	.....	7	10	.....	2
49	.....	tons.. 89	37	127	.....	151	184	22	312
Special crops:									
50	Potatoes.....	acres.. 2,848	2,470	2,624	24	1,050	1,310	37	4,395
51	.....	bushels.. 333,459	327,790	314,024	3,185	110,270	158,103	5,891	497,236
52	All other vegetables.....	acres.. 2,364	2,153	10,515	47	2,022	1,993	764	4,656
53	Tobacco.....	acres.. 1,118	2,767	1	.....	.....	.....	.....	638
54	Maple trees.....	pounds.. 1,832,773	5,035,454	320	.....	.....	35	.....	467
55	Maple sugar (made).....	number.. 24,421	89,965	129	.....	21	.....	.....	4,574
56	Maple sirup (made).....	pounds.. 23,410	65,311	.....	.....	.....	.....	.....	638
57	.....	gallons.. 4,436	14,215	58	.....	7	.....	.....	1,930
FRUITS AND NUTS									
Orchard fruits:									
58	Total.....	trees.. 150,650	119,249	356,059	.....	58,029	46,880	5,522	410,195
59	.....	bushels.. 210,343	197,758	675,134	.....	67,429	43,924	5,663	643,252
60	Apples.....	trees.. 115,264	100,785	293,812	.....	39,984	32,180	2,257	231,460
61	.....	bushels.. 183,012	186,512	632,853	.....	56,622	37,377	2,519	595,340
62	Peaches and nectarines.....	trees.. 28,027	8,337	27,449	.....	8,746	6,224	196	37,885
63	.....	bushels.. 21,060	5,369	16,047	.....	5,452	1,543	165	21,027
64	Pears.....	trees.. 4,706	5,276	23,934	.....	5,670	5,312	2,930	27,701
65	.....	bushels.. 4,157	4,328	21,469	.....	4,174	3,882	2,012	21,779
66	Plums and prunes.....	trees.. 3,129	3,263	6,701	.....	2,336	2,250	26	8,563
67	.....	bushels.. 1,599	1,096	2,375	.....	815	899	2	3,896
68	Cherries.....	trees.. 1,075	978	2,606	.....	740	471	32	3,016
69	.....	bushels.. 368	270	1,607	.....	191	124	14	758
70	Grapes.....	vines.. 2,593	4,939	10,887	.....	4,296	11,809	25	12,950
71	.....	pounds.. 55,513	83,956	188,742	.....	94,657	124,248	1,628	278,945
Small fruits:									
72	Total.....	acres.. 225	163	852	1	310	3,306	19	539
73	.....	quarts.. 411,593	386,553	1,901,479	2,764	427,585	12,700,904	15,480	790,469
74	Strawberries.....	acres.. 134	86	432	.....	150	214	8	237
75	.....	quarts.. 285,524	158,028	1,516,467	2,572	235,707	559,835	9,181	538,289
76	Raspberries and loganberries.....	acres.. 31	20	82	.....	55	27	4	45
77	.....	quarts.. 30,706	24,854	108,223	.....	23,878	26,124	386	51,595
78	Cranberries.....	acres.. 14	14	204	.....	82	3,038	.....	110
79	.....	quarts.. 17,664	137,120	133,664	192	138,304	12,085,728	.....	74,048
80	Nuts.....	trees.. 641	949	414	.....	100	117	.....	2,309
81	.....	pounds.. 14,338	20,382	16,460	.....	2,902	653	.....	34,810

AND RECEIPTS, BY COUNTIES: 1909.

1	Labor.....	Farms reporting.....	1,918	2,117	3,958	20	1,521	1,766	75	5,035
2	.....	Cash expended.....	dollars.. 505,283	538,928	2,332,992	5,319	700,896	834,559	242,306	1,433,810
3	.....	Rent and board furnished.....	dollars.. 134,936	128,031	484,080	2,150	168,326	102,032	30,910	407,070
4	Fertilizer.....	Farms reporting.....	1,636	2,105	3,166	18	1,118	1,480	67	4,283
5	.....	Amount expended.....	dollars.. 164,343	312,127	394,202	1,289	93,505	93,614	16,669	245,921
6	Feed.....	Farms reporting.....	2,230	2,373	4,496	20	1,821	1,970	64	6,220
7	.....	Amount expended.....	dollars.. 515,286	588,292	2,118,457	10,350	861,310	748,155	67,589	2,078,703
8	Receipts from sale of feedable crops.....	dollars.. 49,639	61,665	93,161	290	29,391	29,221	2,085	.....	128,230

TABLE 6.—NUMBER AND VALUE OF DOMESTIC ANIMALS NOT ON FARMS, BY COUNTIES: APRIL 15, 1910.

		THE STATE.	Barnstable.	Berkshire.	Bristol.	Dukes.	Essex.	Franklin.
1	Incllosures reporting domestic animals.....	43,063	1,707	2,205	3,866	251	5,825	965
2	Value of all domestic animals.....dollars..	20,482,394	334,601	671,481	1,462,801	64,700	2,704,799	239,877
Cattle:								
3	Total number.....	19,896	1,134	1,173	1,442	227	2,388	477
4	Value.....dollars..	875,189	45,109	45,392	62,704	7,592	99,677	16,567
5	Number of dairy cows.....	16,082	892	1,003	1,195	155	1,919	376
Horses:								
6	Total number.....	115,186	2,202	4,159	9,434	388	14,862	1,639
7	Value.....dollars..	19,423,642	280,510	621,385	1,390,271	42,595	2,575,052	217,382
8	Number of mature horses.....	114,944	2,196	4,147	9,411	387	14,841	1,627
Mules and asses and burros:								
9	Total number.....	307	12	7	8	7	61	8
10	Value.....dollars..	46,365	2,360	825	725	1,025	9,390	1,000
11	Number of mature mules.....	269	11	6	7	5	57	8
Swine:								
12	Total number.....	12,010	594	364	975	210	2,026	348
13	Value.....dollars..	113,577	6,432	3,234	8,338	1,964	19,265	3,888
Sheep and goats:								
14	Total number.....	4,972	26	123	87	3,277	190	218
15	Value.....dollars..	23,621	190	645	673	11,524	1,414	1,040

		Hampden.	Hampshire.	Middlesex.	Nantucket.	Norfolk.	Plymouth.	Suffolk.	Worcester.
1	Incllosures reporting domestic animals.....	2,737	1,180	8,146	93	3,654	3,573	2,899	5,962
2	Value of all domestic animals.....dollars..	1,197,966	328,721	3,918,079	42,838	1,463,926	1,012,718	5,092,634	1,947,253
Cattle:									
3	Total number.....	939	708	3,676	149	2,134	2,456	728	2,295
4	Value.....dollars..	41,959	23,658	195,257	5,249	103,110	101,251	41,376	86,198
5	Number of dairy cows.....	719	482	3,094	88	1,895	1,903	676	1,685
Horses:									
6	Total number.....	6,693	2,075	22,432	193	7,568	6,423	24,517	12,601
7	Value.....dollars..	1,140,967	300,242	3,693,294	36,800	1,348,297	893,037	5,043,180	1,840,630
8	Number of mature horses.....	6,671	2,063	22,395	193	7,545	6,405	24,506	12,567
Mules and asses and burros:									
9	Total number.....	34	12	45	-----	15	36	34	28
10	Value.....dollars..	6,900	1,180	6,780	-----	1,790	5,627	5,178	3,585
11	Number of mature mules.....	31	9	37	-----	13	34	34	17
Swine:									
12	Total number.....	714	483	2,096	60	975	1,391	89	1,685
13	Value.....dollars..	6,795	3,453	19,949	781	9,136	12,206	1,708	16,427
Sheep and goats:									
14	Total number.....	72	22	347	1	258	85	212	54
15	Value.....dollars..	1,345	188	2,799	8	1,593	597	1,192	412

CHAPTER 4.

STATISTICS OF MANUFACTURES FOR THE STATE, CITIES, AND INDUSTRIES.

Introduction.—This chapter gives the statistics of manufactures for the state of Massachusetts for the calendar year 1909, as shown by the Thirteenth Census.

The text summarizes the general results of the census inquiry, presenting a series of special tables in which the main facts printed in the general tables are given in convenient form for the state as a whole and for important industries. It also presents tables in which the statistics for the industries of the state as a whole and for a few important industries are classified by character of ownership, size of establishments, number of wage earners, and prevailing hours of labor, information which could not be presented in general tables for each industry without disclosing the facts for individual establishments.

At the end of the chapter are three general tables.

Table I gives for 1909, 1904, and 1899 the number of establishments and of persons engaged in the industries, primary power, capital, salaries and wages, cost of materials, value of products, and value added by manufacture reported for all industries combined and for certain important industries (1) for the state as a whole and (2) for the cities of Boston, Brockton, Cambridge, Fall River, Holyoke, Lawrence, Lowell, Lynn, New Bedford, Somerville, Springfield, and Worcester. It also gives the same items for all industries combined for every city and town having in 1910 a population of over 10,000 but less than 50,000.

Table II gives statistics in detail for 1909 for the state and for a larger number of industries.

Table III gives statistics in detail for 1909 for the 12 cities having 50,000 inhabitants or more enumerated in a previous paragraph for all industries combined and selected industries, and for each city having from 10,000 to 50,000 inhabitants for all industries combined.

Scope of census: Factory industries.—Census statistics of manufactures are compiled primarily for the purpose of showing the absolute and relative magnitude of the different branches of industry covered and their growth or decline. Incidentally, the effort is made to present data throwing light upon character of organization, location of establishments, size of establishments, labor force, and similar subjects. When use is made of the data for these purposes it is imperative that due attention should be given to the limitations of the figures. Particularly is this true when the attempt is made to derive from them figures purporting to show average wages, cost of production, or profits. These limitations will be fully discussed in the general report on manufactures for the United States as a whole.

The census of 1909, like that of 1904, was confined to manufacturing establishments conducted under the factory system, as

distinguished from the neighborhood, hand, and building industries. Where statistics for 1899 are given they have been reduced to a comparable basis by eliminating the latter classes of industries. The census does not include establishments which were idle during the entire year, or had a value of products of less than \$500, or the manufacturing done in educational, eleemosynary, and penal institutions, or in governmental establishments, except those of the Federal Government.

Period covered.—The returns cover the calendar year 1909, or the business year which corresponds most nearly to that calendar year. The statistics cover a year's operations, except for establishments which began or discontinued business during the year.

The establishment.—The term "establishment" comprises the factories, mills, or plants which are under a common ownership or control, and for which one set of books of account is kept.

If, however, the plants constituting an establishment as thus defined were not all located within the same city or state, separate reports were secured in order that the separate totals might be included in the statistics for each city or state. In some instances separate reports were secured for different industries carried on in the same establishment.

Classification by industries.—The establishments were assigned to the several classes of industries according to their products of chief value. The products reported for a given industry may thus, on the one hand, include minor products very different from those covered by the class designation, and, on the other hand, may not include the total product covered by this designation, because some part of this product may be made in establishments in which it is not the product of chief value.

Selected industries.—The general tables at the end of this chapter give the principal facts separately for the industries of the state. A selection has been made of the leading industries of the state for more detailed consideration. Sometimes an industry of greater importance than some of those selected is omitted because it comprises so few establishments that these detailed presentations would reveal the operations of individual concerns.

Comparisons with previous censuses.—Owing to the changes in industrial conditions it is not always possible to classify establishments by industries in such a way as to permit accurate comparison with preceding censuses. Table I, giving comparable figures for 1909, 1904, and 1899, therefore, does not embrace all the industries shown for 1909 in Table II.

Influence of increased prices.—In considering changes in cost of materials, value of products, and value added by manufacture, account should be taken of the general increase in the prices of commodities during recent years. To the extent to which this factor has been influential the figures can not be taken as an exact measure of increase in the volume of business.

Persons engaged in industry.—At the censuses of 1909, 1904, and 1899, the following general classes of persons engaged in manufacturing industries have been distinguished: (1) Proprietors and firm members, (2) salaried officers of corporations, (3) superintendents and managers, (4) clerks, and (5) wage earners. In the censuses of 1904 and 1899 these five classes were shown according to the three main groups: (1) Proprietors and firm members, (2) salaried officials, clerks, etc., and (3) wage earners. The second group included the three classes of salaried officers of corporations, superintendents and managers, and clerks. In the present census an entirely different grouping is employed: That into (1) proprietors and officials, (2) clerks, and (3) wage earners. The first group includes proprietors and

firm members, salaried officers of corporations, and superintendents and managers.

At this census the number of persons engaged in the industries, segregated by sex, and, in the case of wage earners, also by age (whether under 16 or 16 and over), was reported for December 15, or the nearest representative day. The 15th of December was selected as representing for most industries normal conditions of employment, but where conditions were exceptional, and particularly in the case of certain seasonal industries, such as canning, the December date could not be accepted as typical and an earlier date had to be chosen.

In the case of employees other than wage earners the number thus reported on December 15, or other representative day, has been treated as equivalent to the average for the year, since the number of employees of this class does not vary much from month to month in a given industry. In the case of wage earners the average is obtained in the manner explained in the next paragraph.

Wage earners.—In addition to the report by sex and age of the number of wage earners on December 15, or other representative day, a report was obtained of the number employed on the 15th of each month, without distinction of sex or age. From these figures the average number of wage earners for the year has been calculated by dividing the sum of the numbers reported each month by 12. The average thus obtained represents the number of wage earners that would be required to perform the work done if all were constantly employed during the entire year. Accordingly, the importance of any industry as an employer of labor is believed to be more accurately measured by this average than by the number employed at any one time or on a given day.

The number of wage earners reported for the representative day, though given for each separate industry, is not totaled for all industries combined, because in view of the variations of date such a total is believed not to be significant. It would involve more or less duplication of persons working in different industries at different times, would not represent the total number employed in all industries at any one time, and would give an undue weight to seasonal industries as compared with industries in continual operation.

In particular, totals by sex and age for the wage earners reported for the representative day would be misleading because of the undue weight given to seasonal industries, in some of which, such as canning and preserving, the distribution of the wage earners by sex and age is materially different from that in most industries of more regular operation. In order to determine as nearly as possible the sex and age distribution of the average number of wage earners in the state as a whole, the following procedure has been adopted:

The percentage distribution by sex and age of the wage earners in each industry, for December 15, or the nearest representative day, has been calculated from the actual numbers reported for that date. This percentage has been applied to the average number of wage earners for the year in that industry, to determine the average number of men, women, and children employed. These calculated averages for the several industries have been added up to give the average distribution for the state as a whole.

In 1899 and 1904 the schedule called for the average number of wage earners of each sex 16 years and over, and the total number under 16 years of age, for each month, and these monthly statements were combined in an annual average. Comparatively few manufacturing concerns, however, keep their books in such way as to show readily the number of men, women, and children (under 16) employed each month. These monthly returns by sex and age were, in fact, largely estimates. It was believed that a more accurate and reliable sex and age distribution could be secured by taking as a basis of estimate the actual numbers employed on a single day.

Prevailing hours of labor.—The census made no attempt to ascertain the number of employees working a given number of hours per week. The inquiry called merely for the prevailing practice

followed in each establishment. Occasional variations in hours in an establishment from one period to another are disregarded, and no attention is given to the fact that a limited number of employees may have hours differing from those of the majority. In the tables all the wage earners of each establishment are counted in the class within which the establishment itself falls. In most establishments, however, all or practically all the employees work the same number of hours, so that these figures give a substantially correct picture of the hours of labor in manufacturing industries.

Capital.—For reasons stated in prior census reports, the statistics of capital secured by the census canvass are so defective as to be without value, except as indicating very general conditions. The instructions on the schedule for securing capital were as follows:

The answer should show the total amount of capital, both owned and borrowed, on the last day of the business year reported. All the items of fixed and live capital may be taken at the amounts carried on the books. If land or buildings are rented, that fact should be stated and no value given. If a part of the land or buildings is owned, the remainder being rented, that fact should be so stated and only the value of the owned property given. Do not include securities and loans representing investments in other enterprises.

Materials.—Cost of materials refers to the materials used during the year, which may be more or less than the materials purchased during the year. The term materials includes fuel, rent of power and heat, mill supplies, and containers, as well as materials forming a constituent part of the product. Fuel includes all fuel used, whether for heat, light, or power, or for the process of manufacture.

Expenses.—Under "Expenses" are included all items of expense incident to the year's business, except interest, whether on bonds or other forms of indebtedness, and allowances for depreciation.

Value of products.—The value of products for any industry includes the total value of all products manufactured in establishments whose products of chief value fall under the industry designation. The amounts given represent the selling value at the factory of all products manufactured during the year, which may differ from the value of the products sold. Amounts received for work on materials furnished by others are included.

Value added by manufacture.—The value of products is not a satisfactory measure of either the absolute or the relative importance of a given industry, because only a part of this value is actually created by the manufacturing process carried on in the industry itself. Another part of it, and often by far the larger part, represents the value of the materials used, which have been produced by agriculture or mining or by other industrial establishments. For many purposes, therefore, the best measure of the importance of different classes of industry is the value created as the result of the manufacturing operations carried on within the industry. This value is obtained by deducting the cost of the materials consumed from the value of the product. The figure thus obtained is termed in the census reports "value added by manufacture."

There is a further statistical advantage which "value added" has over gross value of products. In combining the value of products for all industries the value of products produced by one establishment and used as materials in another is duplicated, and the total, therefore, gives a greatly exaggerated idea of the wealth created. No such duplication takes place in the total "value added by manufacture."

Cost of manufacture and profits.—Census data do not show the entire cost of manufacture, and consequently can not be used to show profits. No account has been taken of interest and depreciation. Even if the amount of profit could be determined by deducting the expenses from the value of the products the rate of profit on the investment could not properly be calculated, because of the very defective character of the returns regarding capital.

Primary power.—The figures given for this item show the total of the primary power used by the establishments. They do not

cover the power developed by motors operated by such power, the inclusion of which would evidently result in duplication.

Location of establishments.—The Census Bureau has classified establishments by their location in cities or classes of cities. In interpreting these figures due consideration should be given to the fact that often establishments are located just outside the boundaries of cities, and are necessarily so classified, though locally they are looked upon as constituting a part of the manufacturing interests of the cities.

INDUSTRIES IN GENERAL.

General character of the state.—Massachusetts, with a gross area of 8,266 square miles, of which 227 represent water surface, is the fifth smallest state in the Union, only Rhode Island, Delaware, Connecticut, and New Jersey having smaller areas. Its population in 1910 was 3,366,416, as compared with 2,805,346 in 1900 and 2,238,947 in 1890. It ranked sixth among the 49 states and territories of continental United States as regards population in 1910 and seventh in 1900. In density of population Massachusetts ranked second in 1910, having 418.8 persons per square mile, the corresponding figure for 1900 being 349. Ninety-two and eight-tenths per cent of the entire population of the state resided in cities and towns having 2,500 inhabitants or over in 1910, as against 91.5 per cent in 1900.

In 1910, 12 cities in the state had a population of over 50,000: Boston, 670,585; Worcester, 145,986; Fall River, 119,295; Lowell, 106,294; Cambridge, 104,839; New Bedford, 96,652; Lynn, 89,336; Springfield, 88,926; Lawrence, 85,892; Somerville, 77,236; Holyoke, 57,730; and Brockton, 56,878. There were also 43 cities and towns having a population of over 10,000 but less than 50,000. (See table on page 648.) These 55 cities and towns contained 77.4 per cent of the total population of the state and were credited in 1909 with 82.9 per cent of the total value of its manufactures. Apart from these places only 15.4 per cent of the population resided in towns of 2,500 inhabitants or over.

The raw materials used in the manufacturing industries of Massachusetts are for the most part produced elsewhere, and most of its manufactured products are sold for consumption beyond its borders. There were 2,116 miles of main and branch lines of steam-railroad trackage in the state in 1909,¹ which connect the various manufacturing districts of the state with its leading industrial centers and those of other states. The network of electric railways in the state is not only an important factor in connection with its manufactures but adds greatly to its facilities for local trade. Furthermore, Boston, the second seaport in importance on the Atlantic coast, affords excellent opportunities for domestic and foreign commerce. Several other cities and towns likewise have good water facilities which augment to some extent the water traffic to and from Boston and ports outside the state.

¹ Statistics of Railways in the United States, Interstate Commerce Commission, 1909.

Laundries.—The census of 1909 was the first to include statistics of laundries. The reports are confined to establishments using mechanical power. The data are presented separately and are not included in the general total for manufacturing industries, in order to avoid interference with comparisons with prior censuses.

Custom sawmills and gristmills.—In order to make the statistics for 1909 comparable with those for 1904 the data for these mills have been excluded from all the tables presenting general statistics, and are given in a separate table at the end of this chapter.

Importance and growth of manufactures.—Massachusetts is preeminently a manufacturing state, its early industrial development being due in part to the fact that it contained one of the first permanent settlements of North America. The superior water-power advantages which the state affords were largely instrumental in bringing about the establishment of a number of important mills and factories. At each census since 1849 the state has contributed a smaller proportion of the total value of the products of manufacturing industries in the United States, notwithstanding a steady actual growth from census to census. This proportion was 15.5 per cent in 1849 and 7.2 per cent in 1909.

The growth and concentration of population in the state have been closely related to the increase in the importance of its manufacturing industries, although considerably less in degree. In 1849 the total value of the manufactured products of the state, including those of the neighborhood and hand industries, amounted to \$157,743,994, while in 1909, exclusive of the value of the products of the neighborhood and hand industries, it reached a total of \$1,490,529,386, or more than nine times that in 1849. During the same period the population of the state increased 238.5 per cent. In 1849 an average of 177,461 wage earners, representing 17.8 per cent of the total population, were employed in manufactures, while in 1909 an average of 584,559 wage earners, or 17.4 per cent of the total population, were so engaged. The value of manufactured products per capita of the total population of the state increased from \$159 to \$443 during this period. The state ranked second among the states of the Union with respect to value of manufactured products in 1849, third from 1859 to 1879, inclusive, and fourth at each subsequent census.

The table on the following page gives the most important figures relative to all classes of manufactures combined for 1909, 1904, and 1899, together with the percentages of increase from census to census.

In 1909 the state of Massachusetts had 11,684 manufacturing establishments, which gave employment to an average of 644,399 persons during the year and paid out \$364,452,000 in salaries and wages. Of the persons employed, 584,559 were wage earners. These establishments turned out products to the value of \$1,490,529,000, to produce which materials costing \$830,765,000 were utilized. The value added by

manufacture was thus \$659,764,000, which figure, as explained in the Introduction, best represents the net wealth created by manufacturing operations during the year.

	NUMBER OR AMOUNT.			PER CENT OF INCREASE. ¹	
	1909	1904	1899	1904-1909	1899-1904
	Number of establishments.....	11, 684	10, 723	10, 929	9. 0	-1. 9
Persons engaged in manufactures.....	644, 399	532, 481	(²)	21. 0	-----
Proprietors and firm members.....	11, 194	11, 258	(²)	-0. 6	-----
Salaried employees.....	48, 646	32, 824	25, 256	48. 2	30. 0
Wage earners (average number).....	584, 559	488, 399	438, 234	19. 7	11. 4
Primary horsepower.....	1, 175, 071	938, 007	796, 061	25. 3	17. 8
Capital.....	\$1, 279, 687, 000	\$965, 949, 000	\$781, 868, 000	32. 5	23. 5
Expenses.....	1, 320, 866, 000	992, 294, 000	785, 805, 000	33. 1	26. 3
Services.....	364, 452, 000	272, 044, 000	224, 758, 000	34. 0	21. 0
Salaries.....	63, 279, 000	39, 655, 000	29, 480, 000	59. 6	34. 5
Wages.....	301, 173, 000	232, 389, 000	195, 278, 000	29. 6	19. 0
Materials.....	830, 765, 000	626, 410, 000	498, 655, 000	32. 6	25. 6
Miscellaneous.....	125, 649, 000	93, 840, 000	62, 392, 000	33. 9	50. 4
Value of products.....	1, 490, 529, 000	1, 124, 092, 000	907, 626, 000	32. 6	23. 8
Value added by manufacture (value of products less cost of materials).....	659, 764, 000	497, 682, 000	408, 971, 000	32. 6	21. 7

¹ A minus sign (-) denotes decrease.

² Figures not available.

In general, this table brings out the fact that the manufacturing industries of Massachusetts as a whole showed a greater development during the more recent five-year period, 1904-1909, than during the preceding five-year period, 1899-1904. During the later period the number of establishments increased 9 per cent and the average number of wage earners 19.7 per cent, while the value of products and the value added by manufacture each increased 32.6 per cent. As pointed out in the Introduction, it would be improper to infer that manufactures increased in volume to the full extent indicated by these figures relating to values, since the increase shown is certainly due, in part, to the increase that has taken place in the prices of commodities.

The only decreases shown in the table are one of six-tenths of 1 per cent in the number of proprietors and firm members during the period 1904-1909 and one of 1.9 per cent in the number of establishments during the period 1899-1904.

The relative importance and growth of the leading manufacturing industries of the state are shown in the table on page 639.

It should be borne in mind, in considering that table, that the value of products in some of the industries involves a certain amount of duplication due to the use of the product of one establishment in the industry as material for another establishment.

The table gives separate statistics for 76 industries or industry groups for which products valued at more than \$500,000 were reported in 1909. These industries include 4, with products exceeding \$50,000,000 in value; 6, with products between \$25,000,000 and \$50,000,000 in value; and 16, with products between \$10,000,000 and \$25,000,000 in value, making an aggregate of 26 industries with a value of products in excess of \$10,000,000 each. The other industries shown separately comprise 15, with products between

\$5,000,000 and \$10,000,000 in value; 23, with products between \$1,000,000 and \$5,000,000 in value; and 12, with products between \$500,000 and \$1,000,000 in value.

Of the industries included under the head of "All other industries," the dyeing and finishing of textiles, which covers the bleaching, dyeing, and mercerizing of raw fiber, yarns, and woven cloth, as well as the printing of cotton piece goods, is the most important. A considerable number of the cotton, woolen, and silk mills carry on one or more of these subordinate processes with the primary manufacturing process in the same establishment, and therefore the statistics for the independent establishments engaged in dyeing and finishing do not fully represent the statistics for this branch of manufacture as a whole. In 1909 reports for some of the dyeing and finishing establishments in the state included the cost of the material upon which the work was performed and its value as finished. In such cases the cost and value of these goods were deducted, in order to place all of the reports on a uniform basis and to make the statistics comparable with those for prior censuses, when the value of products represented only the value added to the materials by the processes. It is of interest to know that forty-eight of these independent establishments, giving employment to an average of 9,079 wage earners, were reported at the census of 1909, as compared with forty-six establishments, employing on the average 7,508 wage earners, in 1904. The industry ranked twelfth among the industries of the state in 1909, as measured by value of products, with \$21,893,000. Massachusetts led all other states in this respect, contributing 26.2 per cent of the total value of products reported for the industry in the United States, while in 1904, with products valued at \$11,049,000, it ranked second in this branch of manufacture, New Jersey being first.

STATISTICS OF MANUFACTURES.

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INDUSTRY.	Number of establishments.	WAGE EARNERS.		VALUE OF PRODUCTS.		VALUE ADDED BY MANUFACTURE.		PER CENT OF INCREASE. ¹			
		Average number.	Per cent distribution.	Amount.	Per cent distribution.	Amount.	Per cent distribution.	Value of products.		Value added by manufacture.	
								1904-1909	1899-1904	1904-1909	1899-1904
All industries	11,684	584,559	100.0	\$1,430,529,000	100.0	\$859,764,000	100.0	32.6	23.8	32.6	21.7
Boots and shoes, including cut stock and findings.....	860	83,063	14.2	236,343,000	15.9	83,353,000	12.6	36.1	23.0	32.2	33.7
Cotton goods, including cotton small wares.....	182	108,914	18.6	189,462,000	12.5	81,305,000	12.3	43.4	17.0	63.3	-12.2
Woolen, worsted, and felt goods, and wool hats.....	183	53,873	9.2	141,967,000	9.5	53,991,000	8.2	42.9	34.1	47.8	20.2
Foundry and machine-shop products.....	857	44,179	7.6	86,926,000	5.8	55,744,000	8.4	36.4	0.4	41.8	1.4
Printing and publishing.....	1,279	17,532	3.0	47,445,000	3.2	34,564,000	5.2	20.8	11.8	21.9	8.3
Slaughtering and meat packing.....	94	3,325	0.6	44,403,000	3.0	5,517,000	0.8	16.8	17.5	33.6	10.1
Paper and wood pulp.....	88	12,848	2.2	40,097,000	2.7	17,747,000	2.7	25.3	44.6	26.2	37.6
Leather, tanned, curried, and finished.....	132	10,252	1.8	40,092,000	2.7	11,230,000	1.7	19.9	27.9	9.0	64.4
Electrical machinery, apparatus, and supplies.....	83	14,507	2.5	28,143,000	1.9	15,408,000	2.3	77.2	51.4	50.0	63.3
Bread and other bakery products.....	1,201	6,697	1.1	26,146,000	1.8	10,419,000	1.6	40.1	21.0	31.2	12.2
Lumber and timber products.....	708	8,976	1.5	23,026,000	1.5	10,542,000	1.6	13.4	24.6	15.7	19.2
Boots and shoes, rubber.....	8	6,928	1.2	18,722,000	1.3	8,082,000	1.2				
Clothing, men's, including shirts.....	254	7,335	1.3	18,314,000	1.2	8,555,000	1.3	22.8	23.9	25.2	16.0
Cordage and twine and jute and linen goods.....	31	6,690	1.1	16,632,000	1.1	5,434,000	0.8	7.1	26.7	39.3	-7.6
Confectionery.....	117	5,548	0.9	15,286,000	1.0	6,077,000	0.9	63.8	60.8	59.5	65.3
Jewelry.....	175	7,423	1.3	15,211,000	1.0	9,632,000	1.5	51.0	-2.2	51.9	7.3
Hosiery and knit goods.....	65	9,941	1.7	14,736,000	1.0	7,764,000	1.2	46.0	52.0	53.0	36.3
Furniture and refrigerators.....	155	7,277	1.2	13,868,000	0.9	8,060,000	1.2	22.1	-1.2	34.0	-12.3
Iron and steel, steel works and rolling mills.....	9	3,115	0.5	13,568,000	0.9	8,536,000	0.5	13.6	-10.9	-29.9	-14.8
Paper goods, not elsewhere specified.....	61	5,135	0.9	13,533,000	0.9	6,097,000	0.9				
Carpets and rugs, other than rag.....	11	5,954	1.0	12,812,000	0.9	5,311,000	0.8	31.9	39.4	76.4	1.2
Liquors, malt.....	37	1,739	0.3	12,724,000	0.9	9,131,000	1.4	14.8	-1.6	16.5	6.8
Clothing, women's.....	174	5,813	1.0	11,728,000	0.8	5,217,000	0.8	34.9	67.2	33.5	62.3
Cutlery and tools, not elsewhere specified.....	135	6,747	1.2	11,611,000	0.8	8,127,000	1.2	41.0	31.6	43.6	31.4
Automobiles, including bodies and parts.....	62	4,138	0.7	11,359,000	0.8	5,868,000	0.9	326.5	246.3	320.0	201.9
Gas, illuminating and heating.....	64	2,292	0.4	11,074,000	0.7	7,264,000	1.1	37.8	36.9	47.1	17.1
Musical instruments, pianos and organs and materials.....	59	4,245	0.7	9,106,000	0.6	4,957,000	0.8	10.0	34.1	-4.0	33.5
Silk and silk goods, including throwsters.....	19	4,109	0.7	8,942,000	0.6	3,512,000	0.5	27.5	17.7	23.0	33.8
Tobacco manufactures.....	417	3,551	0.6	7,838,000	0.5	4,967,000	0.8	19.9	24.2	21.6	20.6
Marble and stone work.....	330	5,015	0.9	7,804,000	0.5	5,612,000	0.8	1.6	24.4	-5.1	24.7
Cars and general shop construction and repairs by steam-railroad companies.....	21	5,162	0.9	7,804,000	0.5	3,828,000	0.6	22.9	71.0	39.2	40.3
Patent medicines and compounds and druggists' preparations.....	154	1,183	0.2	7,432,000	0.5	4,705,000	0.7	-7.5	21.9	-1.3	8.1
Canning and preserving.....	71	1,449	0.2	6,840,000	0.5	2,257,000	0.3	4.0	3.8	28.3	1.4
Fancy articles, not elsewhere specified.....	78	3,558	0.6	6,618,000	0.4	3,104,000	0.5	73.1	40.3	68.7	38.9
Hats, straw.....	18	2,668	0.5	6,589,000	0.4	2,909,000	0.4	98.1		120.0	
Silverware and plated ware.....	21	2,465	0.4	6,539,000	0.4	3,811,000	0.6	33.5	78.8	37.0	70.8
Copper, tin, and sheet-iron products.....	150	2,627	0.4	6,185,000	0.4	3,252,000	0.5	41.8	29.9	38.5	28.7
Brass and bronze products.....	85	1,791	0.3	6,042,000	0.4	2,379,000	0.4				
Chemicals.....	24	1,358	0.2	5,916,000	0.4	2,868,000	0.4	68.6	74.5	43.8	114.5
Boxes, fancy and paper.....	99	3,838	0.7	5,758,000	0.4	3,039,000	0.5	58.4	-12.3	49.4	-12.4
Belting and hose, leather.....	16	955	0.2	5,647,000	0.4	1,981,000	0.3	409.7	-4.3	553.8	-22.9
Flour-mill and gristmill products.....	120	229	(²)	4,632,000	0.3	501,000	0.1	0.3	-14.4	-0.8	-43.6
Leather goods.....	119	1,710	0.3	4,373,000	0.3	1,986,000	0.3	34.7		28.4	
Millinery and lace goods.....	79	1,686	0.3	3,977,000	0.3	1,695,000	0.3	-17.1	163.7	-12.9	144.9
Corsets.....	10	1,689	0.3	3,752,000	0.3	2,145,000	0.3	93.4	20.9	83.5	9.3
Hats, fur-felt.....	11	2,224	0.4	3,746,000	0.3	1,814,000	0.3	61.7	-12.0	52.3	-4.0
Blackening and cleansing and polishing preparations.....	80	527	0.1	3,713,000	0.3	1,834,000	0.3	47.1	42.7	62.6	20.1
Stoves and furnaces, including gas and oil stoves.....	21	1,703	0.3	3,542,000	0.2	2,463,000	0.4	-4.9		19.4	
Paint and varnish.....	41	428	0.1	3,469,000	0.2	1,394,000	0.2	34.8	2.7	47.7	4.9
Firearms and ammunition.....	8	2,327	0.4	3,408,000	0.2	2,656,000	0.4				
Carriages and wagons and materials.....	177	1,539	0.3	3,185,000	0.2	1,903,000	0.3	-35.3	-21.7	-34.2	-17.0
Optical goods.....	11	2,460	0.4	3,058,000	0.2	1,895,000	0.3	34.0		49.2	35.5
Whips.....	29	1,005	0.2	2,774,000	0.2	1,702,000	0.3	43.3	17.3	45.1	25.9
Liquors, distilled.....	6	49	(²)	2,755,000	0.2	2,068,000	0.3	112.1	51.6	110.4	79.1
Bicycles, motorcycles, and parts.....	10	843	0.1	2,706,000	0.2	1,328,000	0.2	364.9	-78.6	353.2	-79.2
Mattresses and spring beds.....	52	667	0.1	2,227,000	0.2	930,000	0.1	2.2	36.1	8.6	23.5
Emery and other abrasive wheels.....	13	615	0.1	1,982,000	0.1	1,418,000	0.2	98.0	48.7	105.5	60.8
Cooperage and wooden goods, not elsewhere specified.....	70	974	0.2	1,939,000	0.1	845,000	0.1	-8.5	37.4	-18.4	28.1
Lasts.....	27	675	0.1	1,909,000	0.1	1,298,000	0.2	58.2	41.3	57.1	31.5
Shoddy.....	27	442	0.1	1,766,000	0.1	573,000	0.1	-2.7	83.7	1.4	86.5
Sewing machines, cases, and attachments.....	6	869	0.1	1,548,000	0.1	989,000	0.1	-16.4	8.9	-26.6	27.0
Gas and electric fixtures and lamps and reflectors.....	25	663	0.1	1,509,000	0.1	697,000	0.1	123.9	21.2	48.3	30.9
Gold and silver, reducing and refining, not from the ore.....	8	78	(²)	1,359,000	0.1	256,000	(²)	295.1	681.8	293.8	242.1
Brick and tile.....	52	991	0.2	1,243,000	0.1	913,000	0.1	8.1	-20.2	8.6	-21.3
Buttons.....	12	659	0.1	978,000	0.1	569,000	0.1	21.6	18.1	-1.6	30.5
Fur goods.....	16	210	(²)	955,000	0.1	403,000	0.1	105.8	8.9	87.4	-9.3
Coffins, burial cases, and undertakers' goods.....	12	384	0.1	941,000	0.1	497,000	0.1	-5.4	45.7	-19.3	59.2
Lime.....	9	557	0.1	864,000	0.1	527,000	0.1	115.5		164.8	
Surgical appliances and artificial limbs.....	23	227	(²)	846,000	0.1	362,000	0.1	251.0	10.0	118.1	5.1
Electroplating.....	54	467	0.1	678,000	(²)	514,000	0.1	55.9	60.5	52.5	67.7
Butter, cheese, and condensed milk.....	24	56	(²)	664,000	(²)	116,000	(²)	-24.3	-26.8	18.4	-43.4
Hats and caps, other than felt, straw, and wool.....	30	274	(²)	659,000	(²)	324,000	(²)	-51.0	-69.3	-44.0	-72.3
Agricultural implements.....	5	346	0.1	647,000	(²)	380,000	0.1	-1.1	22.2	-10.4	28.0
Pottery, terra-cotta, and fire-clay products.....	20	465	0.1	644,000	(²)	465,000	0.1	-10.3	-0.7	-14.4	3.4
Models and patterns, not including paper patterns.....	62	342	0.1	625,000	(²)	506,000	0.1	33.0	22.4	34.2	18.9
Screws, machine.....	13	348	0.1	570,000	(²)	343,000	0.1	-27.9	16.2	-31.5	6.4
All other industries	1,815	61,316	10.5	199,668,000	13.4	84,310,000	12.8				

¹ Percentages are based on figures in Table I; a minus sign (-) denotes decrease. Where the percentages are omitted, comparable figures can not be given.
² Less than one-tenth of 1 per cent.

In addition to the 64 industries with products valued at more than \$1,000,000 which are shown separately in the preceding table, and the dyeing and finishing of textiles, 34 other industries had a value of products in 1909 in excess of this amount.¹ These industries include 5, with products valued at \$5,000,000 but less than \$10,000,000; 26, with products valued at \$1,000,000 but less than \$5,000,000; and 3, with products valued at \$10,000,000 or over. These industries are included under the head of "All other industries" in the table in some instances, because the operations of individual establishments would be disclosed if they were shown separately; in others, because the returns do not properly present the true condition of the industry, for the reason that it is more or less interwoven with other industries; and in still others, because comparative statistics can not be presented for either 1904 or 1899 on account of changes in classification. The 1909 statistics, however, for six of these industries, namely, the manufacture of brushes, steam-railroad cars, men's furnishing goods, oilcloth and linoleum, and rubber goods, and the work done in the street-railroad repair shops, are presented separately in Table II, page 680.

While a few industries predominate in the state, there are, as already noted, a very large number which are of considerable importance. The leading products of the state, measured by value, are boots and shoes, cotton goods, woolen goods, and foundry and machine-shop products. However, the textile group considered as a whole much exceeds boots and shoes in importance. The leading industries call for special consideration.

Textiles.—The textile industries of Massachusetts comprise mainly the manufacture of cotton goods, including cotton small wares; woolen, worsted, and felt goods, and wool hats; cordage and twine and jute and linen goods; hosiery and knit goods; carpets and rugs, other than rag; silk and silk goods, including throwsters; fur-felt hats; and shoddy. Combined, the eight allied industries gave employment in 1909 to an average of 192,147 wage earners, and the value of their products amounted to \$387,063,000. These figures represent an increase over 1904 of 35,976, or 23 per cent, in number of wage earners, and \$111,205,000, or 40.3 per cent, in value of products. From

¹ These industries are:

Belting and hose, woven and rubber.
Brushes.
Carrriages and sleds, children's.
Cars and general shop construction and repairs by street-railroad companies.
Cars, steam-railroad, not including operations of railroad companies.
Chocolate and cocoa products.
Clocks and watches, including cases and materials.
Coffee and spice, roasting and grinding.
Coke.
Fertilizers.
Food preparations.
Furnishing goods, men's.
Glue.
Grease and tallow.
Iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills.
Iron and steel forgings.

Iron and steel, nails and spikes, cut and wrought, including wire nails, not made in steel works or rolling mills.
Mineral and soda waters.
Mucilage and paste.
Oil, not elsewhere specified.
Oilcloth and linoleum.
Rubber goods, not elsewhere specified.
Saws.
Shipbuilding, including boat building.
Soap.
Soda-water apparatus.
Sporting and athletic goods.
Stationery goods, not elsewhere specified.
Sugar refining, not including beet sugar.
Toys and games.
Waste.
Wire.
Wirework, including wire rope and cable.
Wood, turned and carved.

1899 to 1904 the gain in number of wage earners was 4,548, or 3 per cent, and that in value of products was \$55,224,000, or 25 per cent. The relative importance of the textile industries in Massachusetts is apparent from the fact that, in 1909, 32.9 per cent of the aggregate number of wage earners employed in manufacturing industries in the state and 26 per cent of the aggregate value of manufactured products were reported for these industries. The corresponding proportions for 1904 were 32 per cent and 24.5 per cent, respectively. Massachusetts is not only the foremost state in the Union in the production of all textiles combined, but is first as regards three of the most important branches—cotton goods, including cotton small wares; woolen, worsted, and felt goods, and wool hats; and cordage and twine and jute and linen goods. It ranks second in the production of shoddy, third in that of hosiery and knit goods and of carpets and rugs, and fifth in that of silk and silk goods and of fur-felt hats.

Boots and shoes, including cut stock and findings.—Of the 860 establishments included under this classification in 1909, 469 were engaged primarily in the manufacture of boots and shoes, 215 in the production of boot and shoe findings, and 176 in the manufacture of boot and shoe cut stock. There is some overlapping between these three branches, for which there were separate classifications in 1904, which makes it desirable to combine them in presenting the statistics. Although this industry is one of the oldest in the state, dating from about 1629, it was not until after the period from 1851 to 1865, when various kinds of shoemaking machinery were introduced, that the real expansion of the industry began. In 1869 there were 2,562 boot and shoe factories, including custom and repair shops, in the state, which gave employment to an average of 56,443 wage earners and turned out products valued at \$90,561,000, whereas in 1909 the 860 establishments operating under the factory system employed an average of 83,063 wage earners and had an output valued at \$236,343,000. The figures for wage earners and value of products in 1869 represented 20.2 per cent and 16.3 per cent of the respective totals for all manufacturing industries in the state, while the corresponding percentages for 1909 were 14.2 and 15.9, respectively. Massachusetts continues to lead all other states of the Union in the combined industry and in each of the three branches. During recent years, however, there has been a marked development of this industry in a number of other states, in consequence of which the value of such products reported for Massachusetts formed a smaller proportion of the total value for the United States in 1909 than in 1899, the percentages being 46.1 and 48.7, respectively. The increase in value of products was \$32,441,000 from 1899 to 1904, and \$62,663,000 from 1904 to 1909, the total gain during the decade being \$95,104,000, or 67.3 per cent.

The 469 establishments which reported boots and shoes as their principal product in 1909 gave employment to an average of 74,710 wage earners and manufactured products valued at \$187,046,000, while the 502 establishments reported in 1904 employed 62,633 wage earners and turned out products valued at \$144,291,000. During the five years, therefore, a decrease of 33 occurred in the number of establishments, but there were increases of 12,077 in the number of wage earners and \$42,755,000 in the value of products.

Foundry and machine-shop products.—The development of this industry has been in a measure dependent upon and largely stimulated by the growth of the textile, boot and shoe, printing and publishing, paper and wood pulp, and other important industries of the state which employ machinery extensively in their manufacturing processes. A large amount of the machinery used throughout the United States in these industries, particularly in the first two, is manufactured in Massachusetts. This classification covers products of great diversity, embracing not only the output of foundries and machine shops but also that of establishments engaged in the manufacture of gas machines and gas and water meters, hardware, plumbers' supplies, steam fittings and heating apparatus, and structural ironwork. During the period from 1899 to 1904 the industry was practically at a standstill, but from 1904 to 1909 its growth was greater, relatively, than that shown for all industries combined. The foundry and machine-shop industry in its broadest sense is of greater importance in the state than is indicated by the statistics presented under this specific head, for the reason that the chief products of some machine shops are of a character which caused the establishment to be assigned to some other classification.

Printing and publishing.—Under this head are included job printing; the printing and publishing of books, newspapers and periodicals, and music; book-binding and blank-book making; steel engraving, including plate printing; and lithographing. More establishments were reported for this industry than for any other single industry in the state. Although in value of products the industry shows an advance of only 20.8 per cent from 1904 to 1909, this relative gain was nearly double that shown for the preceding five-year period. The absolute increase in value of products from 1904 to 1909 was \$8,171,000 and from 1899 to 1904 it was \$4,140,000.

Slaughtering and meat packing.—Under this head are included the wholesale slaughtering and meat-packing establishments and those engaged in the manufacture of sausage only. The first census at which establishments in the slaughtering and meat-packing industry were reported for Massachusetts was that of 1859, when the total output of the eight plants in operation during that year was valued at \$173,000. Since that date the

industry in the state has grown very rapidly. In 1889, 43 establishments with products valued at \$32,344,000 were reported, and in 1909 there were 94 establishments with products valued at \$44,403,000, an increase for the decade of \$12,059,000, or 37.3 per cent. The relative growth in value of products was practically the same during each of the five-year periods 1899-1904 and 1904-1909. Of the 94 establishments reported for the industry as a whole in 1909, 17 were engaged in both wholesale slaughtering and wholesale meat packing, 28 in wholesale slaughtering only, and 49 in the manufacture of sausage only, the value of the output of these three branches representing 79.2 per cent, 16.6 per cent, and 4.2 per cent, respectively, of the total for the combined industry.

Paper and wood pulp.—All establishments which manufacture paper exclusively, pulp exclusively, or both paper and pulp are included in this classification. The mills engaged in the production of paper alone, however, largely predominate. This branch of the industry was developed and brought to its high standard of efficiency mainly in Massachusetts and for many years it has ranked among the principal manufacturing activities of the state. In 1869, 1879, and 1889, when the manufacture of paper and that of pulp were treated as separate industries, Massachusetts led all other states in the value of paper manufactured. Beginning with the census of 1899, however, the two branches were treated together and owing to the fact that the state produced very little wood pulp it dropped to second place, where it has since remained. Of the aggregate value of the output of all paper and pulp mills in the United States, Massachusetts contributed 17.4 per cent in 1899, 17 per cent in 1904, and 15 per cent in 1909. The development of the industry in the state during the last 10 years is due mainly to the increase in the production of fine paper and book paper, the value of which formed about three-fourths of the total for the industry in 1909.

Leather, tanned, curried, and finished.—This industry includes establishments engaged primarily in the manufacture of leather and those which treat hides or skins for others. The cost of materials and the value of products, however, do not include the cost or value of the hides or skins treated under contract. In 1849 Massachusetts was the third state of the Union in this industry with respect to value of products, reporting 397 establishments, which employed 2,623 wage earners and turned out products valued at \$6,538,775. The state retained the same rank in 1909, in which year, although only 132 establishments were engaged in the industry, the number of wage earners was nearly four times as great and the value of products more than six times as great as in 1849.

Clothing.—While neither the manufacture of men's clothing nor that of women's clothing is among the

12 leading industries of the state, the 2 industries combined had an output for 1909 valued at \$30,042,000. The increase in value of products from 1904 to 1909 was \$6,433,000, or 27.2 per cent, and that from 1899 to 1904, \$6,366,000, or 36.9 per cent. In 1869 Massachusetts was the third state in the Union in the manufacture of clothing, as measured by value of products, but largely owing to the great fire of 1872 in Boston, the center of the industry in the state, it dropped to fifth place in 1879. From the effects of this fire the wholesale clothing industry of the state has never fully recovered. At the census of 1889 the first attempt was made to segregate the statistics for establishments manufacturing clothing under the factory system from establishments doing custom tailoring and dressmaking. Although the value of the ready-made clothing reported by Massachusetts has increased substantially during the last 40 years, its proportion of the aggregate value of products reported for the industry in the United States has been growing less, this proportion being 3.6 per cent in 1899 and 3.2 per cent in 1909. The value of men's clothing has represented the major part of the total value shown for the combined industries at each census, but that of the women's clothing branch has increased its percentage of the combined value of products of the industry from 30.2 per cent in 1899 to 36.8 per cent in 1904 and 39 per cent in 1909.

Electrical machinery, apparatus, and supplies.—The exceptionally rapid extension during recent years of the uses of electricity has created a demand for appliances with which to utilize this energy. Massachusetts shows a remarkable development during the last decade, the value of products having increased from \$10,490,000 in 1899 to \$15,882,000 in 1904 and to \$28,143,000 in 1909, and in this respect it held fourth place among the states in the industry in 1909.

Manufactures from precious metals.—The manufacture of jewelry is allied closely to the production of silverware and plated ware, and the reducing and refining of gold and silver from clippings, sweepings, and scrap. In 1909 these three industries combined employed an average of 9,966 wage earners and turned out products valued at \$23,109,000. This group of manufactures had its beginning in the state about 1805, the chief finished products at that time being such articles as silver spoons, gold beads, and finger rings, and later included a cheaper grade of jewelry, in the manufacture of which Massachusetts is now one of the leading states.

Lumber and timber products.—This industry includes the timber plants, whose chief products are logs and bolts; the sawmills, shingle mills, and planing mills, which produce rough and dressed lumber, shingles, lath, cooperage stock, sash, doors, blinds, interior finish, and other millwork; and the wooden packing-

box factories. This industry in the state in 1909 was represented by 208 independent planing mills, 391 sawmills and timber plants, and 109 packing-box factories, which reported 42.2 per cent, 22.7 per cent, and 35.1 per cent, respectively, of the value of products for the industry. The corresponding percentages of the total value of products in 1899 contributed by these three branches were: 38.6, 38.5, and 22.9. It is apparent, therefore, that the growth of the industry as a whole was due to the increase in the production of the planing mills and box factories. Although the total cut of rough lumber increased from 344,190 M feet board measure in 1899 to 361,200 M feet in 1909, Massachusetts is one of the five states in which the cut reported for 1909 was less than that for 1908. In the industry as a whole there was an increase during the decade 1899-1909 of \$6,732,000, or 41.3 per cent, in value of products.

Boots and shoes, rubber.—Massachusetts leads all other states of the Union in the production of rubber footwear, reporting 37.7 per cent of the total value of the product of the industry in 1909, 55.7 per cent in 1904, and 40.1 per cent in 1899. The value of products reported for the industry in the state as given in Table I shows an increase of 136.7 per cent from 1899 to 1904. In explanation of this large apparent gain, the statement is made in the reports for the census of 1904, that it is probable that instead of reporting the value of products on a basis similar to that used in 1899, some of the establishments reported their products on the basis of a list price, subject to a large discount peculiar to the industry. This would naturally result in an excessive figure for value of products in 1904. The value of products reported for 1909 is more in harmony with that for 1899 than is that for 1904. A comparison of the statistics for 1909 and 1899 shows that during the decade as a whole the number of wage earners increased 1,678, or 32 per cent; the value of products, \$2,232,000, or 13.5 per cent; and the value added by manufacture, \$430,000, or 5.6 per cent.

There are five industries presented separately in the preceding table, which are not among the leading ones in the state as measured by value of products, yet in respect to which Massachusetts leads all other states of the Union. These industries, with the share of the state in the value of the total production in 1909, are: The manufacture of paper goods outside of paper mills—including the cutting and boxing of writing paper and the making of shelf paper, glazed paper, paper tubes, playing cards, and other similar products—24.5 per cent; the manufacture of cutlery and tools other than those reported as separate industries, 21.8 per cent; the whip industry, 70.2 per cent; the manufacture of bicycles, motorcycles, and parts, 25.3 per cent; and the making of lasts, 45.9 per cent.

