

DEPARTMENT OF COMMERCE AND LABOR  
BUREAU OF THE CENSUS  
S. N. D. NORTH, DIRECTOR

—  
BULLETIN 101  
—

# INDUSTRIAL DISTRICTS: 1905

MANUFACTURES AND POPULATION



WASHINGTON  
GOVERNMENT PRINTING OFFICE  
1909

## BULLETINS OF THE PERMANENT CENSUS.

1. Geographical distribution of population.
2. Cotton ginned in the United States: 1899 to 1902.
- \*3. Street and electric railways.
4. A discussion of increase of population.
- \*5. Central electric light and power stations.
6. Mineral industries of Porto Rico.
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23. Census statistics of teachers.
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## LETTER OF TRANSMITTAL.

DEPARTMENT OF COMMERCE AND LABOR,  
BUREAU OF THE CENSUS,  
*Washington, D. C., May 15, 1909.*

SIR:

I have the honor to transmit herewith Census Bulletin 101, containing a compilation of the statistics of population and manufactures for 13 of the principal industrial districts of the United States.


In presenting census data it is necessary to have well-defined units of locality. These units may be political, civil, geographical, or industrial. With few exceptions the political unit has been followed in grouping the census statistics of population and manufactures. With this grouping correct totals are obtained for the areas included within political boundaries, but statistics for industrial districts are not secured. Many of the industrial districts include a number of important cities, as well as intervening and surrounding minor civil divisions, all of which are politically independent but closely allied industrially. The development of the telephone, electric railway, and other means of transportation and intercommunication has to a great extent done away with the necessity of close physical association in industrial enterprises; therefore the increase in our urban population and industries is in many instances due to the development of the suburbs of the cities rather than to the growth within corporate limits. Under these conditions the publication of the statistics for population and industries included within the corporate limits of the city often conveys an erroneous idea of the importance of the district in which the city is located.

While the Office has endeavored, in presenting the statistics for industrial districts, to include in each district all of the places identified or closely associated with its industrial development, it realizes the fact that it is impossible to agree upon an area that will be entirely acceptable to all persons interested. In order to perfect the methods to be followed in the preparation of similar bulletins for the census of 1910, it is desired at this time to obtain the benefit of suggestions and criticisms from boards of trade, chambers of commerce, other organizations, and individuals. Any suggestions on this subject addressed to the Director of the Census will receive careful consideration, and I have no doubt that such suggestions will be of great assistance to the Office in its plans for the Thirteenth Census.

The last census of manufactures, that of 1905, covered the calendar year 1904, while the census of 1900 covered the year ending May 31, 1900. The census year 1905 is named in table headings, but in the text the year 1904 is used to insure strict accuracy of statement concerning the statistical year to which the data relate.

The bulletin is principally a recompilation of the statistics obtained at previous censuses, and has been prepared under the supervision of Mr. William M. Steuart, chief statistician for manufactures.

Very respectfully,

  
Director.

Hon. CHARLES NAGEL,  
*Secretary of Commerce and Labor.*

# INDUSTRIAL DISTRICTS: 1905.

## MANUFACTURES AND POPULATION.

### INTRODUCTION.

The statistics in this bulletin are a retabulation of the regular census data and, unless otherwise noted, relate to the years ending May 31, 1900, and December 31, 1904. Therefore reference should be made to the reports for the census of manufactures of 1905 and of population of 1900 for any explanation that may be desired in regard to Census methods and the limitations attending the use of the statistics. As the geographic make-up of the districts is based on the civil subdivisions shown at the census of 1900 and the accompanying maps follow the latest details, it will be found that a few subdivisions have disappeared and that a few have been created.

This bulletin presents statistics for 13 of the important industrial districts in the United States. The district of New York city is the most important and embraces an area of 702 square miles with a population, in 1905, of 5,294,682. There is no district in the United States with which it can be grouped. The districts of Chicago, Philadelphia, and Boston are in a class, having substantially the same population—1,815,107, 1,537,994, and 1,249,504, respectively, in 1900, and areas of 500, 501, and 502 square miles. In a third class are the districts of St. Louis, Pittsburg-Allegheny, Baltimore, Cincinnati, San Francisco, Cleveland, Buffalo, and Minneapolis-St. Paul. They had a population in 1900 ranging from 638,134 for St. Louis to 376,357 for Minneapolis-St. Paul, and from 246 square miles of area for Baltimore to 151 for Cincinnati. The Providence district, with 344,521 population in 1905 and an area of 154 square miles, can not be compared with any district in this bulletin. In the original design the districts of Detroit, Milwaukee, New Orleans, Washington, Kansas City, Mo. and Kans., and Louisville were to be grouped with it, but statistics for these have not yet been compiled. A fifth group was also in contemplation. It embraced the districts of Indianapolis, Rochester, Denver, Toledo, and Columbus, with population for the cities themselves ranging from 169,164 to 125,560 and an area of substantially 100 square miles.

Each industrial district is treated as a distinct statistical unit, but the same series of tables is given for all, and consequently comparisons can be made to show the relative importance of the various districts. This method of presentation necessarily occasions some repetition of descriptive matter which is essential to a proper understanding of the figures.

The manufactures immediately surrounding the principal cities which form the centers of these districts are largely controlled by capital owned by residents of the cities. A considerable proportion of the employees reside within the cities, and the city is frequently the principal distributing point for the products. In other ways the industries are so closely allied to the cities that they should be credited to the urban rather than to the rural manufactures. The inclusion of this surrounding territory in the 13 districts has added 2,836.4 square miles, or 261.9 per cent, to the area. The statistics of population for 1905 are taken from the state census reports, but as there was no census of California, Illinois, Maryland, Missouri, Ohio, and Pennsylvania for that year the figures for Baltimore, Chicago, Cincinnati, Cleveland, Philadelphia, Pittsburg-Allegheny, San Francisco, and St. Louis can not be given, and it is impossible to show the total population in 1905 for the 13 districts. From the totals for the districts for which statistics of population are available it is evident that the manufactures in these districts have increased relatively much more rapidly than the population; also, that the inclusion of the territory surrounding the cities has caused a much larger addition to the manufactures than to the population. In the case of each district the data show the tendency of manufactures to increase more rapidly in the area immediately surrounding the central city than they do within the corporate limits of the city. The manufacturing industries within the incorporated limits of the 13 central cities included in these districts gave employment to 1,691,553 salaried persons and wage-earners during the year 1904, which was covered by the census of 1905, and the products were valued at \$4,762,022,170. In the parts of these 13 districts immediately outside of the cities around which they center there were 9,323 establishments, which gave employment to 483,597 salaried persons and wage-earners and reported products valued at \$1,421,863,317, thus increasing the number of employees by 28.6 per cent and the value of products by 29.9 per cent. The statistics for a limited number of the leading industries in each district are shown separately. The amount of retabulation that would be necessary to give an extended presentation for all industries precluded such a showing, and also made it practicable to show only the general totals for the power employed in manufactures in 1904.

TABLE 1.—MANUFACTURES, POPULATION, AND AREA OF THIRTEEN SELECTED INDUSTRIAL DISTRICTS: 1905 AND 1900.

DISTRICT.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.	Area (square miles).
				Number.	Salaries.	Average number.	Wages.					
Total.....	1905 1900	64,309 61,446	\$4,992,485,573 3,756,067,251	236,416 169,596	\$272,600,543 187,254,840	1,938,734 1,672,055	\$1,000,949,684 793,559,926	\$600,174,843 436,960,704	\$3,583,033,371 2,865,881,081	\$6,183,885,487 4,896,842,405	13,380,591	3,919
Per cent of increase.....		4.7	32.9	39.4	45.6	15.9	26.1	51.1	25.5	26.3		
New York.....	1905 1900	25,257 23,262	1,572,628,947 1,224,823,447	80,472 54,864	94,547,089 66,057,921	654,988 539,690	341,691,183 266,599,742	259,853,759 161,930,981	1,209,010,634 910,389,938	2,144,488,093 1,614,267,347	5,294,682 4,539,390	702
Per cent of increase.....		8.6	28.4	46.7	43.1	21.4	28.2	60.5	32.8	32.3	16.6	
Chicago.....	1905 1900	8,382 7,851	664,215,775 519,469,858	40,880 32,806	46,330,318 32,501,114	247,989 224,991	139,829,354 110,582,600	97,746,701 70,840,132	598,556,727 506,073,549	970,974,280 806,464,641	(1) 1,815,107	500
Per cent of increase.....		6.8	27.9	24.6	42.6	10.2	26.4	38.0	18.1	20.4		
Philadelphia.....	1905 1900	7,780 8,196	622,081,779 505,847,424	25,488 19,163	28,830,421 21,105,446	261,456 242,551	123,093,496 106,964,183	62,399,878 43,870,257	387,566,027 330,895,698	677,781,117 582,998,753	(1) 1,537,994	501
Per cent of increase.....		5.1	23.0	33.0	36.6	7.8	15.1	42.2	17.1	16.3		
Boston.....	1905 1900	4,870 5,305	311,088,956 266,437,063	16,666 12,731	18,637,473 13,671,864	100,481 131,623	83,804,219 65,794,045	44,244,397 29,061,192	249,836,542 200,057,065	457,254,360 353,955,958	1,354,653 1,249,504	502
Per cent of increase.....		2.7	16.8	30.9	35.3	21.9	27.5	52.2	24.9	29.2	8.4	
Pittsburg-Allegheny....	1905 1900	1,859 1,477	443,889,824 328,493,963	13,775 7,580	16,418,501 7,953,339	106,004 94,404	60,920,554 51,808,404	31,978,579 21,291,431	242,040,207 209,040,808	383,490,468 339,801,658	(1) 623,342	198
Per cent of increase.....		25.9	35.1	81.7	105.4	12.3	17.6	50.2	15.8	12.8		
St. Louis.....	1905 1900	2,603 2,731	289,133,806 159,634,795	12,413 9,157	14,546,325 10,390,824	70,564 70,556	47,366,813 31,691,118	39,432,392 28,036,935	180,806,473 131,029,394	319,709,859 228,089,639	(1) 638,134	206
Per cent of increase.....		4.7	81.1	35.6	39.9	29.9	49.5	40.6	38.0	40.2		
Baltimore.....	1905 1900	2,243 2,352	166,770,882 122,009,527	7,297 5,744	7,724,061 6,187,327	71,432 71,688	28,924,307 26,110,847	19,561,794 13,319,245	124,800,047 108,775,530	202,659,272 176,909,124	(1) 568,653	246
Per cent of increase.....		4.6	36.7	27.0	24.8	0.4	10.8	46.9	14.5	14.6		
Cincinnati.....	1905 1900	2,600 1,423	170,769,226 121,972,067	9,825 6,819	10,929,512 7,170,868	72,735 64,409	33,932,557 26,981,122	33,383,730 25,352,023	102,721,628 82,263,028	203,095,605 164,217,216	(1) 473,282	151
Per cent of increase.....		12.5	40.0	44.1	52.4	12.9	25.8	31.7	24.9	23.7		
Cleveland.....	1905 1900	1,720 1,423	164,691,287 105,381,527	7,341 5,189	8,859,767 5,614,108	67,801 57,222	35,356,918 27,348,548	15,593,258 10,619,850	100,783,886 77,966,319	170,184,277 142,464,823	(1) 420,508	200
Per cent of increase.....		20.9	56.3	41.5	57.8	18.5	29.3	46.8	29.3	25.8		
Buffalo.....	1905 1900	1,631 1,663	188,384,845 105,094,082	5,854 3,951	6,276,393 3,634,828	48,704 37,568	24,705,927 17,277,719	15,970,427 8,923,845	102,623,748 71,090,632	168,111,658 113,430,772	(1) 385,498	201
Per cent of increase.....		4.4	79.3	48.2	72.7	29.9	43.5	79.0	44.4	48.2	9.8	
Minneapolis-St. Paul...	1905 1900	1,506 1,340	108,209,964 79,283,521	5,830 4,390	5,994,418 4,158,905	37,044 33,755	19,148,285 15,247,846	13,922,920 7,327,248	109,364,757 85,836,668	161,803,453 126,613,742	(1) 376,357	155
Per cent of increase.....		12.4	36.5	32.8	44.1	9.7	25.6	90.0	27.4	27.8	25.5	
San Francisco.....	1905 1900	2,621 2,016	119,442,395 79,054,236	6,008 3,801	7,525,931 4,349,075	44,875 37,390	28,906,745 19,748,946	14,061,196 7,386,391	88,554,355 72,746,095	159,033,080 119,240,348	(1) 453,847	203
Per cent of increase.....		30.0	51.1	58.1	73.0	20.0	46.4	90.4	21.7	33.4		
Providence.....	1905 1900	1,237 1,257	171,177,887 138,565,741	4,567 3,401	5,974,334 4,453,221	73,391 66,148	33,119,386 27,404,806	12,025,812 9,001,174	86,568,340 69,125,957	156,299,965 128,328,444	344,521 304,975	154
Per cent of increase.....		1.6	23.5	34.3	34.2	10.9	20.9	33.6	25.2	21.8	13.0	

<sup>1</sup> No state census was taken for 1905.<sup>2</sup> Decrease.

In addition to the area that has been fixed for the different industrial districts, there are a number of surrounding places that are closely connected industrially and commercially with the central cities. The statistics for these surrounding places are shown separately and can be combined with those for the respective districts, if such a presentation is desired. These surrounding places in 1900 had a population of 3,922,456, and in 1904 contained 12,507 factories which gave employment to 505,424 salaried persons and wage-earners and reported an annual product valued at \$1,251,482,925. A combination of these totals with

those for the industrial districts shown in Table 1 gives a population of 17,307,902 for 1900, and 76,816 factories employing 2,680,574 salaried persons and wage-earners and reporting products valued at \$7,435,368,412 for the census of 1905. The aggregate for 13 industrial districts that have been selected without regard to size or locality is not of much importance. The chief value of the presentations is the comparison of the totals for each central city with the totals for its district, the determination of the relative importance of the different districts, and the character and extent of their leading industries, so far as these can be shown.

## INDUSTRIAL DISTRICT OF NEW YORK CITY.

New York city, the commercial metropolis of the United States, is situated on the East and the Hudson rivers, Upper and Lower New York bays, Long Island Sound, and the Atlantic ocean. The bays afford 102 square miles of anchorage. The water front of New

York city is extensive; the part belonging to the Borough of Manhattan alone extends more than 22 miles, and this entire frontage is available for deep-water shipping. The port is visited regularly by many thousand ocean and coastwise steamships and sailing ves-



sels, which carry passengers and freight and connect with the principal ports of the world. New York city is the center for the foreign trade of the United States, about half of the imports and exports passing through this port.

For regular local intercommunication there are numerous ferries which connect the various boroughs and reach points in New Jersey; many bridges, including three massive ones uniting Brooklyn borough with Manhattan borough and one connecting with Long Island City; railway tunnels under the Hudson river to Hoboken and under the East river to Brooklyn, with many more in process of construction; and surface, elevated, and subway electric railways. More than a dozen great steam railway systems center at the metropolis.

New York city was permanently settled by the Dutch in 1623 and incorporated as a city in 1653. It was originally known as New Amsterdam, but when it was taken by the English in 1664 it was named New York. In 1874 and 1895 parts of Westchester county were annexed; and on January 1, 1898, New York city as now constituted was created by the union of New York, Brooklyn, Staten Island, parts of Eastchester and Pelham towns in Westchester county, and part of Queens county.

The industrial district for which New York city is made the central city comprises an area of 702 square miles. Of all this area, 326 square miles, or 46.4 per cent, are within the corporate limits of the city.

The population of New York city in 1905, as shown by the state census, was 4,013,781, and that of the industrial district was 5,294,682. The relative growth of population in New York city and in the other cities and towns included in the district was nearly the same, the percentages being 16.8 and 16.2, respectively.

The density of population per square mile in 1905 was 12,312 for the city and 3,407 for the other places in the district.

Besides New York city the district comprises the whole of Hudson county, N. J., the chief cities being Bayonne, Hoboken, and Jersey City, and the chief towns, Kearny, Union, Harrison, and West Hoboken; and the following cities, towns, boroughs, villages, and townships:

- Westchester county, N. Y.:
  - Eastchester. New Rochelle.
  - Mamaroneck. Pelham.
  - Mt. Vernon. Yonkers.
- Bergen county, N. J.:
  - Bergenfields. Lodi township.
  - Carlstadt. Maywood.
  - East Rutherford. Palisades.
  - Englewood. Palisades Park.
  - Englewood Cliffs. Ridgefield borough.
  - Fairview. Ridgefield township.
  - Hackensack. Rutherford.
  - Harrington. Tenafly.
  - Little Ferry. Union.
  - Lodi borough.
- Essex county, N. J.:
  - Belleville. Montclair.
  - Bloomfield. Newark.
  - Clinton. Orange.
  - East Orange. South Orange township.
  - Franklin. South Orange village.
  - Glen Ridge. Vailsburg.
  - Irvington.
- Middlesex county, N. J.:
  - Perth Amboy. Woodbridge.
- Passaic county, N. J.:
  - Acquackanonk. Passaic.
  - Little Falls. Paterson.
- Union county, N. J.:
  - Clark. Linden township.
  - Cranford. Rahway.
  - Elizabeth. Roselle.
  - Garwood. Union.
  - Linden borough.

The borough of Garwood was organized in 1903 from parts of Cranford and Westfield townships and is included in the district here presented.

TABLE 2.—INDUSTRIAL DISTRICT OF NEW YORK CITY—MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Industrial district, total.....	1905	25,257	\$1,572,628,947	80,472	\$94,547,089	654,988	\$341,601,183	\$259,853,759	\$1,209,010,634	\$2,144,488,093	5,294,682
Per cent of increase.....	1900	23,262	1,224,823,447	54,864	66,057,921	539,890	266,599,742	161,930,938	910,389,938	1,614,267,347	4,539,390
		8.6	28.4	46.7	43.1	21.4	28.2	60.5	32.8	32.8	16.6
New York city.....	1905	20,839	1,042,946,487	63,586	73,027,655	464,716	248,128,259	206,825,065	818,029,267	1,526,523,006	4,013,781
Per cent of increase.....	1900	19,243	853,238,133	43,783	51,656,094	388,586	190,665,892	131,828,922	634,210,045	1,172,870,261	3,437,202
		8.3	22.2	45.2	41.4	19.0	26.2	56.9	29.0	30.2	16.8
Brooklyn borough.....	1905	4,182	313,452,384	9,932	13,520,985	104,995	54,534,568	38,470,163	230,809,278	373,462,930	1,338,686
Per cent of increase.....	1900	4,801	263,470,749	6,826	9,096,670	87,445	42,840,565	22,444,392	206,336,184	313,617,489	1,166,582
		12.8	19.0	45.5	48.6	20.1	28.8	71.4	11.9	19.1	16.5
Manhattan and Bronx boroughs.....	1905	15,975	620,525,980	51,716	56,758,487	339,221	182,080,410	160,648,168	507,029,836	1,043,251,923	2,384,010
Per cent of increase.....	1900	14,362	511,917,637	35,061	40,724,602	285,265	146,504,864	104,197,429	398,076,251	810,807,975	2,060,600
		11.2	21.2	45.0	39.4	18.9	24.3	54.2	27.4	28.7	16.3
Queens borough.....	1905	513	92,977,244	1,257	1,836,479	14,905	8,440,434	5,697,333	70,403,426	92,941,158	198,240
Per cent of increase.....	1900	395	67,419,903	912	1,263,938	10,684	5,633,659	3,754,250	23,353,686	35,427,561	152,999
		29.9	37.9	37.8	45.3	39.5	52.5	51.8	201.5	162.3	29.6
Richmond borough.....	1905	169	15,990,879	681	911,704	5,595	3,072,847	2,009,401	9,736,727	16,866,995	72,845
Per cent of increase.....	1900	185	10,429,844	384	570,384	5,192	2,276,904	1,432,851	6,444,924	13,017,236	67,021
		18.6	53.3	77.3	59.7	7.8	35.0	40.2	51.9	29.0	8.7

<sup>1</sup> Decrease.

TABLE 2.—INDUSTRIAL DISTRICT OF NEW YORK CITY—MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900—Continued.

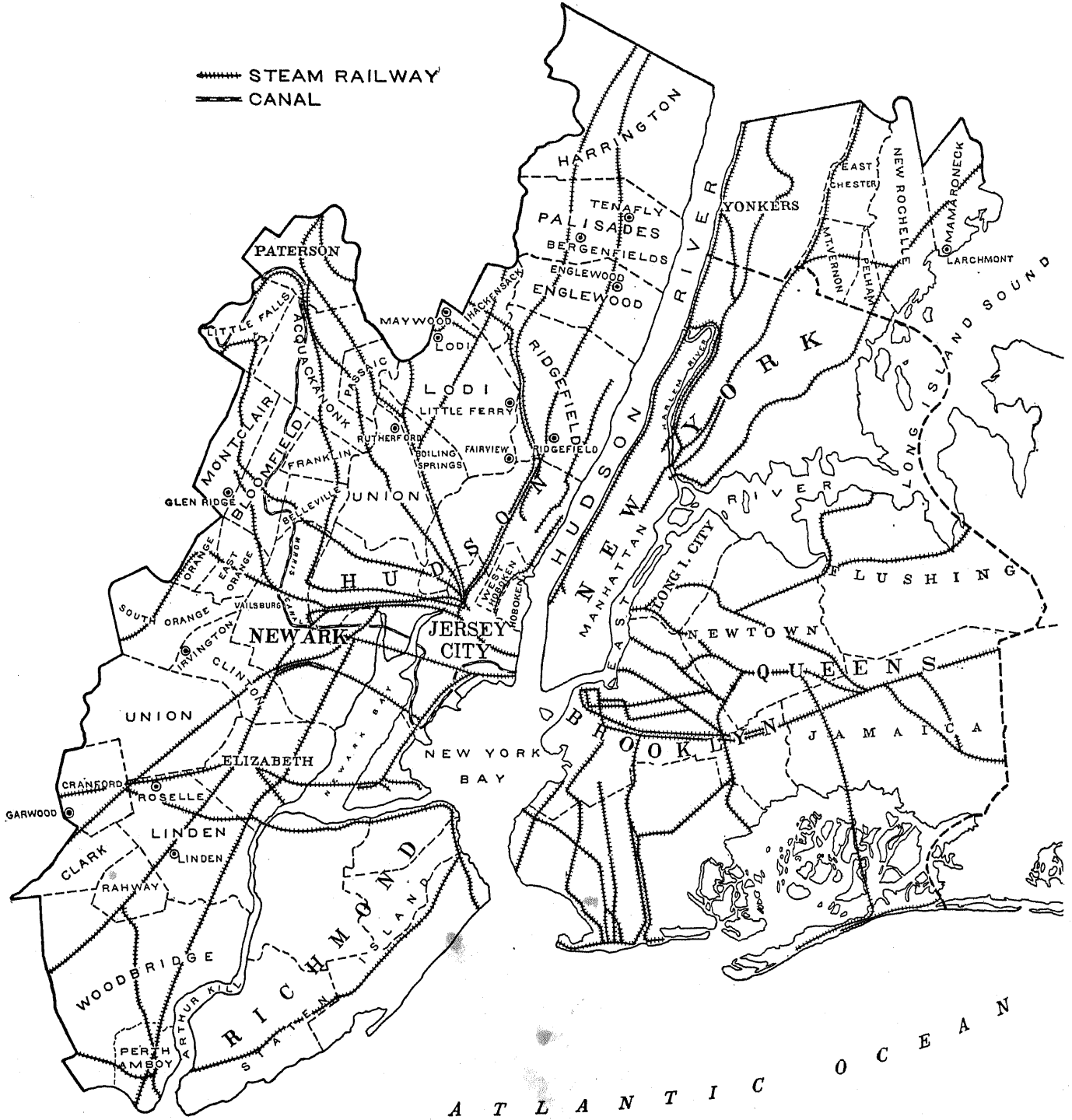
MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Outside of New York city .....	1905 1900	4,418 4,019	\$529,682,460 371,585,314	16,886 11,081	\$21,519,434 14,401,827	190,272 151,104	\$93,562,924 69,943,850	\$53,028,694 30,102,059	\$390,981,367 276,179,893	\$617,965,087 441,397,086	1,280,901 1,102,188
Per cent of increase .....		9.9	42.5	52.4	49.4	25.9	33.8	76.2	41.6	40.0	16.2
Bayonne, N. J. ....	1905 1900	58 63	50,296,704 26,251,109	746 248	1,036,787 412,799	7,057 4,670	4,276,613 2,622,791	3,557,005 763,065	46,984,412 33,794,455	60,633,761 38,601,429	42,262 32,722
Per cent of increase .....		17.9	91.6	200.8	151.2	51.1	63.1	366.1	39.0	57.1	29.2
Bloomfield, N. J. ....	1905 1900	33 39	4,177,405 3,194,468	261 142	314,208 221,239	1,893 1,612	1,024,309 770,145	846,704 226,762	1,750,389 1,705,600	4,645,483 3,370,924	11,668 9,668
Per cent of increase .....		15.4	30.8	83.8	42.0	17.4	33.0	273.4	2.6	37.8	20.7
East Orange, N. J. ....	1905 1900	17 22	3,047,905 1,896,260	383 150	267,248 186,088	854 690	453,700 356,018	317,826 302,469	1,108,151 910,770	2,326,552 2,086,910	25,175 21,506
Per cent of increase .....		22.7	60.7	155.3	43.6	23.8	27.4	5.1	21.7	11.5	17.1
Elizabeth, N. J. ....	1905 1900	124 141	23,564,094 15,951,174	740 584	866,099 800,585	12,335 9,498	7,397,978 5,475,852	1,417,406 1,288,016	16,981,514 12,912,537	29,300,801 22,861,375	60,509 52,130
Per cent of increase .....		12.1	47.7	26.7	8.2	29.9	35.1	10.0	31.5	28.2	16.1
Hackensack, N. J. ....	1905 1900	23 21	2,933,203 1,508,810	69 29	57,220 21,693	812 487	277,776 173,113	269,844 123,009	688,770 371,258	1,488,358 782,232	11,098 9,443
Per cent of increase .....		9.5	94.4	137.9	163.8	66.7	60.5	119.4	85.0	90.3	17.5
Harrison, N. J. ....	1905 1900	41 41	11,388,823 5,075,510	413 202	524,358 234,287	4,040 2,859	1,928,999 1,380,692	698,522 375,529	3,629,106 3,202,334	8,408,924 6,086,477	12,823 10,596
Per cent of increase .....			124.4	104.5	123.8	41.3	39.7	85.9	13.3	38.2	21.0
Hoboken, N. J. ....	1905 1900	279 194	11,776,602 7,475,164	725 402	913,607 495,304	7,227 5,712	3,572,667 2,625,042	1,417,853 795,847	6,580,235 5,025,963	14,077,305 10,483,079	65,468 59,304
Per cent of increase .....		43.8	57.5	80.3	84.4	26.5	36.1	78.2	30.9	34.3	10.3
Jersey City, N. J. ....	1905 1900	628 536	82,994,841 78,612,223	2,379 1,614	2,989,880 2,038,967	20,353 17,391	10,021,067 7,964,944	7,031,034 6,203,102	48,798,807 50,265,642	75,740,934 72,929,690	232,699 206,433
Per cent of increase .....		17.2	4.8	47.4	46.6	17.0	25.8	13.3	1.9	3.9	12.7
Kearny, N. J. ....	1905 1900	11 16	2,924,564 1,983,360	44 28	62,807 42,970	1,308 986	505,132 359,459	230,137 110,638	3,505,358 984,375	4,427,904 1,607,002	13,601 10,896
Per cent of increase .....		31.3	47.5	57.1	46.3	32.2	40.5	108.0	256.1	175.5	24.8
Montclair, N. J. ....	1905 1900	19 23	565,629 505,122	20 12	24,326 14,050	151 169	72,116 86,099	55,713 52,790	418,819 386,387	621,145 663,592	16,370 13,962
Per cent of increase .....		17.4	12.0	66.7	73.1	110.7	116.2	5.5	8.4	16.4	17.2
Mt. Vernon, N. Y. ....	1905 1900	54 37	7,284,487 4,056,573	183 93	150,470 77,753	670 438	426,030 224,046	334,864 107,271	784,350 328,406	1,877,508 909,718	25,006 21,228
Per cent of increase .....		45.9	79.6	96.8	93.5	53.0	90.2	212.2	138.8	106.4	17.8
Newark, N. J. ....	1905 1900	1,600 1,573	119,026,172 97,182,390	5,135 4,146	6,685,531 5,255,212	50,697 42,878	25,621,626 20,364,784	17,735,013 9,001,230	80,689,255 60,771,784	150,055,227 112,728,045	283,289 246,070
Per cent of increase .....		1.7	22.5	23.9	27.2	18.2	25.8	97.0	32.8	33.1	15.1
New Rochelle, N. Y. ....	1905 1900	28 25	814,422 391,894	55 15	48,441 11,579	517 198	342,319 110,292	58,590 19,051	461,513 278,407	1,102,817 508,162	20,479 14,720
Per cent of increase .....		12.0	107.8	266.7	318.4	161.1	210.4	207.5	65.8	117.0	39.1
Orange, N. J. ....	1905 1900	66 74	3,441,183 1,859,523	157 50	191,614 45,894	2,450 1,640	1,312,002 911,944	810,639 105,532	2,641,886 1,579,900	6,150,635 2,995,688	26,101 24,141
Per cent of increase .....		10.8	153.1	214.0	317.5	49.4	43.9	668.1	67.2	105.3	8.1
Passaic, N. J. ....	1905 1900	95 70	28,611,310 18,377,299	776 403	1,072,995 622,644	11,000 6,399	3,866,098 2,374,445	2,249,836 1,075,552	13,109,651 7,417,998	22,782,725 12,804,805	37,837 27,777
Per cent of increase .....		35.7	55.7	92.6	72.3	71.9	62.8	109.2	76.7	77.9	36.2
Paterson, N. J. ....	1905 1900	513 487	53,695,585 46,893,628	1,859 1,199	2,163,909 1,588,313	28,509 28,542	13,001,545 11,843,098	6,355,010 4,898,731	27,440,733 25,064,780	54,673,083 48,502,044	111,529 105,171
Per cent of increase .....		5.3	14.5	55.0	36.2	10.1	9.8	29.7	9.5	12.7	6.0
Perth Amboy, N. J. ....	1905 1900	53 47	11,583,382 6,373,836	346 157	400,267 185,361	3,950 2,005	1,827,055 919,522	864,001 290,999	30,316,381 11,346,833	34,800,402 14,061,072	25,895 17,699
Per cent of increase .....		12.8	81.7	120.4	115.9	97.0	98.7	196.9	167.2	147.5	46.3
Union, N. J. ....	1905 1900	77 57	7,294,574 5,353,924	104 92	183,252 164,086	1,856 1,376	875,126 664,574	704,777 868,395	1,391,911 1,408,284	3,512,451 3,403,136	17,005 15,187
Per cent of increase .....		35.1	36.2	13.0	11.7	34.9	31.7	118.8	1.2	3.2	12.0
West Hoboken, N. J. ....	1905 1900	95 65	6,017,875 3,732,428	259 172	258,071 151,627	3,562 2,733	1,276,369 1,059,031	970,189 571,296	3,122,089 2,529,058	5,947,267 4,769,436	29,082 23,094
Per cent of increase .....		46.2	61.2	50.6	70.2	30.3	20.5	69.8	23.4	24.7	25.9
Yonkers, N. Y. ....	1905 1900	106 107	33,731,085 12,239,123	464 308	720,599 437,488	9,779 7,555	4,518,547 3,263,587	2,514,501 926,693	23,329,973 9,541,473	33,548,688 17,303,690	61,716 47,931
Per cent of increase .....		0.9	175.6	50.6	64.7	29.4	38.5	171.3	144.5	93.9	28.8
All other places in district <sup>2</sup>	1905 1900	498 381	65,112,615 33,171,496	1,768 1,085	2,587,985 1,393,498	21,257 13,266	10,965,850 6,394,372	4,589,230 1,995,782	77,250,114 46,363,699	101,843,117 63,938,580	<sup>3</sup> 151,289 132,450
Per cent of increase .....		30.7	96.3	70.8	85.7	60.2	71.5	130.0	66.6	59.3	14.2

<sup>1</sup>Decrease.<sup>2</sup>For names of places included, see page 11.<sup>3</sup>Exclusive of population for Ridgfield township in Bergen county, N. J., and Clinton and Franklin townships and Vailsburg borough in Essex county, N. J., statistics of which are not given in the state census.

MAP 1.—INDUSTRIAL DISTRICT OF NEW YORK CITY.

[Electric railways are omitted because of the reduced scale of the map.]

——+—— STEAM RAILWAY  
—— CANAL



The industrial district of New York city leads the country in the value of products of its manufacturing establishments. This value for 1904 was nearly two and one-seventh billions of dollars, an increase of nearly one-third over the amount shown by the previous census. Five-sevenths of this value was reported for New York city itself, about one-half of the total value being credited to the boroughs of Manhattan and Bronx. The percentage of increase

was greater for the places outside of New York city than for the great city itself, but the absolute increase for the central city was over twice that for the outside places. The actual increase in New York city amounted to \$353,652,745 and that in the places outside to \$176,568,001. In the boroughs of Manhattan and Bronx alone the absolute increase in the four and one-half years between the census of 1900 and that of 1905 was over two hundred million dollars.

TABLE 3.—INDUSTRIAL DISTRICT OF NEW YORK CITY—PER CENT DISTRIBUTION OF MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
New York city.....	1905	82.5	66.3	79.0	77.2	71.0	72.6	79.6	67.7	71.2	75.8
	1900	82.7	69.7	79.8	78.2	72.0	73.8	81.4	69.7	72.7	75.7
Brooklyn borough.....	1905	16.6	19.9	12.3	14.3	16.0	16.0	14.8	19.1	17.4	25.7
	1900	18.5	21.5	12.4	13.8	16.2	15.9	13.9	22.7	19.4	25.7
Manhattan and Bronx boroughs.....	1905	63.3	39.5	64.3	60.0	51.8	53.3	61.8	41.9	48.6	45.0
	1900	61.7	41.8	65.0	61.6	52.9	55.0	64.3	43.7	50.2	45.2
Queens borough.....	1905	2.0	5.9	1.6	1.9	2.3	2.5	2.2	5.8	4.3	3.7
	1900	1.7	5.5	1.7	1.9	2.0	2.1	2.3	2.6	2.2	3.4
Richmond borough.....	1905	0.7	1.0	0.8	1.0	0.9	0.9	0.8	0.8	0.8	1.4
	1900	0.8	0.9	0.7	0.9	1.0	0.9	0.9	0.7	0.8	1.5
Outside of New York city.....	1905	17.5	33.7	21.0	22.8	29.0	27.4	20.4	32.3	28.8	24.2
	1900	17.3	30.3	20.2	21.8	28.0	26.2	18.6	30.3	27.3	24.3
Bayonne, N. J.....	1905	0.2	3.2	0.9	1.1	1.1	1.3	1.4	3.9	2.8	0.8
	1900	0.3	2.1	0.5	0.6	0.9	1.0	0.5	3.7	2.4	0.7
Bloomfield, N. J.....	1905	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.1	0.2	0.2
	1900	0.2	0.3	0.3	0.3	0.3	0.3	0.1	0.2	0.2	0.2
East Orange, N. J.....	1905	0.1	0.2	0.5	0.3	0.1	0.1	0.1	0.1	0.1	0.5
	1900	0.1	0.2	0.3	0.3	0.1	0.1	0.2	0.1	0.1	0.5
Elizabeth, N. J.....	1905	0.5	1.5	0.9	0.9	1.9	2.2	0.5	1.4	1.4	1.1
	1900	0.6	1.3	1.1	1.2	1.8	2.1	0.8	1.4	1.4	1.1
Hackensack, N. J.....	1905	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
	1900	0.1	0.1	0.1	( <sup>1</sup> )	0.1	0.1	0.1	( <sup>1</sup> )	( <sup>1</sup> )	0.2
Harrison, N. J.....	1905	0.2	0.7	0.5	0.6	0.6	0.6	0.3	0.3	0.4	0.2
	1900	0.2	0.4	0.4	0.4	0.5	0.5	0.2	0.4	0.4	0.2
Hoboken, N. J.....	1905	1.1	0.7	0.9	1.0	1.1	1.0	0.5	0.5	0.7	1.2
	1900	0.8	0.6	0.7	0.7	1.1	1.0	0.5	0.6	0.6	1.3
Jersey City, N. J.....	1905	2.5	5.2	3.0	3.2	3.1	2.9	2.7	4.0	3.5	4.4
	1900	2.3	6.4	2.9	3.1	3.2	3.0	3.8	5.5	4.5	4.5
Kearny, N. J.....	1905	( <sup>1</sup> )	0.2	0.1	0.1	0.2	0.1	0.1	0.3	0.2	0.3
	1900	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2
Montclair, N. J.....	1905	0.1	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	0.3
	1900	0.1	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	0.3
Mt. Vernon, N. Y.....	1905	0.2	0.5	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.5
	1900	0.2	0.3	0.2	0.1	0.1	0.1	0.1	( <sup>1</sup> )	0.1	0.5
Newark, N. J.....	1905	6.3	7.6	6.4	7.1	7.7	7.5	6.8	6.7	7.0	5.4
	1900	6.8	7.9	7.6	8.0	7.9	7.6	5.6	6.7	7.0	5.4
New Rochelle, N. Y.....	1905	0.1	0.1	0.1	0.1	0.1	0.1	( <sup>1</sup> )	( <sup>1</sup> )	0.1	0.4
	1900	0.1	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	0.3
Orange, N. J.....	1905	0.3	0.2	0.2	0.2	0.4	0.4	0.3	0.2	0.3	0.5
	1900	0.3	0.1	0.1	0.1	0.3	0.3	0.1	0.2	0.2	0.5
Passaic, N. J.....	1905	0.4	1.8	1.0	1.1	1.7	1.1	0.9	1.1	1.1	0.7
	1900	0.3	1.5	0.7	0.9	1.2	0.9	0.7	0.8	0.8	0.6
Paterson, N. J.....	1905	2.0	3.4	2.3	2.3	4.4	3.8	2.4	2.3	2.5	2.1
	1900	2.1	3.8	2.2	2.4	5.3	4.4	3.0	2.8	3.0	2.3
Perth Amboy, N. J.....	1905	0.2	0.7	0.4	0.4	0.6	0.5	0.3	2.5	1.6	0.5
	1900	0.2	0.5	0.3	0.3	0.4	0.3	0.2	1.2	0.9	0.4
Union, N. J.....	1905	0.3	0.5	0.1	0.2	0.3	0.3	0.3	0.1	0.2	0.3
	1900	0.2	0.4	0.2	0.2	0.3	0.2	0.5	0.2	0.2	0.3
West Hoboken, N. J.....	1905	0.4	0.4	0.3	0.3	0.5	0.4	0.4	0.3	0.3	0.5
	1900	0.3	0.3	0.3	0.2	0.5	0.4	0.4	0.3	0.3	0.5
Yonkers, N. Y.....	1905	0.4	2.1	0.6	0.8	1.5	1.3	1.0	1.9	1.6	1.2
	1900	0.5	1.0	0.6	0.7	1.4	1.2	0.6	1.0	1.1	1.1
All other places in district.....	1905	2.0	4.1	2.2	2.7	3.2	3.2	1.8	6.4	4.7	2.9
	1900	1.6	2.7	1.9	2.1	2.5	2.4	1.2	5.1	4.0	2.9

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

The great central city has, however, fallen off in its proportion of district manufactures, although this loss was only 1.5 per cent in value of products. In capital the relative loss was greater—3.4 per cent—but in number of establishments and average number of wage-earners it was much less, being only two-tenths of 1 per cent for the former and 1 per cent for the latter. The proportionate gain for the outside cities and towns was so small and so widely distributed that it is apparent only in tenths of 1 per cent. The proportions for many of the places were the same at the two censuses, while in a few cases a loss is shown. Several had values so comparatively small that their proportion of the total of over two billion for the district could be computed only in hundredths of 1 per cent, which is so slight that it is not given in the table.

The manufacture of men's and women's clothing was the foremost industry for this district in 1904, the products being valued at nearly one-third of a billion dollars and constituting 14.5 per cent of the value of products of the entire district. The value of women's clothing was considerably larger than that of men's. The average number of wage-earners employed in the industry was over 2 per cent of the entire population of the district. New York city reported 98.3 per cent of the total value of these products.

The printing and publishing industry ranked second, but the value of its products was much less than one-half that of the clothing manufacture. The value of the newspaper and periodical output exceeded that of the book and job offices by over one-half.

The refining of sugar and molasses, reported mainly from the Borough of Brooklyn, ranked third; the smelting and refining of copper, lead, and zinc, reported

largely from New Jersey, ranked fourth; and the manufacture of textiles was fifth. Each of these manufactures had products valued at over one hundred millions.

The leading branch of the textile industry was the manufacture of silk and silk goods, which was carried on largely in the cities outside of New York city, notably in the textile centers of New Jersey. The textile industry ranked next to clothing in the number of wage-earners employed.

Foundry and machine shop products, an industry embracing the construction and repair of many kinds of machinery used in the various industries of the district as well as in manufactures of distant centers, would naturally be expected to have a high rank in value; the output was valued at over seventy millions, and was sixth in rank. The industry employed the third greatest number of wage-earners.

Every center has within or near it some industries that prepare food for the consumption of its population. Within the district of New York city the slaughtering of food animals is an important industry, and in 1904 its products were valued at nearly seventy millions, and it was seventh in rank.

Malt liquors, tobacco, and bread and other bakery products were next in rank in the order given. Comparatively few wage-earners were employed in the manufacture of liquors, but tobacco reported the fourth greatest number shown for the selected industries for the district; with the exception of millinery and lace goods, bread and other bakery products ranked next in this particular.

Many other important industries had products valued at more than ten millions. Most of them show substantial increases, and some of them a very great growth.

TABLE 4.—INDUSTRIAL DISTRICT OF NEW YORK CITY—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE-EARNERS, AND VALUE OF PRODUCTS, WITH PER CENT OF INCREASE, BY SELECTED INDUSTRIES: 1905 AND 1900.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE-EARNERS.		VALUE OF PRODUCTS.		PER CENT OF INCREASE.		
	1905	1900	1905	1900	1905	1900	Number of establishments.	Average number of wage-earners.	Value of products.
Clothing.....	3,935	3,589	115,050	78,081	\$310,788,764	\$209,037,623	9.6	47.3	48.7
Women's.....	2,173	1,644	72,431	46,306	171,311,652	104,826,178	32.2	56.4	63.9
Men's.....	1,762	1,945	42,619	31,775	139,477,112	104,511,445	<sup>1</sup> 9.4	34.1	33.5
Printing and publishing.....	2,219	1,664	30,387	25,706	123,275,357	83,224,656	33.3	18.2	48.1
Newspapers and periodicals.....	789	519	11,126	11,123	73,862,315	53,896,383	52.0	(?)	37.0
Book and job.....	1,387	1,123	18,977	14,368	47,251,436	28,474,411	23.5	32.1	65.9
Music.....	43	22	284	215	2,161,606	853,862	95.5	32.1	153.2
Sugar and molasses refining.....	6	13	3,706	3,242	116,420,217	90,678,378	<sup>1</sup> 53.8	<sup>1</sup> 14.3	28.4
Smelting and refining <sup>2</sup> .....	8	10	2,814	3,279	113,546,449	59,442,378	<sup>1</sup> 20.0	<sup>1</sup> 14.2	91.0
Textiles.....	552	438	65,202	56,514	112,364,606	93,240,384	26.0	15.4	20.5
Silk and silk goods.....	299	229	28,570	26,845	49,374,007	44,572,704	30.6	6.4	10.8
Dyeing and finishing textiles.....	88	80	8,066	6,457	12,693,073	9,558,051	10.0	24.9	32.8
Carpets and rugs, other than rag.....	6	6	6,718	4,283	11,959,928	8,496,047	.....	56.9	40.8
Cordage and twine <sup>4</sup> .....	10	11	3,591	3,252	9,569,719	8,708,974	9.1	10.4	9.1
Worsted goods.....	6	3	4,306	2,655	7,717,041	4,114,474	100.0	62.2	87.6
Cotton goods.....	14	16	4,047	4,387	6,522,065	5,462,359	<sup>1</sup> 12.5	17.8	19.4
Hosiery and knit goods.....	105	66	4,138	2,747	6,397,511	3,903,340	59.1	50.0	63.9
Jute and jute goods.....	5	4	2,668	2,023	3,259,902	2,200,664	25.0	31.9	44.2
Woolen goods.....	7	13	1,254	1,604	1,843,144	2,340,426	<sup>1</sup> 46.2	<sup>1</sup> 21.8	121.2
All other textiles <sup>5</sup> .....	12	10	1,844	2,261	3,027,616	3,765,345	20.0	<sup>1</sup> 18.4	119.6
Foundry and machine shop products <sup>6</sup> .....	822	837	34,472	31,981	73,494,705	64,190,436	<sup>1</sup> 1.8	7.8	14.5
Slaughtering.....	72	82	2,598	2,426	69,895,456	55,782,285	<sup>1</sup> 12.2	7.1	25.3
Wholesale, not including meat packing.....	42	46	1,833	1,621	56,912,416	42,506,696	<sup>1</sup> 8.7	13.1	33.9
Meat packing, wholesale.....	30	36	765	805	12,983,040	13,275,589	<sup>1</sup> 16.7	<sup>1</sup> 5.0	12.2
Liquors, malt.....	121	128	7,355	6,507	60,043,479	53,230,700	<sup>1</sup> 5.5	13.0	12.8
Tobacco.....	2,585	2,218	29,448	23,847	56,219,444	49,624,497	16.5	23.5	13.3
Cigars and cigarettes.....	2,544	2,200	29,006	21,570	53,102,750	39,851,417	15.6	34.5	33.3
Chewing and smoking, and snuff.....	41	18	442	2,277	3,116,694	9,773,080	127.8	<sup>1</sup> 80.6	168.1
Bread and other bakery products.....	2,460	2,428	14,737	12,624	51,229,612	37,607,704	1.3	16.7	36.2
Petroleum, refining.....	4	4	3,721	2,951	46,608,984	29,649,460	.....	26.1	57.2
Iron and steel industry.....	257	244	11,521	8,870	37,217,989	25,270,593	5.3	29.9	47.3
Structural ironwork <sup>7</sup> .....	206	198	6,105	5,060	16,405,833	12,984,224	4.0	20.7	26.4
Wire.....	6	3	1,083	176	12,185,463	3,375,095	100.0	515.3	261.0
Iron and steel <sup>8</sup> .....	10	11	3,420	3,059	6,674,782	7,031,516	<sup>1</sup> 9.1	11.8	15.1
Iron and steel forgings.....	10	9	430	268	919,199	607,213	11.1	60.4	51.4
Iron and steel bolts, nuts, washers, and rivets not made in rolling mills or steel works.....	9	6	136	119	332,886	372,852	50.0	14.3	110.7
All other iron and steel industries <sup>9</sup> .....	16	17	347	188	699,826	899,693	<sup>1</sup> 5.9	84.6	122.2
Gas, illuminating and heating.....	20	20	6,138	4,955	33,824,295	19,457,606	.....	23.9	73.8
Millinery and lace goods.....	578	392	16,316	11,278	33,190,852	21,057,038	47.4	44.7	57.6
Coffee and spice, roasting and grinding.....	60	62	1,482	1,456	25,992,568	21,630,353	<sup>1</sup> 2.2	1.8	20.7
Fur goods.....	578	515	5,309	4,193	25,325,361	15,256,505	12.2	26.6	66.0
Electrical machinery, apparatus, and supplies.....	170	133	10,914	8,946	24,612,892	18,821,522	27.8	22.0	30.8
Chemicals <sup>10</sup> .....	79	80	5,023	3,703	24,274,728	16,669,713	11.3	35.6	45.4
Jewelry.....	373	327	6,713	5,610	20,605,626	17,076,426	14.1	19.7	20.7
Musical instruments, pianos <sup>11</sup> .....	125	113	8,146	5,904	19,918,683	13,120,041	10.6	38.0	51.8
Paints.....	72	71	2,719	2,247	19,178,709	12,912,301	1.4	21.0	48.5
Furnishing goods, men's.....	227	221	8,160	8,190	19,101,279	19,009,500	2.7	<sup>1</sup> 0.4	0.5
Lumber, planing mill products, including sash, doors, and blinds.....	245	176	7,027	4,324	18,839,012	11,202,166	39.2	62.5	68.2
Leather, tanned, curried, and finished.....	83	85	4,534	4,190	16,554,193	14,745,295	<sup>1</sup> 2.4	8.2	12.3
Confectionery.....	128	110	5,817	4,500	15,302,094	10,988,348	14.5	29.3	39.3
Hats, felt.....	83	57	8,718	7,210	15,165,579	10,720,719	45.6	20.9	41.5
Tinware <sup>12</sup> .....	360	847	7,047	6,482	15,005,164	23,607,409	<sup>1</sup> 57.5	8.7	136.4
Shirts.....	158	201	5,249	5,859	14,464,747	15,213,144	<sup>1</sup> 21.4	110.4	14.9
Boots and shoes.....	94	113	7,143	6,912	14,291,175	11,658,776	<sup>1</sup> 16.8	3.3	22.6
Furniture.....	311	196	6,493	6,925	13,462,589	13,500,880	58.7	1.2	1.3
Marble and stone work <sup>13</sup> .....	165	180	5,672	4,164	13,250,110	9,671,951	<sup>1</sup> 8.3	36.2	37.0
Patent medicines and compounds.....	275	195	1,748	1,701	11,951,829	10,704,211	41.0	2.8	11.7
Flour and grist mill products.....	16	26	595	1,201	11,314,398	9,539,822	<sup>1</sup> 38.5	<sup>1</sup> 50.5	18.6
Smelting and refining, not from the ore.....	17	12	795	109	10,661,613	2,115,726	41.7	370.4	403.9

<sup>1</sup> Decrease.

