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# METROPOLITAN DISTRICTS

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NEW YORK CITY	CLEVELAND
CHICAGO	BUFFALO
PHILADELPHIA	DETROIT
PITTSBURGH	CINCINNATI
BOSTON	BALTIMORE
ST. LOUIS	MINNEAPOLIS-ST. PAUL
SAN FRANCISCO-OAKLAND	

# STATISTICS OF MANUFACTURES FOR METROPOLITAN DISTRICTS.

## CITIES AND THEIR SUBURBS.

The metropolitan districts for which statistics are presented in this report include not only the area within the corporate limits of the city but also parts of the surrounding territory which may in a general way be regarded as closely associated with the development of the city. Statistics as to the population of important urban centers, which are termed "metropolitan districts," have been published in the Thirteenth Census bulletin entitled "Population of Cities," and the boundaries of the districts as there defined have been adopted for the presentation of statistics relative to manufactures. Although these districts were not defined on an industrial basis, it is believed that they include most of the important factories which are intimately connected with the growth of the central cities.

In many cases manufacturing establishments of considerable size are located just outside the boundaries of cities. Such sites are purposely chosen by manufacturers who wish to secure all the advantages of an urban location, such as a plentiful supply of labor, good shipping facilities, and the like, and at the same time escape as many as possible of the expenses and restrictions which they would incur in building their plants within the city limits. The corporate limits of some cities have been extended so as to take in important manufacturing suburbs, while the boundaries of other towns have remained unchanged, although important manufacturing suburbs have developed. When city limits are established or extended the boundaries are in many instances fixed in such a way as to leave outside certain plants which would be expected to come within the city limits. Obviously, the statistics for a city alone do not always accurately represent its importance from an industrial standpoint. It follows, therefore, that the exact importance of a city as a manufacturing center can be ascertained only by combining with the statistics for establishments actually located in the city, figures for the neighboring manufacturing establishments identified or closely associated with its industrial development.

**Method of defining districts.**—The metropolitan district as defined for the census of 1910, in a general way consists of the city, together with the civil divisions of urban character lying within 10 miles of the city limits. Divisions which lie partly within and partly without the 10-mile limit are included if either one-half of their total population or one-half of their

total area comes within that limit. State boundaries are disregarded, so that in some cases the metropolitan district lies partly in two states. The area within the 10-mile limit thus defined is, of course, a very different thing from the area of a circle having as its radius a line extending 10 miles from the center of the city; nor is it the area bounded by a line drawn parallel to the city boundary at an exact distance of 10 miles, because in mapping out the district no civil divisions can be subdivided. Hence the outline of the area does not follow geometrical lines, but conforms to the boundaries of the political divisions which are on the outer edge of the included area. Owing to this fact, the boundaries of the adjacent territory thus defined sometimes vary considerably in their actual distance from the city lines. The area considered in this report is the net area, or land surface only.

**Districts for which statistics are presented.**—The statistics for 13 districts only are shown in the report, as the retabulation necessary to make a similar presentation of the figures for all metropolitan districts in the United States is impracticable. The metropolitan districts were selected for this presentation according to their population.

The central cities of the districts selected are, in the order of the importance of the districts as manufacturing centers, as follows: New York, Chicago, Philadelphia, Pittsburgh, Boston, St. Louis, Cleveland, Buffalo, Detroit, Cincinnati, Baltimore, Minneapolis and St. Paul, and San Francisco and Oakland. The districts are presented in the same order in the report.

**Comparison with earlier censuses.**—This report is a continuation of a similar report prepared in connection with the census of manufactures of 1904 (Bulletin 101, Industrial Districts, 1905), which contains statistics for 1904 and 1899 for 13 "industrial" districts. The central cities represented in the earlier bulletin are the same as those in the present report, except that Providence was included while Detroit was not.

Owing to the fact that different methods were employed in mapping out "metropolitan" and "industrial" districts, the area of the metropolitan district in 1909 is in most cases very different from that of the industrial district in 1904 and 1899. Since in the case of Boston a strict application of the rule used for determining metropolitan districts at the population census of 1910 would have given an area almost identical with the area of the industrial district of Boston in 1904 and 1899, the latter area was for conveni-

ence of comparison considered as the metropolitan district. The same was true of New York City, except that Nassau County, and a part of the town of Rye, N. Y., which were not included in the industrial district, were added to the metropolitan district, and Maywood borough, N. J., which was in the industrial district, was not included in the metropolitan district. In the case of the other industrial districts shown in the bulletin mentioned, the areas were so different from the metropolitan districts, as determined by the application of the rule described above, that no attempt was made to secure conformity.