The rank of the industries shown in the state when measured by value added by manufacture differs considerably from the rank by value of products, which is the order shown in the table on page 639. Of all the industries listed in this table, only eight hold the same position when ranked according to value added by manufacture. Noticeable changes in rank are found in the case of slaughtering and meat packing, which drops from the sixth place in gross value to the twenty-third place in added value; in the cordage, twine, jute, and linen goods industry, which falls from fourteenth to twenty-fourth place; and in the steel works and rolling mills, which falls from the nineteenth to the thirty-second place. On the other hand, the malt-liquor industry advances from twenty-second place to twelfth; the manufacture of cutlery and tools from twenty-fourth to fourteenth; the gas industry from twenty-sixth to eighteenth; and marble and stone work from thirtieth to twenty-second. The greatest variation is shown for the flour-mill and gristmill industry, which ranks forty-second in value of products and sixty-seventh in value added by manufacture.

This table also shows the percentages of increase or decrease for these leading industries in respect to value of products and value added by manufacture in all cases where comparable figures can be given in Table I. Exceptionally large relative increases are shown for several of the industries during each of the five-year periods, while others show marked relative decreases. From 1904 to 1909 the largest increases in both items are shown for the manufacture of leather belting and hose, the manufacture of bicycles, motor cycles, and parts, the manufacture of automobiles including bodies and parts, and the reduction and refining of gold and silver. From 1899 to 1904 the largest gains in both items are shown for the reduction and refining of gold and silver, and for the automobile and the millinery and lace-goods industries. None of the industries just mentioned, however, is among the 20 leading industries shown in the table. In value of products 13 industries showed a decrease from 1904 to 1909, and 14 a decrease from 1899 to 1904, while in value added by manufacture decreases were reported for 15 and 14 industries, respectively. The largest relative decreases shown in value of products from 1904 to 1909 were in the hat and cap industry (51 per cent), and in the carriage and wagon industry (35.3 per cent).

Persons engaged in manufacturing industries.—The next table shows, for 1909, the distribution of the number of persons engaged in manufactures, the average number of wage earners being distributed by sex and age. It should be borne in mind, however, that the sex and age classification of the average number of wage earners in this and other tables is an estimate obtained by the method described in the Introduction.

The average number of persons engaged in manufactures during 1909 was 644,399, of whom 584,559

were wage earners. Of the remainder, 23,985 were proprietors and officials and 35,855 were clerks. Corresponding figures for individual industries will be found in Table II, page 680.

CLASS.	PERSONS ENGAGED IN MANUFACTURES.		
	Total.	Male.	Female.
All classes.....	644,399	447,287	197,112
Proprietors and officials.....	23,985	23,181	804
Proprietors and firm members.....	11,194	10,695	499
Salaried officers of corporations.....	4,615	4,481	134
Superintendents and managers.....	8,176	8,005	171
Clerks.....	35,855	22,914	12,941
Wage earners (average number).....	584,559	401,172	183,387
16 years of age and over.....	563,824	390,544	173,280
Under 16 years of age.....	20,735	10,628	10,107

The following table shows, for 1909, the percentage of proprietors and officials, clerks, and wage earners, respectively, among the total number of persons employed in manufactures. It covers all industries combined and 32 important industries individually.

INDUSTRY.	PERSONS ENGAGED IN MANUFACTURES.			
	Total number.	Per cent of total.		
		Proprietors and officials.	Clerks.	Wage earners (average number).
All industries.....	644,399	3.7	5.6	90.7
Automobiles, including bodies and parts.....	4,624	3.7	6.8	89.5
Boots and shoes, including cut stock and findings.....	90,048	2.6	5.1	92.2
Boots and shoes, rubber.....	7,451	1.2	5.8	93.0
Bread and other bakery products.....	9,755	18.5	12.8	68.7
Carpets and rugs, other than rag.....	6,251	0.8	4.0	95.2
Cars and general shop construction and repairs by steam-railroad companies.....	5,416	2.0	2.7	95.3
Clothing, men's, including shirts.....	8,208	5.2	5.4	89.4
Clothing, women's.....	6,686	5.0	8.0	86.9
Confectionery.....	6,398	3.3	10.0	86.7
Cordage and twine and jute and linen goods.....	7,003	1.2	3.2	95.5
Cotton goods, including cotton small wares.....	110,686	0.7	0.9	98.4
Cutlery and tools, not elsewhere specified.....	7,432	3.6	5.6	90.8
Electrical machinery, apparatus, and supplies.....	16,725	3.5	9.8	86.7
Foundry and machine-shop products.....	49,393	4.1	6.5	89.4
Furniture and refrigerators.....	7,940	4.4	4.0	91.6
Gas, illuminating and heating.....	2,800	6.9	11.2	81.9
Hosiery and knit goods.....	10,287	1.4	1.9	96.6
Iron and steel, steel works and rolling mills.....	3,465	3.2	6.9	89.9
Jewelry.....	8,560	5.1	8.2	86.7
Leather, tanned, curried, and finished.....	11,006	3.3	3.6	93.1
Liquors, malt.....	2,091	5.3	11.5	83.2
Lumber and timber products.....	10,478	10.4	3.9	85.7
Marble and stone work.....	5,712	9.3	2.9	87.8
Musical instruments, pianos and organs and materials.....	4,681	3.6	5.7	90.7
Paper and wood pulp.....	13,742	2.1	4.4	93.5
Paper goods, not elsewhere specified.....	5,710	3.3	6.7	89.9
Patent medicines and compounds and druggists' preparations.....	1,805	12.6	21.8	65.5
Printing and publishing.....	24,410	8.3	19.8	71.8
Silk and silk goods, including throwsters.....	4,308	1.7	2.9	95.4
Slaughtering and meat packing.....	3,832	3.7	9.6	86.8
Tobacco manufactures.....	4,258	12.1	4.5	83.4
Woolen, worsted, and felt goods, and wool hats.....	55,533	1.3	1.7	97.0
All other industries.....	127,705	5.5	7.6	87.0

Of the total number of persons engaged in all manufacturing industries, 3.7 per cent were proprietors and officials, 5.6 per cent clerks, and 90.7 per cent wage earners. In the bakery industry the majority of the establishments are small, and the work to a large extent is done by the proprietors or their immediate representatives, so that the proportion of persons

engaged in the industry falling into the class of proprietors and officials is very much higher than for most other industries or for all industries combined. Similar conditions prevail to some extent in the manufacture of patent medicines, in tobacco manufactures, and in the lumber industry, in which proprietors and officials form 12.6, 12.1, and 10.4 per cent, respectively, of the total number of persons engaged in the industry.

On account of the fact that the cotton-goods, carpet and rug, and woolen-goods industries and the manufacture of rubber boots and shoes and of cordage and twine are conducted in relatively large establishments measured by number of wage earners employed, these industries show the smallest proportions of proprietors and officials. The largest proportion of wage earners, 98.4 per cent, is reported for the cotton-goods industry, and the smallest, 65.5 per cent, for the manufacture of patent medicines. The highest percentage of clerks is shown for the manufacture of patent medicines.

The next table shows, for 1909, in percentages, for all industries combined, the distribution of the average number of wage earners by age periods, and for those 16 years of age and over by sex, calculated in the manner described in the Introduction. It also shows, for some of the important industries separately, a similar distribution of wage earners as reported for December 15, or the nearest representative day. As a means of judging the importance of the several industries, the average number employed for the year is also given in each case.

For all industries combined, 66.8 per cent of the average number of wage earners were males 16 years of age and over; 29.6 per cent, females 16 years of age and over; and 3.5 per cent, children under the age of 16. The larger part of the total number of female wage earners 16 years of age and over is made up of those employed in the textile and the boot and shoe industries.

In the carpet and rug and the cotton-goods industries and in the manufacture of cordage and twine, over two-fifths of the wage earners are women 16 years of age and over; in the knitting mills, over one-half; in the silk mills, nearly three-fifths; and in the woolen and worsted mills, nearly two-fifths. Of the wage earners employed in the manufacture of boots and shoes, including cut stock and findings, nearly one-third are women 16 years of age and over. The industries in the table, however, which show the largest percentages of female wage earners are the women's clothing industry, with 77.4 per cent; the confectionery industry, with 64 per cent; and the men's clothing industry, with 61 per cent.

The textile and boot and shoe industries combined also include the larger part of the total number of

wage earners under 16 years of age. The proportion of such wage earners in the total number engaged in the manufacture of textiles was 5.9 per cent, while the corresponding proportion for the boot and shoe industry was 3.7 per cent. In six of the industries given in the table at least 5 per cent of the wage earners were children, the proportion ranging from 10.8 per cent for the silk mills to 5.7 per cent for the cotton mills.

INDUSTRY.	WAGE EARNERS.			
	Average number. ¹	Per cent of total.		
		16 years of age and over.		Under 16 years of age.
Male.	Female.			
All industries.....	584,559	66.8	29.6	3.5
Automobiles, including bodies and parts.....	4,138	98.3	1.4	0.4
Boots and shoes, including cut stock and findings.....	83,063	64.1	32.2	3.7
Boots and shoes, rubber.....	6,928	58.8	38.7	2.5
Bread and other bakery products.....	6,697	78.3	19.0	2.7
Carpets and rugs, other than rag.....	5,954	51.8	42.2	6.0
Cars and general shop construction and repairs by steam-railroad companies.....	5,162	99.4	0.6	.....
Clothing, men's, including shirts.....	7,335	38.0	61.0	1.0
Clothing, women's.....	5,813	21.6	77.4	1.0
Confectionery.....	5,548	26.3	64.0	9.6
Cordage and twine and jute and linen goods.....	6,090	50.5	41.4	8.1
Cotton goods, including cotton small wares.....	108,914	51.2	43.1	5.7
Cutlery and tools, not elsewhere specified.....	6,747	82.4	15.1	2.5
Electrical machinery, apparatus, and supplies.....	14,507	78.8	20.3	0.9
Foundry and machine-shop products.....	44,179	97.2	1.5	1.3
Furniture and refrigerators.....	7,277	89.8	7.9	2.3
Gas, illuminating and heating.....	2,292	99.4	0.6	.....
Hosiery and knit goods.....	9,941	41.6	53.9	4.4
Iron and steel, steel works and rolling mills.....	3,115	96.7	3.3	(*)
Jewelry.....	7,423	62.7	34.7	2.5
Leather, tanned, curried, and finished.....	10,252	88.2	1.3	0.5
Liquors, malt.....	1,739	99.3	0.7	.....
Lumber and timber products.....	8,976	96.2	3.0	0.8
Marble and stone work.....	5,015	99.6	(*)	0.4
Musical instruments, pianos and organs and materials.....	4,245	91.9	5.7	2.4
Paper and wood pulp.....	12,848	65.1	33.9	1.0
Paper goods, not elsewhere specified.....	5,135	49.0	46.1	4.9
Patent medicines and compounds and druggists' preparations.....	1,183	46.7	51.9	1.4
Printing and publishing.....	17,532	70.1	27.1	2.8
Silk and silk goods, including throwsters.....	4,109	29.6	59.6	10.8
Slaughtering and meat packing.....	3,325	58.2	1.1	0.7
Tobacco manufactures.....	3,551	73.5	25.6	0.8
Woolen, worsted, and felt goods, and wool hats.....	53,873	56.2	38.0	5.8
All other industries.....	111,053	72.2	25.0	2.8

¹ For method of estimating the distribution, by sex and age periods, of the average number in all industries combined, see Introduction.

² Less than one-tenth of 1 per cent.

In order to compare the distribution of persons engaged in manufactures in 1909 with that shown at the census of 1904, it is necessary to use the classification employed at the earlier census. (See Introduction.) The following table makes this comparison according to occupational status:

CLASS.	PERSONS ENGAGED IN MANUFACTURES.				
	1909		1904		Per cent of increase, 1904-1909. ¹
	Number.	Percent distribution.	Number.	Percent distribution.	
Total.....	644,399	100.0	532,481	100.0	21.0
Proprietors and firm members.....	11,194	1.7	11,258	2.1	-0.6
Salaries employees.....	48,646	7.5	32,824	6.2	48.2
Wage earners (average number).....	584,559	90.7	488,399	91.7	19.7

¹ A minus sign (-) denotes decrease.

Comparable figures are not obtainable for 1899. The table shows that the greatest percentage of increase was for salaried employees, the only class with a higher proportion of the total in 1909 than in 1904.

The following table shows the average number of wage earners, distributed according to age periods, and in the case of those 16 years of age and over according to sex, for 1909, 1904, and 1899. The averages for 1909 are estimated on the basis of the actual number reported for a single representative day. (See Introduction.)

CLASS.	AVERAGE NUMBER OF WAGE EARNERS.					
	1909		1904		1899	
	Number.	Percent distribution.	Number.	Percent distribution.	Number.	Percent distribution.
Total.....	584,559	100.0	488,399	100.0	438,234	100.0
16 years of age and over..	563,824	96.5	473,630	97.0	425,909	97.2
Male.....	390,544	66.8	326,586	66.9	292,019	66.6
Female.....	173,280	29.6	147,044	30.1	133,890	30.6
Under 16 years of age....	20,735	3.5	14,769	3.0	12,325	2.8

This table indicates that for all industries combined the number of children under 16 years of age employed in 1909 was decidedly greater than the number reported for 1899, and that the proportion of such employees in the total number of wage earners increased slightly during the decade. Although the number of females 16 years of age and over increased during the same period, the proportion of such wage earners became somewhat less. In 1909 males 16 years of age and over formed 66.8 per cent of all wage earners, as compared with 66.9 per cent in 1904 and 66.6 per cent in 1899.

Wage earners employed, by months.—The next table gives the number of wage earners employed on the 15th of each month during the year 1909, for all industries combined, and also the percentage which the number reported for each month is of the greatest number reported for any month. In Table II, page 680 are shown, for the majority of the important industries in the state, the largest number and also the smallest number of wage earners reported for any month. The figures are for the 15th day, or the nearest representative day, of the month.

There are no seasonal industries of importance in Massachusetts. On the contrary, most of the leading industries show comparatively little fluctuation throughout the year in the number of wage earners employed. (See Table II, page 680.) Among them the greatest relative variation is in the foundry and machine-shop industry, in which the minimum number,

40,164, was employed in January, and the maximum number, 48,740, in December. For all industries combined the smallest number, 565,750, was employed in the month of January. The number increased somewhat in February and March, but a slight decrease occurred in every month from March to July. From then on the number increased steadily, until in December 612,615 wage earners were employed, the largest number reported for any month. The difference between the figures for the months of greatest and least employment was thus 46,865, or 7.6 per cent of the maximum.

MONTH.	WAGE EARNERS.		MONTH.	WAGE EARNERS.	
	Number.	Percent of maximum.		Number.	Percent of maximum.
January.....	565,750	92.4	July.....	573,462	93.6
February.....	572,618	93.5	August.....	581,008	94.8
March.....	579,519	94.6	September.....	594,688	97.1
April.....	576,618	94.1	October.....	601,533	98.2
May.....	576,379	94.1	November.....	604,466	98.7
June.....	576,055	94.0	December.....	612,615	100.0

Prevailing hours of labor.—In the table on page 646 wage earners have been classified according to the hours of labor prevailing in the establishments in which they are employed. In making this classification the average number of wage earners employed during the year is used, and the number employed in each establishment is classified as a total according to the hours prevailing in that establishment, even though a few employees work a greater or less number of hours.

It is evident from this table that for the great majority of wage earners employed in the manufacturing industries of Massachusetts the usual hours of labor are between 54 and 60 a week, 27.6 per cent of the total being employed in establishments where the prevailing hours are 54 or less, and only 7.4 per cent in establishments where they are 60 or more a week.

In 33 of the 76 industries shown separately in the table at least half the wage earners were in establishments in which the prevailing period of employment is a week of between 54 and 60 hours. More than six-sevenths of the wage earners in the iron and steel industry and more than half of those in the slaughtering and meat-packing and in the paper and wood-pulp industries, however, are employed in establishments where the prevailing number of hours are 60 or over per week, while for the majority of the wage earners engaged in marble and stone work, printing and publishing, and tobacco manufactures the prevailing hours of labor are 48 or less per week.

INDUSTRY.	AVERAGE NUMBER OF WAGE EARNERS IN ESTABLISHMENTS GROUPED ACCORDING TO PREVAILING HOURS OF WORK PER WEEK.								
	Total.	48 and under.	Between 48 and 54.	54.	Between 54 and 60.	60.	Between 60 and 72.	72.	Over 72.
All industries.....	584,559	29,484	28,555	103,114	380,223	35,887	4,599	1,230	1,487
Agricultural implements.....	346			5	265	70			
Automobiles, including bodies and parts.....	4,138	3	232	2,645	1,242	16			
Belting and hose, leather.....	955		13	33	909				
Bicycles, motorcycles, and parts.....	843			123	720				
Blacking and cleansing and polishing preparations.....	527	57	109	41	309	11			
Boots and shoes, including cut stock and findings.....	83,063	212	4,258	33,007	44,503	1,023			
Boots and shoes, rubber.....	6,928			6,928					
Boxes, fancy and paper.....	3,838	28	594	938	2,278				
Brass and bronze products.....	1,791	40	55	492	604	540			
Bread and other bakery products.....	6,697	303	94	1,649	1,855	2,611	109	69	7
Brick and tile.....	991	32	46	107	207	507	13	19	
Butter, cheese, and condensed milk.....	56	12		9	3	28	4		
Buttons.....	659	4		58	597				
Canning and preserving.....	1,449	66	94	1,103	154	32			
Carpets and rugs, other than rag.....	5,954		45		5,909				
Carriages and wagons and materials.....	1,539	18	498	704	172	147			
Cars and general shop construction and repairs by steam-railroad companies.....	5,162	231	1,188	3,689			54		
Chemicals.....	1,358	8	8	16	1,033	241		13	30
Clothing, men's, including shirts.....	7,335	255	1,271	2,590	2,973	246			
Clothing, women's.....	5,813	542	2,671	949	1,610	41			
Coffins, burial cases, and undertakers' goods.....	384	2		139	192	50	1		
Confectionery.....	5,548	35	2,966	747	1,785	15			
Cooperage and wooden goods, not elsewhere specified.....	974	157	8	107	494	208			
Copper, tin, and sheet-iron products.....	2,027	714	347	520	987	59			
Cordage and twine and jute and linen goods.....	6,690	52	1	1,347	5,208	5	17		
Corsets.....	1,989		101	33	1,855				
Cotton goods, including cotton small wares.....	108,914		11	41	08,760	88	58		
Cutlery and tools, not elsewhere specified.....	6,747	177	298	2,820	2,543	909			
Electrical machinery, apparatus, and supplies.....	14,507	266	395	902	12,851	98			
Electroplating.....	467	15		70	334	1			
Emery and other abrasive wheels.....	615			1	561	53			
Fancy articles, not elsewhere specified.....	3,558	41	181	97	2,696	543			
Firearms and ammunition.....	2,327	1		862	984	450			
Flour-mill and gristmill products.....	229	22	4	28	30	144	1		
Foundry and machine-shop products.....	44,179	310	1,259	11,059	29,735	1,747	69		
Fur goods.....	210		97	113					
Furniture and refrigerators.....	7,277	542	916	2,108	3,312	394	5		
Gas and electric fixtures and lamps and reflectors.....	663	33	270	314	46				
Gas, illuminating and heating.....	2,292	23		735	314	12	195	14	909
Gold and silver, reducing and refining, not from the ore.....	78				71	7			
Hats and caps, other than felt, straw, and wool.....	274	20	67	72	114	1			
Hats, fur-felt.....	2,224	83		20	2,121				
Hats, straw.....	2,668			14	2,331	323			
Hosiery and knit goods.....	9,941	12	245	86	9,598				
Iron and steel, steel works and rolling mills.....	3,115		13	39	376	2,687			
Jewelry.....	7,423	54	215	234	6,755	165			
Lasts.....	675			235	419	21			
Leather goods.....	1,710	31	288	463	602	326			
Leather, tanned, curried, and finished.....	10,252	155	108	120	8,292	1,577			
Lime.....	557			4	110	199		147	97
Liquors, distilled.....	49	5		13		31			
Liquors, malt.....	1,739	305	35	1,392	7				
Lumber and timber products.....	8,976	1,058	987	1,793	3,600	1,486	41	11	
Marble and stone work.....	5,015	3,991	332	304	142	187	59		
Mattresses and spring beds.....	667	73	90	151	289	64			
Millinery and lace goods.....	1,686	311	663	169	543				
Models and patterns, not including paper patterns.....	342	23	82	97	140				
Musical instruments, pianos and organs and materials.....	4,245	700	420	2,855	195	75			
Optical goods.....	2,460	5	12		2,443				
Paint and varnish.....	428	8	158	42	149	71			
Paper and wood pulp.....	12,848	944	386	848	3,697	4,023	2,425	525	
Paper goods, not elsewhere specified.....	5,135	48	46	1,776	2,922	190	153		
Patent medicines and compounds and druggists' preparations.....	1,183	356	434	63	252	70	8		
Pottery, terra-cotta, and fire-clay products.....	465	4	11	151	218	81			
Printing and publishing.....	17,532	11,404	1,853	2,911	1,342	20			2
Screws, machine.....	348			14	278	56			
Sewing machines, cases, and attachments.....	869			861	8				
Shoddy.....	442		24	2	184	206			20
Silk and silk goods, including throwsters.....	4,109	1	39		4,069				
Silverware and plated ware.....	2,465			300	2,165				
Slaughtering and meat packing.....	3,325	59	35	70	1,337	1,819	4	1	
Stoves and furnaces, including gas and oil stoves.....	1,703	44	48	1,431	180				
Surgical appliances and artificial limbs.....	227	5	23	96	101	2			
Tobacco manufactures.....	3,551	3,256	87	59	141	8			
Whips.....	1,005	2		7	898	98			
Woolen, worsted, and felt goods, and wool hats.....	53,873	359	138	255	48,567	4,554			
All other industries.....	61,816	1,967	3,616	9,031	37,351	7,240	1,383	431	297

Location of establishments.—The next table shows the extent to which the manufactures of Massachusetts are centralized in cities and towns of 10,000 population or over. (See Introduction.) The com-

parison is confined here, as in other states, to the years 1899 and 1909, in the absence of a Federal census of population by which the grouping of cities or towns in 1904 in all states could be determined.

ITEM.	Year.	Aggregate.	CITIES AND TOWNS HAVING A POPULATION OF 10,000 AND OVER.								DISTRICTS OUTSIDE OF CITIES AND TOWNS HAVING A POPULATION OF 10,000 AND OVER.	
			Total.		10,000 to 25,000.		25,000 to 100,000.		100,000 and over.			
			Number or amount.	Percent of total.	Number or amount.	Percent of total.	Number or amount.	Percent of total.	Number or amount.	Percent of total.	Number or amount.	Percent of total.
Population.....	1910	3,366,416	2,606,380	77.4	450,898	13.4	1,008,483	30.0	1,146,999	34.1	700,036	22.6
	1900	2,805,346	2,050,862	73.1	413,698	14.7	852,988	30.4	784,176	28.0	754,484	26.9
Number of establishments.....	1909	11,684	9,210	78.8	1,468	12.6	3,124	26.7	4,618	39.5	2,474	21.2
	1899	10,929	8,210	75.1	1,494	13.7	3,133	28.7	3,583	32.8	2,719	24.9
Average number of wage earners.	1909	584,559	477,766	81.7	88,952	15.2	205,982	35.2	182,832	31.3	106,793	18.3
	1899	438,234	341,251	77.9	70,042	16.0	165,117	37.7	106,092	24.2	96,983	22.1
Value of products.....	1909	\$1,490,529,386	\$1,236,269,442	82.9	\$209,652,301	14.1	\$543,367,703	36.5	\$483,249,438	32.4	\$254,259,944	17.1
	1899	907,626,439	715,626,978	78.8	120,241,566	13.2	346,724,807	38.2	248,660,605	27.4	191,999,461	21.2
Value added by manufacture....	1909	659,764,443	548,852,996	83.2	95,201,949	14.4	229,499,986	34.8	224,151,061	34.0	110,911,447	16.8
	1899	408,971,406	326,156,070	79.8	56,674,925	13.9	144,655,457	35.4	124,825,688	30.5	82,815,336	20.2

In 1909, 82.9 per cent of the total value of products for all manufacturing industries in the state was reported from cities and towns having over 10,000 inhabitants, and 81.7 per cent of the average number of wage earners were employed in such cities and towns. The figures indicate that while there was very little relative change during the last 10 years, yet on the whole the industries of the cities and towns with a population of 10,000 or over have gained somewhat on those of the remainder of the state.

It should be understood that in making the classification of cities and towns for 1899 in this table the population in 1900 was used as the basis. Hence the towns that had less than 10,000 inhabitants each in 1900 but more than that number in 1910, namely, Arlington, Greenfield, Methuen, Plymouth, Wakefield, Watertown, Webster, and Winthrop, are included for 1899 with the districts outside. The total value of products reported for these eight towns in 1909 was \$47,001,185, or 3.2 per cent of the total for the state. If, therefore, the statistics for these towns in 1909 were deducted from the totals for cities and towns having a population of 10,000 or over and added to the districts outside, the proportion of the aggregate value of products credited to the former group would be 79.7 per cent and that credited to the latter 20.3 per cent. These figures represent the relative proportions of the total value of manufactured products for the state contributed by the same areas for which statistics are given in 1899.

The composition of each of the groups of cities and towns having more than 10,000 inhabitants has been affected by changes in the population of different cities and towns. In 1900 Brookline, Chicopee, Everett, Pittsfield, Quincy, and Waltham had less than 25,000 inhabitants, but during the following decade the population of each increased so that all in 1910 belonged to the group comprising cities and towns having between 25,000 and 100,000 inhabitants. Cambridge and Lowell had less than 100,000 inhabitants in 1900, but by 1910 had so gained in population that they were included with Boston, Worcester, and Fall River in the group of cities having more than 100,000 inhabitants.

On the other hand, Gloucester, which in 1900 was included among the cities having between 25,000 and 100,000 inhabitants, as the result of a decrease in population during the decade in 1910 fell into the group comprising cities and towns having between 10,000 and 25,000 inhabitants.

Although each of the three groups into which the cities and towns having over 10,000 inhabitants are divided showed a substantial increase during the decade in average number of wage earners, value of products, and value added by manufacture, the group comprising the places having between 25,000 and 100,000 inhabitants showed a smaller proportion of the total for each item in 1909 than in 1899, while the proportion for the group comprising the cities of over 100,000 inhabitants was larger in each case. These changes are of course due largely to changes in the composition of the different groups. Of the total value of products shown for the state at the census of 1909, 14.1 per cent was reported from the 30 cities and towns having between 10,000 and 25,000 inhabitants, 36.4 per cent from the 19 cities and 1 town having between 25,000 and 100,000 inhabitants, and 32.4 per cent from the 5 cities having more than 100,000 inhabitants.

The population in 1910 and 1900 of the 55 cities and towns which had 10,000 inhabitants or more in 1910 is given in the first tabular statement on page 648.

The relative importance in manufactures of each of these cities and towns is shown in the second tabular statement on page 648, in which the value of products and average number of wage earners are shown separately for 1909, 1904, and 1899, so far as comparative figures are available.

Every city and town for which comparative figures are available shows an increase during the decade in number of wage earners, with the exception of North Adams, Gloucester, Melrose, and Medford, while for all except North Adams and Melrose there was a gain in value of products. From 1904 to 1909 all except four of the cities and towns show an increase in value of products, and all except seven an increase in number of wage earners employed. During the period from

1899 to 1904 a decrease in value of products occurred in three of the places shown, and a decrease in wage earners in nine. Some cities show decided increases from 1904 to 1909 in value of products. The largest relative gain, 149.1 per cent, was made by Chicopee, and was due in part to the increased production of cotton goods, rubber goods, and sporting goods, as well as to the establishment of such new industries as slaughtering and meat packing and the manufacture of automobiles. In Medford there was an increase of 134.6 per cent, due largely to gains in the foundry and machine-shop and wool-pulling industries of the city and to the establishment of a tannery there since 1904. Beverly shows a gain of 111 per cent, representing primarily an increase in the output of its foundries and machine shops and boot and shoe factories. A gain in Webster of 92.5 per cent was due mostly to increases in the textile and boot and shoe industries and in the dyeing and finishing of textiles, and a gain in New Bedford of 80.7 per cent was mainly the result of the marked increase in the manufacture of cotton goods in that city.

CITY OR TOWN.	1910	1900	CITY OR TOWN.	1910	1900
Boston.....	670,585	560,892	Northampton....	19,431	18,643
Worcester.....	145,966	118,421	Beverly.....	18,669	13,884
Fall River.....	119,295	104,863	Revere.....	18,219	10,395
Lowell.....	106,294	94,969	Leominster.....	17,590	12,392
Cambridge.....	104,839	91,886	Attleborough.....	16,215	11,335
New Bedford.....	96,652	62,442	Westfield.....	16,044	12,310
Lynn.....	89,336	68,513	Peabody.....	15,721	11,523
Springfield.....	88,926	62,059	Melrose.....	15,715	12,962
Lawrence.....	85,822	62,569	Hyde Park.....	15,507	13,244
Somerville.....	77,236	61,643	Woburn.....	15,308	14,354
Holyoke.....	57,739	45,712	Newburyport....	14,949	14,478
Brockton.....	56,878	40,063	Gardner.....	14,699	10,813
Malden.....	44,404	33,664	Marlborough.....	14,579	13,609
Haverhill.....	44,115	37,175	Clinton.....	13,075	13,667
Salem.....	44,097	35,956	Milford.....	13,055	11,376
Newton.....	39,806	33,587	Adams.....	13,026	11,134
Fitchburg.....	37,826	31,531	Frammingham....	12,948	11,302
Taunton.....	34,259	31,036	Weymouth.....	12,905	11,324
Everett.....	33,484	24,336	Watertown.....	12,875	9,706
Quincy.....	32,642	23,899	Southbridge.....	12,592	10,625
Chelsea.....	32,452	34,072	Plymouth.....	12,141	9,592
Pittsfield.....	32,121	21,706	Webster.....	11,509	8,804
Waltham.....	27,834	23,481	Methuen.....	11,448	7,512
Brookline.....	27,792	19,935	Wakefield.....	11,404	9,290
Chicopee.....	25,401	19,167	Arlington.....	11,187	8,603
GloUCESTER.....	24,398	26,121	Greenfield.....	10,427	7,927
Medford.....	23,150	13,244	Winthrop.....	10,132	6,058
North Adams....	22,019	24,200			

Boston, the capital and metropolis of the state, shows an increase in 1909, as compared with 1904, of \$53,106,309, or 28.8 per cent, in value of products and 10,477, or 17.7 per cent, in the average number of wage earners employed. The relative importance of Boston as a manufacturing city is indicated by the fact that when ranked by value of products it was eighth among the cities of the United States in 1909 and sixth in 1904 and 1899. Eleven and nine-tenths per cent of the wage earners and 15.9 per cent of the value of products shown for the state in 1909 were reported from Boston. Unlike most of the other important manufacturing cities of the state, Boston does not owe its importance to any particular branch of manufactures but, on the contrary, to a wide range

of industries. Measured by value of products, the most important industries are printing and publishing, with \$28,021,000; the manufacture of boots and shoes, with \$26,147,000; the clothing industries, with \$22,377,000; and foundries and machine shops, with \$13,474,000. The value of the combined output of these industries, however, represents only 37.9 per cent of the total reported for the city. Other industries of importance are the confectionery industry, with products valued at \$10,341,000; the bakery industry, with products valued at \$8,109,000; the brewery industry, with products valued at \$7,554,000; and tobacco manufactures, with products valued at \$5,506,000.

CITY OR TOWN.	AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.		
	1909	1904	1899	1909	1904	1899
Boston.....	69,637	59,160	52,853	\$237,457,472	\$184,351,163	\$162,764,528
Lawrence.....	30,542	21,910	20,899	79,992,668	48,036,593	41,741,998
Worcester.....	28,221	22,796	22,593	77,147,884	52,144,965	46,793,372
Lynn.....	27,368	21,540	16,377	71,503,140	55,003,023	39,347,494
Fall River.....	37,139	26,836	30,646	64,145,726	43,473,105	39,102,716
Lowell.....	32,575	29,303	29,254	60,270,061	46,879,212	41,202,984
New Bedford....	26,566	17,855	15,203	53,237,839	29,499,349	23,397,491
Brockton.....	14,737	13,899	10,296	45,972,388	37,790,982	24,855,362
Cambridge.....	15,260	14,586	11,070	44,227,395	42,407,064	29,092,160
Holyoke.....	16,513	14,685	12,519	40,097,224	30,731,322	24,092,610
Somerville.....	5,280	3,474	3,528	38,686,527	22,955,197	20,064,519
Haverhill.....	11,689	9,574	9,761	35,376,617	24,446,594	23,418,790
Springfield....	11,855	10,523	8,152	31,772,815	25,860,250	18,155,071
Fitchburg.....	8,497	6,498	6,218	23,252,155	15,390,507	13,008,021
Chicopee.....	7,260	4,670	4,085	19,219,166	7,715,653	5,388,930
Chelsea.....	5,954	4,930	2,959	17,002,492	13,879,159	9,518,700
Peabody.....	4,850	3,953	2,661	15,438,732	10,236,669	6,943,796
Taunton.....	7,407	6,608	6,590	15,379,821	13,644,586	11,544,150
Pittsfield.....	6,353	4,455	3,198	15,215,202	8,577,358	5,753,546
Attleborough....	6,429	5,044	4,811	15,160,359	10,050,384	8,751,427
Salem.....	6,338	5,945	5,625	14,576,276	12,202,217	10,711,026
Plymouth.....	2,912	2,300	1,511	11,618,020	11,115,713	5,530,015
Watertown.....	4,335	3,322	1,935	11,545,555	15,524,675	5,330,026
Webster.....	3,409	3,107	2,377	11,296,271	8,577,769	4,007,872
Leominster.....	5,601	4,127	3,412	10,530,815	7,501,720	5,396,528
Quincy.....	5,492	5,371	2,128	10,505,403	8,982,446	3,011,950
Marlborough....	4,265	3,479	2,524	10,382,277	7,468,849	4,498,365
North Adams....	5,414	5,502	6,312	10,314,847	8,035,705	10,741,495
Everett.....	2,680	2,186	1,877	8,746,923	6,135,650	4,437,180
Beverly.....	4,487	2,083	2,275	8,652,547	4,101,168	3,781,468
Malden.....	2,900	2,954	2,416	8,205,852	11,235,635	6,602,462
Clinton.....	4,123	3,482	3,836	7,844,543	5,457,865	5,042,549
Waltham.....	6,037	6,208	4,861	7,814,178	7,149,697	5,890,792
GloUCESTER.....	2,181	1,763	2,367	7,753,463	6,920,984	6,292,772
Westfield.....	3,060	2,634	2,370	7,361,528	5,818,130	4,440,797
Hyde Park.....	4,320	3,991	2,483	7,356,084	6,739,307	4,383,959
Northampton....	3,150	2,963	2,635	6,985,992	5,756,381	4,706,820
Newburyport....	3,215	2,935	2,801	6,931,049	6,809,979	5,140,554
Frammingham....	3,069	2,484	2,207	6,916,864	4,173,579	3,007,301
Weymouth.....	1,991	1,841	1,922	6,627,168	4,921,955	5,388,581
Gardner.....	3,617	3,168	2,896	6,485,148	5,019,019	4,386,077
Adams.....	3,991	3,994	3,132	6,410,054	5,492,001	3,894,071
Newton.....	2,174	1,803	1,823	6,278,714	4,140,996	3,679,223
Southbridge....	4,037	3,223	2,687	6,269,131	4,201,853	3,512,171
Wakefield.....	2,230	1,804	1,436	5,527,102	4,807,728	2,647,130
Woburn.....	1,653	1,452	1,356	5,408,081	4,654,067	4,002,576
Milford.....	1,801	1,782	1,357	4,442,140	3,390,504	2,552,150
Methuen.....	1,572	(1)	(1)	3,475,702	(1)	(1)
Melrose.....	1,038	1,571	1,180	2,824,669	9,450,929	3,416,240
Greenfield.....	1,251	(1)	(1)	2,801,011	(1)	(1)
Medford.....	560	484	575	2,045,289	871,820	1,132,131
Arlington.....	283	200	122	695,356	495,208	256,411
Brookline.....	340	495	324	532,303	732,845	485,559
Revere.....	101	125	87	407,336	355,060	155,833
Winthrop.....	7	(1)	(1)	42,168	(1)	(1)

† Figures not available.

In addition to the 32 industries presented separately for Boston in Table I, there are 143 others which, for various reasons, are included in the group of "All other industries." Some of these are among the more important in the city, in fact 11 reported products in

1909 valued at more than \$1,000,000.¹ These industries include 1, with products exceeding \$10,000,000 in value; 2, with products between \$5,000,000 and \$10,000,000 in value; and 8, with products between \$1,000,000 and \$5,000,000 in value.

The totals presented in this report for Boston do not include the statistics for an establishment operated by the Federal Government—the United States navy yard—located there. In 1909 this plant employed an average of 1,665 wage earners, and the value of the work performed at the yard during that year was reported at \$3,817,755.

Lawrence, which was the fourth in importance among the manufacturing cities in the state in 1904 on the basis of value of products, rose to second place in 1909, having exchanged places with Lynn during the five-year period. The total value of manufactured products for this city increased 66.5 per cent from 1904 to 1909, due primarily to the increased production of woolen and worsted goods, in the manufacture of which the city outranks any other in the state or in the United States. The value of such goods manufactured in 1909 was \$58,536,000, which represented 73.2 per cent of the total reported for all manufacturing industries of the city. The manufacture of cotton goods, paper, and machine-shop products, the lumber industry, and the dyeing and finishing of textiles are also important industries in Lawrence. The statistics for the paper mills and the dyeing and finishing establishments, however, can not be presented separately for Lawrence in Table I without disclosing the operations of individual establishments.

Worcester continued to be the third city of the state in rank according to value of products, showing an increase in this respect of 47.9 per cent from 1904 to 1909. The city owes its position to a comparatively wide range of industries, important among which are foundries and machine shops, with products valued at \$13,219,000; the manufacture of woolen and worsted goods, with products valued at \$4,460,000; the clothing industries, with products valued at \$2,498,000; the manufacture of boots and shoes, with products valued at \$2,414,000; bakeries, with products valued at \$1,472,000; and printing and publishing, with products valued at \$1,233,000. In 1909, 23 per cent of the wage earners reported for all manufacturing industries of the city were employed in foundries and machine shops. The manufacture of steel, wire, leather belting and hose, corsets, paper goods, carpets and rugs, and emery and abrasive wheels, and slaughtering and meat packing are also important industries, but the statistics for each are included under the head of "All other industries" for Worcester in Table I, in order not to disclose the operations of individual establishments.

With the exception of St. Louis, Mo., which held third place in 1909, Lynn, Brockton, and Haverhill are the three most important centers of the boot and shoe industry in the entire country, ranking in the order named. The value of the boots and shoes manufactured in 1909 in the three Massachusetts cities was \$46,660,000, \$39,293,000, and \$29,150,000, respectively. The aggregate value, \$115,103,000, which represented the output of 516 factories that gave employment to an average of 38,455 wage earners, formed 48.7 per cent of the total for the industry in the state, 39.2 per cent of the total for the New England states, and 22.4 per cent of that for the country as a whole. In Lynn the value of products of the boot and shoe industry in 1909 formed 65.3 per cent of the total value of products reported for the city. Other important industries there were the manufacture of electrical machinery (shown under the head of "All other industries" in Table I), leather (tanned, curried, and finished), and patent medicines. From 1904 to 1909 there was an increase of 30 per cent in the value of all manufactured products in Lynn. The corresponding percentages of increase for Brockton and Haverhill were 21.6 per cent and 44.7 per cent, respectively. In the two cities last mentioned the boot and shoe industry contributed 85.5 per cent and 82.4 per cent, respectively, of the total value of products, the remaining industries being of comparatively little importance.

Fall River, Lowell, and New Bedford, which in the value of manufactured products in 1909 ranked fifth, sixth, and seventh, respectively, in the state, owe their prominence primarily to the manufacture of cotton goods. In 1909 the total value of cotton goods produced in Fall River was \$48,576,000, or 75.7 per cent of the value of all products for the city; in Lowell, \$24,744,000, or 41.1 per cent of the total; and in New Bedford, \$42,505,000, or 79.8 per cent of the total. These three cities led all others in the state as well as in the United States in the manufacture of this class of textiles. Of the remaining industries in these cities, the dyeing and finishing of textiles, the manufacture of fur-felt hats, and the foundry and machine-shop industry were important in Fall River, the first two being included under the head of "All other industries" for Fall River in Table I; the manufacture of woolen and worsted goods, of hosiery and knit goods, and of carpets and rugs, foundries and machine shops, the tanning, currying, and finishing of leather, the manufacture of boots and shoes, and of patent medicines, and the lumber industry in Lowell, the hosiery and knit goods, the carpet and rug, and the leather industries being included under "All other industries" for Lowell in Table I; and the boot and shoe, brass and bronze products, and bakery industries in New Bedford, the first two being included under "All other industries" for New Bedford in Table I. During the five-year period from 1904 to 1909 the value of products reported for all manufacturing industries increased 47.6 per cent in Fall River, 28.6 per cent in Lowell, and 80.7 per cent in New Bedford.

¹ These industries are:

Belting and hose, woven and rubber.
Brushes.
Carpets and rugs, other than rag.
Chocolate and cocoa products.
Coffee and spice, roasting and grinding.
Food preparations.

Furnishing goods, men's.
Gas, illuminating and heating.
Liquors, distilled.
Oil, not elsewhere specified.
Sugar, refining, not including beet sugar.

Cambridge, the ninth manufacturing city in the state, is dependent upon no one industry for its industrial position. Although the total value of products for the city in 1909 shows but little gain over that reported in 1904, a large increase is shown for the period from 1899 to 1904. Among the industries of importance, as measured by value of products, are foundries and machine shops, printing and publishing, bakeries, the manufacture of rubber belting and hose, rubber boots and shoes, pianos and organs and materials, electrical machinery, and blacking and cleansing preparations, the confectionery and the furniture industries, and the refining of cane sugar.

Holyoke is the center of the paper industry in the state and also the leading city in the United States in the manufacture of fine paper. The value of products of the Holyoke paper and pulp mills in 1909 was \$12,305,000, which represented 30.7 per cent both of the total value of products reported for the paper and wood-pulp industry of the state and of the total value of products for all manufacturing industries of the city. The manufacture of all textiles combined is even more important in Holyoke, however, than the paper industry; the output of the leading classes of textiles made there being valued at \$18,104,000 in 1909. Other prominent industries are the foundries and machine shops, with an output valued at \$2,095,000; the manufacture of stationery goods, with products valued at \$1,930,000; paper goods, with products valued at \$1,424,000; and printing and publishing, with products valued at \$1,450,000.

Somerville outranked all other cities of the state in the slaughtering and meat-packing industry, which constituted the principal manufacturing activity of the city. Of the total value of manufactured products for this city in 1909, amounting to \$38,687,000, this industry contributed \$31,270,000, or 80.8 per cent. The remaining industries are of little comparative importance. The total value of the manufactures of the city increased 68.5 per cent from 1904 to 1909.

Springfield is the thirteenth city of the state in the value of manufactured products. The leading industries in 1909, as measured by value of products, were automobiles, including bodies and parts, printing and publishing, paper goods, and foundry and machine-shop products. The statistics for the city as a whole are not fully representative, however, of its manufacturing activities, since they do not include those for the Springfield Armory, operated by the Federal Government. In 1909 this establishment employed an average of 1,125 wage earners during the year and turned out products valued at \$1,312,568.

In Fitchburg the leading branch of manufacture was the production of textiles, the output of which represented 40.2 per cent of the value of all products manufactured in the city in 1909. There were, however, a number of other important industries, chief of which were the production of paper and wood pulp,

foundries and machine shops, steam-railroad repair shops, and the manufacture of saws.

Chelsea owes its prominence in manufactures to the production of rubber goods and of boots and shoes, the printing and publishing industry, and the manufacture of suspenders and elastic goods, which four industries gave employment to nearly three-fourths of the total number of wage earners engaged in all manufacturing industries in the city. Of the remaining industries in the city the foundries and machine shops were the most important.

Peabody led all cities and towns of the state in the tanning, currying, and finishing of leather, reporting an output valued at \$12,893,653 in 1909 and \$7,919,370 in 1904, the increase for the five-year period being \$4,974,283, or 62.8 per cent. The value of this class of products constituted 82.9 per cent of the total for the town in 1909 and 77.4 per cent in 1904.

In Woburn the tanning, currying, and finishing of leather also largely predominates, the value of the leather manufactured in 1909 being \$3,415,105 out of \$5,408,081 reported for all manufactures in the city.

Taunton, Plymouth, Webster, North Adams, Clinton, Northampton, Adams, Newton, and Methuen are all textile-manufacturing cities or towns. The cotton-goods industry was the most prominent in Taunton, North Adams, Adams, and Methuen, although the output of woolen and worsted goods was also large in North Adams. The leading industry of Plymouth was the production of cordage and twine, followed closely by that of worsted goods. In Clinton the manufacture of carpets and rugs and that of cotton goods were the most important. The chief industry in Northampton was the production of silk and silk goods, although hosiery and knit goods were extensively manufactured. The woolen and worsted goods industry led in Webster and in Newton; the manufacture of cotton goods and boots and shoes and the dyeing and finishing of textiles were also important in Webster.

Pittsfield is noted for its output of electrical machinery and apparatus, this industry having supplanted the manufacture of textiles in first place since 1904, as determined by value of products. Stationery goods are also manufactured in comparatively large quantities.

Of the value of the products manufactured in Attleborough during 1909, more than two-thirds represented the value of jewelry, silverware and plated ware, and products obtained by the reduction and refining of gold and silver from sweepings, clippings, and scrap. The value of jewelry alone was \$7,396,558, or 48.8 per cent of the total for the town.

The boot and shoe industry was the leading industry in Salem, Marlborough, Newburyport, Weymouth, and Milford, with a value of products for 1909 amounting to \$6,449,608 in Salem, \$9,565,993 in Marlborough, \$3,296,468 in Newburyport, \$3,897,999 in Weymouth, and \$2,210,461 in Milford. Other

prominent industries in Salem were the manufacture of leather and of cotton goods; in Newburyport, the manufacture of silverware and plated ware; in Weymouth, the manufacture of fertilizers; and in Milford, the straw-hat industry. Of the value of products reported for Watertown, Malden, and Melrose, a large part represented that of rubber boots and shoes, although worsted mills were also important in Watertown and the soap factories in Malden. The totals presented for Watertown do not include the statistics for the arsenal in that city, operated by the Federal Government. In 1909 this plant employed an average of 482 wage earners and turned out products, mainly gun carriages, valued at \$859,936.

About two-fifths of the wage earners reported for Leominster in 1909 were engaged in the manufacture of fancy articles from ivory, shell, and bone, including combs and hairpins, which were valued at \$4,245,578, or 40.3 per cent of the total value of products for the town. The production of pianos and materials and that of shirts were also prominent among the various manufactures in Leominster.

In Quincy shipbuilding, marble and stone work, and the manufacture of iron and steel, bolts, nuts, washers, and rivets predominated; in Everett the chief products were coke, chemicals, boots and shoes, and foundry and machine-shop products; and in Framingham, paper goods, boots and shoes, and worsted goods.

Waltham ranked first in 1909 among the cities and towns of the state in the manufacture of clocks and watches, Gloucester in canning and preserving, Westfield in the manufacture of whips, Gardner in the furniture industry, and Southbridge in the manufacture of optical goods. In the manufacture of whips Westfield also outranks all other cities and towns of the United States. The most important industry in Greenfield was the manufacture of cutlery and edge tools, and that in Wakefield the manufacture of hosiery and knit goods. The manufacture of cotton goods was also an important industry in Waltham; the manufacture of glue, in Gloucester; foundries and machine shops, in Westfield; the manufacture of children's carriages and sleds, in Gardner; the furniture industry, in Wakefield; the worsted-goods industry, in Southbridge; and the manufacture of silverware and plated ware, in Greenfield.

The manufacture of machinery was the leading industry in Beverly and Hyde Park, although the boot and shoe industry in the former, and steam-railroad repair shops in the latter, were nearly as important.

The remaining places included in the preceding table—Medford, Arlington, Brookline, Revere, and Winthrop—are comparatively unimportant from a manufacturing standpoint.

Character of ownership.—The table that follows presents statistics as to the character of ownership, or legal organization, of manufacturing enterprises.

INDUSTRY AND CHARACTER OF OWNERSHIP.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.	INDUSTRY AND CHARACTER OF OWNERSHIP.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.
ALL INDUSTRIES:					Bread and other bakery products, 1909.....	1,201	6,697	\$26,146,044	\$10,418,611
1909.....	11,684	584,559	\$1,490,529,386	\$659,784,443	Individual.....	1,000	3,050	12,611,605	5,011,147
1904.....	10,723	488,399	1,124,092,051	497,681,620	Firm.....	157	1,215	4,889,692	1,926,334
Individual:					Corporation ¹	44	2,432	8,644,747	3,481,180
1909.....	6,015	55,318	137,804,436	65,831,571	Per cent of total.....	100.0	100.0	100.0	100.0
1904.....	5,684	55,989	127,600,985	60,174,689	Individual.....	83.3	45.5	48.2	48.1
Firm:					Firm.....	13.1	18.1	18.7	18.5
1909.....	2,084	58,684	162,323,389	68,901,641	Corporation ¹	3.7	36.3	33.1	33.4
1904.....	2,423	77,494	184,869,987	78,087,375	Clothing, men's, including shirts, 1909.....	254	7,335	\$18,313,783	\$8,556,132
Corporation:					Individual.....	145	2,200	2,970,248	1,645,927
1909.....	3,483	468,301	1,182,935,652	521,101,657	Firm.....	74	1,976	6,421,749	3,038,274
1904.....	2,555	354,711	810,543,002	358,944,586	Corporation.....	35	3,159	8,921,786	3,873,931
Other:					Per cent of total.....	100.0	100.0	100.0	100.0
1909.....	102	2,256	7,465,909	3,929,574	Individual.....	57.1	39.0	16.2	19.2
1904.....	61	205	1,178,077	474,970	Firm.....	29.1	28.9	35.1	35.6
Per cent of total:					Corporation.....	13.8	43.1	48.7	45.3
1909.....	100.0	100.0	100.0	100.0	Clothing, women's, 1909.....	174	5,813	\$11,727,980	\$5,216,648
1904.....	100.0	100.0	100.0	100.0	Individual.....	81	1,727	3,756,580	1,629,331
Individual:					Firm.....	54	1,772	3,640,312	1,702,890
1909.....	51.5	9.5	9.2	10.0	Corporation.....	39	2,314	4,331,088	1,884,427
1904.....	53.0	11.5	11.3	12.1	Per cent of total.....	100.0	100.0	100.0	100.0
Firm:					Individual.....	46.6	29.7	32.0	31.2
1909.....	17.8	10.0	10.9	10.4	Firm.....	31.0	30.5	31.0	32.6
1904.....	22.6	15.9	16.4	15.7	Corporation.....	22.4	39.3	36.9	36.1
Corporation:					Confectionery, 1909.....	117	5,548	\$15,266,483	\$6,077,935
1909.....	29.8	80.1	79.4	79.0	Individual.....	62	440	1,295,070	575,217
1904.....	23.8	72.6	72.1	72.1	Firm.....	16	510	1,013,599	445,180
Other:					Corporation.....	39	4,598	12,957,784	5,057,558
1909.....	0.9	0.4	0.5	0.6	Per cent of total.....	100.0	100.0	100.0	100.0
1904.....	0.6	(¹)	0.1	0.1	Individual.....	53.0	7.9	8.5	9.5
Automobiles, including bodies and parts, 1909.....	62	4,138	\$11,359,224	\$5,867,746	Firm.....	13.7	9.2	6.0	7.3
Individual.....	20	370	1,044,768	563,066	Corporation.....	33.3	82.9	84.9	83.2
Firm.....	8	126	346,727	176,899	Cordage and twine and jute and linen goods, 1909.....	31	6,890	\$16,631,643	\$5,433,937
Corporation.....	34	3,642	9,967,729	5,127,811	Individual.....	7	69	171,684	50,606
Per cent of total.....	100.0	100.0	100.0	100.0	Firm.....	5	201	273,280	136,507
Individual.....	32.3	8.9	8.2	9.6	Corporation.....	19	6,420	16,186,679	5,246,824
Firm.....	12.9	3.0	3.0	3.0	Per cent of total.....	100.0	100.0	100.0	100.0
Corporation.....	54.8	88.0	87.8	87.4	Individual.....	22.6	1.0	1.0	0.9
Boots and shoes, including cut stock and findings, 1909.....	860	83,063	\$236,342,915	\$83,352,963	Firm.....	16.1	3.0	1.6	2.5
Individual.....	399	10,663	30,483,211	11,107,991	Corporation.....	61.3	96.0	97.3	96.6
Firm.....	225	16,956	55,361,516	18,629,205					
Corporation ¹	236	55,444	150,498,188	53,715,767					
Per cent of total.....	100.0	100.0	100.0	100.0					
Individual.....	46.4	12.8	12.9	13.3					
Firm.....	26.2	20.4	23.4	22.2					
Corporation ¹	27.4	66.7	63.7	64.4					

¹ Less than one-tenth of 1 per cent.