<sup>2</sup> Less than one-tenth of 1 per cent.

<sup>3</sup> Embraces the smelting and refining of copper, lead, and zinc.

<sup>4</sup> Exclusive of 1 small establishment in Newark.

<sup>5</sup> Includes in both years cotton small wares and felt goods; and in 1905, linen goods and wool hats.

<sup>6</sup> Includes stoves and furnaces.

<sup>7</sup> Includes bridges.

<sup>8</sup> Includes blast furnaces, and steel works and rolling mills.

<sup>9</sup> Includes in both years doors and shutters; nails and spikes, made by establishments other than rolling mills or steel works, and tin and terne plate; and in 1905, wrought pipe.

<sup>10</sup> Includes sulphuric, nitric, and mixed acids.

<sup>11</sup> Includes organs, and piano and organ materials.

<sup>12</sup> Includes copper-smithing and sheet iron working.

<sup>13</sup> Includes artificial stone.

TABLE 5.—INDUSTRIAL DISTRICT OF NEW YORK CITY—MOTIVE POWER EMPLOYED IN MANUFACTURES: 1905.

	Aggregate.	NEW YORK CITY.					Outside of New York city.
		Total.	Manhattan and Bronx boroughs.	Brooklyn borough.	Queens borough.	Richmond borough.	
Number of establishments using power.....	10,761	8,194	6,182	1,715	208	89	2,567
Total horsepower.....	652,319	357,549	181,902	134,785	26,602	14,260	294,770
Owned:							
Steam engines—							
Number.....	6,311	3,373	1,584	1,310	342	137	2,938
Horsepower.....	478,221	246,175	109,141	101,773	23,637	11,624	232,046
Gas and gasoline engines—							
Number.....	1,857	1,433	895	463	51	24	424
Horsepower.....	16,000	11,189	7,214	3,507	320	148	4,811
Water wheels—							
Number <sup>1</sup> .....	103	11	5	2	1	3	92
Horsepower.....	3,175	198	73	16	100	9	2,977
Electric motors—							
Number.....	6,439	3,701	2,383	1,110	81	127	2,738
Horsepower <sup>2</sup> .....	73,048	34,468	15,221	16,586	1,113	1,548	39,480
Other power, horsepower.....	2,960	1,891	572	502	327	490	1,069
Rented: <sup>3</sup>							
Electric, horsepower.....	48,643	41,241	32,713	7,257	930	341	7,402
All other, horsepower.....	29,372	22,387	16,968	5,144	175	100	6,985

<sup>1</sup> Includes 9 water motors in New York city, with 94 horsepower, and 23 outside New York city, with 235 horsepower.

<sup>2</sup> Includes electric power generated by steam engines reported above.

<sup>3</sup> Includes power rented from other manufacturers.

Of the horsepower reported, that generated by steam engines constituted 73.3 per cent, while electric power, owned and rented, formed 18.8 per cent. New York city had 54.8 per cent of the total. The textile industry used 71,815 horsepower, or 11 per cent of the total.

The second largest amount—40,266 horsepower, or 6.2 per cent—was reported by foundry and machine shops, while almost as much—39,695 horsepower, or 6.1 per cent—was employed in the production of malt liquors.

It is difficult to limit the additional territory contributory to the New York industrial district or dependent upon it for commerce and finance; in this discussion, however, surrounding municipalities with an area of 2,752 square miles, and a population in 1900 of 583,999, are considered. Not only does this additional territory extend farther into New Jersey but it includes a part of Connecticut. In the former state the whole of Somerset county and parts of Monmouth, Morris, and Passaic counties are included, together with the rest of Bergen, Essex, Middlesex, and Union counties, and in the latter state a part of Fairfield county. The area added in New York state comprises the whole of Nassau and Rockland counties, a part of Suffolk county, and that part of Westchester county not included in the district. The cities, boroughs, towns, and townships in the parts of Fairfield, Monmouth, Morris, Passaic, and Suffolk counties which are included in the outlying territory are as follows:

Fairfield county, Conn.:

Darien.	Norwalk.
Greenwich.	Stamford.
New Canaan.	Wilton.

Monmouth county, N. J.:

Allenhurst.	Atlantic.
Asbury Park.	Atlantic Highlands.

Monmouth county, N. J.—Continued.

Belmar.	Marlboro.
Bradley Beach.	Matawan borough.
Deal.	Matawan township.
Eatontown.	Middletown.
Englishtown.	Neptune.
Freehold town.	Neptune City.
Freehold township.	North Spring Lake.
Highlands.	Ocean.
Holmdel.	Raritan.
Höwell.	Red Bank.
Keyport.	Seabright.
Long Branch.	Shrewsbury.
Manalapan.	Spring Lake.
Manasquan.	Wall.

Morris county, N. J.:

Boonton.	Montville.
Chatham borough.	Morris.
Chatham township.	Morristown.
Dover.	Passaic township.
Florham Park.	Pequanac.
Hanover.	Port Oram.
Madison.	Randolph.
Mendham.	

Passaic county, N. J.:

Hawthorne.	Totowa.
Manchester.	Wayne.

Suffolk county, N. Y.:

Babylon.	Islip.
Huntington.	Smithtown.

In this additional territory the following cities and towns were large enough to be shown separately: Peekskill in New York; Long Branch, Morristown, New Brunswick, and Plainfield in New Jersey; and Stamford in Connecticut.

In 1904 the total number of establishments in both the district and the surrounding area was 26,816; the average number of wage-earners, 700,806; and the value of products, \$2,246,947,158. Details concerning these are given in the following tables:

TABLE 6.—MUNICIPALITIES SURROUNDING INDUSTRIAL DISTRICT OF NEW YORK CITY—MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Total.....	1905	1,559	\$117,141,853	4,222	\$5,127,287	45,818	\$21,306,654	\$13,071,103	\$49,535,442	\$102,459,065	.....
Per cent of increase.....	1900	1,354	63,758,103	2,463	2,841,566	36,812	15,586,476	6,006,102	30,281,508	63,714,119	583,999
		15.1	83.7	71.4	80.4	24.5	36.7	117.6	68.6	60.8	.....
Long Branch, N. J.....	1905	26	2,038,354	67	40,319	294	155,341	61,227	206,711	577,268	12,183
Per cent of increase.....	1900	11	1,761,869	23	17,631	96	48,916	22,513	108,847	280,590	8,872
		136.4	15.7	191.3	128.7	206.3	217.6	172.0	89.9	105.7	37.3
Morristown, N. J.....	1905	26	781,637	25	21,676	307	170,899	48,475	299,179	704,412	12,146
Per cent of increase.....	1900	22	747,399	36	24,199	252	146,054	34,818	309,729	595,592	11,267
		18.2	4.6	130.6	110.4	21.8	17.0	39.2	13.4	18.3	7.8
New Brunswick, N. J.....	1905	71	10,392,709	338	399,749	4,590	1,792,230	1,230,892	4,157,992	8,916,983	23,133
Per cent of increase.....	1900	72	6,319,119	238	302,717	3,836	1,303,832	631,207	2,993,866	5,791,321	20,006
		11.4	64.5	42.0	32.1	19.7	37.5	95.0	38.9	54.0	15.6
Peekskill N. Y.....	1905	46	3,894,811	156	218,150	1,957	1,025,135	3,414,486	2,281,880	7,251,897	13,200
Per cent of increase.....	1900	37	1,426,738	86	94,670	1,281	619,736	89,984	760,965	1,782,977	10,358
		24.3	173.0	81.4	130.4	52.8	65.4	3,694.5	199.9	306.7	27.4
Plainfield, N. J.....	1905	49	5,101,343	246	237,840	1,986	1,025,716	469,275	1,153,739	3,572,134	18,468
Per cent of increase.....	1900	32	2,449,634	121	138,825	1,384	761,070	217,897	812,914	2,437,434	15,369
		53.1	108.2	103.3	71.3	43.5	34.8	115.4	41.9	46.6	20.2
Stamford, Conn.....	1905	62	7,526,057	417	438,917	3,341	1,722,108	555,919	2,329,735	5,890,416	( <sup>2</sup> )
Per cent of increase.....	1900	49	4,813,085	281	260,590	2,445	1,193,049	414,387	1,700,362	3,920,010	15,997
		26.5	56.4	48.4	68.4	36.6	44.3	34.2	37.0	50.3	.....
All other surrounding places <sup>3</sup> .....	1905	1,279	87,406,942	2,973	3,770,636	33,343	15,415,225	7,290,829	39,106,206	75,545,955	452,671
Per cent of increase.....	1900	1,131	46,240,259	1,678	2,002,934	27,518	11,513,819	4,595,296	23,594,825	48,906,195	502,130
		13.1	89.0	77.2	88.3	21.2	33.9	58.7	65.7	54.5	.....

Decrease.

<sup>2</sup> No state census was taken for 1905.

<sup>3</sup> For names of places included, see page 17.

<sup>4</sup> Exclusive of 5 towns in Connecticut, the population of which in 1900 was 39,786; and of North Spring Lake borough in New Jersey, the population of which in 1900 was 361.

TABLE 7.—MUNICIPALITIES SURROUNDING INDUSTRIAL DISTRICT OF NEW YORK CITY—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE-EARNERS, AND VALUE OF PRODUCTS, WITH PER CENT OF INCREASE, BY SELECTED INDUSTRIES: 1905 AND 1900.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE-EARNERS.		VALUE OF PRODUCTS.		PER CENT OF INCREASE.		
	1905	1900	1905	1900	1905	1900	Number of establishments.	Average number of wage-earners.	Value of products.
Textiles.....	46	36	6,774	5,211	\$10,603,997	\$6,696,590	27.8	30.0	58.3
Silk and silk goods.....	20	16	2,538	1,503	4,843,002	2,579,217	25.0	68.9	87.8
Woolen goods.....	8	8	1,054	1,817	2,419,823	2,360,128	.....	19.0	2.5
Dyeing and finishing textiles.....	9	5	1,431	1,125	1,670,752	1,196,415	80.0	27.2	39.6
All other textiles <sup>1</sup> .....	9	7	1,151	766	1,670,420	560,830	28.6	50.3	197.8
Foundry and machine shop products <sup>2</sup> .....	74	78	4,784	4,306	8,714,119	7,456,115	15.1	11.1	16.9
Liquors.....	19	16	347	66	4,784,338	833,983	18.8	425.8	473.7
Distilled.....	14	13	290	51	4,452,700	765,415	7.7	468.6	481.7
Malt.....	5	3	57	15	331,638	68,568	66.7	280.0	383.7
Tobacco.....	141	111	1,707	1,026	4,700,052	2,540,792	27.0	66.4	85.0
Chewing and smoking, and snuff.....	5	6	407	345	2,645,840	1,522,279	116.7	18.0	73.8
Cigars and cigarettes.....	136	105	1,300	681	2,054,212	1,018,513	29.5	90.9	101.7
Clothing.....	33	16	2,128	1,293	3,208,733	2,206,562	106.3	64.6	45.4
Men's.....	15	8	776	705	1,783,003	1,470,610	87.5	10.1	21.2
Women's.....	18	8	1,352	588	1,425,730	735,952	125.0	129.9	93.7
Bread and other bakery products.....	248	135	930	466	3,059,645	1,329,319	83.7	99.6	130.2
Hats, felt.....	16	20	1,383	1,133	2,469,750	1,549,349	120.0	22.1	59.4
Printing and publishing.....	181	137	927	895	2,398,521	2,239,048	32.1	3.6	7.1
Newspapers and periodicals.....	146	106	806	796	2,197,921	2,092,925	37.7	1.3	5.0
Book and job.....	35	31	121	99	200,600	146,123	12.9	22.2	37.3
Paper and wood pulp.....	15	9	707	261	2,219,614	730,378	66.7	170.9	203.9
Pottery, terra cotta, and fire clay products.....	17	19	1,533	1,512	1,888,428	1,564,369	110.5	1.4	20.7
Lumber, planing mill products, including sash, doors, and blinds.....	48	54	702	686	1,864,647	1,631,804	111.1	2.3	14.3
Rubber and elastic goods.....	7	7	774	665	1,595,367	941,497	.....	16.4	69.5
Boots and shoes.....	14	22	679	1,000	1,142,643	1,623,409	136.4	132.1	129.9
Flour and grist mill products.....	39	37	90	72	1,009,931	1,027,676	5.4	25.0	11.7

<sup>1</sup> Decrease.

<sup>2</sup> Includes in both years the manufacture of cotton goods, felt goods, and hosiery and knit goods; and in 1905, the manufacture of worsted goods.

<sup>3</sup> Includes stoves and furnaces.



In the surrounding municipalities the textile industry led among the selected manufactures, with products valued at more than ten millions of dollars; foundry and machine shop products ranked second, with a value of products of nearly nine millions; and liquors and tobacco almost tied for third place, with products valued at nearly five millions each.

Great increases in value of products are shown for several industries, the manufacture of liquors being especially prominent in this respect.

A combination of the figures for power in the outlying territory and those for the district proper gives a total of 11,686 establishments, employing 735,324 horsepower. Of the total horsepower reported for the surrounding territory, 78.1 per cent was generated by steam engines. Of the total for both district and surrounding territory, 543,056 horsepower, or 73.9 per cent, was steampower.

In the additional territory, the industries using

large amounts of power were brick and tile, with 6,189 horsepower; paper and wood pulp, with 5,998 horsepower; and foundry and machine shop products, with 5,225 horsepower.

TABLE 8.—Municipalities surrounding industrial district of New York city—motive power employed in manufactures: 1905.

Number of establishments using power.....	925
Total horsepower.....	83,005
Owned:	
Steam engines—	
Number.....	1,054
Horsepower.....	64,835
Gas and gasoline engines—	
Number.....	161
Horsepower.....	2,144
Water wheels—	
Number <sup>1</sup> .....	168
Horsepower.....	4,454
Electric motors—	
Number.....	688
Horsepower.....	7,046
Other power, horsepower.....	317
Rented: <sup>2</sup>	
Electric, horsepower.....	3,201
All other, horsepower.....	1,008

<sup>1</sup>Includes 31 water motors, with 416 horsepower.

<sup>2</sup>Includes electric power generated by steam engines reported above.

<sup>3</sup>Includes power rented from other manufacturers.

## INDUSTRIAL DISTRICT OF CHICAGO, ILLINOIS.

Chicago, a leading railway terminal city with 24 miles of frontage on Lake Michigan, is a great receiving, manufacturing, and distributing center—the metropolis of the West. A navigable waterway to the Mississippi river, and thence to the Gulf, is expected by means of the Chicago drainage and ship canal, already built to Joliet as a means of sewage disposal; the Illinois and Mississippi canal; and the Illinois river. The city has over 1,000 miles of street railway.

Chicago has reached its present dimensions by enlargements made in 1847, 1864, 1887, and 1893.

The map on page 23 shows all the changes in townships since 1900. These are Stickney township, organized from Cicero and Lyons townships; Berwyn and Oak Park townships, organized from Cicero; Ridgeville

township, created from the whole of Evanston township and parts of New Trier and Niles townships, and the city of Evanston made coextensive with it.

The industrial district of Chicago comprised an area of 500 square miles in 1905, and in 1900 had a population of 1,815,107. The city of Chicago is credited with 179 square miles, or 35.8 per cent of the area, and 1,698,575 inhabitants, or 93.6 per cent of the population of the district. With the exception of Chicago, Evanston is the only city in the district which is made up of parts of Cook and Dupage counties. The following townships are included in the industrial district: Cicero, Calumet, Evanston, Leyden, Lyons, New Trier, Niles, Norwood, Palos, Proviso, Riverside, Thornton, and Worth in Cook county; and Downers Grove and York in Dupage county.

TABLE 9.—INDUSTRIAL DISTRICT OF CHICAGO, ILL.—MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Industrial district, total....	1905	8,382	\$664,215,775	40,880	\$46,336,318	247,989	\$139,829,354	\$97,746,701	\$508,556,727	\$970,974,280	(1)
Per cent of increase.....	1900	7,851	519,469,858	32,806	32,711,114	224,991	110,582,600	70,840,132	500,673,549	806,464,641	1,815,107
		6.8	27.9	24.6	42.6	10.2	26.4	38.0	18.1	20.4	
Chicago.....	1905	8,159	637,743,474	40,276	45,601,201	241,984	136,404,666	96,298,031	589,913,993	955,036,277	(1)
Per cent of increase.....	1900	7,668	511,249,431	32,406	32,067,676	221,191	108,727,154	70,445,992	502,222,401	797,879,141	1,698,575
		6.4	24.7	24.5	42.2	9.4	25.5	36.7	17.5	19.7	
Outside of Chicago.....	1905	223	26,472,301	604	735,117	6,005	3,424,658	1,448,670	8,042,734	15,938,003	(1)
Per cent of increase.....	1900	183	8,220,427	400	433,438	3,800	1,855,446	394,440	4,451,148	8,585,500	116,532
		21.9	222.0	51.0	69.6	58.0	84.6	267.3	94.2	85.6	
Evanston.....	1905	33	1,722,976	102	75,981	738	383,652	189,063	1,582,553	2,550,529	(1)
Per cent of increase.....	1900	27	1,290,404	29	24,450	400	191,917	52,035	361,742	830,920	19,259
		22.2	33.5	251.7	210.8	84.5	99.9	263.3	337.5	207.3	
All other places in district <sup>2</sup>	1905	190	24,749,325	502	659,136	5,267	3,041,006	1,259,607	7,060,181	13,387,474	(1)
Per cent of increase.....	1900	156	6,980,023	371	408,988	3,400	1,663,529	342,405	4,089,406	7,755,480	97,273
		21.8	257.1	35.3	61.2	54.9	82.8	267.9	72.6	72.6	

<sup>1</sup>No state census was taken for 1905.

<sup>2</sup>For names of places included, see a bove.

As shown by the percentages of increase for the value of products in 1904 as compared with 1900, the relative gain in the manufactures was much greater in the cities and towns outside of Chicago than in the city itself. The percentage of increase in the city was

19.7, while for the places outside it was 85.6. The absolute increase in the value of products for the city itself, however, was \$157,157,136, while for the places outside it was only \$7,352,503. The per cent distribution is shown in the following table:

TABLE 10.—INDUSTRIAL DISTRICT OF CHICAGO, ILL.—PER CENT DISTRIBUTION OF MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Chicago.....	1905	97.3	95.0	98.5	98.4	97.6	97.6	98.5	98.6	98.4	93.6
	1900	97.7	98.4	98.8	98.7	98.3	98.3	99.4	99.1	98.9	
Outside of Chicago.....	1905	2.7	4.0	1.5	1.6	2.4	2.4	1.5	1.4	1.6	6.4
	1900	2.3	1.6	1.2	1.3	1.7	1.7	0.6	0.9	1.1	
Evanston.....	1905	0.4	0.3	0.2	0.2	0.3	0.3	0.2	0.3	0.3	1.1
	1900	0.3	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	
All other places in district.....	1905	2.3	3.7	1.2	1.4	2.1	2.2	1.3	1.2	1.4	5.4
	1900	2.0	1.3	1.1	1.3	1.5	1.5	0.5	0.8	1.0	

For the year 1905 the gross value of all products for the entire Chicago district was nearly a billion of dollars. Almost the whole of this was produced within the central city itself; but, as in most other industrial districts, the percentage reported from the places outside in the district has increased, although but slightly, since 1900. The outside places have gained, and Chicago has lost, five-tenths of 1 per cent.

Among the many important industries of the district, that by which it is best known—slaughtering—was first in rank in value of products, with an output worth over a quarter of a billion dollars in 1904, almost the entire amount being reported by the slaughtering and meat packing establishments. The industry is entirely within the city of Chicago. Although the number of establishments and the average number of wage-earners—except wage-earners in wholesale slaughtering concerns that do no meat packing—decreased between 1900 and 1904, the value of products increased except in the case of wholesale slaughtering, for which a decrease is reported. The value of products for the combined slaughtering industries in 1904 was 27.8 per cent of the value of all products manufactured in the district, and over four times the output of the selected industry next in rank. The average number of wage-earners engaged in the manufacture of foundry and machine shop products and of clothing

exceeded the average number employed in the slaughtering houses. Many industries, moreover, had a larger number of establishments than this important industry.

The manufacture of clothing was second in rank among the leading industries in 1904. This industry is also wholly within the city. It is segregated into men's clothing and women's clothing, and has had a large increase since 1900.

The third industry in rank was the iron and steel industry, for which the district is well situated, being convenient to the coal fields of Illinois and the iron ore regions of Lake Superior. Of the value of iron and steel products, over 95 per cent was credited to Chicago, the remainder being widely distributed throughout the district.

An allied industry, the manufacture of foundry and machine shop products, was fourth in rank in value of products and first in the average number of wage-earners. Printing and publishing ranked next and was followed by an industry for which the district is prominent—the manufacture of steam railroad cars.

In addition to the industries given in the table, glucose, glue, and the smelting and refining of lead were important and each had a large output. These industries, however, could not be shown without disclosing operations of individual establishments.

TABLE 11.—INDUSTRIAL DISTRICT OF CHICAGO, ILL.—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE-EARNERS, AND VALUE OF PRODUCTS, WITH PER CENT OF INCREASE, BY SELECTED INDUSTRIES: 1905 AND 1900.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE-EARNERS.		VALUE OF PRODUCTS.		PER CENT OF INCREASE.		
	1905	1900	1905	1900	1905	1900	Number of establishments.	Average number of wage-earners.	Value of products.
Slaughtering.....	32	38	22,613	25,345	\$269,581,486	\$256,527,949	115.8	110.8	5.1
Slaughtering and meat packing, wholesale.....	24	28	22,391	25,141	262,586,609	248,811,997	114.3	110.9	5.5
Slaughtering, wholesale, not including meat packing.....	8	10	222	204	6,994,877	7,715,952	120.0	8.8	19.4
Clothing.....	737	1,026	23,232	17,843	64,867,254	45,303,464	128.2	30.2	43.2
Men's.....	563	875	18,924	13,855	53,230,436	36,095,010	135.7	36.6	47.5
Women's.....	174	151	4,308	3,988	11,636,818	9,208,454	15.2	8.0	26.4
Iron and steel industry.....	98	107	12,092	10,811	60,081,341	45,743,806	18.4	11.8	31.3
Iron and steel <sup>2</sup> .....	9	11	7,084	6,635	47,350,355	32,245,977	118.2	6.8	46.8
Structural ironwork <sup>3</sup> .....	68	77	3,434	3,241	8,279,075	9,541,703	111.7	6.0	113.2
Iron and steel forgings.....	8	9	510	637	1,338,300	1,899,430	111.1	119.9	129.5
Iron and steel, doors and shutters.....	4	4	122	45	259,983	132,799	.....	171.1	95.8
All other iron and steel industries <sup>4</sup> .....	9	6	942	253	2,853,028	1,923,837	50.0	272.3	48.3
Foundry and machine shop products <sup>5</sup> .....	459	458	23,682	21,834	56,650,626	47,235,346	0.2	8.5	19.9
Printing and publishing.....	1,197	999	15,039	13,419	48,814,707	32,992,320	19.8	12.1	48.0
Book and job.....	706	606	11,518	9,552	26,243,822	18,587,539	16.5	20.6	41.2
Newspapers and periodicals.....	459	371	3,481	3,814	21,991,468	14,122,454	23.7	18.7	55.7
Music.....	32	22	40	53	579,417	282,297	45.5	124.5	105.3
Cars, steam railroad, not including operations of railroad companies.....	11	13	7,059	7,589	23,798,900	19,108,085	115.4	17.0	24.5
Bread and other bakery products.....	880	725	5,922	4,478	21,061,370	12,905,586	21.4	32.2	63.2
Furniture.....	156	115	9,656	7,808	17,548,457	12,365,010	35.7	22.7	41.9
Liquors, malt <sup>6</sup> .....	56	37	2,763	2,272	10,983,421	14,956,805	51.4	21.6	13.5
Electrical machinery, apparatus, and supplies.....	96	71	5,927	5,787	16,291,546	11,357,980	35.2	2.4	43.4
Coffee and spice, roasting and grinding.....	23	25	940	922	15,563,301	12,612,424	18.0	2.0	23.4
Soap.....	23	27	1,835	1,484	13,769,940	9,064,989	114.8	23.7	51.9
Lumber, planing mill products, including sash, doors, and blinds.....	139	107	5,103	3,530	14,027,434	7,670,169	29.9	44.6	82.9
Cars and general shop construction and repairs by steam railroad companies. <sup>7</sup>	22	24	8,592	6,787	11,171,554	8,185,431	18.3	26.6	36.5
Tobacco.....	993	846	4,401	3,516	11,124,658	8,235,267	17.4	25.2	35.1
Cigars and cigarettes.....	969	822	3,651	2,885	6,894,925	5,180,727	17.9	26.6	33.1
Chewing and smoking, and snuff.....	24	24	750	631	4,229,733	3,054,540	.....	18.9	38.5
Tinware <sup>8</sup> .....	163	152	4,085	3,566	11,083,679	8,267,751	7.2	14.6	34.1
Textiles <sup>9</sup> .....	26	19	3,156	2,079	10,403,449	6,530,651	36.8	51.8	59.3
Patent medicines and compounds <sup>10</sup> .....	203	168	1,143	783	9,627,664	4,651,888	20.8	46.0	107.0
Leather, tanned, curried, and finished.....	23	22	2,479	2,047	9,420,426	6,979,289	4.5	21.1	35.0
Paints.....	31	27	954	679	8,863,216	5,905,742	14.8	40.5	50.1
Musical instruments, pianos <sup>11</sup> .....	32	31	4,886	4,107	8,487,726	6,896,335	3.2	19.0	23.1
Malt.....	16	9	451	349	7,983,970	4,704,636	77.8	29.2	69.7
Confectionery.....	63	52	2,965	2,600	6,592,183	5,757,334	21.2	14.0	14.5
Boxes, wooden packing.....	22	25	2,770	2,189	5,952,188	4,005,301	112.0	26.5	48.6
Boots and shoes <sup>6</sup> .....	27	38	2,144	2,664	5,592,684	5,723,126	128.9	119.5	12.3
Looking-glass and picture frames <sup>6</sup> .....	67	68	2,128	2,198	5,045,414	3,511,828	11.5	13.2	43.7
Oil, linseed.....	5	9	216	279	4,811,770	6,935,051	144.4	122.6	130.6
Millinery and lace goods.....	44	26	2,699	1,517	4,788,212	2,103,124	69.2	77.9	127.7
Carriages and wagons <sup>12</sup> .....	132	101	1,972	1,845	4,368,940	3,744,768	30.7	6.9	16.7

<sup>1</sup> Decrease.

<sup>2</sup> Includes blast furnaces, and steel works and rolling mills.

<sup>3</sup> Includes bridges.

<sup>4</sup> Includes in both years the manufacture of nails and spikes by establishments other than rolling mills or steel works; in 1905, the manufacture of wrought pipe and of bolts, nuts, etc., by establishments other than rolling mills or steel works; and in 1900, of tin and terne plate.

<sup>5</sup> Includes stoves and furnaces.

<sup>6</sup> Exclusive of 1 establishment in 1905 outside of Chicago.

<sup>7</sup> Exclusive of 2 establishments in 1905 outside of Chicago.

<sup>8</sup> Includes coppersmithing and sheet iron working.

<sup>9</sup> Includes in both years the manufacture of cordage and twine, felt goods, hosiery and knit goods, silk and silk goods, and the dyeing and finishing of textiles; in 1905, cotton small wares; and in 1900, the manufacture of woolen goods.

<sup>10</sup> Exclusive of 2 establishments in 1905 and 1 in 1900 outside of Chicago.

<sup>11</sup> Includes organs, and piano and organ materials.

<sup>12</sup> Includes automobiles, and automobile bodies and parts.

TABLE 12.—Industrial district of Chicago, Ill.—motive power employed in manufactures: 1905.

	Total.	Chicago.	Outside of Chicago.
Number of establishments using power.....	4, 405	4, 297	108
Total horsepower.....	467, 122	455, 527	11, 595
Owned:			
Steam engines—			
Number.....	2, 290	2, 177	113
Horsepower.....	329, 966	320, 233	9, 733
Gas and gasoline engines—			
Number.....	600	562	38
Horsepower.....	6, 301	5, 967	334
Water wheels—			
Number <sup>1</sup> .....	13	11	2
Horsepower.....	224	222	2
Electric motors—			
Number.....	6, 075	5, 959	116
Horsepower <sup>2</sup> .....	87, 556	86, 204	1, 352
Other power, horsepower.....	7, 216	7, 186	30
Rented: <sup>3</sup>			
Electric, horsepower.....	25, 777	25, 646	131
All other, horsepower.....	10, 082	10, 069	13

<sup>1</sup> Includes 8 water motors in Chicago, with 102 horsepower, and 2 outside of Chicago, with 2 horsepower.

<sup>2</sup> Includes electric power generated by steam engines reported above.

<sup>3</sup> Includes power rented from other manufacturers.

Chicago reported 97.5 per cent of the establishments using mechanical motive power in the district, and also 97.5 per cent of the horsepower. The largest amount was used by blast furnaces and steel works and rolling mills. These had a total of 109,002 horsepower, or 23.3 per cent of the entire power reported. The combined slaughtering and meat packing establishments had 45,834 horsepower, or 9.8 per cent.

Of the total horsepower, 70.6 per cent was generated by steam engines. The second leading power was electricity, owned and rented, with 24.3 per cent of the total amount. Almost the entire quantity of this was used in the city itself.

Chicago, enlarged industrially beyond the district already set forth, is increased by an area of 1,664 square miles and a population in 1900 of 219,187. Only parts of Cook and Dupage counties were taken for the district; the remainder is included as part of the surrounding territory closely dependent upon Chicago industrially. In addition, townships in Kane, Lake, and Will counties, Ill., and several townships in the adjoining county of Lake, Ind., are included. The following is a list of these additional townships belonging to the supplemental territory:

Kane county, Ill.:	
Aurora.	Geneva.
Batavia.	St. Charles.
Elgin.	
Lake county, Ill.:	
Benton.	Shields.
Cuba.	Vernon.
East Deerfield.	Warren.
Ela.	Waukegan.
Libertyville.	
Lake county, Ind.:	
Calumet.	North.
Hobart.	St. Johns.
Will county, Ill.:	
DuPage.	Lockport.
Frankfort.	New Lenox.
Homer.	Wheatland.
Joliet.	

Within the townships given above are a number of cities large enough to be shown separately, namely: Aurora, Elgin, Joliet, and Waukegan in Illinois, and Hammond in Indiana.

TABLE 13.—MUNICIPALITIES SURROUNDING INDUSTRIAL DISTRICT OF CHICAGO, ILL.—MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Total.....	1905	675	\$38,268,433	3,048	\$3,590,561	30,918	\$17,202,689	\$10,524,980	\$64,987,988	\$110,047,538	(1)
Per cent of increase.....	1900	621	65,546,082	1,798	1,958,549	25,060	12,574,528	3,795,406	75,748,065	108,034,995	219,187
		8.7	34.7	69.5	83.3	23.4	36.8	177.3	<sup>2</sup> 14.2		
Aurora, Ill.....	1905	103	6,800,268	348	386,570	4,078	2,088,101	660,437	3,538,169	7,329,028	(1)
Per cent of increase.....	1900	97	4,666,312	280	275,169	3,949	1,614,628	425,154	2,591,932	5,638,191	24,147
		6.2	45.7	24.3	40.5	3.3	28.1	55.3	36.5	30.0	
Elgin, Ill.....	1905	76	10,979,586	296	427,490	4,885	2,712,560	1,186,634	4,090,259	9,349,274	(1)
Per cent of increase.....	1900	80	8,382,597	152	188,574	4,376	2,073,796	424,066	2,614,384	6,386,243	22,433
		<sup>2</sup> 5.0	31.0	94.7	126.7	11.6	30.8	179.8	56.5	46.4	
Hammond, Ind.....	1905	38	5,974,883	128	213,217	1,548	879,128	3,877,705	2,545,301	7,671,203	(1)
Per cent of increase.....	1900	21	6,300,977	290	330,686	2,683	1,237,208	480,977	20,201,892	25,070,551	12,376
		81.0	<sup>2</sup> 5.2	<sup>2</sup> 55.9	<sup>2</sup> 35.5	<sup>2</sup> 42.3	<sup>2</sup> 28.9	706.2	<sup>2</sup> 87.4	<sup>2</sup> 69.4	
Joliet, Ill.....	1905	106	15,356,337	766	894,876	6,187	3,902,268	1,861,102	21,705,492	33,788,700	(1)
Per cent of increase.....	1900	135	15,040,445	406	345,127	5,792	3,548,330	1,527,439	17,192,915	26,131,625	29,353
		<sup>2</sup> 21.5	2.1	88.7	159.3	6.8	10.0	21.8	26.2	29.3	
Waukegan, Ill.....	1905	41	4,140,832	141	137,567	825	455,690	237,946	2,958,264	3,961,513	(1)
Per cent of increase.....	1900	32	771,281	41	40,497	495	180,718	51,039	338,294	732,794	9,426
		28.1	436.9	243.9	239.7	66.7	152.2	366.2	774.5	440.6	
All other surrounding places <sup>3</sup> .....	1905	311	45,016,527	1,369	1,530,841	13,395	7,184,942	2,701,156	30,150,503	47,947,820	(1)
Per cent of increase.....	1900	256	30,384,470	629	778,496	7,765	3,919,848	886,731	32,808,648	44,075,591	121,452
		21.5	48.2	117.6	96.6	72.5	83.3	204.6	<sup>2</sup> 8.1	8.8	

<sup>1</sup> No state census was taken for 1905.

<sup>2</sup> Decrease.

<sup>3</sup> For names of places included, see above.

When the statistics for manufactures in this surrounding territory are added to those for the district, the totals for 1904 become 9,057 establishments, 278,907 wage-earners, and \$1,081,021,818 for value of

products. Of these totals, the additional statistics constitute 7.5 per cent, 11.1 per cent, and 10.2 per cent, respectively. The principal industries in the outlying area are given in Table 14.

MAP 2.—INDUSTRIAL DISTRICT OF CHICAGO, ILL.

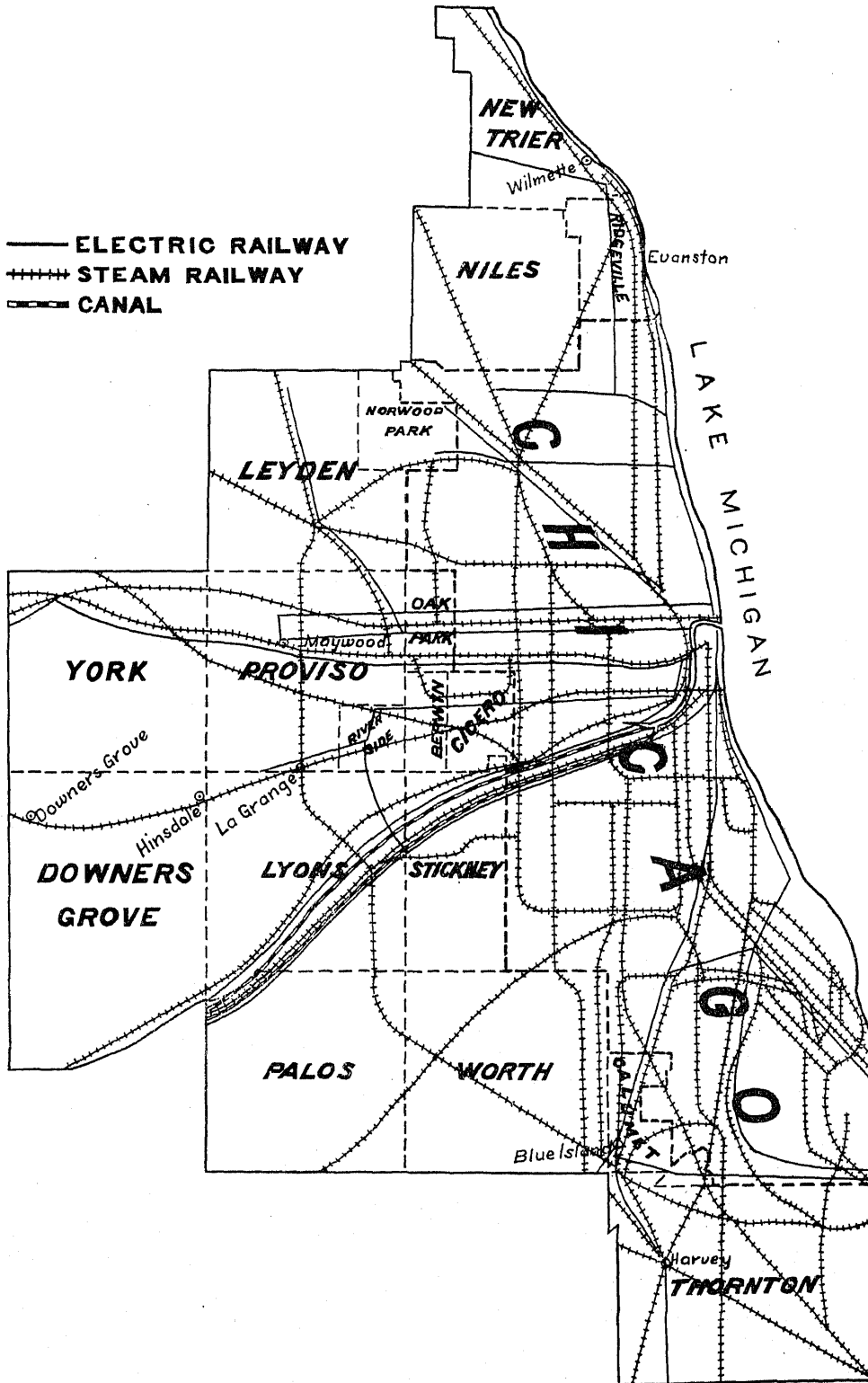


TABLE 14.—MUNICIPALITIES SURROUNDING INDUSTRIAL DISTRICT OF CHICAGO, ILL.—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE-EARNERS, AND VALUE OF PRODUCTS, WITH PER CENT OF INCREASE, BY SELECTED INDUSTRIES: 1905 AND 1900.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE-EARNERS.		VALUE OF PRODUCTS.		PER CENT OF INCREASE.		
	1905	1900	1905	1900	1905	1900	Number of establishments.	Average number of wage-earners.	Value of products.
Iron and steel industry.....	15	16	6,758	5,296	\$34,859,802	\$23,572,594	16.2	27.6	47.9
Iron and steel <sup>2</sup> .....	8	9	5,206	4,066	24,885,220	16,401,058	111.1	28.0	51.7
All other iron and steel industries <sup>3</sup> .....	7	7	1,552	1,230	9,974,582	7,171,536	.....	26.2	39.1
Foundry and machine shop products <sup>4</sup> .....	64	57	3,797	2,953	7,946,973	4,814,045	12.3	28.6	65.1
Cars and general shop construction and repairs by steam railroad companies.....	4	7	1,195	1,271	2,186,032	1,305,413	142.9	16.0	67.5
Flour and grist mill products.....	16	19	102	93	2,127,957	1,874,642	15.8	9.7	13.5
Printing and publishing.....	72	69	1,799	1,486	2,664,243	2,284,425	4.3	21.1	16.6
Book and job.....	20	16	1,179	91	1,468,001	152,666	25.0	1,195.6	861.6
Newspapers and periodicals.....	52	53	620	1,395	1,196,242	2,131,759	1.9	155.6	143.9
Hardware.....	7	5	488	279	1,114,480	477,603	40.0	74.9	133.3
Cooperage.....	6	6	363	345	1,069,585	590,421	.....	5.2	81.2

<sup>1</sup> Decrease.

<sup>2</sup> Includes blast furnaces, and steel works and rolling mills.

<sup>3</sup> Includes in both years the manufacture of structural ironwork, and wire; in 1905, of forgings; and in 1900, of forgings, of nails and spikes by establishments other than steel works and rolling mills, and of tin and terne plate.

<sup>4</sup> Includes in 1900 stoves and ranges.

The iron and steel industry led in 1904, with nearly three-fifths of the value of the products of the industry in the district. In the district and the surrounding towns together the products aggregated \$94,941,143.

While the refining of petroleum and slaughtering are leading industries for the surrounding area, no figures can be given without disclosing the operations of individual establishments. Glucose is another leading industry for which separate statistics can not be shown.

Of the horsepower for the additional area reported, 83.1 per cent was steam. Electricity, owned and rented, is represented by 11.8 per cent of the total. Steel works and rolling mills used the largest amount of power in the extended territory—39,692 horsepower, or 40.9 per cent of the total reported for that territory.

TABLE 15.—Municipalities surrounding industrial district of Chicago, Ill.—motive power employed in manufactures: 1905.

Number of establishments using power.....	436
Total horsepower.....	96,933
Owned:	
Steam engines—	
Number.....	545
Horsepower.....	80,513
Gas and gasoline engines—	
Number.....	78
Horsepower.....	736
Water wheels—	
Number <sup>1</sup> .....	78
Horsepower.....	3,557
Electric motors—	
Number.....	700
Horsepower <sup>2</sup> .....	8,118
Other power, horsepower.....	325
Rented: <sup>3</sup>	
Electric, horsepower.....	3,361
All other, horsepower.....	323

<sup>1</sup> Includes 17 water motors, with 103 horsepower.

<sup>2</sup> Includes electric power generated by steam engines reported above.

<sup>3</sup> Includes power rented from other manufacturers.

## INDUSTRIAL DISTRICT OF PHILADELPHIA, PENNSYLVANIA.

Philadelphia, from the earliest history of the country, has held a commanding position as a commercial and industrial center. Possessing a water frontage of 38 miles on the Delaware and Schuylkill rivers, both of which are navigable by ocean-going vessels, and being the headquarters of the Philadelphia and Reading and the Pennsylvania railroads, and having other important railroads terminating there, it occupies a very advantageous position for the distribution of its products. The manufactured products of this district are sold in all parts of the United States, and some special products are distributed throughout the world's markets. The rich and populous tributary territory surrounding the city contributes in a large degree to its commercial importance.

The area of the industrial district is 501 square miles. The city of Philadelphia occupies 130 square miles, or 25.9 per cent of this area, the remaining area, 371

square miles, comprising the outlying territory surrounding the city in Pennsylvania and New Jersey. The population of the district in 1900 was 1,537,994 and that of the city was 1,293,697, leaving 244,297 as the population of the outlying area. As no state census of population was taken in Pennsylvania in 1905, no statistics of population can be given for that year for places in that state. Since such a census was taken in New Jersey the population of Camden is stated.

Prior to 1854 the city was much smaller territorially than it is now; on February 2 of that year the legislature passed a bill which extended the city limits so that they became coterminous with the county boundaries.

The outlying area, which with the city of Philadelphia makes up the industrial district, embraces the whole of Delaware county, the chief city of which is

Chester, and the following places in Bucks, Chester, and Montgomery counties, Pa., and Camden county, New Jersey:

Bucks county, Pa.:		
Bensalem township.	Southampton township.	
Camden county, N. J.:		
Camden city.	Haddon township.	
Center township.	Haddonfield borough.	
Gloucester City.	Merchantville borough.	
Collingswood borough.	Pennsauken township.	
Chester county, Pa.:		
Easttown township.	Willistown township.	
Thornbury township.		
Montgomery county, Pa.:		
Abington township.	Narberth borough.	
Cheltenham township.	Plymouth township.	
Conshohocken borough.	Rockledge borough.	
Hatboro borough.	Springfield township.	
Jenkintown borough.	West Conshohocken borough.	
Lower Merion township.	Whitemarsh township.	
Moreland township.		