On account of the differences in the areas as defined for the two reports, it was deemed advisable, in compiling the tables showing totals for the districts at the various censuses, to segregate the figures for the territory added and that deducted since 1904 and to compute increases only on the basis of the figures for the area which was comprised in the district at both censuses. In the comparison of selected industries, however, it was deemed best, except for the Pittsburgh district, to make no segregation of the figures for the territory added or deducted since 1904, as only a few of these industries were greatly affected; allusions to such will be found in the text.

**Summary of the statistics.**—Although the main purpose of this report is to bring out the importance of the individual districts as manufacturing centers in separate sections devoted to each, some interest and significance attach to the summarized statistics as presented in Tables 1, 2, and 3. Table 1 is a summary for 1909 of the statistics of manufacturing industries, with a statement of the population in 1910, for the 13 districts combined, for the central cities, and for the remainder of the territory comprised in these districts. The percentage which the figure for the combined cities represents of the total for all districts is shown in the case of each item.

	THIRTEEN METROPOLITAN DISTRICTS: 1909			
	Total.	Central cities.	Districts exclusive of central cities.	Per cent central cities are of total for districts.
Population <sup>1</sup> .....	18,326,338	13,848,151	4,478,187	75.6
Number of establishments.....	78,437	66,135	12,302	84.3
Persons engaged in manufactures.....	2,789,034	2,115,967	673,067	75.9
Proprietors and firm members.....	78,196	67,113	11,083	85.8
Salaried employees.....	363,120	294,272	68,848	81.0
Wage earners (average number).....	2,347,718	1,754,582	593,136	74.7
Primary horsepower.....	4,442,233	2,640,197	1,802,036	59.4
Capital.....	\$7,056,832,487	\$4,984,243,416	\$2,072,489,071	70.6
Expenses.....	7,768,863,123	5,699,226,724	2,069,636,399	73.4
Services.....	1,768,942,349	1,347,549,736	421,392,613	76.2
Salaries.....	446,192,628	358,593,706	87,598,922	80.4
Wages.....	1,322,749,721	988,956,030	333,793,691	74.8
Materials.....	5,126,778,739	3,644,994,395	1,481,784,344	71.1
Miscellaneous.....	873,142,035	706,682,593	166,459,442	80.9
Value of products.....	8,658,267,349	6,371,374,946	2,286,892,403	73.6
Value added by manufacture.....	3,531,488,610	2,726,380,551	805,108,059	77.2

<sup>1</sup> April 15, 1910.

By reference to Table 3, page 905, it will be seen that in 1909 the 13 metropolitan districts combined embraced 3,416,019 acres (approximately 5,338 square miles). Of this amount 733,158 acres represented the area of the cities and 2,682,861 acres that of the outside territory.

In 1909 the combined districts had 78,437 manufacturing establishments, which gave employment to an average of 2,789,034 persons during the year and paid out \$1,768,942,349 in salaries and wages. Of the persons employed, 2,347,718 were wage earners. These establishments turned out products to the value of \$8,658,267,349, to produce which materials costing \$5,126,778,739 were utilized. The value added by manufacture was thus \$3,531,488,610, which figure best represents the net wealth created by manufacturing operations during the year.

The percentages which the statistics for the group of central cities represent of the totals for the districts range from 59.4 per cent for primary horsepower to 85.8 per cent for proprietors and firm members. The central cities contained 75.6 per cent of the population of the districts in 1910 and contributed 73.6 per cent of the value of manufactured products in 1909.

**Comparison with United States totals.**—Table 2 is a summary of the statistics of manufacturing industries in 1909 and of the population in 1910 for the United States and for the group of 13 metropolitan districts, together with the percentages which this group reported of the totals for the United States.