¹ Includes the group "Other," to avoid disclosure of individual operations.

INDUSTRY AND CHARACTER OF OWNERSHIP.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.	INDUSTRY AND CHARACTER OF OWNERSHIP.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.
Cotton goods, including cotton small wares, 1909.	182	108,914	\$186,462,313	\$81,305,519	Lumber and timber products, 1909.	708	8,976	\$23,025,837	\$10,541,712
Individual.....	12	643	1,181,169	380,666	Individual.....	444	3,106	6,908,798	3,457,232
Firm.....	13	1,593	2,321,164	1,012,783	Firm.....	151	1,749	4,203,016	1,957,907
Corporation.....	157	106,678	182,959,980	79,912,070	Corporation ¹	113	4,121	11,914,023	5,126,573
Per cent of total.....	100.0	100.0	100.0	100.0	Per cent of total.....	100.0	100.0	100.0	100.0
Individual.....	6.6	0.6	0.6	0.5	Individual.....	62.7	34.6	30.0	32.8
Firm.....	7.1	1.5	1.2	1.2	Firm.....	21.3	19.5	18.3	18.6
Corporation.....	86.3	97.9	98.1	98.3	Corporation ¹	16.0	45.9	51.7	48.6
Cutlery and tools, not elsewhere specified, 1909.	135	6,747	\$11,610,749	\$8,126,350	Musical instruments, pianos and organs and materials, 1909.	59	4,245	\$9,106,470	\$4,957,214
Individual.....	56	379	628,895	443,571	Individual.....	17	475	1,080,176	490,200
Firm.....	19	172	506,136	195,933	Firm.....	7	206	282,555	165,659
Corporation ¹	60	6,196	10,475,718	7,486,846	Corporation.....	35	3,564	7,743,739	4,301,355
Per cent of total.....	100.0	100.0	100.0	100.0	Per cent of total.....	100.0	100.0	100.0	100.0
Individual.....	41.5	5.0	5.4	5.5	Individual.....	28.8	11.2	11.9	9.9
Firm.....	14.1	2.5	4.4	2.4	Firm.....	11.9	4.9	3.1	3.3
Corporation ¹	44.4	91.8	90.2	92.1	Corporation.....	59.3	84.0	85.0	86.8
Electrical machinery, apparatus, and supplies, 1909.	83	14,507	\$28,142,889	\$15,408,069	Paper and wood pulp, 1909.	88	12,848	\$40,088,713	\$17,747,100
Individual.....	16	203	464,517	245,905	Individual.....	4	786	2,955,881	2,163,091
Firm.....	8	233	441,672	237,304	Firm.....	8	710	2,304,008	1,234,008
Corporation.....	59	14,071	27,236,700	14,924,860	Corporation ¹	76	11,352	34,836,824	14,350,001
Per cent of total.....	100.0	100.0	100.0	100.0	Per cent of total.....	100.0	100.0	100.0	100.0
Individual.....	19.3	1.4	1.7	1.6	Individual.....	4.5	6.1	7.4	12.2
Firm.....	9.6	1.6	1.6	1.5	Firm.....	9.1	5.5	5.7	7.0
Corporation.....	71.1	97.0	96.8	96.9	Corporation ¹	86.4	88.4	86.9	80.9
Foundry and machine-shop products, 1909.	357	44,179	\$86,925,871	\$55,743,781	Paper goods, not elsewhere specified, 1909.	61	5,135	\$13,532,976	\$6,097,069
Individual.....	330	3,343	6,888,091	4,263,916	Individual.....	10	79	110,326	76,315
Firm.....	135	1,984	4,162,904	2,561,833	Firm.....	6	83	259,185	117,225
Corporation.....	392	38,852	75,877,676	48,918,032	Corporation.....	45	4,973	13,163,465	5,903,529
Per cent of total.....	100.0	100.0	100.0	100.0	Per cent of total.....	100.0	100.0	100.0	100.0
Individual.....	38.5	7.6	7.9	7.6	Individual.....	16.4	1.5	0.8	1.3
Firm.....	15.8	4.5	4.8	4.6	Firm.....	9.8	1.6	1.9	1.9
Corporation.....	45.7	87.9	87.3	87.8	Corporation.....	73.8	96.8	97.3	96.8
Furniture and refrigerators, 1909.	155	7,277	\$13,867,548	\$8,059,640	Printing and publishing, 1909.	1,279	17,532	\$47,445,006	\$34,564,455
Individual.....	60	811	1,436,221	861,539	Individual.....	739	4,039	7,731,293	5,557,548
Firm.....	47	1,352	2,496,716	1,395,058	Firm.....	153	2,386	4,721,255	3,208,982
Corporation.....	48	5,114	9,934,611	5,803,043	Corporation.....	318	10,877	33,313,993	24,543,900
Per cent of total.....	100.0	100.0	100.0	100.0	Other.....	69	230	1,678,465	1,254,025
Individual.....	38.7	11.1	10.4	10.7	Per cent of total.....	100.0	100.0	100.0	100.0
Firm.....	30.3	18.6	18.0	17.3	Individual.....	57.8	23.0	16.3	16.1
Corporation.....	31.0	70.3	71.6	72.0	Firm.....	12.0	13.6	10.0	9.3
Hosiery and knit goods, 1909.	65	9,941	\$14,736,025	\$7,764,419	Corporation.....	24.9	62.0	70.2	71.0
Individual.....	20	215	474,926	190,521	Other.....	5.4	1.3	3.5	3.6
Firm.....	7	1,001	2,549,024	1,130,605	Slaughtering and meat packing, 1909.	94	3,325	\$44,402,972	\$5,516,833
Corporation.....	38	8,725	11,712,075	6,443,293	Individual.....	57	238	1,948,761	492,049
Per cent of total.....	100.0	100.0	100.0	100.0	Firm.....	14	117	1,904,899	244,628
Individual.....	30.8	2.2	3.2	2.5	Corporation.....	23	2,970	40,549,312	4,780,156
Firm.....	10.8	10.1	17.3	14.6	Per cent of total.....	100.0	100.0	100.0	100.0
Corporation.....	58.5	87.8	79.5	83.0	Individual.....	60.6	7.2	4.4	8.9
Jewelry, 1909.	175	7,423	\$15,210,738	\$9,631,413	Firm.....	14.9	3.5	4.3	4.4
Individual.....	62	1,183	2,372,099	1,461,464	Corporation.....	24.5	89.3	91.3	86.6
Firm.....	53	2,460	5,201,421	3,465,319	Woolen, worsted, and felt goods, and wool hats, 1909.	183	53,873	\$141,966,882	\$53,990,551
Corporation.....	60	3,780	7,637,218	4,704,630	Individual.....	26	2,262	5,822,008	2,001,336
Per cent of total.....	100.0	100.0	100.0	100.0	Firm.....	27	4,810	11,885,145	4,688,985
Individual.....	35.4	15.9	15.6	15.2	Corporation.....	130	46,801	124,259,729	47,330,230
Firm.....	30.3	33.1	34.2	36.0	Per cent of total.....	100.0	100.0	100.0	100.0
Corporation.....	34.3	50.9	50.2	48.8	Individual.....	14.2	4.2	4.1	3.7
Leather, tanned, curried, and finished, 1909.	132	10,262	\$40,002,079	\$11,236,571	Firm.....	14.8	8.9	8.4	8.6
Individual.....	42	1,039	2,413,413	1,131,280	Corporation.....	71.0	86.9	87.5	87.7
Firm.....	30	1,646	4,571,004	1,551,555					
Corporation.....	60	7,667	33,017,662	8,453,736					
Per cent of total.....	100.0	100.0	100.0	100.0					
Individual.....	31.8	10.1	6.0	10.1					
Firm.....	22.7	15.1	11.4	14.7					
Corporation.....	45.5	74.8	82.5	75.2					

¹ Includes the group "Other," to avoid the disclosure of individual operations.

Comparative data for 1899 are not available. Figures for 1909 only are presented for several important industries individually. In order to avoid disclosing the operations of individual concerns it is necessary to omit several important industries from this table and the one following.

The most important distinction shown is that between corporate and all other forms of ownership. Of the total number of establishments in all industries combined, 29.8 per cent were under corporate ownership in 1909, as against 70.2 per cent under

all other forms. The corresponding figures for 1904 were 23.8 per cent and 76.2 per cent, respectively. In respect to value of products the difference was even more pronounced, but in the opposite direction, for in 1909 the establishments operated by corporations reported 79.4 per cent of the total value of products; as against 20.6 per cent for establishments under all other forms of ownership, while in 1904 the corresponding figures were 72.1 per cent and 27.9 per cent, respectively. The greatest decrease in relative importance from 1904 to 1909 is shown for establishments operated

by firms, which represented only 17.8 per cent of the total number of establishments in 1909, as compared with 22.6 per cent in 1904, and contributed only 10.9 per cent of the total value of products in 1909, as compared with 16.4 per cent in 1904. Establishments under corporate ownership reported a larger proportion of the total value of products (98.1 per cent) in the cotton-goods industry than in any other shown separately in the table, while the proportion of the total reported by establishments under individual ownership was highest in the bakery industry (48.2 per cent) and that for establishments under firm ownership in the men's clothing industry (35.1 per cent).

Size of establishment.—The tendency for manufacturing to become concentrated in large establishments, or the reverse, is a matter of interest from the standpoint of industrial organization. In order to throw some light upon it, the following table groups the establishments according to the value of their products. The table also shows the average size of establishments for all industries combined and for important industries separately, as measured by number of wage earners, value of products, and value added by manufacture. The totals for all industries are shown for the last two censuses, while for the industries presented separately figures are given for 1909 only.

INDUSTRY AND VALUE OF PRODUCTS.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.	INDUSTRY AND VALUE OF PRODUCTS.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.
ALL INDUSTRIES:									
1909	11,684	584,559	\$1,490,529,286	\$659,784,443	Bread and other bakery products, 1909—Con.				
1904	10,723	488,399	1,124,092,051	497,681,620	Per cent of total	100.0	100.0	\$100.0	\$100.0
Less than \$5,000:					Less than \$5,000	18.2	2.4	2.7	2.9
1909	2,760	3,508	7,162,781	4,767,415	\$5,000 and less than \$20,000	63.6	28.8	30.0	30.8
1904	2,633	3,834	6,898,333	4,517,846	\$20,000 and less than \$100,000	15.6	25.2	25.5	25.0
\$5,000 and less than \$20,000:					\$100,000 and less than \$1,000,000 ¹	2.6	43.6	41.8	41.3
1909	3,826	19,912	40,731,897	24,009,431	Average per establishment		6	\$21,770	\$8,675
1904	3,594	20,257	37,326,510	22,109,809					
\$20,000 and less than \$100,000:					Clothing, men's, including shirts, 1909	254	7,335	\$18,313,783	\$8,558,132
1909	2,932	61,041	136,992,841	73,120,246	Less than \$5,000	61	263	185,111	168,135
1904	2,673	60,075	120,969,162	63,758,232	\$5,000 and less than \$20,000	91	1,334	1,001,078	828,782
\$100,000 and less than \$1,000,000:					\$20,000 and less than \$100,000	69	1,890	2,787,365	1,525,876
1909	1,873	222,890	585,630,505	261,501,513	\$100,000 and less than \$1,000,000 ¹	36	3,843	14,350,229	6,035,339
1904	1,632	216,531	500,755,535	218,741,293	Per cent of total	100.0	100.0	100.0	100.0
\$1,000,000 and over:					Less than \$5,000	24.0	3.6	1.1	2.0
1909	293	277,208	719,811,362	296,365,838	\$5,000 and less than \$20,000	35.8	18.2	5.5	9.7
1904	191	188,702	458,142,511	188,554,880	\$20,000 and less than \$100,000	26.0	25.8	15.2	17.8
Per cent of total:					\$100,000 and less than \$1,000,000 ¹	14.2	52.5	78.2	70.5
1909	100.0	100.0	100.0	100.0	Average per establishment		20	\$72,102	\$33,693
1904	100.0	100.0	100.0	100.0					
Less than \$5,000:					Clothing, women's, 1909	174	5,813	\$11,727,980	\$5,216,648
1909	23.6	0.6	0.5	0.7	Less than \$5,000	10	28	33,269	22,648
1904	24.6	0.8	0.6	0.9	\$5,000 and less than \$20,000	35	322	422,396	242,334
\$5,000 and less than \$20,000:					\$20,000 and less than \$100,000	95	2,499	5,041,751	2,222,559
1909	32.7	3.4	2.7	3.6	\$100,000 and less than \$1,000,000	34	2,964	6,230,564	2,729,107
1904	33.5	4.1	3.3	4.4	Per cent of total	100.0	100.0	100.0	100.0
\$20,000 and less than \$100,000:					Less than \$5,000	5.7	0.5	0.3	0.4
1909	25.1	10.4	9.2	11.1	\$5,000 and less than \$20,000	20.1	5.5	3.6	4.6
1904	24.9	12.3	10.8	12.8	\$20,000 and less than \$100,000	54.6	43.0	43.0	42.6
\$100,000 and less than \$1,000,000:					\$100,000 and less than \$1,000,000	19.5	51.0	53.1	52.3
1909	16.0	38.1	39.3	39.6	Average per establishment		33	\$67,402	\$29,981
1904	15.2	44.1	44.6	44.0					
\$1,000,000 and over:					Confectionery, 1909	117	5,548	\$15,266,453	\$6,077,935
1909	2.5	47.4	48.3	44.9	Less than \$5,000	17	14	55,379	31,817
1904	1.8	38.6	40.8	37.9	\$5,000 and less than \$20,000	38	161	429,881	212,487
Average per establishment:					\$20,000 and less than \$100,000	34	515	1,392,826	533,621
1909	50		\$127,570	\$56,467	\$100,000 and less than \$1,000,000	25	3,120	7,713,840	3,038,636
1904	46		104,830	46,413	\$1,000,000 and over	3	1,738	5,674,527	2,211,374
					Per cent of total	100.0	100.0	100.0	100.0
Automobiles, including bodies and parts, 1909	62	4,138	\$11,359,224	\$5,867,746	Less than \$5,000	14.5	0.3	0.4	0.5
Less than \$5,000	6	3	11,850	7,720	\$5,000 and less than \$20,000	32.5	2.9	2.8	3.5
\$5,000 and less than \$20,000	8	39	78,006	51,204	\$20,000 and less than \$100,000	29.1	9.3	9.1	9.6
\$20,000 and less than \$100,000	27	533	1,364,483	802,975	\$100,000 and less than \$1,000,000	21.4	56.2	50.5	50.0
\$100,000 and less than \$1,000,000 ¹	21	3,563	9,904,885	5,005,847	\$1,000,000 and over	2.6	31.3	37.2	36.4
Per cent of total	100.0	100.0	100.0	100.0	Average per establishment		47	\$130,482	\$51,948
Less than \$5,000	9.7	0.1	0.1	0.1					
\$5,000 and less than \$20,000	12.9	0.9	0.7	0.9	Cordage and twine and jute and linen goods, 1909	31	6,690	\$16,681,643	\$5,433,937
\$20,000 and less than \$100,000	43.5	12.9	12.0	13.7	Less than \$5,000	4	6	11,530	5,542
\$100,000 and less than \$1,000,000 ¹	33.9	86.1	87.2	85.3	\$5,000 and less than \$20,000	3	9	31,284	6,746
Average per establishment		67	\$183,213	\$94,641	\$20,000 and less than \$100,000	9	188	456,685	163,169
					\$100,000 and less than \$1,000,000	12	2,445	4,909,231	1,777,534
Boots and shoes, including cut stock and findings, 1909	860	83,063	\$236,342,915	\$83,352,963	\$1,000,000 and over	3	4,042	11,222,813	3,481,006
Less than \$5,000	74	115	215,018	121,427	Per cent of total	100.0	100.0	100.0	100.0
\$5,000 and less than \$20,000	195	1,507	2,196,375	1,232,688	Less than \$5,000	12.9	0.1	0.1	0.1
\$20,000 and less than \$100,000	248	5,243	12,154,998	5,128,734	\$5,000 and less than \$20,000	9.7	0.1	0.2	0.1
\$100,000 and less than \$1,000,000	279	36,269	104,620,992	36,792,782	\$20,000 and less than \$100,000	29.0	2.8	2.7	3.0
\$1,000,000 and over	64	39,929	117,155,532	40,077,332	\$100,000 and less than \$1,000,000	38.7	36.5	29.5	32.7
Per cent of total	100.0	100.0	100.0	100.0	\$1,000,000 and over	9.7	60.4	67.5	64.1
Less than \$5,000	8.6	0.1	0.1	0.1	Average per establishment		216	\$536,505	\$175,288
\$5,000 and less than \$20,000	22.7	1.8	0.9	1.5					
\$20,000 and less than \$100,000	28.8	6.3	5.1	6.2	Cotton goods, including cotton small wares, 1909	182	108,914	\$186,462,313	\$81,305,519
\$100,000 and less than \$1,000,000	32.4	43.7	44.3	44.1	\$5,000 and less than \$20,000	12	63	132,651	63,663
\$1,000,000 and over	7.4	48.1	49.6	48.1	\$20,000 and less than \$100,000	23	755	1,252,642	520,586
Average per establishment		97	\$274,817	\$96,922	\$100,000 and less than \$1,000,000	79	22,367	37,088,054	15,368,391
					\$1,000,000 and over	68	85,699	147,978,966	65,352,879
Bread and other bakery products, 1909	1,201	6,697	\$26,148,044	\$10,418,611	Per cent of total	100.0	100.0	100.0	100.0
Less than \$5,000	219	158	706,602	304,774	\$5,000 and less than \$20,000	6.6	0.1	0.1	0.1
\$5,000 and less than \$20,000	764	1,932	7,848,841	3,264,356	\$20,000 and less than \$100,000	12.6	0.7	0.7	0.6
\$20,000 and less than \$100,000	187	1,688	6,661,851	2,604,415	\$100,000 and less than \$1,000,000	43.4	20.5	19.9	18.9
\$100,000 and less than \$1,000,000 ¹	31	2,919	10,928,750	4,305,066	\$1,000,000 and over	37.4	78.7	79.4	80.4
					Average per establishment		598	\$1,024,518	\$446,734

¹ Includes the group "\$1,000,000 and over."

² Includes the group "Less than \$5,000."

INDUSTRY AND VALUE OF PRODUCTS.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.	INDUSTRY AND VALUE OF PRODUCTS.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.
Cutlery and tools, not elsewhere specified, 1909	135	6,747	\$11,610,749	\$8,126,350	Lumber and timber products, 1909	708	8,976	\$23,025,837	\$10,541,712
Less than \$5,000	34	42	93,364	67,945	Less than \$5,000	231	384	576,547	385,843
\$5,000 and less than \$20,000	43	292	435,806	323,636	\$5,000 and less than \$20,000	243	1,467	2,585,747	1,677,674
\$20,000 and less than \$100,000	35	1,141	1,737,694	1,233,439	\$20,000 and less than \$100,000	176	3,328	8,285,588	3,856,527
\$100,000 and less than \$1,000,000	23	5,272	9,343,885	6,501,330	\$100,000 and less than \$1,000,000	58	3,797	11,577,955	4,721,768
Per cent of total	100.0	100.0	100.0	100.0	Per cent of total	100.0	100.0	100.0	100.0
Less than \$5,000	25.2	0.6	0.8	0.8	Less than \$5,000	32.6	4.3	2.5	3.7
\$5,000 and less than \$20,000	31.9	4.3	3.8	4.0	\$5,000 and less than \$20,000	34.3	16.3	11.2	15.0
\$20,000 and less than \$100,000	25.9	16.9	15.0	15.2	\$20,000 and less than \$100,000	24.9	37.1	36.0	36.6
\$100,000 and less than \$1,000,000	17.0	78.1	80.5	80.0	\$100,000 and less than \$1,000,000	8.2	42.3	50.3	44.8
Average per establishment		50	\$86,006	\$60,195	Average per establishment		13	\$32,522	\$14,889
Electrical machinery, apparatus, and supplies, 1909	83	14,507	\$28,142,889	\$15,408,069	Musical instruments, pianos and organs and materials, 1909	59	4,245	\$9,106,470	\$4,957,214
Less than \$5,000	5	13	8,921	2,704	Less than \$5,000	8	5	20,816	13,346
\$5,000 and less than \$20,000	19	97	236,813	141,428	\$5,000 and less than \$20,000	12	58	123,919	74,149
\$20,000 and less than \$100,000	31	917	1,692,854	999,015	\$20,000 and less than \$100,000	12	350	622,925	393,812
\$100,000 and less than \$1,000,000	28	13,480	26,204,301	14,264,922	\$100,000 and less than \$1,000,000	27	3,832	8,338,810	4,475,907
Per cent of total	100.0	100.0	100.0	100.0	Per cent of total	100.0	100.0	100.0	100.0
Less than \$5,000	6.0	0.1	(¹)	(²)	Less than \$5,000	13.6	0.1	0.2	0.3
\$5,000 and less than \$20,000	22.9	0.7	0.8	0.9	\$5,000 and less than \$20,000	20.3	1.4	1.4	1.5
\$20,000 and less than \$100,000	37.3	6.3	6.0	6.5	\$20,000 and less than \$100,000	20.3	8.2	6.8	7.9
\$100,000 and less than \$1,000,000	33.7	92.9	93.1	92.6	\$100,000 and less than \$1,000,000	45.8	90.3	91.6	90.3
Average per establishment		175	\$339,071	\$185,639	Average per establishment		72	\$154,347	\$84,021
Foundry and machine-shop products, 1909	857	44,179	\$86,925,671	\$55,743,781	Paper and wood pulp, 1909	88	12,848	\$40,096,713	\$17,747,100
Less than \$5,000	152	216	406,446	274,143	\$5,000 and less than \$20,000	5	36	65,864	25,588
\$5,000 and less than \$20,000	255	1,501	2,799,023	1,918,817	\$20,000 and less than \$100,000	14	271	649,922	292,577
\$20,000 and less than \$100,000	287	7,297	14,149,812	8,667,392	\$100,000 and less than \$1,000,000	65	10,469	30,063,696	13,102,767
\$100,000 and less than \$1,000,000	149	16,764	36,784,419	22,156,361	\$1,000,000 and over	4	2,072	9,317,231	4,326,168
\$1,000,000 and over	14	18,401	32,785,971	22,827,063	Per cent of total	100.0	100.0	100.0	100.0
Per cent of total	100.0	100.0	100.0	100.0	Less than \$5,000	5.7	0.3	0.2	0.1
Less than \$5,000	17.7	0.5	0.5	0.5	\$20,000 and less than \$100,000	15.9	2.1	1.6	1.6
\$5,000 and less than \$20,000	29.8	3.4	3.2	3.4	\$100,000 and less than \$1,000,000	73.9	81.5	75.0	73.8
\$20,000 and less than \$100,000	33.5	16.5	16.3	15.4	\$1,000,000 and over	4.5	16.1	23.2	24.4
\$100,000 and less than \$1,000,000	17.4	37.9	42.3	39.7	Average per establishment		146	\$455,644	\$201,672
\$1,000,000 and over	1.6	41.6	37.7	40.9					
Average per establishment		52	\$101,430	\$65,045					
Furniture and refrigerators, 1909	155	7,277	\$13,867,548	\$8,059,640	Paper goods, not elsewhere specified, 1909	61	5,135	\$13,532,976	\$8,097,089
Less than \$5,000	22	37	64,989	43,961	Less than \$5,000	8	15	23,749	13,544
\$5,000 and less than \$20,000	37	199	418,432	257,603	\$5,000 and less than \$20,000	14	104	173,585	100,024
\$20,000 and less than \$100,000	66	1,632	3,056,414	1,719,582	\$20,000 and less than \$100,000	16	272	687,938	335,309
\$100,000 and less than \$1,000,000	30	5,409	10,327,713	6,038,494	\$100,000 and less than \$1,000,000	23	4,744	12,647,704	5,643,192
Per cent of total	100.0	100.0	100.0	100.0	Per cent of total	100.0	100.0	100.0	100.0
Less than \$5,000	14.2	0.5	0.5	0.5	Less than \$5,000	13.1	0.3	0.2	0.2
\$5,000 and less than \$20,000	23.9	2.7	3.0	3.2	\$5,000 and less than \$20,000	23.0	2.0	1.3	1.6
\$20,000 and less than \$100,000	42.6	22.4	22.0	21.3	\$20,000 and less than \$100,000	26.2	5.3	5.1	5.5
\$100,000 and less than \$1,000,000	19.4	74.3	74.5	74.9	\$100,000 and less than \$1,000,000	37.7	92.4	93.5	92.6
Average per establishment		47	\$89,468	\$51,968	Average per establishment		84	\$221,852	\$99,952
Hosiery and knit goods, 1909	65	9,941	\$14,736,025	\$7,764,419	Printing and publishing, 1909	1,279	17,532	\$47,445,008	\$34,564,455
Less than \$5,000	12	11	23,506	13,069	Less than \$5,000	491	594	1,223,106	965,746
\$5,000 and less than \$20,000	4	64	72,399	35,335	\$5,000 and less than \$20,000	470	2,480	4,707,863	3,675,434
\$20,000 and less than \$100,000	24	672	1,891,835	619,378	\$20,000 and less than \$100,000	230	4,426	9,863,248	7,388,352
\$100,000 and less than \$1,000,000	20	3,310	6,029,313	3,140,696	\$100,000 and less than \$1,000,000	79	6,624	18,479,010	13,724,154
\$1,000,000 and over	3	5,884	7,218,972	3,955,941	\$1,000,000 and over	9	3,408	13,171,779	8,810,769
Per cent of total	100.0	100.0	100.0	100.0	Per cent of total	100.0	100.0	100.0	100.0
Less than \$5,000	18.5	0.1	0.2	0.2	Less than \$5,000	38.4	3.4	2.6	2.8
\$5,000 and less than \$20,000	9.2	0.6	0.5	0.5	\$5,000 and less than \$20,000	36.7	14.1	9.9	10.6
\$20,000 and less than \$100,000	36.9	6.8	9.4	8.0	\$20,000 and less than \$100,000	18.0	25.2	20.8	21.4
\$100,000 and less than \$1,000,000	30.8	33.3	40.9	40.4	\$100,000 and less than \$1,000,000	6.2	37.8	38.9	39.7
\$1,000,000 and over	4.6	59.2	49.0	50.9	\$1,000,000 and over	0.7	19.4	27.8	25.5
Average per establishment		153	\$226,708	\$119,463	Average per establishment		14	\$37,095	\$27,025
Jewelry, 1909	175	7,423	\$15,210,738	\$9,631,413	Slaughtering and meat packing, 1909	94	3,325	\$44,402,972	\$5,516,833
Less than \$5,000	20	26	53,312	36,180	Less than \$5,000	5	4	19,385	5,489
\$5,000 and less than \$20,000	35	219	399,186	263,465	\$5,000 and less than \$20,000	25	53	291,957	87,579
\$20,000 and less than \$100,000	63	1,806	3,542,137	2,284,666	\$20,000 and less than \$100,000	41	274	1,959,346	520,756
\$100,000 and less than \$1,000,000	57	5,372	11,226,123	7,067,102	\$100,000 and less than \$1,000,000	18	303	6,027,941	676,174
Per cent of total	100.0	100.0	100.0	100.0	\$1,000,000 and over	5	2,691	36,104,343	4,226,835
Less than \$5,000	11.4	0.4	0.4	0.4	Per cent of total	100.0	100.0	100.0	100.0
\$5,000 and less than \$20,000	20.0	3.0	2.6	2.7	Less than \$5,000	5.3	0.1	(¹)	0.1
\$20,000 and less than \$100,000	36.0	24.3	23.3	23.5	\$5,000 and less than \$20,000	26.6	1.6	0.7	1.6
\$100,000 and less than \$1,000,000	32.6	72.4	73.8	73.4	\$20,000 and less than \$100,000	43.6	8.2	4.4	9.4
Average per establishment		42	\$86,918	\$55,037	\$100,000 and less than \$1,000,000	19.1	9.1	13.6	12.3
					\$1,000,000 and over	5.3	80.9	81.3	76.6
					Average per establishment		35	\$472,872	\$58,690
Leather, tanned, curried, and finished, 1909	132	10,252	\$40,002,079	\$11,238,571	Woolen, worsted, and felt goods, and wool hats, 1909	183	53,873	\$141,986,882	\$53,990,551
Less than \$5,000	9	20	22,640	14,116	Less than \$5,000	4	8	13,475	9,578
\$5,000 and less than \$20,000	19	164	216,426	140,389	\$5,000 and less than \$20,000	6	83	68,288	53,195
\$20,000 and less than \$100,000	45	1,251	2,135,768	1,198,880	\$20,000 and less than \$100,000	33	1,340	2,035,947	895,843
\$100,000 and less than \$1,000,000	52	4,226	19,349,210	5,109,076	\$100,000 and less than \$1,000,000	116	18,034	43,146,440	14,992,501
\$1,000,000 and over	7	4,591	18,278,035	4,774,110	\$1,000,000 and over	24	34,408	96,702,732	38,039,434
Per cent of total	100.0	100.0	100.0	100.0	Per cent of total	100.0	100.0	100.0	100.0
Less than \$5,000	6.8	0.2	0.1	0.1	Less than \$5,000	2.2	(²)	(¹)	(²)
\$5,000 and less than \$20,000	14.4	1.6	0.5	1.2	\$5,000 and less than \$20,000	3.3	0.2	(¹)	0.1
\$20,000 and less than \$100,000	34.1	12.2	5.3	10.7	\$20,000 and less than \$100,000	18.0	2.5	1.4	1.7
\$100,000 and less than \$1,000,000	39.4	41.2	48.4	45.5	\$100,000 and less than \$1,000,000	63.4	33.5	30.4	27.8
\$1,000,000 and over	5.3	44.8	45.7	42.5	\$1,000,000 and over	13.1	63.9	68.1	70.5
Average per establishment		77	\$303,046	\$85,126	Average per establishment		294	\$775,775	\$295,030

¹ Includes the group "\$1,000,000 and over."

² Less than one-tenth of 1 per cent.

The preceding table shows that, in 1909, of the 11,684 establishments, only 293, or 2.5 per cent, had a value of products exceeding \$1,000,000. These establishments, however, employed an average of 277,208 wage earners, or 47.4 per cent of the total number in all establishments, and reported 48.3 per cent of the total value of products and 44.9 per cent of the total value added by manufacture.

On the other hand, the very small establishments—that is, those having a value of products of less than \$5,000—constituted a considerable proportion (23.6 per cent) of the total number of establishments, but the value of their products amounted to only one-half of 1 per cent of the total. The great bulk of the manufacturing was done in establishments having products valued at not less than \$100,000.

It will be seen from the preceding table that during the five years from 1904 to 1909 there was a considerable increase, as measured by value of products, in the relative importance of the largest establishments—those reporting products of not less than \$1,000,000 in value—and a decrease in that of all other classes.

The fact that the average value of products per establishment increased from \$104,830 to \$127,570, and the average value added by manufacture from \$46,413 to \$56,467, can not be taken as in itself indicating a tendency toward concentration. The increased values shown may be, and probably are, due in part to the increase that has taken place in the prices of commodities. The average number of wage earners per establishment increased from 46 in 1904 to 50 in 1909.

The preceding table shows further that among the industries given separately in the table the average value of products per establishment is highest in the cotton-goods, woolen and worsted goods, cordage and twine, slaughtering and meat-packing, and paper and wood-pulp industries, while the average is lowest in the bakery, lumber, printing and publishing, women's clothing, and men's clothing industries. The average value of products in the cotton mills was \$1,024,518 and in the bakeries, \$21,770.

In some respects, and especially from the standpoint of conditions under which persons engaged in manufactures work, the best classification of establishments to bring out the feature of size is a classification according to the number of wage earners employed. The following table shows, for 1909, such a classification for all industries combined and for 32 important industries individually, and gives not only the number of establishments in each group but also the average number of wage earners employed.

Of the 11,684 establishments reported for all industries, 8.1 per cent employed no wage earners; 41.1 per cent, from 1 to 5; 23.5 per cent, from 6 to 20; and 12 per cent, from 21 to 50. The most numerous single group consists of the 4,807 establishments employing from 1 to 5 wage earners each, and the next of the 2,741 establishments employing from 6 to 20. There were 471 establishments that employed over 250 wage earners; of these, 88 employed over 1,000, of which 39 were cotton mills, 8 boot and shoe factories, 8 woolen and worsted mills, and 7 foundries and machine shops.

INDUSTRY.	Total.	ESTABLISHMENTS EMPLOYING—								
		No wage earners.	1 to 5 wage earners.	6 to 20 wage earners.	21 to 50 wage earners.	51 to 100 wage earners.	101 to 250 wage earners.	251 to 500 wage earners.	501 to 1,000 wage earners.	Over 1,000 wage earners.
All industries.....	11,684	943	4,807	2,741	1,400	709	613	254	129	88
Automobiles, including bodies and parts.....	62	2	13	17	17	5	4	2	2	.....
Boots and shoes, including cut stock and findings.....	86	20	191	219	154	78	96	72	22	8
Boots and shoes, rubber.....	8	1	1	1	1	1	1	2	1	3
Bread and other bakery products.....	1,201	123	868	176	20	6	5	2	1	.....
Carpets and rugs, other than rag.....	11	1	1	1	1	1	1	2	2	2
Cars and general shop construction and repairs by steam-railroad companies.....	21	.....	.....	2	7	5	2	2	2	1
Clothing, men's, including shirts.....	254	4	63	96	62	19	7	1	2	.....
Clothing, women's.....	174	1	21	65	56	23	7	1	.....	.....
Confectionery.....	117	5	43	36	10	8	10	3	2	.....
Cordage and twine and jute and linen goods.....	31	1	7	5	3	1	10	1	1	2
Cotton goods, including cotton small wares.....	182	.....	8	11	14	20	21	29	40	39
Cutlery and tools, not elsewhere specified.....	135	7	45	34	16	12	13	2	2	1
Electrical machinery, apparatus, and supplies.....	83	2	14	22	19	11	10	3	.....	2
Foundry and machine-shop products.....	857	33	279	233	155	84	49	10	7	7
Furniture and refrigerators.....	155	2	47	42	38	13	7	4	1	1
Gas, illuminating and heating.....	64	2	21	18	7	8	7	1	.....	.....
Hosiery and knit goods.....	65	3	12	10	17	10	6	3	2	2
Iron and steel, steel works and rolling mills.....	9	.....	.....	2	.....	.....	2	2	.....	1
Jewelry.....	175	7	31	39	42	37	18	1	.....	.....
Leather, tanned, curried, and finished.....	132	.....	20	28	40	23	15	.....	5	1
Liquors, malt.....	37	.....	2	6	14	13	2	.....	.....	.....
Lumber and timber products.....	708	18	364	207	83	26	10	.....	.....	.....
Marble and stone work.....	330	14	143	119	30	18	4	2	.....	.....
Musical instruments, pianos and organs and materials.....	59	4	13	8	8	9	13	4	.....	.....
Paper and wood pulp.....	88	.....	2	12	12	11	37	12	2	.....
Paper goods, not elsewhere specified.....	61	.....	16	17	7	6	12	2	.....	1
Patent medicines and compounds and druggists' preparations.....	154	47	74	17	12	8	1	.....	.....	.....
Printing and publishing.....	1,279	326	521	277	92	32	20	7	4	.....
Silk and silk goods, including throwsters.....	19	.....	1	2	6	1	6	1	1	1
Slaughtering and meat packing.....	94	2	52	30	3	2	1	2	1	1
Tobacco manufactures.....	417	98	242	54	12	6	3	1	1	.....
Woolen, worsted, and felt goods, and wool hats.....	183	1	5	8	11	37	60	26	7	8
All other industries.....	3,659	221	1,685	927	410	181	153	54	21	7

INDUSTRY.	Total.	ESTABLISHMENTS EMPLOYING—								
		No wage earners.	1 to 5 wage earners.	6 to 20 wage earners.	21 to 50 wage earners.	51 to 100 wage earners.	101 to 250 wage earners.	251 to 500 wage earners.	501 to 1,000 wage earners.	Over 1,000 wage earners.
AVERAGE NUMBER OF WAGE EARNERS.										
All industries.....	584,559		11,912	31,222	45,621	50,368	96,031	88,945	90,776	168,784
Automobiles, including bodies and parts.....	4,138		40	214	588	390	567	744	1,595	
Boots and shoes, including cut stock and findings.....	83,063		584	2,618	4,997	5,645	15,279	26,230	14,618	13,092
Boots and shoes, rubber.....	6,928				7		137	947	601	5,236
Bread and other bakery products.....	6,697		2,012	1,645	654	422	714	710	534	
Carpets and rugs, other than rag.....	5,954		3	13	45	80	168	747	1,644	3,254
Cars and general shop construction and repairs by steam-railroad companies.....	5,162			32	213	331	357	608	1,681	1,940
Clothing, men's, including shirts.....	7,335		192	1,120	1,897	1,327	1,190	364	1,245	
Clothing, women's.....	5,813		74	857	1,854	1,595	1,061	372		
Confectionery.....	5,548		106	421	380	591	1,516	925	1,009	
Cordage and twine and jute and linen goods.....	6,690		21	68	115	82	1,727	417	635	3,025
Cotton goods, including cotton small wares.....	108,914		25	134	488	1,431	3,519	11,184	29,019	63,114
Cutlery and tools, not elsewhere specified.....	6,747		125	371	495	865	1,993	648	1,180	1,070
Electrical machinery, apparatus, and supplies.....	14,507		40	271	664	841	1,754	1,070		9,867
Foundry and machine-shop products.....	44,179		811	2,589	5,103	5,936	8,025	3,109	4,989	13,557
Furniture and refrigerators.....	7,277		133	536	1,249	1,044	919	1,217	702	1,477
Gas, illuminating and heating.....	2,292		49	200	200	525	1,048	270		
Hosiery and knit goods.....	9,941		26	116	569	749	1,017	944	1,457	5,063
Iron and steel, steel works and rolling mills.....	3,115			26	49		254	854		2,282
Jewelry.....	7,423		81	439	1,395	2,019	2,605	284		
Leather, tanned, curried, and finished.....	10,252		60	350	1,352	1,682	2,885		3,123	1,321
Liquors, malt.....	1,739		3	74	502	876	284			54.2
Lumber and timber products.....	8,976		883	2,381	2,639	1,735	1,338			
Marble and stone work.....	5,015		372	1,394	847	1,244	631	527		15.9
Musical instruments, pianos and organs and materials.....	4,245		31	105	248	674	1,967	1,220		
Paper and wood pulp.....	12,848		9	158	390	867	6,379	3,662	1,383	
Paper goods, not elsewhere specified.....	5,135		36	200	236	469	1,012	613		1,669
Patent medicines and compounds and druggists' preparations.....	1,183		140	161	406	252	224			
Printing and publishing.....	17,532		1,371	3,019	2,890	2,279	2,980	2,426	2,558	
Silk and silk goods, including throwsters.....	4,109		1	33	240	57	899	384	585	1,910
Slaughtering and meat packing.....	3,325		132	274	83	145	196	568	912	1,015
Tobacco manufactures.....	3,551		507	531	347	433	600	407	726	
Woolen, worsted, and felt goods, and wool hats.....	53,873		17	121	1,117	2,687	9,698	9,033	5,420	25,780
All other industries.....	111,053		4,028	10,744	13,305	12,525	23,579	18,755	14,555	13,562
PER CENT OF AVERAGE NUMBER OF WAGE EARNERS.										
All industries.....	100.0		2.0	5.3	7.8	8.6	16.6	15.2	15.5	28.9
Automobiles, including bodies and parts.....	100.0		1.0	5.2	14.2	9.4	13.7	18.0	38.5	
Boots and shoes, including cut stock and findings.....	100.0		0.7	3.2	6.0	6.8	18.4	31.6	17.6	15.8
Boots and shoes, rubber.....	100.0			0.1			2.0	13.7	8.7	75.6
Bread and other bakery products.....	100.0		30.0	24.6	9.8	6.3	10.7	10.7	8.0	
Carpets and rugs, other than rag.....	100.0		0.1	0.2	0.8	1.3	2.8	12.5	27.6	54.7
Cars and general shop construction and repairs by steam-railroad companies.....	100.0			0.6	4.1	6.4	6.9	11.8	32.6	37.6
Clothing, men's, including shirts.....	100.0		2.6	15.3	25.9	18.1	16.2	5.0	17.0	
Clothing, women's.....	100.0		1.3	14.7	31.9	27.4	18.3	6.4		
Confectionery.....	100.0		1.9	7.6	6.8	10.7	27.3	16.7	29.0	
Cordage and twine and jute and linen goods.....	100.0		0.3	1.0	1.7	1.2	25.8	6.2	9.5	54.2
Cotton goods, including cotton small wares.....	100.0		(1)	0.1	0.4	1.3	3.2	10.3	26.6	57.9
Cutlery and tools, not elsewhere specified.....	100.0		1.9	5.5	7.3	12.8	29.5	9.6	17.5	15.9
Electrical machinery, apparatus, and supplies.....	100.0		0.3	1.9	4.6	5.8	12.1	7.4		68.0
Foundry and machine-shop products.....	100.0		1.8	5.9	11.7	13.4	18.2	7.0	11.3	30.7
Furniture and refrigerators.....	100.0		1.8	7.4	17.2	14.3	12.6	16.7	9.6	20.3
Gas, illuminating and heating.....	100.0		2.1	8.7	8.7	22.9	45.7	11.8		
Hosiery and knit goods.....	100.0		0.3	1.2	5.7	7.5	10.2	9.5	14.7	50.9
Iron and steel, steel works and rolling mills.....	100.0			0.8	1.6		8.2	17.8		71.7
Jewelry.....	100.0		1.1	5.9	18.8	35.3	35.1	3.8		
Leather, tanned, curried, and finished.....	100.0		0.6	3.4	13.2	16.1	23.3		30.5	12.9
Liquors, malt.....	100.0		0.2	4.3	28.9	50.4	16.3			
Lumber and timber products.....	100.0		9.8	26.5	29.4	19.3	14.9			
Marble and stone work.....	100.0		7.4	27.8	16.9	24.8	12.6	10.6		
Musical instruments, pianos and organs and materials.....	100.0		0.7	2.5	5.8	15.9	46.3	28.7		
Paper and wood pulp.....	100.0		0.1	1.2	3.0	6.7	49.6	28.5	10.8	
Paper goods, not elsewhere specified.....	100.0		0.7	3.9	4.6	9.1	37.2	11.9		32.5
Patent medicines and compounds and druggists' preparations.....	100.0		11.8	13.6	34.3	21.3	18.9			
Printing and publishing.....	100.0		7.8	17.2	16.5	13.0	17.0	13.8	14.6	
Silk and silk goods, including throwsters.....	100.0		(1)	0.8	5.8	1.4	21.9	9.3	14.2	46.5
Slaughtering and meat packing.....	100.0		4.0	8.2	2.5	4.4	5.9	17.1	27.4	30.5
Tobacco manufactures.....	100.0		14.3	15.0	9.8	12.2	16.9	11.5	20.4	
Woolen, worsted, and felt goods, and wool hats.....	100.0		(1)	0.2	2.1	5.0	18.0	16.8	10.1	47.9
All other industries.....	100.0		3.6	9.7	12.0	11.3	21.2	16.9	13.1	12.2

¹ Less than one-tenth of 1 per cent.

Of the total number of wage earners, 59.6 per cent were in establishments employing over 250 wage earners. The single group having the largest number of wage earners was the group comprising the establishments employing over 1,000 wage earners. This group employed 168,784 wage earners, or 28.9 per cent of the total. With the exception of the breweries, marble

and stone work, patent medicines, and tobacco manufactures, the 10 individual industries listed in this table but not in the preceding one are industries in which establishments employing more than 100 wage earners did most of the business, as appears from the classification according to the number of wage earners employed.

Expenses.—As stated in the Introduction, the census does not purport to furnish figures that can be used for determining the cost of manufacture and profits. Facts of interest can, however, be brought out concerning the relative importance of the different classes of expenses which make up the total. The following table shows, for 1909, in percentages, the distribution of expenses among the classes indicated for all industries combined and for certain important industries separately. The figures on which the percentages are based appear in Table II, page 680.

INDUSTRY.	PER CENT OF TOTAL EXPENSES REPORTED.			
	Salaries.	Wages.	Materials.	Miscellaneous expenses.
All industries	4.8	22.8	62.9	9.5
Automobiles, including bodies and parts.....	5.0	28.4	55.8	10.8
Boots and shoes, including cut stock and findings.....	3.0	21.1	70.1	5.8
Boots and shoes, rubber.....	3.3	22.0	69.4	5.3
Bread and other bakery products.....	4.0	16.6	68.5	10.8
Carpets and rugs, other than rag.....	4.2	24.7	67.0	4.2
Cars and general shop construction and repairs by steam-railroad companies.....	3.1	44.5	51.3	1.2
Clothing, men's, including shirts.....	4.2	20.8	59.8	15.2
Clothing, women's.....	6.3	23.6	62.8	7.2
Confectionery.....	3.0	13.6	67.2	11.3
Cordage and twine and jute and linen goods.....	3.2	16.6	72.5	7.6
Cotton goods, including cotton small wares.....	2.1	27.4	63.9	6.7
Cutlery and tools, not elsewhere specified.....	8.6	38.9	36.2	16.3
Electrical machinery, apparatus, and supplies.....	9.4	31.4	48.6	10.6
Foundry and machine-shop products.....	8.7	36.6	42.2	12.6
Furniture and refrigerators.....	5.8	34.4	50.1	9.7
Gas, illuminating and heating.....	7.5	17.7	54.0	20.8
Hosiery and knit goods.....	4.2	31.4	56.7	7.7
Iron and steel, steel works and rolling mills.....	2.9	15.1	76.4	5.7
Jewelry.....	9.0	35.0	44.2	11.7
Leather, tanned, curried, and finished.....	2.5	14.5	76.8	6.1
Liquors, malt.....	7.2	14.7	35.6	42.6
Lumber and timber products.....	3.9	24.9	61.8	9.4
Marble and stone work.....	5.3	52.8	32.6	9.3
Musical instruments, pianos and organs and materials.....	7.2	32.1	49.9	10.7
Paper and wood pulp.....	4.9	18.9	64.5	11.8
Paper goods, not elsewhere specified.....	6.5	19.9	63.1	10.6
Patent medicines and compounds and druggists' preparations.....	10.2	8.9	42.9	38.0
Printing and publishing.....	14.8	28.5	31.5	25.2
Silk and silk goods, including throwsters.....	2.4	22.1	65.1	10.4
Slaughtering and meat packing.....	1.2	4.4	92.3	2.2
Tobacco manufactures.....	4.4	36.6	42.6	16.4
Woolen, worsted, and felt goods, and wool hats.....	2.4	19.9	71.2	6.5
All other industries.....	6.2	20.3	62.2	11.2

This table shows that, for all industries combined, 62.9 per cent of the total expenses were incurred for materials, 27.6 per cent for services—that is, salaries and wages—and but 9.5 per cent for other purposes. As would be expected, these proportions vary greatly in the different industries. The largest proportions for the various items of expense in the industries shown separately are as follows: For salaries, 14.8 per cent in printing and publishing; for wages, 52.8 per cent in marble and stone work; for materials, 92.3 per cent in slaughtering and meat packing; and for miscellaneous expenses, which include internal-revenue taxes, 42.6 per cent in the breweries.

Engines and power.—The next table shows, for all industries combined, the number of engines or other motors, according to their character, employed in generating power (including electric motors operated by purchased current), and their total horsepower at

the censuses of 1909, 1904, and 1899. It also shows separately the number and horsepower of electric motors, including those operated by current generated in the manufacturing establishments.

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.			PER CENT DISTRIBUTION OF HORSEPOWER.		
	1909	1904	1899 ¹	1909	1904	1899 ¹	1909	1904	1899
Primary power, total	19,279	8,449	8,996	1,175,071	938,007	796,061	100.0	100.0	100.0
Owned.....	8,485	8,449	8,996	1,049,438	885,369	764,067	88.5	94.4	96.0
Steam.....	5,784	5,855	6,439	834,701	690,467	576,525	71.0	73.6	72.4
Gas.....	896	654	468	18,326	7,487	4,074	1.6	0.8	0.5
Water wheels.....	1,750	1,868	2,089	185,996	183,135	181,907	15.8	19.5	22.8
Water motors.....	55	72	(²)	520	292	(²)	(²)	(²)	(²)
Other.....				895	3,988	1,561	0.1	0.4	0.2
Rented.....	10,794	(²)	(²)	134,633	52,638	31,994	11.5	5.6	4.0
Electric.....	10,794	(²)	(²)	109,996	27,073	13,409	9.4	2.9	1.7
Other.....				24,637	25,565	18,585	2.1	2.7	2.3
Electric motors	29,344	3,697	823	402,492	91,012	32,828	100.0	100.0	100.0
Run by current generated by establishment.....	18,550	3,697	823	292,496	63,939	19,419	72.7	70.3	59.2
Run by rented power.....	10,794	(²)	(²)	109,996	27,073	13,409	27.3	29.7	40.8

¹ Includes the neighborhood industries and hand trades, omitted in 1904 and 1909.
² Not reported.
³ Less than one-tenth of 1 per cent.

The table indicates that the total primary horsepower increased 141,946, or 17.8 per cent, from 1899 to 1904 and 237,064, or 25.3 per cent, from 1904 to 1909. The greater part of this increase was in owned steam and rented electric power. In 1909, as in 1904, steam power formed the major part of the total power reported, but notwithstanding an increase during the five-year period of 144,234 horsepower, the proportion which this kind of power formed of the total primary power decreased from 73.6 per cent in 1904 to 71 per cent in 1909. The more general use of gas engines in recent years is shown, 896 such engines with an indicated capacity of 18,326 horsepower being reported in 1909, as against 654 engines with a capacity of 7,487 horsepower in 1904 and 468 engines with a capacity of 4,074 horsepower in 1899. The figures also show that the practice of renting electric power is increasing rapidly, 9.4 per cent of the total power being of this character in 1909, as compared with 2.9 per cent in 1904 and 1.7 per cent in 1899. The use of electric motors for the purpose of applying the power generated within the manufacturing establishments is rapidly becoming more common, the horsepower of such motors having increased from 19,419 in 1899 to 63,939 in 1904 and 292,496 in 1909.

Fuel.—Closely related to the question of the kind of power employed is that of the fuel consumed in generating this power, or otherwise used as material in the manufacturing processes. The next table shows the quantity of each kind of fuel used in 1909 for all industries combined and for certain selected industries.

INDUSTRY.	Anthracite coal (tons).	Bituminous coal (tons).	Coke (tons).	Wood (cords).	Oil including gasoline (barrels).	Gas (1,000 feet).	INDUSTRY.	Anthracite coal (tons).	Bituminous coal (tons).	Coke (tons).	Wood (cords).	Oil including gasoline (barrels).	Gas (1,000 feet).
All industries.....	901,158	5,872,727	207,953	126,958	811,658	774,436	Gas, illuminating and heating.	109,399	290,835	58,940	3	484,513	.....
Automobiles, including bodies and parts.....	2,561	7,411	75	12	154	7,302	Hosiery and knit goods.....	3,212	35,196	785	.....	22	1,040
Boots and shoes, including cut stock and findings.....	4,134	96,144	1,895	364	622	5,309	Iron and steel, steel works and rolling mills.....	1,861	155,952	2,231	335	140,432	645
Boots and shoes, rubber.....	5,055	31,719	.....	.....	468	.....	Jewelry.....	510	9,012	555	7	669	15,997
Bread and other bakery products.....	25,382	12,304	23,550	7,844	264	45,239	Leather, tanned, curried, and finished.....	17,226	114,138	236	261	304	472
Carpets and rugs, other than rag.....	1,146	56,952	.....	.....	.....	727	Liquors, malt.....	11,750	63,729	752	200	18	154
Cars and general shop construction and repairs by steam-railroad companies.....	140	45,753	7,719	208	.....	.....	Lumber and timber products.....	1,650	10,626	620	2,335	2,058	5,438
Clothing, men's, including shirts.....	452	7,692	.....	5	25	14,820	Marble and stone work.....	1,836	43,997	115	13	1,388	4,843
Clothing, women's.....	380	1,122	5	6	42	8,600	Musical instruments, pianos and organs and materials.....	1,652	17,852	678	515	64	779
Confectionery.....	4,507	13,807	987	61	17	12,777	Paper and wood pulp.....	69,131	405,347	.....	4,769	19	.....
Cordage and twine and jute and linen goods.....	2,633	40,425	.....	59	2,031	812	Paper goods, not elsewhere specified.....	1,656	20,312	5,264	3	16	572
Cotton goods, including cotton small wares.....	166,788	918,635	924	530	4,823	31,855	Patent medicines and compounds, and druggists' preparations.....	841	2,587	15	82	81	2,931
Cutlery and tools, not elsewhere specified.....	5,924	22,993	943	517	23,190	2,610	Printing and publishing.....	9,408	22,959	131	125	221	86,614
Electrical machinery, apparatus, and supplies.....	7,946	103,916	4,154	40	27,066	241,011	Silk and silk goods, including throwsters.....	13	12,682	.....	160	.....	60
Foundry and machine-shop products.....	38,588	164,829	64,674	3,751	36,168	94,106	Slaughtering and meal packing.....	34,007	12,584	103	2,320	13	1,583
Furniture and refrigerators.....	4,856	15,854	1,002	10,557	121	3,862	Tobacco manufactures.....	905	474	14	38	11	3,592
							Woolen, worsted, and felt goods, and wool hats.....	43,709	1,390,218	253	1,260	1,636	3,535
							All other industries.....	321,834	1,658,671	31,327	90,578	85,202	177,151

NOTE.—In addition, there were 14,063 tons of other varieties of fuel reported.