As in nearly all other important industrial districts, so in this district, the relative increase in manufactures between the censuses of 1900 and 1905 was greater in the territory outside of the city limits than in the city, the percentage of increase in the value of products being 23.4 greater for the outlying area than for the city. The total value of products within the city, however, was almost seven times that for the outlying territory, and the absolute increase was greater within the city, being \$71,406,266 as compared with \$23,376,098 for the outlying municipalities.

There has been an apparent decrease in the number of factories in the district, as a result of the decreases in Philadelphia and Camden. This may be primarily due to changes in Census methods and to the consolidation of establishments. There has been, however, a decided increase in the magnitude of the operations of the factories in each part of the district.

TABLE 16.—INDUSTRIAL DISTRICT OF PHILADELPHIA, PA.—MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Industrial district, total.....	1905 1900	7,780 8,196	\$22,081,779 505,847,424	25,488 19,103	\$23,830,421 21,105,446	261,456 242,551	\$123,093,436 106,964,183	\$62,399,878 43,870,257	\$387,506,027 330,895,698	\$677,781,117 582,998,753	(1) 1,537,994
Per cent of increase.....		25.1 23.0		33.0	36.6	7.8	15.1	42.2	17.1	16.3	
Philadelphia, Pa.....	1905 1900	7,087 7,503	520,178,654 445,725,392	22,839 17,498	25,396,245 18,931,020	228,899 214,775	107,640,307 94,737,389	55,449,026 39,854,009	333,352,212 295,174,969	591,388,078 519,981,812	(1) 1,293,697
Per cent of increase.....		25.5 16.7		30.5	34.2	6.6	13.6	39.1	12.9	13.7	
Outside of Philadelphia.....	1905 1900	693 693	101,903,125 60,122,032	2,649 1,665	3,434,176 2,174,426	32,557 27,776	15,453,129 12,226,794	6,950,852 4,016,248	54,213,815 35,720,729	86,393,039 63,016,941	(1) 244,297
Per cent of increase.....			69.5	59.1	57.9	17.2	26.4	73.1	51.8	37.1	
Camden, N. J.....	1905 1900	298 322	31,992,497 15,592,585	1,201 658	1,496,307 681,839	12,061 7,742	6,097,913 3,216,043	2,909,320 1,285,679	20,422,640 10,441,030	33,587,273 17,969,654	83,363 75,935
Per cent of increase.....		27.5	105.2	82.5	119.5	63.5	89.6	126.3	95.6	86.9	0.8
Chester, Pa.....	1905 1900	131 121	22,070,140 17,672,198	431 307	607,146 485,674	7,061 6,972	3,416,843 3,131,184	1,153,064 1,042,993	10,422,066 8,670,732	16,644,842 14,940,165	(1) 33,988
Per cent of increase.....		8.3	24.9	40.4	25.0	1.3	9.1	10.6	21.6	11.4	
All other places in district <sup>a</sup> .....	1905 1900	264 250	47,840,488 26,857,249	1,017 700	1,330,723 1,006,913	12,835 13,062	5,938,373 5,878,067	2,888,468 1,687,576	23,369,100 16,708,067	36,160,024 30,106,822	(1) 134,374
Per cent of increase.....		5.6	78.1	45.3	32.2	21.7	1.0	71.2	39.9	20.1	

<sup>1</sup> No state census was taken for 1905.

<sup>2</sup> Decrease.

<sup>3</sup> For names of places included, see above.

TABLE 17.—INDUSTRIAL DISTRICT OF PHILADELPHIA, PA.—PER CENT DISTRIBUTION OF MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Philadelphia, Pa.....	1905 1900	91.1 91.5	83.6 88.1	89.6 91.3	88.1 89.7	87.5 88.5	87.4 88.6	88.9 90.8	86.0 89.2	87.3 89.2	84.1
Outside of Philadelphia.....	1905 1900	8.9 8.5	16.4 11.9	10.4 8.7	11.9 10.3	12.5 11.5	12.6 11.4	11.1 9.2	14.0 10.8	12.7 10.8	15.9
Camden, N. J.....	1905 1900	3.8 3.9	5.1 3.1	4.7 3.4	5.2 3.2	4.8 3.2	5.0 3.0	4.7 2.9	5.3 3.2	5.0 3.1	4.9
Chester, Pa.....	1905 1900	1.7 1.5	3.5 3.5	1.7 1.6	2.1 2.3	2.7 2.9	2.8 2.9	1.8 2.4	2.7 2.6	2.5 2.6	2.2
All other places in district.....	1905 1900	3.4 3.1	7.7 5.3	4.0 3.7	4.6 4.8	4.9 5.4	4.8 5.5	4.6 3.8	6.0 5.0	5.3 5.2	8.7

Of the gross value of products of the entire district for 1900, nearly nine-tenths was reported by the factories located within the corporate limits of Phila-

delphia. The corresponding proportion in 1904 had decreased 1.9 per cent.

TABLE 18.—INDUSTRIAL DISTRICT OF PHILADELPHIA, PA.—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE-EARNERS, AND VALUE OF PRODUCTS, WITH PER CENT OF INCREASE, BY SELECTED INDUSTRIES: 1905 AND 1900.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE-EARNERS.		VALUE OF PRODUCTS.		PER CENT OF INCREASE.		
	1905	1900	1905	1900	1905	1900	Number of establishments.	Average number of wage-earners.	Value of products.
Textiles.....	693	700	67,334	70,084	\$128,343,320	\$119,871,184	1 1.0	1 3.9	7.1
Worsted goods.....	72	49	13,209	9,382	33,249,635	20,490,417	46.9	40.8	62.3
Cotton goods.....	132	146	10,738	13,279	20,239,110	20,949,247	1 9.6	1 19.1	1 3.4
Woolen goods.....	83	110	7,745	11,988	15,957,585	22,347,832	1 24.6	1 35.4	1 28.6
Hosiery and knit goods.....	148	147	13,368	12,009	15,861,649	13,098,950	0.7	11.3	21.1
Dyeing and finishing textiles.....	101	95	3,698	4,986	5,425,431	7,583,304	6.3	1 25.8	1 28.5
Cordage and twine.....	9	9	1,241	1,168	4,049,351	5,291,239	1 23.8	6.3	1 23.5
Cotton small wares.....	16	21	1,271	1,361	1,873,963	1,896,644	1 23.8	1 6.6	1 1.2
All other textiles <sup>2</sup> .....	132	123	16,064	15,911	31,686,596	28,213,551	7.3	1.0	12.3
Foundry and machine shop products <sup>3</sup> .....	392	400	25,715	21,282	53,135,096	41,297,709	1 2.0	20.8	28.7
Sugar and molasses, refining.....	6	7	1,270	1,249	37,182,504	36,163,817	1 14.3	1.7	2.8
Printing and publishing.....	716	679	10,054	9,255	31,446,850	23,969,027	5.4	8.6	31.2
Newspapers and periodicals.....	258	243	3,937	3,649	16,979,827	13,453,530	6.2	7.9	26.2
Book and job.....	443	424	6,048	5,373	14,043,287	10,150,202	4.5	12.6	38.4
Music.....	15	12	69	233	423,736	365,295	25.0	1 70.4	16.0
Iron and steel industry.....	86	94	12,256	11,082	30,988,014	30,980,124	1 8.5	10.6	( <sup>4</sup> )
Iron and steel <sup>5</sup> .....	16	20	7,636	7,532	16,770,123	21,215,505	1 20.0	1.4	1 21.0
Structural ironwork.....	41	47	1,922	879	6,293,520	2,122,822	1 12.8	118.7	196.5
Iron and steel pipe, wrought.....	4	3	1,178	692	4,303,975	2,870,578	33.3	70.2	49.9
Iron and steel, bolts, nuts, washers, and rivets, not made in rolling mills or steel works.....	9	7	996	1,178	1,407,633	1,885,404	28.6	1 15.4	1 25.4
Iron and steel forgings.....	11	8	230	319	538,254	652,010	37.5	1 27.9	1 17.4
All other iron and steel industries <sup>6</sup> .....	5	9	294	482	1,674,509	2,233,715	1 44.4	1 39.0	1 25.0
Clothing <sup>7</sup> .....	403	589	12,476	12,713	30,949,166	28,263,496	1 31.6	1 1.9	9.5
Leather, tanned, curried, and finished.....	52	49	6,971	6,329	30,589,851	19,947,747	6.1	10.1	53.3
Petroleum, refining.....	4	4	2,888	2,327	28,207,165	22,664,188	1 18.3	24.1	24.5
Bread and other bakery products.....	1,312	1,402	4,995	3,524	15,562,487	11,173,460	1 6.4	41.7	39.3
Shipbuilding, iron and steel.....	7	6	8,905	7,030	14,051,668	14,404,745	16.7	26.7	1 2.5
Slaughtering <sup>8</sup> .....	91	63	837	666	13,671,551	13,016,889	44.4	25.7	5.0
Liquors.....	58	66	1,760	1,862	13,092,871	13,334,076	1 12.1	1 5.5	1 1.8
Malt.....	54	63	1,674	1,814	12,477,139	12,722,883	1 14.3	1 7.7	1 1.9
Distilled.....	4	3	86	48	615,732	611,193	33.3	79.2	0.7
Chemicals <sup>9</sup> .....	29	35	2,178	2,114	9,545,203	8,372,289	1 17.1	3.0	14.0
Tobacco, cigars and cigarettes.....	654	584	6,240	6,143	9,109,199	8,833,966	12.0	1.6	3.1
Shirts <sup>10</sup> .....	67	82	4,105	3,854	8,270,853	6,042,754	1 18.3	6.5	36.9
Gas, illuminating and heating.....	9	13	2,038	2,662	8,146,740	5,883,245	1 30.8	1 23.4	38.5
Paints and varnishes.....	49	50	1,155	1,253	7,189,279	8,160,147	1 2.0	1 7.8	1 11.9
Druggists' preparations <sup>11</sup> .....	95	98	1,795	1,842	6,991,705	6,982,371	1 3.1	1 2.6	0.1
Soap.....	37	37	885	541	6,210,517	2,920,642	1 3.1	63.6	112.6
Boots and shoes.....	57	86	3,467	4,211	5,931,033	6,540,500	1 33.7	1 17.7	1 9.3
Cars and general shop construction and repairs by steam railroad companies.....	11	13	3,842	3,177	5,275,345	4,238,156	1 15.4	20.9	24.5
Electrical machinery, apparatus, and supplies.....	40	43	1,536	1,291	5,065,862	4,280,699	1 7.0	19.0	18.3
Tinware <sup>12</sup> .....	88	78	2,457	1,223	4,834,385	2,765,914	12.8	85.7	74.8
Oilcloth and linoleum, floor <sup>13</sup> .....	6	8	1,432	1,233	4,647,810	4,560,722	1 25.0	16.1	1.9
Lumber, planing mill products, including sash, doors, and blinds.....	55	50	1,955	1,891	4,453,888	3,941,841	10.0	3.4	13.0
Paper and wood pulp.....	15	12	1,540	1,065	4,174,472	2,925,580	25.0	44.6	42.7
Flour and grist mill products.....	29	39	187	183	4,149,912	2,778,118	1 25.6	2.2	49.4

<sup>1</sup> Decrease.

<sup>2</sup> Includes in both years the manufacture of carpets and rugs, other than rag; of felt goods; of silk and silk goods; and of jute and jute goods; and in 1905, the manufacture of wool hats.

<sup>3</sup> Includes foundries and machine shops, and the manufacture of locomotives and of stoves and furnaces.

<sup>4</sup> Less than one-tenth of 1 per cent.

<sup>5</sup> Includes steel works and rolling mills.

<sup>6</sup> Includes the manufacture of nails and spikes by establishments other than rolling mills or steel works; of tin and terne plate; and of wire.

<sup>7</sup> Includes clothing, men's, and clothing, women's.

<sup>8</sup> Includes slaughtering and meat packing, wholesale.

<sup>9</sup> Includes sulphuric, nitric, and mixed acids.

<sup>10</sup> Includes furnishing goods, men's.

<sup>11</sup> Includes patent medicines and compounds.

<sup>12</sup> Includes coppersmithing and sheet iron working.

<sup>13</sup> Includes mats and matting.

The textile industries are the characteristic manufactures of the district, and of these the manufacture of worsted goods was the most important, rated by value of products. There were, during 1900, 700 textile factories, which together reported a value of products amounting to \$119,871,184, or 20.6 per cent of the total for all industries. In 1904 the number was 693, and the value of products had increased to

\$128,343,320, or 18.9 per cent of the total. The proportional decrease shown is due to the decrease in several of the industries included, woolen goods and the dyeing and finishing of textiles leading in this respect. The textile industries gave employment to more wage-earners than any other group of industries in the district, the average number in 1900 being 70,084, and in 1904, 67,334.





Among the textiles, worsted goods led in value of products, and had, in addition, the greatest percentage of increase, but the manufacture of hosiery and knit goods required the employment of the largest average number of wage-earners. Carpets and rugs, an industry that can not be shown separately for the district, because there were less than 3 establishments outside of Philadelphia, ranked second in value of products, the total for Philadelphia alone being \$25,232,510.

Ranking next to the textile group, but exceeding any single textile industry in every item, was the manufacture of foundry and machine shop products. More wage-earners were employed in this than in any other single industry shown in the selected list. In a district with a great number of textile and other factories requiring machinery, the high rank of this industry is not unlooked for; the demands for the products of these shops, however, are not by any means entirely from within the district, for this industry includes the manufacture of locomotives, for which Philadelphia is noted, and that of stoves and furnaces.

The refining of sugar, an industry attracted to the seaboard where imports can be easily handled, ranked third among the industries of the district, according to value of products. In average number of wage-earners it was relatively low in rank. This industry was wholly within the city of Philadelphia.

Printing and publishing ranked fourth in value of products. Of its branches, newspapers and periodicals had the greatest value of products, but the book and job work had the greatest average number of wage-earners.

There were numerous other important industries, among which may be mentioned those grouped as iron and steel; the manufacture of clothing; the tanning, currying, and finishing of leather, which is rapidly becoming an urban industry; the refining of petroleum, which is carried on partly within and partly without the city; iron and steel ship building; chemicals; and druggists' preparations.

Besides the leading industries shown in the table, there are a number that can not be shown separately for the district without disclosing the operations of individual establishments. Such are confectionery, furniture, and felt hats.

There were 4,165 establishments in the industrial district in 1904 which reported the use of mechanical motive power, amounting altogether to 433,038 horsepower. Over three-fourths, or 77.5 per cent, of the power reported for the district was located in Philadelphia.

The textile industries used 84,165 horsepower, or 19.4 per cent, of the total power reported for all industries in the entire district. Steel works and rolling

mills used 69,198 horsepower, and foundry and machine shops, 24,064 horsepower. Steam, the most important primary power, formed 76.6 per cent of the total power reported in 1904. Electricity, owned and rented, constituted 16.8 per cent of the total.

TABLE 19.—Industrial district of Philadelphia, Pa.—motive power employed in manufactures: 1905.

	Total.	Philadel- phia.	Outside of Phila- delphia.
Number of establishments using power.....	4,165	3,727	438
Total horsepower.....	433,038	335,509	97,529
Owned:			
Steam engines—			
Number.....	4,271	3,501	770
Horsepower.....	331,965	256,196	75,769
Gas and gasoline engines—			
Number.....	612	545	67
Horsepower.....	8,470	7,244	1,226
Water wheels—			
Number <sup>1</sup> .....	61	19	42
Horsepower.....	2,517	1,055	1,462
Electric motors—			
Number.....	5,589	4,404	1,185
Horsepower <sup>2</sup> .....	60,998	45,202	15,796
Other power, horsepower.....	5,726	3,973	1,753
Rented: <sup>3</sup>			
Electric, horsepower.....	11,642	10,289	1,353
All other, horsepower.....	11,720	11,550	170

<sup>1</sup> Includes 7 water motors in Philadelphia, with 30 horsepower, and 2 outside Philadelphia, with 12 horsepower.

<sup>2</sup> Includes electric power generated by steam engines reported above.

<sup>3</sup> Includes power rented from other manufacturers.

The additional territory, dependent to some extent upon commercial and industrial Philadelphia, comprises 2,732 square miles and in 1900 had a population of 540,393. These additions increase the district area to 3,233 square miles and the population to 2,078,387.

Included in this additional area are such parts of Bucks, Chester, and Montgomery counties in Pennsylvania, and of Camden county in New Jersey, as were not given in the industrial district proper; also the whole of Gloucester county, N. J., and the following cities, boroughs, and townships:

Burlington county, N. J.:

Beverly city.	Florence.
Beverly township.	Lumberton.
Bordentown city.	Mansfield.
Bordentown township.	Medford.
Burlington city.	Mt. Laurel.
Burlington township.	Northampton.
Chester township.	Palmyra.
Chesterfield.	Riverside.
Cinnaminson.	Riverton.
Delran.	Southampton.
Easthampton.	Springfield.
Evesham.	Westhampton.
Fieldsboro.	Willingboro.

Mercer county, N. J.:

Ewing.	Lawrence.
Hamilton.	Pennington.
Hopewell borough.	Trenton.
Hopewell township.	

Of the cities and boroughs included in the addition, Norristown, Phoenixville, and Pottstown, Pa., and Trenton, N. J., are shown separately.

TABLE 20.—MUNICIPALITIES SURROUNDING INDUSTRIAL DISTRICT OF PHILADELPHIA, PA.—MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Total.....	1905 1900	1,805 1,643	\$127,816,872 81,576,795	3,897 2,579	\$4,404,679 2,574,304	57,770 42,235	\$25,089,122 17,387,933	\$9,840,303 4,749,575	\$73,142,993 48,945,390	\$131,612,795 84,992,712	540,393
Per cent of increase.....		9.9	56.7	51.1	71.1	36.8	47.7	107.2	49.4	54.9	
Norristown, Pa.....	1905 1900	84 77	5,306,860 3,678,587	198 154	225,784 125,799	3,517 2,944	1,315,336 977,403	757,468 386,973	2,866,976 2,159,500	5,925,243 4,106,834	(1) 22,265
Per cent of increase.....		9.1	44.5	28.6	79.5	19.5	34.6	95.7	32.8	44.3	
Phoenixville, Pa.....	1905 1900	31 32	7,460,700 5,819,787	96 111	140,485 107,028	2,888 2,249	1,313,575 910,357	404,260 205,441	3,023,479 1,846,871	5,499,891 3,321,599	(1) 9,196
Per cent of increase.....		2 3.1	28.2	2 13.5	31.3	28.4	44.3	96.8	63.7	65.6	
Pottstown, Pa.....	1905 1900	77 65	6,419,713 4,688,351	271 159	295,239 135,468	3,457 2,681	1,515,026 1,165,608	332,374 373,762	5,437,601 4,844,539	8,144,723 7,357,503	(1) 13,696
Per cent of increase.....		18.5	37.1	70.4	117.9	28.9	30.0	2 11.1	12.2	10.7	
Trenton, N. J.....	1905 1900	312 246	41,623,232 24,624,592	1,043 739	1,342,640 903,253	14,252 13,138	7,000,731 6,003,316	2,633,047 1,865,553	17,692,467 16,581,063	32,719,945 28,458,008	84,180 73,307
Per cent of increase.....		26.8	69.0	41.1	48.6	8.5	16.6	41.1	6.7	15.0	14.8
West Chester, Pa.....	1905 1900	35 35	1,670,681 1,051,113	111 63	102,291 47,733	849 497	411,894 233,729	238,269 69,252	673,985 315,798	2,121,185 859,424	(1) 9,524
Per cent of increase.....			58.9	76.2	114.3	70.8	76.2	244.1	113.4	146.8	
All other surrounding places <sup>3</sup> .....	1905 1900	1,266 1,188	65,335,686 41,724,365	2,178 1,353	2,298,240 1,255,023	32,807 20,726	14,131,900 8,097,520	5,474,885 1,848,594	43,448,485 23,197,619	77,201,808 40,889,284	(1) 412,405
Per cent of increase.....		6.6	56.6	61.0	83.1	58.3	74.5	196.2	87.3	88.8	

<sup>1</sup> No state census was taken for 1905.

<sup>2</sup> Decrease.

<sup>3</sup> For names of places included, see page 28.

The statistics of manufactures for the additional area adds to the establishments in the district a number sufficient to make the total 9,585, and increases the average number of wage-earners to 319,226 and the value of products to \$809,393,912. Leading industries are given in the following table:

TABLE 21.—MUNICIPALITIES SURROUNDING INDUSTRIAL DISTRICT OF PHILADELPHIA, PA.—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE-EARNERS, AND VALUE OF PRODUCTS, WITH PER CENT OF INCREASE, BY SELECTED INDUSTRIES: 1905 AND 1900.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE-EARNERS.		VALUE OF PRODUCTS.		PER CENT OF INCREASE.		
	1905	1900	1905	1900	1905	1900	Number of establishments.	Average number of wage-earners.	Value of products.
Iron and steel industry.....	30	30	11,817	9,318	\$32,688,344	\$28,604,424		26.8	14.3
Iron and steel <sup>1</sup> .....	15	18	10,713	8,769	29,675,229	27,645,426	<sup>2</sup> 16.7	22.2	7.3
Iron and steel forgings.....	4	3	110	65	165,681	94,540		33.3	75.2
Structural ironwork <sup>3</sup> .....	11	9	994	484	2,847,434	864,458	22.2	105.4	229.4
Textiles.....	85	65	8,107	5,273	15,193,673	8,147,614	30.8	53.7	86.5
Hosiery and knit goods.....	33	29	2,774	2,316	3,870,493	2,708,819	13.8	19.8	42.9
Woolen goods.....	14	12	1,077	1,523	1,546,489	3,094,538	16.7	<sup>2</sup> 29.3	<sup>2</sup> 50.0
Carpets and rugs, other than rag.....	7	6	716	215	1,174,894	383,797	16.7	233.0	206.1
Silk and silk goods.....	9	6	664	478	1,014,266	691,185	50.0	38.9	46.7
Cordage and twine.....	4	3	232	69	1,002,444	201,299	33.3	236.2	398.0
Cotton goods.....	6	5	438	359	742,139	402,248	20.0	22.0	60.5
All other textiles <sup>4</sup> .....	12	4	2,206	313	5,842,948	605,728	200.0	604.8	864.6
Foundry and machine shop products <sup>5</sup> .....	95	82	5,724	3,672	10,623,096	6,105,176	15.9	55.9	74.0
Tobacco, cigars and cigarettes.....	173	139	4,892	2,437	8,031,562	2,714,346	24.5	100.7	218.0
Pottery, terra cotta, and fire clay products.....	59	47	5,054	4,736	6,573,746	5,288,370	25.5	6.7	24.3
Leather, tanned, curried, and finished.....	6	6	616	77	3,721,633	346,048		700.0	975.5
Belting and hose <sup>6</sup> .....	11	14	1,083	1,066	3,531,157	3,058,583	<sup>2</sup> 21.4	1.6	15.5
Bread and other bakery products.....	216	152	782	517	2,342,001	1,274,522		42.1	88.8
Boots and shoes.....	26	40	1,295	209	2,225,475	1,901,020	<sup>2</sup> 35.0	519.6	13.5
Slaughtering <sup>7</sup> .....	9	8	130	66	1,595,902	912,310	12.5	97.0	74.9
Liquors.....	11	10	150	112	1,290,975	735,118	10.0	33.9	75.6
Malt.....	5	5	141	105	1,184,529	688,500		34.3	72.0
Distilled.....	6	5	9	7	106,446	40,618	20.0	28.6	128.3
Printing and publishing.....	141	118	769	637	1,253,145	939,063	19.5	20.7	33.4
Newspapers and periodicals.....	100	91	616	549	968,340	797,629	9.9	12.2	21.4
Book and job.....	41	27	153	88	284,805	141,434	51.9	73.9	101.4
Paper and wood pulp.....	20	25	449	412	1,251,504	792,209	<sup>2</sup> 20.0	9.0	58.0
Lumber, planing mill products, including sash, doors, and blinds.....	32	33	536	438	1,140,586	847,069	<sup>2</sup> 3.0	22.4	34.7
Wirework, including wire rope and cable.....	7	5	327	205	1,052,782	395,870	40.0	59.5	165.9

<sup>1</sup> Includes blast furnaces, and steel works and rolling mills.

<sup>2</sup> Decrease.

<sup>3</sup> Includes the manufacture of bolts, nuts, nails, and spikes, by establishments other than rolling mills or steel works; and wire.

<sup>4</sup> Includes the manufacture of worsted goods and cotton small wares; and the dyeing and finishing of textiles.

<sup>5</sup> Includes stoves and furnaces.

<sup>6</sup> Includes rubber and elastic goods.

<sup>7</sup> Includes meat packing.

The iron and steel industry led among the manufactures shown for the surrounding places, and exceeded in value of products the same industry within the district. In the district and the surrounding places combined there were 116 establishments, with 24,073 wage-earners, and products valued at \$63,676,358. In the surrounding districts the average number of wage-earners reported for the iron and steel industry—11,817—was greater than that for any other industry. The value of the output of blast furnaces and steel works and rolling mills constituted practically the entire amount of the value of products of this industry. In some branches, notably structural ironwork, the percentages of increase between the censuses of 1900 and 1905 were very great.

The manufacture of textiles ranked second, with a value of products a little less than one-half that of the leading manufactures. Of the branches shown separately, hosiery and knit goods was first. The textile totals for the surrounding places added to those for the district make an aggregate of 778 establishments, 75,441 wage-earners, and \$143,536,993 for value of products.

The manufacture of foundry and machine shop products was next in rank, with a value of products aggregating over ten millions, or nearly one-third of the value of the output of the iron and steel industry

with which it is allied. The average number of wage-earners employed in these shops was as great as the number engaged in the iron and steel shops.

The other selected industries are more varied than those usually found in the territory surrounding industrial districts.

TABLE 22.—Municipalities surrounding industrial district of Philadelphia, Pa.—motive power employed in manufactures: 1905.

Number of establishments using power.....	1,236
Total horsepower.....	156,333
Owned:	
Steam engines—	
Number.....	1,526
Horsepower.....	126,274
Gas and gasoline engines—	
Number.....	182
Horsepower.....	2,143
Water wheels—	
Number <sup>1</sup> .....	275
Horsepower.....	7,508
Electric motors—	
Number.....	876
Horsepower <sup>2</sup> .....	14,306
Other power, horsepower.....	1,251
Rented: <sup>3</sup>	
Electric, horsepower.....	4,259
All other, horsepower.....	592

<sup>1</sup> Includes 9 water motors, with 57 horsepower.

<sup>2</sup> Includes electric power generated by steam engines reported above.

<sup>3</sup> Includes power rented from other manufacturers.

Steampower constituted 80.8 per cent of the total horsepower reported, and electricity, owned and rented, 11.9 per cent.

Steel works and rolling mills used 65,256 horsepower, or 41.7 per cent of the power reported from the surrounding places.

## INDUSTRIAL DISTRICT OF BOSTON, MASSACHUSETTS.

Certain suburban towns and cities connected with Boston by trolleys and steam railroads are so closely allied industrially that it seems proper to consider them a part of the industrial district of which Boston is the center. Other places are perhaps nearly as closely allied to the city as the towns which have been included, but, as the area was restricted to approximately 500 square miles immediately surrounding the city, they have necessarily been omitted. In outlining this district, however, no civil division—that is, town or city—has been divided, the entire division being included or omitted.

The industrial district of Boston includes all of Suffolk county—which contains Boston, Chelsea, Revere, and Winthrop—and the parts of Essex, Middlesex, and Norfolk counties shown below:

### Essex county:

Lynn.	Salem.
Marblehead.	Saugus.
Nahant.	Swampscott.
Peabody.	

### Middlesex county:

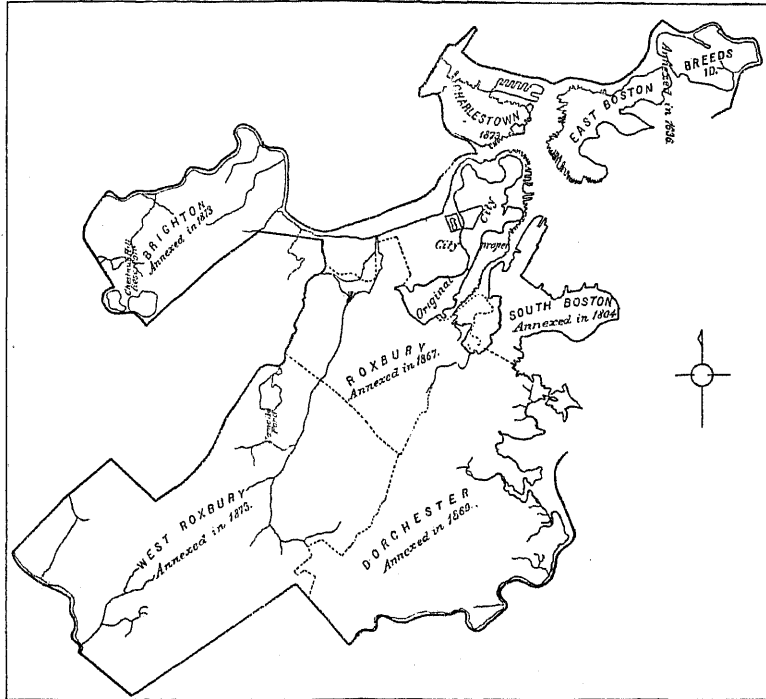
Arlington.	Newton.
Belmont.	Sherborn.
Cambridge.	Somerville.
Everett.	Stoneham.
Framingham.	Wakefield.
Lexington.	Waltham.
Lincoln.	Watertown.
Malden.	Wayland.
Medford.	Weston.
Melrose.	Winchester.
Natick.	Woburn.

### Norfolk county:

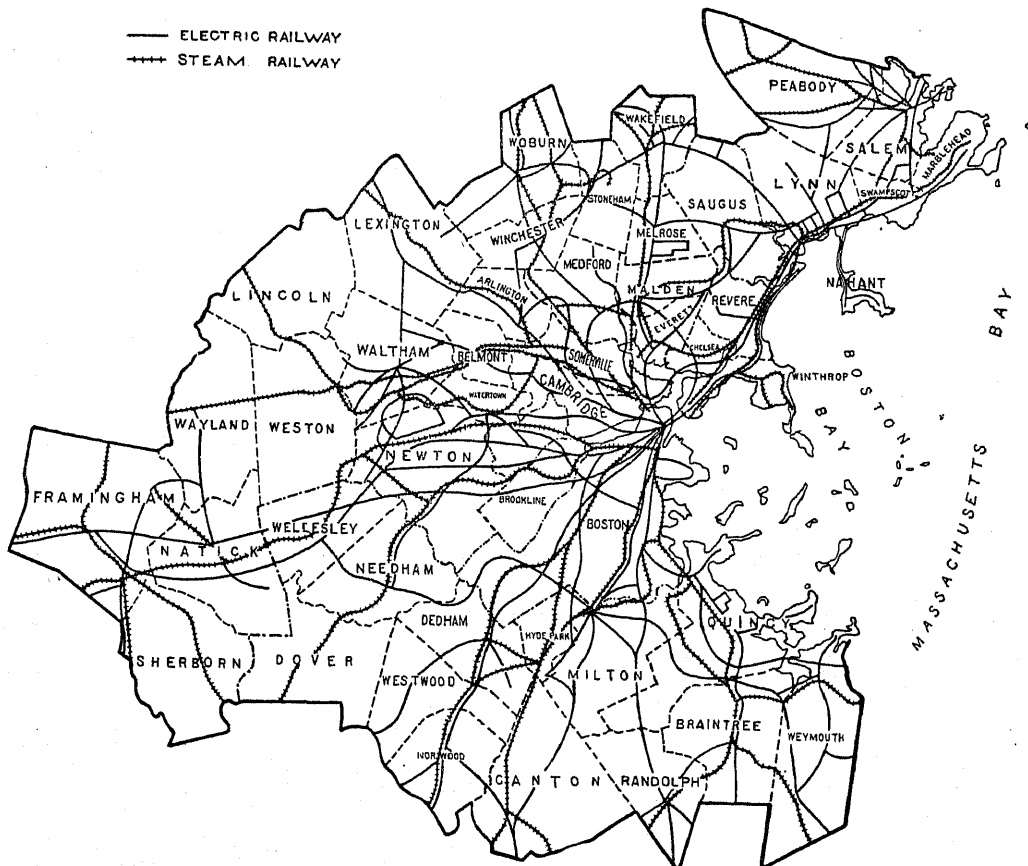
Braintree.	Needham.
Brookline.	Norwood.
Canton.	Quincy.
Dedham.	Randolph.
Dover.	Wellesley.
Hyde Park.	Westwood.
Milton.	Weymouth.

Nineteen of these cities and towns are within the Metropolitan Water District, organized for the purpose of furnishing a water supply under one board of commissioners.

MAP 4.—AREA OF BOSTON, SHOWING ANNEXATIONS SINCE 1836.



MAP 5.—INDUSTRIAL DISTRICT OF BOSTON, MASS.



The area of Boston city in 1905 was 38 square miles and that of the outlying district 464 square miles, making a total of 502 square miles for the district. The population of Boston in 1900 was 560,892, and the population of the other cities and towns in the district, 688,612, making a total population for the district of 1,249,504. The area added to Boston to form the industrial district is therefore a little more than twelve times as great as the area of the city, and the population of the added area is about one and one-fourth times that of Boston. In 1905, according to the state census, the population of the city was 595,380 and that of the district, 1,354,653, increases of 6.1 and 8.4 per cent. The number of inhabitants per square mile in the district outside of Boston in 1905 was 1,636, and the density of population for the entire district was 2,699.

Boston, the leading city of New England, is situated on Boston harbor, an inlet from Massachusetts bay, at

the confluence of the Mystic and Charles rivers. The elevated and subway and surface electric railways permit intercommunication between different parts of the city and the adjoining places; there are ferries, and a tunnel to East Boston. Several steam railroad systems, and many ocean and coastwise steamships and other craft furnish means of transportation to distant points.

The city of Boston has had an extensive territorial growth since its founding in 1630 and its incorporation in 1822. The general court made various annexations previous to 1822, notably that of East Boston—which included Noddles Island and Breeds Island—in 1636-37; and South Boston in 1804. Roxbury was annexed in 1867; Dorchester in 1869; and Brighton, Charlestown, and West Roxbury in 1873. The dates given are in some cases those of the enactments. There have been numerous adjustments of boundaries and some minor annexations and cessions.

TABLE 23.—INDUSTRIAL DISTRICT OF BOSTON, MASS.—MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Industrial district, total.....	1905	4,870	\$311,088,956	16,666	\$18,637,473	160,481	\$83,864,219	\$44,244,397	\$249,836,542	\$457,254,360	1,354,653
Per cent of increase.....	1900	5,005	266,437,063	12,731	13,071,804	131,623	65,794,045	29,061,192	200,057,065	353,955,958	1,249,504
		12.7	16.8	30.9	30.3	21.9	27.5	52.2	24.9	29.2	8.4
Boston.....	1905	2,747	131,562,822	9,428	10,464,168	59,160	31,873,185	25,006,898	94,602,913	184,351,163	595,380
Per cent of increase.....	1900	2,878	130,142,653	7,691	8,179,522	52,853	28,208,920	18,645,743	82,295,297	162,764,523	560,892
		4.6	1.1	22.6	27.9	11.9	13.0	34.1	15.0	13.3	6.1
Outside of Boston.....	1905	2,123	179,526,134	7,238	8,173,305	101,321	51,991,034	19,237,499	155,233,629	272,903,197	759,273
Per cent of increase.....	1900	2,127	136,294,410	5,040	5,492,342	78,770	37,585,119	10,415,449	117,761,768	191,191,435	688,612
		0.2	31.7	43.6	48.8	28.6	38.3	84.7	31.8	42.7	10.3
Arlington.....	1905	18	473,828	23	19,923	209	111,299	47,750	225,974	493,208	9,668
Per cent of increase.....	1900	12	302,080	18	12,718	122	73,556	16,019	111,677	256,411	6,603
		50.0	56.9	27.8	56.7	71.3	51.3	198.1	102.3	92.4	12.4
Brookline.....	1905	13	618,011	43	42,677	495	285,528	75,031	271,241	732,845	23,436
Per cent of increase.....	1900	8	319,650	21	25,231	324	168,309	39,962	218,688	485,359	19,935
		62.5	93.3	104.8	69.1	52.8	69.6	87.8	24.0	51.0	17.6
Cambridge.....	1905	202	32,260,238	1,478	1,712,826	14,586	7,493,858	3,552,608	25,116,539	42,407,064	97,434
Per cent of increase.....	1900	243	24,590,508	1,033	1,221,449	11,070	5,451,265	1,776,886	16,772,856	29,092,103	91,886
		7.8	31.2	43.1	40.2	31.8	37.5	99.9	49.7	45.8	6.0
Chelsea.....	1905	130	9,684,437	454	580,634	4,939	2,442,282	1,281,072	8,307,336	13,879,159	37,289
Per cent of increase.....	1900	120	7,900,091	323	342,615	2,959	1,405,595	624,415	5,460,770	9,518,700	34,072
		8.3	21.7	38.4	69.5	66.9	73.8	105.2	52.1	45.8	9.4
Everett.....	1905	51	8,476,624	216	283,999	2,186	1,154,505	1,182,075	3,122,931	6,135,650	29,111
Per cent of increase.....	1900	52	5,974,732	152	168,415	1,877	902,693	659,689	2,474,246	4,437,180	24,336
		11.9	41.9	42.1	68.6	16.5	27.9	79.2	26.2	38.3	19.6
Framingham.....	1905	36	2,612,003	89	133,060	2,484	1,121,485	228,247	2,516,969	4,173,579	11,548
Per cent of increase.....	1900	34	2,820,580	69	66,002	2,207	857,107	160,818	1,691,579	3,007,301	11,302
		5.9	7.4	29.0	101.6	12.6	30.8	41.9	48.8	38.8	2.2
Hyde Park.....	1905	40	7,487,072	282	333,134	3,991	2,020,391	683,361	3,580,754	6,739,307	14,510
Per cent of increase.....	1900	33	3,554,345	98	147,879	2,483	1,122,463	136,476	2,507,348	4,383,959	13,244
		21.2	110.6	187.8	125.3	60.7	80.0	400.7	42.8	53.7	9.6
Lynn.....	1905	431	23,139,185	1,706	1,530,374	21,540	11,737,737	3,741,789	32,615,644	55,003,023	77,042
Per cent of increase.....	1900	423	16,036,023	1,175	953,647	16,377	7,970,542	2,103,491	24,471,218	39,347,493	68,513
		1.9	44.3	45.2	60.5	31.5	47.3	77.9	33.3	39.8	12.4
Malden.....	1905	59	5,553,432	135	133,310	2,954	1,428,070	704,625	4,045,390	11,235,635	38,037
Per cent of increase.....	1900	53	5,031,498	104	121,684	2,416	1,135,478	628,780	4,084,147	6,602,462	33,604
		11.3	1.4	29.8	9.6	22.3	25.8	12.1	10.9	70.2	13.0
Medford.....	1905	37	1,448,645	51	67,219	484	243,981	88,161	385,964	871,820	19,686
Per cent of increase.....	1900	36	1,051,041	58	70,676	575	279,402	78,960	539,514	1,132,131	18,244
		2.8	37.8	12.1	14.9	15.8	12.7	11.7	128.5	123.0	7.9
Melrose.....	1905	24	4,644,643	57	51,255	1,571	795,664	510,263	2,915,367	9,450,929	14,295
Per cent of increase.....	1900	16	3,150,939	65	77,230	1,180	505,733	431,381	2,146,477	3,416,240	12,962
		50.0	47.4	12.3	33.6	33.1	40.6	18.3	35.8	176.6	10.3
Natick.....	1905	47	1,211,299	41	52,207	1,392	643,613	99,167	2,484,687	3,453,094	9,609
Per cent of increase.....	1900	47	938,549	24	17,241	1,253	579,909	107,350	1,851,137	2,722,225	9,468
			29.1	70.8	202.8	11.1	11.0	17.6	34.2	26.8	1.3

TABLE 23.—INDUSTRIAL DISTRICT OF BOSTON, MASS.—MANUFACTURES AND POPULATION, BY MUNICIPALITIES:  
1905 AND 1900—Continued.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Outside of Boston—Continued.											
Newton.....	1905	48	\$4,324,499	139	\$201,053	1,893	\$943,634	\$318,202	\$2,241,538	\$4,140,996	36,827
	1900	45	4,320,812	103	141,585	1,823	846,343	223,289	1,894,103	3,679,273	33,587
Per cent of increase.....		6.7	0.1	35.0	42.0	3.8	11.5	42.5	18.3	12.5	9.6
Peabody.....	1905	76	7,653,757	200	260,296	3,953	1,989,580	564,909	6,747,709	10,236,669	13,098
	1900	86	4,339,092	146	149,317	2,661	1,273,004	235,290	5,073,711	6,943,736	11,523
Per cent of increase.....		11.6	76.4	37.0	74.3	48.6	56.3	140.1	33.0	47.4	13.7
Quincy.....	1905	161	9,220,870	345	440,498	5,371	3,059,663	985,537	3,704,090	8,082,446	28,076
	1900	153	1,885,842	113	100,292	2,128	1,145,011	196,777	909,236	3,011,950	23,899
Per cent of increase.....		5.2	389.0	205.3	339.2	152.4	167.2	400.8	307.4	168.2	17.5
Revere.....	1905	12	764,075	14	13,583	125	65,893	59,278	249,486	355,000	12,659
	1900	17	388,188	8	7,904	87	46,382	15,318	50,864	155,813	10,395
Per cent of increase.....		129.4	97.0	75.0	71.8	43.7	42.1	287.0	390.5	127.9	21.8
Salem.....	1905	143	9,669,984	281	268,937	5,945	2,505,708	577,861	7,921,159	12,202,217	37,627
	1900	162	6,947,431	214	202,354	5,625	2,390,066	351,640	6,583,499	10,711,026	35,956
Per cent of increase.....		11.7	39.2	31.3	32.9	5.7	4.8	64.3	20.3	13.9	4.6
Somerville.....	1905	78	10,263,892	397	431,171	3,474	1,752,611	945,906	19,175,935	22,955,197	69,272
	1900	85	9,503,426	224	230,591	3,528	1,720,818	500,704	16,721,063	20,064,519	61,643
Per cent of increase.....		8.2	8.0	77.2	87.0	11.5	1.8	88.9	14.7	14.4	12.4
Wakefield.....	1905	22	2,840,949	128	163,842	1,804	827,708	315,561	2,837,569	4,807,728	10,268
	1900	25	3,090,442	70	95,850	1,436	711,170	156,282	1,253,888	2,647,130	9,290
Per cent of increase.....		12.0	18.1	82.9	70.9	25.6	16.4	101.9	126.3	81.6	10.5
Waltham.....	1905	60	10,092,723	221	370,344	6,208	3,239,561	616,113	2,067,294	7,149,697	26,282
	1900	74	8,776,658	179	255,298	4,861	2,370,884	552,400	1,888,577	5,889,792	23,481
Per cent of increase.....		18.9	21.8	23.5	45.1	27.7	36.6	11.5	9.5	21.4	11.9
Watertown.....	1905	20	5,168,661	225	235,018	3,322	1,665,431	409,053	5,528,635	15,524,675	11,258
	1900	27	4,168,613	119	163,940	1,935	930,789	145,765	3,409,183	5,330,026	9,706
Per cent of increase.....		125.9	24.0	89.1	43.4	71.7	78.9	180.6	58.0	191.3	16.0
Weymouth.....	1905	46	3,651,857	140	154,574	1,841	927,004	337,378	2,907,873	4,921,955	11,585
	1900	51	4,332,658	216	285,750	1,922	877,878	290,797	3,177,589	5,388,531	11,324
Per cent of increase.....		19.8	115.7	135.2	145.9	14.2	5.6	16.0	15.7	18.7	2.3
Woburn.....	1905	52	4,426,928	81	106,553	1,482	783,221	250,965	2,807,522	4,654,067	14,402
	1900	47	2,832,232	51	63,417	1,356	616,500	149,246	2,878,629	4,002,576	14,254
Per cent of increase.....		10.6	56.3	58.8	68.0	9.3	27.0	68.2	12.5	16.3	1.0
All other places in district <sup>2</sup> .....	1905	257	13,237,322	492	586,818	9,072	4,752,607	1,602,467	13,366,023	22,397,177	106,254
	1900	278	13,378,380	452	571,257	8,565	4,144,156	833,714	11,501,829	18,965,499	97,305
Per cent of increase.....		17.6	11.1	8.8	2.7	5.9	14.7	99.4	16.2	18.1	9.2

<sup>1</sup> Decrease.<sup>2</sup> For names of places included, see page 30.

Between 1900 and 1904 manufactures increased more rapidly in the cities and towns outside of Boston than in the city itself, as shown by the increase in value of products; this increase for the cities and towns outside of Boston was over two-thirds, and that

for Boston less than one-seventh. While the gross value of the products manufactured in the central city during 1904 was over one hundred and eighty-four millions, the total for the cities and towns outside was nearly one-half more.