	United States.	THIRTEEN METROPOLITAN DISTRICTS: 1909	
		Number or amount.	Per cent of total for United States.
Population <sup>1</sup> .....	91,972,266	18,326,338	19.9
Number of establishments.....	268,491	78,437	29.2
Persons engaged in manufactures.....	7,678,578	2,789,034	36.3
Proprietors and firm members.....	273,265	78,196	28.6
Salaried employees.....	790,267	363,120	45.9
Wage earners (average number).....	6,615,046	2,347,718	35.5
Primary horsepower.....	18,675,376	4,442,233	23.8
Capital.....	\$18,428,269,706	\$7,056,832,487	38.3
Expenses.....	18,454,089,599	7,768,863,123	42.1
Services.....	4,365,612,851	1,768,942,349	40.5
Salaries.....	938,574,967	446,192,628	47.5
Wages.....	3,427,037,884	1,322,749,721	38.6
Materials.....	12,142,790,878	5,126,778,739	42.2
Miscellaneous.....	1,945,685,870	873,142,035	44.9
Value of products.....	20,672,051,870	8,658,267,349	41.9
Value added by manufacture.....	8,529,260,992	3,531,488,610	41.4

<sup>1</sup> April 15, 1910.

Of the total number of manufacturing establishments in the United States in 1909 (268,491), 78,437, or 29.2 per cent, were in the 13 metropolitan districts, and these establishments contributed products valued at \$8,658,267,349, or 41.9 per cent of the total value of products for the United States. These districts are collectively more important from the industrial standpoint than from that of population. Their combined population represented 19.9 per cent of the

METROPOLITAN DISTRICTS.

total for the United States in 1910, while the percentages for the items relating to manufactures for 1909 range from 23.8 for primary horsepower to 47.5 for salaries.

Table 3 is a detailed statement of the statistics of manufactures, population, and area, as reported at the Thirteenth Census for each of the metropolitan districts included in the report.

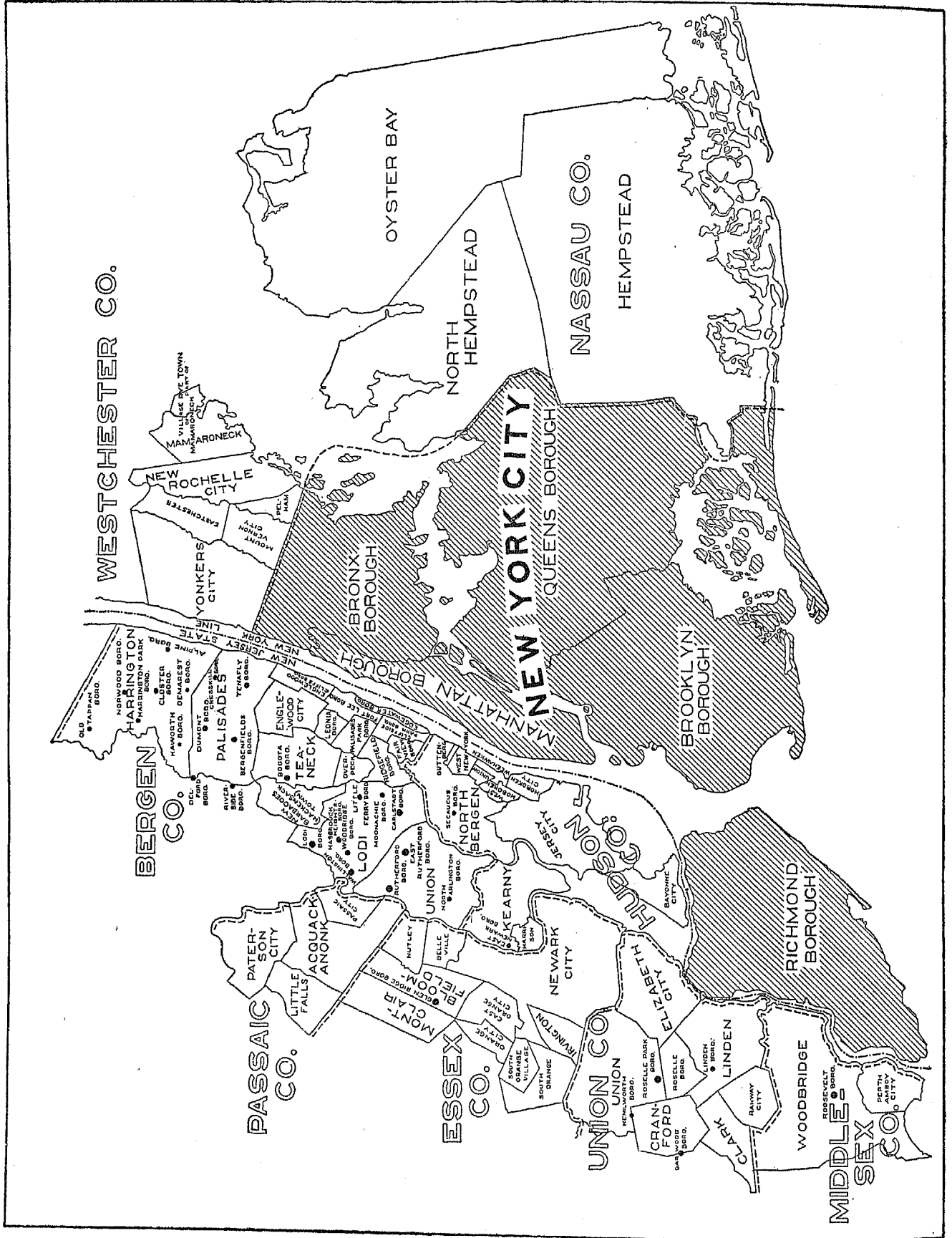
MANUFACTURES, POPULATION, AND AREA FOR THIRTEEN SELECTED METROPOLITAN DISTRICTS: 1909.