SUPPLEMENTARY DATA REGARDING IMPORTANT INDUSTRIES.

(With statistics for laundries and custom sawmills and gristmills.)

For certain industries the Census Bureau collects, by means of special schedules, details regarding the quantity and cost of materials and the quantity and value of products and other information for securing which no provision is made on the general schedule. Data of this character for eight important industries in Massachusetts are here presented.

Textiles.—The next two tables display the relative importance of each of the important textile industries in Massachusetts as measured by value of products, and exhibit the progress of the textile industries by showing the number of the principal machines used in the combined industries and for each of the several

branches separately. In both tables figures are given for the years 1909, 1904, and 1899.

INDUSTRY.	VALUE OF PRODUCTS.		
	1909	1904	1899
Total.....	\$387,063,000	\$275,858,000	\$220,634,000
Cotton goods, including cotton small wares.....	186,462,000	130,069,000	111,125,000
Woolen, worsted, and felt goods, and wool hats.....	141,967,000	199,314,000	74,075,000
Cordage and twine and jute and linen goods.....	16,632,000	15,523,000	12,250,000
Hosiery and knit goods.....	14,736,000	10,995,000	6,641,000
Carpets and rugs, other than rag.....	12,812,000	9,714,000	6,966,000
Silk and silk goods, including throwsters.....	8,942,000	7,012,000	5,958,000
Hats, fur-felt.....	3,745,000	2,316,000	2,631,000
Shoddy.....	1,786,000	1,815,000	988,000

¹ Excluding statistics for two establishments engaged in the manufacture of wool hats, to avoid disclosure of individual operations.

MACHINE.	Census.	Total.	VALUE OF PRODUCTS.						
			Carpets and rugs, other than rag.	Cordage and twine and jute and linen goods.	Cotton goods, including cotton small wares.	Hosiery and knit goods.	Shoddy	Silk and silk goods, including throwsters.	Woolen, worsted, and felt goods, and wool hats.
Producing spindles.....	1909	10,874,515	53,244	59,037	9,377,964	163,248	.....	99,699	1,121,303
	1904	9,596,637	42,464	43,052	8,411,249	124,580	.....	57,419	917,873
	1899	8,794,923	39,388	(¹)	7,784,687	102,862	.....	68,088	799,596
Looms.....	1909	263,929	1,778	(¹)	234,249	.....	.....	2,717	25,185
	1904	223,757	1,367	(¹)	200,192	.....	.....	1,610	20,588
	1899	200,368	1,223	(¹)	179,582	.....	.....	1,040	18,523
Knitting machines.....	1909	7,741	.....	.....	.....	7,741	.....	(²)	.....
	1904	6,728	.....	.....	.....	6,715	.....	13	.....
	1899	5,034	.....	.....	.....	5,003	.....	31	.....
Woolen cards (sets).....	1909	1,721	80	.....	.....	36	202	.....	1,403
	1904	1,882	86	.....	.....	39	176	.....	1,587
	1899	1,661	60	.....	.....	39	58	.....	1,528
Wool-combing machines.....	1909	703	46	.....	.....	.....	.....	.....	657
	1904	497	47	.....	.....	.....	.....	.....	450
	1899	424	47	.....	.....	.....	.....	.....	377

¹ Figures not available.

² Not reported.

The total number of producing spindles shows an increase from 1904 to 1909 of 1,277,878, or 13.3 per cent; that of looms an increase of 40,172, or 18 per cent; that of knitting machines an increase of 1,013, or 15.1 per cent; and that of wool-combing machines an increase of 206, or 41.4 per cent. The number of sets

of woolen cards decreased 161, or 8.6 per cent. The absolute and relative gains in the number of producing spindles and looms from 1904 to 1909 were much greater than those from 1899 to 1904. From 1899 to 1904 the increases were 801,714, or 9.1 per cent, and 23,389, or 11.7 per cent, respectively. Not-

withstanding these decided increases, and the fact that more of these two classes of machines are reported from Massachusetts than from any other state in the Union, the number of each class used in the state has formed a smaller proportion of the corresponding total for the United States at each census since 1899. The proportions for producing spindles were 36.8 per cent in 1899, 33.4 per cent in 1904, and 32.1 per cent in 1909, the corresponding percentages for looms being 35, 32.1, and 32, respectively.

The cotton mills reported by far the largest number of spindles and looms, 9,377,984 and 234,249, respectively. These figures represent increases over 1904 of 966,735, or 11.5 per cent, in the number of spindles and 34,057, or 17 per cent, in the number of looms. About one-eighth as many spindles and about one-ninth as many looms were used in the woolen and worsted mills during 1909 as in the cotton mills, the increase in the number of spindles during the five-year period being 203,430, or 22.2 per cent, and that in the number of looms being 4,597, or 22.3 per cent. The number of spindles in the knitting mills increased during the period at a more rapid rate, 31 per cent, than those in either the cotton or the woolen and worsted mills.

Cotton goods, including cotton small wares.—Although the manufacture of cotton goods under the factory system in the United States began in Rhode Island in 1790, the introduction in 1814 of the power loom and at about the same time of the dressing machine in Waltham, Mass., marked the beginning of the real growth of the industry.¹

The quantity and cost of the materials used during 1909, 1904, and 1899 are given in the next table.

The cotton consumed in this industry during 1909 amounted to 622,368,027 pounds, costing \$77,738,315, these figures representing increases since 1904 of 132,378,442 pounds, or 27 per cent, in quantity and of \$15,505,497, or 24.9 per cent, in cost. The aggregate quantity of yarn of all kinds purchased in 1909 was 29,079,341 pounds, costing \$12,405,031, compared with 19,497,310 pounds, costing \$6,003,657, in 1904, and 18,000,406 pounds, costing \$4,884,733, in 1899. Although the quantity of cotton yarn increased considerably during the later five-year period, silk and spun-silk yarns showed much greater relative gains. Of the total quantities of raw cotton and purchased cotton yarn consumed during 1909 in the cotton industry of the United States, the mills of Massachusetts used 26.6 per cent and 21.4 per cent, respectively. The corresponding proportions for 1904 were 26.1 per cent and 17.1 per cent, and for 1899, 30.9 per cent and 17.5 per cent, respectively. Cotton waste purchased increased 4,839,664 pounds; or 31.9 per cent, in quantity and \$103,279, or 10.4 per cent, in cost from 1904 to 1909.

MATERIAL.	1909	1904	1899
Total cost	\$105,156,794	\$80,267,952	\$54,389,045
Cotton:			
Pounds.....	622,368,027	489,989,585	500,084,204
Cost.....	\$77,738,315	\$62,232,818	\$38,916,998
Domestic—			
Pounds.....	578,315,382	467,110,958	525,691,880
Cost.....	\$70,495,332	\$58,267,914	\$34,972,153
Foreign—			
Pounds.....	44,052,645	22,878,627	35,292,324
Cost.....	\$7,242,983	\$3,964,904	\$3,944,845
Cotton waste, purchased:			
Pounds.....	20,024,977	15,185,313	22,399,384
Cost.....	\$1,100,785	\$997,506	\$689,250
Yarns, purchased:			
Cotton—			
Pounds.....	27,175,076	18,048,019	16,537,776
Cost.....	\$8,279,065	\$4,907,080	\$3,562,765
Silk—			
Pounds.....	872,303	129,206	142,249
Cost.....	\$2,854,181	\$465,747	\$676,210
Spun-silk—			
Pounds.....	187,601	40,745	78,679
Cost.....	\$802,763	\$121,036	\$306,273
All other—			
Pounds.....	844,271	1,279,340	1,241,702
Cost.....	\$468,422	\$509,794	\$339,485
Cost.....	\$471,045	\$355,513	\$406,029
Starch.....			
Pounds.....			
Cost.....	\$1,609,908	\$1,697,589	\$2,358,277
Fuel and rent of heat and power.....	\$4,041,092	\$3,137,878	\$2,190,914
All other materials.....	\$7,790,618	\$5,842,991	\$4,942,844

The following table shows the quantity and value of the principal products of the cotton mills reported at the last three censuses:

PRODUCT.	1909	1904	1899
Total value	\$186,462,313	\$130,068,982	\$111,125,175
Plain cloths for printing or converting:			
Square yards.....	1,054,755,770	846,308,546	927,405,189
Value.....	\$51,541,620	\$37,264,695	\$31,939,320
Brown or bleached sheetings and shirtings:			
Square yards.....	175,923,550	138,199,541	176,283,924
Value.....	\$11,486,548	\$8,186,188	\$9,255,612
Twills and sateens:			
Square yards.....	159,658,540	136,315,041	86,668,240
Value.....	\$14,839,807	\$9,676,474	\$5,856,028
Fancy woven fabrics:			
Square yards.....	197,402,265	130,960,271	137,064,111
Value.....	\$22,378,381	\$12,388,941	\$10,995,987
Ginghams:			
Square yards.....	139,552,491	70,831,304	53,932,358
Value.....	\$10,753,018	\$5,708,934	\$3,949,351
Duck:			
Square yards.....	29,169,491	14,486,473	17,903,557
Value.....	\$5,988,828	\$1,532,440	\$1,677,230
Drills:			
Square yards.....	17,088,244	9,238,099	20,475,203
Value.....	\$1,998,819	\$697,279	\$1,316,071
Ticks, denims, and stripes:			
Square yards.....	58,716,976	65,639,919	63,794,895
Value.....	\$6,897,895	\$6,460,557	\$5,380,989
Napped fabrics:			
Square yards.....	123,982,755	144,456,099	137,199,884
Value.....	\$9,470,477	\$11,529,551	\$9,328,553
Corduroy, cotton velvet, and plush:			
Square yards.....	6,109,238	4,149,619	1,687,597
Value.....	\$1,707,507	\$1,211,404	\$349,343
Thread:			
Pounds.....	6,563,216	4,717,974	3,390,883
Value.....	\$5,285,750	\$3,909,470	\$2,800,495
Cotton yarns, for sale:			
Pounds.....	108,830,860	83,399,133	87,656,177
Value.....	\$31,725,674	\$21,363,138	\$18,205,806
Cotton waste, for sale:			
Pounds.....	115,907,265	82,270,060	114,597,274
Value.....	\$4,650,374	\$3,814,247	\$2,613,066
All other products.....	\$7,687,615	\$6,325,664	\$7,454,524

Plain cloth for printing or converting was the main product in each of the three census years. During the five years from 1904 to 1909 the output of this product increased 208,447,224 square yards, or 24.6 per cent, and its value \$14,276,925, or 38.3 per cent, while the output of fancy woven fabrics, which ranked next in importance in 1909, increased 66,441,994 square yards, and its value \$9,989,440. Between 1899 and 1904, however, the quantities of both these classes of goods decreased. The largest relative gains in production during the later five-year period are shown for duck,

¹ Introduction and Early Progress of the Cotton Manufacture in the United States, by Samuel Batchelder, 1863, p. 70.

the quantity of which more than doubled, and for gingham and drills, in the output of which there were increases of 97 per cent and 85 per cent, respectively.

With the exception of decreases in the quantity of ticks, denims, and stripes, and in the quantity and value of napped fabrics, each of the different classes of products shows substantial increases in both quantity and value from 1904 to 1909. It is significant, however, that in the case of most of the products the quantity did not increase relatively as much as the value, which fact is due principally to the general rise in prices and in part, perhaps, to the manufacture of higher grade fabrics in 1909 than in 1904.

To the extent that the cotton yarn and waste made in the state for sale were sold by the establishment producing them to other establishments in Massachusetts engaged in the cotton-goods industry, for use as material in their manufacturing processes, a duplication is involved in both the total cost of materials and the total value of products for the state.

Woolen, worsted, and felt goods, and wool hats.—This industry is second in importance among the textile industries of Massachusetts, and is also one of the oldest industries in the state. The manufacturing processes involved in the production of woolen and worsted goods in the United States were largely perfected in Massachusetts. As early as 1839 there were 144 mills in operation in the state, which gave employment to an average of 5,076 wage earners and turned out products valued at \$7,082,898.

The quantity and cost of the different kinds of materials reported for this industry in 1909, 1904, and 1899 are shown in the next table.

In 1909, 156,338,534 pounds of wool were consumed in this industry, compared with 127,507,629 pounds in 1904 and 104,935,180 pounds in 1899, these figures representing 32 per cent, 29.5 per cent, and 30.6 per cent, respectively, of all wool used in this class of mills in the United States in the years named. Although the major part of the wool consumed in each of the three years was domestic wool, the relative increase in foreign wool has been the more rapid, particularly for the later five-year period. The quantity of cotton used in the woolen and worsted mills decreased materially during the decade. A total of 29,947,889 pounds of purchased yarns were used in 1909, as compared with 18,806,047 pounds in 1904 and 15,015,933 pounds in 1899. Worsted yarn constituted 58.7 per cent of the quantity of all purchased yarns used in the industry in 1909, 42.5 per cent in 1904, and 45.6 per cent in 1899, both the quantity and value of this kind of yarn being more than two and one-half times as great in 1909 as in 1899. Cotton yarn shows an increase of 2,740,689 pounds in 1909 as compared with 1904. The quantity of woolen yarn reported in 1909 was comparatively insignificant, whereas 1,120,010 pounds were used in 1904. The consumption of shoddy decreased 4,711,410 pounds during the same period.

MATERIAL.	1909	1904	1899
Total cost.....	\$87,976,331	\$62,777,588	\$45,130,236
Wool:			
In condition purchased—			
Pounds.....	156,338,534	127,507,629	104,935,180
Cost.....	\$44,803,728	\$33,802,852	\$24,660,518
Foreign—			
Pounds.....	59,636,561	36,294,811	28,839,685
Cost.....	\$19,028,951	\$10,286,318	\$7,447,617
Domestic—			
Pounds.....	96,701,973	91,212,818	76,095,595
Cost.....	\$25,774,777	\$23,516,534	\$17,212,901
Equivalent in scoured condition, pounds.....	99,133,005	74,265,049	57,347,362
Cotton:			
Pounds.....	6,869,651	9,257,173	8,123,310
Cost.....	\$886,281	\$1,230,363	\$755,288
Domestic—			
Pounds.....	5,979,362	7,989,134	8,123,310
Cost.....	\$734,858	\$1,057,870	\$755,288
Egyptian and other foreign—			
Pounds.....	890,289	1,268,039	(*)
Cost.....	\$151,423	\$172,493	(*)
Buffalo, cow, mohair, and other animal hair:			
Pounds.....	3,612,888	4,004,693	3,631,611
Cost.....	\$1,053,176	\$1,124,049	\$833,787
Shoddy:			
Pounds.....	3,687,630	8,398,940	9,808,403
Cost.....	\$547,990	\$1,030,990	\$1,145,006
Waste and noils of wool, mohair, camel's hair, etc., purchased:			
Pounds.....	9,501,027	8,518,733	4,181,175
Cost.....	\$2,671,684	\$2,239,602	\$1,207,606
Tops, purchased:			
Pounds.....	5,045,561	2,999,927	1,576,891
Cost.....	\$3,466,257	\$1,605,667	\$762,140
Yarns, purchased:			
Pounds.....	29,947,889	18,806,047	15,015,933
Cost.....	\$20,937,624	\$10,381,470	\$8,285,877
Woolen—			
Pounds.....	53,324	1,120,010	1,427,101
Cost.....	\$30,522	\$537,560	\$809,772
Worsted—			
Pounds.....	17,569,806	7,988,800	6,849,748
Cost.....	\$16,905,864	\$6,627,945	\$5,943,303
Merino—			
Pounds.....	33,115	157,881	254,434
Cost.....	\$6,623	\$49,508	\$47,275
Cotton—			
Pounds.....	12,116,277	9,375,588	6,453,607
Cost.....	\$3,624,646	\$2,618,113	\$1,603,406
Silk—			
Pounds.....	30,529	57,979	1,454
Cost.....	\$126,330	\$250,677	\$8,716
Spun-silk—			
Pounds.....	74,332	88,694	19,321
Cost.....	\$240,174	\$295,374	\$69,574
Jute, ramie, or other vegetable fiber—			
Pounds.....	70,806	17,095	10,268
Cost.....	\$3,465	\$2,293	\$3,632
Hatters' fur, etc.:			
Pounds.....	62,940		
Cost.....	\$78,480		
Chemicals and dyestuffs.....	\$3,247,159	\$2,644,687	\$2,213,422
Fuel and rent of power.....	\$2,360,970	\$1,759,340	\$1,088,339
All other materials.....	\$7,917,982	\$6,959,168	\$4,178,473

* Excluding statistics for two establishments engaged in the manufacture of wool hats, to avoid disclosure of individual operations.

† Not reported separately.

The next table compares the quantity and value reported for the different kinds of products at the last three censuses.

The quantity of all-wool woven goods reported was 109,221,437 square yards in 1909, as compared with 85,615,420 in 1904 and 72,351,338 in 1899, the gain from 1904 to 1909 being 27.6 per cent, and that in the earlier five-year period 18.3 per cent. The most conspicuous features of the development of the industry in this state during the more recent five-year period are the remarkable increases in the quantities and values of worsted fabrics and the accompanying decreases in both quantity and value of woolen fabrics. The output of worsted coatings and suitings and worsted dress goods in 1909 was 78,242,027 square yards, constituting 71.6 per cent of the total output of all-wool woven goods, whereas in 1904 it was only 34,074,137 square yards, representing 39.8 per cent of the total, and in 1899, 36,167,802 square yards, forming 50 per cent of the total.

PRODUCT.	1909	1904	1899
Total value	\$141,966,882	\$99,313,895	\$74,075,300
All-wool woven goods:			
Square yards.....	109,221,437	85,615,420	72,351,338
Value.....	\$78,873,571	\$53,601,910	\$43,794,294
Woolen suitings for men's wear—			
Square yards.....	13,096,953	14,308,537	12,830,426
Value.....	\$9,156,465	\$9,887,059	\$8,275,730
Worsted coatings and suitings—			
Square yards.....	56,772,066	20,514,811	22,055,157
Value.....	\$48,051,832	\$22,486,282	\$18,686,753
Woolen overcoatings—			
Square yards.....	4,538,709	10,570,499	7,517,646
Value.....	\$3,648,648	\$7,328,883	\$6,932,733
Woolen dress goods—			
Square yards.....	11,731,023	24,017,924	12,606,040
Value.....	\$6,220,727	\$7,944,565	\$4,347,790
Worsted dress goods—			
Square yards.....	21,469,961	13,559,326	14,112,645
Value.....	\$10,856,014	\$4,977,318	\$4,442,385
Flannels for underwear—			
Square yards.....	506,182	1,349,300	2,219,563
Value.....	\$207,183	\$439,405	\$689,248
All other—			
Square yards.....	1,106,483	1,285,023	1,009,861
Value.....	\$732,702	\$537,798	\$419,655
Union or cotton-mixed woven goods:			
Square yards.....	10,226,836	13,401,999	13,706,236
Value.....	\$3,332,690	\$5,193,788	\$4,541,889
Unions, tweeds, etc.—			
Square yards.....	4,837,123	7,130,838	3,849,310
Value.....	\$1,631,006	\$2,888,540	\$1,535,204
Overcoatings—			
Square yards.....	1,241,172	1,369,028	1,439,836
Value.....	\$678,910	\$853,993	\$715,643
Sackings, tricots, etc.—			
Square yards.....	326,735	1,905,107	4,583,862
Value.....	\$228,258	\$893,693	\$1,400,142
All other—			
Square yards.....	3,831,806	2,997,026	3,833,228
Value.....	\$794,516	\$557,562	\$391,000
Goods woven on cotton warp:			
Square yards.....	104,303,227	87,766,935	55,244,010
Value.....	\$24,858,337	\$21,834,123	\$13,377,088
Wool-filling cassimeres—			
Square yards.....	18,793,980	11,005,728	7,416,602
Value.....	\$4,229,797	\$3,660,593	\$2,508,525
Worsted-filling cassimeres—			
Square yards.....	6,936,133	2,890,672	2,574,582
Value.....	\$3,132,929	\$1,038,335	\$1,379,428
Wool-filling overcoatings and cloak-			
ings—			
Square yards.....	1,550,017	3,870,781	1,055,861
Value.....	\$448,995	\$917,453	\$224,270
Satinets and linseys—			
Square yards.....	4,120,737	17,559,146	10,326,148
Value.....	\$606,202	\$3,213,469	\$2,237,965
Worsted-filling dress goods—			
Square yards.....	51,588,003	34,683,359	21,794,250
Value.....	\$10,140,751	\$8,280,919	\$4,128,159
Domest flannels and shirtings—			
Square yards.....	794,799	1,719,849	167,000
Value.....	\$136,605	\$426,274	\$182,700
Blankets and carriage robes—			
Square yards.....	2,069,734	3,066,920	2,188,997
Value.....	\$359,951	\$853,219	\$460,948
All other—			
Square yards.....	18,449,824	12,960,480	9,721,170
Value.....	\$5,803,107	\$3,443,861	\$2,255,093
Felt goods:			
Felt cloths—			
Square yards.....	2,062,534	2,193,203	679,534
Value.....	\$480,838	\$1,062,421	\$190,840
Boot and shoe linings—			
Square yards.....	1,444,978	2,645,811	1,001,137
Value.....	\$409,915	\$701,101	\$509,738
All other.....	\$1,500,746	\$882,381	\$681,563
Wool-felt hats:			
Dozens.....	148,457	.....	247,163
Value.....	\$941,502	.....	\$939,298
Yarns, for sale:			
Woolen, all wool—			
Pounds.....	929,184	1,333,033	1,110,332
Value.....	\$383,327	\$609,541	\$483,861
Woolen or worsted, union or			
merino—			
Pounds.....	1,283,261	743,771	1,075,706
Value.....	\$1,043,693	\$498,056	\$789,744
Worsted yarn and tops—			
Pounds.....	26,180,428	15,430,810	8,878,568
Value.....	\$22,227,154	\$10,119,400	\$5,020,268
Mohair and other yarns—			
Pounds.....	651,296	868,437	445,616
Value.....	\$484,856	\$684,483	\$302,899
Waste, for sale:			
Pounds.....	6,476,439	4,802,626	1,576,293
Value.....	\$711,529	\$744,742	\$244,792
Noils, for sale:			
Pounds.....	10,894,622	4,835,934	4,880,617
Value.....	\$3,576,221	\$1,443,455	\$1,282,138
All other products.....	\$1,697,049	\$1,466,168	\$1,025,185
Work on materials for others.....	\$1,445,454	\$482,326	\$891,703

¹ Excluding statistics for two establishments engaged in the manufacture of wool hats, to avoid disclosure of individual operations.

The mills of Massachusetts produced nearly one-half of the worsted coatings and suitings and over

one-fifth of the worsted dress goods manufactured in the United States in 1909.

The output of goods woven on cotton warps was 104,303,227 square yards in 1909, compared with 87,766,935 square yards in 1904 and 55,244,610 square yards in 1899, these figures representing 49.6 per cent, 48.2 per cent, and 36.1 per cent, respectively, of the total quantities of such fabrics manufactured in all woolen and worsted mills of the Union in the years named. Worsted-filling dress goods constituted the most important class of cotton-warp goods at each of the three censuses. In the quantity of satinets and linseys a marked decrease is shown, from 17,559,146 square yards in 1904 to 4,120,737 square yards in 1909.

The growth of the worsted branch of the industry is further indicated by the increases throughout the 10-year period in the quantity of worsted yarn manufactured for sale. The production of worsted yarn and tops for sale in 1909 was 26,180,428 pounds, which was 10,749,618 pounds, or 69.7 per cent, more than in 1904, and 17,301,860 pounds, or 194.9 per cent, more than in 1899. To the extent that the yarns, waste, and noils manufactured for sale were sold by the establishments in the state producing them to other establishments in the state engaged in the same industry, for use as materials in their manufacturing processes, a duplication is involved in both the total cost of materials and value of products for the industry.

Hosiery and knit goods.—Measured by value of products, this is the fourth of the textile industries in Massachusetts, where the industry in the United States had its beginning. The only stocking factory in the United States in 1831 was located at Newburyport. In 1837, however, an establishment for the manufacture of knit hose and shirts was started at Lowell.¹ In 1859 there were 15 knitting mills in operation in the state, and the value of their products was \$314,000.

The first statement on the following page shows the quantity and cost of the different kinds of materials used in 1909, 1904, and 1899.

The principal material used was raw cotton, the cost of which formed over one-fourth of the total cost of all materials used during each of the three census years. The cost of cotton yarn formed about the same proportion of the total, although the quantity used was only about two-fifths as great as that of raw cotton in 1909, less than one-third as great in 1904, and less than one-fourth as great in 1899. From 1904 to 1909 there was an increase in the amount of each kind of yarn consumed, except worsted yarn, which also decreased in value. The quantity of cotton yarn nearly doubled during the five years, while the value increased 74.6 per cent. The largest relative gain is shown for merino yarn. Shoddy decreased in both quantity and value, and wool waste and noils decreased in quantity only.

¹ Statistics of Manufactures, Massachusetts Bureau of Statistics of Labor, 1898, p. 225.

MATERIAL.	1909	1904	1899
Total cost.....	\$6,971,606	\$5,020,770	\$2,916,612
Cotton:			
Pounds.....	16,459,053	12,643,679	10,915,958
Cost.....	\$1,912,046	\$1,445,852	\$781,259
Domestic—			
Pounds.....	16,034,818	12,380,800	10,915,958
Cost.....	\$1,843,846	\$1,400,173	\$781,259
Foreign—			
Pounds.....	424,235	262,879	(1)
Cost.....	\$68,200	\$45,679	(1)
Shoddy:			
Pounds.....	269,443	284,974	65,075
Cost.....	\$34,382	\$40,993	\$9,797
Wool waste and noils:			
Pounds.....	271,388	301,545	204,756
Cost.....	\$107,839	\$99,908	\$68,796
Yarns, purchased:			
Pounds.....	8,295,153	4,635,801	3,226,950
Cost.....	\$3,359,779	\$1,966,254	\$1,196,713
Cotton—			
Pounds.....	6,963,775	3,711,210	2,610,885
Cost.....	\$1,771,206	\$1,014,714	\$628,635
Woolen—			
Pounds.....	113,368	80,380	128,631
Cost.....	\$87,798	\$57,192	\$63,321
Worsted—			
Pounds.....	619,140	736,826	411,468
Cost.....	\$638,014	\$672,606	\$380,425
Silk and spun-silk—			
Pounds.....	124,715	53,679	30,684
Cost.....	\$369,777	\$181,278	\$95,860
Merino—			
Pounds.....	466,747	53,706	44,604
Cost.....	\$475,769	\$40,464	\$27,794
All other—			
Pounds.....	7,408		678
Cost.....	\$17,215		\$678
Chemicals and dyestuffs.....	\$242,632	\$155,419	\$121,525
Fuel and rent of power.....	\$174,846	\$140,226	\$71,836
All other materials.....	\$1,140,082	\$1,172,118	\$666,686

¹ Foreign cotton included with domestic.

The quantity and value of the different products reported at the last three censuses are shown in the following statement:

PRODUCT.	1909	1904	1899
Total value.....	\$14,736,025	\$10,094,897	\$6,640,938
Half hose and hose:			
Dozen pairs.....	4,506,960	2,790,860	2,363,872
Value.....	\$4,780,351	\$2,869,037	\$1,952,320
Shirts and drawers:			
Dozens.....	1,667,482	1,253,170	996,144
Value.....	\$6,080,517	\$4,268,233	\$3,133,037
Combination suits:			
Dozens.....	183,175	123,144	44,833
Value.....	\$2,011,791	\$1,172,512	\$367,936
Gloves and mittens:			
Dozen pairs.....	27,829	52,840	51,440
Value.....	\$51,156	\$108,991	\$110,449
Cardigan jackets, sweaters, etc.:			
Dozens.....	40,544	15,023	7,476
Value.....	\$718,562	\$300,899	\$116,756
All other products.....	\$1,063,648	\$1,375,225	\$960,438

With the exception of gloves and mittens, each kind of products shown separately increased in quantity and in value both from 1904 to 1909 and from 1899 to 1904. The chief class of products in point of value at each census was shirts and drawers, the aggregate output of which was 1,667,482 dozens, valued at \$6,080,517, in 1909, representing an increase of 33.1 per cent in number and 42.5 per cent in value during the five years. From 1899 to 1904 the relative increases were somewhat smaller. The output of hose and half hose, the product next in importance, amounted to 4,506,960 dozen pairs, valued at \$4,780,351, in 1909, an increase of 1,716,100 dozen pairs, or 61.5 per cent, in number, and of \$1,911,314, or 66.6 per cent, in value, since 1904. During the preceding five years the output of hose and half hose increased 18.1 per cent and their value 47 per cent. Combination suits show large gains in both

quantity and value for the decade as a whole and for each of the five-year periods. Cardigan jackets, sweaters, etc., however, show larger relative increases from 1904 to 1909 in both number and value than any other class of products.

Other textile industries.—The manufacture of cordage and twine and jute and linen goods ranked third among the textile industries of the state in 1909, as measured by value of products; that of carpets and rugs, other than rag, fifth; that of silk and silk goods, including the operations of throwsters, sixth; that of fur-felt hats, seventh; and that of shoddy, eighth. A detailed statement of the materials and products for these industries can not be shown without disclosing the operations of individual establishments. However, the principal products of the carpet factories were Wilton, Axminster, and Brussels carpets; of the silk mills, plain and fancy silk-mixed broad silks; and of the shoddy mills, shoddy and mungo, amounting to 11,661,993 pounds and valued at \$1,325,053. In the felt-hat factories 320,587 dozen fur-felt hats, valued at \$3,544,067, were made in 1909, an increase compared with 1904 of 85,795 dozens, or 36.5 per cent, in number, and of \$1,232,976, or 53.4 per cent, in value.

Boots and shoes.—The following statement shows the total number of pairs of the various kinds of boots, shoes, and slippers manufactured in Massachusetts during 1909, 1904, and 1899:

KIND.	NUMBER OF PAIRS.		
	1909	1904	1899
Boots and shoes.....	102,826,648	93,546,297	89,680,941
Men's.....	45,155,939	44,878,920	40,004,809
Boys' and youths'.....	9,019,124	8,439,461	10,665,620
Women's.....	36,778,432	28,190,958	24,500,767
Misses' and children's.....	11,873,153	12,036,958	14,509,745
Slippers.....	10,155,324	12,069,160	12,052,114
Men's, boys', and youths'.....	3,360,808	3,549,189	3,282,260
Women's, misses', and children's.....	6,785,516	8,519,971	8,769,854
Infants' shoes and slippers.....	3,610,576	(1)	(1)
All other kinds of footwear.....	1,411,378	1,644,419	999,490

¹ Not reported separately.

In 1909, 102,826,648 pairs of boots and shoes were produced in the factories of Massachusetts, or 41.5 per cent of the total number reported for the United States, as compared with 93,546,297 pairs, or 43.3 per cent of the total, in 1904, and 89,680,941 pairs, or 45.9 per cent of the total, in 1899. The total number of pairs of boots and shoes manufactured in the state increased 9,280,351, or 9.9 per cent, from 1904 to 1909, and 3,865,356, or 4.3 per cent, from 1899 to 1904.

Men's boots and shoes constituted the leading class of footwear manufactured, forming 43.9 per cent of the total number of boots and shoes in 1909, 48 per cent in 1904, and 44.6 per cent in 1899. Women's shoes, which were second in importance, have formed a larger proportion of the total number at each succeeding census, the percentage being 27.3 in 1899, 30.1 in 1904, and 35.8 in 1909. This class shows the largest relative increase during each five-year period and the largest absolute increase from 1904 to 1909. For

misses' and children's shoes decreases are shown, amounting to 163,805 pairs from 1904 to 1909, and 2,472,787 pairs from 1899 to 1904.

The number of pairs of slippers produced in 1909 was 10,155,324, a decrease of 1,913,836 pairs since 1904, when the number was about the same as in 1899. It is probable, however, that infants' shoes and slippers,

reported separately in 1909, were, to some extent, included with children's slippers in 1904 and 1899. Of the total output of slippers in the United States in 1909, about three-fifths were made in Massachusetts factories.

The following table shows a distribution of the various kinds of footwear produced in 1909 according to the methods employed in their manufacture:

KIND.	NUMBER OF PAIRS, BY METHOD OF MANUFACTURE.					
	Total.	Machine or hand welt.	Turned.	McKay.	Wooden-pegged.	Wire-screw or metal fastened.
Boots and shoes.....	102,826,648	41,486,895	9,615,918	38,947,521	4,109,749	8,666,565
Men's.....	45,155,939	27,994,422	384,108	8,106,707	2,950,357	5,720,345
Boys' and youths'	9,019,124	1,548,436	(1)	5,354,449	462,099	1,654,090
Women's.....	36,778,432	10,867,921	7,601,247	16,976,900	507,567	324,787
Misses' and children's.....	11,873,153	1,076,086	1,630,563	8,509,465	189,726	467,333
Slippers.....	10,155,324	565,673	5,276,409	4,185,149		
Men's, boys', and youths'	3,369,808	427,464	1,540,032	1,286,219		
Women's, misses', and children's.....	6,785,516	138,209	3,736,377	2,898,930	19,531	131,068
Infants' shoes and slippers.....	3,610,576	580,551	2,376,013	638,257		
All other kinds of footwear.....	1,411,378	435,097	830,216	139,314		

¹Included with "All other kinds of footwear."

Of the boots and shoes manufactured in the state in 1909, 41,486,895 pairs, or 40.3 per cent, were machine or hand welt sewed; 38,947,521, or 37.9 per cent, McKay sewed; 9,615,918, or 9.4 per cent, turned; 8,666,565, or 8.4 per cent, wire-screw or metal fastened; and 4,109,749, or 4 per cent, wooden-pegged. These proportions differ somewhat from the corresponding figures for the United States, the differences being greatest in the case of the first two classes named, which represented 45.3 per cent and 32.6 per cent, respectively, of the total output for the country as a whole. The majority of the men's shoes were machine or hand welt sewed, while most of the boys' and youths', the women's, and the misses' and children's shoes were McKay sewed. More than half of the slippers produced were turned.

Printing and publishing.—Though the printing and publishing industry as a whole in Massachusetts shows considerable growth during the last five years when measured by the financial statistics, the number of newspapers and periodicals has decreased during the same period, while the aggregate circulation shows but little relative increase.

The following table shows the number of the different classes of newspapers and periodicals published in the state and their aggregate circulation per issue for 1909, 1904, and 1899:

PERIOD OF ISSUE.	NUMBER OF PUBLICATIONS.			AGGREGATE CIRCULATION PER ISSUE.		
	1909	1904	1899	1909	1904	1899
Total.....	537	575	497	9,636,182	9,079,506	6,199,127
Daily.....	86	89	98	1,705,690	1,453,263	1,130,820
Sunday.....	15	16	11	1,122,049	926,441	(1)
Semiweekly and tri-weekly.....	8	5	7	23,225	38,025	32,350
Weekly.....	271	309	273	1,911,486	1,445,984	2,066,369
Monthly.....	107	117	85	2,789,665	4,374,209	2,257,142
Quarterly.....	31	27	15	1,401,844	445,581	363,096
All other classes.....	19	12	8	622,223	396,003	349,350

¹Included with circulation of dailies.

From 1904 to 1909 the number of the three leading classes of publications decreased, although for two of these classes—the weeklies and the dailies—an increase in circulation is shown. The decrease in the number of monthlies was only 8.5 per cent, whereas their circulation decreased 36.2 per cent. The weeklies show the largest decrease in number, amounting to 38, or 12.3 per cent. The largest increase in circulation, 956,263, was reported for quarterly publications. In 1909, 14 of the 86 daily papers, with an aggregate circulation of 650,932, were morning papers.

Among the states, Massachusetts ranked sixteenth in 1909 in number of newspapers and periodicals and fifth in the circulation of such publications.

The following statement shows the number and circulation of the various classes of publications in English and in foreign languages, respectively, reported in 1909 and 1904:

PERIOD OF ISSUE.	Year.	TOTAL.		IN ENGLISH.		IN FOREIGN LANGUAGES.	
		Num-ber.	Aggregate circula-tion per issue.	Num-ber.	Aggregate circula-tion per issue.	Num-ber.	Aggregate circula-tion per issue.
Daily and Sunday.....	1909	101	2,887,739	96	2,871,539	5	16,200
	1904	105	2,379,704	102	2,368,472	3	11,232
Semiweekly and tri-weekly.....	1909	8	23,225	3	9,725	5	13,500
	1904	5	38,025	2	32,325	3	5,700
Weekly.....	1909	271	1,911,486	242	1,817,380	29	94,106
	1904	309	1,445,984	287	1,392,134	22	53,850
Monthly.....	1909	¹ 101	2,744,183	101	2,744,183	(2)	(2)
	1904	¹ 115	4,277,957	115	4,277,957	(2)	(2)
All other classes.....	1909	56	2,009,549	48	1,818,317	8	251,232
	1904	41	937,836	38	839,184	3	98,652

¹ Does not include monthly publications issued in foreign languages.
² Included in "All other classes."

In 1909 and in 1904 the aggregate circulation of publications in foreign languages included under the head of "All other classes" was greater than that of all other groups of publications in foreign lan-

guages. Among the publications in foreign languages, all of the daily and Sunday papers in both years were printed in French; of the semiweeklies and triweeklies in 1909 one each was in Arabic, Finnish, German, Greek, and Lettish, and of those in 1904 two were in French and one in German. Of the weeklies published in foreign languages in 1909 two each were in Armenian and Finnish, seven in French, one each in French and English, Greek, Italian, Lithuanian, and Yiddish, six in German, three in Portuguese, and four in Swedish, while of those published in 1904 two each were in Armenian, Finnish, and Portuguese, five in French, one each in French and English and in Italian, six in German, and three in Swedish. In 1909 two each of the publications included under the head of "All other classes" were in German and Swedish, one each in Finnish and German, and two in French and English, while in 1904 one was in Armenian and two in German.

Of the total number of publications reported in 1909, 326, with an aggregate circulation of 3,341,597, were devoted to politics, news, and family reading; 55, with a circulation of 2,280,886, were religious in character; and 18, with a circulation of 1,207,930, were devoted to general literature. The circulation of the first two classes represented decided increases over the totals reported for 1904, whereas that of the third class was less than half as great as in 1904.

Slaughtering and meat packing.—The first census to show any slaughtering and meat-packing establishments in Massachusetts was that of 1859, when eight plants, with products valued at \$172,625, were reported. Since then the industry has developed rapidly.

The following table shows the quantities and values of the various products for 1909, 1904, and 1899:

PRODUCT.	1909	1904	1899
Total value	\$44,402,972	\$38,012,208	\$32,343,950
Beef, fresh:			
Pounds.....	34,589,397	40,510,084	17,960,150
Value.....	\$2,865,011	\$2,803,289	\$1,865,198
Beef, salted or cured:			
Pounds.....	4,745,224	2,294,690	1,116,500
Value.....	\$605,657	\$116,071	\$62,000
Veal, fresh:			
Pounds.....	8,317,482	6,001,707	5,173,540
Value.....	\$801,055	\$585,981	\$408,934
Mutton, fresh:			
Pounds.....	13,346,470	16,915,035	16,207,400
Value.....	\$1,538,054	\$1,502,370	\$1,311,978
Pork, fresh:			
Pounds.....	66,468,331	82,117,964	44,507,608
Value.....	\$7,956,169	\$7,314,614	\$3,526,589
Pork, salted or cured:			
Pounds.....	122,689,181	167,090,994	207,246,776
Value.....	\$15,044,381	\$14,414,435	\$16,813,348
Sausage, fresh or cured	\$4,228,821	\$2,349,245	\$2,384,979
Lard:			
Pounds.....	60,840,711	84,617,813	69,843,633
Value.....	\$7,159,116	\$6,393,846	\$4,280,098
Tallow, oleo stock, and stearin:			
Pounds.....	2,775,149	(¹)	(¹)
Value.....	\$172,280	(¹)	(¹)
Fertilizers and fertilizer materials:			
Tons.....	8,441	3,684	5,099
Value.....	\$229,019	\$88,632	\$88,810
Hides:			
Number.....	191,837	154,654	106,492
Pounds.....	4,672,435	6,149,456	2,609,300
Value.....	\$386,312	\$377,076	\$237,682
Pelts:			
Number.....	341,956	423,080	(¹)
Value.....	\$190,214	\$144,222	(¹)
Amount received for custom or contract work.....	\$85,582	\$24,524	\$13,983
All other products.....	\$2,841,301	\$1,697,903	\$2,050,371

¹ Figures not available.

The changes in this industry were due mainly to the fluctuations in the production of the two staple products, fresh beef and fresh pork. It will be noted that the quantity of fresh beef increased 22,549,934 pounds, or 125.6 per cent, from 1899 to 1904, but decreased 5,920,687 pounds, or 14.6 per cent, from 1904 to 1909. In the production of fresh pork there was an increase of 37,610,356 pounds, or 84.5 per cent, during the earlier five-year period, followed by a decline of 15,649,633 pounds, or 19.1 per cent, during the next five years. The output of mutton and lard, although showing substantial increases from 1899 to 1904, decreased from 1904 to 1909. The production of salted or cured pork, including hams, bacon, and shoulders, decreased during both five-year periods, while that of salted or cured beef, veal, and hides and the amount received for custom work increased during the 10 years.

In 1909, 62,900 beeves, 129,162 calves, 342,491 sheep, and 1,501,456 hogs were slaughtered in the wholesale establishments of the state, as compared with 68,103 beeves, 88,651 calves, 418,580 sheep, and 1,549,365 hogs in 1904.

Paper and wood pulp.—Of the 88 mills in the state engaged in this industry in 1909, 83 manufactured paper only, 4 made both paper and pulp, and 1 produced pulp only. The following table gives the quantity and cost of the materials used in the industry during 1909, 1904, and 1899:

MATERIAL.	1909	1904	1899
Total cost	\$22,349,613	\$17,946,726	\$11,918,802
Pulp wood.....	\$357,888	\$338,044	\$245,657
Wood pulp, purchased—			
Total tons.....	143,905	120,937	85,304
Total cost.....	\$6,762,838	\$5,048,371	\$3,278,705
Ground—			
Tons.....	12,191	14,980	21,038
Cost.....	\$277,421	\$302,997	\$400,299
Soda fiber—			
Tons.....	38,424	39,991	25,493
Cost.....	\$1,731,456	\$1,712,642	\$1,069,036
Sulphite fiber—			
Tons.....	91,103	63,313	36,912
Cost.....	\$4,654,074	\$2,908,553	\$1,709,804
Other chemical fiber—			
Tons.....	2,177	2,653	1,861
Cost.....	\$99,887	\$124,179	\$99,566
Rags, including cotton and flax waste and sweepings:			
Tons.....	93,558	99,468	86,715
Cost.....	\$4,859,936	\$4,837,815	\$3,306,599
Old and waste paper:			
Tons.....	106,216	60,424	42,866
Cost.....	\$1,861,709	\$1,009,927	\$815,272
Manila stock, including jute bagging, rope, waste, threads, etc.:			
Tons.....	17,515	14,339	10,955
Cost.....	\$660,065	\$437,761	\$236,238
Fuel and rent of power.....	\$2,331,897	\$1,815,681	\$1,254,211
All other materials.....	\$5,515,280	\$4,459,127	\$2,782,120

Although wood pulp purchased formed a larger proportion of the total tonnage reported than any other kind of material used, there has been a decided increase during each five-year period in the consumption of old and waste paper and manila stock. These, together with rags, including cotton and flax waste and sweepings, represent a very large proportion of the weight of all materials used. The tonnage of rags reported in 1909 was greater than in 1899 but less than in 1904, when 33.8 per cent of the total quantity of rags used in

the paper mills of the United States was reported from Massachusetts. In 1909, 26.2 per cent of the rags consumed in the industry throughout the country, 15 per cent of the manila stock, and 10.8 per cent of the old and waste paper were used by the mills of this state. The large amounts shown for "All other materials" includes the cost of such items as chemicals, sizing clay, freight, and mill supplies.

The following statement shows the quantity and value of the various products reported for the last three census years:

PRODUCT.	1909	1904	1899
Total value.....	\$40,096,713	\$32,012,247	\$22,141,461
Book, cover, plate, and coated paper:			
Tons.....	125,269	100,004	55,465
Value.....	\$10,500,994	\$8,079,720	\$4,495,334
Writing and other fine paper:			
Tons.....	89,595	80,775	68,055
Value.....	\$17,438,568	\$14,971,411	\$11,298,628
Wrapping paper:			
Tons.....	16,362	16,150	22,238
Value.....	\$1,900,385	\$1,417,915	\$1,441,291
Boards:			
Tons.....	53,233	27,020	17,238
Value.....	\$2,065,865	\$1,338,346	\$954,111
Building, roofing, sheathing, and asbestos paper:			
Tons.....	14,602	7,153	14,372
Value.....	\$1,870,079	\$917,682	\$615,038
All other products.....	\$6,320,822	\$5,287,173	\$3,337,059

Book paper and fine paper are the principal products of the Massachusetts paper mills. In 1909 the state contributed 18 per cent of the total quantity of book paper and 45.2 per cent of the total amount of writing and other fine paper produced in the United States. The corresponding proportions for fine paper in 1904 and 1899 were 55 per cent and 60.4 per cent, respectively. The production of wrapping paper decreased between 1899 and 1904, while that of boards increased steadily during the decade and the value of building, roofing, sheathing, and asbestos paper more than trebled.

The number and capacity of the paper machines, the number of digesters and grinders, and the total yearly capacity of the mills in pulp and in paper for 1909, 1904, and 1899 are shown in the following statement:

CLASS OF EQUIPMENT.	1909	1904	1899
Paper machines:			
Fourdrinier, number.....	150	157	152
Capacity, tons, 24 hours.....	920	862	(¹) 50
Cylinder, number.....	65	44	(¹) 21
Capacity, tons, 24 hours.....	454	264	(¹) 42
Digesters, number.....	17	17	18
Grinders, number.....	11	18	42
Yearly capacity of mills, tons of pulp.....	24,401	31,110	31,920
Yearly capacity of mills, tons of paper.....	410,536	331,680	283,576

¹ Not reported.

In general, the capacity for the production of pulp decreased during the decade from 1899 to 1909 considered as a whole, while the total equipment and capacity for the production of paper increased.

Leather, tanned, curried, and finished.—The quantity and cost of the different kinds of materials used in this industry during the last three census years are shown in the next table.

MATERIAL.	1909	1904	1899
Total cost.....	\$28,765,508	\$23,040,897	\$19,793,757
Hides (all kinds):			
Number.....	¹ 1,251,036	1,126,634	1,029,535
Cost.....	\$6,603,898	\$4,789,002	\$4,703,949
Skins:			
Calf and kip—			
Number.....	5,439,226	4,009,400	2,229,559
Cost.....	\$7,910,409	\$4,673,907	\$2,705,877
Goat—			
Dozens.....	524,996	624,427	810,427
Cost.....	\$3,935,024	\$3,887,947	\$4,708,971
Sheep—			
Dozens.....	727,557	702,428	627,454
Cost.....	\$3,277,748	\$3,188,877	\$2,290,309
All other—			
Number.....	² 223,752	56,890	47,946
Cost.....	\$129,705	\$36,632	\$41,963
Purchased rough leather used:			
Whole sides—			
Number.....	343,701	301,589	338,991
Cost.....	\$1,157,204	\$951,620	\$1,051,403
Grains—			
Sides.....	35,544	22,607	12,578
Cost.....	\$79,344	\$86,755	\$31,704
Splits—			
Number.....	814,985	813,640	1,550,723
Cost.....	\$594,223	\$723,847	\$1,056,670
All other.....	\$157,309	\$131,618	\$352,284
Fuel and rent of power.....	\$607,523	\$342,178	\$229,216
All other materials.....	\$4,283,121	\$4,128,511	\$2,621,411

¹ Cattle hides only.

² Includes some horsehides.

Calf and kip skins not only constitute the most important class of material, but show a greater increase during the decade than any other class. Hides and every kind of skins except goatskins, were used in larger quantities in 1909 than in 1904 or 1899. In 1909, 27.6 per cent of the calf and kip skins tanned in the United States were treated in the Massachusetts tanneries, while the proportion for cattle hides was 6.8 per cent.

The next table presents the quantity and value of the different products for this industry in 1909, 1904, and 1899.

Of the value of the main groups of products shown in the table on page 666, that of the three classes of upper leather was the largest in each year, although in 1904 that of tanned and finished calf and kip skins was almost as large. During each five-year period finished grain calf and kip skins show a greater absolute increase in value than any other class of products, but from 1904 to 1909 an almost equal gain took place in the value of patent and enameled shoe leather, due mainly to the decided increase in the demand for that class of leather on account of its improved quality and finish during recent years. Black tanned and finished goatskins decreased in number and value from 1904 to 1909, while the colored increased in both respects. The largest decrease in value during that period is shown for belting leather.

In 1909 the value of products of this industry in Massachusetts, \$40,002,079, represented 12.2 per cent of the total shown for the industry in the United States. The corresponding percentages for 1904 and 1899 were 13.2 and 12.8, respectively. Of the totals reported for the United States in 1909, the state contributed 55.1 per cent of the sides of patent and enameled shoe leather; 41.5 per cent of the tanned and finished sheepskins; 33.7 per cent of the finished

upper leather splits; 26.8 per cent of the colored tanned and finished goatskins; 25.8 per cent of the grain-finished calf and kip skins; and 19 per cent of the sides of grain, satin, and pebble upper leather.

The amount received for tanning, currying, or finishing for others more than doubled from 1899 to 1904 and nearly doubled from 1904 to 1909. The estimated value after treatment of the stock treated for others who were not tanners, curriers, or finishers was \$13,324,293 in 1909. If this amount be added to the total value of products, \$40,002,079, reported for the industry, and the amount received for work performed, \$4,769,157, be deducted, the result, \$48,557,215, fairly indicates the importance of the leather industry in the state.

PRODUCT.	1909	1904	1899
Total value	\$40,002,079	\$33,352,999	\$28,067,714
Leather:			
Sole leather—			
Sides	29,634	175,200	69,980
Value	\$185,317	\$229,236	\$267,500
Upper leather, other than calf, kip, or colt skins—			
Grain, satin, pebble, etc. (side leather)—			
Sides	1,509,748	1,881,547	1,859,287
Value	\$4,174,700	\$4,180,031	\$4,361,481
Finished splits—			
Number	2,742,777	2,357,182	3,581,012
Value	\$2,967,535	\$2,667,982	\$2,852,551
Patent and enameled shoe leather—			
Sides	1,490,165	506,450	18,650
Value	\$4,003,000	\$981,551	\$61,054
Calf and kip skins, tanned and finished—			
Grain-finished—			
Number	4,516,129	3,705,070	2,241,919
Value	\$9,793,257	\$6,569,899	\$4,009,829
All other—			
Number	941,642	336,260	6,335
Value	\$1,173,905	\$393,199	\$7,395
Goatskins, tanned and finished—			
Black—			
Number	3,810,919	4,972,847	5,001,784
Value	\$3,176,182	\$3,922,335	\$3,427,021
Colored—			
Number	2,026,482	1,906,108	3,954,334
Value	\$1,676,323	\$1,355,656	\$2,585,184
Sheepskins, tanned and finished—			
Number	8,162,771	6,892,980	8,590,563
Value	\$4,254,219	\$3,900,146	\$3,636,839
Belting—			
Sides	58,719	230,870	226,443
Value	\$370,605	\$1,350,481	\$945,723
Trunk, bag, and pocketbook	\$645,264	\$372,896	\$316,646
Leather sold in rough	\$442,439	\$179,152	\$293,434
All other	\$870,580	\$1,170,906	\$1,229,146
All other products	\$1,499,596	\$2,851,199	\$992,728
Work on materials for others	\$4,769,157	\$2,728,340	\$1,061,183

¹ Value of oak sole leather included in "All other products," to avoid disclosure of individual operations.