TABLE 24.—INDUSTRIAL DISTRICT OF BOSTON, MASS.—PER CENT DISTRIBUTION OF MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Boston.....	1905	56.4	42.3	56.6	56.1	36.9	38.0	56.5	37.9	40.3	44.0
	1900	57.5	48.8	60.4	59.8	40.2	42.9	64.2	41.1	46.0	44.9
Outside of Boston.....	1905	43.6	57.7	43.4	43.9	63.1	62.0	43.5	62.1	59.7	56.0
	1900	42.5	51.2	39.6	40.2	59.8	57.1	35.8	58.9	54.0	55.1
Arlington.....	1905	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.7
	1900	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.7
Brookline.....	1905	0.3	0.2	0.3	0.2	0.3	0.3	0.2	0.1	0.2	1.7
	1900	0.2	0.1	0.2	0.2	0.2	0.3	0.1	0.1	0.1	1.6
Cambridge.....	1905	5.4	10.4	8.9	9.2	9.1	8.9	8.0	10.1	9.3	7.2
	1900	4.9	9.2	8.1	8.9	8.4	8.3	6.1	8.4	8.2	7.4
Chelsea.....	1905	2.7	3.1	2.7	3.1	3.1	2.9	2.9	3.3	3.0	2.8
	1900	2.4	3.0	2.6	2.5	2.2	2.1	2.1	2.7	2.7	2.7
Everett.....	1905	1.0	2.7	1.3	1.5	1.4	1.4	2.7	1.2	1.3	2.1
	1900	1.0	2.2	1.2	1.2	1.4	1.4	2.3	1.2	1.3	1.9
Framingham.....	1905	0.7	0.8	0.5	0.7	1.5	1.3	0.5	1.0	0.9	0.9
	1900	0.7	1.1	0.5	0.5	1.7	1.3	0.6	0.8	0.8	0.9
Hyde Park.....	1905	0.8	2.4	1.7	1.8	2.5	2.4	1.5	1.4	1.5	1.1
	1900	0.7	1.3	0.8	1.1	1.9	1.7	0.5	1.3	1.2	1.1
Lynn.....	1905	8.9	7.4	10.2	8.2	13.4	14.0	8.5	13.1	12.0	5.7
	1900	8.5	6.0	9.2	7.0	12.4	12.1	7.2	12.2	11.1	5.5
Malden.....	1905	1.2	1.8	0.8	0.7	1.8	1.7	1.6	1.6	2.5	2.8
	1900	1.1	2.1	0.8	0.9	1.8	1.7	2.2	2.0	1.9	2.7
Medford.....	1905	0.8	0.5	0.3	0.4	0.3	0.3	0.2	0.2	0.2	1.5
	1900	0.7	0.4	0.5	0.5	0.4	0.4	0.3	0.3	0.3	1.5
Melrose.....	1905	0.5	1.5	0.3	0.3	1.0	0.9	1.2	1.2	2.1	1.1
	1900	0.3	1.2	0.5	0.6	0.9	0.9	1.5	1.1	1.0	1.0
Natick.....	1905	1.0	0.4	0.2	0.3	0.9	0.8	0.2	1.0	0.8	0.7
	1900	0.9	0.4	0.2	0.1	1.0	0.9	0.4	0.9	0.8	0.8
Newton.....	1905	1.0	1.4	0.8	1.1	1.2	1.1	0.7	0.9	0.9	2.7
	1900	0.9	1.6	0.8	1.0	1.4	1.3	0.8	0.9	1.0	2.7
Peabody.....	1905	1.6	2.5	1.2	1.4	2.5	2.4	1.3	2.7	2.2	1.0
	1900	1.7	1.6	1.1	1.1	2.0	1.9	0.8	2.5	2.0	0.9
Quincy.....	1905	3.3	3.0	2.1	2.4	3.3	3.6	2.2	1.5	2.0	2.1
	1900	3.1	0.7	0.9	0.7	1.6	1.7	0.7	0.5	0.9	1.9
Revere.....	1905	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.9
	1900	0.3	0.1	0.1	0.1	0.1	0.1	0.1	( <sup>1</sup> )	( <sup>1</sup> )	0.8
Salem.....	1905	2.9	3.1	1.7	1.4	3.7	3.0	1.3	3.2	2.7	2.8
	1900	3.2	2.6	1.7	1.5	4.3	3.6	1.2	3.3	3.0	2.9
Somerville.....	1905	1.6	3.3	2.4	2.3	2.2	2.1	2.1	7.7	5.0	5.1
	1900	1.7	3.6	1.8	1.7	2.7	2.6	1.7	8.4	5.7	4.9
Wakefield.....	1905	0.5	0.9	0.8	0.9	1.1	1.0	0.7	1.1	1.1	0.8
	1900	0.5	1.2	0.5	0.7	1.1	1.1	0.5	0.6	0.7	0.7
Waltham.....	1905	1.2	3.4	1.3	2.0	3.9	3.9	1.4	0.8	1.6	1.9
	1900	1.5	3.3	1.4	1.9	3.7	3.6	1.9	0.9	1.7	1.9
Watertown.....	1905	0.4	1.7	1.4	1.3	2.1	2.0	0.9	2.2	3.4	0.8
	1900	0.5	1.6	0.9	1.2	1.5	1.4	0.5	1.7	1.5	0.8
Weymouth.....	1905	0.9	1.2	0.8	0.8	1.1	1.1	0.8	1.2	1.1	0.9
	1900	1.0	1.6	1.7	2.1	1.5	1.3	1.0	1.6	1.5	0.9
Woburn.....	1905	1.1	1.4	0.5	0.6	0.9	0.9	0.6	1.1	1.0	1.1
	1900	0.9	1.1	0.4	0.5	1.0	0.9	0.5	1.4	1.1	1.1
All other places in district.....	1905	5.3	4.3	3.0	3.1	5.7	5.7	3.8	5.3	4.9	7.8
	1900	5.6	5.0	3.6	4.2	6.5	6.3	2.9	5.7	5.4	7.8

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

The exact proportions of the gross value of products in Boston and in the cities and towns outside are shown in the table. In 1900, 8 per cent more was reported

from the outside places than from Boston; in 1904 this excess had increased to 19.4 per cent. The principal industries in the outlying area are given in Table 25.



TABLE 25.—INDUSTRIAL DISTRICT OF BOSTON, MASS.—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE-EARNERS, AND VALUE OF PRODUCTS, WITH PER CENT OF INCREASE, BY SELECTED INDUSTRIES: 1905 AND 1900.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE-EARNERS.		VALUE OF PRODUCTS.		PER CENT OF INCREASE.		
	1905	1900	1905	1900	1905	1900	Number of establishments.	Average number of wage-earners.	Value of products.
Boot and shoe industry.....	387	448	28,011	22,707	\$67,945,133	\$51,373,831	13.6	23.4	32.3
Boots and shoes.....	207	251	24,206	19,171	50,582,121	36,485,656	17.5	26.3	38.6
Boot and shoe cut stock.....	111	125	2,356	2,558	14,619,878	12,616,761	11.2	17.9	15.9
Boot and shoe findings.....	63	65	1,403	956	2,676,166	2,182,484	3.1	46.8	22.6
Boot and shoe uppers.....	6	7	46	22	66,968	88,930	14.3	109.1	24.7
Boots and shoes, rubber.....	5	4	6,407	4,489	32,402,654	11,430,520	25.0	42.7	183.5
Slaughtering.....	22	12	2,384	1,608	31,152,578	18,787,102	83.3	48.3	65.8
Slaughtering and meat packing.....	6	4	1,873	1,203	24,630,899	14,754,159	50.0	55.7	66.9
Slaughtering, not including meat packing.....	16	8	511	405	6,521,679	4,032,943	100.0	26.2	61.7
Printing and publishing.....	612	580	8,384	8,018	26,874,803	23,733,486	5.5	4.6	13.2
Newspapers and periodicals.....	236	207	3,452	3,430	16,615,499	13,270,745	14.0	0.6	25.2
Book and job.....	366	364	4,843	4,428	9,753,314	10,055,107	0.5	9.4	13.0
Music.....	10	9	89	160	505,990	407,634	11.1	144.4	24.1
Leather, tanned, curried, and finished.....	104	97	6,933	4,789	25,071,158	18,602,569	7.2	44.8	34.8
Foundry and machine shop products <sup>2</sup> .....	255	316	11,836	10,227	23,372,486	19,784,672	19.3	15.7	18.1
Clothing.....	246	264	6,575	5,013	18,283,079	12,747,691	6.8	31.2	43.4
Men's.....	137	164	3,378	2,855	11,844,295	8,958,884	16.5	18.3	32.2
Women's.....	109	100	3,197	2,158	6,438,784	3,788,807	9.0	48.1	69.9
Textiles.....	76	77	9,474	8,488	16,946,260	12,739,568	11.3	11.6	33.0
Cotton goods.....	4	8	2,769	2,580	3,088,845	3,203,487	50.0	7.3	13.6
Hosiery and knit goods.....	30	29	1,364	1,148	2,871,989	1,530,189	3.4	18.8	87.7
Woolen goods.....	6	7	938	868	1,731,766	1,397,222	14.3	8.1	23.9
Worsted goods.....	4	3	659	608	1,639,454	771,815	33.3	8.4	112.4
Dyeing and finishing textiles.....	14	12	1,101	1,069	1,590,035	1,398,893	16.7	3.0	13.7
All other textiles <sup>3</sup> .....	18	18	2,643	2,215	6,024,171	4,437,962	.....	19.3	35.7
Electrical machinery, apparatus, and supplies.....	42	38	7,192	4,484	12,786,569	8,851,042	10.5	60.4	44.5

<sup>1</sup> Decrease.<sup>2</sup> Includes stoves and furnaces.<sup>3</sup> Includes cordage and twine, cotton small wares, felt goods, linen goods, and silk and silk goods.

The boot and shoe industry, the leading industry of the district, was of greater importance outside of the city of Boston than in the city proper, since Boston had only 16.8 per cent of the product.

Another of the principal manufactures was rubber boots and shoes, and all of the establishments engaged in this industry were located outside of Boston.

A feature that is noteworthy in this time of localization of slaughtering and meat packing near the great grazing grounds is the presence—mostly in Cambridge and Somerville—of that business as a leading industry.

Only a comparatively small proportion of the textile industry of the state was reported for the district; a great center of this manufacture lies within the surrounding cities and towns. Boston itself had only 17 factories engaged in the manufacture of textiles. These establishments employed 1,751 wage-earners and produced an output valued at \$4,115,503.

Other principal industries include the printing and publishing of newspapers, periodicals, books, and music; the tanning, currying, and finishing of leather; the manufacture of foundry and machine shop products, of clothing, and of electrical machinery, apparatus, and supplies. The leather industry is an industry accompanying the boot and shoe industry; nearly all

of the establishments are located outside of Boston, most of them being in the smaller cities and towns.

A number of important industries—among them chocolate and cocoa products; shipbuilding, iron and steel; sugar and molasses, refining; and watches—can not be shown separately because to do so would disclose the operations of individual establishments.

TABLE 26.—Industrial district of Boston, Mass.—motive power employed in manufactures: 1905.

	Total.	Boston.	Outside of Boston.
Number of establishments using power.....	3,100	1,680	1,420
Total horsepower.....	179,527	53,949	125,578
Owned:			
Steam engines—			
Number.....	1,631	581	1,050
Horsepower.....	128,076	33,834	94,242
Gas and gasoline engines—			
Number.....	294	136	158
Horsepower.....	3,252	1,610	1,642
Water wheels—			
Number <sup>1</sup> .....	99	18	81
Horsepower.....	4,906	485	4,421
Electric motors—			
Number.....	2,144	377	1,767
Horsepower <sup>2</sup> .....	17,573	4,313	13,260
Other power, horsepower.....	3,010	830	2,180
Rented: <sup>3</sup>			
Electric, horsepower.....	12,810	8,215	4,595
All other, horsepower.....	9,900	4,662	5,238

<sup>1</sup> Includes 2 water motors in Boston, with 15 horsepower, and 8 outside of Boston, with 21 horsepower.

<sup>2</sup> Includes electric power generated by steam engines reported above.

<sup>3</sup> Includes power rented from other manufacturers.

The mechanical motive power reported was somewhat widely distributed among the various industries. Although the boot and shoe industry is the leading manufacture of the district, only 8,191 horsepower, or 4.6 per cent of the total, was reported for it. Foundry and machine shops had 12,547 horsepower, or 7 per cent, and the textile industry had 20,844 horsepower, or 11.6 per cent.

Waterpower comprised only a small part of the total power used, steam maintaining the lead, with a percentage of 71.3. Electric power, owned and rented,

was a considerable factor in the manufactures of the district, constituting 16.9 per cent.

Of the total horsepower, 69.9 per cent was in the district outside of the central city where the greater proportion of steampower was used; electric power was proportionately somewhat greater in the city.

The statistics of manufactures reported from a number of cities and towns outside of the district closely connected with Boston industrially and commercially are given herewith.

TABLE 27.—MUNICIPALITIES SURROUNDING INDUSTRIAL DISTRICT OF BOSTON, MASS.—MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Total.....	1905	2,202	\$224,541,343	5,680	\$6,819,993	124,140	\$58,250,106	\$17,972,846	\$160,604,330	\$270,592,672	578,210
Per cent of increase.....	1900	2,309	172,680,619	4,585	5,391,316	114,832	49,325,219	12,821,872	124,730,009	217,317,813	548,105
		12.0	30.0	23.9	26.5	8.6	18.1	40.2	28.8	24.5	5.5
Amesbury.....	1905	71	2,929,507	65	76,023	1,877	870,902	248,659	1,974,176	3,614,692	8,840
Per cent of increase.....	1900	71	2,873,795	74	67,462	2,255	979,203	215,879	1,992,309	3,672,573	9,473
			1.9	12.2	12.7	16.8	11.1	15.2	0.9	1.6	6.7
Beverly.....	1905	71	1,900,303	118	93,099	2,083	1,097,805	228,130	2,322,792	4,101,168	15,223
Per cent of increase.....	1900	73	2,111,539	96	64,228	2,275	1,021,255	144,238	2,149,121	3,781,498	13,884
		12.7	10.0	22.9	45.0	8.4	7.5	58.2	8.1	8.5	9.6
Brockton.....	1905	201	15,336,123	890	950,644	13,889	8,838,379	2,561,013	22,552,556	37,790,982	47,704
Per cent of increase.....	1900	186	9,635,291	604	639,372	10,296	5,775,471	1,036,779	15,333,301	24,855,362	40,063
		8.1	59.2	47.4	45.6	34.9	33.0	147.0	47.1	52.0	19.3
Danvers.....	1905	38	2,430,939	48	47,637	733	347,782	96,698	1,308,017	2,017,908	9,063
Per cent of increase.....	1900	37	1,307,061	48	52,821	859	415,045	78,374	1,671,890	2,303,814	8,542
		2.7	86.0		19.0	14.7	16.2	23.4	18.2	15.7	6.1
Gloucester.....	1905	132	4,321,450	203	196,988	1,763	811,261	516,748	4,682,002	6,920,984	26,011
Per cent of increase.....	1900	137	3,864,998	183	168,457	2,367	916,148	272,458	4,231,856	6,292,772	26,121
		13.6	11.8	10.9	10.9	25.5	11.5	89.7	10.6	10.0	0.4
Haverhill.....	1905	320	10,305,950	551	541,599	9,574	4,817,892	1,632,236	14,257,243	24,446,594	37,830
Per cent of increase.....	1900	390	6,357,505	479	366,468	9,761	4,538,120	1,292,454	14,904,402	23,418,790	37,175
		17.9	62.1	15.0	47.8	1.9	6.2	26.3	14.9	4.4	1.8
Lawrence.....	1905	187	60,063,193	633	971,244	21,910	8,907,784	2,030,609	29,415,589	48,036,593	70,050
Per cent of increase.....	1900	167	48,827,445	648	996,945	20,809	8,196,813	1,901,221	24,841,477	41,741,980	62,559
		12.0	23.0	12.3	12.0	4.8	8.7	6.8	18.4	15.1	12.0
Lowell.....	1905	258	54,809,038	964	1,345,120	29,303	11,589,724	4,787,058	26,910,760	46,879,212	94,889
Per cent of increase.....	1900	238	45,509,908	684	929,302	29,254	10,853,025	4,309,421	20,279,444	41,202,984	94,969
		10.5	20.4	40.9	44.7	0.2	6.8	11.1	32.7	13.8	0.1
Marlboro.....	1905	46	2,600,974	186	180,120	3,479	1,644,123	316,770	4,585,716	7,468,849	14,073
Per cent of increase.....	1900	50	2,001,007	73	100,284	2,524	1,152,078	166,722	2,834,404	4,498,385	13,609
		8.0	33.0	154.8	79.6	37.8	42.7	90.0	61.8	66.0	3.4
Milford.....	1905	44	1,662,983	93	93,503	1,782	910,422	153,046	1,775,643	3,390,504	12,105
Per cent of increase.....	1900	50	1,077,283	75	71,027	1,357	633,081	85,703	1,466,071	2,552,150	11,376
		12.0	54.4	24.0	31.6	31.3	43.8	78.6	21.1	32.8	6.4
Newburyport.....	1905	69	4,019,802	238	212,617	2,955	1,391,911	438,397	4,262,269	6,809,979	14,675
Per cent of increase.....	1900	64	3,696,087	209	204,947	2,801	1,175,481	338,572	3,051,083	5,140,554	14,478
		7.8	8.8	13.9	3.7	5.5	18.4	29.5	39.7	32.5	1.4
Taunton.....	1905	127	14,790,187	294	467,963	6,608	3,146,556	1,200,006	7,087,084	13,644,586	30,967
Per cent of increase.....	1900	114	11,266,904	313	417,744	6,590	3,042,936	852,911	5,540,021	11,544,150	31,036
		11.4	31.3	16.1	12.0	0.3	3.4	40.7	38.8	18.2	0.2
All other surrounding places <sup>2</sup> .....	1905	700	49,310,804	1,397	1,663,436	28,184	13,875,565	3,763,476	38,810,453	65,470,621	196,690
Per cent of increase.....	1900	683	34,151,886	1,089	1,312,759	23,094	10,626,563	2,127,140	26,334,570	46,222,801	184,820
		2.5	44.4	27.1	26.7	22.0	30.6	76.9	47.4	41.6	6.4

<sup>1</sup> Decrease.

<sup>2</sup> For names of places included, see page 37.

By the inclusion of these cities and towns 1,499 square miles are added to the area of the district, making a total of 2,001 square miles, or an area almost four times as great as that of the district. The population of this added territory was 578,210; in 1905, therefore, the total population for the district and the

surrounding territory was 1,932,863, an increase of 42.8 per cent. The number of establishments in 1904 is increased to 7,132; the average number of wage-earners to 284,621; and the value of products to \$727,847,032. The percentage of establishments added is 31.7; of wage-earners, 43.6; of value of products, 37.2.

The following list shows surrounding cities and towns (76 in number), by counties, which are included in Table 27:

Bristol county:	
Easton.	Raynham.
Mansfield.	Taunton.
Norton.	
Essex county:	
Amesbury.	Manchester.
Andover.	Merrimac.
Beverly.	Methuen.
Boxford.	Middleton.
Danvers.	Newbury.
Essex.	Newburyport.
Georgetown.	North Andover.
Gloucester.	Rockport.
Groveland.	Rowley.
Hamilton.	Salisbury.
Haverhill.	Topsfield.
Ipswich.	Wenham.
Lawrence.	West Newbury.
Lynnfield.	
Middlesex county:	
Acton.	Bedford.
Ashland.	Billerica.

Middlesex county—Continued.

Burlington.	Marlboro.
Concord.	Maynard.
Dracut.	North Reading.
Holliston.	Reading.
Hopkinton.	Sudbury.
Hudson.	Tewksbury.
Lowell.	Wilmington.

Norfolk county:

Avon.	Millis.
Foxboro.	Norfolk.
Franklin.	Sharon.
Holbrook.	Stoughton.
Medfield.	Walpole.
Medway.	Wrentham.

Plymouth county:

Abington.	Kingston.
Bridgewater.	Middleboro.
Brockton.	Pembroke.
East Bridgewater.	Rockland.
Hanson.	West Bridgewater.
Hingham.	Whitman.

Worcester county:

Milford.	Southboro.
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TABLE 28.—MUNICIPALITIES SURROUNDING INDUSTRIAL DISTRICT OF BOSTON, MASS.—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE-EARNERS, AND VALUE OF PRODUCTS, WITH PER CENT OF INCREASE, BY SELECTED INDUSTRIES: 1905 AND 1900.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE-EARNERS.		VALUE OF PRODUCTS.		PER CENT OF INCREASE.		
	1905	1900	1905	1900	1905	1900	Number of establishments.	Average number of wage-earners.	Value of products.
Textiles.....	110	106	53,399	49,689	\$98,561,100	\$77,670,855	3.8	7.5	20.9
Worsted goods.....	21	22	13,887	13,159	34,632,930	28,777,404	14.5	5.5	20.3
Cotton goods.....	24	26	21,615	24,042	38,766,169	30,989,948	17.7	10.1	9.0
Woolen goods.....	28	28	7,738	4,805	17,302,101	9,856,331		59.1	75.5
Hosiery and knit goods.....	14	14	5,798	4,890	5,579,048	4,101,378		18.6	34.1
Dyeing and finishing textiles.....	6	6	1,250	275	1,621,862	447,595		354.5	262.4
All other textiles <sup>2</sup> .....	17	10	3,111	2,458	5,659,050	3,458,199	70.0	26.6	63.6
Boot and shoe industry.....	461	538	30,905	33,405	92,391,169	72,460,230	14.3	10.5	27.5
Boots and shoes.....	259	337	33,346	30,738	30,577,079	63,685,440	23.1	8.5	26.7
Boot and shoe cut stock.....	114	138	1,955	1,554	6,836,505	5,493,355	17.4	25.8	25.1
Boot and shoe findings.....	88	63	1,004	1,113	4,977,585	3,411,435	39.7	44.1	45.9
Foundry and machine shop products <sup>3</sup> .....	159	184	6,891	7,431	10,616,310	11,226,836	13.6	17.3	15.4
Leather, tanned, curried, and finished.....	16	11	1,275	1,112	5,294,391	4,640,112	45.5	14.7	14.1

<sup>1</sup> Decrease.

<sup>2</sup> Includes carpets and rugs, other than rag; cordage and twine; cotton small wares; felt goods; and linen goods.

<sup>3</sup> Includes stoves and furnaces.

The textile centers of Lawrence and Lowell give the manufactures of textiles the leading place in the surrounding cities and towns.

The textile industry, within and without the district, was carried on by 186 establishments, which employed 62,873 wage-earners and manufactured products to the value of \$115,507,360. While the boot and shoe industry is large within the district, the value of products is more than doubled by including this industry in the surrounding towns. The totals for the district and the surrounding territory become 848 for number of establishments, 64,916 for average number of wage-earners, and \$160,336,302 for value of products.

TABLE 29.—Municipalities surrounding industrial district of Boston, Mass.—motive power employed in manufactures: 1905.

Number of establishments using power.....	1,578
Total horsepower.....	218,447
Owned:	
Steam engines—	
Number.....	1,454
Horsepower.....	148,774
Gas and gasoline engines—	
Number.....	154
Horsepower.....	1,464
Water wheels—	
Number <sup>1</sup> .....	396
Horsepower.....	46,413
Electric motors—	
Number.....	328
Horsepower <sup>2</sup> .....	8,463
Other power, horsepower.....	169
Rented: <sup>3</sup>	
Electric, horsepower.....	8,406
All other, horsepower.....	5,758

<sup>1</sup> Includes 12 water motors, with 60 horsepower.

<sup>2</sup> Includes electric power generated by steam engines reported above.

<sup>3</sup> Includes power rented from other manufacturers.

The horsepower reported in these 76 additional cities and towns added to that for the district makes a total of 397,974. Of this additional power, 133,643 horsepower, or 57 per cent, was reported for textiles; thus of the total power for the district and the sur-

rounding municipalities, 154,487 horsepower, or 35.2 per cent, was employed in this industry. The water-power in the surrounding cities and towns was 45,413, or 20.8 per cent of the additional amount, and the electric power was 16,869, or 7.7 per cent.

### INDUSTRIAL DISTRICT OF PITTSBURG-ALLEGHENY, PENNSYLVANIA.

The city of Allegheny became a part of the city of Pittsburg on December 6, 1907, but as the statistics herein shown are for 1900 and 1905, when the cities were separate, it is deemed proper to refer to them as the statistics of Pittsburg-Allegheny.

The total area of this district was 198 square miles, Pittsburg embracing 29 square miles and Allegheny 7, and the remainder, or 162 square miles, being in the boroughs and townships outside of the central cities. The population of this district in 1900 was 623,342, of which Pittsburg-Allegheny had 451,512, or 72.4 per cent. No census of population was taken in 1905.

Pittsburg is situated at the point where the Allegheny and Monongahela rivers unite to form the Ohio. Allegheny is just opposite to the northwest, on the Allegheny and Ohio rivers. The Monongahela river, which runs through rich coal fields, is improved with dams and locks to Fairmont, W. Va.; the Allegheny

river is navigable for over 80 miles; and the Ohio river forms the waterway for the carrying of freight to points on the Mississippi. The traffic of these rivers is enormous.

The natural resources of Pittsburg and its vicinity include not only coal but petroleum and gas. Around Pittsburg and Allegheny are many boroughs closely allied with the business and social interests of these cities, so closely that a few years ago the annexation to Pittsburg of the whole of Allegheny county was contemplated. At an early date, the original Pittsburg was enlarged by the absorption of territory on the east; in 1872 certain boroughs on the south side of the Monongahela were added; and since then several others have been annexed, among them Elliott, Esplen, Montooth, Sheraden, Spring Garden, and West Liberty, and the township of Sterrett. Kennedy township has been organized from Stowe since 1900.

TABLE 30.—INDUSTRIAL DISTRICT OF PITTSBURG-ALLEGHENY, PA.—MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Industrial district, total .....	1905	1,859	\$443,889,824	13,775	\$16,418,501	108,064	\$60,920,554	\$31,978,579	\$242,040,207	\$383,490,468	(1)
Per cent of increase .....	1900	1,477	328,493,063	7,580	7,953,339	94,464	51,808,404	21,291,431	209,040,008	339,861,658	623,342
		25.0	35.1	81.7	106.4	12.3	17.6	50.2	15.8	12.8	-----
Pittsburg-Allegheny .....	1905	1,562	260,765,394	8,273	9,752,993	71,618	39,805,046	19,088,974	124,581,020	211,259,153	(1)
Per cent of increase .....	1900	1,301	211,774,258	5,850	6,351,150	71,794	37,635,388	15,231,882	128,487,532	218,198,065	451,512
		20.1	23.1	41.4	53.6	0.2	5.8	25.3	3.0	3.2	-----
Pittsburg .....	1905	1,177	202,424,240	5,976	7,146,220	56,229	31,540,678	14,521,511	97,945,328	165,428,881	(1)
Per cent of increase .....	1900	928	160,570,413	3,929	4,291,809	52,540	28,018,045	11,080,989	97,625,551	165,002,687	321,616
		26.8	26.1	52.1	66.5	7.0	12.6	31.0	0.3	0.3	-----
Allegheny .....	1905	385	58,341,154	2,297	2,606,773	15,389	8,264,368	4,565,463	26,635,692	45,830,272	(1)
Per cent of increase .....	1900	373	51,203,845	1,921	2,059,341	19,254	9,617,343	4,150,893	30,831,981	53,195,378	129,896
		3.2	13.9	19.6	26.6	20.1	14.1	10.0	13.6	13.8	-----
Outside of Pittsburg-Allegheny .....	1905	297	183,124,430	5,502	6,665,508	34,446	21,115,508	12,891,605	117,459,187	172,231,315	(1)
Per cent of increase .....	1900	176	116,719,705	1,730	1,602,189	22,670	14,173,016	6,059,549	80,583,076	121,663,593	171,830
		68.8	56.9	218.0	316.0	61.9	49.0	112.7	45.8	41.6	-----
Braddock .....	1905	39	3,333,056	107	118,319	1,245	767,853	183,134	2,777,183	4,199,079	(1)
Per cent of increase .....	1900	30	2,471,682	64	55,443	815	525,836	470,622	2,565,087	4,090,748	15,654
		30.0	34.8	67.2	113.4	52.8	46.0	61.1	8.3	2.6	-----
Duquesne .....	1905	15	16,591,380	328	387,756	2,731	1,900,580	966,825	23,144,659	28,494,303	(1)
Per cent of increase .....	1900	7	14,350,200	76	88,157	1,487	1,068,766	434,469	14,597,470	20,333,476	9,036
		114.3	15.6	331.6	339.8	83.7	77.8	122.5	58.6	40.1	-----
Homestead .....	1905	27	732,587	35	44,762	307	171,247	140,311	265,136	712,830	(1)
Per cent of increase .....	1900	15	173,210	12	9,890	164	93,091	26,282	101,018	265,654	12,554
		80.0	322.9	191.7	352.6	87.2	84.0	433.9	162.5	168.3	-----
Wilkesburg .....	1905	30	427,186	22	22,565	184	127,013	26,817	234,667	471,960	(1)
Per cent of increase .....	1900	16	216,035	8	3,988	100	61,823	13,310	125,704	246,148	11,886
		87.5	97.7	175.0	465.8	84.0	105.4	101.5	86.7	91.7	-----
All other places in district <sup>2</sup> .....	1905	186	162,040,221	5,010	6,092,106	29,979	18,148,815	11,574,518	91,037,542	138,353,143	(1)
Per cent of increase .....	1900	108	99,508,578	1,570	1,444,711	20,104	12,423,510	5,114,866	63,193,797	96,727,567	122,700
		72.2	62.8	219.1	321.7	49.1	46.1	126.3	44.1	43.0	-----

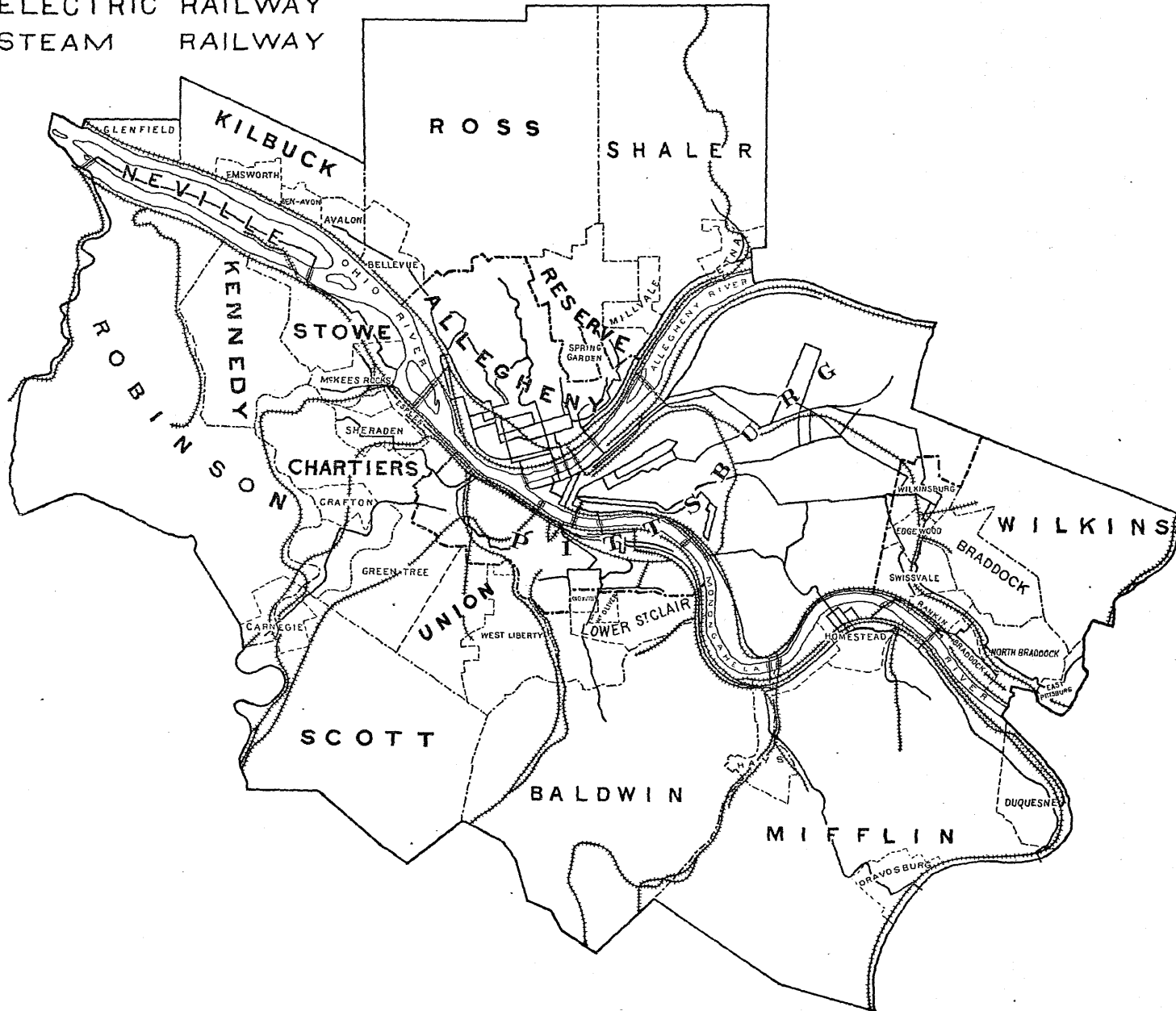
<sup>1</sup> No state census was taken for 1905.

<sup>2</sup> Decrease.

<sup>3</sup> For names of places included, see page 40.

MAP 6.—INDUSTRIAL DISTRICT OF PITTSBURGH-ALLEGHENY, PA.

— ELECTRIC RAILWAY  
+ + + STEAM RAILWAY



All of the places in the district are within Allegheny county:

Avalon.	Etna.	Reserve.
Baldwin.	Glenfield.	Robinson.
Bellevue.	Greentree.	Ross.
Ben Avon.	Homestead.	Scott.
Braddock borough.	Kilbuck.	Shaler.
Braddock township.	Knoxville.	Sheraden.
Carnegie.	Lower St. Clair.	Spring Garden.
Chartiers.	McKees Rocks.	Sterrett.
Crafton.	Mifflin.	Stowe.
Duquesne.	Millvale.	Swissvale.
East Pittsburg.	Mt. Oliver.	Union.
Edgewood.	Neville.	West Liberty.
Emsworth.	North Braddock.	Wilkins.
Esplen.	Rankin.	Wilkesburg.

As in some of the other districts, the increase in the manufactures has been much greater for the part of the district outside of the central cities than for the cities themselves. The effect of the considerable business depression which marked the year 1903 and a part of the year 1904—the year for which the census was taken—is readily discernible within the central cities of Pittsburg and Allegheny. It is not so plain in the case of the outside districts. The increase in the entire district in value of products was nearly 13 per cent; in the places outside it reached over 41 per cent. This is an evidence of the rapidly growing importance of the outside boroughs in the industries for which the great iron and steel district is famous.

TABLE 31.—INDUSTRIAL DISTRICT OF PITTSBURG-ALLEGHENY, PA.—PER CENT DISTRIBUTION OF MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Pittsburg-Allegheny.....	1905	84.0	58.7	60.1	59.4	67.5	65.3	59.7	51.5	55.1	.....
	1900	88.1	64.5	77.2	79.9	76.0	72.6	71.5	61.5	64.2	72.4
Pittsburg.....	1905	63.3	45.6	43.4	43.5	53.0	51.8	45.4	40.5	43.1	.....
	1900	62.8	48.9	51.8	54.0	55.6	54.1	52.0	46.7	48.5	51.6
Allegheny.....	1905	20.7	13.1	16.7	15.9	14.5	13.6	14.3	11.0	12.0	.....
	1900	25.3	15.6	25.3	25.9	20.4	18.6	19.5	14.7	15.7	20.8
Outside of Pittsburg-Allegheny.....	1905	16.0	41.3	39.9	40.6	32.5	34.7	40.3	48.5	44.9	.....
	1900	11.9	35.5	22.8	20.1	24.0	27.4	28.5	38.5	35.8	27.6
Braddock.....	1905	2.1	0.8	0.8	0.7	1.2	1.3	0.6	1.1	1.1	.....
	1900	2.0	0.8	0.8	0.7	0.9	1.0	2.2	1.2	1.2	2.5
Duquesne.....	1905	0.8	3.7	2.4	2.4	2.6	3.1	3.0	9.6	7.4	.....
	1900	0.5	4.4	1.0	1.1	1.6	2.1	2.0	7.0	6.0	1.4
Homestead.....	1905	1.5	0.2	0.3	0.3	0.3	0.3	0.4	0.1	0.2	.....
	1900	1.0	0.1	0.2	0.1	0.2	0.2	0.1	( <sup>1</sup> )	0.1	2.0
Wilkesburg.....	1905	1.6	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	.....
	1900	1.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.9
All other places in district.....	1905	10.0	36.5	36.4	37.1	28.3	29.8	36.2	37.6	36.1	.....
	1900	7.3	30.3	20.7	18.2	21.3	24.0	24.0	30.2	28.5	19.7

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

There has been a decrease since 1900 in the proportion of the district manufactures situated within Pittsburg-Allegheny, and a corresponding increase for those outside of these cities, in the case of every item for which statistics are given. In 1900 over seven-eighths of the establishments, almost two-thirds of the capital, over three-fourths of the average number of wage-earners, and a little less than two-thirds of the value of products were reported for Pittsburg-Allegheny. In 1905 the proportion of establishments in the two

cities had decreased to less than seven-eighths of the total number in the district, the capital to somewhat more than one-half, the average number of wage-earners to a little more than two-thirds, and the value of products to somewhat more than one-half. The absolute figures, however, for Pittsburg-Allegheny remained much larger than those for the outside places of the district, the value of products in the former being \$211,259,153 in 1905, as compared with \$172,231,315 in the latter.

TABLE 32.—INDUSTRIAL DISTRICT OF PITTSBURG-ALLEGHENY, PA.—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE-EARNERS, AND VALUE OF PRODUCTS, WITH PER CENT OF INCREASE, BY SELECTED INDUSTRIES: 1905 AND 1900.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE-EARNERS.		VALUE OF PRODUCTS.		PER CENT OF INCREASE.		
	1905	1900	1905	1900	1905	1900	Number of establishments.	Average number of wage-earners.	Value of products.
Iron and steel industries.....	105	94	48,952	45,097	\$233,371,972	\$215,523,132	11.7	8.5	8.3
Iron and steel <sup>1</sup> .....	50	58	45,512	39,431	222,182,110	195,981,129	<sup>2</sup> 13.8	15.4	13.4
Structural ironwork.....	27	15	2,032	3,154	6,828,057	10,239,634	80.0	<sup>2</sup> 35.6	<sup>2</sup> 33.6
Iron and steel forgings.....	11	7	555	579	1,308,335	1,230,939	57.1	<sup>2</sup> 4.2	1.3
All other iron and steel industries <sup>3</sup> .....	17	14	853	1,933	3,052,870	7,901,430	21.4	<sup>2</sup> 55.9	<sup>2</sup> 61.7
Foundry and machine shop products <sup>4</sup> .....	134	124	10,639	10,668	24,436,440	24,721,820	8.1	<sup>2</sup> 0.3	<sup>2</sup> 1.2
Electrical machinery, apparatus, and supplies.....	17	12	7,326	6,263	19,312,896	14,322,779	41.7	17.0	34.8
Cars <sup>5</sup> .....	13	19	7,710	6,831	13,010,545	15,971,890	<sup>2</sup> 31.6	12.9	<sup>2</sup> 18.5
Slaughtering <sup>6</sup> .....	24	14	897	591	10,085,477	6,063,145	71.4	51.8	66.3
Printing and publishing.....	228	141	2,695	2,270	7,714,101	4,860,921	61.7	18.7	58.7
Newspapers and periodicals.....	96	56	1,289	1,295	5,119,240	3,330,540	71.4	<sup>2</sup> 0.5	53.7
Book and job.....	132	85	1,406	975	2,594,861	1,530,381	55.3	44.2	69.6
Bread and other bakery products.....	261	153	2,045	1,395	6,893,103	3,470,742	70.6	46.6	98.6
Pickles, preserves, and sauces <sup>7</sup> .....	6	5	1,406	1,444	6,216,778	4,423,382	20.0	<sup>2</sup> 6.6	40.4
Liquors, malt.....	19	15	969	614	5,372,043	5,266,755	26.7	57.8	2.0
Tobacco, cigars and cigarettes.....	261	218	3,075	2,125	3,241,679	2,492,001	19.7	44.7	39.1
Glass.....	14	21	2,407	2,465	2,875,828	2,824,292	<sup>2</sup> 33.3	<sup>2</sup> 2.4	1.8
Lumber, planing mill products, including sash, doors, and blinds.....	57	35	865	579	2,615,693	1,632,170	62.9	49.4	60.3
Petroleum, refining.....	5	5	198	161	2,175,774	1,613,440	.....	23.0	43.8

<sup>1</sup> Includes blast furnaces, and steel works and rolling mills.

<sup>2</sup> Decrease.

<sup>3</sup> Includes in both years the manufacture of bolts, nuts, etc., and of nails and spikes by establishments other than rolling mills or steel works, of pipe, and of tin and terra plate; in 1905, the manufacture of doors and shutters, and of ordnance and ordnance stores; and in 1900, that of wire is also included.

<sup>4</sup> Includes the manufacture of locomotives, and stoves and furnaces.

<sup>5</sup> Includes the manufacture and repair of railroad cars.

<sup>6</sup> Includes slaughtering and meat packing.

<sup>7</sup> Exclusive of 2 small establishments outside of Allegheny.

The iron and steel industries are the predominant ones in the district. Of the total value of products for all kinds of industries, \$233,371,972, or 60.9 per cent, was returned for these industries; nearly the whole, or \$222,182,110, of this being the value of the products of blast furnaces and steel works and rolling mills. Apparent decreases in production are shown for two of the classifications—structural ironwork and all other industries—but this is due primarily to a change in classification from one census to the other. In 1904 some plants that were otherwise classified in 1900 were included with the “iron and steel” industry. Nevertheless there was a decrease in the number of establishments, as a result of the concentration of concerns.

The difference between the enormous output of the iron and steel industries and the products of the industry next in rank is very great. The allied industry of foundry and machine shop products had a value of \$24,436,440 in 1904. For purposes of comparison, establishments making locomotives and those manufacturing stoves and furnaces, not including gas and oil stoves, are included with foundries and machine shops, since they were so included in 1900. A slight decrease in products is apparent here also. Of the large industries, electrical machinery, apparatus, and supplies, and slaughtering show big gains notwithstanding the business depression; while for the industry of cars, which as here shown includes railroad repair shops, a decrease is registered.

Glass is not an important industry in the district, its prominence being in the surrounding municipalities; and petroleum refining is even less noticeable. The industries that are planted and flourish merely because of the aggregation of people in their immediate neighborhood may be noted among the selected industries; and most of them show evidences of prosperity.

Coke is an extensive industry, but as only 2 establishments are reported for the district the statistics for the industry can not be shown separately. Cork cutting is reported in Pittsburg by 1 establishment, which is said to be the largest of the kind in the world, but its operations also can not be disclosed.

Leather, tanned, curried, and finished is an important industry, totals for which can not be shown for the district because there is 1 establishment outside of Pittsburg-Allegheny.

Of the 701,064 horsepower reported for the district, 556,713, or 79.4 per cent, was power generated by steam engines. The next largest was electric power; this, owned and rented, constituted 15.3 per cent of the total. The larger part of all the power, 58.6 per cent, was used outside of Pittsburg-Allegheny. More power was reported for the district than for any other shown in this bulletin, not excepting New York.

The greatest amount of power, 584,388 horsepower, or 83.4 per cent of all the power reported for the district, was used in the various branches of the iron and steel industry. All but 1.5 per cent of this power

was reported for blast furnaces and steel works and rolling mills, and 83 per cent of it was steampower. Electrical machinery, apparatus, and supplies had 21,921 horsepower, and foundry and machine shop products 16,379.

TABLE 33.—Industrial district of Pittsburg-Allegheny, Pa.—motive power employed in manufactures: 1905.

	Aggregate.	PITTSBURG-ALLEGHENY.			Outside of Pittsburg-Allegheny.
		Total.	Pittsburg.	Allegheny.	
Number of establishments using power.....	1,088	896	659	237	192
Total horsepower.....	701,004	290,288	247,068	43,220	410,776
Owned:					
Steam engines—					
Number.....	2,472	1,524	1,126	398	948
Horsepower.....	550,713	231,054	198,090	33,558	325,059
Gas and gasoline engines—					
Number.....	589	466	363	103	123
Horsepower.....	23,271	16,045	12,807	3,178	7,226
Water motors—					
Number.....	37	37	35	2	.....
Horsepower.....	404	404	395	9	.....
Electric motors—					
Number.....	4,949	2,098	1,769	329	2,851
Horsepower.....	104,601	35,085	29,786	5,299	69,516
Other power, horsepower.....	11,500	3,729	3,409	260	7,840
Rented: <sup>2</sup>					
Electric, horsepower.....	2,519	1,414	1,338	76	1,105
All other, horsepower.....	1,987	1,987	1,117	840	30

<sup>1</sup> Includes electric power generated by steam engines reported above.  
<sup>2</sup> Includes power rented from other manufacturers.

The great iron and steel center of Pittsburg-Allegheny has such extraordinary ramifications that the industrial district just defined and described may not be considered a sufficient presentation of the area and population depending upon or contributing to its commercial, financial, and manufacturing interests. Accordingly an extensive area has been added from the surrounding towns and counties, and also from the neighboring counties in Ohio and West Virginia, where are found not only iron and steel industries but coke and other industries contributory to or allied with the iron and steel manufacture, or otherwise partaking of the characteristics of the industries of the Pittsburg-Allegheny district and supported in part through its commercial and financial resources.

That part of Allegheny county not included in the district proper is given here; among other places it contains McKeesport, the only city within it with a population of more than 20,000 in 1900. The following list shows the cities, boroughs, districts, and townships taken from other counties:

Armstrong county, Pa.:

Bethel. Manor.  
 Ford City. Manorville.  
 Gilpin. Parks.  
 Kittanning. Rayburn.  
 Leechburg.

Beaver county, Pa.:

Aliquippa. Borough.  
 Baden. Bridgewater.  
 Beaver. Brighton.  
 Beaver Falls. College Hill.  
 Big Beaver. Daugherty.

Beaver county, Pa.—Continued.

Eastvale. Marion.  
 Economy. Monaca.  
 Fallston. Moon.  
 Frankfort Springs. New Brighton.  
 Franklin. New Galilee.  
 Freedom. New Sewickley.  
 Georgetown. North Sewickley.  
 Glasgow. Ohio.  
 Greene. Patterson.  
 Hanover. Patterson Heights.  
 Harmony. Pulaski.  
 Hookstown. Raccoon.  
 Hopewell. Rochester borough.  
 Independence. Rochester township.  
 Industry. White.

Brooke county, W. Va.:

Buffalo. Wellsburg.

Cross Creek.

Butler county, Pa.:

Adams. Jackson.  
 Buffalo. Jefferson.  
 Butler borough. Mars.  
 Butler township. Middlesex.  
 Clinton. Penn.  
 Cranberry. Saxonburg.  
 Evans City. Valencia.  
 Forward. Zelenople.  
 Harmony.

Columbiana county, Ohio:

Liverpool. Yellow Creek.  
 Wellsville.

Fayette county, Pa.:

Belleverson. Luzerne.  
 Bridgeport. Masontown.  
 Brownsville borough. Menallen.  
 Brownsville township. New Haven.  
 Connellsville borough. Nicholson.  
 Connellsville township. North Union.  
 Dawson. Perry.  
 Dunbar borough. Point Marion.  
 Dunbar township. Redstone.  
 Fairchance. Smithfield.  
 Franklin. South Union.  
 George. Springhill.  
 German. Uniontown.  
 Jefferson. Upper Tyrone.  
 Lower Tyrone. Washington.