METROPOLITAN DISTRICT.	Popula- tion. <sup>1</sup>	Area in acres.	Number of estab- lish- ments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse- power.	Capital.	Sal- aries.	Wages.	Materials.	Miscel- laneous ex- penses.	Value of products.	Value added by manu- facture.
				Total.	Pro- pri- etors and firm mem- bers.	Sal- aried em- ployees.	Wage earners (average num- ber).								
Expressed in thousands.															
<b>Total</b> .....	18,326,338	3,416,019	78,437	2,789,034	78,196	363,120	2,347,718	4,442,233	\$7,056,832	\$446,193	\$1,322,750	\$5,126,779	\$873,142	\$8,658,267	\$3,531,488
New York.....	6,474,568	616,928	31,782	948,706	34,476	125,055	789,175	820,413	2,117,433	159,275	448,480	1,710,325	342,295	2,970,143	1,259,818
Chicago.....	2,446,921	409,087	10,202	393,859	8,600	59,335	325,924	739,229	1,144,003	71,161	195,406	870,587	135,243	1,408,780	538,193
Philadelphia.....	1,972,342	437,733	9,568	358,218	10,263	39,008	308,947	497,453	863,969	46,619	154,314	529,992	79,849	911,014	381,022
Pittsburgh.....	1,044,743	405,880	2,369	163,258	2,102	20,692	140,464	791,047	642,527	24,034	90,116	366,892	37,878	578,815	211,923
Boston.....	1,620,470	335,905	5,389	214,641	4,989	23,700	185,952	223,886	444,558	29,074	103,321	315,771	55,036	504,055	248,284
St. Louis.....	828,733	197,993	2,951	126,453	2,045	17,873	106,535	228,925	356,356	22,613	59,545	266,552	45,429	430,170	163,618
Cleveland.....	613,270	103,174	2,230	103,709	1,771	12,850	83,088	216,166	236,911	16,150	50,655	159,897	27,865	281,992	122,095
Buffalo.....	488,661	132,413	1,964	75,086	1,638	9,876	63,572	322,280	280,053	11,190	36,173	180,458	22,109	279,852	99,394
Detroit.....	500,982	96,554	2,104	101,482	1,865	13,596	86,021	136,460	210,402	16,028	46,010	137,848	28,322	268,900	131,052
Cincinnati.....	593,804	111,772	2,827	95,571	2,593	12,046	80,332	140,254	212,556	15,602	41,736	139,107	37,094	260,400	121,268
Baltimore.....	658,715	184,660	2,668	94,954	2,790	10,339	81,825	125,080	193,735	11,888	36,097	165,086	23,899	200,213	95,127
Minneapolis-St. Paul.....	520,256	94,539	1,844	59,920	1,674	9,978	48,268	119,219	160,628	10,872	27,725	166,823	20,069	244,340	77,517
San Francisco-Oakland.....	686,873	289,381	2,539	53,177	3,390	8,172	41,615	81,821	187,701	10,787	32,512	117,441	18,654	199,593	82,152

<sup>1</sup> April 15, 1910.



NEW YORK CITY METROPOLITAN DISTRICT: 1908.