The next statement gives for 1909 and 1904 the quantity and estimated value after treatment of materials tanned, curried, or finished by the establishments engaged in this industry in Massachusetts, for others who were not tanners, curriers, or finishers.

The number both of hides and of skins tanned in 1909 for others who were not engaged in the industry

was less than half as great as in 1904. Increases from 1904 to 1909 are shown, however, in the numbers of sides, splits, and skins curried or finished.

KIND.	1909	1904
Total estimated value of stock after treatment	\$13,324,293	\$10,061,036
Hides, tanned:		
Number	90,581	218,377
Estimated value	\$647,084	\$1,332,870
Skins tanned:		
Number	1,315,017	3,459,516
Estimated value	\$761,784	\$1,808,814
Curried or finished:		
Sides—		
Number	1,115,217	1,070,387
Estimated value	\$4,312,216	\$2,701,279
Splits—		
Number	740,889	336,988
Estimated value	\$936,778	\$394,666
Skins—		
Number	9,818,367	6,290,135
Estimated value	\$6,666,431	\$3,853,407

¹ Includes 34,510 sides, valued at \$143,500, reported as 17,255 hides.

Laundries.—Statistics for steam laundries are not included in the general tables, or in the totals for manufacturing industries. In 1909 there were 280 such establishments in the state of Massachusetts, of which 53 were in Boston; 13 in Worcester; 12 in Springfield; 10 each in Fall River, Lynn, and New Bedford; 9 each in Lawrence and Lowell; 7 in Cambridge; 6 in Haverhill; and 5 each in Somerville and Taunton. No other city or town having more than 10,000 inhabitants reported as many as 5 laundries.

The following statement summarizes the statistics:

Number of establishments.....	280
Persons engaged in the industry.....	6,655
Proprietors and firm members.....	313
Salaried employees.....	384
Wage earners (average number).....	5,958
Primary horsepower.....	6,802
Capital.....	\$2,951,025
Expenses.....	4,745,135
Services.....	2,918,919
Materials.....	903,845
Miscellaneous.....	922,371
Amount received for work done.....	5,754,572

The most common form of ownership was the individual, with 168 establishments. The firm and corporate forms were represented by 67 and 44 establishments, respectively. Fifty-two establishments had receipts for the year's business of less than \$5,000; 139, receipts of \$5,000 but less than \$20,000; 82, receipts of \$20,000 but less than \$100,000; and 7, receipts of \$100,000 but less than \$1,000,000.

The number of wage earners employed each month and the percentage which this number represented of the greatest number employed in any month are shown in the next statement.

MONTH.	WAGE EARNERS.		MONTH.	WAGE EARNERS.	
	Number.	Per cent of maximum.		Number.	Per cent of maximum.
January.....	5,671	91.0	July.....	6,226	99.9
February.....	5,668	90.9	August.....	6,136	98.4
March.....	5,677	91.0	September.....	6,235	100.0
April.....	5,734	92.0	October.....	6,113	98.0
May.....	5,839	93.6	November.....	6,066	97.3
June.....	6,039	96.9	December.....	6,096	97.8

KIND.	Unit.	Quantity.
Anthracite coal.....	Tons.....	7,051
Bituminous coal.....	Tons.....	37,423
Coke.....	Tons.....	2,211
Wood.....	Cords.....	167
Oil.....	Barrels.....	57
Gas.....	1,000 feet.....	30,452

Custom sawmills and gristmills.—Statistics for custom sawmills and gristmills are not included in the general tables or in the totals for manufacturing industries, but are presented in the following summary:

The different kinds of primary power, the number of engines or motors, and the horsepower used in 1909 are shown in the following statement:

KIND.	Number of engines or motors.	Horsepower.
Primary power, total.....		6,802
Owned:		
Steam.....	209	5,514
Gas.....	7	78
Water wheels.....	2	110
Rented:		
Electric.....	110	666
Other.....		434

	Custom sawmills.	Custom gristmills.
Number of establishments.....	35	15
Persons engaged in the industry.....	92	26
Proprietors and firm members.....	40	16
Wage earners (average number).....	52	10
Primary horsepower.....	1,512	584
Capital.....	\$78,685	\$42,780
Expenses.....	29,614	88,574
Services.....	22,548	2,333
Materials.....	601	185,510
Miscellaneous.....	6,465	731
Value of products.....	47,754	199,381

¹ Includes estimate of all grain ground. A similar estimate of the value of the lumber sawed by custom sawmills is impracticable.

The kind and amount of fuel used are shown in the next statement.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899.
THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES.

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employes.	Wage earners (average number).							
STATE—All Industries	1909	11,684	644,389	11,194	48,646	584,559	1,175,071	\$1,279,687	\$63,279	\$301,173	\$830,765	\$1,490,529	\$659,764
	1904	10,723	532,481	11,258	32,824	488,399	838,007	965,949	39,655	232,389	626,410	1,124,092	497,682
	1899	10,929			25,256	438,234	796,061	781,868	29,480	195,278	498,655	907,628	408,971
Agricultural implements.....	1909	5	401	2	53	346	487	605	63	188	287	647	360
	1904	9	452	7	27	418	888	732	36	213	252	654	402
	1899	9	356	9	35	312	752	706	45	100	216	535	319
Automobiles, including bodies and parts.....	1909	62	4,624	38	448	4,138	2,896	7,458	497	2,793	5,491	11,359	5,888
	1904	18	1,229	15	114	1,100	909	1,939	128	709	1,268	2,603	1,395
	1899	12			18	303		476	24	188	307	769	462
Belting and hose, leather.....	1909	16	1,290	5	300	955	897	4,426	335	555	3,666	5,647	1,981
	1904	12	236	7	52	177	206	622	54	104	805	1,108	803
	1899	17	239	12	45	182		564	59	113	765	1,158	393
Bicycles, motorcycles, and parts.....	1909	10	950	7	100	843	899	2,077	153	580	1,378	2,706	1,328
	1904	8	397	6	47	344	645	690	45	180	289	582	263
	1899	25	1,739	19	139	1,581	1,428	2,646	117	815	1,308	2,715	1,407
Blacking and cleansing and polishing preparations.....	1909	80	850	76	247	527	892	1,735	331	257	1,879	3,713	1,834
	1904	74	614	78	143	393	875	1,350	144	186	1,396	2,524	1,128
	1899	64	570	80	148	342		1,473	159	132	830	1,769	939
Boots and shoes, including cut stock and findings.....	1909	860	90,048	911	6,074	83,063	35,051	90,243	6,649	45,990	152,990	236,343	83,353
	1904	893	75,156	1,110	3,898	70,148	24,536	59,925	3,737	36,175	110,610	173,680	63,070
	1899	1,056	69,580	1,423	2,922	65,235		45,546	2,815	30,302	94,049	141,239	47,190
Boots and shoes, rubber.....	1909	8	7,451		523	6,928	8,330	15,602	507	3,376	10,640	18,722	8,082
	1904	7	7,971	2	295	7,674	8,987	14,845	287	3,754	13,178	39,035	25,857
	1899	6	5,403		153	5,250	8,415	13,157	220	2,456	8,838	16,490	7,652
Boxes, fancy and paper.....	1909	99	4,209	76	285	3,838	2,370	2,939	351	1,557	2,719	5,758	3,039
	1904	88	3,347	87	234	3,026	1,870	2,095	227	1,059	1,602	3,636	2,034
	1899	95	4,153	112	151	3,890		2,415	126	1,381	1,824	4,145	2,321
Brass and bronze products.....	1909	85	2,036	71	174	1,791	6,407	4,351	243	1,115	3,663	6,042	2,379
	1904	175	1,780	68	153	1,559	1,248	2,418	177	863	1,702	3,362	1,660
	1899	67			88	1,597		2,365	102	895	2,536	4,005	1,469
Bread and other bakery products.....	1909	1,201	9,755	1,700	1,358	6,697	4,316	12,752	919	3,814	15,727	26,146	10,419
	1904	1,108	7,735	1,268	915	5,552	1,841	7,017	502	3,072	10,721	18,660	7,939
	1899	1,005	7,393	1,113	1,030	5,250		6,316	668	2,538	8,847	16,421	7,074
Brick and tile.....	1909	52	1,104	53	60	991	2,967	1,476	67	509	330	1,243	913
	1904	64	1,208	63	47	1,098	3,745	2,461	41	496	330	1,171	841
	1899	81	1,591	108	54	1,429	3,858	2,319	44	622	400	1,468	1,068
Butter, cheese, and condensed milk.....	1909	24	95	18	21	56	318	115	7	29	548	664	116
	1904	36	123	12	47	64	354	211	9	41	779	877	98
	1899	50	141	18	24	99	449	324	13	62	1,025	1,198	173
Buttons.....	1909	12	728	9	60	659	898	1,044	83	301	409	978	569
	1904	12	858	12	30	816	554	740	54	318	226	804	578
	1899	13	803	12	19	772	463	626	31	276	238	681	443
Canning and preserving.....	1909	71	1,819	61	309	1,449	1,043	4,112	324	642	4,583	6,840	2,257
	1904	85	1,663	116	205	1,342	570	2,838	180	572	4,815	6,574	1,759
	1899	95			227	1,746		2,309	187	623	4,599	6,334	1,735
Carpets and rugs, other than rag.....	1909	11	6,251	3	294	5,954	10,037	11,450	466	2,763	7,501	12,812	5,311
	1904	10	5,267	2	86	5,179	7,875	7,905	141	2,188	6,703	9,714	3,011
	1899	8	4,552	1	71	4,480	5,875	9,401	127	1,720	3,990	6,966	2,976
Carriages and wagons and materials.....	1909	177	1,857	205	113	1,539	2,038	2,824	109	986	1,282	3,185	1,903
	1904	305	3,040	369	141	2,530	2,807	4,494	133	1,541	2,030	4,922	2,892
	1899	349			154	3,271		5,965	131	1,703	2,803	6,289	3,488
Cars and general shop construction and repairs by steam-railroad companies.....	1909	21	5,416		254	5,162	5,697	5,109	240	3,447	3,976	7,804	3,828
	1904	22	4,202		198	4,004	2,576	4,494	168	2,522	3,600	6,349	2,749
	1899	16	3,142		111	3,031	1,583	3,056	104	1,823	1,763	3,712	1,959
Chemicals.....	1909	24	1,604	9	237	1,358	3,731	5,185	385	811	3,048	5,916	2,848
	1904	14	969	3	106	860	3,281	2,652	188	504	1,514	3,509	1,995
	1899	17	722	8	92	622	2,169	1,877	133	399	1,081	2,011	930
Clothing, men's, including shirts.....	1909	254	8,208	319	554	7,335	1,753	8,242	682	3,398	9,756	18,314	8,558
	1904	187	6,175	283	629	5,263	1,354	6,325	613	2,311	8,076	14,913	6,837
	1899	217			373	5,195		5,178	414	2,061	6,147	12,041	5,894
Clothing, women's.....	1909	174	6,686	210	663	5,813	1,024	4,223	658	2,446	6,511	11,728	5,217
	1904	142	5,186	188	305	4,693	736	2,756	314	1,742	4,789	8,696	3,907
	1899	119	3,742	159	140	3,443	539	1,617	145	1,083	2,795	5,202	2,407
Coffins, burial cases, and undertakers' goods.....	1909	12	460	7	69	384	733	968	108	231	444	941	497
	1904	14	425	15	55	355	473	854	47	199	379	995	616
	1899	15	352	15	53	284		716	64	160	296	683	387
Confectionery.....	1909	117	6,398	95	755	5,548	4,278	7,371	1,090	1,860	9,189	15,266	6,077
	1904	93	4,664	91	406	4,167	2,085	3,747	425	1,302	5,508	9,318	3,810
	1899	71			277	2,572		1,773	244	876	3,490	5,795	2,305
Cooperage and wooden goods, not elsewhere specified.....	1909	70	1,098	76	48	974	2,863	1,402	59	452	1,094	1,939	845
	1904	74	1,320	83	72	1,165	4,498	1,698	61	547	1,084	2,120	1,056
	1899	49			40	998		975	42	442	734	1,543	809

¹ Excluding statistics for one establishment, to avoid disclosure of individual operations.

STATISTICS OF MANUFACTURES.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employes.	Wage earners (average number).							
STATE—Continued.													
Copper, tin, and sheet-iron products....	1909	150	3,145	142	376	2,627	1,808	\$6,308	\$437	\$1,481	\$2,933	\$6,155	\$3,252
	1904	112	2,122	134	199	1,789	1,043	4,679	229	977	1,907	4,128	2,221
	1899	98	.....	.....	173	1,640	.....	2,368	175	852	1,507	3,237	1,730
Cordage and twine and jute and linen goods.	1909	31	7,003	22	291	6,600	24,864	17,510	498	2,560	11,198	16,632	5,434
	1904	27	5,061	13	156	4,892	11,140	12,698	264	1,667	11,623	15,523	3,900
	1899	33	5,292	20	152	5,120	.....	11,008	234	1,709	8,028	12,250	4,222
Corsets.....	1909	10	2,156	2	165	1,989	455	1,857	370	735	1,607	3,750	2,145
	1904	9	1,427	5	74	1,348	402	1,233	144	477	771	1,940	1,169
	1899	6	.....	.....	95	1,063	.....	928	145	321	534	1,604	1,070
Cotton goods, including cotton small wares.	1909	182	110,686	43	1,729	108,914	362,043	214,017	3,450	45,117	105,157	186,462	81,305
	1904	161	90,239	47	1,552	88,640	296,244	174,552	2,714	32,555	80,268	130,069	49,011
	1899	177	93,667	48	1,404	92,515	276,161	156,289	2,046	32,479	54,389	111,125	56,736
Cutlery and tools, not elsewhere specified.	1909	135	7,432	101	584	6,747	13,263	12,416	830	3,738	3,484	11,611	8,127
	1904	136	5,714	133	355	5,226	11,275	9,476	473	2,769	2,573	8,233	5,660
	1899	139	.....	.....	237	4,081	.....	7,012	322	2,086	1,948	6,256	4,308
Electrical machinery, apparatus, and supplies.	1909	83	16,725	34	2,184	14,507	14,835	32,961	2,458	8,209	12,735	28,143	15,408
	1904	72	9,706	37	871	8,798	9,341	12,735	963	5,003	7,324	15,852	8,558
	1899	54	5,801	34	565	5,202	3,668	8,260	557	2,714	5,250	10,490	5,240
Electroplating.....	1909	54	584	73	44	467	406	431	38	239	164	678	514
	1904	45	322	55	8	259	263	228	6	150	98	435	337
	1899	43	.....	.....	3	205	.....	128	1	105	70	271	201
Emery and other abrasive wheels.....	1909	13	744	7	122	615	1,710	1,739	171	429	564	1,982	1,418
	1904	10	495	2	85	408	666	1,165	99	241	311	1,001	690
	1899	9	322	4	47	271	.....	597	52	162	244	673	429
Fancy articles, not elsewhere specified..	1909	78	3,867	61	248	3,558	2,382	2,925	299	1,630	3,514	6,618	3,104
	1904	68	2,640	74	137	2,429	1,583	1,614	128	1,011	1,984	3,824	1,840
	1899	67	1,853	83	87	1,683	.....	1,085	89	705	1,401	2,726	1,825
Firearms and ammunition.....	1909	8	2,483	5	151	2,327	3,059	4,313	224	1,458	752	3,408	2,656
	1904	18	2,926	10	117	2,799	12,848	3,431	166	1,692	858	4,011	3,153
	1899	10	1,691	10	78	1,603	.....	1,933	81	863	510	1,928	1,418
Flour-mill and gristmill products.....	1909	120	437	151	57	229	5,642	2,222	35	126	4,131	4,632	501
	1904	142	499	181	41	277	9,363	1,881	25	154	4,113	4,618	505
	1899	149	.....	.....	52	278	.....	1,689	32	152	4,497	5,393	896
Foundry and machine-shop products....	1909	857	49,393	643	4,571	44,179	52,802	103,052	6,439	27,032	81,182	86,926	55,744
	1904	777	39,570	708	3,018	35,844	43,038	78,022	4,121	20,834	24,426	63,750	39,324
	1899	921	.....	.....	2,435	35,850	.....	66,528	3,203	19,870	24,734	63,514	38,780
Fur goods.....	1909	16	277	20	47	210	28	730	30	153	552	955	403
	1904	12	156	19	13	124	6	157	9	77	249	464	215
	1899	11	.....	.....	23	144	.....	99	21	102	189	426	237
Furniture and refrigerators.....	1909	155	7,940	165	498	7,277	12,203	16,813	677	3,986	5,808	13,868	8,060
	1904	136	7,164	171	368	6,625	8,724	13,794	457	3,362	5,346	11,360	6,014
	1899	132	6,691	175	317	6,199	.....	11,144	369	2,988	4,638	11,497	6,859
Gas and electric fixtures and lamps and reflectors.	1909	25	766	17	86	663	478	725	100	399	812	1,509	697
	1904	25	385	25	28	332	154	315	37	201	204	674	470
	1899	19	392	24	44	324	.....	343	37	186	197	556	359
Gas, illuminating and heating.....	1909	64	2,800	3	505	2,292	7,371	52,984	529	1,250	3,810	11,074	7,264
	1904	64	2,225	.....	378	1,847	5,444	33,174	425	1,091	3,097	8,036	4,939
	1899	68	1,843	.....	434	1,409	4,212	30,033	420	813	1,652	6,869	4,217
Gold and silver, reducing and refining, not from the ore.	1909	8	100	9	13	78	88	566	21	57	1,103	1,359	256
	1904	6	32	8	4	20	136	143	4	13	279	344	65
	1899	4	15	7	1	7	.....	44	2	5	25	44	19
Hats and caps, other than felt, straw, and wool.	1909	30	355	44	37	274	52	179	24	161	385	659	324
	1904	27	568	36	53	479	112	621	59	276	767	1,346	678
	1899	50	2,390	65	80	2,245	.....	1,798	109	1,039	2,290	4,383	2,093
Hats, fur-felt.....	1909	11	2,341	10	107	2,224	1,149	2,262	147	990	1,932	3,746	1,814
	1904	6	1,664	9	69	1,586	1,180	1,845	93	627	1,125	2,316	1,191
	1899	11	1,895	18	54	1,823	855	1,468	56	791	1,390	2,631	1,241
Hats, straw.....	1909	18	2,811	19	124	2,668	1,009	2,573	306	1,448	3,680	6,589	2,909
	1904	15	1,815	17	76	1,722	629	1,544	91	826	2,004	3,326	1,822
	* 1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hosiery and knit goods.....	1909	65	10,287	37	309	9,941	9,113	12,477	516	3,855	6,972	14,736	7,764
	1904	62	8,417	54	244	8,119	10,390	7,836	318	2,842	5,021	10,065	6,074
	1899	63	6,891	45	167	6,679	6,691	6,306	213	2,097	2,917	6,641	3,724
Iron and steel, steel works and rolling mills.	1909	9	3,465	.....	350	3,115	24,500	14,194	375	1,977	10,032	13,568	3,536
	1904	5	4,939	.....	365	4,544	28,210	14,348	365	2,593	6,902	11,948	5,046
	1899	7	6,192	.....	93	6,099	28,965	13,009	155	3,402	7,491	13,412	5,921
Jewelry.....	1909	175	8,560	202	935	7,423	4,018	13,806	1,140	4,422	5,579	15,211	9,632
	1904	131	6,322	187	509	5,626	2,305	8,705	596	2,820	3,733	10,074	6,341
	1899	132	.....	.....	350	5,690	.....	4,911	373	2,777	4,388	10,300	5,912

* Excluding statistics for two establishments, to avoid disclosure of individual operations.
 * Not reported separately.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).							
Expressed in thousands.													
STATE—Continued.													
Lasts.....	1909	27	803	27	101	675	1,610	\$1,460	\$175	\$526	\$611	\$1,909	\$1,298
	1904	23	595	31	63	501	1,581	1,076	87	396	381	1,207	826
	1899	23	480	35	31	414	.....	679	35	287	226	854	628
Leather goods.....	1909	119	2,106	124	272	1,710	634	2,371	306	859	2,387	4,373	1,986
	1904	88	1,772	100	175	1,497	655	1,832	164	666	1,699	3,246	1,547
	1899	66	.....	.....	123	1,215	.....	1,369	123	549	1,337	2,535	1,198
Leather, tanned, curried, and finished..	1909	132	11,006	112	642	10,252	19,231	41,197	952	5,444	23,766	40,002	11,236
	1904	132	9,752	152	526	9,074	15,303	27,070	686	4,556	23,041	33,353	10,312
	1899	119	7,825	160	355	7,010	11,543	15,318	406	3,380	19,794	26,008	6,274
Lime.....	1909	9	588	2	29	557	589	1,307	32	304	337	804	527
	1904	8	242	6	16	220	112	245	14	110	202	401	199
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Liquors, distilled.....	1909	6	72	5	18	49	366	840	26	36	687	2,755	2,068
	1904	6	52	7	12	33	240	601	20	25	316	1,299	933
	1899	8	53	6	18	29	265	554	21	22	308	857	549
Liquors, malt.....	1909	37	2,091	8	344	1,739	9,917	20,288	724	1,481	3,593	12,724	9,131
	1904	37	1,872	18	329	1,525	7,841	23,293	639	1,328	3,244	11,081	7,837
	1899	40	1,988	15	322	1,651	6,719	18,137	639	1,340	2,843	11,256	8,413
Lumber and timber products.....	1909	708	10,478	793	709	8,976	44,784	17,552	795	5,031	12,484	23,026	10,542
	1904	618	9,836	772	563	8,501	37,851	13,714	583	4,501	11,195	20,308	9,113
	1899	603	.....	.....	422	8,063	.....	11,003	392	3,761	8,646	16,294	7,648
Marble and stone work.....	1909	330	5,712	412	285	5,015	16,515	6,993	358	3,552	2,192	7,804	5,612
	1904	228	6,217	308	289	5,620	11,563	8,214	325	3,428	1,768	7,684	5,916
	1899	245	.....	.....	233	4,960	.....	6,059	238	2,764	1,433	6,178	4,745
Mattresses and spring beds.....	1909	52	826	49	110	667	592	909	132	336	1,297	2,227	990
	1904	43	753	47	77	629	577	680	74	283	1,323	2,179	856
	1899	32	.....	.....	86	616	.....	493	67	269	908	1,601	693
Millinery and lace goods.....	1909	79	2,004	82	236	1,686	391	1,585	265	667	2,282	3,977	1,695
	1904	51	2,754	66	185	2,503	372	1,506	199	1,047	2,850	4,797	1,947
	1899	25	1,067	33	41	993	.....	706	42	481	1,024	1,819	795
Models and patterns, not including paper patterns.	1909	62	454	78	34	342	290	300	27	239	119	625	506
	1904	65	356	90	16	250	1,220	229	14	168	93	470	377
	1899	75	361	92	10	259	.....	163	7	150	67	384	317
Musical instruments, pianos and organs and materials.	1909	59	4,681	33	403	4,245	4,454	11,632	600	2,668	4,149	9,106	4,957
	1904	55	4,500	37	292	4,171	3,381	8,306	429	2,488	3,114	8,279	5,165
	1899	61	3,433	57	201	3,175	2,757	7,007	318	1,903	2,302	6,172	3,870
Optical goods.....	1909	11	2,661	6	195	2,460	2,230	2,194	379	1,103	1,163	3,058	1,895
	1904	6	1,868	3	74	1,791	1,332	1,345	164	746	1,012	2,282	1,270
	1899	5	.....	.....	55	1,363	.....	1,197	56	605	859	1,796	937
Paint and varnish.....	1909	41	672	24	220	428	1,819	2,195	286	251	2,075	3,469	1,394
	1904	33	580	25	109	446	1,536	1,858	152	237	1,630	2,574	944
	1899	44	542	37	117	388	1,657	1,659	147	208	1,607	2,507	900
Paper and wood pulp.....	1909	88	13,742	24	870	12,848	115,792	42,524	1,690	6,542	22,350	40,097	17,747
	1904	87	12,365	33	627	11,705	104,954	41,074	1,185	5,588	17,947	32,012	14,065
	1899	93	9,606	35	510	9,061	82,200	26,693	861	3,938	11,919	22,141	10,222
Paper goods, not elsewhere specified.....	1909	61	5,710	24	551	5,135	6,776	12,903	764	2,344	7,436	13,533	6,097
	1904	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1899	46	2,770	30	277	2,463	.....	5,402	350	1,020	3,940	6,455	2,515
Patent medicines and compounds and druggists' preparations.	1909	154	1,805	109	513	1,183	1,376	5,293	652	566	2,727	7,432	4,705
	1904	134	1,698	115	387	1,196	1,148	5,115	471	542	3,266	8,035	4,769
	1899	121	.....	.....	352	1,427	.....	3,266	358	475	2,178	6,591	4,413
Pottery, terra-cotta, and fire-clay products.	1909	20	541	9	67	465	932	1,167	76	256	179	644	455
	1904	25	644	22	55	567	1,216	1,592	61	294	175	718	543
	1899	29	682	26	72	584	1,209	1,628	60	262	188	713	525
Printing and publishing.....	1909	1,279	24,410	1,089	5,789	17,532	47,629	33,473	6,048	11,684	12,881	47,445	34,564
	1904	1,144	20,933	1,067	4,724	15,112	11,785	28,265	4,954	9,064	10,918	39,274	28,356
	1899	1,147	19,562	1,177	3,516	14,899	.....	23,957	3,230	8,607	8,948	35,134	26,188
Screws, machine.....	1909	13	392	9	35	348	387	686	38	186	227	570	343
	1904	10	721	7	65	649	762	1,014	69	289	290	791	501
	1899	11	632	9	37	586	.....	532	38	252	210	681	471
Sewing machines, cases, and attachments.	1909	6	981	3	109	809	1,364	2,191	170	533	559	1,548	999
	1904	6	864	3	134	727	999	3,459	212	473	503	1,851	1,345
	1899	9	.....	.....	52	742	1,594	3,373	113	483	639	1,700	1,061
Shoddy.....	1909	27	518	21	55	442	4,688	1,519	89	202	1,193	1,766	573
	1904	31	620	29	47	444	4,083	1,206	69	190	1,250	1,815	565
	1899	29	366	29	30	307	.....	769	34	128	685	988	303
Silk and silk goods, including throwsters.	1909	19	4,308	24	175	4,109	5,305	7,801	201	1,840	5,430	8,942	3,512
	1904	18	3,397	10	126	3,261	4,221	5,523	142	1,162	4,157	7,012	2,855
	1899	20	3,277	11	156	3,110	4,331	5,650	227	1,110	3,824	5,958	2,134

1 Not reported separately.

2 Figures can not be shown without disclosing individual operations.

STATISTICS OF MANUFACTURES.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employ-ees.	Wage earners (average number).							
Expressed in thousands.													
STATE—Continued.													
Silverware and plated ware.....	1909	21	2,734	11	258	2,465	2,113	\$6,818	\$382	\$1,725	\$2,728	\$6,539	\$3,811
	1904	26	2,152	20	190	1,942	1,766	4,660	288	1,150	2,115	4,897	2,782
	1899	17	1,398	16	159	1,223	.....	4,162	204	705	1,140	2,769	1,629
Slaughtering and meat packing.....	1909	94	3,832	87	420	3,325	4,844	15,547	488	1,837	38,886	44,403	5,517
	1904	80	3,520	81	412	3,027	3,396	12,983	402	1,595	33,881	38,012	4,131
	1899	43	3,148	48	226	2,874	.....	11,445	253	1,390	28,561	32,344	3,753
Stoves and furnaces, including gas and oil stoves.	1909	21	1,911	5	203	1,703	1,804	3,324	317	1,239	1,079	3,542	2,463
	1904	19	1,733	7	168	1,558	1,232	2,910	249	1,024	1,661	3,724	2,063
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Surgical appliances and artificial limbs..	1909	23	301	26	48	227	337	458	39	125	484	846	362
	1904	22	200	28	25	147	114	125	19	71	75	241	166
	1899	27	188	33	13	142	.....	119	11	66	61	219	158
Tobacco manufactures.....	1909	417	4,258	458	249	3,551	251	3,729	304	2,506	2,921	7,888	4,967
	1904	348	4,131	392	164	3,575	28	2,342	200	2,331	2,492	6,578	4,086
	1899	331	3,255	370	133	2,752	25	2,359	154	1,750	1,911	5,288	3,387
Whips.....	1909	29	1,203	28	170	1,005	645	2,779	183	489	1,072	2,774	1,702
	1904	26	954	20	68	866	358	2,156	80	376	763	1,936	1,173
	1899	31	854	35	124	695	.....	1,108	152	292	719	1,651	832
Woolen, worsted, and felt goods, and wool hats.	1909	183	55,533	103	1,557	53,875	117,119	133,955	2,964	24,593	87,976	141,967	53,991
	1904	190	45,264	141	1,073	44,050	88,896	104,257	1,759	18,137	62,778	99,314	36,536
	1899	187	.....	.....	977	37,589	76,279	80,728	1,583	14,338	45,130	74,075	28,945
All other industries.....	1909	1,815	70,401	1,648	7,437	61,816	117,084	181,769	10,379	32,457	115,348	199,658	84,310
	1904	1,758	63,811	1,781	4,878	57,152	102,076	142,495	6,448	27,268	85,632	149,459	63,827
	1899	1,783	.....	.....	3,648	37,630	.....	106,953	4,665	17,765	70,558	115,163	44,635

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES.

BOSTON—All industries.....	1909	3,155	85,158	2,873	12,648	89,637	68,419	\$175,182	\$15,641	\$39,910	\$124,577	\$237,457	\$112,880
	1904	2,747	71,421	2,833	9,428	59,160	.....	131,563	10,464	31,873	94,603	184,351	89,748
	1899	2,878	.....	.....	7,691	52,853	.....	130,143	8,180	28,209	82,295	162,765	80,470
Belting and hose, leather.....	1909	5	76	.....	30	46	43	412	37	35	513	698	185
	1904	5	68	5	21	42	.....	208	21	33	320	453	133
	1899	6	57	4	18	35	.....	171	22	23	185	318	132
Blacking and cleansing and polishing preparations.	1909	23	206	10	71	125	114	302	133	67	417	820	403
	1904	21	176	16	69	91	.....	379	82	52	519	877	358
	1899	21	243	24	84	235	.....	419	122	78	459	1,028	569
Boots and shoes, including cut stock and findings.	1909	43	6,790	32	642	6,116	2,062	11,257	670	3,046	19,835	26,147	6,312
	1904	32	4,273	32	256	3,985	.....	4,449	294	1,601	8,094	11,414	3,365
	1899	40	3,011	47	213	2,751	.....	1,846	193	1,202	4,996	7,307	2,311
Boxes, fancy and paper.....	1909	21	1,049	18	67	964	414	488	92	362	558	1,213	655
	1904	22	882	15	48	819	.....	355	46	266	358	887	529
	1899	23	779	24	37	718	.....	292	34	232	250	687	437
Brass and bronze products.....	1909	33	407	32	42	333	244	348	50	224	363	806	443
	1904	33	484	35	45	404	.....	515	40	240	410	855	445
	1899	32	553	43	36	474	.....	586	34	249	366	821	455
Bread and other bakery products.....	1909	285	2,758	303	456	1,999	6,663	3,543	335	1,068	4,825	8,109	3,284
	1904	269	1,898	287	310	1,301	.....	1,784	133	805	2,981	4,968	2,017
	1899	251	2,132	262	354	1,516	.....	1,661	160	778	2,602	4,587	1,965
Canning and preserving.....	1909	21	454	14	117	323	577	1,008	130	140	1,383	1,951	568
	1904	20	361	22	76	263	.....	786	58	117	1,378	1,922	544
	1899	29	.....	.....	109	393	.....	677	92	152	1,481	2,071	590
Carriages and wagons and materials....	1909	26	347	29	20	298	450	419	19	204	222	582	360
	1904	33	537	44	42	451	.....	775	48	297	317	874	557
	1899	56	.....	.....	37	595	.....	1,778	33	256	437	1,257	820
Cars and general shop construction and repairs by steam-railroad companies.	1909	6	1,224	.....	52	1,172	291	761	47	768	652	1,536	894
	1904	7	997	.....	53	944	.....	1,191	49	661	622	1,339	717
	1899	7	1,330	.....	52	1,278	.....	1,553	49	822	773	1,664	891
Clothing, men's, including shirts.....	1909	196	5,167	256	432	4,479	1,086	6,172	544	2,286	7,756	14,535	6,779
	1904	134	3,985	209	499	3,277	.....	4,699	488	1,577	6,235	11,580	5,345
	1899	156	.....	.....	276	2,747	.....	3,284	304	1,217	4,457	8,946	4,489
Clothing, women's.....	1909	122	4,101	147	414	3,540	491	2,409	383	1,649	4,306	7,842	3,586
	1904	99	3,112	133	246	2,733	.....	1,668	241	1,073	3,147	5,705	2,558
	1899	88	1,958	112	86	1,760	.....	731	85	625	1,764	3,258	1,494
Confectionery.....	1909	54	4,716	31	548	4,137	2,797	5,048	864	1,344	6,117	10,341	4,224
	1904	41	3,130	42	265	2,823	.....	2,371	257	852	3,738	6,210	2,472
	1899	37	.....	.....	157	1,845	.....	1,150	143	632	2,602	4,210	1,608
Copper, tin, and sheet-iron products....	1909	85	1,999	84	213	1,702	845	4,544	233	990	1,870	3,925	2,055
	1904	62	1,427	67	125	1,235	.....	3,817	165	663	1,351	2,878	1,527
	1899	61	.....	.....	109	1,052	.....	1,242	109	571	909	1,305	396

1 Excluding statistics for two establishments, to avoid disclosure of individual operations.
 2 Not reported separately.
 3 Excluding statistics for one establishment, to avoid disclosure of individual operations.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employes.	Wage earners (average number).							
Expressed in thousands.													
BOSTON—Continued.													
Cutlery and tools, not elsewhere specified.	1909	14	1,428	13	102	1,313	1,060	\$2,117	\$160	\$537	\$940	\$2,864	\$1,924
	1904	15	460	19	38	403	.....	565	50	218	391	965	574
	1899	16	237	18	18	201	.....	404	16	108	142	423	281
Electrical machinery, apparatus, and supplies.	1909	27	1,609	11	218	1,380	1,502	3,007	244	700	1,003	3,028	2,025
	1904	23	650	12	94	544	.....	1,310	106	259	393	1,127	734
	1899	23	689	16	92	581	.....	1,022	89	273	577	1,274	697
Foundry and machine-shop products...	1909	211	7,515	154	1,038	6,323	6,886	14,026	1,351	4,190	5,100	13,474	8,374
	1904	180	7,486	152	780	6,554	.....	12,057	1,002	4,088	5,147	13,336	8,189
	1899	240	.....	.....	710	6,552	.....	10,926	843	3,757	5,266	13,110	7,850
Furniture and refrigerators.....	1909	64	1,134	74	117	943	822	1,115	133	617	1,159	2,654	1,465
	1904	60	1,360	66	122	1,181	.....	1,160	131	703	1,012	2,404	1,362
	1899	59	1,325	74	127	1,124	.....	1,388	146	667	1,063	3,072	2,009
Gas and electric fixtures and lamps and reflectors.	1909	16	231	12	41	178	131	231	46	133	212	464	252
	1904	18	248	18	19	211	.....	183	21	126	147	441	294
	1899	15	268	19	37	212	.....	274	32	131	144	424	280
Hosiery and knit goods.....	1909	8	761	2	30	729	168	543	66	253	583	1,026	443
	1904	6	250	1	12	237	.....	144	20	76	147	298	151
	1899	19	466	5	19	442	.....	135	17	110	107	284	177
Jewelry.....	1909	32	394	30	61	303	82	396	54	189	248	710	462
	1904	16	233	18	24	191	.....	279	28	106	175	456	281
	1899	16	232	20	16	196	.....	265	16	107	200	464	284
Leather goods.....	1909	45	711	49	104	558	152	654	112	280	797	1,434	637
	1904	27	352	33	49	270	.....	324	35	137	349	734	385
	1899	20	.....	.....	32	292	.....	515	40	139	262	590	328
Liquors, malt.....	1909	20	1,338	2	210	1,126	4,799	13,436	478	1,019	1,957	7,554	5,597
	1904	23	1,164	10	203	951	.....	14,400	409	844	1,827	6,715	4,888
	1899	25	1,493	5	227	1,261	.....	12,229	464	1,008	1,796	7,519	5,723
Lumber and timber products.....	1909	67	1,214	66	114	1,034	3,295	1,500	132	727	1,538	3,027	1,480
	1904	62	1,182	73	78	1,031	.....	1,409	89	670	1,176	2,432	1,256
	1899	39	850	49	66	735	.....	1,558	76	428	1,198	2,105	907
Marble and stone work.....	1909	31	649	28	40	581	1,146	905	77	459	453	1,152	699
	1904	17	513	21	37	455	.....	1,116	39	301	414	1,025	611
	1899	26	.....	.....	44	650	.....	1,405	45	416	430	1,197	767
Mattresses and spring beds.....	1909	28	616	24	96	496	383	642	117	248	1,048	1,770	722
	1904	23	479	27	58	394	.....	365	59	185	992	1,545	553
	1899	17	445	18	67	360	.....	263	54	156	609	1,038	429
Millinery and lace goods.....	1909	65	1,724	68	202	1,454	311	1,254	217	580	1,931	3,425	1,494
	1904	38	1,559	48	122	1,389	.....	707	110	520	1,376	2,439	1,063
	1899	18	870	21	30	319	.....	151	22	152	369	716	347
Musical instruments, pianos and organs and materials.	1909	21	1,575	11	154	1,410	917	5,497	264	958	1,468	3,428	1,960
	1904	21	1,626	13	127	1,486	.....	4,234	220	969	1,055	3,722	2,667
	1899	21	1,454	18	105	1,331	.....	4,183	169	903	939	2,839	1,900
Paint and varnish.....	1909	12	249	4	103	142	484	750	139	80	617	1,065	448
	1904	11	159	8	52	99	.....	446	64	58	414	687	273
	1899	16	156	14	50	92	.....	445	58	52	440	719	279
Patent medicines and compounds and druggists' preparations.	1909	69	924	44	266	614	280	1,632	363	282	1,538	3,966	2,428
	1904	63	767	57	216	494	.....	1,704	257	218	2,125	3,946	1,821
	1899	68	.....	.....	164	317	.....	891	154	142	955	2,267	1,312
Printing and publishing.....	1909	564	12,113	418	3,438	8,257	6,248	18,410	3,988	6,033	6,962	28,021	21,059
	1904	498	10,472	428	3,231	6,813	.....	14,559	3,398	4,402	5,286	22,435	17,149
	1899	518	9,957	514	2,311	7,132	.....	12,631	2,166	4,471	4,407	21,063	16,656
Slaughtering and meat packing.....	1909	24	367	23	71	273	313	504	77	172	3,514	4,096	582
	1904	18	139	22	13	104	.....	243	17	67	1,996	2,300	304
	1899	12	69	17	6	46	.....	67	4	29	947	1,088	141
Tobacco manufactures.....	1909	145	2,646	148	180	2,318	70	2,696	242	1,780	2,046	5,506	3,460
	1904	106	2,683	120	104	2,464	.....	1,442	145	1,706	1,799	4,593	2,794
	1899	107	1,993	130	83	1,780	.....	1,305	104	1,207	1,224	3,505	2,281
All other industries.....	1909	772	18,666	736	2,959	14,971	23,293	69,156	3,844	8,500	42,646	70,288	27,642
	1904	744	18,295	780	1,994	15,521	.....	52,139	2,342	7,983	38,957	62,759	29,802
	1899	806	.....	.....	1,919	13,861	.....	64,696	2,285	7,116	39,938	61,623	21,685
BROCKTON—All industries.....													
Blackening and cleansing and polishing preparations.	1909	12	70	17	22	31	45	121	18	23	166	328	162
	1904	11	44	19	9	16	.....	87	6	11	98	183	90
	1899	4	23	6	1	16	.....	21	.....	6	29	75	46
Boots and shoes, including cut stock and findings.	1909	75	13,579	54	1,022	12,503	6,802	14,117	1,296	7,751	25,984	39,293	13,909
	1904	82	13,034	80	681	12,273	.....	11,840	715	7,853	20,902	33,853	12,951
	1899	80	9,622	89	412	9,121	.....	7,032	482	5,129	14,138	22,068	7,930
Boxes, fancy and paper.....	1909	5	233	5	14	214	148	209	20	89	140	329	189
	1904	5	247	7	17	223	.....	214	16	94	137	304	167
	1899	4	199	6	13	180	.....	137	11	76	113	286	153

1 Excluding statistics for one establishment, to avoid disclosure of individual operations.

2 Excluding statistics for two establishments, to avoid disclosure of individual operations.

STATISTICS OF MANUFACTURES.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employes.	Wage earners (average number).							
Expressed in thousands.													
BROCKTON—Continued.													
Bread and other bakery products.....	1909	11	295	10	62	223	198	\$388	\$55	\$126	\$453	\$892	\$439
	1904	13	104	15	3	86	.....	101	2	57	175	297	122
	1899	11	78	11	30	37	.....	47	16	24	82	190	108
Outlery and tools, not elsewhere specified.	1909	8	119	6	11	102	90	142	17	85	47	204	157
	1904	8	66	11	5	50	.....	50	5	39	17	95	78
	1899	11	76	14	4	58	.....	69	3	37	28	115	87
Foundry and machine-shop products...	1909	9	196	10	24	162	278	345	29	119	116	391	275
	1904	10	173	15	22	136	.....	373	27	90	83	284	201
	1899	16	162	22	15	125	.....	280	16	87	56	250	194
Lasts.....	1909	6	212	8	34	170	313	416	44	124	183	539	356
	1904	5	176	5	24	147	.....	376	35	122	124	430	305
	1899	3	139	4	11	124	.....	258	15	88	90	292	202
Lumber and timber products.....	1909	6	116	5	9	102	495	300	10	63	194	340	146
	1904	14	69	3	5	61	.....	117	4	34	106	165	59
	1899	5	.....	.....	4	59	.....	70	2	30	65	119	54
Printing and publishing.....	1909	16	345	14	51	230	321	359	45	211	192	670	478
	1904	15	260	18	30	212	.....	237	21	156	158	484	326
	1899	9	97	11	8	78	.....	100	7	45	71	180	109
All other industries.....	1909	48	1,126	47	129	950	1,083	2,581	162	531	1,690	2,986	1,296
	1904	48	334	55	94	685	.....	1,941	100	382	753	1,661	938
	1899	43	.....	.....	106	493	.....	1,621	87	253	661	1,300	639
CAMBRIDGE—All Industries.													
	1909	275	17,475	223	1,992	15,260	21,372	\$37,929	\$2,404	\$8,365	\$23,566	\$44,227	\$20,661
	1904	262	16,343	279	1,478	14,586	.....	32,260	1,713	7,494	25,117	42,407	17,290
	1899	243	.....	.....	1,033	11,070	.....	24,591	1,221	5,451	16,773	29,092	12,319
Bread and other bakery products.....	1909	40	1,042	37	204	801	862	4,230	149	440	1,961	2,962	1,001
	1904	36	1,115	41	193	881	.....	2,040	163	385	1,238	2,593	1,355
	1899	33	.....	.....	141	857	.....	1,965	215	265	1,253	2,391	1,138
Carriages and wagons and materials.....	1909	4	71	4	10	57	49	67	9	34	39	105	66
	1904	12	140	15	4	121	.....	206	3	70	91	129	149
	1899	17	.....	.....	7	161	.....	244	6	94	104	275	171
Confectionery.....	1909	12	804	11	93	700	517	855	132	218	1,172	1,910	738
	1904	17	757	15	65	677	.....	617	73	197	943	1,634	691
	1899	11	.....	.....	56	418	.....	305	55	117	457	844	387
Copper, tin, and sheet-iron products...	1909	6	246	4	42	200	100	448	55	104	274	530	256
	1904	3	.....	.....	30	135	.....	270	32	72	185	374	189
	1899	5	.....	.....	19	263	.....	571	29	119	308	507	199
Foundry and machine-shop products...	1909	25	2,602	13	229	2,290	3,176	8,094	403	1,430	1,761	4,789	3,028
	1904	22	2,377	20	131	2,226	.....	5,068	200	1,395	2,294	4,944	2,650
	1899	23	.....	.....	119	1,902	.....	5,170	129	1,167	1,936	4,180	2,244
Furniture and refrigerators.....	1909	13	874	14	80	780	1,282	1,443	125	603	417	1,392	975
	1904	14	640	17	43	580	.....	912	57	416	284	1,006	742
	1899	10	480	14	31	435	.....	553	51	310	220	692	472
Lumber and timber products.....	1909	11	394	10	39	345	1,261	654	55	232	409	875	466
	1904	7	288	10	38	240	.....	424	36	170	397	715	318
	1899	6	121	6	8	107	.....	115	9	63	130	235	105
Marble and stone work.....	1909	12	338	7	29	302	887	442	41	242	183	605	422
	1904	9	385	14	19	352	.....	355	22	280	254	680	426
	1899	7	.....	.....	6	175	.....	273	9	124	154	366	212
Musical instruments, pianos and organs and materials.	1909	7	1,272	6	128	1,138	1,211	2,708	153	636	943	2,174	1,221
	1904	4	739	6	13	720	.....	632	16	298	398	848	450
	1899	6	769	7	29	733	.....	1,043	32	325	551	1,169	618
Patent medicine and compounds and druggists' preparations.	1909	5	144	2	40	102	102	215	34	60	120	264	144
	1904	4	.....	.....	9	145	.....	185	14	57	107	254	147
	1899	3	.....	.....	4	174	.....	236	5	44	125	205	80
Printing and publishing.....	1909	41	2,178	45	140	1,993	1,442	2,350	191	1,185	1,280	3,368	2,088
	1904	38	2,155	54	240	1,861	.....	3,856	289	1,028	1,644	4,009	2,365
	1899	31	2,039	45	230	1,764	.....	3,219	212	942	1,530	3,609	2,079
All other industries.....	1909	99	7,510	70	858	6,582	10,503	16,423	1,057	3,181	15,007	25,253	10,246
	1904	95	.....	.....	693	6,648	.....	17,695	808	3,126	17,302	25,130	7,828
	1899	91	.....	.....	383	4,081	.....	10,897	469	1,861	10,005	14,619	4,614
FALL RIVER—All Industries.													
	1909	288	38,210	247	824	37,139	122,061	\$82,086	\$1,514	\$15,339	\$35,524	\$64,146	\$28,622
	1904	234	27,711	208	667	28,836	.....	69,375	1,142	10,099	26,096	43,473	17,377
	1899	240	.....	.....	512	30,646	.....	57,415	861	10,742	18,070	39,103	21,033
Bread and other bakery products.....	1909	74	318	74	27	217	19	184	13	127	479	796	317
	1904	55	226	58	6	162	.....	116	3	88	289	472	183
	1899	63	299	68	37	194	.....	127	19	97	313	555	242
Cordage and twine and jute and linen goods.	1909	5	71	5	1	65	150	336	(*)	19	63	102	39
	1904	5	51	5	1	45	.....	815	1	10	64	96	32
	1899	3	28	2	1	25	.....	23	1	7	30	44	14

* Excluding statistics for one establishment, to avoid disclosure of individual operations.
 * Excluding statistics for two establishments, to avoid disclosure of individual operations.
 * Less than \$500.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employes.	Wage earners (average number).							
Expressed in thousands.													
FALL RIVER—Continued.													
Cotton goods, including cotton small wares.	1909	45	30,790	8	375	30,407	110,975	\$62,748	\$826	\$12,106	\$27,563	\$48,576	\$21,013
	1904	42	22,101	7	305	21,729	-----	51,346	650	7,966	20,616	32,539	11,923
	1899	46	26,722	11	246	26,465	-----	45,743	477	8,843	13,137	29,287	16,150
Foundry and machine-shop products...	1909	33	860	43	58	759	629	969	83	373	605	1,342	737
	1904	30	580	37	33	510	-----	581	44	239	277	738	461
	1899	132	699	39	37	623	-----	653	42	327	365	933	568
Liquors, malt.....	1909	3	99	-----	19	80	1,860	1,116	29	45	106	381	275
	1904	3	97	-----	19	78	-----	1,117	40	57	171	605	434
	1899	4	93	1	31	61	-----	919	39	56	187	566	379
Lumber and timber products.....	1909	8	99	13	18	68	648	183	19	38	206	318	112
	1904	2 4	49	7	4	38	-----	119	3	23	78	126	48
	1899	1 5	31	6	2	23	-----	71	2	16	43	80	37
Marble and stone work.....	1909	12	120	13	4	103	549	81	3	81	24	158	124
	1904	2 5	156	5	7	144	-----	97	6	75	18	127	109
	1899	2 3	-----	-----	2	16	-----	18	1	9	5	23	18
Printing and publishing.....	1909	21	240	17	33	190	171	418	33	142	95	365	270
	1904	15	195	14	42	139	-----	243	39	87	66	278	212
	1899	1 17	192	18	19	155	-----	239	16	94	62	266	204
All other industries.....	1909	87	5,613	74	289	5,250	7,060	16,051	508	2,408	6,383	12,108	5,725
	1904	75	4,256	75	190	3,991	-----	14,941	356	1,554	4,517	8,492	3,975
	1899	67	-----	-----	137	3,084	-----	9,622	264	1,293	3,928	7,349	3,421
HOLYOKE—All industries.....													
	1909	187	17,776	153	1,110	16,513	80,269	\$42,675	\$1,677	\$8,076	\$22,301	\$40,097	\$17,798
	1904	179	15,563	158	720	14,685	-----	37,150	1,018	6,693	16,579	30,731	14,152
	1899	158	-----	-----	580	12,519	-----	25,935	810	5,254	12,706	24,093	11,387
Brass and bronze products.....	1909	3	61	4	12	45	55	95	12	29	64	140	76
	1904	4	181	4	31	146	-----	207	28	89	82	268	186
	1899	3	-----	-----	5	29	-----	48	4	18	30	62	32
Bread and other bakery products.....	1909	27	181	33	40	108	24	159	20	76	275	464	189
	1904	27	143	36	19	88	-----	147	6	55	166	292	126
	1899	20	80	20	4	56	-----	48	1	29	92	183	91
Foundry and machine-shop products...	1909	17	1,190	14	174	1,002	1,455	2,838	226	621	843	2,095	1,252
	1904	17	1,324	13	95	1,216	-----	2,878	114	703	781	2,162	1,361
	1899	1 18	1,014	15	53	946	-----	1,693	68	546	625	1,828	1,203
Lumber and timber products.....	1909	4	153	2	20	131	410	233	20	71	177	362	185
	1904	4 4	119	3	17	99	-----	248	22	77	124	272	149
	1899	2 3	117	1	17	99	-----	269	19	61	208	339	131
Paper and wood pulp.....	1909	23	4,754	-----	274	4,480	39,069	14,036	552	2,211	7,244	12,305	5,061
	1904	19	4,204	-----	165	4,039	-----	16,884	316	1,925	6,001	10,620	4,619
	1899	19	3,569	1	169	3,399	-----	10,089	271	1,397	4,325	8,109	3,584
Paper goods, not elsewhere specified....	1909	4	457	-----	40	417	740	1,353	81	204	947	1,424	477
	1904	2 3	189	-----	21	168	-----	422	31	79	359	530	171
	1899	1 4	424	1	28	395	-----	820	60	177	886	1,284	398
Printing and publishing.....	1909	27	886	19	131	736	371	1,428	137	371	633	1,450	817
	1904	1 28	1,162	24	95	1,043	-----	1,639	94	459	1,131	2,247	1,116
	1899	1 29	961	20	116	825	-----	1,327	95	364	808	1,633	825
Tobacco manufactures.....	1909	17	96	17	6	73	-----	58	3	44	38	128	90
	1904	11	68	11	4	53	-----	49	3	32	41	115	74
	1899	10	52	11	-----	41	-----	35	-----	25	29	73	44
All other industries.....	1909	65	9,998	64	413	9,521	18,145	22,475	626	4,449	12,080	21,729	9,649
	1904	66	8,173	67	273	7,833	-----	14,676	404	3,274	7,894	14,225	6,331
	1899	52	-----	-----	188	6,729	-----	11,606	292	2,637	5,503	10,582	5,079
LAWRENCE—All industries.....													
	1909	162	31,589	145	902	30,542	73,066	\$79,550	\$1,561	\$13,787	\$45,438	\$79,993	\$34,555
	1904	187	22,726	183	633	21,910	-----	60,063	971	8,908	29,416	48,637	18,621
	1899	167	-----	-----	648	20,899	-----	48,827	997	8,197	24,842	41,742	16,900
Bread and other bakery products.....	1909	26	184	32	9	143	129	292	9	89	367	572	205
	1904	36	200	41	8	151	-----	145	6	85	336	527	191
	1899	25	108	25	9	74	-----	53	3	36	117	201	84
Carriages and wagons and materials.....	1909	8	193	7	15	171	220	401	20	100	170	384	214
	1904	1 7	70	6	6	58	-----	115	3	35	37	90	53
	1899	1 10	95	16	3	76	-----	142	1	39	54	124	70
Cotton goods, including cotton small wares.	1909	6	4,978	1	63	4,914	16,172	9,150	121	2,030	3,918	6,826	2,908
	1904	2 5	4,027	-----	71	3,956	-----	6,549	139	1,507	3,792	5,746	1,954
	1899	1 7	6,086	1	78	6,007	-----	12,218	156	2,336	4,227	8,147	3,920
Foundry and machine-shop products...	1909	27	1,126	23	91	1,012	1,238	1,441	108	578	727	1,720	993
	1904	1 25	1,004	27	80	897	-----	1,727	90	485	545	1,418	873
	1899	26	913	26	65	822	-----	1,648	66	430	566	1,334	768
Lumber and timber products.....	1909	5	423	2	19	402	1,170	775	22	230	1,087	1,390	353
	1904	2 4	138	2	3	133	-----	242	4	75	137	263	126
	1899	2 3	142	1	13	128	-----	256	12	73	125	249	124

¹ Excluding statistics for one establishment, to avoid disclosure of individual operations.
² Excluding statistics for two establishments, to avoid disclosure of individual operations.