Greene county, Pa.:

Carmichaels. Jefferson borough.  
 Cumberland. Jefferson township.  
 Dunkard. Monongahela.  
 Greensboro. Morgan.

Hancock county, W. Va.:

Butler. Grant.  
 Clay. Poe.

Indiana county, Pa.:

Blairsville.

Jefferson county, Ohio:

Island Creek. Steubenville city.  
 Knox. Steubenville township.  
 Saline.

Lawrence county, Pa.:

Big Beaver. Taylor.  
 Ellwood City. Union.  
 Newcastle. Wampum.  
 North Beaver. Wayne.

Monongalia county, W. Va.:

Cass. Union.  
 Morgan.



Washington county, Pa.:

Allen.	Long Branch.
Beallsville.	McDonald.
Bentleyville.	Monongahela.
Blaine.	Mt. Pleasant.
Buffalo.	North Charleroi.
Burgettstown.	North Franklin.
California.	North Strabane.
Canonsburg.	North Washington.
Canton.	Nottingham.
Carroll.	Peters.
Cecil.	Robinson.
Centerville.	Roscoe.
Charleroi.	Smith.
Chartiers.	Somerset.
Coal Center.	South Canonsburg.
Cross Creek.	South Strabane.
Deemston.	South Washington.
East Bethlehem.	Speers.
East Pike Run.	Stockdale.
East Washington.	Twilight.
Elco.	Union.
Fallowfield.	Washington.
Finleyville.	West Brownsville.
Hanover.	West Middletown.
Hopewell.	West Pike Run.
Independence.	West Washington.
Jefferson.	

Westmoreland county, Pa.:

Adamsburg.	Derry borough.
Allegheny.	Derry township.
Arnold.	East Greensburg.
Arona.	East Huntingdon.
Avonmore.	Fairfield.
Bell.	Franklin.
Bolivar.	Greensburg.
Cokeville.	Hempfield.

Westmoreland county, Pa.—Continued.

Hyde Park.	Penn borough.
Irwin.	Penn township.
Jeannette.	Rostraver.
Latrobe.	St. Clair.
Livermore.	Salem.
Lower Burrell.	Scottdale.
Loyalhanna.	Sewickley.
Ludwick.	South Greensburg.
Madison.	Southeast Greensburg.
Manor.	Southwest Greensburg.
Monessen.	South Huntingdon.
New Alexandria.	Unity.
New Florence.	Upper Burrell.
New Kensington.	Vandergrift.
New Salem.	Vandergrift Heights.
North Bellevernon.	Washington.
North Huntingdon.	West Newton.
North Irwin.	Youngstown.
Parnassus.	

The cities shown separately for this extension of territory are Beaver Falls, Butler, McKeesport, and Newcastle in Pennsylvania, and East Liverpool and Steubenville in Ohio.

The extension adds to the district 3,734 square miles, an increase of nearly nineteenfold, which makes a total of 3,932 square miles. The population of the added district was 693,140, which increases the total to 1,316,482, or more than double the population of the district.

In the district and the additional area there were 3,673 establishments, with an average of 202,414 wage-earners, and products valued at \$647,900,506.

TABLE 34.—MUNICIPALITIES SURROUNDING INDUSTRIAL DISTRICT OF PITTSBURG-ALLEGHENY, PA.—MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Total.....	1905	1,814	\$291,871,882	8,082	\$9,624,355	96,350	\$55,889,176	\$19,665,316	\$151,761,783	\$264,410,038	(1)
Per cent of increase.....	1900	1,593	161,966,957	3,946	4,500,813	68,470	36,176,033	9,040,319	97,722,082	182,009,024	693,140
		13.9	80.2	104.8	113.6	40.7	54.5	117.5	55.3	45.3	
Beaver Falls, Pa.....	1905	42	6,518,128	234	279,963	2,232	1,123,139	593,358	2,241,513	4,907,536	(1)
Per cent of increase.....	1900	47	6,520,965	142	173,888	2,174	970,624	298,210	3,850,366	6,228,808	10,054
		10.6	(3)	64.8	61.0	2.7	15.7	99.0	241.9	21.2	
Butler, Pa.....	1905	48	9,910,334	322	373,875	2,093	1,113,756	516,857	4,059,864	6,832,007	(1)
Per cent of increase.....	1900	41	1,419,147	33	43,691	792	415,867	97,889	520,352	1,403,026	10,853
		17.1	598.3	875.8	755.7	164.3	167.8	428.0	795.5	386.9	
East Liverpool, Ohio.....	1905	81	6,972,256	302	362,991	5,228	2,703,123	601,521	2,107,042	6,437,090	(1)
Per cent of increase.....	1900	75	4,959,920	283	287,695	4,171	1,969,711	232,411	1,462,550	4,749,165	16,485
		8.0	40.6	6.7	26.2	25.3	37.2	158.8	44.1	35.5	
McKeesport, Pa.....	1905	75	16,285,952	696	777,862	8,848	5,521,390	1,378,272	12,309,484	23,054,412	(1)
Per cent of increase.....	1900	67	15,083,223	473	445,337	7,213	4,147,087	375,877	21,834,873	36,058,447	34,227
		11.9	7.9	47.1	74.7	22.7	33.1	266.7	43.6	36.1	
Newcastle, Pa.....	1905	72	18,508,474	572	630,685	5,729	3,603,080	1,529,297	21,529,945	29,433,635	(1)
Per cent of increase.....	1900	71	12,952,616	184	239,052	4,529	2,988,162	445,875	13,140,079	20,015,798	28,339
		1.4	42.9	210.9	163.8	26.5	20.6	243.0	63.8	47.1	
Steubenville, Ohio.....	1905	72	12,627,048	255	321,178	4,184	2,328,434	684,111	8,243,063	12,369,677	(1)
Per cent of increase.....	1900	54	2,302,563	88	73,959	1,773	734,244	204,234	2,408,184	4,547,049	14,349
		33.3	448.4	189.8	334.3	136.0	217.1	235.0	242.6	172.0	
All other surrounding places <sup>4</sup> .....	1905	1,424	221,049,690	5,701	6,877,801	68,036	39,496,248	14,361,900	100,670,872	181,375,681	(1)
Per cent of increase.....	1900	1,238	118,723,523	2,743	3,243,191	47,818	24,950,338	7,385,823	54,492,678	109,006,731	578,833
		15.0	86.2	107.8	112.1	42.3	58.3	94.5	84.7	66.4	

<sup>1</sup>No state census was taken for 1905.

<sup>2</sup>Decrease.

<sup>3</sup>Less than one-tenth of 1 per cent.

<sup>4</sup>For names of places included, see pages 42 and 43.

TABLE 35.—MUNICIPALITIES SURROUNDING INDUSTRIAL DISTRICT OF PITTSBURG-ALLEGHENY, PA.—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE-EARNERS, AND VALUE OF PRODUCTS, WITH PER CENT OF INCREASE, BY SELECTED INDUSTRIES: 1905 AND 1900.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE-EARNERS.		VALUE OF PRODUCTS.		PER CENT OF INCREASE.		
	1905	1900	1905	1900	1905	1900	Number of establishments.	Average number of wage-earners.	Value of products.
Iron and steel industries.....	96	92	36,187	21,750	\$142,779,114	\$94,480,614	4.3	66.4	51.1
Iron and steel <sup>1</sup> .....	59	59	30,263	18,368	114,960,681	80,769,810	.....	64.8	42.3
Tin and terne plate.....	13	14	2,051	1,213	17,000,962	8,915,787	27.1	69.1	90.7
Structural ironwork.....	9	3	2,564	300	7,512,185	558,555	200.0	754.7	1,244.9
Iron and steel pipe, wrought.....	4	3	594	223	1,609,313	365,161	33.3	166.4	340.7
Iron and steel, bolts, nuts, washers, and rivets, not made in rolling mills or steel works.....	4	3	195	455	406,445	1,066,326	33.3	257.1	261.9
Iron and steel forgings.....	3	4	227	428	526,315	1,186,676	25.0	247.0	255.6
All other iron and steel industries <sup>3</sup> .....	4	6	293	763	763,213	1,618,299	233.3	261.6	252.8
Coke.....	84	58	8,365	7,022	23,924,156	17,712,184	44.8	19.1	35.1
Glass.....	69	58	14,469	13,570	19,060,666	15,047,299	19.0	6.6	26.7
Foundry and machine shop products <sup>4</sup> .....	145	127	6,709	4,827	14,251,852	15,783,515	14.2	39.0	29.7
Cars <sup>5</sup> .....	21	12	4,865	1,471	10,508,043	2,493,484	75.0	230.7	321.4
Pottery, terra cotta, and fire clay products.....	100	94	9,651	7,806	10,243,010	7,825,572	6.4	23.6	30.9
Liquors, malt.....	41	28	820	403	3,506,039	1,832,369	46.4	103.5	91.3
Lumber, planing mill products, including sash, doors, and blinds.....	90	72	1,088	693	3,162,615	2,198,885	25.0	57.0	43.8
Bread and other bakery products.....	214	122	508	243	1,936,537	783,926	75.4	104.8	147.0
Printing and publishing.....	167	149	786	671	1,462,812	926,658	12.1	17.1	57.9
Newspapers and periodicals.....	123	113	662	598	1,189,277	804,891	8.8	10.7	47.8
Book and job.....	44	36	124	73	273,535	121,767	22.2	69.9	124.6

<sup>1</sup> Includes blast furnaces, and steel works and rolling mills.

<sup>2</sup> Decrease.

<sup>3</sup> Includes in both years the manufacture of nails and spikes by establishments other than rolling mills or steel works; and of wire. In 1900 the manufacture of doors and shutters is also included.

<sup>4</sup> Includes stoves and furnaces.

<sup>5</sup> Includes the manufacture and repair of railroad cars.

As in the district itself, so in the surrounding places, the iron and steel industries led. In 1904 the output of these industries in the added area was valued at \$142,779,114, or nearly five-eighths of the value of the output of these industries within the district, and the average number of wage-earners employed, 36,187, was about three-fourths of the number for the district. The total number of establishments for these industries in both district and surrounding territory was 201; the average number of wage-earners, 85,139; and the value of products, \$376,151,086. Blast furnaces and steel works and rolling mills, comprised under the term "iron and steel," were first among these industries, and the value of their products constituted a large part of the amount shown. The combined totals for these plants in the district and surrounding territory are as follows: Number of establishments, 109; average number of wage-earners, 75,775; and value of products, \$337,142,791. Tin and terne plate was the next of these industries in value of products. For structural ironwork in the surrounding territory fewer establishments but more wage-earners and a slightly greater value of products were reported than for the same industry in the district.

In the surrounding municipalities the coke industry was next in rank to the iron and steel industries, and

was followed by the glass industry, which gave employment to more wage-earners than any other industry shown except iron and steel. While cars showed a falling off in the district, in these surrounding places the products have increased very largely in value. One of the great pottery centers of the United States is at East Liverpool, Ohio, which is a city included in the places surrounding the Pittsburg-Allegheny district as having peculiar commercial relations therewith. There are also other places within this territory in which pottery is a considerable industry.

TABLE 36.—Municipalities surrounding industrial district of Pittsburg-Allegheny, Pa.—motive power employed in manufactures: 1905.

Number of establishments using power.....	1,339
Total horsepower.....	506,637
Owned:	
Steam engines—	
Number.....	2,657
Horsepower.....	418,383
Gas and gasoline engines—	
Number.....	508
Horsepower.....	15,135
Water wheels—	
Number.....	57
Horsepower.....	2,352
Electric motors—	
Number.....	3,456
Horsepower <sup>2</sup> .....	54,475
Other power, horsepower.....	12,647
Rented: <sup>3</sup>	
Electric, horsepower.....	2,694
All other, horsepower.....	951

<sup>1</sup> Includes 21 water motors, with 246 horsepower.

<sup>2</sup> Includes electric power generated by steam engines reported above.

<sup>3</sup> Includes power rented from other manufacturers.

In the surrounding places the horsepower most largely used was that generated by steam engines, which formed 82.6 per cent of the total. Electric power ranked next, with 11.3 per cent. By far the greatest amount of power, 280,398 horsepower, or 55.3 per cent, was employed in the iron and steel industries. This was almost wholly generated by steam engines, only 38,944 horsepower, or 13.9 per

cent, being of other kinds. Of the iron and steel industries, blast furnaces and rolling mills and steel works alone used 257,072 horsepower, of which 231,039, or 89.9 per cent, was steam.

Glass is the industry having the next largest amount of horsepower, namely, 49,655, or 9.8 per cent of the total. Coke followed with 36,923 horsepower, or 7.3 per cent.

### INDUSTRIAL DISTRICT OF ST. LOUIS, MISSOURI.

There are 206 square miles in the industrial district of St. Louis, Mo., of which 61 square miles are in the city. In 1900 the population of this district was 638,134; of this total, 575,238, or 90.1 per cent, was credited to the city of St. Louis. The territory outside of St. Louis comprises Carondelet and Central townships in St. Louis county, Mo., and extends into Illinois, embracing East St. Louis, Stites, and Center-ville Station townships in St. Clair county.

St. Louis is situated on the west bank of the Mississippi river. It has a water frontage of 19 miles, and

the rivers to which it is readily accessible are navigable for 6,000 miles and are open for traffic most of the year. Electric railways operate 250 miles or more of track for the local transit of the city, and 24 or more railroads connect the city with all parts of the United States. St. Louis and East St. Louis are joined by the magnificent Eads bridge, which was built for the accommodation of railroads, vehicles, and foot passengers. St. Louis was founded in 1764 as a trading post, and became incorporated as a town in 1809 and as a city in 1822.

TABLE 37.—INDUSTRIAL DISTRICT OF ST. LOUIS, MO.—MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Industrial district, total.....	1905	2,603	\$289,133,806	12,413	\$14,546,325	91,684	\$47,366,813	\$30,432,392	\$180,805,473	\$319,709,859	( )
Per cent of increase.....	1900	2,731	159,634,795	9,157	10,396,824	70,556	31,691,118	28,036,935	131,029,394	228,089,639	638,134
		4.7	81.1	35.6	39.9	29.9	49.5	40.6	38.0	40.2	
St. Louis, Mo.....	1905	2,482	265,936,570	11,381	13,474,841	82,698	42,642,358	37,183,096	137,739,927	267,307,038	(1)
Per cent of increase.....	1900	2,646	150,525,899	8,867	10,078,516	64,832	29,145,127	27,404,021	101,838,142	193,732,788	575,238
		6.2	76.7	28.4	33.7	27.6	46.3	35.7	35.3	38.0	
Outside of St. Louis.....	1905	121	23,197,236	1,032	1,071,484	8,986	4,724,455	2,249,296	43,066,546	52,402,821	(1)
Per cent of increase.....	1900	85	9,108,896	290	318,308	5,724	2,545,991	632,914	29,191,252	34,356,851	62,896
		42.4	154.7	255.9	236.6	57.0	85.6	255.4	47.5	52.5	
East St. Louis, Ill. <sup>2</sup> .....	1905	92	12,993,362	402	483,220	4,556	2,518,629	1,091,462	5,840,687	10,800,320	(1)
Per cent of increase.....	1900	58	5,447,555	112	146,749	3,106	1,425,542	298,706	3,678,206	6,241,391	29,655
		58.6	138.5	258.9	229.3	46.7	76.7	265.4	59.0	78.0	
All other places in district <sup>4</sup> .....	1905	29	10,203,874	630	588,294	4,430	2,205,826	1,157,834	37,219,859	41,602,501	(1)
Per cent of increase.....	1900	27	3,661,341	178	171,559	2,618	1,120,449	334,208	25,513,046	28,115,480	33,241
		7.4	178.7	253.9	242.9	69.2	96.9	246.4	45.9	48.0	

<sup>1</sup>No state census was taken for 1905.

<sup>2</sup>Decrease.

<sup>3</sup>The totals for East St. Louis differ from those published in the report on Manufactures, Parts I and II, census of 1905, by reason of the transfer of the statistics for slaughtering and meat packing from those of the city proper to those of the territory outside the corporate limits, where the establishments were actually situated.

<sup>4</sup>For names of places included, see above.

The relative increase in 1904 as compared with 1900 in the value of the products manufactured in places outside of St. Louis was greater than that for the products manufactured within the central city, but in 1904 their actual value is a little less than one-fifth of the value for the city products. There was a consid-

erable increase in the number of establishments outside of the central city and a considerable reduction in the number within the corporate limits.

From 1900 to 1904 the central city lost 1.3 per cent in its proportion of the value of products, and naturally the outside places gained the same percentage.

TABLE 38.—INDUSTRIAL DISTRICT OF ST. LOUIS, MO.—PER CENT DISTRIBUTION OF MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
St. Louis, Mo. ....	1905 1900	95.4 96.9	92.0 94.3	91.7 96.8	92.6 96.9	90.2 91.9	90.0 92.0	94.3 97.7	76.2 77.7	83.6 84.9	..... 90.1
Outside of St. Louis. ....	1905 1900	4.6 3.1	8.0 5.7	8.3 3.2	7.4 3.1	9.8 8.1	10.0 8.0	5.7 2.3	23.8 22.3	16.4 15.1	..... 9.9
East St. Louis, Ill. ....	1905 1900	3.5 2.1	4.5 3.4	3.2 1.2	3.3 1.4	5.0 4.4	5.3 4.5	2.8 1.1	3.2 2.8	3.4 2.7	..... 4.7
All other places in district. ....	1905 1900	1.1 1.0	3.5 2.3	5.1 1.9	4.0 1.7	4.8 3.7	4.7 3.5	2.9 1.2	20.6 19.5	13.0 12.3	..... 5.2

TABLE 39.—INDUSTRIAL DISTRICT OF ST. LOUIS, MO.—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE-EARNERS, AND VALUE OF PRODUCTS, WITH PER CENT OF INCREASE, BY SELECTED INDUSTRIES: 1905 AND 1900.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE-EARNERS.		VALUE OF PRODUCTS.		PER CENT OF INCREASE.		
	1905	1900	1905	1900	1905	1900	Number of establishments.	Average number of wage-earners.	Value of products.
Slaughtering and meat packing, wholesale. ....	18	24	4,898	3,128	\$57,618,974	\$39,911,950	125.0	56.6	44.4
Tobacco. ....	323	358	4,568	4,378	29,701,306	26,085,323	9.8	4.3	13.9
Chewing and smoking, and snuff. ....	9	13	3,519	3,502	27,703,258	24,411,307	130.8	0.5	13.5
Cigars and cigarettes. ....	314	345	1,049	876	1,998,108	1,674,016	19.0	19.7	19.4
Liquors <sup>2</sup> . ....	31	31	5,108	2,787	21,900,367	12,061,337	.....	83.3	81.6
Boots and shoes. ....	18	29	9,234	5,344	19,101,166	8,286,156	137.9	72.8	130.5
Cars <sup>3</sup> . ....	20	21	6,460	4,731	16,029,471	9,571,271	14.8	36.5	67.5
Printing and publishing <sup>4</sup> . ....	344	307	5,235	3,623	15,355,931	9,923,617	12.1	44.5	54.7
Foundry and machine shop products <sup>5</sup> . ....	127	142	6,629	6,370	15,170,823	12,895,952	110.6	4.1	17.6
Chemicals <sup>6</sup> . ....	49	42	1,829	1,033	11,564,665	7,635,326	16.7	77.1	51.5
Flour and grist mill products <sup>7</sup> . ....	44	52	942	737	9,117,025	6,817,770	115.4	27.8	33.7
Clothing. ....	92	108	4,513	4,747	8,572,267	8,564,888	145.2	14.9	0.1
Men's. ....	46	126	2,809	2,790	5,497,201	5,577,442	163.5	0.7	11.4
Women's. ....	46	42	1,704	1,957	3,075,066	2,987,446	9.5	112.9	2.9
Iron and steel industry. ....	33	27	3,833	3,469	8,336,479	8,798,600	22.2	10.5	15.3
Iron and steel <sup>8</sup> . ....	7	6	2,661	2,550	5,008,259	5,349,079	16.7	4.4	16.4
Structural ironwork <sup>9</sup> . ....	21	18	940	736	1,968,963	1,768,693	16.7	27.7	11.3
All other iron and steel industries <sup>10</sup> . ....	5	3	232	183	1,359,257	1,680,828	66.7	26.8	19.1
Textiles <sup>11</sup> . ....	8	6	1,500	1,080	7,842,596	4,678,584	33.3	38.9	67.6
Coffee and spice, roasting and grinding. ....	19	20	484	419	6,725,109	4,765,564	15.0	15.5	41.1
Lumber, planing mill products, including sash, doors, and blinds <sup>12</sup> . ....	85	78	3,068	2,636	6,326,250	4,962,925	9.0	16.4	22.1
Furniture <sup>13</sup> . ....	51	44	2,359	2,294	4,036,599	3,306,765	15.9	2.8	27.5
Soap and candles. ....	9	13	692	552	3,945,798	3,437,735	130.8	25.4	14.8
Pottery, terra cotta, and fire clay products <sup>14</sup> . ....	32	27	3,263	2,265	3,827,317	2,067,833	18.5	44.1	85.1
Confectionery. ....	18	20	1,123	984	3,052,323	2,673,307	110.0	14.1	14.2
Tinware <sup>15</sup> . ....	61	44	1,106	741	2,800,705	1,660,018	38.6	49.3	68.7
Wirework. ....	11	12	545	298	2,244,704	1,014,330	18.3	82.9	121.3
Saddlery and harness. ....	19	15	626	478	2,161,554	1,267,103	26.7	31.0	70.6
Electrical machinery, apparatus, and supplies. ....	16	11	784	522	1,712,883	874,890	45.5	50.2	95.8
Leather, tanned, curried, and finished. ....	7	8	211	182	1,107,272	805,700	112.5	15.9	37.4

<sup>1</sup> Decrease.

<sup>2</sup> Includes malt and vinous liquors.

<sup>3</sup> Includes the manufacture and repair of railroad cars.

<sup>4</sup> Includes book and job; music; and newspaper and periodical printing and publishing.

<sup>5</sup> Includes stoves and furnaces.

<sup>6</sup> Includes druggists' preparations; paints; and varnishes.

<sup>7</sup> Includes food preparations, and baking and yeast powders.

<sup>8</sup> Includes blast furnaces, and steel works and rolling mills.

<sup>9</sup> Exclusive of one establishment for 1900 in East St. Louis.

<sup>10</sup> Includes in both years the manufacture of forgings; tin and terne plate; and bolts, nuts, etc., by establishments other than rolling mills or steel works; and in 1905, structural ironwork, and wire.

<sup>11</sup> Includes cotton goods; cordage and twine; jute and jute goods; and bags, other than paper.

<sup>12</sup> Includes lumber and timber products; cooperage; and wood, turned and carved.

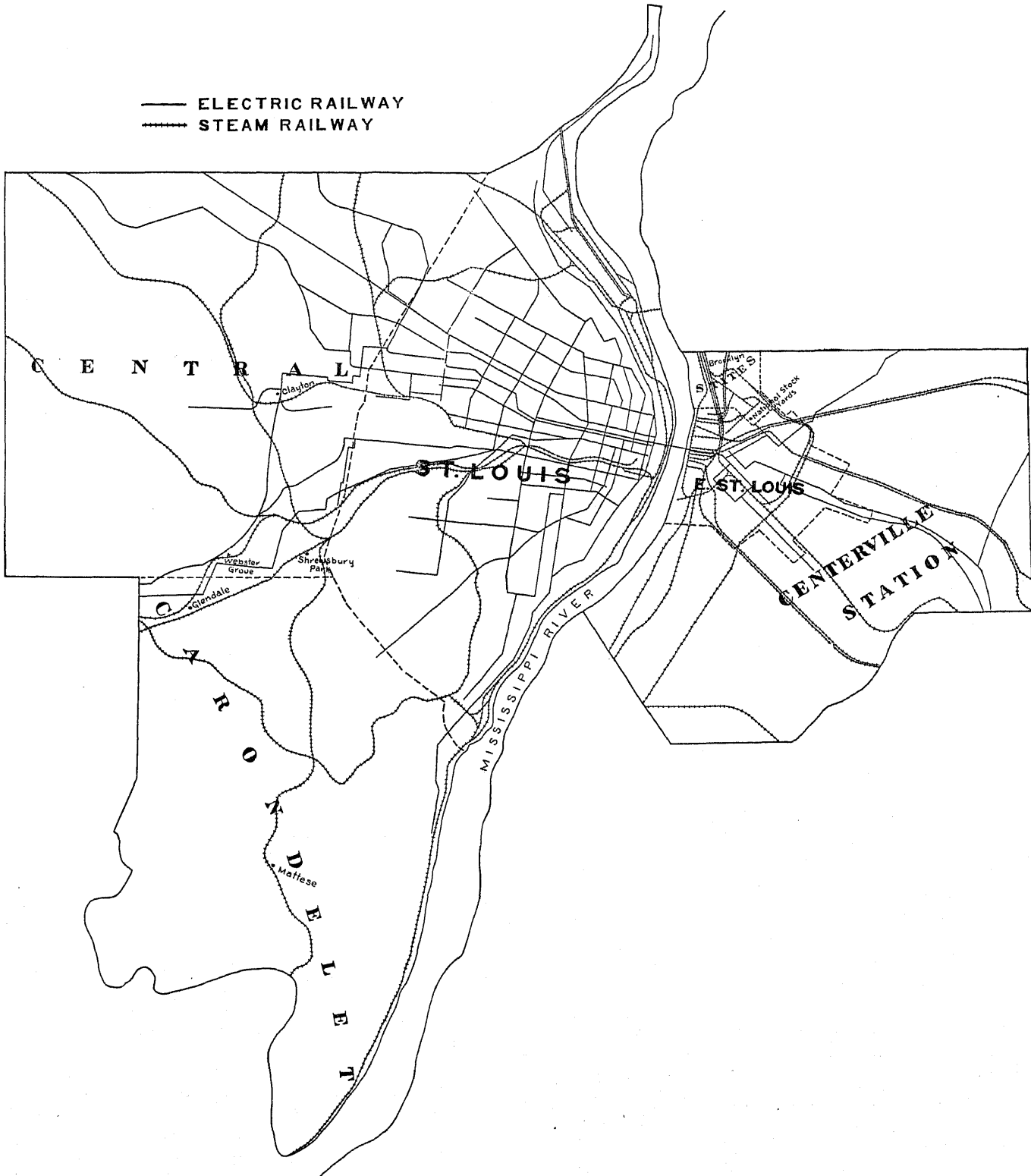
<sup>13</sup> Includes billiard tables and materials.

<sup>14</sup> Includes brick and tile.

<sup>15</sup> Includes coppersmithing and sheet iron working.

MAP 7.—INDUSTRIAL DISTRICT OF ST. LOUIS, MO.

— ELECTRIC RAILWAY  
- - - STEAM RAILWAY



The leading industry shown in 1905 was wholesale slaughtering and meat packing. Of the value of these products, 70.2 per cent was reported for the district just outside of St. Louis. The manufacture of tobacco was second in rank, and furnished employment for almost as many wage-earners as the slaughtering and meat packing industry; its output, however, was valued at a little more than one-half of the value of products for the foremost industry, and had more wage-earners than either of the industries preceding it in value of products. Other industries of importance in value of products, and especially in number of wage-earners, include boots and shoes, cars, foundry and machine shop products, and the iron and steel manufacture.

A number of other important industries can not be shown separately because the operations of individual establishments would be disclosed. These are bread and other bakery products; carriages and wagons, including automobiles; and patent medicines and compounds.

TABLE 40.—Industrial district of St. Louis, Mo.—motive power employed in manufactures: 1905.

	Total.	St. Louis.	Outside of St. Louis.
Number of establishments using power.....	1,401	1,326	75
Total horsepower.....	151,353	123,479	27,874
Owned:			
Steam engines—			
Number.....	1,290	1,149	141
Horsepower.....	116,152	94,765	21,387
Gas and gasoline engines—			
Number.....	82	76	6
Horsepower.....	1,303	1,275	88
Water motors—			
Number.....	13	11	2
Horsepower.....	86	78	8
Electric motors—			
Number.....	1,964	1,711	253
Horsepower <sup>1</sup> .....	19,948	14,921	5,027
Other power, horsepower.....	2,168	2,033	135
Rented: <sup>2</sup>			
Electric, horsepower.....	11,171	9,942	1,229
All other, horsepower.....	465	465	.....

<sup>1</sup> Includes electric power generated by steam engines reported above.  
<sup>2</sup> Includes power rented from other manufacturers.

Of the total horsepower used, 76.7 per cent was steampower and 20.6 per cent electric power, owned and rented. The liquor industry used the largest amount reported, 16,901 horsepower, or 11.2 per cent of the total. Slaughtering and meat packing followed with 13,120 horsepower, or 8.7 per cent, and the iron and steel industry ranked next with 9,854 horsepower, or 6.5 per cent. Of the total horsepower, all but 18.4 per cent was reported for the central city.

A considerable area beyond the limits of the district is really industrially appurtenant to it. This additional territory includes the remainders of St. Louis county, Mo., and of St. Clair county, Ill.; all of Madison county, Ill.; and the following townships in Franklin and Lincoln counties, Mo., and Jersey county, Ill.:

Franklin county, Mo.:	
Boles.	St. Johns.
Calvey.	Union.
Central.	Washington.
Jersey county, Ill.:	
Elsah.	Mississippi.
Jersey.	Piasa.
Lincoln county, Mo.:	
Bedford.	Monroe.
Clark.	

In this additional area no city, except Alton, Ill., is large enough to be shown separately among cities having a population of 8,000 or more. The additional territory has an area of 2,980 square miles; consequently the area of the central and the surrounding municipalities comprises 3,184 square miles, an increase of 1,460.8 per cent over the area of the industrial district. The population, moreover, is increased from 638,134 to 834,436, or 30.8 per cent, by the addition of the surrounding territory.

TABLE 41.—MUNICIPALITIES SURROUNDING INDUSTRIAL DISTRICT OF ST. LOUIS, MO.—MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Total.....	1905	471	\$32,851,490	1,064	\$1,174,402	14,766	\$7,887,722	\$3,103,200	\$28,443,762	\$44,017,468	(1)
	1900	463	19,610,848	673	740,514	12,278	5,379,821	1,870,975	15,503,837	26,899,235	196,302
Per cent of increase.....		1.7	67.5	58.1	58.6	20.3	46.6	65.9	83.5	63.6	.....
Alton, Ill.....	1905	62	4,062,110	240	220,154	3,069	1,727,858	466,082	5,422,845	8,696,814	(1)
	1900	59	2,773,170	123	112,048	2,174	1,037,479	233,294	2,472,440	4,250,389	14,210
Per cent of increase.....		5.1	44.3	95.1	96.5	41.2	66.5	99.8	119.3	104.6	.....
Belleville, Ill.....	1905	96	3,083,666	165	170,632	1,765	1,011,313	895,204	1,787,117	4,356,615	(1)
	1900	89	2,814,064	118	107,564	1,335	619,974	759,155	935,043	2,873,334	17,484
Per cent of increase.....		7.9	33.3	39.8	58.6	32.2	63.1	17.9	91.1	51.6	.....
All other surrounding places <sup>2</sup> .....	1905	313	25,765,714	659	783,616	9,982	5,148,551	1,741,914	21,233,800	30,964,039	(1)
	1900	315	14,523,614	432	520,902	8,769	3,722,368	878,526	12,096,354	19,775,512	164,608
Per cent of increase.....		0.6	77.4	52.5	50.4	13.3	38.3	98.3	75.5	56.6	.....

<sup>1</sup> No state census was taken for 1905.

<sup>2</sup> For names of places included, see above.

<sup>3</sup> Decrease.

The manufactures in this additional area together with those in the district were reported by 3,074 establishments, employing 106,450 wage-earners, and producing an output valued at \$363,727,330.

TABLE 42.—MUNICIPALITIES SURROUNDING INDUSTRIAL DISTRICT OF ST. LOUIS, MO.—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE-EARNERS, AND VALUE OF PRODUCTS, WITH PER CENT OF INCREASE, BY SELECTED INDUSTRIES: 1905 AND 1900.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE-EARNERS.		VALUE OF PRODUCTS.		PER CENT OF INCREASE.		
	1905	1900	1905	1900	1905	1900	Number of establishments.	Average number of wage-earners.	Value of products.
Flour and grist mill products.....	40	40	511	377	\$9,119,539	\$5,056,017	.....	35.5	80.4
Iron and steel, steel works and rolling mills.....	6	4	2,105	2,031	4,161,027	3,060,084	50.0	3.6	36.0
Foundry and machine shop products.....	24	23	1,197	715	1,729,220	1,090,089	4.3	67.4	58.6
Liquors, malt.....	13	9	243	171	1,084,843	787,012	44.4	42.1	37.8
Bread and other bakery products.....	43	37	84	70	310,337	265,278	16.2	20.0	17.0
Tobacco, cigars and cigarettes.....	79	71	174	117	304,066	212,519	11.3	48.7	43.1
Printing and publishing.....	58	48	160	151	289,253	194,287	20.8	6.0	48.9
Newspapers and periodicals.....	47	40	150	141	251,488	170,996	17.5	6.4	47.1
Book and job.....	11	8	10	10	37,765	23,291	37.5	.....	62.1

The most important industry for places surrounding St. Louis was the manufacture of flour and grist mill products, but the value of such products was only a little more than nine millions. The products of steel and rolling mills came next, with a value less than one-half as great as that of the flour and grist mills. Foundries and machine shops manufactured products with a value approaching two millions, and this industry was third in rank.

Of the horsepower in the additional area, steam constituted 82.2 per cent. The largest amount, 11,332, or 27.4 per cent, was used in steel works and rolling mills.

TABLE 43.—Municipalities surrounding industrial district of St. Louis, Mo.—motive power employed in manufactures: 1905.

Number of establishments using power.....	224
Total horsepower.....	41,399
Owned:	
Steam engines—	
Number.....	346
Horsepower.....	34,010
Gas and gasoline engines—	
Number.....	50
Horsepower.....	656
Water motors—	
Number.....	1
Horsepower.....	2
Electric motors—	
Number.....	359
Horsepower <sup>1</sup> .....	5,597
Other power, horsepower.....	650
Rented: <sup>2</sup>	
Electric, horsepower.....	424
All other, horsepower.....	60

<sup>1</sup>Includes electric power generated by steam engines reported above.  
<sup>2</sup>Includes power rented from other manufacturers.

## INDUSTRIAL DISTRICT OF BALTIMORE, MARYLAND.

Baltimore is located at the head of tidewater and navigation on the Patapsco river, 14 miles from Chesapeake bay and about 200 miles from the Atlantic ocean. At the entrance to the harbor the Patapsco river divides into three branches known as the Northwest branch, the Southwest, and the Middle. These give the city a total water front of about 12 miles. Five steam railroad lines connect the city with the North, West, and South; steamships ply regularly from this port to foreign and coastwise ports; and there are plenty of other facilities for land and water transportation. Electric railroads furnish intercommunication between the city and the suburbs.

The city was founded in 1729 and incorporated in 1796. In 1888 a large section of suburban territory was added to its corporate limits.

The Baltimore industrial district covers an area of 246 square miles and in 1900 had a population of 568,653. The city of Baltimore embraces an area of 30 square miles, and its population in 1900 was 508,957, or 42.8 per cent of the total for the state. No state census of population was taken in 1905.

In this tabulation no city or town other than Baltimore is shown separately, for, although a number of localities reported manufactures of importance, the civil subdivisions in which they were located did not have a population of 8,000 or over.

The territory embraced in addition to Baltimore city consists of districts 1, 3, 9, 12, 13, 14, and 15 of Baltimore county.

In 1900 the population per square mile for the entire district was 2,312, while for Baltimore alone it was 16,965.

TABLE 44.—INDUSTRIAL DISTRICT OF BALTIMORE, MD.—MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Industrial district, total.....	1905	2,243	\$166,770,882	7,297	\$7,724,061	71,432	\$28,924,307	\$19,561,794	\$124,600,047	\$202,659,272	( <sup>1</sup> ) 508,653
Per cent of increase.....	1900	2,352	122,009,527	5,744	6,187,327	71,688	26,110,847	13,319,245	108,775,530	176,909,124	.....
		<sup>2</sup> 4.6	36.7	27.0	24.8	<sup>2</sup> 0.4	10.8	46.9	14.5	14.6	.....
Baltimore, Md.....	1905	2,163	148,763,503	6,806	7,086,614	65,224	25,633,550	18,224,852	81,014,029	151,546,580	( <sup>1</sup> ) 508,957
Per cent of increase.....	1900	2,274	107,216,770	5,501	5,871,110	66,571	23,493,427	12,112,419	75,222,830	135,107,626	.....
		<sup>2</sup> 4.9	38.8	23.7	20.7	<sup>2</sup> 2.0	9.1	50.5	7.7	12.2	.....
All other places in district <sup>3</sup> .....	1905	80	18,007,379	491	637,447	6,208	3,290,757	1,336,942	43,586,018	51,112,692	( <sup>1</sup> ) 59,696
Per cent of increase.....	1900	78	14,792,757	243	316,217	5,117	2,617,420	1,206,826	33,552,700	41,801,498	.....
		2.6	21.7	102.1	101.6	21.3	25.7	10.8	29.9	22.3	.....

<sup>1</sup> No state census was taken for 1905.<sup>2</sup> Decrease.<sup>3</sup> For names of places included, see page 49.

The relative growth was 10.1 per cent greater in places outside of Baltimore from 1900 to 1904 than in the city itself. In gross value, however, the products of Baltimore were almost threefold as large as those of the places outside of the city in 1904. The value

of products for the district in that year was over two hundred millions.

Of the manufactures of the district the proportion credited to Baltimore in 1904 was less by 1.6 per cent than the corresponding proportion in 1900.

TABLE 45.—INDUSTRIAL DISTRICT OF BALTIMORE, MD.—PER CENT DISTRIBUTION OF MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Baltimore.....	1905	96.4	89.2	93.3	91.7	91.3	88.6	93.2	65.0	74.8	.....
	1900	96.7	87.9	95.8	94.9	92.9	90.0	90.9	69.2	76.4	89.5
All other places in district.....	1905	3.6	10.8	6.7	8.3	8.7	11.4	6.8	35.0	25.2	.....
	1900	3.3	12.1	4.2	5.1	7.1	10.0	9.1	30.8	23.6	10.5

The manufacture of clothing, as the foremost industry that can be presented separately, furnished employment for the greatest number of wage-earners reported for any of the industries in the district. The entire industry was within the city of Baltimore and the products were valued at more than twenty-two millions. Of this total value, 86.5 per cent was produced by the manufacture of men's clothing.

The various branches of the iron and steel industry held a high rank in this district, with nearly two thousand wage-earners and an output valued at over

twelve and one-half millions. The largest establishments were located at Sparrow Point, about six miles from the corporate limits of Baltimore.

The smelting and refining of copper was really the leading industry for the district, but the totals can not be shown without disclosing the operations of individual establishments. The industry was located at Canton, just outside of Baltimore. Other leading industries which can not be shown without disclosures are coke, cotton goods, refining of petroleum, and shipbuilding.



MAP 8.—INDUSTRIAL DISTRICT OF BALTIMORE, MD.

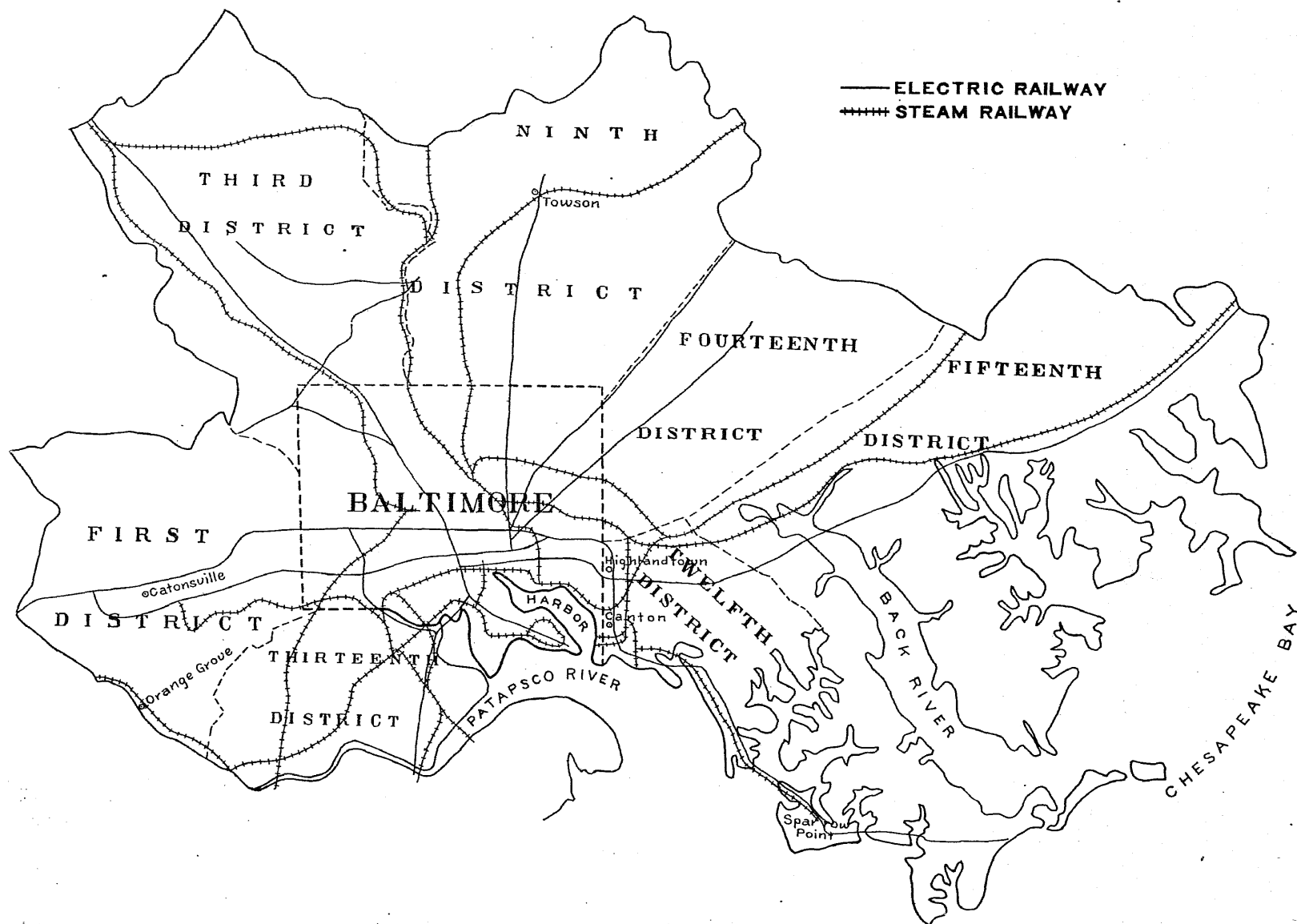


TABLE 46.—INDUSTRIAL DISTRICT OF BALTIMORE, MD.—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE-EARNERS, AND VALUE OF PRODUCTS, WITH PER CENT OF INCREASE, BY SELECTED INDUSTRIES: 1905 AND 1900.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE-EARNERS.		VALUE OF PRODUCTS.		PER CENT OF INCREASE.		
	1905	1900	1905	1900	1905	1900	Number of establishments.	Average number of wage-earners.	Value of products.
Clothing.....	166	195	10,297	11,569	\$22,630,358	\$19,797,479	1 14.9	1 11.0	14.3
Men's.....	115	137	8,555	9,690	19,565,474	17,290,825	1 16.1	1 11.7	13.2
Women's.....	51	58	1,742	1,879	3,064,884	2,506,654	1 12.1	1 7.3	22.3
Iron and steel industry.....	13	15	1,887	1,768	12,695,470	9,730,599	1 13.3	6.7	30.5
Structural ironwork.....	7	8	293	168	841,692	562,368	1 12.5	74.4	40.7
All other iron and steel industries <sup>2</sup> .....	6	7	1,594	1,600	11,853,838	9,168,171	1 14.3	1 0.4	29.3
Tobacco.....	288	324	3,650	4,027	10,545,035	9,581,893	1 11.1	1 9.4	10.1
Chewing and smoking, and snuff.....	5	5	1,016	2,002	6,172,158	7,054,159	.....	1 49.3	1 12.5
Cigars and cigarettes.....	283	319	2,634	2,025	4,372,877	2,527,734	1 11.3	30.1	73.0
Foundry and machine shop products <sup>3</sup> .....	70	77	3,647	4,018	7,728,598	7,124,414	1 9.1	1 9.2	8.5
Slaughtering.....	37	46	540	456	6,702,061	6,435,942	1 19.6	18.4	4.1
Slaughtering and meat packing, wholesale.....	29	32	512	417	6,332,914	5,149,706	1 9.4	22.8	23.0
Slaughtering, wholesale, not including meat packing.....	8	14	28	39	369,147	1,286,236	1 42.9	1 28.2	1 71.3
Liquors.....	30	22	876	659	6,206,447	4,175,569	36.4	32.9	48.6
Malt.....	16	12	655	538	4,185,170	2,934,028	33.3	21.7	42.6
Distilled.....	14	10	221	121	2,021,277	1,241,541	40.0	82.6	62.9
Tinware <sup>4</sup> .....	47	56	1,831	1,919	6,179,465	4,873,366	1 16.1	1 4.6	26.8
Canning and preserving, fruits and vegetables.....	26	28	4,025	5,558	5,981,541	10,474,596	1 7.1	1 27.6	1 42.9
Printing and publishing.....	180	186	1,943	2,357	4,826,869	4,223,474	1 3.2	1 17.6	14.3
Newspapers and periodicals.....	56	44	667	1,179	2,662,307	2,186,437	27.3	1 43.4	21.8
Book and job.....	124	142	1,276	1,178	2,164,562	2,037,037	1 12.7	8.3	6.3
Shirts.....	15	18	4,268	2,354	5,710,783	3,551,913	1 16.7	81.3	60.8
Bread and other bakery products.....	352	350	1,475	1,437	4,539,180	3,696,376	0.6	2.6	22.8
Cars and general shop construction and repairs by steam railroad companies.....	7	6	3,712	2,438	4,477,818	3,529,959	16.7	52.3	26.9
Druggists' preparations.....	6	9	625	435	3,265,220	1,280,344	1 33.3	43.7	155.0
Furniture.....	38	36	1,776	1,627	2,854,496	2,690,610	5.6	9.2	6.1
Confectionery.....	43	42	1,049	858	2,597,943	1,923,939	2.4	22.3	35.0
Stamped ware.....	3	3	681	826	2,429,137	1,059,800	.....	1 17.6	129.2
Hats and caps, not including fur and wool hats.....	17	20	1,248	1,117	2,248,843	1,619,825	1 15.0	11.7	38.8

<sup>1</sup> Decrease.