## NEW YORK CITY METROPOLITAN DISTRICT.

**Territory included.**—The metropolitan district of New York City embraces 616,928 acres of territory, of which 183,555 acres constitute the area of New York, and 433,373 acres the area of the outside territory. The population of the city of New York in 1910 was 4,766,883, and that of the outside territory 1,707,685, the total for the district being 6,474,568.

As defined at the census of 1910, the metropolitan district includes in addition to the central city 15 cities, 41 boroughs, 2 villages, 17 towns, and 17 townships. The following is a list by states and counties of the various primary divisions included in the metropolitan district for 1909. Nassau County, N. Y., and that part of Mamaroneck village, in the town of Rye, have been added to the area since 1904; and the borough of Maywood, N. J., has been deducted from it.

### NEW YORK.

New York City, comprising Kings, New York, Queens, and Richmond Counties.

#### NASSAU COUNTY.

Hempstead town.	Oyster Bay town.
North Hempstead town.	

#### WESTCHESTER COUNTY.

Eastchester town.	New Rochelle city.
Mamaroneck town.	Pelham town.
Mamaroneck village.	Yonkers city.
Mount Vernon city.	

### NEW JERSEY.

#### BERGEN COUNTY.

Alpine borough.	Hasbrouck Heights borough.
Bergenfields borough.	Haworth borough.
Bogota borough.	Leonia borough.
Carlstadt borough.	Little Ferry borough.
Cliffside Park borough.	Lodi borough.
Closter borough.	Lodi township.
Cresskill borough.	Moonachie borough.
Delford borough.	North Arlington borough.
Demarest borough.	Norwood borough.
Dumont borough.	Old Tappan borough.
East Rutherford borough.	Overpeck township.
Edgewater borough.	Palisades township.
Englewood city.	Palisades Park borough.
Englewood Cliffs borough.	Ridgefield borough.
Fairview borough.	Riverside borough.
Fort Lee borough.	Rutherford borough.
Hackensack town (coextensive with New Barbadoes township).	Teaneck township.
Harrington township.	Tenafly borough.
Harrington Park borough.	Union township.
	Wallington borough.
	Woodridge borough.

### NEW JERSEY—Continued.

#### ESSEX COUNTY.

Belleville township.	Newark city.
Bloomfield town.	Nutley town.
East Orange city.	Orange city.
Glen Ridge borough.	South Orange township.
Irvington town.	South Orange village.
Montclair town.	

#### HUDSON COUNTY.

Bayonne city.	North Bergen township.
East Newark borough.	Secaucus borough.
Guttenberg town.	Union town.
Harrison town.	Weehawken township.
Hoboken city.	West Hoboken town.
Jersey City.	West New York town.
Kearny town.	

#### MIDDLESEX COUNTY.

Perth Amboy city (coextensive with Perth Amboy township).	Roosevelt borough.
	Woodbridge township.

#### PASSAIC COUNTY.

Acquackanonk township.	Passaic city.
Little Falls township.	Paterson city.

#### UNION COUNTY.

Clark township.	Linden township.
Cranford township.	Rahway city.
Elizabeth city.	Roselle borough.
Garwood borough.	Roselle Park borough.
Kenilworth borough.	Union township.
Linden borough.	

On page 906 is an outline map of the metropolitan district as constituted in 1909, showing the various primary divisions included.

**Summary for the district.**—Table 4 is a summary for 1909 of the statistics of manufacturing industries, with a statement of the population in 1910, for the New York City metropolitan district, for 22 incorporated places and for the remainder of the district. The percentage which the figure for New York City represents of the total for the district is shown in the case of each item.

In 1909 the New York City metropolitan district had 31,782 manufacturing establishments, which gave employment to an average of 948,706 persons during the year, and paid out \$607,755,267 in salaries and wages. Of the persons employed, 789,175 were wage earners. These establishments turned out products

to the value of \$2,970,143,382, to produce which materials costing \$1,710,324,660 were utilized. The value added by manufacture was thus \$1,259,818,722. The New York City district ranked first in 1909 among all the metropolitan districts of the United States in the value of its manufactured products.