STATISTICS OF MANUFACTURES.

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TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salari ed employ-ees.	Wage earners (average number).							
Expressed in thousands.													
LAWRENCE—Continued.													
Printing and publishing.....	1909	18	176	21	29	126	166	\$169	\$33	\$89	\$66	\$254	\$188
	1904	19	174	24	25	125	-----	162	25	77	52	216	164
	1899	16	167	21	8	138	-----	147	7	74	48	183	138
Woolen, worsted, and felt goods, and wool hats.	1909	15	20,668	17	448	20,203	44,638	57,467	937	8,899	33,657	58,536	24,879
	1904	10	12,435	6	213	12,216	-----	40,498	370	4,672	19,386	30,927	11,541
	1899	12	11,786	6	325	11,455	-----	29,855	638	4,215	15,277	25,585	9,658
All other industries.....	1909	57	3,841	42	228	3,571	9,333	9,855	331	1,772	5,496	10,311	4,815
	1904	81	4,678	77	227	4,374	-----	10,625	334	1,972	5,131	8,850	3,719
	1899	68	-----	-----	147	2,199	-----	4,508	214	994	3,778	5,916	2,138
LOWELL—All industries.....													
	1909	320	34,108	316	1,217	32,575	72,012	\$61,984	\$1,682	\$14,149	\$32,331	\$60,271	\$27,440
	1904	256	30,544	277	964	29,303	-----	54,809	1,345	11,590	26,911	46,879	19,968
	1899	286	-----	-----	684	29,254	-----	45,510	929	10,853	20,279	41,203	20,924
Boots and shoes, including cut stock and findings.	1909	7	1,343	3	81	1,259	618	964	86	562	1,682	2,650	968
	1904	6	850	4	27	819	-----	413	30	310	956	1,457	501
	1899	7	536	5	14	517	-----	387	16	201	684	974	290
Bread and other bakery products.....	1909	46	298	65	67	166	58	171	33	103	482	750	268
	1904	40	256	49	44	163	-----	131	18	98	407	644	237
	1899	57	304	71	34	199	-----	141	12	99	325	589	264
Cotton goods, including cotton small wares.	1909	11	14,003	2	168	13,833	41,955	24,270	331	5,653	13,943	24,744	10,801
	1904	11	13,173	4	204	12,965	-----	22,580	344	4,848	12,844	19,384	6,540
	1899	18	13,847	2	115	13,730	-----	21,355	243	4,785	8,774	17,039	8,265
Foundry and machine-shop products...	1909	35	2,735	30	106	2,599	2,706	4,485	184	1,418	1,822	4,333	2,511
	1904	34	2,403	35	74	2,294	-----	6,431	129	1,168	1,509	3,439	1,930
	1899	47	3,088	62	98	2,938	-----	6,145	158	1,477	1,601	4,258	2,657
Lumber and timber products.....	1909	17	462	18	34	410	1,637	720	27	211	734	1,066	332
	1904	12	450	15	19	416	-----	623	17	183	646	938	292
	1899	11	379	16	15	348	-----	589	11	152	467	728	261
Patent medicines and compounds and druggists' preparations.	1909	7	257	4	70	183	496	1,659	82	95	349	1,130	781
	1904	6	369	3	87	279	-----	1,519	97	135	281	1,471	1,190
	1899	7	-----	-----	116	391	-----	824	120	141	403	1,780	1,377
Printing and publishing.....	1909	26	354	26	78	250	349	616	104	178	299	796	497
	1904	19	334	23	52	259	-----	318	64	161	150	525	375
	1899	22	278	26	47	205	-----	231	37	123	110	385	275
Woolen, worsted, and felt goods, and wool hats.	1909	12	3,187	10	128	3,040	6,257	6,152	134	1,337	4,048	6,105	2,057
	1904	9	2,690	11	54	2,625	-----	4,624	96	1,022	2,783	4,558	1,775
	1899	8	2,551	4	51	2,496	-----	4,174	82	882	2,803	4,689	1,686
All other industries.....	1909	159	11,469	158	485	10,826	17,936	22,947	701	4,592	9,472	18,697	9,225
	1904	119	10,019	133	403	9,483	-----	18,167	550	3,665	7,335	14,463	7,123
	1899	119	-----	-----	194	8,430	-----	11,664	250	2,993	5,112	10,761	5,649
LYNN—All industries.....													
	1909	431	30,685	469	2,848	27,368	17,089	\$42,784	\$3,008	\$15,666	\$41,361	\$71,503	\$30,142
	1904	431	23,811	565	1,706	21,540	-----	23,139	1,530	11,738	32,616	55,003	22,387
	1899	423	-----	-----	1,175	16,377	-----	16,037	954	7,971	24,471	39,347	14,876
Blackening and cleansing and polishing preparations.	1909	14	109	19	46	44	76	178	37	31	271	537	266
	1904	12	69	17	14	38	-----	83	11	24	110	245	135
	1899	12	51	18	17	16	-----	52	10	11	66	172	106
Boots and shoes, including cut stock and findings.	1909	207	17,942	240	1,353	16,349	5,488	17,488	1,356	9,532	29,148	46,660	17,512
	1904	211	14,581	298	997	13,286	-----	12,155	882	7,035	22,173	35,431	13,258
	1899	207	10,968	309	597	10,060	-----	8,388	484	4,769	17,052	24,982	7,930
Boxes, fancy and paper.....	1909	6	378	1	29	348	265	238	39	169	404	730	326
	1904	3	94	2	27	65	-----	80	16	27	108	172	64
	1899	7	317	6	19	292	-----	233	16	119	213	417	204
Bread and other bakery products.....	1909	37	222	38	19	165	42	119	14	111	443	681	238
	1904	42	212	49	14	149	-----	110	7	89	271	480	209
	1899	28	146	29	14	103	-----	82	6	54	148	283	135
Foundry and machine-shop products...	1909	26	518	29	78	411	370	826	77	254	178	800	622
	1904	23	422	19	49	354	-----	566	47	222	146	588	442
	1899	30	-----	-----	35	452	-----	589	32	259	278	887	609
Lasts.....	1909	5	95	8	6	81	187	193	8	61	75	266	191
	1904	4	87	9	12	66	-----	96	16	45	40	126	86
	1899	5	79	10	6	63	-----	78	5	36	29	100	71
Leather, tanned, curried, and finished.	1909	8	1,148	1	85	1,062	1,185	2,656	147	457	4,009	5,094	1,085
	1904	12	1,124	18	48	1,058	-----	1,963	51	499	3,475	4,570	1,095
	1899	12	706	17	51	638	-----	1,031	35	282	2,039	2,451	412
Lumber and timber products.....	1909	6	142	5	8	129	363	296	7	82	188	330	142
	1904	7	260	5	36	219	-----	233	25	100	236	426	190
	1899	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Patent medicines and compounds and druggists' preparations.	1909	7	63	5	14	74	41	1,051	36	39	200	948	748
	1904	6	85	5	11	69	-----	1,049	33	36	219	1,328	1,109
	1899	4	-----	-----	15	323	-----	739	18	44	272	1,338	1,066

1 Excluding statistics for one establishment, to avoid disclosure of individual operations.
 2 Excluding statistics for two establishments, to avoid disclosure of individual operations.
 3 Figures can not be shown without disclosing individual operations.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employes.	Wage earners (average number).							
Expressed in thousands.													
LYNN—Continued.													
Printing and publishing.....	1909	26	331	27	76	228	177	\$313	\$77	\$145	\$162	\$537	\$375
	1904	25	282	28	46	188	.....	227	52	102	81	362	281
	1899	19	.....	.....	16	160	.....	212	13	92	62	244	182
All other industries.....	1909	89	9,707	96	1,134	8,477	8,895	19,426	1,210	4,785	6,283	14,920	8,637
	1904	88	6,615	115	452	6,048	.....	6,577	390	3,559	5,757	11,275	5,518
	1899	99	.....	.....	405	4,270	.....	4,633	335	2,305	4,312	8,473	4,161
NEW BEDFORD—All industries													
	1909	207	27,538	303	669	26,566	76,147	\$58,970	\$1,245	\$12,598	\$28,564	\$53,238	\$24,074
	1904	176	18,563	189	519	17,855	.....	40,410	781	7,251	16,091	29,469	13,378
	1899	171	.....	.....	425	15,263	.....	28,182	535	6,123	11,783	23,397	11,614
Bread and other bakery products.....	1909	44	492	163	40	289	99	331	30	160	548	1,023	475
	1904	36	189	42	6	141	.....	81	5	80	257	444	187
	1899	32	257	35	41	181	.....	216	24	92	242	470	228
Carriages and wagons and materials.....	1909	6	76	6	4	66	45	105	4	37	36	105	69
	1904	8	68	9	3	56	.....	64	3	30	31	88	57
	1899	6	.....	.....	5	75	.....	180	4	47	48	120	72
Cotton goods, including cotton small wares.	1909	22	22,457	3	313	22,141	68,155	50,318	734	10,115	23,290	42,505	19,215
	1904	15	14,787	.....	242	14,545	.....	34,394	448	5,576	12,685	22,412	9,727
	1899	15	12,426	.....	140	12,286	.....	21,871	253	4,603	8,208	16,749	8,541
Foundry and machine-shop products...	1909	16	313	13	24	276	1,019	325	19	176	192	454	262
	1904	19	315	24	30	261	.....	362	21	148	138	405	267
	1899	17	238	17	25	196	.....	370	22	124	203	425	222
Lumber and timber products.....	1909	8	196	11	14	171	759	406	27	93	232	412	180
	1904	5	82	12	3	67	.....	116	4	38	160	243	83
	1899	4	47	8	1	38	.....	69	1	21	49	90	41
Printing and publishing.....	1909	17	314	18	31	265	199	345	52	171	129	483	354
	1904	16	209	17	26	166	.....	239	42	104	74	335	261
	1899	14	165	19	24	122	.....	148	35	74	49	254	206
All other industries.....	1909	94	3,690	89	243	3,358	5,871	7,140	379	1,846	4,137	8,256	4,119
	1904	77	2,913	85	209	2,619	.....	5,254	258	1,275	2,746	5,542	2,796
	1899	83	.....	.....	189	2,365	.....	5,338	196	1,162	2,984	5,289	2,305
SOMERVILLE—All industries.													
	1909	114	5,951	97	574	5,280	7,680	\$17,282	\$692	\$2,870	\$31,923	\$38,687	\$6,764
	1904	78	3,951	80	397	3,474	.....	10,284	431	1,753	19,176	22,955	3,779
	1899	85	.....	.....	224	3,528	.....	9,503	231	1,721	16,721	20,065	3,344
Bread and other bakery products.....	1909	28	180	33	27	120	55	155	12	68	269	429	160
	1904	19	113	22	15	76	.....	62	6	53	146	272	126
	1899	14	116	21	35	60	.....	78	18	34	123	239	116
Foundry and machine-shop products...	1909	6	108	7	7	94	72	208	7	46	95	197	102
	1904	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1899	5	.....	.....	8	73	.....	85	4	33	48	154	103
Slaughtering and meat packing.....	1909	7	2,553	2	259	2,292	3,308	12,221	326	1,226	27,866	31,270	3,404
	1904	5	1,780	2	236	1,542	.....	7,225	243	815	17,186	18,959	1,773
	1899	5	.....	.....	45	1,445	.....	6,813	71	700	14,295	16,764	1,469
All other industries.....	1909	73	3,110	55	281	2,774	4,245	4,698	347	1,520	3,693	6,791	3,098
	1904	54	2,058	56	146	1,856	.....	2,977	182	885	1,844	3,724	1,880
	1899	61	.....	.....	138	1,950	.....	2,527	138	954	2,255	3,908	1,653
SPRINGFIELD—All industries.													
	1909	244	14,455	288	2,312	11,855	17,744	28,658	2,362	6,867	14,363	31,773	17,419
	1904	296	11,957	246	1,188	10,523	.....	24,041	1,499	5,645	12,380	25,860	13,489
	1899	278	.....	.....	848	8,152	.....	16,071	982	3,975	8,892	18,155	9,283
Brass and bronze products.....	1909	7	197	6	27	164	129	230	32	104	246	431	185
	1904	3	55	2	5	48	.....	85	4	34	78	142	64
	1899	3	193	2	10	181	.....	268	19	92	135	333	196
Bread and other bakery products.....	1909	27	171	30	14	127	52	191	9	33	356	611	255
	1904	20	218	20	14	184	.....	204	15	105	407	656	249
	1899	26	176	26	17	133	.....	181	14	68	224	393	169
Carriages and wagons and materials...	1909	8	99	10	7	82	18	116	7	56	68	177	109
	1904	6	63	6	2	55	.....	76	3	33	29	96	67
	1899	4	.....	.....	2	61	.....	92	2	31	26	90	64
Confectionery.....	1909	5	407	3	78	326	184	305	65	119	559	903	344
	1904	5	338	3	37	298	.....	218	54	101	350	601	261
	1899	3	.....	.....	16	145	.....	93	14	58	193	318	125
Cutlery and tools, not elsewhere specified.	1909	4	312	5	20	287	648	488	41	185	154	523	360
	1904	6	165	7	16	142	.....	287	22	83	59	233	174
	1899	4	123	3	14	106	.....	146	15	44	30	151	121
Electrical machinery, apparatus, and supplies.	1909	5	181	1	26	154	198	288	25	82	63	191	128
	1904	5	182	1	23	153	.....	352	33	72	104	370	265
	1899	3	146	1	18	127	.....	264	28	60	138	302	164
Fancy articles, not elsewhere specified..	1909	5	71	4	11	56	23	60	11	21	30	106	76
	1904	7	21	4	5	12	.....	25	3	4	8	21	13
	1899	3	15	2	13	.....	.....	17	.....	6	6	19	13

1 Excluding statistics for two establishments, to avoid disclosure of individual operations.

2 Excluding statistics for one establishment, to avoid disclosure of individual operations.

3 Figures can not be shown without disclosing individual operations.

STATISTICS OF MANUFACTURES.

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TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).							
Expressed in thousands.													
SPRINGFIELD—Continued.													
Foundry and machine-shop products...	1909	39	1,779	21	204	1,554	3,488	\$3,851	\$342	\$973	\$1,027	\$3,006	\$1,979
	1904	28	1,455	13	128	1,314	.....	2,503	218	783	788	2,456	1,668
	1899	29	.....	.....	76	.....	.....	2,040	91	505	652	1,751	1,099
Lumber and timber products.....	1909	10	380	7	39	334	1,436	657	41	211	580	945	365
	1904	8	291	8	31	252	.....	692	32	142	283	560	277
	1899	5	.....	.....	21	253	.....	409	21	134	251	489	238
Printing and publishing.....	1909	51	2,077	33	1,014	1,025	1,632	3,527	618	666	1,006	3,901	2,895
	1904	41	1,138	30	316	792	.....	2,009	354	515	708	2,402	1,694
	1899	43	1,226	26	321	879	.....	1,697	293	533	533	2,145	1,612
Slaughtering and meat packing.....	1909	3	136	4	23	109	125	278	34	76	1,033	1,251	218
	1904	3	317	2	53	202	.....	1,295	30	130	2,528	3,053	525
	1899	3	.....	.....	18	293	.....	652	13	116	3,254	2,545	291
Tobacco manufactures.....	1909	29	463	33	22	408	6	275	17	277	256	720	464
	1904	22	361	25	13	323	.....	202	14	207	172	534	362
	1899	19	294	22	6	266	.....	247	9	160	177	440	263
All other industries.....	1909	153	8,182	126	827	7,229	9,895	18,364	1,120	4,014	8,985	19,008	10,023
	1904	142	7,353	125	540	6,683	.....	16,130	707	3,436	6,366	14,726	7,860
	1899	133	.....	.....	334	4,785	.....	9,959	463	2,108	4,273	9,179	4,906
WORCESTER—All industries.													
Boots and shoes, including cut stock and findings.	1909	580	32,154	750	3,183	28,281	53,405	\$64,639	\$4,169	\$15,295	\$42,601	\$77,148	\$34,547
	1904	470	25,259	420	2,043	22,796	.....	48,772	2,377	11,825	27,011	52,145	25,154
	1899	465	.....	.....	1,328	22,593	.....	41,384	1,708	11,281	23,470	46,793	23,323
Bread and other bakery products.....	1909	11	896	8	59	829	399	1,351	81	469	1,466	2,414	648
	1904	12	814	11	56	747	.....	870	48	381	1,007	1,755	569
	1899	14	899	16	31	862	.....	681	35	399	1,119	1,709	590
Carriages and wagons and materials.....	1909	67	846	329	104	413	160	442	67	207	877	1,472	505
	1904	30	230	35	34	161	.....	93	16	95	360	572	212
	1899	26	342	33	59	250	.....	334	34	117	378	700	322
Clothing, men's, including shirts.....	1909	12	87	10	6	71	63	131	3	51	62	160	98
	1904	10	81	12	4	65	.....	163	3	46	31	109	78
	1899	8	.....	.....	3	56	.....	101	4	34	35	112	77
Clothing, women's.....	1909	16	322	21	13	288	56	223	13	111	362	556	194
	1904	10	225	14	10	201	.....	115	10	79	317	462	145
	1899	4	131	5	.....	126	.....	97	.....	53	164	230	66
Copper, tin, and sheet-iron products....	1909	18	1,252	29	163	1,060	219	902	167	371	1,081	1,942	861
	1904	19	1,108	27	37	1,044	.....	568	51	372	857	1,629	772
	1899	7	721	11	19	691	.....	466	30	194	447	853	406
Cotton goods, including cotton small wares.	1909	10	232	6	31	195	247	388	31	113	168	411	245
	1904	19	108	10	14	84	.....	256	13	50	76	181	105
	1899	7	.....	.....	4	60	.....	134	4	34	44	112	68
Cutlery and tools, not elsewhere specified.	1909	4	274	1	19	254	425	415	29	98	680	833	203
	1904	3	198	1	13	184	.....	466	18	79	514	737	223
	1899	3	138	.....	13	125	.....	318	12	49	296	417	121
Foundry and machine-shop products...	1909	11	448	7	32	409	1,104	641	51	241	214	569	355
	1904	13	425	12	19	394	.....	618	30	211	236	575	339
	1899	10	287	7	14	266	.....	300	24	126	103	306	263
Lumber and timber products.....	1909	89	7,161	55	603	6,508	6,891	13,069	982	3,841	4,793	13,219	8,426
	1904	89	5,131	77	404	4,650	.....	10,792	618	2,706	3,198	8,339	5,191
	1899	97	.....	.....	258	4,989	.....	9,451	454	2,848	3,706	8,705	5,059
Marble and stone work.....	1909	12	362	9	33	320	1,154	461	49	195	476	814	338
	1904	17	470	15	41	414	.....	722	49	247	535	968	433
	1899	13	170	1	17	152	.....	253	18	73	139	268	129
Printing and publishing.....	1909	10	253	10	16	227	862	388	29	218	93	383	290
	1904	9	461	10	30	421	.....	694	53	280	70	686	616
	1899	9	.....	.....	11	420	.....	598	28	265	51	458	407
Tobacco manufactures.....	1909	53	767	45	137	585	384	605	162	392	371	1,233	862
	1904	44	619	38	204	377	.....	584	160	248	219	906	747
	1899	49	.....	.....	125	481	.....	422	82	290	213	822	609
Woolen, worsted, and felt goods, and wool hats.	1909	20	94	25	4	65	2	54	3	37	42	117	75
	1904	17	91	20	7	64	.....	31	5	36	40	114	74
	1899	16	107	18	5	84	.....	49	5	47	47	142	95
All other industries.....	1909	15	1,802	8	72	1,722	3,990	3,530	105	689	3,200	4,460	1,260
	1904	14	1,641	8	57	1,576	.....	2,202	80	610	2,356	3,530	1,174
	1899	14	1,132	10	30	1,092	.....	1,557	47	406	1,212	2,018	806
All other industries.....	1909	232	17,358	187	1,861	15,280	37,449	42,039	2,397	8,262	28,718	48,515	19,797
	1904	174	13,657	130	1,113	12,414	.....	30,598	1,223	6,385	17,105	31,471	14,366
	1899	198	.....	.....	737	12,949	.....	26,623	929	6,346	15,516	29,821	14,305

¹ Excluding statistics for two establishments, to avoid disclosure of individual operations.
² Excluding statistics for one establishment, to avoid disclosure of individual operations.

SUPPLEMENT FOR MASSACHUSETTS.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

CITIES OF 10,000 TO 50,000 INHABITANTS—ALL INDUSTRIES COMBINED.

CITY OR TOWN.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employes.	Wage earners (average number).							
Adams.....	1909	31	4,100	32	77	3,991	10,173	\$8,019	\$183	\$1,719	\$3,082	\$6,410	\$3,328
	1904	23	4,089	25	70	3,994	.....	6,945	151	1,509	2,688	5,492	2,804
	1899	26	.....	.....	51	3,182	.....	6,560	125	1,166	1,713	3,894	2,181
Arlington.....	1909	19	335	18	34	283	851	778	40	177	311	695	384
	1904	18	250	18	23	209	.....	474	20	111	226	493	267
	1899	12	.....	.....	18	122	.....	302	13	74	112	256	144
Attleborough.....	1909	128	7,168	132	607	6,429	5,991	14,305	785	3,763	6,813	15,160	8,347
	1904	108	5,553	128	351	5,044	.....	10,433	451	2,474	4,651	10,050	5,399
	1899	108	.....	.....	273	4,811	.....	5,724	285	2,191	3,796	8,751	4,955
Beverly.....	1909	63	4,896	60	349	4,487	3,778	8,658	496	2,929	3,291	8,653	5,302
	1904	71	2,292	91	118	2,083	.....	1,900	93	1,093	2,323	4,101	1,778
	1899	73	.....	.....	96	2,275	.....	2,112	64	1,021	2,149	3,781	1,632
Brookline.....	1909	16	404	19	45	340	339	617	37	194	196	532	336
	1904	13	552	14	43	495	.....	618	43	286	271	733	462
	1899	8	.....	.....	21	324	.....	320	25	168	219	485	266
Chelsea.....	1909	110	6,694	98	642	5,954	8,339	11,021	869	3,326	10,569	17,002	6,433
	1904	130	5,532	139	454	4,939	.....	9,684	581	2,442	8,307	13,879	5,572
	1899	120	.....	.....	328	2,959	.....	7,960	343	1,406	5,461	9,619	4,058
Chicopee.....	1909	58	7,776	45	471	7,260	18,738	14,803	468	3,696	10,952	19,219	8,267
	1904	40	4,899	41	183	4,670	.....	6,829	255	1,935	4,330	7,716	3,386
	1899	46	.....	.....	120	4,085	.....	5,976	148	1,588	2,700	5,389	2,689
Clinton.....	1909	39	4,357	33	201	4,123	10,882	7,607	276	1,872	4,216	7,845	3,629
	1904	35	3,646	35	123	3,482	.....	5,590	177	1,438	3,408	5,458	2,650
	1899	22	.....	.....	85	3,836	.....	6,930	115	1,510	2,715	5,043	2,328
Everett.....	1909	62	3,096	56	360	2,680	7,816	22,905	471	1,508	4,506	8,747	4,241
	1904	51	2,451	49	216	2,186	.....	8,477	284	1,155	3,123	6,136	3,013
	1899	52	.....	.....	152	1,877	.....	5,975	168	903	2,474	4,437	1,963
Fitchburg.....	1909	122	9,103	101	505	8,497	28,754	20,888	711	4,231	14,442	23,252	8,810
	1904	107	6,904	111	285	6,498	.....	13,109	379	3,168	9,421	15,391	6,970
	1899	115	.....	.....	260	6,218	.....	12,586	364	2,802	7,480	13,008	5,528
Framingham.....	1909	27	3,307	19	219	3,069	4,486	7,770	326	1,446	3,411	6,917	3,506
	1904	36	2,609	36	89	2,484	.....	2,613	133	1,121	2,517	4,174	1,657
	1899	34	.....	.....	69	2,207	.....	2,821	66	857	1,692	3,007	1,315
Gardner.....	1909	52	3,849	40	192	3,617	5,031	10,273	300	1,774	2,833	6,485	3,652
	1904	50	3,386	62	156	3,168	.....	8,619	201	1,491	2,670	5,019	2,449
	1899	46	.....	.....	108	2,896	.....	5,888	125	1,199	2,284	4,386	2,102
Gloucester.....	1909	102	2,593	104	308	2,181	2,427	5,693	337	1,042	4,770	7,753	2,983
	1904	132	2,141	175	203	1,763	.....	4,321	197	811	4,682	6,921	2,299
	1899	137	.....	.....	183	2,367	.....	3,865	168	916	4,232	6,293	2,061
Greenfield.....	1909	47	1,484	24	209	1,251	2,327	2,520	228	701	1,034	2,801	1,767
	1904	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haverhill.....	1909	346	12,791	407	695	11,689	7,930	14,786	707	6,658	21,686	35,377	13,691
	1904	320	10,529	404	551	9,574	.....	10,306	542	4,818	14,257	24,447	10,190
	1899	390	.....	.....	479	9,761	.....	6,358	366	4,538	14,994	23,419	8,425
Hyde Park.....	1909	40	4,649	37	292	4,320	8,856	8,158	377	2,476	3,351	7,336	3,985
	1904	40	4,297	24	282	3,991	.....	7,487	333	2,020	3,581	6,739	3,158
	1899	33	.....	.....	98	2,483	.....	3,554	148	1,122	2,507	4,384	1,877
Leominster.....	1909	94	6,000	76	323	5,601	5,890	6,633	442	2,794	5,576	10,531	4,955
	1904	65	4,437	64	246	4,127	.....	4,573	268	1,946	3,964	7,502	3,538
	1899	70	.....	.....	155	3,412	.....	3,862	165	1,481	2,769	5,397	2,628
Malden.....	1909	86	3,259	71	288	2,900	3,433	9,910	330	1,346	4,388	8,206	3,818
	1904	59	3,154	65	135	2,954	.....	5,553	133	1,428	4,045	11,236	7,191
	1899	53	.....	.....	104	2,416	.....	5,631	122	1,135	4,084	6,002	2,518
Marlborough.....	1909	59	4,585	46	274	4,265	2,721	3,378	289	2,224	6,375	10,382	4,007
	1904	46	3,708	43	186	3,479	.....	2,661	180	1,644	4,526	7,469	2,883
	1899	50	.....	.....	73	2,524	.....	2,001	100	1,152	2,834	4,498	1,664
Medford.....	1909	40	673	33	80	580	1,123	1,596	115	331	1,250	2,045	795
	1904	37	572	37	51	484	.....	1,449	67	244	386	872	486
	1899	36	.....	.....	58	575	.....	1,651	71	279	540	1,132	592
Melrose.....	1909	25	1,141	21	82	1,038	1,535	2,015	86	493	1,589	2,825	1,236
	1904	24	1,653	25	57	1,571	.....	4,645	51	796	2,915	9,451	6,536
	1899	16	.....	.....	65	1,180	.....	3,151	77	566	2,146	3,416	1,270
Methuen.....	1909	19	1,626	12	42	1,572	5,772	2,956	63	689	2,226	3,476	1,250
	1904	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Millford.....	1909	53	1,980	50	129	1,801	2,410	1,756	205	945	2,389	4,442	2,053
	1904	44	1,930	55	93	1,782	.....	1,663	94	910	1,776	3,391	1,615
	1899	50	75	1,357	1,077	71	633	1,466	2,552	1,086

1 Figures not available.

STATISTICS OF MANUFACTURES.

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TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.
CITIES OF 10,000 TO 50,000 INHABITANTS—ALL INDUSTRIES COMBINED—Continued.

CITY OR TOWN.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employ-ees.	Wage earners (average number).							
Newburyport.....	1909	74	3,543	71	257	3,215	3,820	\$4,900	\$320	\$1,642	\$3,781	\$6,931	\$3,150
	1904	69	3,261	68	238	2,955	.....	4,020	213	1,392	4,262	6,810	2,548
	1899	64	.....	.....	209	2,801	.....	3,696	205	1,175	3,051	5,141	2,090
Newton.....	1909	46	2,373	39	160	2,174	4,153	5,669	302	1,125	3,383	6,279	2,896
	1904	48	2,077	45	139	1,893	.....	4,324	201	944	2,242	4,141	1,899
	1899	45	.....	.....	103	1,823	.....	4,321	142	846	1,894	3,679	1,785
North Adams.....	1909	60	5,846	62	370	5,414	11,928	15,943	617	2,567	5,576	10,315	4,739
	1904	58	5,831	66	263	5,502	.....	18,168	373	2,333	4,011	8,036	4,025
	1899	68	.....	.....	248	6,312	.....	14,127	461	2,708	5,047	10,741	5,604
Northampton.....	1909	71	3,434	58	226	3,150	6,139	7,996	302	1,503	3,163	6,999	3,836
	1904	77	3,235	71	201	2,963	.....	4,380	211	1,217	3,042	5,756	2,714
	1899	66	.....	.....	141	2,635	.....	4,629	150	1,129	2,540	4,707	2,167
Peabody.....	1909	74	5,231	55	326	4,850	9,981	15,804	417	2,638	10,192	15,549	5,357
	1904	76	4,227	74	200	3,953	.....	7,654	260	1,990	6,748	10,237	3,489
	1899	86	.....	.....	146	2,661	.....	4,339	149	1,273	5,074	6,944	1,870
Pittsfield.....	1909	71	7,414	59	1,002	6,353	8,301	15,060	1,061	3,718	8,528	15,215	6,687
	1904	44	4,781	34	292	4,458	.....	8,035	459	2,062	4,629	8,577	3,948
	1899	69	.....	.....	205	3,198	.....	6,557	243	1,271	3,078	5,754	2,675
Plymouth.....	1909	32	3,104	24	168	2,912	6,239	10,760	268	1,416	8,475	11,618	3,143
	1904	35	2,422	34	88	2,900	.....	7,910	141	964	8,568	11,116	2,548
	1899	27	.....	.....	81	1,511	.....	4,322	104	614	3,564	5,530	1,966
Quincy.....	1909	183	6,247	241	514	5,492	9,147	11,975	806	3,434	3,844	10,505	6,661
	1904	161	5,938	222	345	5,371	.....	9,221	440	3,060	3,704	8,982	5,278
	1899	153	.....	.....	118	2,128	.....	1,886	100	1,145	909	3,012	2,103
Revere.....	1909	14	125	12	12	101	548	661	11	54	292	407	115
	1904	12	151	12	14	125	.....	765	14	66	249	355	106
	1899	17	.....	.....	8	67	.....	388	8	46	51	156	105
Salem.....	1909	155	6,852	149	365	6,338	11,436	9,345	396	2,893	8,640	14,576	5,936
	1904	143	6,393	167	281	5,945	.....	9,670	269	2,506	7,921	12,202	4,281
	1899	162	.....	.....	214	5,025	.....	6,947	202	2,390	6,583	10,711	4,128
Southbridge.....	1909	36	4,281	28	216	4,037	7,636	4,266	423	1,895	3,125	6,269	3,144
	1904	32	3,942	28	91	3,795	.....	3,795	199	1,305	2,280	4,202	1,922
	1899	32	.....	.....	66	2,687	.....	4,144	94	1,123	1,782	3,512	1,730
Taunton.....	1909	146	7,945	110	428	7,407	19,141	16,504	701	3,834	7,775	15,380	7,605
	1904	127	7,020	118	294	6,608	.....	14,790	468	3,147	7,687	13,645	5,958
	1899	114	.....	.....	313	6,590	.....	11,267	418	3,043	5,540	11,644	6,004
Wakefield.....	1909	23	2,359	14	115	2,230	1,729	3,864	157	1,046	2,835	5,527	2,692
	1904	22	1,947	15	128	1,804	.....	2,841	164	828	2,838	4,808	1,970
	1899	25	.....	.....	70	1,436	.....	3,090	96	711	1,254	2,647	1,393
Waltham.....	1909	80	6,354	67	250	6,037	7,583	12,871	406	3,288	2,444	7,514	5,370
	1904	60	6,484	55	221	6,208	.....	10,693	370	3,240	2,067	7,150	5,083
	1899	74	.....	.....	179	4,861	.....	8,777	255	2,371	1,889	5,890	4,001
Watertown.....	1909	25	4,805	13	457	4,335	4,862	7,220	440	2,235	6,463	11,546	5,083
	1904	20	3,555	8	225	3,322	.....	5,169	235	1,665	5,529	15,625	9,996
	1899	27	.....	.....	119	1,935	.....	4,169	164	931	3,499	5,330	1,831
Webster.....	1909	23	3,621	14	198	3,409	7,204	10,479	322	1,476	7,820	11,296	3,476
	1904	16	3,197	13	77	3,107	.....	6,623	125	1,142	3,941	5,868	1,927
	1899	20	.....	.....	48	2,377	.....	3,688	51	812	2,462	4,008	1,546
Westfield.....	1909	91	3,500	86	354	3,060	3,731	7,500	462	1,695	2,868	7,362	4,494
	1904	86	2,945	78	233	2,634	.....	5,888	312	1,346	2,251	5,818	3,667
	1899	97	.....	.....	250	2,370	.....	4,157	321	1,077	2,065	4,441	2,356
Weymouth.....	1909	41	2,238	45	202	1,991	1,902	5,504	240	1,110	4,204	6,627	2,423
	1904	46	2,035	54	140	1,841	.....	3,652	155	927	2,998	4,922	1,924
	1899	51	.....	.....	216	1,922	.....	4,333	286	878	3,178	5,389	2,211
Winthrop.....	1909	7	19	6	6	7	41	25	3	5	25	42	17
	1904	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Woburn.....	1909	59	1,867	65	149	1,653	3,560	8,405	195	932	3,114	5,408	2,294
	1904	52	1,622	59	81	1,482	.....	4,427	107	783	2,808	4,654	1,846
	1899	47	.....	.....	51	1,356	.....	2,832	63	617	2,879	4,003	1,124

1 Figures not available.

TABLE II.—DETAIL STATEMENT FOR

Table with multiple columns: Industry, Number of establishments, PERSONS ENGAGED IN INDUSTRY (Total, Proprietors, Salaried officers, Clerks, Wage earners), WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY (Total, 16 and over, Under 16), and Primary horsepower.

1 No figures given for reasons explained in the Introduction.

TABLE II.—DETAIL STATEMENT FOR THE

INDUSTRY.	Number of establishments	PERSONS ENGAGED IN INDUSTRY.										WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY.					Primary horse-power.
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.		Clerks.		Average number.	Wage earners.		Total.	16 and over.		Under 16.			
				Male.	Female.	Male.	Female.		Number.			Male.	Female.	Male.	Female.		
									Maximum month.	Minimum month.							
1 Hats, straw.....	18	2,811	19	37	65	22	2,668	Mh	3,890	Jy	1,487	3,367	1,236	2,118	5	8	1,009
2 Hosiery and knit goods.....	65	10,287	37	110	121	78	9,941	No	10,399	Ja	9,625	10,287	4,284	5,549	128	326	9,113
3 Ice, manufactured.....	7	64	5	2	2	2	55	Jy ¹	75	Ja	13	54	54	54	1	1	2,034
4 Iron and steel, steel works and rolling mills.....	9	3,465	110	187	53	3	3,115	De	3,544	Ap	2,820	3,544	3,427	116	1	1	24,500
5 Jewelry.....	175	8,560	202	237	394	304	7,423	De	8,195	Ap	6,794	8,201	5,143	2,849	116	93	4,018
6 Kaolin and ground earths.....	9	122	6	13	6	2	95	No	103	Ja	83	107	107	107	1	14	1,456
7 Lasts.....	27	803	27	38	47	16	675	De	714	Ap	633	727	712	1	14	1,610	
8 Leather goods.....	119	2,166	124	63	141	68	1,710	No	1,879	Ja	1,484	1,822	1,089	673	29	31	634
9 Leather, tanned, curried, and finished.....	132	11,066	112	246	309	87	10,252	De	11,546	Ap	9,708	11,309	11,105	147	49	8	19,231
10 Lime.....	9	588	2	20	6	3	557	Jy	643	Ja	385	520	520	520	1	1	589
11 Liquors, distilled.....	6	72	5	7	8	3	49	De ¹	52	Au ¹	42	52	52	52	52	52	365
12 Liquors, malt.....	37	2,091	8	103	231	10	1,739	Jy	1,856	Ja	1,648	1,728	1,716	12	12	9,917	
13 Lumber and timber products.....	708	10,478	793	299	231	179	8,976	De	9,821	Au	8,101	10,577	10,176	316	80	5	44,784
14 Marble and stone work.....	330	5,712	412	119	128	38	5,015	My	5,533	Fe	4,044	4,943	4,923	2	18	16,515	
15 Mattresses and spring beds.....	52	826	49	34	50	26	667	Oc	741	Fe	575	660	492	157	9	2	592
16 Millinery and lace goods.....	79	2,004	82	62	103	71	1,686	Mh	2,060	Au	1,271	1,789	313	1,443	5	28	301
17 Mirrors.....	6	127	2	6	5	4	110	De	126	Fe ¹	97	126	123	3	3	140	
18 Models and patterns, not including paper patterns.....	62	454	78	12	6	16	342	Jy	374	My	311	361	339	15	7	290	
19 Musical instruments and materials, not specified.....	18	193	17	7	5	10	154	No ¹	170	Ja	136	170	140	27	3	213	
20 Musical instruments, pianos and organs and materials.....	59	4,681	33	137	195	71	4,245	De	4,512	Jy	4,037	4,553	4,185	257	32	79	4,454
21 Oil, essential.....	5	12	6	8	3	6	6	De ¹	11	Jy	2	11	11	11	11	11	12
22 Oilcloth and linoleum.....	3	239	8	8	3	220	Au ¹	224	Ja	211	226	186	40	40	37	80	375
23 Optical goods.....	11	2,661	6	69	82	44	2,460	Ap	2,650	Se	2,241	2,411	1,661	636	37	80	2,230
24 Paint and varnish.....	41	672	24	56	137	27	428	Ap	442	Ja	395	422	385	34	3	1,819	
25 Paper and wood pulp.....	88	13,742	24	268	401	201	12,848	De	13,224	Jy	12,611	13,313	8,673	4,508	22	110	115,792
26 Paper goods, not elsewhere specified.....	61	5,710	24	167	229	155	5,135	De	5,527	Jy	4,909	5,507	2,701	2,536	78	192	6,776
27 Patent medicines and compounds and druggists' preparations.....	154	1,805	109	119	146	146	1,183	No	1,471	Au	1,022	1,371	639	712	6	14	1,376
28 Pens, fountain, stylographic, and gold.....	3	39	7	1	2	29	Au	33	De	22	28	25	2	1	1	9	
29 Photographic apparatus and materials.....	5	48	2	10	3	1	32	Je	40	Fe	28	31	26	5	5	50	
30 Photo-engraving.....	24	636	21	36	63	33	483	De	504	Ja	445	510	458	46	6	134	
31 Pottery, terra-cotta, and fire-clay products.....	20	541	9	27	24	16	465	No	507	Fe	360	509	470	27	12	932	
32 Printing and publishing.....	1,279	24,410	1,089	946	2,723	2,130	17,532	De	18,158	Au	16,746	18,317	12,837	4,968	404	108	47,629
33 Rubber goods, not elsewhere specified.....	29	3,924	9	97	244	156	3,418	De	3,958	Ja	3,069	3,937	3,095	745	56	41	10,123
34 Scales and balances.....	3	20	2	1	1	1	15	Se	18	Fe ¹	12	16	16	16	16	16	
35 Screws, machine.....	13	392	9	11	10	14	348	De	391	Ja	298	391	322	22	47	387	
36 Sewing machines, cases, and attachments.....	6	981	3	22	82	5	899	Je	903	No	840	843	793	40	8	2	1,364
37 Shoddy.....	27	518	21	34	14	7	442	Mh ¹	460	Se	422	474	414	53	2	4,688	
38 Show cases.....	8	55	7	2	3	2	41	De	45	My	36	46	46	46	46	30	
39 Signs and advertising novelties.....	14	197	10	13	29	9	136	De	157	Fe	116	167	106	59	1	80	
40 Silk and silk goods, including throwsters.....	19	4,308	24	51	77	47	4,109	De	4,370	Ja	3,745	4,370	2,963	2,607	101	369	5,305
41 Silverware and plated ware.....	21	2,734	11	45	133	80	2,405	No	2,796	Jy	2,242	2,735	2,241	440	34	20	2,113
42 Slaughtering and meat packing.....	94	3,832	87	54	305	61	3,325	Ja	3,552	My	3,176	3,371	3,310	37	22	4,844	
43 Steam packing.....	10	69	7	11	9	3	69	My	72	Ja ¹	65	70	68	2	2	120	
44 Stereotyping and electrotyping.....	11	292	11	13	19	10	239	Oc	244	Ja ¹	234	240	229	9	2	243	
45 Stoves and furnaces, including gas and oil stoves.....	21	1,911	5	48	124	31	1,703	De	1,795	Ja	1,376	1,814	1,803	8	3	1,804	
46 Surgical appliances and artificial limbs.....	23	301	26	7	18	23	227	Se	235	Ja	205	230	151	78	1	337	
47 Tobacco manufactures.....	417	4,238	453	56	149	44	3,551	Se	3,906	Ja	2,975	3,775	2,776	967	26	6	251
48 Type founding and printing materials.....	10	219	3	13	18	11	174	Ap ¹	179	Au	157	177	118	57	2	118	
49 Whips.....	29	1,203	28	36	88	46	1,005	Je ¹	1,027	Fe	974	1,026	703	282	24	17	645
50 Woolen, worsted, and felt goods, and wool hats.....	183	55,533	103	634	598	325	53,873	Oc	55,879	Ja	49,715	56,182	31,553	21,368	1,420	1,841	117,119
51 All other industries.....	1,302	53,123	1,220	1,425	3,141	1,130	46,207									94,203	

¹ Same number reported for one or more other months.

² All other industries embrace—

Artificial flowers and feathers and plumes.....	1	Coke.....	1	Glass, cutting, staining, and ornamenting.....	33
Artists' materials.....	3	Cordials and sirups.....	7	Glucose and starch.....	4
Awning, tents, and sails.....	45	Cork, cutting.....	2	Glue.....	14
Axle grease.....	2	Crucibles.....	2	Grease and tallow.....	35
Babbitt metal and solder.....	4	Dentists' materials.....	2	Hair work.....	6
Bags, other than paper.....	5	Drug grinding.....	2	Hammocks.....	3
Bags, paper.....	3	Dyeing and finishing textiles.....	48	Hat and cap materials.....	5
Baking powders and yeast.....	9	Dyestuffs and extracts.....	10	Horseshoes, not made in steel works or rolling mills.....	3
Belting and hose, woven and rubber.....	8	Engravers' materials.....	7	House-furnishing goods, not elsewhere specified.....	3
Bluing.....	7	Engraving and diesinking.....	30	Ink, printing.....	2
Bone, carbon, and lamp black.....	3	Explosives.....	2	Ink, writing.....	5
Butter, reworking.....	1	Fertilizers.....	6	Instruments, professional and scientific.....	23
Card cutting and designing.....	6	Files.....	7	Iron and steel, blast furnaces.....	1
Carriages and sleds, children's.....	7	Fire extinguishers, chemical.....	2	Iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills.....	10
Charcoal.....	2	Flavoring extracts.....	38	Iron and steel, doors and shutters.....	1
China decorating.....	1	Food preparations.....	50	Iron and steel forgings.....	11
Chocolate and cocoa products.....	12	Foundry supplies.....	1	Iron and steel, nails and spikes, cut and wrought, including wire nails, not made in steel works or rolling mills.....	26
Clocks and watches, including cases and materials.....	14	Furs, dressed.....	3	Jewelry and instrument cases.....	10
Clothing, horse.....	2	Galvanizing.....	1		
Clothing, men's, buttonholes.....	3	Glass.....	2		
Coffee and spice, roasting and grinding.....	17				

STATISTICS OF MANUFACTURES.

STATE, BY INDUSTRIES: 1909—Continued.

	Capital.	EXPENSES.										Value of products.	Value added by manufacture.
		Total.	Services.			Materials.		Miscellaneous.					
			Officials.	Clerks.	Wage earners.	Fuel and rent of power.	Other.	Rent of factory.	Taxes, including internal revenue.	Contract work.	Other.		
1	\$2,572,977	\$5,882,922	\$210,110	\$95,392	\$1,448,058	\$66,462	\$3,613,393	\$3,823	\$17,801		\$428,083	\$6,589,477	\$2,909,622
2	12,477,388	12,287,701	309,896	206,677	3,854,828	174,846	6,796,760	28,717	95,280	\$168,501	652,786	14,736,025	7,764,419
3	344,125	130,223	8,000	569	41,827	45,299	21,832		3,780		19,916	202,915	135,784
4	14,193,549	13,131,864	187,723	187,351	1,976,966	760,307	9,271,966	1,050	85,048	1,271	660,182	13,567,628	3,538,355
5	13,805,575	12,616,711	474,776	665,109	4,421,969	137,720	5,441,596	219,496	61,678	100,635	1,093,723	15,210,738	9,631,413
6	382,227	280,560	23,630	6,287	43,351	12,394	145,649	2,300	5,068	2,500	19,381	300,069	142,026
7	1,469,019	1,561,492	110,110	64,458	525,663	25,794	585,320	21,329	7,775	36,068	184,975	1,909,356	1,298,272
8	2,371,434	3,922,542	120,351	185,503	491,891	117,346	12,366,779	71,523	16,299	225	283,121	4,378,266	1,986,567
9	41,190,568	37,445,910	624,805	327,018	5,443,944	607,523	28,157,985	116,998	166,112	241,533	1,759,994	40,002,079	11,236,571
10	1,307,199	705,403	24,028	8,245	303,906	177,750	159,384	3,180	4,377	2,365	22,168	864,330	527,196
11	840,412	2,482,432	13,850	12,604	26,046	17,694	669,427	3,000	1,706,487		23,124	2,755,323	2,068,002
12	20,288,248	10,104,862	431,724	292,596	1,480,638	295,593	3,294,807	100	2,198,049	33,124	2,075,231	12,723,730	9,130,330
13	17,551,037	20,208,965	491,891	303,339	5,030,561	117,346	12,366,779	178,726	109,526	413,593	1,137,204	23,025,837	10,541,712
14	6,993,409	6,726,901	220,835	137,426	3,551,794	225,409	1,966,983	56,326	55,829	191,777	320,522	7,804,387	5,611,995
15	908,229	1,985,448	72,322	59,527	336,216	17,208	1,280,224	62,994	6,865		150,092	2,227,374	929,842
16	1,584,753	3,518,897	98,506	166,630	666,755	24,689	2,257,641	77,270	13,628	17,745	196,033	3,976,600	1,664,279
17	151,494	339,093	17,590	11,140	70,875	3,431	218,109	6,138	2,206		9,604	404,877	183,337
18	300,017	444,905	16,475	10,070	238,881	8,101	111,277	23,675	1,269	722	34,435	624,610	505,132
19	168,359	214,205	10,265	7,002	80,872	2,810	81,956	10,182	592	3,702	16,824	259,781	175,015
20	11,632,136	8,309,051	337,738	262,015	2,667,970	93,371	4,055,885	141,758	68,481	3,557	678,276	9,106,470	4,957,214
21	3,450	9,701			2,544	300	5,628	200	35		994	13,156	7,228
22	688,617	1,476,153	29,598	12,816	117,764	12,573	1,197,947	2,760	4,942		97,753	1,704,470	493,950
23	2,193,569	2,817,522	283,257	96,136	1,102,819	20,696	1,142,499	5,937	22,536		143,742	3,058,018	1,894,922
24	2,195,084	3,028,927	133,439	152,962	250,962	47,837	2,026,827	31,283	21,145		363,872	3,468,560	1,393,896
25	42,523,682	34,070,185	1,093,532	596,738	6,541,636	2,331,897	20,017,716	12,195	395,610	280,594	3,400,267	40,096,713	17,747,100
26	12,962,870	11,788,031	450,157	313,541	2,344,135	144,492	7,201,415	62,398	76,055	2,081	1,103,757	13,532,976	6,097,069
27	5,292,843	6,959,686	333,203	318,641	565,810	28,690	2,698,202	101,685	37,368	4,602	2,271,485	7,431,764	4,704,872
28	20,585	64,361		1,800	17,924	602	39,107	1,230	45		3,653	79,139	39,430
29	98,268	81,365	27,390	1,890	14,008	2,180	22,674	354	1,213	500	11,189	100,510	75,056
30	444,145	846,150	76,425	100,132	402,933	17,894	133,506	29,975	2,279	16,291	69,715	937,236	785,836
31	1,166,607	583,330	43,197	32,862	255,970	67,627	110,877	4,454	10,350	1,216	56,777	644,286	465,782
32	33,473,465	40,853,662	2,347,176	3,701,135	11,683,634	435,088	12,445,463	763,941	288,437	3,204,475	6,084,313	47,445,006	34,564,455
33	10,495,428	14,946,622	328,003	285,864	1,769,269	246,362	10,759,009	8,238	85,710	5,697	1,453,471	15,796,490	8,711,119
34	62,907	43,151	2,600	1,274	651	561	25,209	1,320	296		2,964	62,760	36,900
35	686,175	483,717	23,520	14,714	186,286	12,896	213,978	4,252	3,556	352	24,163	570,356	343,482
36	2,190,728	1,449,773	82,637	87,696	533,469	20,546	538,266	11,280	27,023		148,856	1,548,271	989,459
37	1,518,773	1,608,530	64,031	24,665	202,252	51,814	1,141,587	4,436	12,597	669	106,479	1,765,609	572,208
38	41,583	117,870	2,124	1,848	32,833	1,121	61,816	2,860	268	1,500	13,500	133,138	70,201
39	185,546	320,537	16,661	29,057	85,992	2,920	147,586	7,634	794	9,695	20,198	375,670	225,184
40	7,800,736	8,337,761	106,004	94,705	1,840,247	82,862	5,346,989	17,330	42,362	504,326	302,936	8,942,246	3,512,395
41	6,818,066	5,515,765	154,015	228,300	1,725,234	39,090	2,688,603	13,590	40,444	114,546	511,943	6,538,736	3,811,043
42	18,547,180	42,124,655	144,337	343,683	1,837,166	231,950	38,654,189	56,095	106,718		750,517	44,402,972	5,516,833
43	197,517	241,401	18,175	14,497	3,938	14,497	3,938	3,714	743		27,271	281,562	146,115
44	244,447	374,941	18,490	20,788	182,628	14,766	88,478	16,226	2,431		31,134	451,324	348,080
45	3,323,944	3,060,344	146,843	170,273	1,239,181	67,544	1,011,006	4,619	25,025	7,628	388,225	3,542,140	2,463,590
46	457,503	735,153	8,207	31,191	124,728	8,178	476,131	14,639	1,684	225	69,970	849,147	361,838
47	3,729,412	6,850,622	125,298	178,544	2,505,545	15,405	2,905,750	105,059	610,492	2,520	401,969	7,888,162	4,967,007
48	464,486	288,836	21,056	19,222	90,219	7,197	102,509	16,257	3,033		308,232	198,526	108,526
49	2,778,730	2,000,125	70,898	112,061	488,977	11,320	1,060,555	23,909	13,889	8,932	209,584	2,774,373	1,702,498
50	139,955,422	123,597,299	2,147,773	815,936	24,592,763	2,360,970	85,615,361	183,864	773,838	1,524,423	5,582,321	141,966,882	53,990,551
51	151,112,790	137,133,015	4,017,019	4,075,810	24,434,356	4,230,178	84,869,614	649,571	1,065,134	957,399	12,833,934	154,642,157	65,542,365

* All other industries embrace—Continued.