<sup>2</sup> Includes blast furnaces; steel works and rolling mills; tin and terne plate; and the manufacture of nails by establishments other than rolling mills or steel works.

<sup>3</sup> Includes stoves and furnaces.

<sup>4</sup> Includes coppersmithing and sheet iron working.

TABLE 47.—Industrial district of Baltimore, Md.—motive power employed in manufactures: 1905.

	Total.	Balti- more.	Outside of Balti- more.
Number of establishments using power.....	1,046	994	52
Total horsepower.....	116,611	71,361	45,250
Owned:			
Steam engines—			
Number.....	1,004	768	236
Horsepower.....	93,017	53,836	39,181
Gas and gasoline engines—			
Number.....	274	270	4
Horsepower.....	4,510	4,475	35
Water wheels—			
Number.....	16	3	13
Horsepower.....	963	203	760
Electric motors—			
Number.....	743	466	277
Horsepower <sup>2</sup> .....	11,548	6,571	4,977
Other power, horsepower.....	2,631	2,334	297
Rented: <sup>3</sup>			
Electric, horsepower.....	2,626	2,626	.....
All other, horsepower.....	1,316	1,316	.....

<sup>1</sup> Includes 1 water motor in Baltimore, with 3 horsepower.

<sup>2</sup> Includes electric power generated by steam engines reported above.

<sup>3</sup> Includes power rented from other manufacturers.

Of mechanical motive power used, 93,017 horsepower, or 79.8 per cent, was steampower. Electric

power, rented and owned, formed 12.2 per cent of the total. Baltimore had 71,361 horsepower, or 61.2 per cent of the total power in the district. The power reported was very widely distributed among the industries. In the iron and steel industry 28,800 horsepower, or 24.7 per cent of the total, was used. The second largest amount—7,325 horsepower, or 6.3 per cent—was reported for the manufacture of cotton goods.

By the addition of a number of surrounding places that were closely connected with Baltimore industrially and commercially, the area of the industrial district is increased to 2,333 and the population in 1900 to 722,090. The additional territory embraces that part of Baltimore county not included in the industrial district; also districts 3, 4, and 5 in Anne Arundel county, and the whole of Carroll, Cecil, Harford, and Howard counties. In this additional territory there are no cities or towns of sufficient size to be shown separately.

TABLE 48.—MUNICIPALITIES SURROUNDING INDUSTRIAL DISTRICT OF BALTIMORE, MD.—MANUFACTURES AND POPULATION: 1905 AND 1900.

	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Total <sup>1</sup> .....	1905	465	\$12,069,081	360	\$380,195	7,101	\$2,248,091	\$737,748	\$9,488,858	\$14,017,322	(?)
	1900	508	8,217,815	244	230,030	6,773	1,959,644	389,207	6,317,173	10,993,858	153,437
Percent of increase.....		28.5	46.9	47.5	65.3	4.8	14.7	89.6	49.9	27.5	

<sup>1</sup> For list of places included, see page 52.

<sup>2</sup> No state census was taken for 1905.

<sup>3</sup> Decrease.

By the inclusion of the above-mentioned area the number of establishments for 1904 is increased to 2,708, the average number of wage-earners to 78,533, and the total value of all products to \$216,676,594.

TABLE 49.—MUNICIPALITIES SURROUNDING INDUSTRIAL DISTRICT OF BALTIMORE, MD.—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE-EARNERS, AND VALUE OF PRODUCTS, WITH PER CENT OF INCREASE, BY SELECTED INDUSTRIES: 1905 AND 1900.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE-EARNERS.		VALUE OF PRODUCTS.		PER CENT OF INCREASE.		
	1905	1900	1905	1900	1905	1900	Number of establishments.	Average number of wage-earners.	Value of products.
Canning and preserving, fruits and vegetables.....	147	155	1,529	1,303	\$2,073,773	\$1,810,830	15.2	17.3	14.5
Textiles <sup>2</sup> .....	10	10	1,497	1,653	2,020,953	1,957,365	.....	19.4	3.3
Flour and grist mill products.....	75	74	151	94	1,586,479	1,181,160	1.4	60.6	34.3
Paper and wood pulp.....	12	14	432	264	1,178,562	592,767	114.3	63.6	98.8
Foundry and machine shop products <sup>3</sup> .....	8	12	245	477	839,499	730,685	133.3	148.6	14.9
Liquors, distilled.....	3	3	40	28	277,237	207,456	.....	42.9	33.6
Bread and other bakery products.....	22	14	39	17	125,440	45,694	57.1	129.4	174.5
Lumber, planing mill products, including sash, doors, and blinds.....	3	5	21	21	111,500	120,182	140.0	.....	17.2
Printing and publishing, newspapers and periodicals.....	22	20	69	60	95,424	79,004	10.0	15.0	20.8

<sup>1</sup> Decrease.

<sup>2</sup> Includes, in both years, cotton goods; and in 1905, also the dyeing and finishing of textiles, and silk and silk goods; and in 1900, the manufacture of woolen goods.

<sup>3</sup> Includes stoves and furnaces.

The leading industry shown for this additional territory was the canning and preserving of fruits and vegetables, with products valued at over two millions.

The greatest increase, 174.5 per cent, in value of products for this supplemental territory during the period from 1900 to 1904 was in bread and other bakery products. Several important industries can not be shown without disclosing individual operations. These are the manufacture and repair of railroad cars; sulphuric, nitric, and mixed acids; leather, tanned, curried, and finished; tinware; marble and stone work; and electrical machinery, apparatus, and supplies.

Of the 18,153 horsepower reported for the territory outside the district, 10,945 horsepower, or 60.3 per cent, was steampower and 5,771 horsepower, or 31.8 per cent, was waterpower. A combination of the totals for the supplemental area with those for the district proper gives 1,334 establishments with 134,764 horsepower, 77.1 per cent of which was steampower.

Of the total power reported for the outlying territory, 3,893 horsepower, or 21.4 per cent, was used in the manufacture of paper and wood pulp and 3,595 horsepower, or 19.8 per cent, in the manufacture of cotton goods.

TABLE 50.—Municipalities surrounding industrial district of Baltimore, Md.—motive power employed in manufactures: 1905.

Number of establishments using power.....	288
Total horsepower.....	18,153
Owued:	
Steam engines—	
Number.....	83
Horsepower.....	10,945
Gas and gasoline engines—	
Number.....	29
Horsepower.....	329
Water wheels—	
Number <sup>1</sup> .....	135
Horsepower.....	5,771
Electric motors—	
Number.....	11
Horsepower <sup>2</sup> .....	332
Other power, horsepower.....	650
Rented: <sup>3</sup>	
Electric, horsepower.....	126
All other, horsepower.....	.....

<sup>1</sup> Includes 2 water motors, with 5 horsepower.

<sup>2</sup> Includes electric power generated by steam engines reported above.

<sup>3</sup> Includes power rented from other manufacturers.

## INDUSTRIAL DISTRICT OF CINCINNATI, OHIO.

Cincinnati has a frontage on the Ohio river of nearly 14 miles. It is also the southern terminus of the Miami and Erie canal, connecting with Lake Erie. Waterway transportation facilities are thus extensive and encourage the establishment of manufactures and commercial enterprises. Many villages have been absorbed by the city since its incorporation, and more than 20 street railways lead to various cities and towns that are really a part of the great central city. Steam railway terminals are numerous. Bridges across the Ohio connect with the cities of Covington and Newport, Ky., and with other places.

The corporate limits of Cincinnati do not embrace all of the manufactures that are a part of the city's industrial life. A number of large manufacturing establishments are situated just outside of the city and a number also across the Ohio river in Kentucky. It has therefore been deemed proper that the indus-

trial district of which Cincinnati is the center should be considered as including nearby places in both Ohio and Kentucky. This district embraces an area of 151 square miles, of which 42 square miles is the area of Cincinnati.

Besides Cincinnati there are in the district 2 cities of sufficient population to be shown by specified industries in 1905—Covington and Newport in Kentucky—one having over 42,000 and the other over 28,000 inhabitants in 1900. The district includes Columbia, Delhi, Green, Millcreek, and Spencer townships in Hamilton county, Ohio; and in Kentucky, magisterial districts 3 and 4 in Kenton county and 1, 3, and 4 in Campbell county. The population of the district in 1900 was 473,282; of this, 325,902, or 68.9 per cent, was in Cincinnati. The number of inhabitants per square mile was 1,352 for the district exclusive of Cincinnati, and 3,134 for the entire district. No census of population was taken in 1905.

TABLE 51.—INDUSTRIAL DISTRICT OF CINCINNATI, OHIO—MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Industrial district, total.....	1905	2,600	\$170,769,226	9,825	\$10,929,512	72,735	\$33,932,557	\$33,383,730	\$102,721,628	\$203,095,605	(1)
	1900	2,973	121,972,037	6,819	7,170,858	64,409	26,981,122	25,352,023	82,263,028	164,217,216	473,282
Per cent of increase.....		<sup>2</sup> 12.5	40.0	44.1	52.4	12.9	25.8	31.7	24.9	23.7	.....
Cincinnati, Ohio.....	1905	2,171	130,271,811	8,190	9,077,414	58,584	27,389,569	27,069,745	83,258,492	166,059,050	(1)
	1900	2,454	103,463,842	6,164	6,437,089	54,942	23,103,724	21,162,064	71,390,944	141,677,997	325,902
Per cent of increase.....		<sup>2</sup> 11.5	25.9	32.9	41.0	6.6	18.6	27.9	16.6	17.2	.....
Outside of Cincinnati.....	1905	429	40,497,415	1,635	1,852,098	14,151	6,542,988	6,313,985	19,463,136	37,036,555	(1)
	1900	519	18,508,225	655	733,779	9,467	3,877,398	4,189,959	10,872,084	22,539,219	147,380
Per cent of increase.....		<sup>2</sup> 17.3	118.8	149.6	152.4	49.5	68.7	50.7	79.0	64.3	.....
Covington, Ky.....	1905	199	6,725,323	244	255,965	3,703	1,452,600	988,469	2,610,283	6,099,715	(1)
	1900	204	4,227,946	199	199,387	3,212	1,200,080	709,669	2,516,836	5,478,764	42,938
Per cent of increase.....		<sup>2</sup> 2.5	59.1	22.6	28.4	15.3	21.0	39.3	3.7	11.3	.....
Newport, Ky.....	1905	105	2,816,202	160	190,784	1,958	1,052,123	394,475	2,972,097	5,231,084	(1)
	1900	134	2,389,060	109	117,374	1,955	873,152	622,968	1,473,248	3,547,667	28,301
Per cent of increase.....		<sup>2</sup> 21.6	17.9	46.8	62.5	0.2	20.5	<sup>3</sup> 36.7	101.7	47.5	.....
All other places in district <sup>3</sup> .....	1905	125	30,955,890	1,231	1,405,349	8,490	4,038,265	4,931,041	13,880,756	25,705,756	(1)
	1900	181	11,891,219	347	417,018	4,300	1,804,166	2,857,322	6,882,000	13,512,788	76,141
Per cent of increase.....		<sup>2</sup> 30.9	160.3	254.8	237.0	97.4	123.8	72.6	101.7	90.2	.....

<sup>1</sup> No state census was taken for 1905.

<sup>2</sup> Decrease.

<sup>3</sup> For names of places included, see above.

That the manufactures in places outside of Cincinnati increased much more rapidly between 1900 and 1904 than those in the city itself, is shown by the percentage of increase in the value of products. The

gross value of the products manufactured in Cincinnati in 1904, however, was over four and one-half times the value of the output for all places in the district outside of the city.

MAP 9.—INDUSTRIAL DISTRICT OF CINCINNATI, OHIO.

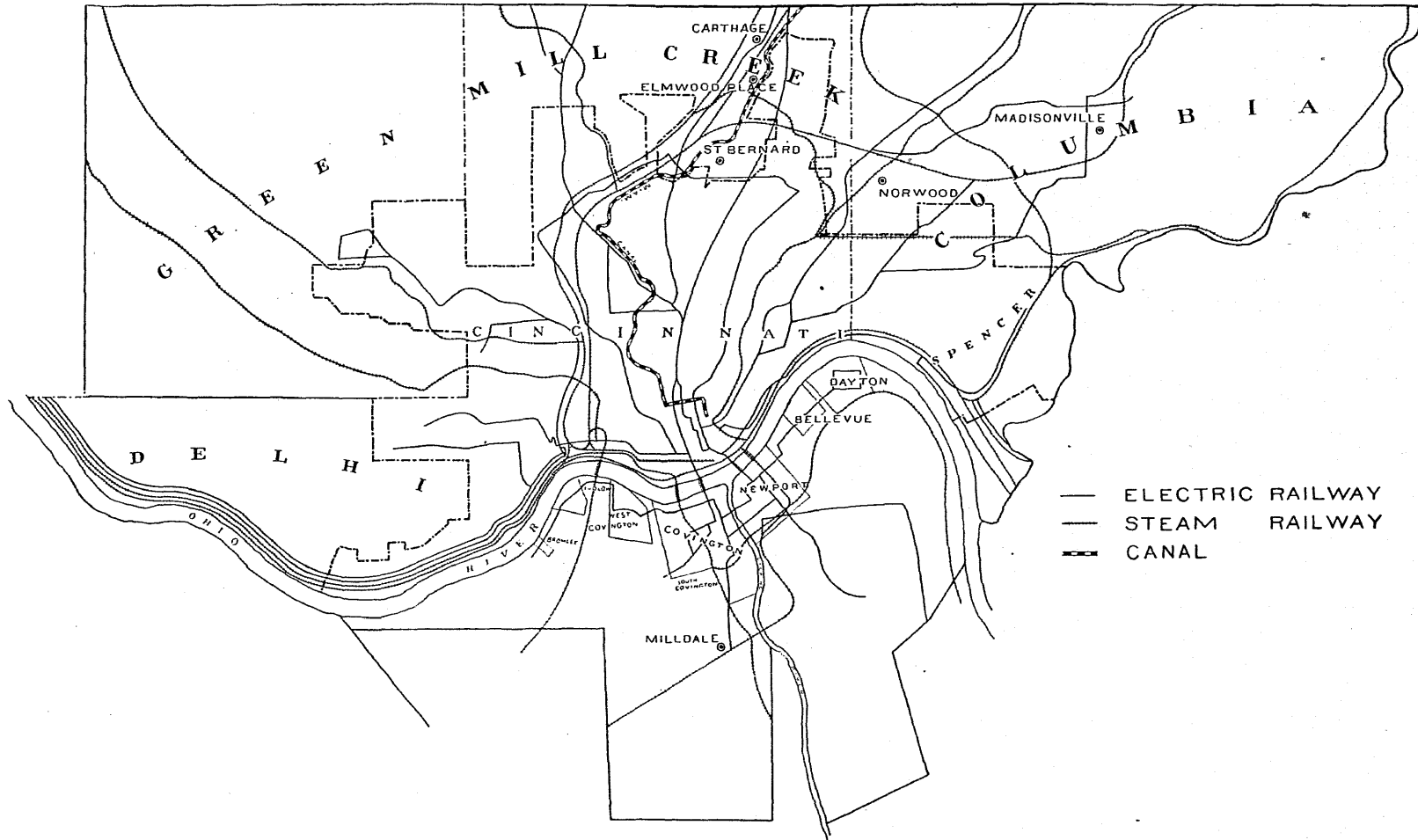


TABLE 52.—INDUSTRIAL DISTRICT OF CINCINNATI, OHIO—PER CENT DISTRIBUTION OF MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Cincinnati, Ohio.....	1905	83.5	76.3	83.4	83.1	80.5	80.7	81.1	81.1	81.8	.....
	1900	82.5	84.8	90.4	89.8	85.3	85.6	83.5	86.8	86.3	68.9
Outside of Cincinnati.....	1905	16.5	23.7	16.6	16.9	19.5	19.3	18.9	18.9	18.2	.....
	1900	17.5	15.2	9.6	10.2	14.7	14.4	16.5	13.2	13.7	31.1
Covington, Ky.....	1905	7.7	3.9	2.5	2.3	5.1	4.3	3.0	2.5	3.0	.....
	1900	0.9	3.5	2.9	2.8	5.0	4.4	2.8	3.1	3.3	9.1
Newport, Ky.....	1905	4.0	1.6	1.6	1.7	2.7	3.1	1.2	2.9	2.6	.....
	1900	4.5	2.0	1.6	1.6	3.0	3.2	2.5	1.8	2.2	6.0
All other places in district.....	1905	4.8	18.1	12.5	12.9	11.7	11.9	14.8	13.5	12.7	.....
	1900	6.1	9.7	5.1	5.8	6.7	6.7	11.3	8.4	8.2	16.1

The gross value of products for the entire district in 1900 was divided between Cincinnati and the remainder of the district in the proportion of 86.3 per cent for the former and 13.7 per cent for the latter.

In 1904 the proportions were a little less than 82 per cent and a little more than 18 per cent, respectively. The proportion for the city, therefore, decreased, the exact percentual difference being 4.5.

TABLE 53.—INDUSTRIAL DISTRICT OF CINCINNATI, OHIO—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE-EARNERS, AND VALUE OF PRODUCTS, WITH PER CENT OF INCREASE, BY SELECTED INDUSTRIES: 1905 AND 1900.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE-EARNERS.		VALUE OF PRODUCTS.		PER CENT OF INCREASE.		
	1905	1900	1905	1900	1905	1900	Number of establishments.	Average number of wage-earners.	Value of products.
Liquors.....	38	39	2,086	1,757	\$21,771,153	\$19,210,452	12.6	18.7	13.3
Distilled.....	8	9	497	264	12,784,633	11,684,874	111.1	88.3	9.4
Malt.....	25	25	1,581	1,485	8,945,130	7,491,503	.....	6.5	19.4
Vinous.....	5	5	8	8	41,390	34,075	.....	.....	21.5
Clothing.....	348	570	6,209	6,445	17,318,956	14,489,801	138.9	13.7	19.5
Men's.....	319	529	5,038	5,055	14,607,141	12,403,817	139.7	10.3	17.8
Women's.....	29	41	1,171	1,390	2,711,815	2,085,984	129.3	115.8	30.0
Foundry and machine shop products <sup>2</sup> .....	175	109	7,336	7,534	13,998,838	13,042,354	3.6	12.6	2.6
Slaughtering.....	47	33	878	882	13,654,342	10,783,241	42.4	10.5	26.6
Slaughtering and meat packing.....	17	23	760	812	11,341,647	9,029,593	126.1	16.4	17.8
Slaughtering, not including meat packing.....	30	10	118	70	2,312,695	1,753,648	200.0	68.6	100.5
Boots and shoes.....	28	30	6,671	6,772	10,840,778	8,553,757	16.7	11.5	26.7
Printing and publishing.....	256	215	2,967	2,768	8,468,722	6,407,056	19.1	7.2	32.2
Newspapers and periodicals.....	102	85	838	1,076	4,418,781	3,594,243	20.0	122.1	22.9
Book and job.....	148	123	2,072	1,641	3,856,413	2,545,828	20.3	26.3	51.5
Music.....	6	7	57	51	193,528	266,985	114.3	11.8	127.5
Carriages and wagons.....	67	75	2,187	2,286	6,787,261	6,385,705	110.7	14.3	6.3
Tobacco.....	325	373	3,834	4,188	6,721,170	7,657,562	112.9	18.5	112.2
Cigars and cigarettes.....	313	357	3,402	3,737	4,607,195	4,973,865	112.3	19.0	17.4
Chewing and smoking, and snuff.....	12	16	432	451	2,113,975	2,683,697	125.0	14.2	121.2
Furniture.....	67	56	3,525	2,427	6,125,631	3,652,196	19.6	45.2	67.7
Iron and steel industry.....	20	21	1,908	1,527	4,471,801	3,957,048	14.8	25.0	13.0
Iron and steel <sup>3</sup> .....	5	7	1,234	1,220	2,995,660	3,240,510	128.6	1.1	17.6
Structural ironwork.....	15	14	674	307	1,476,141	716,538	7.1	119.5	106.0
Bread and other bakery products.....	237	314	1,440	1,199	4,231,455	3,309,397	124.5	20.1	27.9
Lumber, planing mill products, including sash, doors, and blinds.....	41	31	1,292	751	3,744,296	1,856,074	32.3	72.0	101.7
Leather, tanned, curried, and finished.....	10	16	976	958	3,404,866	3,503,225	137.5	1.9	12.8
Tinware <sup>4</sup> .....	47	35	1,040	698	2,562,729	1,399,071	34.3	49.0	83.2
Lithographing and engraving.....	11	12	1,248	1,072	2,485,361	1,829,718	18.3	16.4	35.8
Paints.....	18	17	239	241	2,312,022	1,887,521	5.9	10.8	22.5
Carriage and wagon materials.....	25	16	1,057	1,024	2,011,708	1,664,586	56.3	3.2	20.9

<sup>1</sup>Decrease.

<sup>2</sup>Includes the manufacture of locomotives, and stoves and furnaces.

<sup>3</sup>Includes, in 1905, steel works and rolling mills, and the manufacture of forgings; in 1900, steel works and rolling mills, and the manufacture of tin and terne plate.

<sup>4</sup>Includes coppersmithing and sheet iron working.

The leading industry for the district in 1904 was liquors, distilled, representing 58.7 per cent of the product. Cincinnati had 79.7 per cent of the total product for the district and 75.2 per cent of the distilled. Another of the principal manufactures was clothing. Soap was a prominent industry, but it can not be shown separately for the district.

Among the other leading industries were foundry and machine shop products and slaughtering, with products valued at substantially the same, between \$13,500,000 and \$14,000,000; boots and shoes, having products valued at over ten millions of dollars; printing and publishing, with an output valued at more than eight millions; and carriages and wagons, tobacco, and furniture, with products of over six millions apiece.

TABLE 54.—Industrial district of Cincinnati, Ohio—motive power employed in manufactures: 1905.

	Total.	Cincinnati.	Outside of Cincinnati.
Number of establishments using power.....	1,385	1,224	161
Total horsepower.....	105,254	74,618	30,636
Owned:			
Steam engines—			
Number.....	1,053	812	241
Horsepower.....	80,928	57,215	23,713
Gas and gasoline engines—			
Number.....	125	95	30
Horsepower.....	1,295	1,134	161
Water motors—			
Number.....	10	10	.....
Horsepower.....	270	270	.....
Electric motors—			
Number.....	1,019	877	1,042
Horsepower <sup>1</sup> .....	13,456	7,630	5,826
Other power, horsepower.....	576	122	454
Rented: <sup>2</sup>			
Electric, horsepower.....	6,288	5,965	323
All other, horsepower.....	2,441	2,282	159

<sup>1</sup> Includes electric power generated by steam engines reported above.

<sup>2</sup> Includes power rented from other manufacturers.

The number of establishments reporting mechanical motive power used in 1904 was 1,385, and the total horsepower used by them was 105,254. This power was widely distributed among the various industries. Liquors, the leading manufacture of the district, led in the amount of power consumed, with 13,622 horsepower, or 12.9 per cent of the total. The second largest amount of power used, 8,868 horsepower, or 8.4 per cent of the total, was reported by the iron and steel industries.

Steam maintained the lead, percentages of the various kinds of power used being as follows: Steam, 76.9; gas and gasoline, 1.2; electric power, owned or rented, 18.8; all other kinds, including water motors, 3.1. Of the total, 74,618 horsepower, or 70.9 per cent, was reported from Cincinnati. The amount of electric power reported was 19,744 horsepower, 13,595, or 68.9 per cent, of which was in the city.

The cities and towns in Ohio, Kentucky, and Indiana, surrounding the district and dependent in a considerable measure upon Cincinnati for their industrial and commercial activity, have an area of 2,750 square miles, which, added to the area of the district, makes a total of 2,901 square miles. The population of this additional area in 1900 was 216,386; thus the total population for the district and the surrounding places was 689,668. The additional territory comprises that part of Hamilton county, Ohio, and of Kenton and Campbell counties, Ky., not included in the district; and the whole of Butler, Clermont, and Warren counties in Ohio; Boone and Pendleton counties in Kentucky; and Dearborn county in Indiana.

TABLE 55.—MUNICIPALITIES SURROUNDING INDUSTRIAL DISTRICT OF CINCINNATI, OHIO—MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Total.....	1905	556	\$42,769,485	1,166	\$1,601,541	14,582	\$6,946,113	\$0,285,706	\$20,926,668	\$41,308,280	(1)
	1900	551	23,507,903	927	1,091,649	12,056	4,790,449	3,191,652	14,755,640	29,408,295	216,386
Per cent of increase.....		0.9	81.9	25.8	46.7	21.0	45.0	90.9	41.8	40.2	.....
Hamilton.....	1905	114	19,436,447	482	782,292	6,207	3,369,151	1,980,055	6,502,057	13,992,574	(1)
	1900	97	10,243,102	273	365,942	5,147	2,315,537	588,085	5,002,664	10,655,486	23,914
Per cent of increase.....		17.5	89.8	76.6	113.8	20.6	45.5	236.7	30.0	31.3	.....
Middletown.....	1905	47	10,417,726	186	198,015	1,814	861,378	1,746,132	3,692,059	8,537,993	(1)
	1900	41	3,807,153	255	308,501	1,578	621,149	2,085,434	2,472,860	5,800,095	9,215
Per cent of increase.....		14.6	169.4	27.1	235.8	15.0	38.7	216.3	49.3	47.2	.....
All other surrounding places <sup>3</sup> .....	1905	395	12,915,312	498	621,234	6,561	2,715,584	2,559,519	10,732,552	18,777,713	(1)
	1900	413	9,397,648	399	417,206	5,331	1,853,763	513,133	7,280,110	13,012,714	183,257
Per cent of increase.....		24.4	37.4	24.8	48.9	23.1	46.5	394.0	47.4	44.3	.....

<sup>1</sup> No state census was taken for 1905.

<sup>2</sup> Decrease.

<sup>3</sup> For names of places included, see above.

The only cities large enough to be shown separately are Hamilton and Middletown, Ohio. By the inclusion of the additional territory the total number of estab-

lishments is increased to 3,156; the average number of wage-earners, to 87,317; and the total value of products, to \$244,403,885.

TABLE 56.—MUNICIPALITIES SURROUNDING INDUSTRIAL DISTRICT OF CINCINNATI, OHIO—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE-EARNERS, AND VALUE OF PRODUCTS, WITH PER CENT OF INCREASE, BY SELECTED INDUSTRIES: 1905 AND 1900.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE-EARNERS.		VALUE OF PRODUCTS.		PER CENT OF INCREASE.		
	1905	1900	1905	1900	1905	1900	Number of establishments.	Average number of wage-earners.	Value of products.
Paper and wood pulp.....	20	17	1,697	1,069	\$5,708,728	\$2,718,723	17.6	58.7	110.0
Foundry and machine shop products <sup>1</sup> .....	32	29	3,268	3,328	5,458,622	4,809,751	10.3	21.8	13.5
Liquors.....	17	16	234	207	2,797,245	1,176,043	6.3	13.0	137.9
Distilled.....	13	11	103	74	2,260,571	608,786	18.2	39.2	271.3
Malt.....	4	5	131	133	536,674	567,257	20.0	21.5	25.4
Flour and grist mill products.....	42	47	178	159	2,611,572	2,662,786	10.6	11.9	21.9
Carriages and wagons.....	12	13	444	386	1,160,555	1,058,731	7.7	15.0	9.6
Cooperage.....	7	10	267	232	893,162	577,043	30.0	15.1	54.8
Canning and preserving, fruits and vegetables.....	16	12	200	198	582,414	318,804	33.3	1.0	82.7

<sup>1</sup> Includes stoves and furnaces.

<sup>2</sup> Decrease.

Although the paper and wood pulp industry does not appear among the industries for the district, it is the prevailing one in this broader territory, and its great growth is indicated by the percentage of increase in the value of products. Foundry and machine shop products ranks second with an output valued at \$5,458,622.

The greatest relative increase in value of products between 1900 and 1904, however, is shown for liquors, the percentage being 137.9 for the combined manufacture. For distilled liquors alone the increase was 271.3 per cent. In the district itself liquors ranked first in 1904, while in the surrounding places this industry was third in rank. The value of products in both district and surrounding territory amounted to \$24,568,398 in 1904.

In the district proper and the surrounding places, 1,757 establishments reported 155,285 horsepower. Of the horsepower reported for the territory outside of the district, 37,269, or 74.5 per cent, was steam; of the total power for both district and surrounding ter-

ritory, 118,197 horsepower, or 76.1 per cent, was steam.

In the additional territory the paper and wood pulp industry used 15,506 horsepower, or 31 per cent of the total.

TABLE 57.—Municipalities surrounding industrial district of Cincinnati, Ohio—motive power employed in manufactures: 1905.

Number of establishments using power.....	372
Total horsepower.....	50,031
Owned:	
Steam engines—	
Number.....	403
Horsepower.....	37,269
Gas and gasoline engines—	
Number.....	87
Horsepower.....	874
Water wheels—	
Number <sup>1</sup> .....	69
Horsepower.....	4,227
Electric motors—	
Number.....	359
Horsepower <sup>2</sup> .....	6,345
Other power, horsepower.....	600
Rented: <sup>3</sup>	
Electric, horsepower.....	580
All other, horsepower.....	136

<sup>1</sup> Includes 3 water motors, with 48 horsepower.

<sup>2</sup> Includes electric power generated by steam engines reported above.

<sup>3</sup> Includes power rented from other manufacturers.

## INDUSTRIAL DISTRICT OF CLEVELAND, OHIO.

Cleveland, situated on the south shore of Lake Erie, at the mouth of the Cuyahoga river, has a lake frontage of 10 miles and a river frontage of 16 miles. The Cuyahoga river divides the city and is spanned by many bridges. The commercial advantages of Cleveland were greatly improved by the completion of the Ohio canal, connecting Lake Erie with the Ohio river. Transportation by this canal has become greatly reduced, but now additional facilities are furnished by great shipping lines and trunk railroads. The nearness of the city to the ore fields of Lake Superior and the coal and oil regions of Ohio has made it a great receiving, manufacturing, and distributing point.

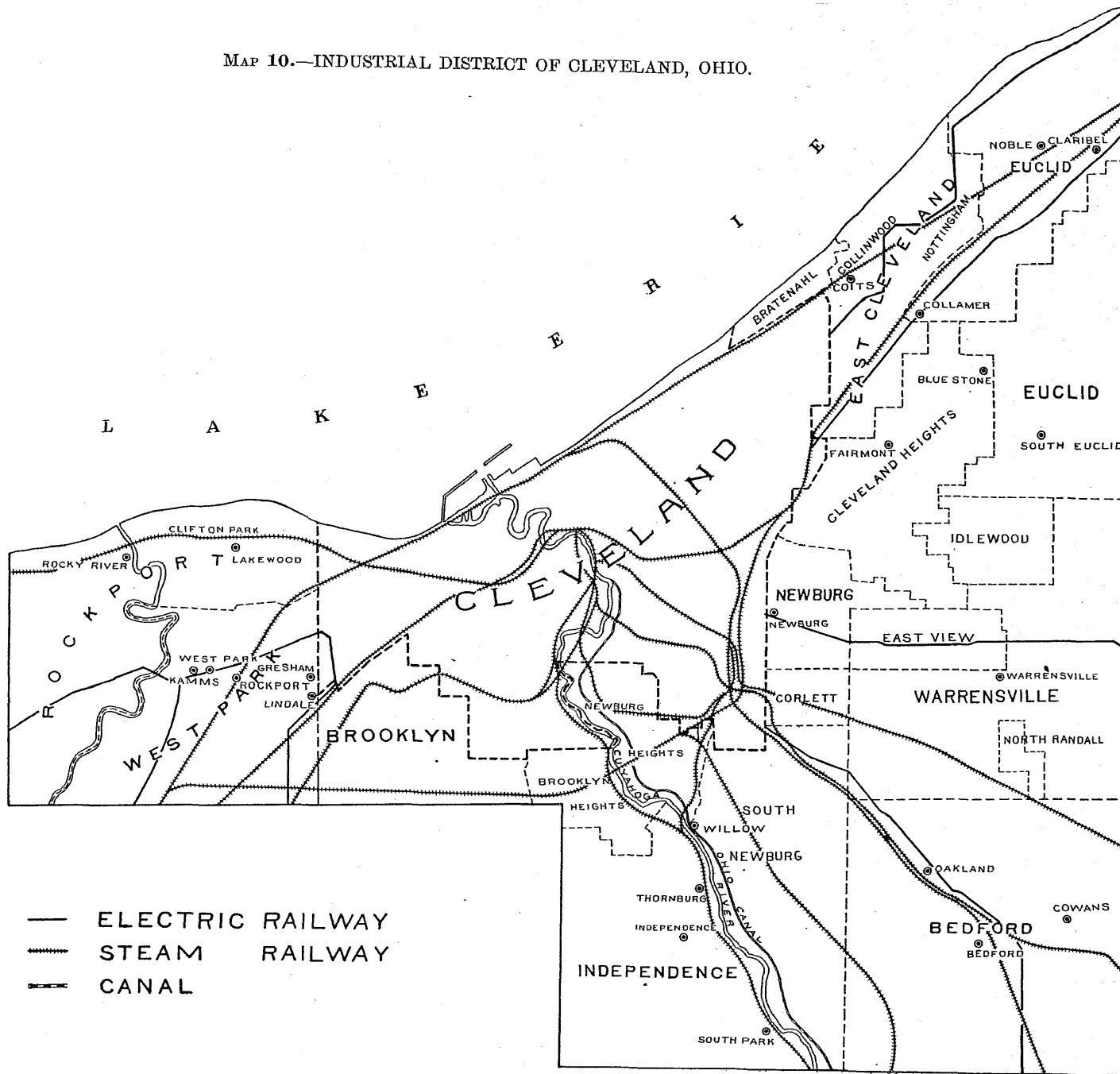
The city was founded in 1796 and chartered in 1836. The following annexations have been made: In 1853 Ohio City, in 1872 East Cleveland, in 1873 a part of Newburg township, and in 1893 parts of West Cleveland and of Brooklyn townships.

The industrial district of Cleveland comprises the city of Cleveland and the following townships, also in Cuyahoga county:

Bedford.	Independence.
Brooklyn.	Newburg.
Collinwood.	Rockport.
East Cleveland.	Warrensville.
Euclid.	West Park.
Glenville.	



MAP 10.—INDUSTRIAL DISTRICT OF CLEVELAND, OHIO.



There was no state census for 1905. The population of the district in 1900 was 420,508 and that of the city alone, 381,768, or 90.8 per cent of the total. The area of the district was 200 square miles, of which the

city had 39, or 19.5 per cent. The density of population in the district was 2,103 per square mile; in Cleveland it was 9,789.

TABLE 58.—INDUSTRIAL DISTRICT OF CLEVELAND, OHIO—MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Industrial district, total.....	1905	1,720	\$164,691,287	7,341	\$8,859,767	67,801	\$35,356,918	\$15,593,258	\$100,783,886	\$179,184,277	(1) 420,508
Per cent of increase.....	1900	1,423	105,381,527	5,189	5,614,108	57,222	27,348,548	10,619,350	77,956,319	142,464,823	381,768
		20.9	56.3	41.5	57.8	18.5	29.3	46.8	29.3	25.8	
Cleveland <sup>2</sup> .....	1905	1,616	156,321,095	6,876	8,298,519	64,041	33,450,303	15,044,636	97,578,102	171,923,636	(1) 381,768
Per cent of increase.....	1900	1,350	101,242,904	5,064	5,453,077	55,341	26,517,747	10,455,029	76,465,189	139,355,508	38,740
		19.7	54.4	35.8	52.2	15.7	26.1	43.9	27.6	23.4	
All other places in district <sup>3</sup> .....	1905	104	8,370,192	465	561,248	3,760	1,906,615	548,622	3,205,784	7,260,641	(1) 38,740
Per cent of increase.....	1900	73	4,138,623	125	161,031	1,881	830,801	164,821	1,491,130	3,109,315	38,740
		42.5	102.2	272.0	248.5	99.9	129.5	232.9	115.0	133.5	

<sup>1</sup> No state census was taken for 1905.

<sup>2</sup> The totals for Cleveland for both 1900 and 1905 differ from those in the report on Manufactures, Parts I and II, census of 1905, because of changes due to the inclusion or exclusion of certain establishments, the exact location of which could not be ascertained at the time the Census reports were published.

<sup>3</sup> For names of places included, see page 58.

The manufactures from 1900 to 1904 increased more rapidly outside of Cleveland than within the city, the percentage of gain for the section outside of the central city being over five and one-half times as great as that for the city; yet the actual increase

was much larger in the city than in the places outside, namely, \$32,568,128, as against \$4,151,326. Moreover, the total value of products for Cleveland in 1904 was nearly twenty-four fold that for the outside towns.

TABLE 59.—INDUSTRIAL DISTRICT OF CLEVELAND, OHIO—PER CENT DISTRIBUTION OF MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Cleveland.....	1905	94.0	94.9	93.7	93.7	94.5	94.6	96.5	96.8	95.9	90.8
	1900	94.9	96.1	97.6	97.1	96.7	97.0	98.4	98.1	97.8	
All other places in district.....	1905	6.0	5.1	6.3	6.3	5.5	5.4	3.5	3.2	4.1	9.2
	1900	5.1	3.9	2.4	2.9	3.3	3.0	1.6	1.9	2.2	

The growth of industries outside of the city is more clearly shown by the statement that the proportion in the city itself decreased 1.9 per cent, measured by value of products. In capital the proportional decrease was 1.2 per cent and in average number of wage-earners it was 2.2 per cent.

The iron and steel industry was the chief manufacture in the Cleveland district. The output was nearly fifty millions, and more than thirteen thousand wage-earners were employed, this number being approached in no other industry save that of foundry and machine shop products, which was second in rank with about half as large an output as that of the combined branches of the iron and steel manufacture. Clothing, and slaughtering and meat packing, two industries both located wholly within the city, ranked third and fourth,

respectively, with values between ten and ten and one-half millions. Among other important selected industries were petroleum refining, textiles, and automobiles. The last-named industry had the wonderful growth of nearly thirtyfold in the four and one-half years between the censuses. The printing and publishing industry had nearly \$6,000,000 in value of products.

There are other industries that had a large output but these can not be shown separately for the district, because such a showing would tend to disclose the operations of individual establishments. Such include bags, other than paper; chemicals, and electrical machinery, apparatus, and supplies—both of which might be presented for the city itself; flour and grist mill products; rubber and elastic goods; and shipbuilding.

TABLE 60.—INDUSTRIAL DISTRICT OF CLEVELAND, OHIO—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE-EARNERS, AND VALUE OF PRODUCTS, WITH PER CENT OF INCREASE, BY SELECTED INDUSTRIES: 1905 AND 1900.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE-EARNERS.		VALUE OF PRODUCTS.		PER CENT OF INCREASE.		
	1905	1900	1905	1900	1905	1900	Number of establishments.	Average number of wage-earners.	Value of products.
Iron and steel industry.....	42	42	13,199	12,976	\$40,535,478	\$45,078,303	.....	1.7	3.2
Iron and steel <sup>1</sup> .....	12	16	9,518	9,839	38,398,122	37,474,866	<sup>2</sup> 25.0	<sup>2</sup> 3.3	2.5
Iron and steel, bolts, nuts, washers, and rivets, not made in rolling mills or steel works.....	8	7	1,962	1,305	3,620,854	2,405,856	14.3	50.3	50.5
Structural ironwork <sup>3</sup> .....	12	12	948	788	2,362,130	2,502,503	.....	20.3	<sup>2</sup> 5.6
Iron and steel forgings.....	7	5	479	897	912,019	1,874,029	40.0	<sup>2</sup> 46.6	<sup>2</sup> 51.3
All other iron and steel industries <sup>4</sup> .....	3	2	292	147	1,242,353	821,049	50.0	98.6	51.3
Foundry and machine shop products <sup>5</sup> .....	148	132	10,767	8,704	20,198,160	15,611,053	12.1	23.7	29.4
Clothing <sup>6</sup> .....	148	195	4,876	3,829	10,406,100	7,023,647	<sup>2</sup> 24.1	27.3	36.5
Slaughtering and meat packing, wholesale.....	8	10	924	577	10,317,494	7,514,470	<sup>2</sup> 20.0	60.1	37.3
Printing and publishing <sup>7</sup> .....	175	111	2,042	1,697	5,778,016	3,871,705	57.7	20.3	49.2
Bread and other bakery products <sup>8</sup> .....	158	117	1,661	991	4,764,616	3,031,074	35.0	<sup>2</sup> 67.6	57.1
Petroleum, refining.....	4	4	1,156	477	4,567,945	2,963,169	.....	142.3	54.2
Textiles.....	10	9	2,157	1,175	4,340,238	2,448,277	11.1	83.6	77.3
Hosiery and knit goods.....	6	5	1,025	541	1,957,350	748,012	20.0	89.5	161.7
All other textiles <sup>9</sup> .....	4	4	1,132	634	2,382,888	1,700,265	.....	78.5	40.1
Automobiles.....	7	3	1,504	86	4,256,979	145,000	133.3	1,648.8	2,835.8
Liquors, malt.....	9	10	601	477	3,980,059	4,033,915	<sup>2</sup> 10.0	26.0	<sup>2</sup> 1.2
Cars <sup>10</sup> .....	11	11	2,565	1,444	3,553,326	1,588,177	.....	77.6	123.7
Lumber, planing mill products, including sash, doors, and blinds <sup>11</sup> .....	31	41	655	816	2,801,572	1,880,214	<sup>2</sup> 24.4	<sup>2</sup> 19.7	102.1
Paints.....	11	9	478	343	2,599,793	2,192,253	22.2	39.4	18.6
Hardware <sup>12</sup> .....	9	10	2,123	2,411	2,568,521	2,447,519	<sup>2</sup> 10.0	<sup>2</sup> 11.9	4.9
Stoves, gas and oil.....	7	4	1,024	1,130	2,164,290	1,905,391	75.0	<sup>2</sup> 9.9	13.6

<sup>1</sup> Includes blast furnaces, and steel works and rolling mills.

<sup>2</sup> Decrease.

<sup>3</sup> In 1900 includes bridges.

<sup>4</sup> Includes the manufacture of nails and spikes by establishments other than rolling mills or steel works; and of tin and terne plate.

<sup>5</sup> Includes the manufacture of steam fittings and heating apparatus, and stoves and furnaces.

<sup>6</sup> Includes men's and women's clothing.

<sup>7</sup> Includes book and job; music; and newspaper and periodical printing and publishing.

<sup>8</sup> Includes confectionery.

<sup>9</sup> Includes in both years the manufacture of woolen goods, worsted goods, and cordage and twine; in 1905, the manufacture of silk goods; and in 1900, the manufacture of cotton small wares.

<sup>10</sup> Includes the manufacture and repair of railroad cars.

<sup>11</sup> Includes wood turning and carving.

<sup>12</sup> Includes screws, wood.

TABLE 61.—Industrial district of Cleveland, Ohio—motive power employed in manufactures: 1905.

	Total.	Cleveland.	Outside of Cleveland.
Number of establishments using power.....	1,009	944	65
Total horsepower.....	187,513	176,046	11,467
Owned:			
Steam engines—			
Number.....	1,021	914	107
Horsepower.....	150,459	142,287	8,172
Gas and gasoline engines—			
Number.....	106	100	6
Horsepower.....	1,696	1,596	100
Water wheels—			
Number <sup>1</sup> .....	5	5	.....
Horsepower.....	71	71	.....
Electric motors—			
Number.....	1,675	1,430	245
Horsepower <sup>2</sup> .....	28,216	25,128	3,088
Other power, horsepower.....	270	230	40
Rented: <sup>3</sup>			
Electric, horsepower.....	5,253	5,196	57
All other, horsepower.....	1,548	1,538	10

<sup>1</sup> Includes 4 water motors, with 21 horsepower.

<sup>2</sup> Includes electric power generated by steam engines reported above.

<sup>3</sup> Includes power rented from other manufacturers.

works and rolling mills used more power than any other industry, the amount being 91,504 horsepower, or 48.8 per cent of the total. Foundry and machine shops were next with 19,252 horsepower, or 10.3 per cent.

Municipalities surrounding the Cleveland district, and by some considered a part of it by reason of their close commercial, financial, and industrial connection with the central city, are those in that part of Cuyahoga county not included in the district and such as are within the borders of the following counties:

Geauga.	Medina.
Lake.	Portage.
Lorain.	Summit.

The cities shown separately are Akron, Elyria, and Lorain.

The area added to the district by the inclusion of the surrounding section is 2,746 square miles—an increase of over thirteenfold—and the population of this area in 1900 was 232,812, or 55.4 per cent of the population of the district itself. For the district and the additional territory the aggregate area is 2,946 square miles and the total population, 653,320.

Of the power reported, 93.9 per cent was credited to the central city. Steampower contributed 80.2 per cent of the total; and electric power, owned and rented, 17.8 per cent. Blast furnaces and steel

TABLE 62.—MUNICIPALITIES SURROUNDING INDUSTRIAL DISTRICT OF CLEVELAND, OHIO—MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Total.....	1905 1900	723 727	\$66,835,737 48,045,183	2,322 1,698	\$2,498,851 1,566,975	23,025 17,752	\$12,863,648 7,597,330	\$6,950,000 3,127,406	\$42,660,919 27,661,264	\$71,770,837 46,519,564	(1) 232,812
Per cent of increase.....		0.6	39.1	36.7	59.5	33.1	69.3	122.2	54.2	54.3	
Akron.....	1905 1900	187 178	29,188,351 28,724,719	969 1,093	1,135,687 991,704	9,817 8,259	4,985,884 3,614,860	4,443,768 1,684,942	20,647,353 12,719,788	34,004,243 22,015,643	(1) 42,728
Per cent of increase.....		5.1	23.0	11.3	14.5	18.9	37.9	163.7	62.3	54.5	
Elyria.....	1905 1900	50 32	3,071,108 1,116,643	249 62	230,708 54,449	1,144 638	566,868 208,719	199,624 89,265	1,594,639 740,080	2,933,450 1,221,250	(1) 8,791
Per cent of increase.....		56.3	175.0	301.6	323.7	79.3	111.0	123.6	115.5	140.2	
Lorain.....	1905 1900	43 26	10,599,114 12,683,792	288 134	254,919 136,515	3,102 2,233	2,832,101 1,101,884	540,997 617,966	9,707,896 6,485,466	14,491,091 9,481,388	(1) 16,028
Per cent of increase.....		65.4	16.4	114.9	86.7	38.9	157.0	112.5	49.7	52.8	
All other surrounding places <sup>2</sup> .....	1905 1900	443 491	23,977,164 10,520,029	816 409	\$77,537 384,307	9,562 6,622	4,478,795 2,611,867	1,765,611 735,233	10,711,031 7,715,930	20,342,053 13,801,283	(1) 165,265
Per cent of increase.....		9.8	127.9	99.5	128.3	44.4	71.5	140.1	38.8	47.4	

<sup>1</sup> No state census was taken for 1905.