Labels and tags.....	6	Pumps, not including steam pumps.....	3	Toys and games.....	16
Lard, refined, not made in slaughtering and meat-packing establishments.....	1	Roofing materials.....	4	Typewriters and supplies.....	1
Lead, bar, pipe, and sheet.....	1	Rules, ivory and wood.....	1	Umbrellas and canes.....	2
Looking-glass and picture frames.....	32	Safes and vaults.....	1	Upholstering materials.....	10
Mats and matting.....	2	Sand and emery paper and cloth.....	1	Vault lights and ventilators.....	2
Mineral and soda waters.....	145	Saws.....	10	Vinegar and cider.....	60
Miscellaneous and paste.....	20	Screws, wood.....	2	Wall paper.....	2
Needles, pins, and hooks and eyes.....	3	Shipbuilding, including boat building.....	115	Wall plaster.....	2
Oil, castor.....	1	Smelting and refining, not from the ore.....	3	Washing machines and clothes wringers.....	2
Oil, not elsewhere specified.....	17	Soap.....	38	Waste.....	9
Ordnance and accessories.....	1	Soda-water apparatus.....	5	Windmills.....	1
Paper patterns.....	1	Sporting and athletic goods.....	18	Window shades and fixtures.....	13
Paving materials.....	2	Springs, steel, car and carriage.....	3	Wire.....	10
Peanuts, grading, roasting, cleaning, and shelling.....	2	Stationery goods, not elsewhere specified.....	21	Wirework, including wire rope and cable.....	31
Pencils, lead.....	1	Statuary and art goods.....	15	Wood, turned and carved.....	69
Phonographs and graphophones.....	1	Straw goods, not elsewhere specified.....	2	Wool pulling.....	1
Pipes, tobacco.....	5	Sugar, refining, not including beet sugar.....	1	Wool scouring.....	8
		Sulphuric, nitric, and mixed acids.....	1		

TABLE III.—DETAIL STATEMENT FOR CITIES OF 50,000 INHABITANTS OR MORE, BY INDUSTRIES,

CITIES OF 50,000 INHABITANTS OR MORE, BY INDUSTRIES:

BOSTON.

INDUSTRY.	Number of establishments	PERSONS ENGAGED IN INDUSTRY.										WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY.					Primary horse-power.
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks.		Wage earners (average number).			Total.	16 and over.		Under 16.				
					Male.	Female.	Total.	16 and over.	Female.		Under 16.	Male.	Female.	Male.	Female.		
																Male.		Female.
1 All industries.....	3,155	85,158	2,873	2,580	6,656	3,412	69,637	45,168	22,090	2,379	75,066	48,412	25,015	1,288	1,351	68,419	
2 Belting and hose, leather.....	5	76	8	15	7	46	43	3	48	45	3	4	2	43	114		
3 Blacking and cleansing and polishing preparations.....	23	206	10	23	17	125	71	48	123	70	47	4	2	114			
4 Boots and shoes, including cut stock and findings.....	43	6,790	32	111	189	342	6,116	3,174	1,890	1,052	6,823	3,540	2,108	685	490	2,062	
5 Boxes, fancy and paper.....	21	1,049	18	29	15	23	964	259	600	45	1,103	297	755	3	48	414	
6 Brass and bronze products.....	33	407	32	20	15	7	333	324	5	4	359	350	5	4	244		
7 Bread and other bakery products.....	285	2,758	303	16	291	149	1,999	1,529	434	36	2,042	1,563	442	9	28	6,663	
8 Canning and preserving.....	21	454	14	20	67	24	323	198	118	7	365	224	133	2	6	577	
9 Carriages and wagons and materials.....	26	347	29	11	3	6	298	297	1	1	278	277	1	1	450		
10 Cars, and general shop construction and repairs by steam-railroad companies.....	6	1,224	7	45	1,172	1,149	23	1,209	1,185	24	1,209	1,185	24	1	291		
11 Clothing, men's, including shirts.....	196	5,167	256	66	262	104	4,479	2,150	2,307	22	4,890	2,348	2,516	19	7	1,086	
12 Clothing, women's.....	122	4,101	147	85	169	160	3,540	1,037	2,469	34	3,520	1,031	2,455	11	23	491	
13 Confectionery.....	54	4,716	31	80	306	162	4,137	964	2,792	381	4,923	1,146	3,323	16	438	2,797	
14 Copper, tin, and sheet-iron products.....	85	1,999	94	59	102	52	1,702	1,499	177	26	1,696	1,494	176	22	4	840	
15 Cutlery and tools, not elsewhere specified.....	14	1,428	13	16	55	31	1,313	865	731	17	1,569	675	873	1	20	1,062	
16 Electrical machinery, apparatus, and supplies.....	27	1,609	11	58	94	66	1,380	858	494	28	1,703	1,060	610	28	5	1,505	
17 Foundry and machine-shop products.....	211	7,515	154	307	547	184	6,323	6,196	70	57	7,059	6,921	78	56	4	6,886	
18 Furniture and refrigerators.....	64	1,134	74	34	58	25	943	877	61	5	997	927	65	4	1	822	
19 Gas and electric fixtures and lamps and reflectors.....	16	231	12	9	18	14	178	157	2	19	200	177	2	21	131		
20 Hosiery and knit goods.....	8	761	2	15	8	7	729	62	598	69	766	65	629	10	62	168	
21 Jewelry.....	32	394	30	12	20	29	303	252	39	12	325	270	42	13	82		
22 Leather goods.....	45	711	49	21	53	30	558	341	208	9	607	371	226	3	7	152	
23 Liquors, malt.....	20	1,338	2	55	154	1	1,126	1,116	10	1	1,099	1,089	10	1	4,799		
24 Lumber and timber products.....	67	1,214	66	36	53	25	1,034	1,029	4	1	1,076	1,071	4	1	3,285		
25 Marble and stone work.....	31	649	28	14	18	8	581	579	1	1	680	678	1	1	1,148		
26 Mattresses and spring beds.....	28	616	24	29	45	22	496	368	120	8	492	365	119	6	2	383	
27 Millinery and lace goods.....	65	1,724	68	56	88	58	1,454	250	1,179	25	1,537	265	1,246	3	23	311	
28 Musical instruments, pianos and organs and materials.....	21	1,575	11	52	73	29	1,410	1,383	26	1	1,477	1,449	27	1	917		
29 Paint and varnish.....	12	249	4	27	58	18	142	130	12	6	137	125	12	5	484		
30 Patent medicines and compounds and druggists' preparations.....	69	924	44	62	132	72	614	261	347	6	779	331	441	2	280		
31 Printing and publishing.....	564	12,113	418	514	1,884	1,040	8,257	5,862	2,213	182	8,679	6,163	2,324	167	25	6,248	
32 Slaughtering and meat packing.....	24	367	23	15	41	15	273	271	2	1	299	297	2	1	313		
33 Tobacco manufactures.....	145	2,646	148	30	115	35	2,318	1,796	510	12	2,432	1,885	535	9	3	70	
34 All other industries.....	772	18,668	736	677	1,632	650	14,971	10,121	4,536	314	15,774	10,668	4,781	187	148	23,293	

¹ All other industries embrace: Artificial stone, 1; automobiles, including bodies and parts, 15; awnings, tents, and sails, 19; axle grease, 1; babbit metal and solder, 1; bags, other than paper, 2; baking powders and yeast, 5; baskets, and rattan and willow ware, 5; belting and hose, woven and rubber, 3; billiard tables and materials, 5; boxes, cigar, 2; brick and tile, 1; brooms, 4; brushes, 11; butter, cheese, and condensed milk, 2; butter, reworking, 1; buttons, 2; card cutting and designing, 4; carpets and rugs, other than rag, 1; carpets, rag, 2; cars and general shop construction and repairs by street-railroad companies, 2; cars, steam-railroad, not including operations of railroad companies, 1; cash registers and calculating machines, 1; chemicals, 9; chocolate and cocoa products, 1; clocks and watches, including cases and materials, 4; cloth, sponging and refinishing, 4; clothing, men's, buttonholes, 2; coffee and spice, roasting and grinding, 11; coffins, burial cases, and undertakers' goods, 3; cooperage and wooden goods, not elsewhere specified, 5; cordage and twine and jute and linen goods, 3; cordials and sirups, 6; cork, cutting, 2; corsets, 1; cotton goods, including cotton small wares, 1; dairymen's, poultryers', and apiarists' supplies, 2; dentists' materials, 2; drug grinding, 1; dyeing and finishing textiles, 2; dyestuffs and extracts, 6; electroplating, 26; emery and other abrasive wheels, 1; enameling and japanning, 6; engravers' materials, 1; engraving and diesinking, 15; engraving, wood, 3; fancy articles, not elsewhere specified, 12; fertilizers, 2; files, 2; flags, banners, regalia, society badges, and emblems, 8; flavoring extracts, 15; flour-mill and gristmill products, 1; food preparations, 14; fur goods, 12; furnishing goods, men's, 20; furs, dressed, 1; galvanizing, 3; gas, illuminating and heating, 4; glass, cutting, staining, and ornamenting, 22; gloves and mittens, leather, 5; glucose and starch, 1; glue, 2; gold and silver, leaf and foil, 4; gold and silver, reducing and refining, not from the ore, 1; grease and tallow, 3; hair work, 4; hammocks, 2; hand stamps and stenolls and brands, 17; hat and cap materials, 1; hats and caps, other than felt, straw, and wool, 28; hats, fur-felt, 5; hats, straw, 2; horseshoes, not made in steel works or rolling mills, 1; house-furnishing goods, not elsewhere specified, 6; ice, manufactured, 1; ink, printing, 1; instruments, professional and

BROOKTON.

1 All industries.....	196	16,291	176	288	600	492	14,737	10,661	3,834	242	16,386	11,840	4,279	143	124	9,773
2 Blacking and cleansing and polishing preparations.....	12	70	17	2	15	5	31	26	5	-----	34	28	6	-----	-----	45
3 Boots and shoes, including cut stock and findings.....	75	13,579	54	197	451	374	12,603	8,840	3,488	175	14,013	9,907	3,911	117	78	6,802
4 Boxes, fancy and paper.....	5	233	5	4	5	5	214	62	130	22	229	66	139	-----	24	148
5 Bread and other bakery products.....	11	295	10	6	31	25	223	165	41	17	234	173	43	2	16	198
6 Cutlery and tools, not elsewhere specified.....	8	119	6	4	4	3	102	102	-----	-----	110	110	-----	-----	-----	90
7 Foundry and machine-shop products.....	9	196	10	4	14	6	162	161	-----	1	170	169	-----	1	-----	273
9 Lasts.....	6	212	8	10	20	4	170	163	-----	7	186	178	-----	8	-----	318
9 Lumber and timber products.....	6	116	5	6	1	2	102	101	-----	1	109	108	-----	1	-----	495
10 Printing and publishing.....	16	345	14	15	12	24	280	240	32	8	301	258	35	8	-----	321
11 All other industries.....	48	1,126	47	38	47	44	950	801	138	11	1,000	843	145	6	6	1,083

¹ All other industries embrace: Automobiles, including bodies and parts, 1; bicycles, motorcycles, and parts, 1; brass and bronze products, 1; carpets, rag, 1; carriages and wagons and materials, 2; cars and general shop construction and repairs by street-railroad companies, 1; clothing, men's, including shirts, 1; clothing, women's, 1; confectionery, 1; cooperage and wooden goods, not elsewhere specified, 1; copper, tin, and sheet-iron products, 1; cotton goods, including cotton small wares, 2; electroplating, 1; flavoring extracts, 2; flour-mill and gristmill products, 2; furnishing goods, men's, 3; gas, illuminating and heating, 1; gloves and mittens, leather, 1; hand

STATISTICS OF MANUFACTURES.

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AND TOTALS FOR ALL INDUSTRIES IN CITIES OF 10,000 BUT LESS THAN 50,000 INHABITANTS: 1909.

CITIES OF 50,000 INHABITANTS OR MORE, BY INDUSTRIES.

BOSTON.

	Capital.	EXPENSES.										Value of products.	Value added by manufacture.
		Total.	Services.			Materials.		Miscellaneous.					
			Officials.	Clerks.	Wage earners.	Fuel and rent of power.	Other.	Rent of factory.	Taxes, including internal revenue.	Contract work.	Other.		
1	\$175,181,571	\$211,132,069	\$6,826,445	\$8,814,385	\$39,909,807	\$2,857,411	\$121,719,744	\$3,204,282	\$4,317,265	\$4,393,847	\$19,068,903	\$237,457,472	\$112,880,317
2	411,771	613,440	15,400	21,940	35,232	2,345	510,159	5,750	2,985	.....	19,599	698,278	185,774
3	301,797	713,411	83,906	49,022	66,799	5,246	411,892	16,786	2,145	900	76,715	819,993	402,855
4	11,257,336	24,325,047	324,407	345,764	3,046,062	91,990	19,743,366	100,412	37,910	2,279	632,857	26,146,755	6,311,399
5	488,209	1,131,715	60,657	31,286	362,148	13,205	544,748	42,016	3,475	.....	74,180	1,213,407	655,454
6	348,434	703,504	35,430	14,479	223,997	15,269	344,791	31,076	2,360	855	32,217	805,771	442,711
7	3,543,048	7,345,958	47,638	287,624	1,068,131	142,220	4,682,340	161,062	32,839	5,310	918,794	8,109,419	3,284,859
8	1,007,745	1,817,882	58,326	71,967	139,636	16,639	1,366,626	35,560	8,296	600	120,032	1,951,234	567,769
9	418,050	484,071	12,064	6,823	204,220	10,700	211,213	18,500	3,472	1,337	15,442	581,589	359,676
10	761,866	1,485,737	10,366	36,506	708,366	16,239	635,947	.....	6,857	.....	11,456	1,535,737	883,551
11	6,171,834	12,818,806	210,729	332,790	2,286,050	51,315	7,704,648	167,468	67,862	1,580,044	417,900	14,535,008	6,779,045
12	2,409,499	6,763,479	139,993	242,736	1,649,482	32,181	4,273,532	148,183	13,842	20,602	242,928	7,841,740	3,536,027
13	5,048,227	9,612,810	295,879	567,876	1,344,191	80,423	6,036,309	250,473	40,592	1,236	995,331	10,341,275	4,224,543
14	4,543,950	3,424,779	114,684	118,777	989,616	31,289	1,838,227	75,237	18,199	1,604	237,146	3,925,155	2,055,639
15	2,117,108	2,449,977	58,825	101,203	536,687	35,066	905,374	6,576	14,880	3,367	788,439	2,863,827	1,923,387
16	3,006,512	2,482,421	130,791	113,431	699,710	31,166	971,774	36,362	14,283	38,694	443,210	3,027,568	2,024,628
17	14,026,258	12,042,672	754,610	596,210	4,189,908	244,656	4,855,581	176,462	104,333	70,990	1,049,922	13,473,971	8,373,734
18	1,114,542	2,317,211	78,085	54,780	617,077	19,805	1,139,587	63,403	8,328	3,547	332,619	2,653,777	1,494,385
19	230,969	430,787	22,269	23,860	133,305	6,674	205,449	13,464	813	616	24,347	464,087	251,964
20	542,711	949,147	51,882	13,863	252,805	5,743	577,321	9,578	3,237	.....	34,718	1,026,293	443,229
21	395,532	552,014	21,947	32,390	189,391	5,155	243,168	22,591	2,316	2,610	32,446	710,164	461,841
22	653,899	1,319,710	35,285	76,758	279,936	7,471	789,869	37,872	4,328	25	88,166	1,433,583	636,253
23	13,435,765	5,888,273	279,830	198,339	1,019,213	101,565	1,795,309	.....	1,324,479	.....	1,109,538	7,553,669	5,596,795
24	1,499,814	2,618,798	69,492	62,272	726,656	28,381	1,509,945	77,988	14,161	6,128	123,775	3,026,594	1,488,268
25	904,665	1,074,560	55,340	21,507	459,030	19,306	433,582	30,739	6,798	5,803	42,455	1,152,198	669,310
26	641,659	1,602,374	64,450	53,011	248,088	11,615	1,036,701	56,346	4,439	.....	127,724	1,770,103	721,787
27	1,254,113	3,014,039	80,556	136,324	579,577	21,234	1,909,436	73,893	11,276	17,745	183,998	3,425,242	1,494,572
28	5,497,059	3,116,039	133,321	130,219	957,683	28,700	1,438,957	95,292	30,526	160	301,201	3,427,911	1,960,254
29	749,703	1,047,908	67,265	71,645	79,946	15,105	602,285	23,744	4,317	.....	183,601	1,064,915	447,625
30	1,631,954	3,272,564	196,747	167,228	282,422	12,830	1,525,425	67,720	13,188	2,942	1,005,062	3,965,998	2,427,743
31	18,409,757	24,364,963	1,467,144	2,521,235	6,033,088	210,779	6,751,333	497,326	174,300	2,275,512	4,434,246	28,021,168	21,059,056
32	503,890	3,908,507	29,811	47,595	171,706	21,251	3,492,696	31,504	1,889	.....	112,055	4,095,940	581,993
33	2,695,506	4,898,594	95,743	145,798	1,779,930	8,135	2,037,744	64,375	422,372	388	314,111	5,506,307	3,460,428
34	69,168,380	62,571,372	1,724,523	2,119,089	8,489,739	1,450,713	41,194,210	763,204	1,916,638	350,553	4,562,703	70,288,786	27,643,863

scientific, 15; iron and steel, steel works, and rolling mills, 2; iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills, 4; iron and steel forgings, 1; iron and steel, nails and spikes, cut and wrought, including wire nails, not made in steel works or rolling mills, 1; jewelry and instrument cases, 4; kaelin and ground earths, 1; labels and tags, 3; lasts, 1; lead, bar, pipe, and sheet, 1; leather, tanned, curried, and finished, 6; liquors, distilled, 2; looking-glass and picture frames, 19; mineral and soda waters, 25; mirrors, 5; models and patterns, not including paper patterns, 24; mucilage and paste, 5; musical instruments and materials, not specified, 10; oil, not elsewhere specified, 5; optical goods, 2; ordnance and accessories, 1; paper goods, not elsewhere specified, 14; peanuts, grading, roasting, cleaning, and shelling, 2; pens, fountain, stylographic, and gold, 1; photographic apparatus and materials, 1; photo-engraving, 19; pipes, tobacco, 4; pottery, terra-cotta, and fire-clay products, 4; pumps, not including steam pumps, 2; roofing materials, 2; rubber goods, not elsewhere specified, 6; rules, ivory and wood, 1; safes and vaults, 1; saws, 3; scales and balances, 2; screws, machine, 4; sewing machines, cases, and attachments, 4; shipbuilding, including boat building, 22; show cases, 6; signs and advertising novelties, 8; silk and silk goods, including throwsters, 3; silverware and plated ware, 5; smelting and refining, not from the ore, 1; soap, 13; soda-water apparatus, 4; sporting and athletic goods, 2; springs, steel, car and carriage, 1; stationary goods, not elsewhere specified, 3; statuary and art goods, 12; steam packing, 5; stereotyping and electrotyping, 0; stoves and furnaces, including gas and oil stoves, 3; sugar, refining, not including beet sugar, 1; surgical appliances and artificial limbs, 11; toys and games, 3; type founding and printing materials, 9; typewriters and supplies, 1; umbrellas and canes, 1; upholstering materials, 2; vault lights and ventilators, 2; wall plaster, 1; waste, 2; window shades and fixtures, 8; wirework, including wire rope and cable, 9; wood, turned and carved, 11; wool scouring, 1; woolen, worsted, and felt goods, and wool hats, 2.

BROCKTON.

1	\$18,978,317	\$42,439,766	\$720,355	\$976,091	\$9,122,298	\$214,575	\$28,350,822	\$119,995	\$104,665	\$165,177	\$2,665,788	\$45,972,388	\$17,406,991
2	120,963	247,887	2,611	15,501	23,484	410	165,283	3,540	291	.....	36,767	327,598	161,905
3	14,117,246	36,863,794	518,567	777,927	7,751,232	100,982	25,282,700	70,489	70,054	162,192	2,129,651	39,293,118	13,909,436
4	209,016	278,736	10,648	9,062	89,225	3,458	136,595	3,020	1,544	.....	25,184	326,020	188,967
5	387,701	763,029	16,710	37,990	125,567	11,833	441,530	6,652	3,254	.....	119,493	892,489	439,126
6	142,144	188,617	9,525	7,922	85,110	4,459	42,912	3,262	1,037	.....	14,390	203,888	156,517
7	344,704	323,594	9,470	19,122	119,137	3,103	113,145	4,240	2,258	.....	53,119	391,078	274,830
8	416,432	423,289	19,200	25,002	124,178	4,374	178,382	1,500	2,676	.....	67,977	538,703	355,947
9	300,079	290,184	7,960	2,313	62,869	2,052	192,144	3,456	2,345	2,000	15,045	340,433	146,237
10	359,167	489,529	24,542	20,611	211,133	4,833	187,603	8,565	2,003	985	29,254	609,504	477,068
11	2,580,865	2,591,107	101,122	60,641	530,363	79,071	1,610,528	15,271	19,203	.....	174,908	2,986,557	1,296,958

stamps and stencils and brands, 1; hosiery and knit goods, 1; house-furnishing goods, not elsewhere specified, 1; iron and steel, nails and spikes, cut and wrought, including wire nails, not made in steel works or rolling mills, 4; leather goods, 3; marble and stone work, 1; models and patterns, not including paper patterns, 3; mucilage and paste, 2; rubber goods, not elsewhere specified, 1; signs and advertising novelties, 1; slaughtering and meat packing, 3; sporting and athletic goods, 1; surgical appliances and artificial limbs, 1; tobacco manufactures, 1.

TABLE III.—DETAIL STATEMENT FOR CITIES OF 50,000 INHABITANTS OR MORE, BY INDUSTRIES, AND

CITIES OF 50,000 INHABITANTS OR MORE, BY INDUSTRIES—Continued.

CAMBRIDGE.

INDUSTRY.	Number of establishments	PERSONS ENGAGED IN INDUSTRY.									WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY.					Primary horse-power.
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks.		Wage earners (average number).			Total.	16 and over.		Under 16.			
					Male.	Female.	Total.	16 and over.	Under 16.		Male.	Female.	Male.	Female.		
															Male.		Female.
1 All industries.....	275	17,475	223	406	1,165	422	15,260	10,630	4,211	419	15,789	10,997	4,357	116	319	21,372
2 Bread and other bakery products.....	40	1,042	37	19	132	53	801	577	195	29	789	568	192	0	23	862
3 Carriages and wagons and materials.....	4	71	4	3	5	2	57	57	.....	.....	51	51	.....	.....	49	
4 Confectionery.....	12	804	11	19	55	19	700	164	449	87	757	177	485	5	90	517
5 Copper, tin, and sheet-iron products.....	6	246	4	12	22	8	200	184	14	2	203	191	15	2	100	
6 Foundry and machine-shop products.....	25	2,602	13	58	240	31	2,260	2,165	90	5	2,381	2,281	95	5	3,176	
7 Furniture and refrigerators.....	13	874	14	25	44	11	780	751	15	14	842	811	16	15	1,262	
8 Lumber and timber products.....	11	394	10	20	11	8	345	345	.....	.....	352	352	.....	.....	1,261	
9 Marble and stone work.....	12	336	7	14	11	4	302	302	.....	.....	243	243	.....	.....	887	
10 Musical instruments, pianos and organs and materials.....	7	1,272	6	24	83	21	1,138	905	147	86	1,206	959	156	18	73	1,211
11 Patent medicines and compounds and druggists' preparations.....	5	144	2	5	28	7	102	44	56	2	107	46	59	.....	102	
12 Printing and publishing.....	41	2,178	45	52	59	29	1,993	1,134	823	36	2,014	1,146	832	22	14	1,442
13 All other industries ¹	99	7,510	70	154	476	229	6,582	4,602	2,422	158	6,809	4,142	2,507	48	117	10,563

¹ All other industries embrace: Artificial stone, 1; automobiles, including bodies and parts, 3; babbit metal and solder, 1; belting and hose, woven and rubber, 1; blacking and cleansing and polishing preparations, 6; boots and shoes, rubber, 1; boxes, fancy and paper, 4; brass and bronze products, 2; brick and tile, 1; brooms, 1; brushes, 2; butter, cheese, and condensed milk, 1; canning and preserving, 1; cars and general shop construction and repairs by steam-railroad companies, 2; clothing, horse, 1; clothing, men's, including shirts, 2; clothing, women's, 1; coffins, burial cases, and undertakers' goods, 1; cooperage and wooden goods, not elsewhere specified, 1; cordage and twine and jute and linen goods, 1; cutlery and tools, not elsewhere specified, 1; electrical machinery, apparatus, and supplies, 4; flavoring extracts, 1; food preparations, 1; furnishing goods, men's 1; gas and electric fixtures and lamps and reflectors, 1; gas, illuminating and heating, 2; glass, cutting, staining, and ornamenting, 2; grease and tallow, 1; horseshoes, not made in steel works or rolling mills, 1; ink, writing, 1; instruments, professional and scientific, 2; jewelry, 2; jewelry

FALL RIVER.

1 All industries.....	288	38,210	247	336	382	106	37,139	20,459	14,949	1,731	38,078	21,032	15,284	868	894	122,061
2 Bread and other bakery products.....	74	318	74	.....	13	14	217	188	22	7	223	193	23	6	1	19
3 Cordage and twine and jute and linen goods.....	5	71	5	.....	.....	1	65	42	10	13	66	43	10	13	.....	150
4 Cotton goods, including cotton small wares.....	45	30,790	8	174	157	44	30,407	15,204	13,683	1,520	31,016	15,517	13,957	715	827	110,975
5 Foundry and machine-shop products.....	33	860	43	32	20	6	759	651	78	30	790	677	81	19	13	629
6 Liquors, malt.....	3	99	7	12	.....	.....	80	80	.....	.....	96	96	.....	.....	1,860	
7 Lumber and timber products.....	8	99	13	3	15	.....	68	66	.....	2	78	76	.....	2	.....	648
8 Marble and stone work.....	12	120	13	1	3	.....	103	99	.....	4	101	97	.....	4	.....	549
9 Printing and publishing.....	21	240	17	13	15	5	190	167	20	3	200	176	21	2	1	171
10 All other industries ¹	87	5,613	74	106	147	36	5,250	3,962	1,136	152	5,508	4,157	1,192	107	52	7,060

¹ All other industries embrace: Awnings, tents, and sails, 2; belting and hose, leather, 2; blacking and cleansing and polishing preparations, 1; boots and shoes, including cut stock and findings, 1; brooms, 1; brushes, 2; canning and preserving, 2; carpets, rag, 1; carriages and wagons and materials, 5; cars and general shop construction and repairs by street-railroad companies, 1; clothing, horse, 1; clothing, men's, including shirts, 1; clothing, women's, 1; coffins, burial cases, and undertakers' goods, 1; confectionery, 4; copper, tin, and sheet-iron products, 6; cutlery and tools, not elsewhere specified, 1; dyeing and finishing textiles, 4; electroplating, 1; flavoring extracts, 1;

HOLYOKE.

1 All industries.....	187	17,776	153	326	484	300	16,513	8,904	6,458	1,149	17,417	9,373	6,815	496	733	60,269
2 Brass and bronze products.....	3	61	4	3	5	4	45	43	2	.....	45	43	2	.....	.....	55
3 Bread and other bakery products.....	27	181	33	6	9	25	108	103	3	2	109	104	3	2	.....	24
4 Foundry and machine-shop products.....	17	1,190	14	43	106	25	1,002	976	1	25	1,092	1,064	1	27	.....	1,455
5 Lumber and timber products.....	4	153	2	11	7	2	131	127	.....	4	131	127	.....	4	.....	410
6 Paper and wood pulp.....	23	4,764	.....	86	122	66	4,480	2,643	1,805	32	4,540	2,678	1,829	5	28	39,069
7 Paper goods, not elsewhere specified.....	4	457	.....	8	14	18	417	266	139	12	435	277	145	4	9	740
8 Printing and publishing.....	27	896	19	21	59	51	786	444	195	97	765	461	203	63	38	371
9 Tobacco manufactures.....	17	96	17	.....	4	2	73	58	14	1	74	59	14	1	.....	.....
10 All other industries ¹	65	9,998	64	148	158	107	9,521	4,246	4,299	976	10,226	4,560	4,618	390	658	18,145

¹ All other industries embrace: Artificial stone, 4; belting and hose, leather, 1; bluing, 1; boxes, fancy and paper, 1; brick and tile, 1; brooms, 1; carpets, rag, 1; carriages and wagons and materials, 3; copper, tin, and sheet-iron products, 4; cotton goods, including cotton small wares, 4; cutlery and tools, not elsewhere specified, 1; dyeing and finishing textiles, 1; electroplating, 1; flour-mill and gristmill products, 2; furniture and refrigerators, 1; gas, illuminating and heating, 1; hand stamps and stencils and brands, 1; leather goods, 3; marble and stone work, 3; mattresses and spring beds, 1; mineral and soda waters, 3; models and patterns, not including paper

LAWRENCE.

1 All industries.....	162	31,589	145	322	378	202	30,542	17,493	11,444	1,605	30,747	17,704	11,443	833	767	73,066
2 Bread and other bakery products.....	26	184	32	.....	6	3	143	128	12	3	157	141	13	2	1	129
3 Carriages and wagons and materials.....	8	193	7	5	4	6	171	171	.....	.....	176	176	.....	.....	.....	220
4 Cotton goods, including cotton small wares.....	6	4,978	1	29	22	12	4,914	2,439	2,262	213	5,145	2,554	2,368	124	99	16,172
5 Foundry and machine-shop products.....	27	1,126	23	38	26	27	1,012	911	82	19	1,031	928	84	11	8	1,238
6 Lumber and timber products.....	5	423	2	7	9	3	402	401	.....	1	428	427	.....	1	.....	1,170
7 Printing and publishing.....	18	176	21	9	12	8	126	113	8	5	131	118	8	5	.....	166
8 Woolen, worsted, and felt goods and wool hats.....	15	20,668	17	162	190	96	20,203	10,585	8,378	1,240	19,783	10,365	8,204	613	601	44,638
9 All other industries ¹	57	3,841	42	72	109	47	3,571	2,745	702	124	3,896	2,995	766	77	58	9,333

¹ All other industries embrace: Belting and hose, leather, 1; belting and hose, woven and rubber, 1; boots and shoes, including cut stock and findings, 2; boxes, fancy and paper, 1; brass and bronze products, 2; brooms, 2; brushes, 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; clothing, women's, 1; copper, tin, and sheet-iron products, 1; dyeing and finishing textiles, 6; files, 1; flour-mill

STATISTICS OF MANUFACTURES.

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TOTALS FOR ALL INDUSTRIES IN CITIES OF 10,000 BUT LESS THAN 50,000 INHABITANTS: 1909—Continued.

CITIES OF 50,000 INHABITANTS OR MORE, BY INDUSTRIES—Continued.

CAMBRIDGE.

	Capital.	EXPENSES.										Value of products.	Value added by manufacture.
		Total.	Services:			Materials.		Miscellaneous.					
			Officials.	Clerks.	Wage earners.	Fuel and rent of power.	Other.	Rent of factory.	Taxes, including internal revenue.	Contract work.	Other.		
1	\$37,928,906	\$38,452,610	\$1,038,932	\$1,365,266	\$8,365,454	\$750,197	\$22,815,460	\$24,653	\$323,944	\$192,543	\$3,396,161	\$44,227,395	\$20,661,738
2	4,229,958	2,787,932	37,420	111,708	440,038	45,994	1,914,716	19,073	18,283	1,000	199,700	2,962,488	1,001,778
3	66,651	91,183	3,528	5,484	34,355	2,247	37,121	5,030	494	-----	2,924	104,957	65,589
4	855,174	1,629,470	41,958	89,590	217,568	15,524	1,156,187	5,845	8,668	-----	94,130	1,909,771	738,000
5	448,273	488,763	18,492	36,128	18,492	6,363	267,396	3,674	4,506	-----	47,717	530,191	256,432
6	8,093,990	4,113,317	188,284	215,125	1,429,648	65,813	1,695,350	10,268	38,746	101,483	368,600	4,788,694	3,027,531
7	1,443,067	1,287,249	53,908	71,024	603,280	23,200	393,308	15,825	11,604	4,652	110,448	1,392,270	975,762
8	653,901	773,240	42,171	13,247	231,757	7,955	400,786	16,948	6,767	4,000	49,609	875,063	466,322
9	441,767	515,875	26,367	14,192	241,838	13,391	169,569	7,318	3,996	3,970	35,234	605,045	422,088
10	2,708,312	1,984,745	66,066	86,776	635,775	20,529	922,035	17,137	20,835	1,997	213,595	2,173,533	1,230,969
11	214,746	245,791	6,728	27,439	59,848	2,516	117,145	730	3,718	-----	27,667	264,435	144,774
12	2,350,069	2,907,004	110,852	80,321	1,185,264	24,099	1,255,644	36,892	22,449	64,491	126,992	3,367,588	2,087,845
13	16,422,998	21,628,041	425,522	631,868	3,181,596	622,566	14,486,203	65,913	183,878	2,119,545	10,950	25,253,357	10,244,588

and instrument cases, 1; leather, tanned, curried, and finished, 1; looking-glass and picture frames, 4; mattresses and spring beds, 1; mineral and soda waters, 2; models and patterns, not including paper patterns, 1; muclage and paste, 2; oil, not elsewhere specified, 1; paint and varnish, 1; paper goods, not elsewhere specified, 1; paving materials, 1; pottery, terra-cotta, and fire-clay products, 1; shipbuilding, including boat building, 2; show cases, 1; silk and silk goods, including throwsters, 1; slaughtering and meat packing, 6; smelting and refining, not from the ore, 1; soap, 3; springs, steel, car and carriage, 1; stationery goods, not elsewhere specified, 1; steam packing, 1; sugar, refining, not including beet sugar, 1; tobacco manufactures, 4; window shades and fixtures, 1; wirework, including wire rope and cable, 1; wood, turned and carved, 3.

FALL RIVER.

1	\$82,086,197	\$56,477,066	\$1,146,234	\$367,978	\$15,339,041	\$1,720,300	\$33,803,632	\$74,788	\$1,041,478	\$182,181	\$2,801,434	\$64,145,728	\$28,621,794
2	183,624	663,873	-----	12,662	126,875	17,793	461,589	16,430	1,910	190	26,424	796,054	316,672
3	335,646	87,289	-----	468	19,455	960	62,049	1,200	585	532	2,040	102,020	39,011
4	62,747,923	43,287,104	666,707	159,312	12,105,778	1,230,448	26,332,719	625	853,613	145,950	1,791,952	48,576,114	21,012,947
5	969,201	1,119,270	63,767	18,862	372,810	20,377	584,319	12,575	7,153	475	38,932	1,341,712	737,016
6	1,115,990	324,910	21,240	8,213	45,114	16,325	89,887	-----	64,641	33,124	46,366	380,520	274,308
7	183,499	269,036	5,270	13,790	38,150	1,003	205,079	792	1,005	-----	3,947	318,300	112,218
8	80,961	119,912	1,100	2,380	80,958	7,041	16,562	624	1,908	1,310	8,029	158,252	134,649
9	417,998	321,508	20,810	11,758	142,294	5,986	89,440	8,527	3,681	300	38,712	365,309	269,893
10	16,051,355	10,284,164	367,340	140,533	2,407,607	420,367	5,961,988	34,015	106,982	300	845,032	12,107,445	5,726,090

four-mill and gristmill products, 3; furnishing goods, men's, 2; furniture and refrigerators, 1; gas, illuminating and heating, 1; grease and tallow, 1; hat and cap materials, 1; hats, fur-felt, 2; jewelry, 1; mattresses and spring beds, 1; millinery and lace goods, 1; mineral and soda waters, 6; models and patterns, not including paper patterns, 1; musical instruments, pianos and organs and materials, 4; paint and varnish, 1; paper goods, not elsewhere specified, 3; patent medicines and compounds and druggists' preparations, 2; pipes, tobacco, 1; slaughtering and meat packing, 7; tobacco manufactures, 7; waste, 1; wood, turned and carved, 1.

HOLYOKE.

1	\$42,674,771	\$36,454,996	\$1,001,399	\$675,892	\$8,075,677	\$1,169,800	\$21,130,787	\$58,205	\$364,730	\$1,421,770	\$2,556,736	\$40,097,224	\$17,796,637
2	94,851	126,367	5,000	7,072	28,609	2,597	61,879	1,280	448	-----	19,482	139,980	75,504
3	159,069	403,773	5,304	14,274	76,008	9,279	265,894	8,823	1,405	-----	22,786	464,258	169,085
4	2,837,551	1,807,720	125,408	100,333	621,479	36,289	806,878	2,404	15,177	540	99,212	2,094,914	1,251,747
5	233,411	295,918	12,517	7,474	70,558	1,149	175,399	-----	3,550	-----	25,271	361,843	185,295
6	14,036,314	10,959,322	374,139	177,633	2,210,881	743,346	6,500,802	955	148,812	-----	803,254	12,304,800	5,061,152
7	1,353,409	1,326,266	39,343	41,757	203,798	14,481	932,830	850	8,309	-----	84,898	1,423,820	476,509
8	1,427,597	1,280,029	44,750	92,066	370,596	9,748	623,746	4,443	10,316	23,170	100,594	1,449,545	816,051
9	58,143	103,037	-----	3,242	43,725	644	37,666	3,480	10,736	-----	3,544	128,235	89,925
10	22,474,436	20,152,564	394,938	231,441	4,450,023	352,267	11,726,193	35,970	165,977	1,398,060	1,397,695	21,729,329	9,651,369

patterns, 1; muclage and paste, 1; musical instruments and materials, not specified, 1; silk and silk goods, including throwsters, 2; slaughtering and meat packing, 3; stationery goods, not elsewhere specified, 7; stereotyping and electrotyping, 1; umbrellas and canes, 1; washing machines and clothes wringers, 1; wire, 1; wirework, including wire rope and cable, 2; woolen, worsted, and felt goods, and wool hats, 5.

LAWRENCE.

1	\$79,550,475	\$65,297,219	\$1,062,461	\$518,120	\$13,786,580	\$1,615,772	\$43,822,290	\$50,729	\$560,363	\$446,799	\$3,434,105	\$79,992,668	\$34,554,606
2	292,311	496,560	-----	8,944	88,835	12,202	355,074	4,278	2,419	250	24,558	572,225	204,949
3	400,769	311,117	13,970	5,980	99,631	4,838	164,875	1,740	3,794	350	15,939	333,756	214,043
4	9,149,634	6,451,107	93,705	26,926	2,029,692	147,195	3,771,249	200	107,949	2,457	271,834	6,825,500	2,907,056
5	1,440,953	1,539,830	69,410	38,801	578,487	34,697	692,276	13,435	16,038	9,388	87,498	1,720,443	993,470
6	774,899	1,324,077	13,813	8,366	229,776	3,243	1,034,008	2,100	7,443	-----	25,328	1,389,832	352,531
7	169,314	210,564	20,254	12,773	88,626	7,869	58,627	8,736	1,105	1,260	11,314	253,851	187,355
8	57,467,392	46,573,913	637,538	299,849	8,898,508	942,656	32,714,237	8,037	281,832	228,460	2,562,796	58,535,950	24,879,057
9	9,855,213	8,389,951	213,771	116,681	1,773,025	463,072	5,031,944	12,203	139,783	204,634	434,838	10,311,111	4,816,095

and gristmill products, 1; food preparations, 1; gas, illuminating and heating, 1; jewelry, 1; leather goods, 1; liquors, malt, 1; marble and stone work, 6; mats and matting, 1; mattresses and spring beds, 1; mineral and soda waters, 4; models and patterns, not including paper patterns, 1; paper and wood pulp, 4; shipbuilding, including boat building, 1; slaughtering and meat packing, 3; soap, 1; tobacco manufactures, 4; wood, turned and carved, 2; wool scouring, 1.

TABLE III.—DETAIL STATEMENT FOR CITIES OF 50,000 INHABITANTS OR MORE, BY INDUSTRIES, AND CITIES OF 50,000 INHABITANTS OR MORE, BY INDUSTRIES—Continued.

LOWELL.

INDUSTRY.	Number of establishments	PERSONS ENGAGED IN INDUSTRY.										WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY.				Primary horse-power.
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks.		Wage earners (average number).			Total.	16 and over.		Under 16.			
					Male.	Female.	Total.	16 and over.			Under 16.	Male.	Female.	Male.	Female.	
								Male.	Female.							
1 All industries.....	320	34,108	318	343	539	335	32,575	20,263	11,083	1,229	34,009	21,299	11,427	617	668	72,012
2 Boots and shoes, including cut stock and findings.....	7	1,343	3	32	25	24	1,259	822	346	91	1,603	1,047	441	81	34	618
3 Bread and other bakery products.....	46	298	65	3	27	37	166	157	7	2	178	169	7	2	58	
4 Cotton goods, including cotton small wares.....	11	14,003	2	51	83	34	13,833	7,550	5,789	494	13,904	7,589	5,819	224	272	41,955
5 Foundry and machine-shop products.....	35	2,735	30	40	38	28	2,599	2,573	13	13	3,044	3,013	15	12	4	2,706
6 Lumber and timber products.....	17	462	18	13	8	13	410	408	2	2	458	456	2	2	1,637	
7 Patent medicines and compounds and druggists' preparations.....	7	257	4	7	23	40	183	109	73	1	193	115	77	1	496	
8 Printing and publishing.....	26	354	26	25	34	19	250	208	40	2	265	220	43	2	349	
9 Woolen, worsted, and felt goods, and wool hats.....	12	3,187	10	29	58	41	3,049	1,497	1,372	180	3,422	1,681	1,540	68	133	6,257
10 All other industries ¹	159	11,460	158	143	243	99	10,826	6,939	3,443	444	10,942	7,009	3,485	226	222	17,936

¹ All other industries embrace: Artists' materials, 1; awnings, tents, and sails, 2; baking powders and yeast, 1; belting and hose, leather, 1; blacking and cleansing and polishing preparations, 3; bluing, 1; boxes, fancy and paper, 3; brass and bronze products, 3; brushes, 2; buttons, 1; canning and preserving, 2; carpets and rugs, other than rag, 2; carpets, rag, 1; carriages and wagons and materials, 3; cars and general shop construction and repairs by street-railroad companies, 1; clothing, men's, including shirts, 1; clothing, women's, 3; coffee and spice, roasting and grinding, 1; coffins, burial cases, and undertakers' goods, 1; confectionery, 7; copper, tin, and sheet-iron products, 6; cordage and twine and jute and linen goods, 1; cutlery and tools, not elsewhere specified, 1; dyeing and finishing textiles, 2; electrical machinery, apparatus, and supplies, 5; electroplating, 2; fancy articles, not elsewhere specified, 1; files, 1; firearms and ammunition, 1; flags, banners, regalia, society badges, and emblems, 1; flavoring extracts, 1; flour-mill and gristmill products, 1; food preparations, 4; furnishing goods, men's, 4; furniture and refrigerators, 2; gas and electric fixtures and lamps

LYNN.

1 All industries.....	431	30,685	469	731	1,212	905	27,368	19,077	8,063	228	29,508	20,657	8,609	155	87	17,089
2 Blacking and cleansing and polishing preparations.....	14	109	19	6	27	13	44	44	44	44	44	44	44	44	44	76
3 Boots and shoes, including cut stock and findings.....	207	17,942	240	343	440	570	16,349	9,924	6,229	190	17,176	10,422	6,546	136	72	5,488
4 Boxes, fancy and paper.....	6	378	1	14	2	13	348	157	174	17	309	167	184	4	14	265
5 Bread and other bakery products.....	37	222	38	4	7	8	165	145	19	1	167	147	19	1	42	
6 Foundry and machine-shop products.....	26	518	29	28	26	24	411	409	1	1	452	480	1	1	370	
7 Lasts.....	5	95	8	6	6	81	81	81	81	81	83	83	83	83	187	
8 Leather, tanned, curried, and finished.....	8	1,148	1	32	40	13	1,062	1,060	2	2	1,074	1,072	2	2	1,185	
9 Lumber and timber products.....	6	142	5	2	1	5	129	106	23	23	134	110	24	2	368	
10 Patent medicines and compounds and druggists' preparations.....	7	93	5	8	4	2	74	29	45	77	77	30	47	41		
11 Printing and publishing.....	26	331	27	10	49	17	228	184	38	6	233	188	39	6	177	
12 All other industries ¹	89	9,707	96	284	610	240	8,477	6,938	1,534	5	9,669	7,914	1,749	5	1	8,886

¹ All other industries embrace: Artificial stone, 2; awnings, tents, and sails, 1; brass and bronze products, 2; brick and tile, 2; carriages and wagons and materials, 5; cars and general shop construction and repairs by street-railroad companies, 1; clothing, men's, buttonholes, 1; clothing, men's, including shirts, 2; clothing, women's, 1; confectionery, 2; cooperage and wooden goods, not elsewhere specified, 2; copper, tin, and sheet-iron products, 1; cutlery and tools, not elsewhere specified, 2; electrical machinery, apparatus, and supplies, 6; fancy articles, not elsewhere specified, 1; flavoring extracts, 2; flour-mill and gristmill products, 2; food preparations, 2; gas,

NEW BEDFORD.

1 All industries.....	207	27,538	303	205	334	130	26,568	15,700	9,516	1,350	27,340	16,224	9,731	687	698	76,147
2 Bread and other bakery products.....	44	492	163	6	25	9	289	233	52	4	311	251	56	3	1	99
3 Carriages and wagons and materials.....	6	76	6	2	1	1	66	66	66	66	66	66	66	66	66	45
4 Cotton goods, including cotton small wares.....	22	22,457	3	104	169	40	22,141	12,026	8,875	1,240	22,580	12,264	9,051	613	652	68,155
5 Foundry and machine-shop products.....	16	313	13	16	2	6	276	257	17	2	301	281	18	2	1,019	
6 Lumber and timber products.....	8	196	11	3	7	4	171	161	10	10	245	230	15	15	759	
7 Printing and publishing.....	17	314	18	12	10	9	265	221	40	4	272	227	41	4	199	
8 All other industries ¹	94	3,690	89	62	120	61	3,358	2,736	532	90	3,565	2,905	565	50	45	5,871

¹ All other industries embrace: Artificial stone, 3; awnings, tents, and sails, 2; baking powders and yeast, 1; boots and shoes, including cut stock and findings, 3; boxes, fancy and paper, 2; brass and bronze products, 3; brooms, 1; card cutting and designing, 1; carpets and rugs, other than rag, 1; cars and general shop construction and repairs by street-railroad companies, 1; chemicals, 1; clothing, men's, including shirts, 1; confectionery, 1; cooperage and wooden goods, not elsewhere specified, 2; copper, tin, and sheet-iron products, 5; cordage and twine and jute and linen goods, 4; cutlery and tools, not elsewhere specified, 1; electrical machinery, apparatus, and supplies, 1; electroplating, 1; fancy articles, not elsewhere specified, 1; firearms and ammunition, 1; furniture and refrigerators, 2; gas, illuminating and heating, 1; glass, 1; glass,

SOMERVILLE.

1 All industries.....	114	5,951	97	99	363	112	5,280	4,841	370	69	5,446	4,981	393	69	3	7,680
2 Bread and other bakery products.....	28	180	33	2	5	20	120	83	35	2	126	87	37	2	55	
3 Foundry and machine-shop products.....	6	108	7	3	4	4	94	92	2	2	78	76	2	2	72	
4 Slaughtering and meat packing.....	7	2,553	2	20	211	28	2,292	2,244	27	21	2,271	2,224	27	18	2	3,308
5 All other industries ¹	73	3,110	55	77	144	60	2,774	2,422	308	44	2,971	2,594	329	47	1	4,245

¹ All other industries embrace: Artificial stone, 1; blacking and cleansing and polishing preparations, 1; bluing, 1; boxes, fancy and paper, 1; brass and bronze products, 2; brooms, 1; brushes, 1; carriages and wagons and materials, 3; cars and general shop construction and repairs by steam-railroad companies, 2; clothing, men's, including shirts, 1; clothing, women's, 1; coffins, burial cases, and undertakers' goods, 1; confectionery, 4; cooperage and wooden goods, not elsewhere specified, 3; copper, tin, and sheet-iron products, 1; cutlery and tools, not elsewhere specified, 2; dyeing and finishing textiles, 1; electrical machinery, apparatus, and supplies, 2; fancy articles, not

STATISTICS OF MANUFACTURES.

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TOTALS FOR ALL INDUSTRIES IN CITIES OF 10,000 BUT LESS THAN 50,000 INHABITANTS: 1909—Continued.

CITIES OF 50,000 INHABITANTS OR MORE, BY INDUSTRIES—Continued.

LOWELL.

	EXPENSES.											Value of products.	Value added by manufacture.
	Capital.	Total.	Services.			Materials.		Miscellaneous.					
			Officials.	Clerks.	Wage earners.	Fuel and rent of power.	Other.	Rent of factory.	Taxes, including internal revenue.	Contract work.	Other.		
1	\$61,983,551	\$53,714,612	\$917,937	\$764,474	\$14,149,106	\$1,245,648	\$31,585,097	\$200,289	\$709,798	\$72,087	\$4,070,176	\$60,270,361	\$27,440,216
2	963,999	2,443,359	53,126	33,292	561,739	13,773	1,668,227	9,734	5,286	.....	98,182	2,649,838	967,838
3	171,152	662,430	4,736	28,391	103,326	15,231	467,156	16,682	2,179	.....	24,729	750,090	267,703
4	24,270,467	21,701,563	216,302	114,286	5,652,636	522,211	13,420,622	4,023	204,340	.....	1,567,073	24,744,240	10,801,337
5	4,484,935	3,751,735	104,580	79,732	1,418,293	76,840	1,745,840	11,623	44,179	.....	3,969	4,332,969	2,510,739
6	719,722	1,011,019	14,658	11,958	211,162	3,442	730,454	16,925	5,436	.....	16,634	1,066,171	332,275
7	1,658,668	1,046,683	29,262	52,596	94,610	5,588	343,278	19,550	7,089	150	494,560	1,130,049	781,183
8	616,395	662,812	59,274	44,674	177,853	12,613	286,849	14,735	5,133	13,394	48,237	796,064	496,602
9	6,152,264	5,842,718	83,050	50,585	1,336,700	128,765	3,921,083	40,104	40,049	52,803	191,579	6,106,083	2,067,235
10	22,945,949	16,592,293	352,949	348,960	4,592,787	469,685	9,001,518	66,913	396,007	1,871	1,361,603	18,698,457	9,225,254

and reflectors, 1; gas, illuminating and heating, 1; glucose and starch, 1; glue, 1; hand stamps and stencils and brands, 3; hats, fur-felt, 1; hosiery and knit goods, 5; jewelry, 2; leather goods, 5; leather, tanned, curried, and finished, 3; liquors, malt, 1; marble and stone work, 9; mats and matting, 1; mattresses and spring beds, 2; millinery and lace goods, 2; mineral and soda waters, 4; models and patterns, not including paper patterns, 2; musical instruments, pianos and organs and materials, 1; needles, pins, and hooks and eyes, 1; paint and varnish, 1; paper goods, not elsewhere specified, 4; phonographs and graphophones, 1; scales and balances, 1; screws, machine, 1; shipbuilding, including boat building, 1; silk and silk goods, including throwsters, 1; slaughtering and meat packing, 2; soap, 2; stationery goods, not elsewhere specified, 1; stereotyping and electrotyping, 1; surgical appliances and artificial limbs, 2; tobacco manufactures, 13; vinegar and cider, 1; waste, 1; wirework, including wire rope and cable, 3; wood, turned and carved, 4.

LYNN.