<sup>2</sup> Decrease.

<sup>3</sup> For names of places included, see page 61.

The number of establishments in the district and the surrounding counties in 1905 was 2,443; the average number of wage-earners was 91,426; and the value of products, \$250,955,114.

TABLE 63.—MUNICIPALITIES SURROUNDING INDUSTRIAL DISTRICT OF CLEVELAND, OHIO—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE-EARNERS, AND VALUE OF PRODUCTS, WITH PER CENT OF INCREASE, BY SELECTED INDUSTRIES: 1905 AND 1900.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE-EARNERS.		VALUE OF PRODUCTS.		PER CENT OF INCREASE.		
	1905	1900	1905	1900	1905	1900	Number of establishments.	Average number of wage-earners.	Value of products.
Rubber and elastic goods.....	16	8	3,911	2,677	\$13,776,239	\$5,524,674	100.0	46.1	149.4
Iron and steel industry <sup>1</sup> .....	10	5	2,317	1,669	12,574,867	9,154,092	100.0	38.8	37.4
Foundry and machine shop products <sup>2</sup> .....	68	51	3,810	2,468	7,757,167	4,628,943	33.3	54.4	67.6
Flour and grist mill products.....	43	38	275	165	3,525,928	1,940,707	13.2	66.7	81.7
Printing and publishing.....	74	49	1,167	1,062	3,141,224	2,186,410	51.0	9.9	43.7
Book and job.....	22	18	944	905	2,693,187	1,830,726	22.2	4.3	47.1
Newspapers and periodicals.....	52	31	223	157	448,037	355,684	67.7	42.0	26.0
Pottery, terra cotta, and fire clay products.....	27	29	2,142	1,281	2,778,099	1,345,463	6.9	67.2	106.5
Chemicals <sup>3</sup> .....	3	3	441	103	2,420,131	309,771		328.2	681.3
Cars and general shop construction and repairs by steam railroad companies.....	3	3	880	806	1,197,153	1,030,828		9.2	16.1
Cheese <sup>4</sup> .....	76	91	109	101	1,019,108	920,610	16.5	7.9	10.7

<sup>1</sup> Includes in both years blast furnaces, and steel works and rolling mills; and in 1905, the manufacture of bolts, nuts, etc., by establishments other than rolling mills or steel works, and of forgings; and in 1900, the manufacture of structural ironwork, and wire.

<sup>2</sup> Includes the manufacture of stoves and furnaces.

<sup>3</sup> Decrease.

<sup>4</sup> Includes explosives.

<sup>5</sup> Includes butter and condensed milk.

The leading industry in the additional area was that of rubber and elastic goods, with products valued at almost fourteen millions. The iron and steel industry was next, with an output valued at over a million less. The manufacture of foundry and machine shop products was third in value, but a good second in average number of wage-earners, being exceeded only by rubber and elastic goods, with 101 more wage-earners. Pottery, terra cotta, and fire clay products, although sixth

in rank in value of products, was fourth in average number of wage-earners. The great increase in chemicals between 1900 and 1904 is due to the appearance during that time of one large establishment new to the field.

The manufacture of matches is an important industry in the territory surrounding the district, but it can not be shown separately because the number of establishments engaged in it was less than three.

TABLE 64.—Municipalities surrounding industrial district of Cleveland, Ohio—motive power employed in manufactures: 1905.

Number of establishments using power.....	547
Total horsepower.....	202,551
Owned:	
Steam engines—	
Number.....	847
Horsepower.....	107,893
Gas and gasoline engines—	
Number.....	135
Horsepower.....	3,403
Water wheels—	
Number <sup>1</sup> .....	51
Horsepower.....	2,831
Electric motors—	
Number.....	1,068
Horsepower <sup>2</sup> .....	27,615
Other power, horsepower.....	380
Rented: <sup>3</sup>	
Electric, horsepower.....	342
All other, horsepower.....	27

<sup>1</sup>Includes 10 water motors, with 76 horsepower.

<sup>2</sup>Includes electric power generated by steam engines reported above.

<sup>3</sup>Includes power rented from other manufacturers.

Steampower was greatly in excess of all other kinds of power, the amount reported being 82.9 per cent of the total. Electric power, owned and rented, constituted 13.8 per cent of the whole. This is one of the few instances in which the amount of power reported from the surrounding places is greater than the amount shown for the district itself.

The iron and steel industry used more power than any other, employing 128,770 horsepower, or 63.6 per cent of the total. This great quantity of power is due in large measure to the operation of a tube works. Rubber and elastic goods reported 16,189 horsepower, and foundry and machine shop products, 6,542.

### INDUSTRIAL DISTRICT OF BUFFALO, NEW YORK.

The area of the industrial district of Buffalo, N. Y., is 201 square miles, and its population in 1900 was 385,498. Of the area, Buffalo has 42 square miles, or 20.9 per cent, and of the population in 1900, 352,387, or 91.4 per cent. The population at the state census of 1905 was 376,587 for the city and 423,390 for the district, increases of 6.9 and 9.8 per cent.

The Buffalo district has many natural advantages. The city itself is situated on Lake Erie and Niagara river and receives and distributes much of the traffic to and from the Great Lakes. The immense water and electrical power of Niagara Falls is near; the Erie

canal has its western terminal in the city, and the steam and electric railroads are numerous and important, with extensive terminal facilities; natural gas is piped from northern Pennsylvania and from Welland, Ontario, while a supply for lighting and domestic purposes is obtained from the gas field of Erie county itself.

The towns in the district outside of Buffalo were not shown separately for 1905 and appear here in the total for "all other places in district." They are Amherst, Cheektowaga (including the whole of Depew village), East Hamburg, Hamburg, Tonawanda, and West Seneca, all in Erie county.

TABLE 65.—INDUSTRIAL DISTRICT OF BUFFALO, N. Y.—MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Industrial district, total .....	1905	1,631	\$188,384,845	5,854	\$6,276,393	48,794	\$24,795,927	\$15,970,427	\$102,623,748	\$168,111,658	423,390
Per cent of increase.....	1900	1,563	105,094,082	3,951	3,634,828	37,568	17,277,719	8,923,845	71,090,632	113,430,772	385,498
		4.4	79.3	48.2	72.7	29.9	43.5	79.0	44.4	48.2	9.8
Buffalo.....	1905	1,538	137,023,114	5,204	5,542,132	43,567	21,621,762	15,083,614	88,367,338	147,377,873	376,587
Per cent of increase.....	1900	1,478	95,739,635	3,767	3,429,473	34,275	15,678,428	8,604,939	65,038,402	105,627,182	352,387
		4.1	43.1	39.7	61.6	27.1	37.9	75.3	34.0	39.5	6.9
All other places in district <sup>1</sup> .....	1905	93	51,361,731	590	734,261	5,227	3,174,165	886,813	14,256,410	20,733,785	46,803
Per cent of increase.....	1900	85	9,354,447	184	205,355	3,293	1,599,291	318,906	5,152,170	7,803,590	33,111
		9.4	449.1	220.7	257.6	58.7	98.5	178.1	176.7	165.7	41.4

<sup>1</sup> For names of places included, see above.

The rate of increase in value of products for the year 1904 as compared with 1900 was very great in the industries outside of the city. The percentage of

increase in the city, although large, was very much less. The rate of increase in population was likewise much larger in the district outside than in the city itself.

TABLE 66.—INDUSTRIAL DISTRICT OF BUFFALO, N. Y.—PER CENT DISTRIBUTION OF MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Buffalo.....	1905 1900	94.3 94.6	72.7 91.1	89.9 95.3	88.3 94.4	89.3 91.2	87.2 90.7	94.4 96.4	86.1 92.8	87.7 93.1	88.9 91.4
All other places in district.....	1905 1900	5.7 5.4	27.3 8.9	10.1 4.7	11.7 5.6	10.7 8.8	12.8 9.3	5.6 3.6	13.9 7.2	12.3 6.9	11.1 8.6

Over seven-eighths of the manufactures of the district were produced within the city of Buffalo in 1904; this proportion, however, was less than that for 1900.

The proportion of the population in the city in 1904 was also less than in 1900. In value of products the city lost 5.4 per cent; in population, 2.5 per cent.

TABLE 67.—INDUSTRIAL DISTRICT OF BUFFALO, N. Y.—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE-EARNERS, AND VALUE OF PRODUCTS, WITH PER CENT OF INCREASE, BY SELECTED INDUSTRIES: 1905 AND 1900.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE-EARNERS.		VALUE OF PRODUCTS.		PER CENT OF INCREASE.		
	1905	1900	1905	1900	1905	1900	Number of establishments.	Average number of wage-earners.	Value of products.
Iron and steel <sup>1</sup> .....	7	3	3,226	871	\$16,946,746	\$2,624,547	133.3	270.4	545.7
Slaughtering <sup>2</sup> .....	28	26	1,177	942	16,269,453	11,675,027	7.7	24.9	39.4
Foundry and machine shop products <sup>3</sup> .....	113	91	6,500	3,820	13,024,515	6,968,813	24.2	70.2	86.9
Flour and grist mill products.....	14	13	431	201	9,889,016	3,350,836	7.7	114.4	195.1
Cars <sup>4</sup> .....	18	15	5,479	6,277	8,814,057	10,288,984	<sup>5</sup> 13.3	<sup>6</sup> 12.7	<sup>6</sup> 14.3
Soap and candles.....	10	9	1,140	743	4,792,915	3,818,571	11.1	53.4	25.5
Clothing.....	97	129	2,042	1,743	4,739,727	3,066,723	<sup>5</sup> 24.8	17.2	54.6
Men's.....	86	119	1,676	1,485	4,231,126	2,793,474	<sup>5</sup> 27.7	12.9	51.5
Women's.....	11	10	366	258	508,601	273,249	10.0	41.9	86.1
Lumber, planing mill products, including sash, doors, and blinds....	26	28	1,607	1,787	4,630,818	4,478,524	<sup>5</sup> 7.1	<sup>6</sup> 10.1	3.4
Bread and other bakery products.....	150	160	1,330	1,007	4,492,465	2,564,864	<sup>5</sup> 6.3	32.1	75.2
Printing and publishing.....	148	122	1,692	1,828	4,257,807	3,204,970	21.3	<sup>5</sup> 7.4	32.9
Newspapers and periodicals.....	45	35	935	757	2,950,295	1,749,037	28.6	23.5	68.7
Book and job.....	103	87	757	1,071	1,307,512	1,455,933	18.4	<sup>5</sup> 29.3	<sup>6</sup> 10.2
Chemicals <sup>6</sup> .....	4	4	372	125	3,254,309	1,939,378	.....	197.6	67.8
Leather, tanned, curried, and finished.....	4	3	686	561	2,428,392	1,663,350	33.3	22.3	46.0

<sup>1</sup> Includes blast furnaces, and steel works and rolling mills.

<sup>2</sup> Includes slaughtering and meat packing.

<sup>3</sup> Includes stoves and furnaces.

<sup>4</sup> Includes the manufacture and repair of railroad cars.

<sup>5</sup> Decrease.

<sup>6</sup> Includes sulphuric, nitric, and mixed acids, and wood distillation.

The leading industry in the district in 1904 was iron and steel, and it is the one that had the largest percentage of increase. In 1900, 3 establishments—all in Buffalo—manufactured iron and steel products valued at \$2,624,547; in 1904 there were 7 establishments, with products valued at \$16,946,746. This increase of over fivefold was almost wholly in the district outside of the city of Buffalo, the great works at Lackawanna being the chief contributors.

Slaughtering had almost as large a value of products as iron and steel in 1904. This industry was carried on almost wholly within the city. Another large industry was that of foundry and machine shop products. An industry for which the district has long been

known, that of flour and grist mill products, was almost entirely within the city. The value of these products in 1904 was almost three times their value in 1900.

Among leading industries that can not be shown separately, because to do so would disclose operations of individual establishments, are linseed oil, petroleum refining, and copper smelting and refining. There are others that could be shown for Buffalo only, but this is not deemed desirable, and to present the statistics for the entire district would furnish facts leading to the disclosure of the operations of individual establishments. Other important industries that are not in the selected list include furniture, food preparations, lithographing and engraving, and agricultural implements.

MAP 11.—INDUSTRIAL DISTRICT OF BUFFALO, N. Y.

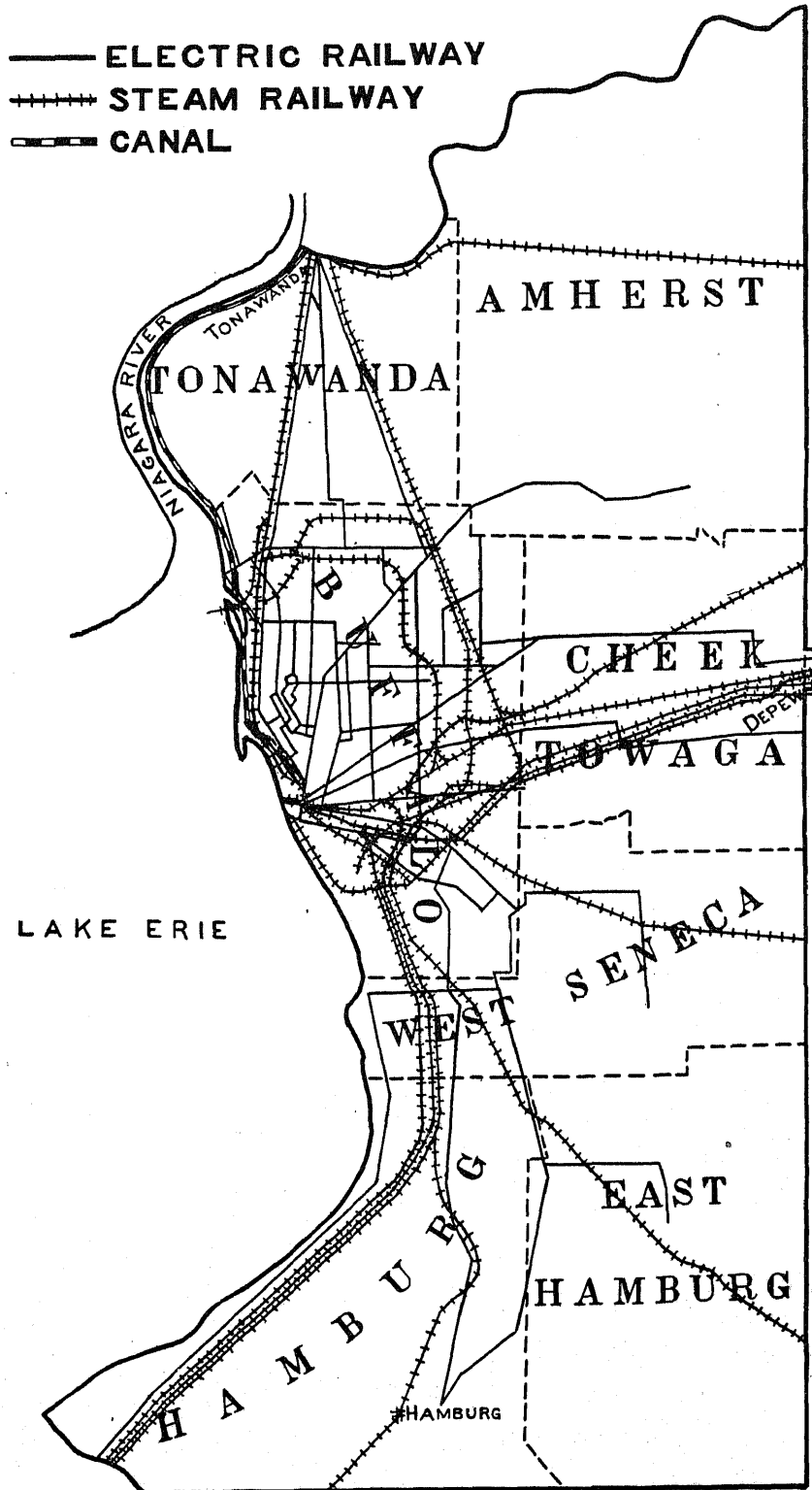


TABLE 68.—Industrial district of Buffalo, N. Y.—motive power employed in manufactures: 1905.

	Total.	Buffalo.	Outside of Buffalo.
Number of establishments using power.....	890	890	61
Total horsepower.....	212,947	77,749	135,198
Owned:			
Steam engines—			
Number.....	714	572	142
Horsepower.....	107,125	50,624	56,501
Gas and gasoline engines—			
Number.....	327	285	42
Horsepower.....	45,291	4,592	40,699
Water wheels—			
Number <sup>1</sup> .....	8	2	6
Horsepower.....	152	10	142
Electric motors—			
Number.....	1,602	417	1,275
Horsepower <sup>2</sup> .....	40,269	4,900	35,359
Other power, horsepower.....	144	134	10
Rented: <sup>3</sup>			
Electric, horsepower.....	17,665	15,178	2,487
All other, horsepower.....	2,311	2,311	.....

<sup>1</sup> Includes 1 water motor in Buffalo, with 5 horsepower, and 1 outside of Buffalo, with 2 horsepower.

<sup>2</sup> Includes electric power generated by steam engines reported above.

<sup>3</sup> Includes power rented from other manufacturers.

Of the establishments reporting power, 93.1 per cent were within the city, but they reported only 36.5 per cent of the total power. The average horsepower per establishment in the district outside of the city

proper, 2,216, was very much larger than the average within the city, 94. This emphasizes the location of the establishments using the large amounts of power. Of the total horsepower, 50.3 per cent was steam; 27.2 per cent, electric, owned and rented; and 21.3, gas and gasoline. The gas was very largely outside of the city—practically all of it in the iron and steel industry at Lackawanna, in the town of West Seneca.

The largest amount of power, 136,733, or 64.2 per cent, was used in the iron and steel industry. Of this amount, 61,115, or 44.7 per cent, was steam; 40,000, or 29.3 per cent, gas; and 35,318, or 25.8 per cent, electric, owned and rented.

By the inclusion of certain surrounding cities, villages, and towns that are closely connected with Buffalo in a commercial, financial, and social way and brought into a compact area by various transportation facilities, the district is increased to 1,831 square miles and the population of 1905, to 580,728. The number of establishments is raised to 2,261, the average number of wage-earners, to 62,302, and the value of products, to \$209,024,944.

TABLE 69.—MUNICIPALITIES SURROUNDING INDUSTRIAL DISTRICT OF BUFFALO, N. Y.—MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Total.....	1905	630	\$49,310,112	1,506	\$1,597,195	13,508	\$6,471,792	\$4,062,589	\$23,415,414	\$40,913,286	157,338
	1900	656	34,045,361	1,118	1,118,257	10,770	4,689,623	2,040,320	16,915,598	28,437,143	144,836
Per cent of increase.....		14.0	44.8	34.7	42.8	25.4	38.0	100.1	38.4	43.0	8.6
Batavia.....	1905	51	4,670,196	385	297,157	1,603	753,036	367,006	1,783,560	3,589,406	10,080
	1900	54	3,398,606	189	167,090	1,573	659,303	186,321	1,245,851	2,573,132	9,194
Per cent of increase.....		15.6	37.4	103.7	77.8	1.9	14.2	97.0	43.2	30.5	9.5
Lockport.....	1905	109	6,122,651	210	255,054	2,323	1,109,654	474,130	3,315,926	5,807,980	17,532
	1900	124	5,972,246	224	231,307	2,359	1,078,332	432,451	3,096,838	5,352,069	16,581
Per cent of increase.....		12.1	2.5	6.3	10.3	1.5	2.9	9.6	7.1	8.5	5.9
Niagara Falls.....	1905	85	27,115,761	504	501,434	4,574	2,347,539	2,149,818	9,192,069	16,915,786	26,500
	1900	93	14,344,446	326	384,087	2,840	1,318,318	756,766	4,888,318	8,540,184	16,451
Per cent of increase.....		18.6	89.0	54.6	54.0	61.1	78.1	184.1	88.0	98.1	36.5
North Tonawanda.....	1905	38	4,824,887	137	170,044	2,025	994,026	335,165	4,534,356	6,499,312	10,157
	1900	34	4,947,077	125	146,845	1,656	758,216	274,734	4,244,410	6,293,686	9,060
Per cent of increase.....		11.8	12.5	9.6	15.8	22.3	31.1	22.0	6.8	3.3	12.0
All other surrounding places <sup>2</sup> .....	1905	347	6,576,617	270	283,506	2,933	1,267,537	756,470	4,589,503	8,100,802	92,660
	1900	351	5,382,926	254	188,928	2,342	875,454	390,048	3,440,181	5,677,472	90,540
Per cent of increase.....		11.1	22.2	6.3	50.1	27.4	44.8	93.9	33.4	42.7	2.7

<sup>1</sup> Decrease.

<sup>2</sup> For names of places included, see below.

This additional territory is on the north, east, and south of the industrial district, and consists of all the parts of Erie county that are not included in the district, the whole of Genesee county, and the following cities and towns in Niagara county:

Cambria.	North Tonawanda city.
Lewiston.	Pendleton.
Lockport city.	Royalton (including all of Middleport village).
Lockport town.	Wheatfield.
Niagara town.	
Niagara Falls city.	

Four cities in this enlarged part of the territory adjacent to Buffalo are shown separately, namely, Batavia, Lockport, Niagara Falls, and North Tonawanda.

Two industries that are not among the leading ones in the district itself were prominent in the places surrounding the district; these are paper and wood pulp, and agricultural implements. The foremost industry was chemicals, and in 1904 its value of products was much larger than the corresponding value for the district. The increase in the output in the surrounding municipalities has been marked. The value of the total products of this industry, both in the district and in the surrounding places, was \$8,754,371 in 1904. The flour and grist mill products reported for the district and the additional territory had a value of \$14,970,767.



TABLE 70.—MUNICIPALITIES SURROUNDING INDUSTRIAL DISTRICT OF BUFFALO, N. Y.—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE-EARNERS, AND VALUE OF PRODUCTS, WITH PER CENT OF INCREASE, BY SELECTED INDUSTRIES: 1905 AND 1900.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE-EARNERS.		VALUE OF PRODUCTS.		PER CENT OF INCREASE.		
	1905	1900	1905	1900	1905	1900	Number of establishments.	Average number of wage-earners.	Value of products.
Chemicals <sup>1</sup> .....	11	10	1,468	621	\$5,500,062	\$1,898,464	10.0	136.4	189.7
Flour and grist mill products.....	54	49	247	291	5,081,751	3,876,727	10.2	<sup>2</sup> 15.1	31.1
Lumber, planing mill products, including sash, doors, and blinds.....	36	33	682	854	3,460,285	3,376,917	9.1	<sup>2</sup> 20.2	2.5
Paper and wood pulp.....	8	10	999	911	3,432,499	2,799,845	<sup>2</sup> 20.0	9.7	22.6
Agricultural implements.....	7	6	769	721	1,984,484	1,399,417	16.7	6.7	41.8
Foundry and machine shop products <sup>3</sup> .....	30	42	713	1,132	1,470,007	2,010,306	<sup>2</sup> 28.6	<sup>2</sup> 37.0	226.9

<sup>1</sup> Includes sulphuric, nitric, and mixed acids; and wood distillation.

<sup>2</sup> Decrease.

<sup>3</sup> Includes stoves and furnaces.

The manufacture of food preparations, of iron and steel, and plated ware are large industries in Niagara Falls, North Tonawanda, and Lockport, but they can not be shown separately, because for one or both of the census years the number of establishments was less than three.

Of the power used in these surrounding places, 51.5 per cent was generated by water wheels and water motors; more than one-half of this waterpower was rented; practically all of it came from the falls of Niagara and most of it was utilized in the chemical industry in Niagara Falls city. The owned waterpower was used in the paper and wood pulp industry.

TABLE 71.—Municipalities surrounding industrial district of Buffalo, N. Y.—motive power employed in manufactures: 1905.

Number of establishments using power.....	420
Total horsepower.....	95,015
Owned:	
Steam engines—	
Number.....	380
Horsepower.....	30,441
Gas and gasoline engines—	
Number.....	71
Horsepower.....	1,161
Water wheels—	
Number <sup>1</sup> .....	99
Horsepower.....	23,341
Electric motors—	
Number.....	85
Horsepower <sup>2</sup> .....	1,528
Other power, horsepower.....	552
Rented: <sup>3</sup>	
Electric, horsepower.....	12,415
All other, horsepower.....	25,577

<sup>1</sup> Includes 6 water motors, with 89 horsepower.

<sup>2</sup> Includes electric power generated by steam engines reported above.

<sup>3</sup> Includes power rented from other manufacturers.

## INDUSTRIAL DISTRICT OF MINNEAPOLIS-ST. PAUL, MINNESOTA.

The industrial district of Minneapolis-St. Paul embraces 155 square miles of territory and in 1905 had a population of 472,362, an increase of 25.5 per cent over the population in 1900. Of the area, Minneapolis occupies 49 square miles and St. Paul 52 square miles, the two, therefore, having 101 square miles, while the remainder of the district has only 54 square miles. This is an unusual division of territory for industrial districts, since most if not all of the others have a much larger area outside than within the chief city. Of the population in 1905, 458,997, or 97.2 per cent, was within the two cities.

Minneapolis is situated at the Falls of St. Anthony on the Mississippi river, and St. Paul is southeast of it, adjoining so closely that the two municipalities are called the "twin cities." Each city is built on both sides of the river, which is crossed by numerous railway and other bridges. The manufacturing district in Minneapolis had its origin at the Falls of St. Anthony, around which it centers. This waterpower yields more than 50,000 horsepower, which is employed not only in manufactures but also in the operation of street rail-

ways in both cities. There is an abundance of steam railway facilities.

Minneapolis was incorporated as a town in 1856 and as a city in 1867. In 1872 the city of St. Anthony was annexed. St. Paul was chartered in 1854. The townships and villages included in the district, outside of Minneapolis and St. Paul, are Brooklyn, Crystal Lake, Edina, Richfield, Robbinsdale, St. Anthony, St. Louis Park, and West Minneapolis in Hennepin, and New Canada and Rose in Ramsey county.

The industries outside of the central cities of the industrial district of Minneapolis-St. Paul had a less rapid growth from 1900 to 1905 than those within the corporate limits of the cities; this condition is the opposite of that usually shown for industrial districts. In this district, moreover, the total value of products of the factories located outside the limits of the central cities was very small, forming only 1.5 per cent of the value of the output of those inside. The rate of increase in value of products was slightly greater, and in population much greater for Minneapolis than it was for St. Paul.

TABLE 72.—INDUSTRIAL DISTRICT OF MINNEAPOLIS-ST. PAUL, MINN.—MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Industrial district, total.....	1905	1,506	\$108,209,964	5,830	\$5,994,418	37,044	\$19,148,235	\$13,914,854	\$109,364,757	\$161,803,453	472,362
Per cent of increase.....	1900	1,340	79,283,521	4,390	4,153,905	33,755	15,247,846	7,327,248	85,836,668	126,613,742	376,357
		12.4	36.5	32.8	44.1	9.7	25.6	89.9	27.4	27.8	25.5
Minneapolis-St. Paul.....	1905	1,490	102,536,078	5,635	5,738,394	36,034	18,628,278	13,620,839	108,369,438	159,481,120	458,997
Per cent of increase.....	1900	1,326	75,835,944	4,237	3,987,507	32,639	14,706,921	7,117,426	84,822,252	124,463,853	365,783
		12.4	35.2	33.0	43.9	10.4	26.7	91.4	27.8	28.1	25.5
Minneapolis <sup>1</sup> .....	1905	876	66,134,796	3,527	3,536,157	21,671	11,417,521	9,147,451	88,881,746	121,162,416	261,974
Per cent of increase.....	1900	789	50,176,730	2,158	2,112,851	19,620	9,383,404	4,158,196	68,909,670	94,407,774	202,718
		11.0	31.8	63.4	67.4	10.5	21.7	120.0	29.0	28.3	28.2
St. Paul.....	1905	614	36,401,282	2,108	2,202,237	14,363	7,210,757	4,473,388	19,487,692	38,318,704	197,023
Per cent of increase.....	1900	537	25,659,214	2,079	1,874,656	13,019	5,323,517	2,959,230	15,912,582	30,056,079	163,065
		14.3	41.9	1.4	17.5	10.3	35.5	51.2	22.5	27.5	20.8
All other places in district <sup>2</sup> .....	1905	16	5,673,886	195	250,024	1,010	520,007	294,015	995,819	2,322,333	13,365
Per cent of increase.....	1900	14	3,447,577	153	171,398	1,116	540,925	209,822	1,014,416	2,149,889	10,574
		14.3	64.6	27.5	49.4	<sup>3</sup> 9.5	<sup>3</sup> 3.9	40.1	<sup>3</sup> 1.9	8.0	26.4

<sup>1</sup> The totals for Minneapolis differ from those published in the report on Manufactures, Parts I and II, census of 1905, because they do not include the statistics for 1 establishment, just outside the corporate limits of the city.

<sup>2</sup> For names of places included, see page 67.

<sup>3</sup> Decrease.

The proportion of the value of products in Minneapolis-St. Paul increased three-tenths of 1 per cent from 1900 to 1905. This is another unusual circumstance in an industrial district, since generally the proportion of products for the central city has decreased and that for the outside places has increased.

The proportions of the population in Minneapolis-St. Paul and in the outside places were the same in 1900 and in 1904, although the proportions for the two cities constituting the center of the district show that relatively Minneapolis gained and St. Paul lost a little during the period between the two censuses.

TABLE 73.—INDUSTRIAL DISTRICT OF MINNEAPOLIS-ST. PAUL, MINN.—PER CENT DISTRIBUTION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Minneapolis-St. Paul.....	1905	98.9	94.8	96.7	95.7	97.3	97.3	97.9	99.1	98.6	97.2
	1900	99.0	95.7	96.5	95.9	96.7	90.5	97.1	98.8	98.3	97.2
Minneapolis.....	1905	58.2	61.1	60.5	59.0	55.5	59.6	65.7	81.3	74.9	55.5
	1900	58.9	63.3	49.2	50.8	58.1	61.5	56.7	80.3	74.6	53.9
St. Paul.....	1905	40.8	33.6	36.2	36.7	38.8	37.7	32.1	17.8	23.7	41.7
	1900	40.1	32.4	47.4	45.1	38.6	34.9	40.4	18.5	23.7	43.3
All other places in district.....	1905	1.1	5.2	3.3	4.3	2.7	2.7	2.1	0.9	1.4	2.8
	1900	1.0	4.3	3.5	4.1	3.3	3.5	2.9	1.2	1.7	2.8

The overshadowing industry of the district was that of flour and grist mills, with products valued at \$63,146,933. In this industry there was an increase in every particular in 1904 as compared with 1900.

The next important industry, measured by value of products, is the manufacture of lumber products. This industry furnished employment for over five thousand wage-earners, a larger number than that engaged in any other industry in this district. In this district, as in others, as the forests have disappeared in a locality, the lumber and timber products have decreased.

Printing and publishing ranked third in value of products; the manufacture and repair of cars, fourth; and the manufacture of the output of foundries and machine shops, fifth.

Prominent industries that can not be shown without disclosing operations of individual establishments within the district are the manufacture of agricultural implements, linseed oil, bags of other material than paper, and furniture. The presence in this district of the industry engaged in the production of bags is due principally to the flour industry.

MAP 12.—INDUSTRIAL DISTRICT OF MINNEAPOLIS-ST. PAUL, MINN.

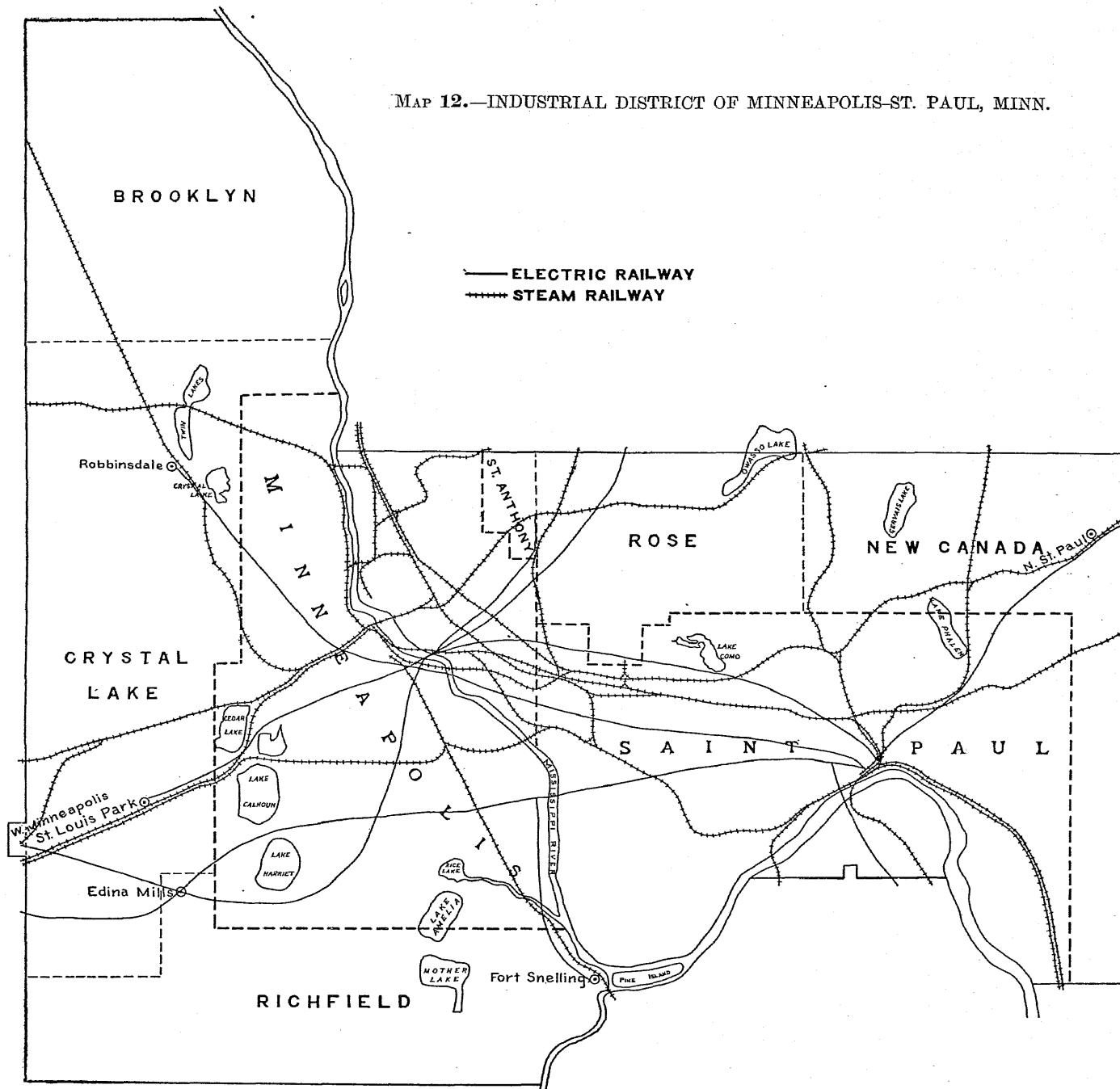


TABLE 74.—INDUSTRIAL DISTRICT OF MINNEAPOLIS-ST. PAUL, MINN.—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE-EARNERS, AND VALUE OF PRODUCTS, WITH PER CENT OF INCREASE, BY SELECTED INDUSTRIES: 1905 AND 1900.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE-EARNERS.		VALUE OF PRODUCTS.		PER CENT OF INCREASE.		
	1905	1900	1905	1900	1905	1900	Number of establishments.	Average number of wage-earners.	Value of products.
Flour and grist mill products <sup>1</sup> .....	21	14	2,271	2,078	\$63,146,933	\$49,787,021	50.0	9.3	26.8
Lumber.....	46	37	5,081	5,728	11,480,713	15,524,552	24.3	<sup>2</sup> 11.3	<sup>2</sup> 26.0
Lumber and timber products <sup>3</sup> .....	12	16	3,017	4,489	5,850,401	12,352,828	<sup>2</sup> 25.0	<sup>2</sup> 32.8	<sup>2</sup> 52.6
Planing mill products, including sash, doors, and blinds.....	34	21	2,064	1,239	5,630,312	3,171,724	61.9	66.6	77.5
Printing and publishing.....	286	248	2,823	2,451	8,267,326	5,786,310	15.3	15.2	42.9
Newspapers and periodicals <sup>4</sup> .....	143	128	1,244	1,508	5,203,433	4,091,502	11.7	<sup>2</sup> 17.5	27.2
Book and job.....	143	120	1,579	943	3,063,893	1,694,748	19.2	07.4	80.8
Cars and general shop construction and repairs by steam railroad companies <sup>5</sup> .....	53	53	3,841	3,353	5,131,177	4,796,428	.....	14.6	7.0
Foundry and machine shop products <sup>6</sup> .....	91	94	1,940	2,324	5,018,335	4,646,798	<sup>2</sup> 3.2	<sup>2</sup> 16.5	8.0
Liquors, malt.....	10	11	632	470	3,869,531	2,843,013	<sup>2</sup> 9.1	34.5	36.1
Bread and other bakery products.....	111	102	1,026	744	3,531,280	2,163,157	8.8	37.9	63.2
Fur goods.....	26	18	1,177	730	3,253,165	1,940,183	44.4	61.2	67.7
Boots and shoes.....	10	9	1,470	1,596	2,539,425	2,654,006	11.1	<sup>2</sup> 7.9	7.0
Structural ironwork.....	11	8	1,175	434	2,819,652	1,138,546	37.5	170.7	147.7
Clothing.....	27	30	1,591	2,190	2,542,934	2,522,681	<sup>2</sup> 10.0	<sup>2</sup> 27.4	0.8
Men's.....	18	22	1,271	1,674	2,256,079	2,095,681	<sup>2</sup> 18.2	<sup>2</sup> 24.1	7.7
Women's.....	9	8	320	516	286,855	427,000	12.5	<sup>2</sup> 38.0	<sup>2</sup> 32.8
Patent medicines and compounds.....	45	30	189	93	2,123,980	548,595	50.0	103.2	287.2
Tobacco, cigars and cigarettes <sup>7</sup> .....	115	106	1,012	902	1,813,885	1,415,247	8.5	12.2	28.2
Cooperage.....	20	21	601	632	1,541,732	1,582,455	<sup>2</sup> 4.8	<sup>2</sup> 4.9	<sup>2</sup> 2.6

<sup>1</sup> Includes baking and yeast powders.

<sup>2</sup> Decrease.

<sup>3</sup> Includes wood, turned and carved.

<sup>4</sup> Includes the printing and publishing of music, and the manufacture of printing materials.

<sup>5</sup> Includes the manufacture of automobiles; of carriages and wagons; and of carriage and wagon materials.

<sup>6</sup> Includes the manufacture of stoves and furnaces; of gas and lamp fixtures; and of gas machines and meters.

<sup>7</sup> Includes chewing and smoking tobacco, and snuff.

TABLE 75.—Industrial district of Minneapolis-St. Paul, Minn.—motive power employed in manufactures: 1905.

	Aggregate.	MINNEAPOLIS-ST. PAUL.			Outside of Minneapolis-St. Paul.
		Total.	Minneapolis.	St. Paul.	
Number of establishments using power.....	836	825	506	319	11
Total horsepower.....	93,520	91,805	74,145	17,660	1,715
Owned:					
Steam engines—					
Number.....	465	418	268	150	47
Horsepower.....	53,021	57,087	44,839	12,248	1,534
Gas and gasoline engines—					
Number.....	169	105	71	34	4
Horsepower.....	1,013	998	741	257	15
Water wheels—					
Number <sup>1</sup> .....	51	51	35	16	.....
Horsepower.....	23,135	23,135	23,040	95	.....
Electric motors—					
Number.....	406	389	164	225	17
Horsepower <sup>2</sup> .....	3,409	3,243	1,612	1,631	166
Other power, horsepower.....	407	407	52	355	.....
Rented: <sup>3</sup>					
Electric, horsepower.....	5,830	5,830	2,963	2,867	.....
All other, horsepower.....	1,105	1,105	898	207	.....

<sup>1</sup> Includes 16 water motors in St. Paul, with 95 horsepower.

<sup>2</sup> Includes electric power generated by steam engines reported above.

<sup>3</sup> Includes power rented from other manufacturers.

Of the horsepower used in the district, 62.7 per cent was steampower and 24.7 per cent waterpower. Of the horsepower used in Minneapolis, 60.5 per cent was steampower and 31.1 per cent waterpower. In St. Paul all the waterpower was furnished by water motors. Electricity, owned and rented, constituted 25.5 per cent and steampower 69.4 per cent of the horsepower reported for St. Paul. There was little power

used in the places outside of the central cities, and that was almost wholly steampower.

Flour and grist mills used 42,267, or 45.2 per cent, of the horsepower of the district, and of this amount, 22,867, or 54.1 per cent, was waterpower.

The additional territory dependent upon Minneapolis and St. Paul, industrially and commercially, extends throughout that part of Hennepin and Ramsey counties not shown in the district, and includes in addition the whole of Carver and Washington counties, all of Dakota county except Douglas township, all of Scott county except Cedar Lake and New Market townships, that part of New Prague city which is in Lesueur county, and the following cities, towns, and townships in Minnesota and Wisconsin:

Anoka county, Minn.:

Anoka city. Centerville.  
Anoka township. Grow.  
Blaine. Ramsey.  
Burns.

Pierce county, Wis.:

Clifton. River Falls city, wards 2, 3, and 4.  
Oak Grove. River Falls town.  
Prescott city.

St. Croix county, Wis.:

Hudson city. St. Joseph.  
Hudson town. Somerset.  
Richmond. Star Prairie.  
River Falls city, ward 1. Troy.

Stillwater, Minn., is the only city in this additional territory large enough to be shown separately.

TABLE 76.—MUNICIPALITIES SURROUNDING INDUSTRIAL DISTRICT OF MINNEAPOLIS-ST. PAUL, MINN.—MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Total.....	1905 1900	282 267	\$9,901,823 7,714,757	588 315	\$537,170 200,195	4,136 3,612	\$2,184,500 1,549,265	\$1,243,178 513,175	\$21,947,706 13,504,759	\$28,075,880 16,942,941	133,209 125,295
Per cent of increase.....		5.6	28.3	86.7	78.9	14.5	41.0	142.3	62.5	65.7	6.3
Stillwater.....	1905 1900	36 32	2,827,939 2,172,094	203 76	175,509 85,135	955 829	454,345 357,718	425,453 150,207	1,484,642 1,050,428	2,784,113 1,801,012	12,435 12,318
Per cent of increase.....		12.5	30.2	167.1	106.2	15.2	27.0	183.2	41.3	54.6	0.9
All other surrounding places <sup>1</sup> .....	1905 1900	246 235	7,073,884 5,542,663	385 239	361,601 215,060	3,181 2,783	1,730,155 1,191,547	817,725 362,968	20,463,064 12,454,331	25,291,767 15,141,929	120,774 112,977
Per cent of increase.....		4.7	27.6	61.1	68.2	14.3	45.2	125.3	64.3	67.0	6.9

<sup>1</sup> For names of places included, see page 70.

The area added by this surrounding territory is 2,720 square miles and the population of this area in 1905 was 133,209; therefore for the district and the surrounding municipalities the aggregate area was 2,875 square miles and the total population, 605,571.

The number of establishments is increased to 1,788 by the inclusion of the plants in this additional area; the average number of wage-earners, to 41,180; and the value of products, to \$189,879,333. The principal industries in the outlying area are given in the table.

TABLE 77.—MUNICIPALITIES SURROUNDING INDUSTRIAL DISTRICT OF MINNEAPOLIS-ST. PAUL, MINN.—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE-EARNERS, AND VALUE OF PRODUCTS, WITH PER CENT OF INCREASE, BY SELECTED INDUSTRIES: 1905 AND 1900.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE-EARNERS.		VALUE OF PRODUCTS.		PER CENT OF INCREASE.		
	1905	1900	1905	1900	1905	1900	Number of establishments.	Average number of wage-earners.	Value of products.
Flour and grist mill products.....	27	33	244	268	\$6,007,451	\$4,560,639	<sup>1</sup> 18.2	<sup>1</sup> 9.0	31.7
Lumber.....	20	23	1,370	1,110	3,128,063	2,882,347	<sup>1</sup> 13.0	23.4	8.5
Lumber and timber products.....	9	16	1,020	858	2,209,048	2,258,029	<sup>1</sup> 43.8	18.9	0.5
Lumber, planing mill products, including sash, doors, and blinds.....	11	7	350	252	859,015	624,318	57.1	38.9	37.6
Butter <sup>2</sup> .....	52	43	74	55	1,032,602	531,268	20.9	34.5	94.4

<sup>1</sup> Decrease.

<sup>2</sup> Includes cheese and condensed milk.

Of the industries that can be shown separately, flour and grist mill products led in the supplemental area as in the district itself, but the value of products was very much less in the additional than in the original area. Totals for this industry in both district and surrounding places are as follows: Number of establishments, 48; average number of wage-earners, 2,515; value of products, \$69,154,384.

Lumber, with products valued at over three millions, was a leading manufacture in the surrounding municipalities, and in these places as in the district itself the number of wage-earners employed was greater for this industry than for any of the other industries. The manufacture of butter was another leading industry, which is unusual for the territory immediately surrounding a large industrial district.

An industry much greater in its importance than any shown in the table was that of slaughtering and meat packing, but as there were only 2 establishments the statistics can not be presented separately.

Very little power was used in the surrounding places. Of the total horsepower, 80.6 per cent was steam power

and only 6.7 per cent waterpower. The industry using the largest amount of power was that of lumber and timber products, this industry reporting 5,843 horsepower, or 37.1 per cent of the total. Most of this was reported as in use in Stillwater. The flour and grist mill industry used 4,110 horsepower.

TABLE 78.—Municipalities surrounding industrial district of Minneapolis-St. Paul, Minn.—motive power employed in manufactures: 1905.