1	\$42,784,070	\$65,098,218	\$1,380,372	\$1,627,342	\$15,665,818	\$559,110	\$40,801,977	\$565,153	\$185,487	\$220,589	\$4,092,370	\$71,503,140	\$30,142,063
2	178,313	393,522	8,480	28,692	30,784	299	270,149	11,738	598	.....	42,782	536,691	266,243
3	17,488,156	42,724,036	580,754	775,611	9,532,137	53,656	29,094,006	435,412	59,627	176,000	2,016,833	46,659,709	17,512,047
4	238,297	654,636	29,200	9,639	169,130	2,558	401,269	12,900	2,781	.....	27,159	730,147	326,320
5	119,353	601,400	5,931	7,910	110,906	9,449	433,587	13,337	952	.....	19,245	651,043	235,007
6	825,646	642,845	41,041	35,539	253,578	8,865	169,062	21,921	4,974	.....	107,865	796,840	621,913
7	192,943	198,210	.....	7,609	60,630	2,153	73,086	4,426	524	35,934	13,857	266,207	190,968
8	2,656,152	4,897,520	100,556	46,959	456,925	25,711	3,983,756	22,433	9,674	3,501	248,205	5,063,927	1,084,460
9	296,158	293,933	2,760	3,767	82,311	1,551	186,496	780	1,394	.....	14,874	330,140	142,093
10	1,051,144	846,487	32,600	3,336	38,564	951	193,611	1,014	7,221	140	564,030	948,401	748,699
11	313,030	440,821	33,262	43,252	144,989	5,521	156,724	10,669	4,304	4,384	37,716	536,672	374,427
12	19,424,979	13,404,819	545,988	665,028	4,785,864	448,396	5,835,231	30,473	93,408	630	999,801	14,920,363	8,686,786

illuminating and heating, 1; grease and tallow, 1; hand stamps and stencils and brands, 1; hosiery and knit goods, 1; jewelry, 1; lard, refined, not made in slaughtering and meat-packing establishments, 1; leather goods, 5; liquors, malt, 1; marble and stone work, 6; mattresses and spring beds, 2; mineral and lace goods, 1; mineral and soda waters, 2; models and patterns, not including paper patterns, 10; mucilage and paste, 2; photo-engraving, 1; shipbuilding, including boat building, 5; slaughtering and meat packing, 1; soap, 2; steam packing, 1; surgical appliances and artificial limbs, 1; tobacco manufactures, 4; upholstering materials, 1; wood, turned and carved, 1.

NEW BEDFORD.

1	\$58,970,015	\$45,333,937	\$756,355	\$489,092	\$12,597,978	\$1,018,029	\$27,545,539	\$41,973	\$795,390	\$112,826	\$1,976,755	\$53,237,839	\$24,674,271
2	331,298	826,641	5,284	24,558	159,874	12,403	535,462	10,465	1,518	.....	77,077	1,022,829	474,964
3	105,308	82,824	2,500	1,700	37,168	1,393	34,698	186	1,022	420	3,737	105,114	69,023
4	50,317,516	36,101,728	519,055	214,794	10,114,756	754,525	22,535,232	500	660,680	64,917	1,237,269	42,505,007	19,215,250
5	324,673	406,755	14,688	4,257	176,107	11,354	181,085	8,042	1,675	1,199	8,848	454,106	261,667
6	405,614	377,339	7,880	18,739	93,377	1,360	230,152	1,246	1,413	.....	23,172	412,398	180,881
7	345,100	395,883	39,928	12,352	171,122	8,428	121,035	8,667	1,182	5,425	27,744	432,574	353,111
8	7,140,506	7,142,767	167,020	212,692	1,845,874	228,566	3,907,875	12,867	127,900	40,865	599,408	8,255,816	4,119,375

cutting, staining and ornamenting, 1; grease and tallow, 2; hand stamps and stencils and brands, 1; ice, manufactured, 3; leather goods, 3; liquors, malt, 2; marble and stone work, 6; mineral and soda waters, 3; musical instruments and materials, not specified, 1; oil, not elsewhere specified, 4; paint and varnish, 2; paper and wood pulp, 1; paper goods, not elsewhere specified, 1; patent medicines and compounds and druggists' preparations, 2; screws, wood, 1; shipbuilding, including boat building, 4; silk and silk goods, including throwsters, 1; silverware and plated ware, 1; slaughtering and meat packing, 6; tobacco manufactures, 4; toys and games, 1; waste, 1; wood, turned and carved, 1; woolen, worsted, and felt goods, and wool hats, 1.

SOMERVILLE.

1	\$17,282,271	\$36,581,008	\$244,357	\$447,210	\$2,869,808	\$315,843	\$31,607,019	\$53,865	\$178,985	\$18,124	\$845,797	\$38,686,527	\$6,763,665
2	154,834	373,394	1,680	10,568	67,867	7,957	260,843	7,739	1,632	.....	15,108	429,170	160,370
3	207,963	166,462	.....	7,419	45,941	6,239	88,867	1,153	1,086	200	15,552	196,951	101,845
4	12,221,306	29,897,543	84,360	241,315	1,296,352	166,182	27,699,381	14,532	87,551	.....	367,570	31,270,261	3,404,698
5	4,698,168	6,143,609	158,317	187,908	1,519,648	135,465	3,557,928	30,436	88,716	17,924	447,267	6,790,145	3,096,752

elsewhere specified, 1; furniture and refrigerators, 3; glass, 1; glass, cutting, staining and ornamenting, 1; grease and tallow, 3; jewelry, 4; leather goods, 3; liquors, distilled, 1; looking glass and picture frames, 1; lumber and timber products, 2; marble and stone work, 1; mineral and soda waters, 1; printing and publishing, 14; soap, 1; stationery goods, not elsewhere specified, 1; tobacco manufactures, 2; vinegar and cider, 1; window shades and fixtures, 1; wirework, including wire rope and cable, 1; wood, turned and carved, 1.

SUPPLEMENT FOR MASSACHUSETTS.

TABLE III.—DETAIL STATEMENT FOR CITIES OF 50,000 INHABITANTS OR MORE, BY INDUSTRIES, AND CITIES OF 50,000 INHABITANTS OR MORE, BY INDUSTRIES—Continued.
SPRINGFIELD.

INDUSTRY.	Number of establishments	PERSONS ENGAGED IN INDUSTRY.									WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY.				Primary horse-power.	
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks.		Wage earners (average number).			Total.	16 and over.		Under 16.			
					Male.	Female.	Total.	16 and over.			Under 16.	Male.	Female.	Male.		Female.
								Male.	Female.							
1 All industries.....	346	14,455	288	425	878	1,009	11,855	8,715	2,726	414	12,620	9,261	2,910	205	244	17,744
2 Brass and bronze products.....	7	197	6	10	10	7	164	151	13	.....	167	154	13	.....	.....	129
3 Bread and other bakery products.....	27	171	30	1	7	6	127	105	21	1	142	118	23	1	.....	52
4 Carriages and wagons and materials.....	8	99	10	.....	5	2	82	79	2	1	74	71	2	1	.....	18
5 Confectionery.....	5	497	3	7	61	10	326	129	137	60	391	155	164	23	49	184
6 Cutlery and tools, not elsewhere specified..	4	312	5	8	7	5	287	272	.....	15	332	314	.....	18	.....	648
7 Electrical machinery, apparatus, and supplies.....	5	181	1	8	8	10	154	129	19	6	192	161	23	6	2	198
8 Fancy articles, not elsewhere specified.....	5	71	4	4	4	3	56	25	30	1	122	55	65	.....	2	23
9 Foundry and machine-shop products.....	39	1,779	21	51	113	40	1,554	1,509	16	29	1,679	1,630	17	32	.....	3,438
10 Lumber and timber products.....	10	350	7	18	14	7	334	329	.....	5	345	340	.....	5	.....	1,436
11 Printing and publishing.....	51	2,077	38	66	244	704	1,025	787	200	38	1,089	836	213	27	13	1,632
12 Slaughtering and meat packing.....	3	130	4	4	15	4	109	107	2	.....	114	112	2	.....	.....	125
13 Tobacco manufactures.....	29	463	33	2	16	4	408	235	108	5	455	262	187	4	2	6
14 All other industries ¹	153	8,182	126	246	374	207	7,229	4,858	2,118	253	7,518	5,053	2,201	88	176	9,805

¹ All other industries embrace: Artificial stone, 1; automobiles, including bodies and parts, 10; awnings, tents, and sails, 1; bicycles, motorcycles, and parts, 2; billiard tables and materials, 1; boots and shoes, including cut stock and findings, 1; boxes, fancy and paper, 2; brick and tile, 2; brooms, 1; brushes, 1; butter, cheese, and condensed milk, 2; buttons, 3; canning and preserving, 1; card cutting and designing, 1; carpets, rag, 2; cars and general shop construction and repairs by steam-railroad companies, 2; cars and general shop construction and repairs by street-railroad companies, 1; cars, steam-railroad, not including operations of railroad companies, 1; cash registers and calculating machines, 1; chemicals, 1; clothing, men's, including shirts, 2; clothing, women's, 1; coffee and spice, roasting and grinding, 2; cooperage and wooden goods, not elsewhere specified, 1; copper, tin, and sheet-iron products, 4; corsets, 2; cotton goods, including cotton small wares, 3; electroplating, 2; emery and other abrasive wheels, 1; engraving and diesinking, 2; firearms and ammunition, 1; flags, banners, regalia, society badges, and emblems, 2; flavoring extracts, 2; flour-mill and gristmill products, 1; food preparations, 2; fur goods, 2; furniture and refrigerators, 1; gas and electric fixtures and lamps and reflectors, 2; gas, illuminating and heating, 1; gold and silver.

WORCESTER.

1 All industries.....	580	32,154	750	810	1,700	673	28,221	21,355	5,745	1,121	31,162	23,608	6,327	641	586	53,406
2 Boots and shoes, including cut stock and findings.....	11	896	8	18	27	14	829	485	294	50	867	507	308	21	31	399
3 Bread and other bakery products.....	67	846	329	18	50	36	413	267	122	24	419	271	124	3	21	180
4 Carriages and wagons and materials.....	12	87	10	2	1	3	71	71	.....	.....	67	67	.....	.....	.....	63
5 Clothing, men's, including shirts.....	16	322	21	7	5	1	288	74	200	14	330	85	229	.....	16	58
6 Clothing, women's.....	18	1,252	29	17	64	82	1,060	150	900	10	1,208	171	1,026	.....	11	219
7 Copper, tin, and sheet-iron products.....	10	232	6	13	10	8	195	153	30	12	228	179	35	6	8	247
8 Cotton goods, including cotton small wares.....	4	274	1	8	5	6	254	51	174	29	255	51	175	5	24	425
9 Cutlery and tools, not elsewhere specified..	11	448	7	13	7	12	409	362	27	20	459	406	30	20	3	1,104
10 Foundry and machine-shop products.....	89	7,161	55	172	302	129	6,503	6,314	46	143	7,393	7,176	50	165	2	6,891
11 Lumber and timber products.....	12	362	9	17	6	10	320	304	14	2	338	321	15	2	.....	1,154
12 Marble and stone work.....	10	253	10	7	7	2	227	227	.....	.....	193	193	.....	.....	.....	862
13 Printing and publishing.....	53	767	45	40	69	28	585	505	65	15	604	521	67	16	.....	384
14 Tobacco manufactures.....	20	94	25	2	2	.....	65	49	16	.....	83	62	21	.....	.....	2
15 Woolen, worsted, and felt goods, and wool hats.....	15	1,802	8	42	21	9	1,722	730	816	176	1,885	800	893	57	135	3,990
16 All other industries ¹	232	17,358	187	434	1,124	333	15,280	11,613	3,041	626	16,833	12,798	3,354	346	335	37,449

¹ All other industries embrace: Agricultural implements, 2; artificial stone, 2; automobiles, including bodies and parts, 1; awnings, tents, and sails, 2; bags, other than paper, 2; belting and hose, leather, 3; belting and hose, woven and rubber, 1; bicycles, motorcycles, and parts, 3; billiard tables and materials, 1; blacking and cleansing and polishing preparations, 2; bluing, 1; boxes, cigar, 1; boxes, fancy and paper, 1; brass and bronze products, 4; brick and tile, 1; brooms, 1; brushes, 3; buttons, 2; canning and preserving, 1; carpets and rugs, other than rag, 1; carpets, rag, 2; cars and general shop construction and repairs by steam-railroad companies, 1; cars and general shop construction and repairs by street-railroad companies, 1; cars, steam-railroad, not including operations of railroad companies, 1; coffee and spice, roasting and grinding, 1; coffins, burial cases, and undertakers' goods, 1; confectionery, 4; cooperage and wooden goods, not elsewhere specified, 2; cordials and sirups, 1; corsets, 6; dairymen's, poultryers', and apiculturists' supplies, 1; dentists' materials, 1; dyeing and finishing textiles, 3; electrical machinery, apparatus, and supplies, 5; electroplating, 7; emery and other abrasive wheels, 2; engraving, wood, 1; fancy articles, not elsewhere specified, 2; files, 2; firearms and ammunition, 1; flags, banners, regalia, society badges, and emblems, 2; flavoring extracts, 3; flour-mill and gristmill products, 2; food preparations, 4; fur goods, 2; furnishing goods, men's, 4; furniture and refrigerators, 4; gas and electric fixtures and lamps and reflectors, 1; gas, illuminating and heating, 1; glass, cutting, staining, and ornamenting, 2; hand stamps and stencils and brands, 3; hosiery and knit goods, 3; house-furnish-

STATISTICS OF MANUFACTURES.

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TOTALS FOR ALL INDUSTRIES IN CITIES OF 10,000 BUT LESS THAN 50,000 INHABITANTS: 1909—Continued.

CITIES OF 50,000 INHABITANTS OR MORE, BY INDUSTRIES—Continued.

SPRINGFIELD.

Capital.	EXPENSES.										Value of products.	Value added by manufacture.	
	Total.	Services.			Materials.		Miscellaneous.						
		Officials.	Clerks.	Wage earners.	Fuel and rent of power.	Other.	Rent of factory.	Taxes, including internal revenue.	Contract work.	Other.			
1	\$28,657,789	\$28,188,121	\$1,044,036	\$1,318,248	\$6,867,314	\$475,576	\$13,887,509	\$222,346	\$484,222	\$678,647	\$3,210,223	\$31,772,815	\$17,409,730
2	230,313	404,062	14,623	17,414	104,407	9,461	236,524	7,360	1,320	.....	12,953	431,214	185,229
3	191,444	529,049	1,900	7,090	83,059	9,076	346,730	7,313	1,210	378	72,293	611,333	255,627
4	116,453	144,786	.....	7,015	56,457	2,335	65,508	3,455	922	870	8,224	177,110	109,267
5	305,480	812,059	13,750	51,343	119,273	6,376	552,422	2,644	4,547	.....	61,704	902,547	343,749
6	486,147	427,801	28,625	11,947	184,877	12,046	141,514	6,160	3,479	.....	39,153	522,603	390,043
7	288,467	200,037	14,600	10,882	81,695	4,671	58,106	4,265	998	.....	24,820	191,476	128,699
8	60,333	86,715	4,800	6,034	21,274	440	29,098	1,983	120	.....	22,966	106,370	76,832
9	3,850,825	2,625,967	155,803	185,951	972,725	50,149	976,761	29,762	28,944	.....	225,872	3,006,484	1,979,574
10	657,156	898,029	28,656	12,686	210,964	3,714	576,061	900	5,268	.....	59,786	945,317	365,542
11	3,526,749	3,694,855	184,412	433,173	666,143	35,744	970,184	25,270	25,437	666,241	688,251	3,901,287	2,895,359
12	277,637	1,207,131	8,630	25,280	75,902	8,312	1,024,832	3,409	1,290	.....	59,426	1,250,531	217,337
13	275,445	623,456	4,700	12,486	277,336	800	254,920	6,859	54,921	465	10,969	719,992	464,272
14	18,391,350	16,534,174	583,637	536,947	4,013,202	332,452	8,654,799	122,966	355,772	10,693	1,923,806	19,006,551	10,019,300

leaf and foil, 3; grease and tallow, 1; hand stamps and stencils and brands, 3; hats and caps, other than felt, straw, and wool, 2; hosiery and knit goods, 5; house-furnishing goods, not elsewhere specified, 1; leather goods, 3; liquors, malt, 3; looking-glass and picture frames, 1; marble and stone work, 3; mattresses and spring beds, 3; millinery and lace goods, 1; mineral and soda waters, 6; mirrors, 1; models and patterns, not including paper patterns, 5; musical instruments and materials, not specified, 1; musical instruments, pianos and organs and materials, 1; needles, pins, and hooks and eyes, 1; paint and varnish, 1; paper goods, not elsewhere specified, 10; patent medicines and compounds and druggists' preparations, 3; photographic apparatus and materials, 1; photo-engraving, 2; saws, 1; screws, machine, 1; sewing machines, cases, and attachments, 1; ship-building, including boat building, 1; soap, 2; sporting and athletic goods, 2; stationery goods, not elsewhere specified, 1; stereotyping and electrotyping, 1; toys and games, 2; upholstering materials, 1; wall plaster, 1; washing machines and clothes wringers, 2; whips, 1; windmills, 1; wirework, including wire rope and cable, 1; wood, turned and carved, 2.

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1	\$64,638,783	\$68,972,539	\$2,062,943	\$2,106,084	\$15,295,266	\$1,812,565	\$40,788,323	\$451,206	\$626,759	\$83,717	\$5,745,676	\$77,147,884	\$34,546,986
2	1,351,381	2,244,076	33,828	46,783	468,948	9,521	1,456,327	11,935	8,244	6,012	202,478	2,414,078	948,230
3	442,048	1,236,429	22,072	45,315	206,763	23,101	853,634	37,108	4,122	33	44,281	1,472,268	595,533
4	130,822	127,282	2,012	1,290	51,272	2,897	58,951	7,558	811	.....	2,491	159,761	97,913
5	223,093	516,129	7,725	5,141	110,588	2,959	358,739	6,335	1,099	6,845	16,730	555,862	194,164
6	901,862	1,763,419	58,960	107,644	370,690	7,547	1,073,884	26,816	6,174	2,000	109,704	1,942,387	860,956
7	368,031	357,273	19,200	11,352	113,380	3,462	162,908	11,231	2,544	820	32,376	411,360	244,990
8	415,427	828,378	20,790	7,935	98,073	9,594	669,674	9,400	2,702	.....	9,810	882,563	202,895
9	641,422	534,069	25,570	25,115	240,855	17,259	196,648	4,300	5,604	6,000	12,658	569,405	355,498
10	13,068,880	11,158,149	559,422	422,801	3,841,049	171,818	4,620,868	103,296	113,303	1,248	1,324,344	13,219,286	8,426,600
11	460,848	757,435	39,630	9,753	194,522	4,138	471,529	15,149	3,935	.....	18,779	814,135	338,468
12	387,572	353,288	20,619	7,932	218,228	5,911	87,292	2,150	2,699	.....	8,457	383,250	290,047
13	604,714	1,053,141	66,401	96,088	392,324	9,895	361,634	28,193	3,499	29,307	65,890	1,232,526	861,087
14	53,669	100,332	2,550	601	36,587	421	41,216	3,656	11,188	.....	4,113	116,599	74,962
15	3,530,051	4,155,518	81,288	23,988	688,587	103,487	3,096,800	27,400	12,128	14,186	107,654	4,400,011	1,259,724
16	42,038,963	43,787,621	1,102,876	1,294,346	8,263,402	1,440,245	27,278,219	156,679	448,677	17,266	3,785,911	48,514,393	19,795,929

ing goods, not elsewhere specified, 1; instruments, professional and scientific, 1; iron and steel, steel works and rolling mills, 1; iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills, 1; iron and steel forgings, 4; iron and steel, nails and spikes, cut and wrought, including wire nails, not made in steel works or rolling mills, 1; jewelry, 2; lasts, 3; leather goods, 10; liquors, malt, 2; looking-glass and picture frames, 4; mattresses and spring beds, 4; mineral and soda waters, 7; models and patterns, not including paper patterns, 1; musical instruments and materials, not specified, 1; musical instruments, pianos and organs and materials, 5; oil, not elsewhere specified, 1; paper goods, not elsewhere specified, 9; patent medicines and compounds and druggists' preparations, 10; photographic apparatus and materials, 3; photo-engraving, 2; rubber goods, not elsewhere specified, 1; saws, 1; screws, machine, 4; screws, wood, 1; shoddy, 1; show cases, 1; signs and advertising novelties, 1; slaughtering and meat packing, 7; soap, 2; sporting and athletic goods, 2; stationery goods, not elsewhere specified, 1; stereotyping and electrotyping, 1; surgical appliances and artificial limbs, 3; type founding and printing materials, 1; vinegar and cider, 1; wall paper, 1; window shades and fixtures, 2; wire, 6; wirework, including wire rope and cable, 8; wood, turned and carved, 3.

TABLE III.—DETAIL STATEMENT FOR CITIES OF 50,000 INHABITANTS OR MORE, BY INDUSTRIES, AND CITIES OF 10,000 TO 50,000 INHABITANTS—ALL INDUSTRIES COMBINED.

CITY OR TOWN.	Number of establishments	PERSONS ENGAGED IN INDUSTRY.										WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY.						Primary horse-power.
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks.		Wage earners (average number).				Total.	16 and over.		Under 16.				
					Male.	Female.	Total.	16 and over.		Under 16.		Male.	Female.	Male.	Female.			
								Male.	Female.									
1 ADAMS.....	31	4,100	32	46	21	10	3,991	2,026	1,478	487	4,093	2,078	1,516	237	262	10,173		
2 ARLINGTON.....	19	335	18	16	8	10	283	259	22	2	326	298	25	3	.....	851	
3 ATTLEBOROUGH.....	128	7,168	132	178	226	203	6,429	4,396	1,853	180	7,092	4,849	2,044	128	71	5,991		
4 BEVERLY.....	63	4,896	60	117	104	128	4,487	3,679	752	56	4,783	3,922	801	49	11	3,778		
5 BROOKLINE.....	16	404	19	7	15	23	340	280	54	6	361	297	58	6	.....	339	
6 CHELSEA.....	110	6,094	98	170	292	180	5,954	4,213	1,611	130	6,568	4,648	1,777	74	69	8,339		
7 CHICOPEE.....	58	7,776	45	83	216	172	7,290	4,994	2,020	246	7,611	5,235	2,118	169	89	15,738		
8 CLINTON.....	39	4,357	33	54	111	36	4,123	2,264	1,670	189	4,169	2,284	1,684	107	84	10,882		
9 EVERETT.....	62	3,096	56	90	196	74	2,680	2,353	257	70	2,900	2,546	278	34	42	7,816		
10 FITCHBURG.....	122	9,103	101	177	212	116	8,497	5,825	2,271	401	9,013	6,179	2,409	216	209	28,764		
11 FRAMINGHAM.....	27	3,307	19	80	97	42	3,069	1,797	1,156	116	3,648	2,136	1,374	69	69	4,486		
12 GARDNER.....	52	3,849	40	82	62	48	3,617	3,100	415	102	3,886	3,331	446	84	25	5,031		
13 GLOUCESTER.....	102	2,593	104	90	137	81	2,181	1,658	482	41	2,363	1,796	522	15	50	2,427		
14 GREENFIELD.....	47	1,484	24	58	95	56	1,251	1,043	139	69	1,422	1,186	158	70	8	2,327		
15 HAVENHILL.....	346	12,791	407	209	194	292	11,689	7,686	3,762	241	12,652	8,319	4,072	164	97	7,930		
16 HYDE PARK.....	40	4,649	37	110	135	47	4,320	3,978	317	25	4,747	4,371	348	19	9	8,856		
17 LEOMINSTER.....	94	6,000	76	152	99	72	5,601	3,708	1,746	147	6,064	4,015	1,890	98	61	5,890		
18 MALDEN.....	86	3,259	71	99	108	84	2,900	1,649	1,222	29	3,048	1,733	1,284	19	12	3,433		
19 MARLBOROUGH.....	59	4,585	46	62	118	94	4,265	2,787	1,201	277	4,373	2,858	1,231	138	146	2,721		
20 MEDFORD.....	40	673	33	36	31	13	560	486	66	8	583	506	69	5	3	1,123		
21 MELROSE.....	25	1,141	21	28	39	15	1,038	438	591	9	996	420	567	6	2	1,535		
22 METHUEN.....	19	1,626	12	18	16	8	1,572	653	793	126	1,649	685	832	55	77	5,772		
23 MILFORD.....	53	1,980	50	52	42	35	1,801	1,045	710	46	1,785	1,036	704	30	15	2,410		
24 NEWBURYPORT.....	74	3,543	71	68	105	84	3,215	2,083	1,035	97	3,499	2,267	1,126	72	34	3,820		
25 NEWTON.....	46	2,373	39	57	68	35	2,174	1,604	520	50	2,242	1,653	536	24	28	4,153		
26 NORTH ADAMS.....	60	5,846	62	98	222	50	5,414	3,508	1,560	346	5,804	3,761	1,672	185	186	11,928		
27 NORTHAMPTON.....	71	3,434	58	82	82	62	3,150	2,012	977	161	3,250	2,076	1,008	77	89	6,139		
28 PEABODY.....	74	5,231	55	110	151	65	4,850	4,270	518	62	5,739	5,053	613	29	44	9,981		
29 PITTSFIELD.....	71	7,414	59	211	580	211	6,353	4,508	1,679	166	7,455	5,290	1,970	81	114	8,301		
30 PLYMOUTH.....	32	3,104	24	51	75	42	2,912	2,124	665	123	3,091	2,254	706	69	62	6,239		
31 QUINCY.....	183	6,247	241	191	253	70	5,492	4,769	560	163	5,808	5,044	592	170	2	9,147		
32 REVERE.....	14	125	12	5	5	2	101	98	3	.....	117	113	4	.....	.....	548
33 SALEM.....	155	6,852	149	151	104	110	6,338	4,070	1,985	283	6,708	4,307	2,101	158	142	11,436		
34 SOUTHERIDGE.....	36	4,281	28	83	86	47	4,037	2,680	1,183	174	4,007	2,660	1,174	60	113	7,636		
35 TAUNTON.....	146	7,945	110	145	204	79	7,407	5,345	1,820	242	7,961	5,745	1,956	148	112	19,141		
36 WAKEFIELD.....	23	2,359	14	41	45	29	2,230	1,200	994	36	2,282	1,228	1,017	31	6	1,729		
37 WALTHAM.....	80	6,354	67	110	64	76	6,037	3,580	2,369	88	6,836	4,054	2,682	36	64	7,583		
38 WATERTOWN.....	25	4,805	13	48	243	166	4,335	2,817	1,372	146	4,787	3,111	1,515	91	70	4,862		
39 WEBSTER.....	23	3,621	14	52	100	46	3,409	2,127	1,005	277	3,658	2,283	1,078	154	143	7,204		
40 WESTFIELD.....	91	3,500	86	96	175	83	3,060	2,390	594	76	3,282	2,563	637	46	36	3,731		
41 WYMOUTH.....	41	2,238	45	43	96	63	1,991	1,398	554	39	2,161	1,517	601	24	19	1,902		
42 WINTHROP.....	7	19	6	1	.....	5	7	7	.....	.....	6	6	.....	.....	.....	41
43 WOBURN.....	59	1,867	65	48	71	30	1,653	1,523	111	14	1,968	1,819	132	12	5	3,560		

STATISTICS OF MANUFACTURES.

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TOTALS FOR ALL INDUSTRIES IN CITIES OF 10,000 BUT LESS THAN 50,000 INHABITANTS: 1909—Continued.

CITIES OF 10,000 TO 50,000 INHABITANTS—ALL INDUSTRIES COMBINED.

	Capital.	EXPENSES.										Value of products.	Value added by manufacture.
		Total.	Services.			Materials.		Miscellaneous.					
			Officials.	Clerks.	Wage earners.	Fuel and rent of power.	Other.	Rent of factory.	Taxes, including internal revenue.	Contract work.	Other.		
1	\$8,018,545	\$5,304,349	\$149,946	\$32,755	\$1,718,679	\$175,660	\$2,906,352	\$3,510	\$119,105	\$49	\$196,293	\$6,410,054	\$3,328,042
2	777,613	587,799	33,634	11,987	177,204	23,160	287,770	5,570	7,143	3,757	36,544	695,356	384,426
3	14,304,864	12,679,477	389,150	396,178	3,763,100	163,927	6,648,903	172,245	106,260	107,267	932,447	15,160,359	8,347,529
4	8,657,676	8,018,352	212,016	283,822	2,928,806	106,511	3,184,729	118,474	31,287	11,975	1,140,732	8,652,547	5,361,307
5	616,841	469,711	17,453	194,483	194,483	5,315	190,733	11,882	3,184	689	26,660	532,303	336,255
6	11,020,840	15,898,771	426,111	443,191	3,326,255	240,063	10,326,683	46,063	116,920	8,551	962,934	17,002,492	6,433,746
7	14,802,824	17,461,587	250,130	217,475	3,696,206	258,466	10,693,609	70,732	200,452	875	2,073,642	19,219,166	8,267,091
8	7,606,673	6,809,921	141,968	134,283	1,872,031	190,416	4,025,728	11,067	96,782	12,883	324,753	7,844,543	3,628,399
9	22,904,639	7,514,065	221,110	250,140	1,507,848	1,387,503	3,118,763	17,700	301,293	106,936	602,772	8,746,923	4,240,657
10	20,888,278	21,166,162	460,532	250,696	4,230,516	651,362	13,790,905	37,371	154,633	25,468	1,564,679	23,252,155	8,809,888
11	7,770,084	5,573,259	231,031	94,621	1,446,421	74,714	3,326,592	8,720	42,940	-----	338,220	6,916,864	3,505,558
12	10,272,673	5,299,368	205,397	94,635	1,774,406	87,761	2,745,315	9,682	40,219	2,000	334,063	6,485,148	3,652,072
13	5,692,501	6,809,921	184,038	153,225	1,042,438	94,961	4,675,527	21,673	47,915	6,007	671,550	7,753,463	2,982,975
14	2,620,280	2,285,593	134,080	94,368	700,884	53,634	980,165	10,774	23,751	2,802	285,145	2,801,011	1,767,212
15	14,786,451	31,250,321	330,837	376,041	6,657,903	306,983	21,379,786	232,587	68,649	737,227	1,161,208	35,376,617	13,600,748
16	8,158,338	6,914,496	218,358	158,280	2,475,875	171,189	1,191,824	12,605	36,502	222,698	438,951	7,336,084	3,984,857
17	6,633,474	9,494,981	305,343	136,387	2,793,609	136,331	5,439,928	30,449	48,038	25,043	579,853	10,530,815	4,954,556
18	9,910,489	6,814,078	182,195	148,128	1,346,462	186,540	4,201,012	22,742	104,090	4,571	618,348	8,205,852	3,818,300
19	3,378,068	9,707,414	123,939	165,282	2,224,431	62,110	6,312,755	25,741	30,383	920	761,853	10,382,277	4,007,412
20	1,695,568	1,828,624	82,624	32,149	331,101	58,050	1,191,824	11,400	12,239	1,628	107,626	2,045,289	795,415
21	2,014,905	2,364,261	46,248	39,518	492,882	20,516	1,568,191	2,367	29,973	2,970	161,596	2,824,669	1,235,962
22	2,956,246	3,181,008	45,802	16,906	688,976	120,217	2,105,299	1,015	37,515	3,582	161,696	3,475,702	1,260,186
23	1,756,146	3,837,930	137,000	67,791	945,179	41,653	2,347,619	10,980	21,556	-----	266,152	4,442,140	2,062,868
24	4,900,069	6,215,921	155,416	164,966	1,642,209	82,096	3,698,926	13,423	91,042	23,643	344,200	6,931,049	3,150,027
25	5,669,439	5,243,565	215,611	86,272	1,125,288	67,652	2,315,837	12,970	36,899	204,188	178,848	6,278,714	2,895,225
26	15,942,717	9,515,018	255,193	362,212	2,567,484	302,907	5,272,597	21,160	102,422	589	630,454	10,314,847	4,739,343
27	7,996,009	5,965,310	188,220	113,928	1,502,834	125,832	3,036,991	11,269	78,242	400,122	507,872	6,998,992	3,836,169
28	15,804,274	14,568,353	250,396	166,973	2,638,162	406,777	9,785,310	22,581	71,102	190,060	1,036,972	15,548,732	5,356,645
29	15,079,888	14,709,255	499,827	580,941	3,718,453	248,498	8,279,473	65,954	70,196	9,577	1,236,336	15,215,202	6,687,231
30	10,759,978	10,764,288	157,110	110,970	1,415,628	104,590	8,370,704	3,984	56,397	500	534,505	11,618,020	3,142,726
31	11,974,782	9,739,261	500,724	305,379	3,433,640	216,916	3,626,951	23,360	64,423	763,711	804,157	10,505,403	6,661,536
32	661,166	381,297	7,202	3,883	54,092	21,351	260,912	1,266	5,250	-----	17,341	407,366	115,103
33	9,245,244	12,680,200	268,174	128,180	2,892,786	204,428	8,435,428	84,823	74,581	105,308	486,492	14,576,276	5,936,420
34	4,260,335	5,640,164	316,702	106,533	1,804,910	120,651	3,004,104	2,602	51,298	1,800	231,564	6,269,131	3,144,376
35	16,503,965	13,541,628	393,906	806,882	3,833,713	328,808	7,445,854	29,951	142,281	2,625	1,057,548	15,379,821	7,605,099
36	3,864,496	4,302,044	106,476	50,315	1,045,960	45,126	2,789,834	5,821	31,111	91,436	135,965	5,527,102	2,692,142
37	12,870,737	7,133,686	279,280	127,089	3,288,292	167,571	2,276,770	15,913	184,209	14,435	780,127	7,814,178	5,369,837
38	7,220,006	9,708,625	173,732	266,186	2,235,005	121,254	6,341,507	3,330	74,616	2,410	490,585	11,545,555	5,082,794
39	10,479,435	10,189,853	131,958	189,575	1,476,146	173,852	7,645,905	2,426	49,384	-----	520,607	11,296,271	3,476,514
40	7,499,794	5,972,686	198,546	263,044	1,695,204	77,732	2,789,908	33,532	67,116	17,212	830,392	7,361,528	4,493,888
41	5,503,936	5,902,901	94,529	145,765	1,109,935	36,380	4,168,060	10,781	22,351	18,943	296,157	6,627,168	2,422,728
42	25,479	36,902	1,000	1,560	4,751	1,509	23,485	1,528	464	-----	2,605	42,168	17,174
43	8,405,106	4,663,614	107,227	87,285	932,274	140,149	2,974,358	14,135	36,306	47,699	324,181	5,408,061	2,293,574

CHAPTER 5.

MINES AND QUARRIES.

Introduction.—The present chapter contains a complete statement of the statistics of all producing mining industries, which include all mines and quarries in the state of Massachusetts for the year 1909, as shown by the Thirteenth Census.

A brief explanation of the scope of the census of mining industries and of the terms used, in so far as the usage differs from that followed in the census of manufactures, is presented below in order to prevent any misinterpretation of the statistics.

The explanations here given show the usage of the mining census generally, though some of the special rules have obviously no relation to particular states in which the industries referred to do not exist.

Scope of census.—The Thirteenth Census covered all classes of mines, quarries, and petroleum and gas wells that were in operation during any portion of the year 1909, both those which were producing and those whose operations were confined to development work. Mines, quarries, or wells that were idle during the entire year 1909 were omitted from the canvass. The following operations were likewise omitted from the canvass: Prospecting; the digging or dredging of sand and gravel for the construction of roads and for building operations; the production of mineral waters; and the operation of small bituminous coal banks producing less than 1,000 tons annually. Where the mineral products are not marketed in their crude condition, but are dressed or washed at the mine or quarry, the statistics of mining cover the entire work of obtaining the crude material and its preparation for the market.

Period covered.—The returns cover the calendar year 1909, or the business year which corresponds most nearly to that calendar year. The statistics cover a year's operations, except for enterprises which began or discontinued business during the year.

Number of operators.—As a rule, the unit of enumeration was the "operator." Every individual, firm, or corporation was required to furnish one report for all mines, quarries, or wells which were operated under the same management or for which one set of books of account was kept. Separate reports were obtained for all properties operated in different states, even where they were owned by the same operator. Likewise, where the operations of one individual, firm, or corporation covered more than one class of mines and quarries, such as coal, iron, limestone, etc., a separate report was received for each industry.

Number of mines, quarries, and wells.—This figure represents the total number of mines and quarries in operation or in the course of development at any time during the calendar year 1909, or the business year that corresponds most nearly to that calendar year, and the number of completed petroleum and natural gas wells in operation on December 31, 1909.

In most mining and quarrying industries the number of mines or quarries varies but little from the number of operators.

Expenses of operation and development.—A certain amount of development work is incidental to the operation of every mine. The expenses reported for producing mines include the cost both of operation and of development work which was done in connection with operation.

Wages.—The amount shown as wages includes only the compensation of regular wage earners hired by the day, week, or month, or under the piecework system.

Supplies and materials.—This item includes the cost of lumber and timber used for repairs, mine supports, track ties, etc.; iron and steel for blacksmithing; rails, frogs, sleepers, etc., for tracks and repairs; renewals of tools and machinery and materials for repairs; and supplies, explosives, oil, etc., as well as the cost of fuel and the rent of power. The schedule called only for the cost of such supplies and materials as had been used during the year covered by the report. Accurate figures, however, could be furnished only in those cases where the operators kept an account of supplies and materials used, or had an inventory made of all in stock at the beginning and at the end of the year. Such a system of accounting is far from general among mine operators, and there is reason to believe that in many cases the reported cost of supplies and materials covered all purchased during the year rather than those used during the year. The crude product of some operators was purchased by others for further dressing or refining; the cost of such materials is shown separately in the general table.

Capital.—The census schedule required every operator to state the total amount of capital invested in the enterprise on the last day of the business year reported, as shown by his books. There is, however, a great diversity in the methods of bookkeeping in use by different operators. As a result, the statistics for capital lack uniformity. Some of the figures reported apparently represent capital stock at face value; others include large investments in mineral lands which are not at present being actively mined, but are held in reserve; still others may include expenditures for unproductive mining ventures in no way related to the operations carried on during the census year.

Persons engaged in mining industries.—The statistics of the number of operators and officials, clerks, and wage earners, are based on the returns for December 15, or the nearest representative day. The reported number of wage earners includes overseers and foremen performing work similar to that of the men over whom they have charge; those whose duties are wholly supervisory are classed as superintendents and managers. Because of the common practice of shutting down mines at frequent intervals, it is impossible to ascertain with any satisfactory degree of accuracy the average number of employees—that is, the number who, if continuously employed, would be required to produce the actual output of the year.

Value of products.—Statistics of the value of mineral products were obtained by the Bureau of the Census in cooperation with the United States Geological Survey, but the two bureaus follow different methods in presenting these statistics. The Geological Survey shows separately the value of each mineral product, whereas the Bureau of the Census presents the value of products of each mining industry. The value of products given for a mining industry often includes the value of some products not covered by the industry designation. The crude product of metalliferous mines may include varying combinations of metals, such as gold, silver, copper, lead, zinc, and iron. Similarly, the total value of all products of the granite quarries is not identical with the value of the total output of granite, but may include the value of some marble or other stone quarried in connection with the principal product.

The value of products for 1909 in most cases represents the value of the products marketed during that year, not the value of those mined during that year.

MINING IN MASSACHUSETTS.

Summary.—Statistics for all producing mining enterprises in Massachusetts are presented in Table 7, which gives statistics for all industries combined and for each industry separately in all cases where the statistics could be given without disclosing the operations of an individual enterprise. One enterprise in the peat industry engaged in development work only has been omitted from the statistics, in order to avoid disclosing individual operations.

The production of granite was the leading industry in Massachusetts in 1909. The value of the output of these quarries was \$2,185,986, which represented 63 per cent of the total value of the products of all mines and quarries. Traprock, sandstone, and marble quarries reported products with a combined value of \$1,113,472, which, added to the value of the granite, give an aggregate value of \$3,299,458 for the products of the stone quarries in the state in 1909.

Character of organization.—Table 1 classifies the producing mining operations of the state under form of organization, distinguishing corporations from individual owners and firms, while Table 2 gives further details for incorporated enterprises distinguished from those which are unincorporated.

INDUSTRY AND CHARACTER OF ORGANIZATION.	PRODUCING ENTERPRISES: 1909					
	Number of operators.	Number of wage earners.	Value of products.		Per cent distribution.	
			Total.	Per operator.	Operators.	Wage earners.	Value of products.
All industries.....	139	3,508	\$3,487,888	\$24,949	100.0	100.0
Individual.....	69	869	778,595	11,284	49.6	22.5
Firm.....	22	318	369,038	16,774	15.8	10.6
Corporation.....	48	2,321	2,320,255	48,330	34.5	66.9
Granite.....	82	2,278	2,185,986	26,658	100.0	100.0
Individual.....	47	598	545,035	11,609	57.3	25.0
Firm.....	15	229	254,251	16,950	18.3	11.6
Corporation.....	20	1,451	1,386,100	69,305	24.4	63.4
Traprock.....	23	581	590,913	25,692	100.0	100.0
Individual.....	11	138	115,843	10,531	47.8	19.6
Corporation.....	12	443	475,070	39,589	52.2	80.4

¹ Includes 1 firm.

	Incorporated.	Unincorporated.
Number of operators.....	48	01
Number of mines and quarries.....	53	04
Proprietors and firm members, total.....		121
Number performing manual labor.....		43
Salaried employees:		
Officers of corporations.....	28	
Superintendents and managers.....	48	25
Clerks and other salaried employees.....	54	21
Wage earners, Dec. 15, 1909, or nearest representative day.....	2,321	1,187
Capital.....	\$3,953,557	\$1,100,536
Expenses of operation and development.....	2,075,902	911,273
Salaries—		
Officers of corporations.....	70,070	
Superintendents and managers.....	61,791	21,222
Clerks and other salaried employees.....	45,256	14,419
Wages.....	1,365,018	601,979
Royalties and rent of mines.....	38,107	17,302
Taxes.....	29,722	10,465
Supplies and miscellaneous expenses.....	465,338	245,386
Value of products.....	2,320,255	1,147,033

Out of a total of 139 operators, 48 were corporations. These corporations reported 66.9 per cent of the total value of products and employed 66.2 per cent of all wage earners.

Size of enterprises.—In Table 3 the producing mining enterprises of the state are classified according to the number of wage earners employed per enterprise or operating unit. In the granite quarries 32.1 per cent of all wage earners were employed in three enterprises employing over 100 wage earners each.

INDUSTRY AND WAGE EARNERS PER ENTERPRISE.	PRODUCING ENTERPRISES: 1909			
	Enterprises.		Wage earners.	
	Number.	Per cent distribution.	Number.	Per cent distribution.
All industries.....	139	100.0	3,508	100.0
No wage earners.....	1	0.7		
Contract work.....	1	0.7		
1 to 5.....	33	23.7	110	3.1
6 to 20.....	58	41.7	688	19.6
21 to 50.....	26	18.7	766	21.8
51 to 100.....	16	11.5	1,061	30.2
Over 100.....	4	2.9	883	25.2
Granite.....	82	100.0	2,278	100.0
No wage earners.....	1	1.2		
1 to 5.....	10	23.2	65	2.8
6 to 20.....	36	43.9	419	18.4
21 to 50.....	14	17.1	421	18.5
51 to 100.....	9	11.0	643	28.2
Over 100.....	3	3.7	732	32.1
Traprock.....	23	100.0	581	100.0
Contract work.....	1	4.3		
1 to 20.....	13	56.5	148	25.5
21 to 50.....	6	26.1	167	28.7
Over 50.....	3	13.0	266	45.8

Prevailing hours of labor.—In Table 4 all producing mines and quarries, except one employing no wage earners and one operated exclusively by contract work, have been classified according to the prevailing hours of labor per day in each enterprise or operating unit.

INDUSTRY AND HOURS PER DAY.	PRODUCING ENTERPRISES: 1909		
	Enterprises.		Per cent distribution of enterprises weighted according to number of wage earners.
	Number.	Per cent distribution.	
All industries.....	139	100.0	100.0
8 hours.....	53	38.1	46.4
9 hours.....	63	45.3	34.1
10 hours.....	22	15.8	18.5
12 hours.....	1	0.7	1.0
Granite.....	81	100.0	100.0
8 hours.....	48	59.3	70.1
9 hours.....	32	39.5	29.6
10 hours.....	1	1.2	0.3
Traprock.....	22	100.0	100.0
8 hours.....	1	4.5	2.8
9 hours.....	12	54.5	31.3
10 hours.....	9	40.9	65.9

The table shows the percentage of the total number of enterprises falling in each group, and also a per cent distribution in which each enterprise has been given a weight according to the total number of wage earners employed December 15, 1909, or the nearest representa-

tive day. It should be borne in mind that this latter distribution does not show the exact proportion of the total number of wage earners working the specified number of hours per day, since, in many cases, some of the employees worked a greater or less number of hours than those generally prevailing in the enterprise.

In 46.4 per cent of the enterprises, weighted according to the number of wage earners, a day of 8 hours prevailed.

Engines and power.—As shown by Table 5, the aggregate horsepower employed in all producing enterprises was 15,031, of which 14,578 was developed by engines and water wheels owned by the enterprises using them and 453 by electric motors operated by purchased current.

CHARACTER OF POWER.	PRODUCING ENTERPRISES: 1909					
	Total.	Granite.	Trap-rock.	Sandstone.	Marble.	All other.
Primary power:						
Aggregate horsepower.	15,031	9,172	2,296	962	1,339	1,262
Owned.....	14,578	9,067	2,033	877	1,339	1,262
Steam engines—						
Number.....	315	223	26	26	25	15
Horsepower.....	13,310	8,387	2,033	829	916	645
Gas or gasoline engines—						
Number.....	14	7		1	1	5
Horsepower.....	700	180		20	198	302
Water wheels—						
Number.....	6			1	3	2
Horsepower.....	568			28	225	315
Electric motors operated by purchased current—						
Number.....	13	5	6	2		
Horsepower.....	453	105	263	85		
Electric motors run by current generated by enterprise using:						
Number.....	28	15	2		7	4
Horsepower.....	676	425	6		197	48

Comparison of mining industries: 1902-1909.—In order to make comparisons between 1909 and 1902 it is necessary to omit from the 1902 figures, as given in the mines and quarries report for that year, statistics for enterprises operated by governmental institutions and to add to the 1909 statistics, figures for the production of lime, which were omitted from the census of mines and quarries in 1909. Such items as are comparable for the two years are presented in Table 6.

	PRODUCING ENTERPRISES.		
	1909	1902	Per cent of increase. ¹
Wages and salaries.....	\$2,516,534	\$2,739,230	-8.1
Supplies and materials.....	\$254,090	\$727,665	17.4
Royalties and rent of mines.....	\$58,589	\$44,325	32.2
Contract work.....	\$18,637	\$1,853	905.8
Value of products.....	\$4,332,218	\$4,499,401	-3.7
Primary horsepower.....	15,620	11,170	39.8

¹ A minus sign (-) denotes decrease.

Duplication between manufactures and mining.—In a number of industries some of the operators subjected the products obtained to certain manufacturing processes on the premises before marketing. These enterprises have been included in the statistics both for manufactures and for mining. As a result of this fact the combined value of products for the manufacturing and mining industries in Massachusetts involves a duplication of \$2,151,708. Of this amount, \$1,743,400 represented the value of granite duplicated, \$252,557 the value of marble, and \$106,831 and \$48,920, respectively, the value of sandstone and talc and soapstone.

DETAILED STATISTICS FOR MINING INDUSTRIES: 1909.

Table 7

	PRODUCING MINES AND QUARRIES.							
	Total.	Granite.	Traprock.	Sandstone.	Marble.	Talc and soapstone.	Clay. (sold as such).	All other. ¹
Number of operators.....	139	82	23	13	8	3	3	7
Number of mines and quarries.....	147	86	24	15	8	4	3	7
Capital.....	\$5,054,093	\$3,149,136	\$286,780	\$341,209	\$499,635	\$182,388	\$6,150	\$419,498
Expenses of operation and development.....	\$2,987,175	\$1,973,630	\$466,390	\$207,924	\$222,816	\$29,736	\$1,063	\$85,616
Services—								
Salaried officers of corporations, superintendents, and managers.....	\$153,683	\$81,888	\$31,155	\$5,860	\$8,650	\$5,065		\$3,305
Clerks and other salaried employees.....	\$59,675	\$38,521	\$7,504	\$2,418	\$3,123	\$659		\$1,950
Wage earners.....	\$1,966,997	\$1,402,344	\$246,131	\$130,946	\$119,147	\$9,996	\$546	\$57,887
Miscellaneous—								
Supplies.....	\$363,698	\$197,135	\$48,959	\$40,424	\$59,287	\$4,085	\$200	\$13,608
Fuel and rent of power.....	\$153,258	\$86,770	\$31,779	\$10,853	\$14,499	\$3,342	\$25	\$5,990
Royalties and rent of mines.....	\$55,409	\$17,552	\$31,126	\$4,040	\$2,691			
Taxes.....	\$40,187	\$29,920	\$3,598	\$2,563	\$1,984		\$89	\$709
Contract work.....	\$16,272	\$3,704	\$10,068			\$2,500		
Rent of offices and other sundry expenses.....	\$177,996	\$115,796	\$66,070	\$10,820	\$13,435	\$3,009	\$203	\$2,107
Value of products.....	\$3,487,888	\$2,185,986	\$580,913	\$270,002	\$252,557	\$48,920	\$1,708	\$117,802
Persons engaged in industry.....	43,805	2,456	634	247	287	42	11	119
Proprietors and officials.....	222	135	36	16	16	4	3	6
Proprietors and firm members.....	121	83	12	11	9		3	3
Number performing manual labor.....	43	27	1	1			1	3
Salaried officers of corporations.....	28	13	7		1			
Superintendents and managers.....	73	39	17	5	6	3		3
Clerks and other salaried employees.....	475	43	17	3	4	2		3
Wage earners, Dec. 15, 1909, or nearest representative day.....	3,508	2,278	581	228	267	36	8	110
Above ground.....	3,428	2,278	581	228	267	16	8	50
Below ground.....	80					20		60
Men 16 years of age and over.....	3,493	2,267	577	228	267	36	8	110
Engineers, firemen, mechanics, etc.....	461	314	69	21	42	7		8
Above ground.....	459	314	69	21	42	5		8
Below ground.....	2					2		
Miners, miners' helpers, quarrymen, and stone-cutters.....	2,285	1,450	455	171	103	20	1	85
Above ground.....	2,207	1,450	455	171	103	2	1	25
Below ground.....	78					18		60
All other employees (all above ground).....	747	503	53	36	122	9	7	17
Boys under 16 years of age (all above ground).....	15	11	4					
Number of wage earners employed on the 15th day of each month:								
January.....	2,297	1,684	159	117	176	30		131
February.....	2,323	1,752	112	124	169	28		136
March.....	2,670	2,087	117	148	172	30		116
April.....	3,282	2,342	381	197	208	29		125
May.....	3,657	2,550	638	204	212	31		122
June.....	3,583	2,333	618	216	236	32	1	147
July.....	3,799	2,489	664	233	241	31	1	140
August.....	3,793	2,496	695	203	241	32	7	119
September.....	3,850	2,509	650	249	250	28	7	97
October.....	3,741	2,468	652	244	250	29		98
November.....	3,430	2,233	591	230	249	28		99
December.....	3,065	1,986	534	147	258	31		109
Land controlled, acres.....	8,077	3,879	479	600	677	774	17	1,651
Owned.....	7,205	3,514	328	579	582	534	17	1,651
Held under lease.....	872	365	151	21	95	240		
Mineral land.....	5,716	2,914	478	600	212	385	17	1,100
Owned.....	4,879	2,549	327	579	152	155	17	1,100
Held under lease.....	837	365	151	21	60	240		
Timber land.....	1,017	536			300	85		96
Other land.....	1,344	429	1		165	294		455
Primary horsepower.....	15,031	9,172	2,296	962	1,339	630	15	617

¹ Includes operators as follows: Bluestone, 1; emery, 1; feldspar, 1; fuller's earth, 1; iron, 1; pyrite, 1; quartz, 1.

² Includes \$169,297 which could not be distributed among the several industries.

³ In some cases the same operator conducted two or more enterprises producing different kinds of products, all enterprises being managed through one central administrative office. The total office expenses were accordingly apportioned among the several industries in proportion to the total expenses of each and the estimated amounts of such administrative expenses were added to "Sundry expenses" for each industry. In the totals for all enterprises, however, the expenses appear under the proper headings. The amounts included in "Rent of offices and other sundry expenses" for individual industries and properly distributed in the total for all industries are as follows: Salaried officers of corporations, superintendents, and managers, \$27,700; clerks and other salaried employees, \$5,500; and taxes, \$244.

⁴ The following numbers of persons, which could not be distributed among the several industries, are included under the proper headings in the totals for all enterprises: Aggregate, 9; salaried officers of corporations, 6; and clerks and other salaried employees, 3.