Number of establishments using power.....	207
Total horsepower.....	15,733
Owned:	
Steam engines—	
Number.....	182
Horsepower.....	12,688
Gas and gasoline engines—	
Number.....	58
Horsepower.....	1,470
Water wheels—	
Number <sup>1</sup> .....	17
Horsepower.....	1,047
Electric motors—	
Number.....	7
Horsepower <sup>2</sup> .....	310
Other power, horsepower.....	2
Rented: <sup>3</sup>	
Electric, horsepower.....	216
All other, horsepower.....	

<sup>1</sup> Includes 4 water motors, with 17 horsepower.

<sup>2</sup> Includes electric power generated by steam engines reported above.

<sup>3</sup> Includes power rented from other manufacturers.

## INDUSTRIAL DISTRICT OF SAN FRANCISCO, CALIFORNIA.

San Francisco is advantageously situated at the north end of the peninsula by which San Francisco bay is separated from the Pacific ocean. The bay has 450 square miles of navigable area, and large vessels can sail upon it for a straight-away distance of 40 miles. Oakland and Alameda are on the east side of the bay and opposite the city; other places are near, all of them easily reached.

Steamship lines to China, Japan, Australia, Mexico, Central and South America, and the Hawaiian and Philippine Islands make San Francisco an important trade center. In addition to these steamship lines a large fleet of sailing vessels is used to carry grain and merchandise to Europe from San Francisco. The city has also an active coastwise commerce with Alaska and the ports of Puget Sound and the southern coast of California. Several transcontinental railway lines terminate at or near the city.

The city of San Francisco covers an area of 40.6 square miles. The street railways are operated electrically, part of the electricity being generated by the

waterpower of the Sierra Nevadas and transmitted long distances.

The city was founded in 1776 and incorporated in 1850. In 1856 the city and county were made coterminous.

The industrial district of San Francisco includes certain cities and towns forming an area of 203 square miles. It embraces all of San Francisco county and the following parts of Alameda and San Mateo counties:

Alameda county:

Alameda.

Brooklyn.

Oakland city.

Oakland township, including Berkeley city.

San Mateo county:

Township 1.

San Mateo city.

Besides San Francisco 3 cities within the district had more than 8,000 inhabitants in 1900, and these are shown separately. They are Alameda, Berkeley, and Oakland.

In 1900 San Francisco had a population of 342,782, or 75.5 per cent of the total population for the district. The number of inhabitants per square mile for the district was 2,236.

TABLE 79.—INDUSTRIAL DISTRICT OF SAN FRANCISCO, CAL.—MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Industrial district, total.....	1905	2,621	\$119,442,395	6,008	\$7,525,031	44,875	\$28,906,745	\$14,061,196	\$88,554,355	\$159,033,080	(1)
Per cent of increase.....	1900	2,016	79,054,236	3,801	4,349,075	37,390	19,748,946	7,386,391	72,746,695	119,240,348	453,647
		30.0	51.1	58.1	73.0	20.0	46.4	90.4	21.7	33.4	
San Francisco.....	1905	2,251	102,362,378	5,190	6,629,948	38,429	25,015,427	12,474,338	75,945,898	137,788,233	(1)
Per cent of increase.....	1900	1,748	69,643,100	3,413	3,929,372	32,555	17,258,604	6,850,396	65,535,251	107,023,567	342,782
		28.8	47.0	52.1	68.7	18.0	44.9	82.1	15.9	28.7	
Outside of San Francisco.....	1905	370	17,060,017	818	895,083	6,446	3,891,318	1,586,858	12,608,457	21,244,847	(1)
Per cent of increase.....	1900	268	9,411,136	388	419,703	4,535	2,490,342	535,995	7,211,444	12,216,781	111,065
		38.1	81.5	110.8	113.5	33.3	56.3	196.1	74.8	73.9	
Alameda.....	1905	30	541,301	15	19,576	270	240,524	31,184	232,891	696,761	(1)
Per cent of increase.....	1900	23	748,968	23	42,810	372	216,023	34,873	788,155	1,335,326	16,464
		30.4	27.7	234.8	254.3	225.0	11.3	210.6	70.5	47.8	
Berkeley.....	1905	44	1,429,356	87	85,521	338	229,623	152,707	781,811	1,473,888	(1)
Per cent of increase.....	1900	22	456,081	19	14,238	211	98,715	49,342	392,026	651,266	13,214
		100.0	213.4	357.9	500.7	60.2	132.6	209.5	99.4	126.3	
Oakland.....	1905	250	9,185,361	391	411,069	3,362	2,075,877	888,092	4,340,714	9,072,539	(1)
Per cent of increase.....	1900	195	5,172,596	264	246,250	2,476	1,209,967	322,474	2,708,972	5,368,258	66,060
		28.2	77.6	48.1	66.9	35.8	71.6	166.1	60.5	69.0	
All other places in district <sup>3</sup> .....	1905	46	5,923,999	325	379,817	2,467	1,345,294	544,875	7,253,041	10,001,659	(1)
Per cent of increase.....	1900	28	3,033,791	82	116,405	1,776	965,637	129,306	3,327,291	4,861,911	14,427
		64.3	95.3	296.3	226.3	38.9	39.3	321.4	118.0	105.7	

<sup>1</sup> No state census was taken for 1905.

<sup>2</sup> Decrease.

<sup>3</sup> For names of places included, see above.

The same conditions are found in the San Francisco district as in most of the other industrial districts shown, the relative increase from 1900 to 1904 in the manufactures being greater for the plants outside of the city than for those within the city limits. The percentage of increase in value of products for the outside places was more than two and one-half times as

great as that for the city itself. The actual value of products for 1904, however, in San Francisco was nearly six and one-half times as great as in the parts of the district outside of the central city, and the actual increase for San Francisco was \$30,764,666, or over threefold the increase reported for all of the outside places.

MAP 13.—INDUSTRIAL DISTRICT OF SAN FRANCISCO, CAL.

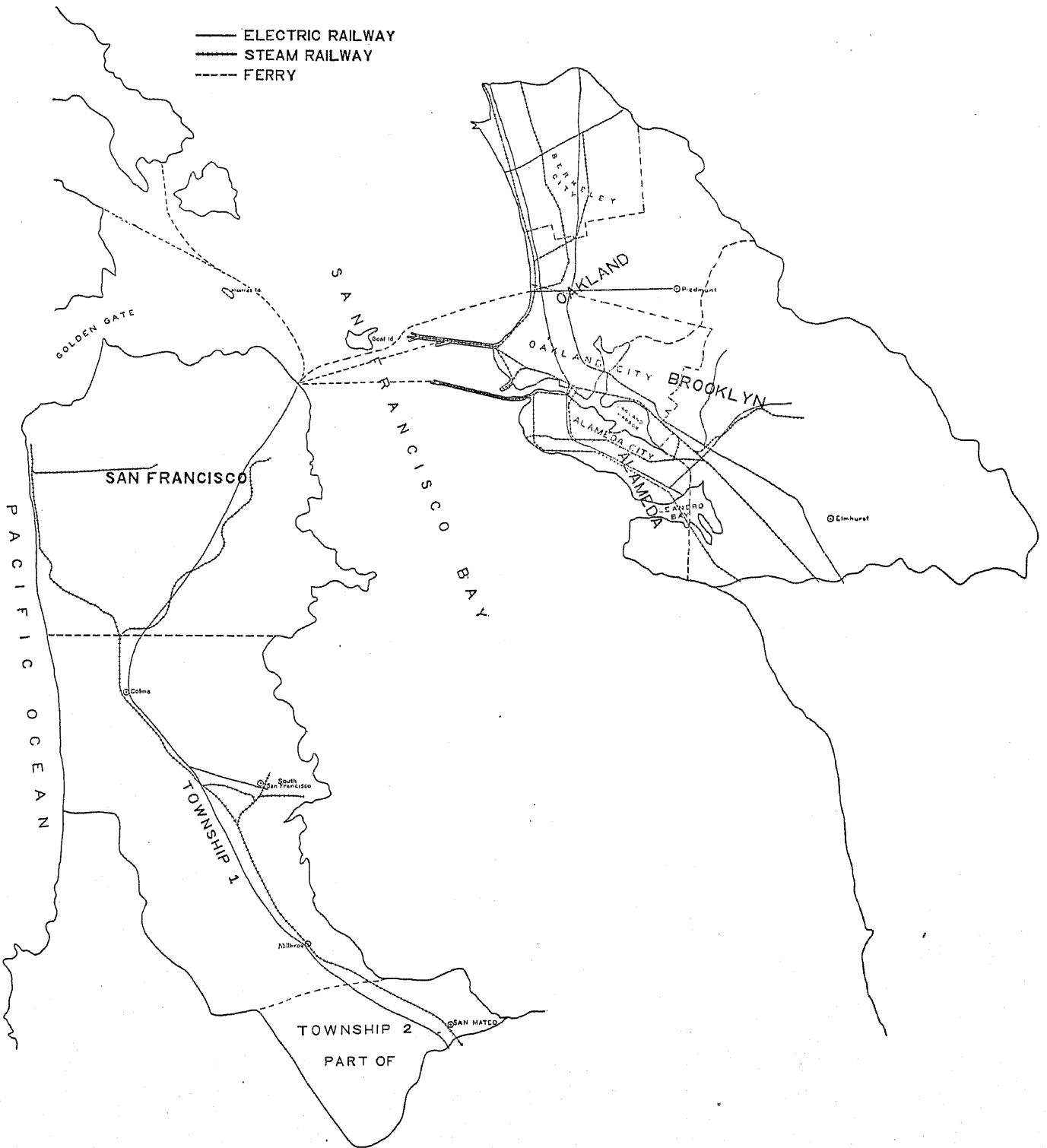


TABLE 80.—INDUSTRIAL DISTRICT OF SAN FRANCISCO, CAL.—PER CENT DISTRIBUTION OF MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
San Francisco.....	1905	85.9	85.7	86.4	88.1	85.6	86.5	88.7	85.8	86.6	75.5
	1900	86.7	88.1	89.8	90.3	87.1	87.4	92.7	90.1	89.8	
Outside of San Francisco.....	1905	14.1	14.3	13.6	11.9	14.4	13.5	11.3	14.2	13.4	24.5
	1900	13.3	11.9	10.2	9.7	12.9	12.6	7.3	9.9	10.2	
Alameda.....	1905	1.1	0.5	0.2	0.3	0.6	0.8	0.2	0.3	0.4	3.6
	1900	1.1	0.9	0.6	1.0	1.0	1.1	0.5	1.1	1.1	
Berkeley.....	1905	1.7	1.2	1.4	1.1	0.8	0.8	1.1	0.9	0.9	2.0
	1900	1.1	0.6	0.5	0.3	0.6	0.5	0.7	0.5	0.5	
Oakland.....	1905	9.5	7.7	6.5	5.5	7.5	7.2	6.1	4.9	5.7	14.8
	1900	9.7	6.5	6.9	5.7	6.6	6.1	4.4	3.7	4.5	
All other places in district.....	1905	1.8	5.0	5.4	5.0	5.5	4.7	3.9	8.2	6.3	3.2
	1900	1.4	3.8	2.2	2.7	4.7	4.9	1.8	4.6	4.1	

Of the gross value of products for the entire district in 1904, almost seven-eighths are credited to San Francisco, but the proportion was a loss of 3.2 per cent from that shown for 1900.

TABLE 81.—INDUSTRIAL DISTRICT OF SAN FRANCISCO, CAL.—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE-EARNERS, AND VALUE OF PRODUCTS, WITH PER CENT OF INCREASE, BY SELECTED INDUSTRIES: 1905 AND 1900.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE-EARNERS.		VALUE OF PRODUCTS.		PER CENT OF INCREASE.		
	1905	1900	1905	1900	1905	1900	Number of establishments.	Average number of wage-earners.	Value of products.
Slaughtering <sup>1</sup> .....	35	29	673	277	\$15,486,299	\$8,677,219	20.7	143.0	78.5
Printing and publishing.....	381	254	3,113	2,442	10,187,664	6,087,067	50.0	27.5	67.4
Newspapers and periodicals <sup>2</sup> .....	195	129	1,343	1,210	6,135,462	3,983,969	51.2	11.0	54.0
Book and job.....	186	125	1,770	1,232	4,052,202	2,103,098	48.8	43.7	92.7
Foundry and machine shop products <sup>3</sup> .....	151	114	3,692	3,432	9,483,767	8,766,383	32.5	7.6	8.2
Bread and other bakery products <sup>4</sup> .....	220	109	1,542	933	5,550,506	2,963,219	30.2	65.3	87.3
Clothing <sup>5</sup> .....	113	140	2,285	3,518	4,930,646	5,427,241	19.3	35.1	69.9
Coppersmithing and sheet iron working <sup>7</sup> .....	54	30	1,626	1,434	4,768,505	4,427,147	80.0	6.4	7.7
Lumber, planing mill products, including sash, doors, and blinds.....	74	45	1,670	1,018	4,690,703	2,250,565	64.4	64.6	108.4
Liquors <sup>8</sup> .....	35	37	636	485	4,499,830	3,136,361	5.4	31.1	43.5
Canning and preserving, fruits and vegetables <sup>9</sup> .....	14	10	1,471	1,538	4,151,414	2,992,802	40.0	4.4	38.7
Coffee and spice, roasting and grinding <sup>9</sup> .....	25	22	275	231	3,979,865	2,766,387	13.6	19.0	43.9
Flour and grist mill products <sup>10</sup> .....	13	11	248	202	3,852,041	2,164,112	18.2	22.8	78.0
Leather, tanned, curried, and finished.....	24	26	638	621	2,937,510	3,066,355	7.7	2.7	64.2
Iron and steel industry.....	33	23	1,051	766	2,791,877	1,385,310	43.5	37.2	101.5
Iron and steel <sup>11</sup> .....	9	6	661	547	1,401,186	763,342	50.0	20.8	83.6
Structural ironwork <sup>9</sup> .....	24	17	390	219	1,390,691	621,968	41.2	78.1	123.6
Textiles <sup>12</sup> .....	13	11	1,071	815	2,342,117	1,844,061	18.2	31.4	27.0
Tobacco, cigars and cigarettes.....	199	124	1,301	997	2,159,650	1,416,599	60.5	30.5	52.5

<sup>1</sup> Includes slaughtering and meat packing, wholesale.

<sup>2</sup> Exclusive of 3 establishments in 1905 and 2 establishments in 1900 in Alameda.

<sup>3</sup> Includes stoves and furnaces, exclusive of 2 establishments in 1905 in Berkeley.

<sup>4</sup> For San Francisco and Oakland only.

<sup>5</sup> Includes men's and women's clothing.

<sup>6</sup> Decrease.

<sup>7</sup> Includes tinware.

<sup>8</sup> Includes in both years malt, and vinous liquors; and in 1905, liquors, distilled.

<sup>9</sup> For San Francisco only.

<sup>10</sup> Exclusive of 1 establishment in 1900 in Alameda.

<sup>11</sup> Includes in both years steel works and rolling mills; forgings; bolts, nuts, etc., by establishments other than rolling mills or steel works; in 1905, wire; and in 1900, doors and shutters.

<sup>12</sup> Includes in both years cotton goods, cordage and twine, hosiery and knit goods, silk and silk goods, and woolen goods; in 1905, the dyeing and finishing of textiles, and in 1900, jute and jute goods.

The leading industry for this district in 1904 was slaughtering and meat packing, with an output valued at over fifteen millions, which is a very considerable increase over the value in 1900. The value of products was about equally divided between San Francisco and the outside territory, the former showing 58.1 per cent and the latter, 41.9 per cent. Of the

total value of these products for the state, this industrial district had 71.1 per cent.

The industry next in rank was printing and publishing, with one branch producing newspapers and periodicals and the other doing book and job work. The value of products was over ten millions, and more than three thousand wage-earners were employed.



The manufacture of foundry and machine shop products was third. The number of wage-earners employed in this industry was larger than the number shown for any other selected industry. San Francisco had an output valued at 95.7 per cent of the total value of these products, which amounted to over nine millions.

Among other leading industries was bread and other bakery products, which is essentially a manufacture due to the presence of a large body of consumers in the immediate neighborhood. This industry had an output valued at over five and a half millions, and was followed by clothing, with products valued at nearly five millions, and lumber to the value of more than four and one-half millions. Products valued at over four millions were reported for liquors, and almost as much for the canning and preserving of fruits and vegetables, which industry forms one of the specialties of California. The textiles manufactured in the district were valued at nearly as much as the products of the various branches of the iron and steel industry.

Sugar and molasses refining ranked among the leading industries, but the statistics for this industry can not be shown without disclosing operations of individual establishments. Of the output for California, 99.8 per cent was refined in the San Francisco district. Other important industries for which details can not be published are shipbuilding and the manufacture and repair of railroad cars.

Of the group of selected industries the greatest percentage of increase in values is shown for structural ironwork, and the next greatest for planing mill products.

TABLE 82.—Industrial district of San Francisco, Cal.—motive power employed in manufactures: 1905.

	Total.	San Francisco.	Outside of San Francisco.
Number of establishments using power.....	1,550	1,337	213
Total horsepower.....	56,911	40,249	10,662
Owned:			
Steam engines—			
Number.....	544	419	125
Horsepower.....	36,517	28,523	7,994
Gas and gasoline engines—			
Number.....	113	83	30
Horsepower.....	928	681	247
Water motors—			
Number.....	3	3	.....
Horsepower.....	43	43	.....
Electric motors—			
Number.....	237	205	32
Horsepower <sup>1</sup> .....	3,139	2,662	477
Other power, horsepower.....	435	350	85
Rented: <sup>2</sup>			
Electric, horsepower.....	14,222	12,502	1,720
All other, horsepower.....	1,627	1,488	139

<sup>1</sup> Includes electric power generated by steam engines reported above.

<sup>2</sup> Includes power rented from other manufacturers.

Of the horsepower, 64.2 per cent was steampower and 30.5 per cent electric power, owned and rented.

San Francisco had 81.3 per cent of the total amount of power reported; 61.7 per cent of this was steam-power and 32.8 per cent electric power.

Planing mills reported more horsepower than any other industry, employing 4,446, or 7.8 per cent of the total. Shipbuilding, wooden, was next with 4,110, or 7.2 per cent; foundry and machine shop products had 3,882 horsepower, or 6.8 per cent. In this industry electric motors were quite extensively used, 56.5 per cent of the total power being electric, owned and rented.

The territory added to the San Francisco district by the taking in of places more or less closely allied to it industrially, increases the area by 3,672 square miles, making a total area of 3,875 square miles. It includes all of Marin county and the following townships and cities in other counties:

Alameda county:	
Eden.	Washington.
Contra Costa county:	
Supervisor's district 1.	Supervisor's district 3.
Supervisor's district 2.	
Napa county:	
Hot Springs.	Yount.
Napa.	
San Mateo county:	
Township 2, exclusive of San Mateo city.	Township 3.
Santa Clara county:	
Almaden.	Redwood.
Alviso.	San Jose.
Fremont.	Santa Clara.
Mayfield.	Saratoga.
Palo Alto.	
Santa Cruz county:	
Branciforte.	Santa Cruz.
San Lorenzo.	
Solano county:	
Benicia.	Suisun.
Elmira.	Vacaville
Green Valley.	Vallejo.
Sonoma county:	
Analy.	Redwood.
Bodega.	Santa Rosa township.
Ocean.	Sonoma.
Petaluma.	Vallejo.

In this added territory the only city large enough to be shown separately is San Jose.

In the district and the surrounding places 3,481 establishments gave employment to 56,599 wage-earners and manufactured products valued at \$238,103,663.

The great bulk of manufacturing in the surrounding municipalities was done in places having less than 8,000 inhabitants, the value of products for such places representing 91.9 per cent of the total.

TABLE 83.—MUNICIPALITIES SURROUNDING INDUSTRIAL DISTRICT OF SAN FRANCISCO, CAL.—MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Total.....	1905	860	\$45,088,284	1,469	\$1,766,039	11,724	\$6,646,317	\$2,657,051	\$60,201,424	\$79,070,583	(1)
Per cent of increase.....	1900	639	22,027,368	705	725,246	8,395	3,098,082	1,265,730	46,616,907	55,959,546	178,869
		34.0	104.7	108.4	143.5	39.7	84.2	109.9	29.1	41.3	.....
San Jose.....	1905	160	4,421,290	261	247,180	1,854	943,406	517,333	3,959,048	6,388,445	(1)
Per cent of increase.....	1900	134	2,980,492	189	146,632	1,221	596,525	265,855	1,850,073	3,291,041	21,500
		29.0	48.3	38.1	69.3	51.8	66.5	94.6	114.0	94.1	.....
All other surrounding places <sup>2</sup> .....	1905	700	40,666,994	1,208	1,518,849	9,870	5,702,911	2,139,718	56,242,376	72,682,138	(1)
Per cent of increase.....	1900	515	19,046,906	516	579,214	7,174	3,041,557	999,575	44,766,894	52,067,905	157,389
		35.9	113.5	134.1	102.2	37.6	87.5	114.0	25.6	38.0	.....

<sup>1</sup> No state census was taken for 1905.

<sup>2</sup> For names of places included, see page 75.

TABLE 84.—MUNICIPALITIES SURROUNDING INDUSTRIAL DISTRICT OF SAN FRANCISCO, CAL.—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE-EARNERS, AND VALUE OF PRODUCTS, WITH PER CENT OF INCREASE, BY SELECTED INDUSTRIES: 1905 AND 1900.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE-EARNERS.		VALUE OF PRODUCTS.		PER CENT OF INCREASE.		
	1905	1900	1905	1900	1905	1900	Number of establishments.	Average number of wage-earners.	Value of products.
Canning and preserving.....	71	59	2,470	2,287	\$7,091,426	\$3,743,497	20.3	8.0	89.4
Fruits and vegetables.....	65	55	2,375	2,067	6,580,126	3,351,044	18.2	14.9	96.4
Fish.....	6	4	95	220	511,300	392,453	50.0	156.8	30.3
Leather, tanned, curried, and finished.....	18	14	783	721	4,618,940	3,821,102	28.6	8.6	20.9
Explosives.....	4	5	704	859	4,158,390	3,806,568	120.0	111.1	9.2
Lumber.....	63	52	1,420	1,058	3,486,950	1,727,425	21.2	34.2	101.0
Lumber, planing mill products, including sash, doors, and blinds.....	34	17	863	271	2,519,887	620,775	100.0	218.5	305.9
Lumber and timber products.....	29	35	557	787	907,063	1,106,650	117.1	129.2	112.6
Liquors.....	131	94	412	278	3,023,023	1,671,577	39.4	48.2	80.8
Liquors, vinous <sup>2</sup> .....	112	75	287	124	2,221,758	1,146,956	49.3	131.5	98.7
Liquors, malt.....	19	19	125	154	801,265	524,621	.....	118.8	52.7
Flour and grist mill products.....	8	9	91	103	2,176,738	1,885,262	111.1	111.7	15.5
Butter <sup>3</sup> .....	58	23	160	51	1,157,376	345,697	152.2	213.7	234.8

<sup>1</sup> Decrease.

<sup>2</sup> Includes liquors, distilled.

<sup>3</sup> Includes cheese and condensed milk.

Canning and preserving, with an output valued at more than seven millions, occupied the first place among the selected industries shown separately for the municipalities surrounding the industrial district. This industry in both the district and the outside places was carried on in 85 establishments, with 3,941 wage-earners, and products valued at \$11,242,840.

The tanning and currying of leather and the manufacture of explosives were notable industries, each with an output of over four millions. The former industry, within and without the district, had 42 establishments, 1,421 wage-earners, and products valued at \$7,556,450.

The smelting and refining of lead had an output very greatly in excess of that of any other industry, but details concerning it can not be shown without disclosing the operations of individual establishments. Petroleum refining was another industry which can not be shown separately.

In the surrounding territory steampower formed 62.4 per cent of the total horsepower, and electric power constituted 33.5 per cent.

TABLE 85.—Municipalities surrounding industrial district of San Francisco, Cal.—motive power employed in manufactures: 1905.

Number of establishments using power.....	436
Total horsepower.....	25,522
Owned:	
Steam engines—	
Number.....	512
Horsepower.....	15,937
Gas and gasoline engines—	
Number.....	108
Horsepower.....	897
Water motors—	
Number.....	12
Horsepower.....	55
Electric motors—	
Number.....	126
Horsepower <sup>1</sup> .....	1,208
Other power, horsepower.....	124
Rented: <sup>2</sup>	
Electric, horsepower.....	7,241
All other, horsepower.....	60

<sup>1</sup> Includes electric power generated by steam engines reported above.

<sup>2</sup> Includes power rented from other manufacturers.

The lumber industry—timber and planing mill products—shows the greatest amount of power, 5,295 horsepower, or 20.7 per cent of the total.

## INDUSTRIAL DISTRICT OF PROVIDENCE, RHODE ISLAND.

The industrial district of Providence, R. I., includes the city of Providence, situated at the head of Providence river which flows into Narragansett bay, and a surrounding territory of 136 square miles, making a total of slightly more than 154 square miles. The district is small as compared with the area of other industrial districts and is well covered with factories. It has no great natural divisions. In establishing the area no minor civil division was subdivided, and therefore the boundary is not at a uniform distance from the center of the principal city. The district includes the cities of Providence, Central Falls, and Pawtucket, and the towns of Cranston, Cumberland, East Providence, Johnston, Lincoln, North Providence, and Warwick. Providence, the principal city of the district, contains slightly more than half of the population and reported for 1904 nearly three-fifths of the total value of the products manufactured in the district. With the exception of Pawtucket, the other cities and towns are of comparatively small importance. All of these cities and towns are connected with Providence by electric and steam railroads or other means of transportation, and all are closely allied industrially.

The 154.28 square miles that have been accepted as the industrial district include land area only, as all important bodies of water have been excluded. The city of Providence contains 18.2815 square miles, or only 11 per cent of the area of the district. When the city was incorporated in 1832 its limits included an area of 5.428 square miles and this area has been increased by 12.9 square miles during the three-fourths of a century since that time. During this period 12.858 square miles have been added and .0045 square mile detached. The annexations include 4.747 square miles from Cranston, 3.491 in 1868 and 1.256 in 1892; 6.731 square miles from North Providence in 1874; and 1.38 square miles from Johnston in 1898. The .0045 square mile detached represents territory ceded to Cranston in 1907.

According to the state census of 1905 the city of Providence had a population of 198,635 and the surrounding territory a population of 145,886, making a total of 344,521 for the industrial district. A comparison of these totals with those for the Federal census of 1900 shows an increase of 13.1 per cent in the population of Providence and 12.8 per cent in that of the district outside of the city.

TABLE 86.—INDUSTRIAL DISTRICT OF PROVIDENCE, R. I.—MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Industrial district, total.....	1905	1,237	\$171,177,887	4,567	\$5,974,334	73,391	\$33,119,386	\$12,025,812	\$86,568,340	\$156,299,965	344,521
Per cent of increase.....	1900	1,257	138,565,741	3,401	4,453,221	66,148	27,404,806	9,001,174	69,125,957	128,328,444	304,975
		1.6	23.5	34.3	34.2	10.9	20.9	33.6	25.2	21.8	13.0
Providence.....	1905	881	95,666,407	3,051	3,818,597	39,804	19,554,958	7,195,102	49,973,310	91,980,963	198,635
Per cent of increase.....	1900	929	79,086,394	2,493	3,053,324	38,368	16,931,442	5,077,732	42,550,664	78,657,103	175,597
		5.2	20.1	23.4	25.1	3.7	15.5	41.7	17.4	16.9	13.1
Outside of Providence.....	1905	356	75,511,480	1,516	2,155,737	33,587	13,564,428	4,830,710	36,595,030	64,319,002	145,886
Per cent of increase.....	1900	328	58,879,347	908	1,399,897	27,780	10,473,304	3,923,442	26,575,293	49,671,341	129,378
		8.5	28.2	67.0	54.0	20.9	29.5	23.1	37.7	29.5	12.8
Central Falls.....	1905	33	4,950,443	85	122,721	2,443	965,467	288,536	3,330,002	5,090,984	19,446
Per cent of increase.....	1900	36	3,969,810	76	103,710	2,372	832,603	280,531	2,726,248	4,511,182	18,167
		8.3	24.7	11.8	18.3	3.0	9.4	2.9	22.1	12.9	7.0
Pawtucket.....	1905	186	27,178,438	737	1,039,791	12,054	5,100,309	2,346,167	14,111,583	25,846,899	43,381
Per cent of increase.....	1900	191	20,451,309	495	715,465	10,712	4,331,007	1,752,847	9,976,710	19,271,582	39,231
		2.6	32.9	48.9	45.3	12.5	17.8	33.8	41.4	34.1	10.6
Warwick.....	1905	37	8,253,436	119	186,937	6,153	2,144,139	367,910	3,847,894	7,051,971	24,773
Per cent of increase.....	1900	27	8,317,637	67	115,639	5,465	1,825,520	323,219	2,440,625	6,019,989	21,316
		37.0	10.8	77.6	61.7	12.6	17.5	13.8	57.7	17.1	16.2
All other places in district <sup>2</sup> .....	1905	100	35,129,163	575	806,288	12,937	5,354,513	1,828,097	15,305,491	26,329,148	58,286
Per cent of increase.....	1900	74	26,140,591	270	468,083	9,231	3,434,234	1,566,845	11,431,710	19,868,688	50,664
		35.1	34.4	113.0	73.4	40.1	55.9	16.7	33.9	32.5	15.0

<sup>1</sup> Decrease.

<sup>2</sup> For names of places included, see above.

During the period between the censuses of 1900 and 1905 the manufactures in the territory immediately surrounding Providence increased much more rapidly than those within the city. The gross value of

products reported for the city is, however, still largely in excess of the value of products reported for the establishments in the districts outside the city limits.

TABLE 87.—INDUSTRIAL DISTRICT OF PROVIDENCE, R. I.—PER CENT DISTRIBUTION OF MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Providence.....	1905 1900	71.2 73.9	55.9 57.5	66.8 73.3	63.9 68.6	54.2 58.0	59.0 61.8	59.8 56.4	57.7 61.6	58.8 61.3	57.7 57.6
Outside of Providence.....	1905 1900	28.8 26.1	44.1 42.5	33.2 26.7	36.1 31.4	45.8 42.0	41.0 38.2	40.2 43.6	42.3 38.4	41.2 38.7	42.3 42.4
Central Falls.....	1905 1900	2.7 2.9	2.9 2.9	1.9 2.2	2.1 2.3	3.3 3.6	2.9 3.2	2.4 3.1	3.8 3.9	3.3 3.5	5.0 6.0
Pawtucket.....	1905 1900	15.0 15.2	15.9 14.8	16.1 14.6	17.4 16.1	16.4 16.2	15.4 15.8	19.5 19.5	16.3 14.4	16.5 15.0	12.6 12.9
Warwick.....	1905 1900	3.0 2.1	4.8 6.0	2.6 2.0	3.1 2.6	8.4 8.3	6.5 6.7	3.1 3.6	4.4 3.5	4.5 4.7	7.2 7.0
All other places in district.....	1905 1900	8.1 5.9	20.5 18.9	12.6 7.9	13.5 10.4	17.6 14.0	16.2 12.5	15.2 17.4	17.7 16.5	16.8 15.5	16.0 16.0

Of the gross value of products of the entire district for 1900, 61.3 per cent was reported by the factories located within the corporate limits of Providence and 38.7 per cent by those in the surrounding towns. The corresponding percentages in 1904 were 58.8 and 41.2, respectively. There has been an apparent decrease in the number of factories in the district, the

decrease being most pronounced in Providence. This is due in part to changes in Census methods and to the consolidation of establishments, but there has been a slight actual decrease in the number of factories in some industries. There has been, however, a decided increase in the magnitude of the operations of the factories in all sections of the district.

TABLE 88.—INDUSTRIAL DISTRICT OF PROVIDENCE, R. I.—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE-EARNERS, AND VALUE OF PRODUCTS, WITH PER CENT OF INCREASE, BY SELECTED INDUSTRIES: 1905 AND 1900.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE-EARNERS.		VALUE OF PRODUCTS.		PER CENT OF INCREASE.		
	1905	1900	1905	1900	1905	1900	Number of establishments.	Average number of wage-earners.	Value of products.
Textiles.....	135	102	40,503	35,076	\$72,791,040	\$55,357,232	32.4	15.5	31.5
Worsted goods.....	22	18	12,806	10,992	31,082,791	24,358,343	22.2	16.5	27.0
Cotton goods.....	43	35	14,811	13,986	21,429,593	15,979,772	22.9	5.9	34.1
Dyeing and finishing textiles.....	26	21	6,707	5,691	8,838,295	7,996,626	23.8	17.9	10.5
Cotton small wares.....	22	12	2,603	2,051	3,614,443	2,221,870	83.3	26.9	62.7
Woolen goods.....	6	5	1,242	857	3,352,053	1,952,200	20.0	44.9	71.7
Hosiery and knit goods.....	10	7	1,289	1,100	2,249,679	1,631,127	42.9	17.2	37.9
Silk and silk goods.....	6	4	1,045	399	2,224,186	1,217,294	50.0	161.9	82.7
Jewelry.....	197	210	6,474	7,102	14,431,756	13,229,313	16.2	8.8	9.1
Foundry and machine shop products.....	105	115	8,124	7,560	14,119,544	11,639,075	18.7	7.5	21.3
Silversmithing and silverware.....	10	12	1,919	1,815	5,323,264	4,249,190	16.7	5.7	25.3

<sup>1</sup> Decrease.

The factory industries are characteristic of the manufactures of the district, and of these the textile industries are the most important. There were in the district during 1900, 102 textile factories, including mills engaged in the associated industry of dyeing and finishing, which together reported a value of products amounting to \$55,357,232, or 43.1 per cent of the total for all industries. In 1904 the number of factories had increased to 135 and the value of products to \$72,791,040, or 46.6 per cent of the total for all industries. The cotton mills gave employment to the greatest number of wage-earners in the textile industries,

but the greatest value of products was reported for the manufacture of worsteds. Jewelry, foundry and machine shop products, and silversmithing and silverware were important industries when measured by value of products. Many of the machine shops make a specialty of textile machinery, but a great variety of heavy and fine tools are manufactured which have a world-wide sale. Establishments located in Providence are credited with the manufacture of all of the silverware, practically all of the jewelry, and about two-thirds of the foundry and machine shop products reported for the district.

MAP 14.—INDUSTRIAL DISTRICT OF PROVIDENCE, R. I.

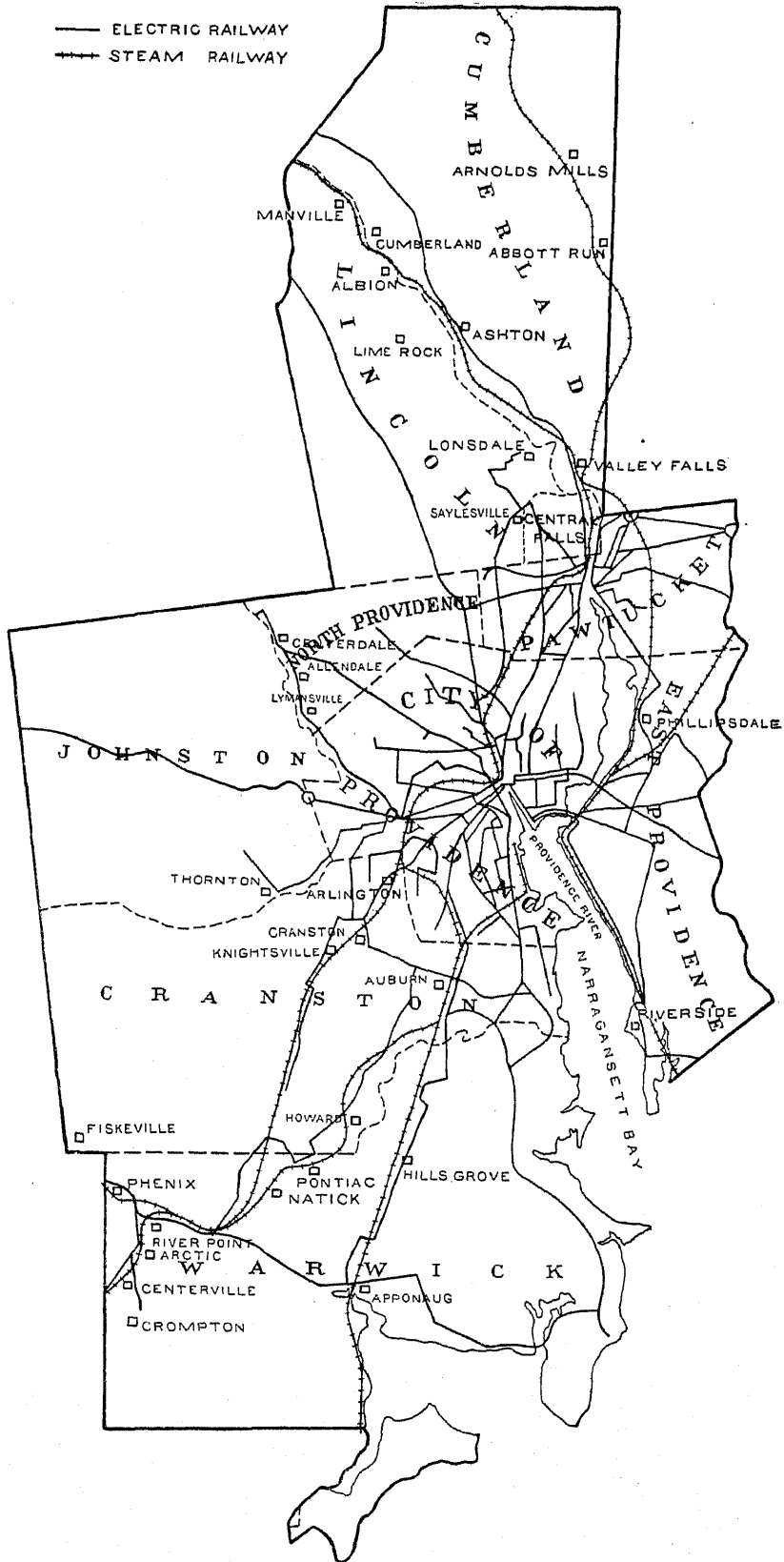


TABLE 89.—Industrial district of Providence, R. I.—motive power employed in manufactures: 1905.

	Total.	Provi- dence.	Outside of Provi- dence.
Number of establishments using power.....	866	600	266
Total horsepower.....	135,408	50,700	84,708
Owned:			
Steam engines—			
Number.....	774	374	400
Horsepower.....	101,187	39,902	61,285
Water wheels—			
Number.....	129	11	118
Horsepower.....	15,211	588	14,623
Electric motors—			
Number.....	553	376	177
Horsepower <sup>1</sup> .....	9,088	4,244	4,844
Other power, horsepower.....	1,490	802	688
Rented: <sup>2</sup>			
Electric, horsepower.....	5,000	3,121	1,879
All other, horsepower.....	3,432	2,043	1,389

<sup>1</sup> Includes electric power generated by steam engines reported above.  
<sup>2</sup> Includes power rented from other manufacturers.

There were 866 establishments in the industrial district in 1904 which reported the use of mechanical motive power, amounting altogether to 135,408 horse-

power. The large amount of power reported for the factories located outside of Providence, 84,708 horsepower, or 62.6 per cent of the total, is due primarily to the amount used in the textile mills, many of which are in the surrounding towns. The textile factories used 96,573 horsepower, or 71.3 per cent of the total power reported for all industries in the entire district. Steam is the most important primary power and formed 74.7 per cent of the total power reported for 1904. Waterpower is used principally in the factories outside of Providence, while electric power is about evenly divided between the establishments within and those outside of the city, though the largest amount of rented electric power was used by the mills and shops in Providence.

In addition to the cities and towns included in the Providence industrial district there are a number of surrounding cities and towns so closely connected industrially and commercially with the district that statistics for them are presented in this connection.

TABLE 90.—MUNICIPALITIES SURROUNDING INDUSTRIAL DISTRICT OF PROVIDENCE, R. I.—MANUFACTURES AND POPULATION, BY MUNICIPALITIES: 1905 AND 1900.

MUNICIPALITY.	Census.	Number of establishments.	Capital.	SALARIED OFFICIALS, CLERKS, ETC.		WAGE-EARNERS.		Miscellaneous expenses.	Cost of materials used.	Value of products, including custom work and repairing.	Population.
				Number.	Salaries.	Average number.	Wages.				
Total.....	1905	405	\$51,602,614	1,249	\$1,602,975	26,333	\$11,455,091	\$3,230,510	\$28,946,434	\$53,187,161	100,115
	1900	443	38,196,318	867	1,072,907	23,496	9,518,423	1,900,120	20,894,604	42,216,023	80,675
Per cent of increase.....		1 8.6	35.1	44.1	49.4	12.1	20.3	70.0	38.5	26.0	11.6
Attleboro, Mass.....	1905	108	10,438,480	381	450,914	5,044	2,474,022	813,972	4,050,845	10,050,384	12,702
	1900	108	5,724,135	273	284,762	4,811	2,190,709	315,656	3,796,454	8,751,427	11,335
Per cent of increase.....			82.4	39.6	58.4	4.8	12.9	157.9	22.5	14.8	12.1
Burrillville, R. I.....	1905	32	3,484,034	47	71,819	2,556	1,155,386	318,593	4,078,028	6,147,799	7,425
	1900	32	2,972,000	53	72,401	1,916	759,730	265,850	2,652,877	4,200,233	6,317
Per cent of increase.....			17.2	11.3	0.8	33.4	52.1	19.8	53.7	46.4	17.5
North Attleboro, Mass.....	1905	60	3,493,976	222	289,213	2,094	1,145,254	325,696	1,561,195	4,182,241	7,878
	1900	66	1,942,130	156	157,509	2,038	1,079,891	125,300	1,475,568	3,690,538	7,253
Per cent of increase.....		1 9.1	79.9	42.3	83.6	2.7	6.1	159.9	5.8	13.3	8.0
Woonsocket, R. I.....	1905	103	15,461,523	357	455,681	8,672	3,550,343	916,236	10,578,710	19,260,537	32,196
	1900	104	13,954,136	162	256,451	7,591	2,853,780	546,416	7,169,244	14,744,900	28,204
Per cent of increase.....		1 1.0	10.8	120.4	77.7	14.2	24.4	67.7	47.6	30.6	14.2
All other surrounding places <sup>2</sup> .....	1905	102	18,724,601	242	335,348	7,967	3,130,086	856,013	8,077,656	13,546,200	39,914
	1900	133	13,604,417	223	301,844	7,140	2,634,313	646,898	5,800,461	10,828,925	36,560
Per cent of increase.....		1 23.3	37.6	8.5	11.1	11.6	18.8	32.3	39.3	25.1	9.2

<sup>1</sup> Decrease.

<sup>2</sup> For names of places included, see below.

In selecting the additional towns for which statistics are presented, the intention was to include, in as compact a form as practicable, all towns in the general community of which Providence is the commercial, financial, and social center. These towns form a somewhat irregular territory, with North Attleboro and Attleboro on the northeast; Seekonk on the east; Barrington, Warren, and Bristol on the southeast; Smithfield, North Smithfield, Woonsocket, and Burrillville on the northwest; and Coventry, East Greenwich, North Kingstown, and South Kingstown on the

southwest. The industrial importance of North Attleboro and Attleboro is due to the jewelry industry, which was carried across the state from Providence early in the nineteenth century.

The inclusion of these additional cities and towns adds 405 square miles to the area, making a total of 559 square miles with a population in 1905 of 444,636, and increases the number of establishments in 1904 to 1,642, the average number of wage-earners to 99,724, and the value of the products manufactured during the year to \$209,487,126.

TABLE 91.—MUNICIPALITIES SURROUNDING INDUSTRIAL DISTRICT OF PROVIDENCE, R. I.—NUMBER OF ESTABLISHMENTS, AVERAGE NUMBER OF WAGE-EARNERS, AND VALUE OF PRODUCTS, WITH PER CENT OF INCREASE, BY SELECTED INDUSTRIES: 1905 AND 1900.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE-EARNERS.		VALUE OF PRODUCTS.		PER CENT OF INCREASE.		
	1905	1900	1905	1900	1905	1900	Number of establishments.	Average number of wage-earners.	Value of products.
Textiles.....	87	81	14,425	11,905	\$27,626,619	\$18,456,203	7.4	21.1	49.7
Worsted goods.....	28	35	5,182	4,027	13,394,805	8,885,818	120.0	28.7	59.7
Cotton goods.....	21	21	6,303	6,186	8,403,622	6,301,967	.....	1.9	33.3
Woolen goods.....	17	10	1,348	744	3,160,197	1,577,409	70.0	81.2	100.3
Hosiery and knit goods.....	5	7	433	495	1,094,976	1,082,057	128.6	112.5	1.2
Dyeing and finishing textiles.....	11	5	920	299	1,308,965	471,322	120.0	207.7	177.7
Cotton small wares.....	5	3	239	154	264,054	137,630	66.7	55.2	91.9
Jewelry.....	97	98	4,259	4,437	8,223,788	8,485,744	11.0	14.0	13.1
Foundry and machine shop products.....	26	28	2,031	1,895	3,385,866	2,810,065	17.1	7.2	19.0
Silversmithing and silverware.....	10	7	693	216	2,043,436	513,494	42.9	220.8	297.9

<sup>1</sup> Decrease.

The industries that are characteristic of the Providence industrial district also predominate in the 14 cities and towns that are closely allied with the district. If these towns are included, the textile industries show a total of 222 mills, which gave employment on the average during 1904 to 54,928 wage-earners, and manufactured products valued at \$100,417,659. Large increases are shown for the textile industries in practically the entire district, but especially in the smaller cities and towns.

The worsted industry of Woonsocket and the jewelry industry of the Attleboros are important, as is also the rubber boot and shoe industry in Woonsocket and Bristol.

The 48,894 horsepower reported<sup>1</sup> as employed in the industries in the 14 towns adjoining the Providence industrial district makes a total of 184,302 horse-

power for all of the places associated with Providence in this report. Of this aggregate, 133,985 horsepower, or 72.7 per cent, was reported for the manufacture of textiles.

TABLE 92.—Municipalities surrounding industrial district of Providence, R. I.—motive power employed in manufactures: 1905.

Number of establishments using power.....	314
Total horsepower.....	48,894
Owned:	
Steam engines—	
Number.....	264
Horsepower.....	35,040
Water wheels—	
Number.....	110
Horsepower.....	10,802
Electric motors—	
Number.....	16
Horsepower <sup>1</sup> .....	585
Other power, horsepower.....	190
Rented: <sup>2</sup>	
Electric, horsepower.....	1,449
All other, horsepower.....	828

<sup>1</sup> Includes electric power generated by steam engines reported above.

<sup>2</sup> Includes power rented from other manufacturers.