In the New York City district the greater part of the value of the manufactured products of the district was reported by factories within the central city,

which is the leading commercial city and the industrial metropolis of the United States. New York City contained nearly three-fourths (73.6 per cent) of the population of the district in 1910, and contributed more than two-thirds (68.3 per cent) of the value of products in 1909. Its manufacturing establishments constituted over four-fifths (81.6 per cent) of all in the district and gave employment to more than seven-tenths of the wage earners (70.2 per cent).

Table 4

	Population. <sup>1</sup>	Number of establishments.	PERSONS ENGAGED IN MANUFACTURES.				Primary horsepower.	Capital.
			Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).		
The district.....	6,474,568	31,782	948,706	34,476	125,055	789,175	820,413	\$2,117,433,047
New York City.....	4,706,883	25,938	680,510	29,055	97,453	554,002	429,003	1,304,352,683
District exclusive of New York City—total.....	1,707,685	5,844	268,196	5,421	27,602	235,173	391,410	753,080,364
Mount Vernon.....	30,919	90	1,492	76	209	1,207	1,560	3,201,654
New Rochelle.....	28,807	42	882	39	103	735	620	1,377,185
Yonkers.....	79,803	158	13,746	150	585	12,711	16,978	58,768,555
Bayonne.....	55,545	97	8,790	84	1,187	7,519	28,094	62,280,685
Bloomfield.....	15,070	45	3,435	35	443	2,957	6,031	7,768,644
East Orange.....	34,371	42	1,801	45	430	1,386	1,087	3,849,230
Elizabeth.....	73,409	103	13,670	132	801	12,737	20,124	20,773,807
Hackensack.....	14,050	46	873	44	91	738	1,021	1,845,897
Harrison.....	14,498	54	7,339	35	396	6,500	8,021	20,602,053
Hoboken.....	70,324	244	9,339	206	1,033	8,100	11,108	19,898,095
Irvington.....	11,877	51	656	40	76	540	907	1,405,795
Jersey City.....	267,770	745	30,239	614	4,171	25,454	35,917	79,793,932
Kearny.....	18,659	13	3,111	14	277	2,820	5,879	6,551,151
Montclair.....	21,550	23	321	17	52	252	1,245	1,104,570
Newark.....	347,469	1,858	69,986	1,704	8,327	59,955	78,263	164,232,686
Orange.....	29,630	85	5,054	85	606	4,383	5,962	11,147,977
Passaic.....	54,773	169	16,386	145	1,155	15,086	23,245	42,840,318
Paterson.....	125,600	702	35,118	871	2,241	32,004	35,889	66,401,725
Perth Amboy.....	32,121	80	6,595	55	674	5,866	22,314	25,100,426
Union.....	21,023	83	3,155	83	178	2,894	3,034	10,910,251
West Hoboken.....	35,403	137	3,179	154	243	2,782	1,477	4,881,242
West New York.....	13,560	66	1,779	70	201	1,508	1,443	4,162,662
Remainder.....	311,385	846	31,192	745	3,408	27,039	81,101	138,201,324
Per cent New York City is of total for district.....	73.6	81.6	71.7	84.3	77.9	70.2	52.3	64.4

	EXPENSES.						Value of products.	Value added by manufacture.
	Aggregate.	Services.			Materials.	Miscellaneous.		
		Total.	Salaries.	Wages.				
The district.....	\$2,660,374,879	\$807,755,267	\$159,275,011	\$448,480,256	\$1,710,324,660	\$342,294,952	\$2,970,143,382	\$1,259,818,722
New York City.....	1,803,901,431	445,771,857	122,073,725	323,698,132	1,092,155,333	266,004,241	2,029,692,576	937,537,243
District exclusive of New York City—total.....	856,413,448	161,983,410	37,201,286	124,782,124	618,169,327	76,260,711	940,450,806	322,281,479
Mount Vernon.....	2,618,139	1,010,518	209,007	801,511	1,285,557	322,004	3,376,415	2,090,858
New Rochelle.....	1,530,439	594,831	113,118	481,713	814,140	121,468	1,668,724	854,584
Yonkers.....	54,401,098	8,024,408	1,298,380	6,726,118	43,201,919	3,264,081	59,333,865	16,131,946
Bayonne.....	69,354,728	6,537,438	1,762,181	4,775,257	58,932,541	3,884,749	73,640,900	14,708,359
Bloomfield.....	5,485,678	1,891,323	590,790	1,300,533	2,300,773	1,293,582	5,894,710	3,593,937
East Orange.....	3,296,385	1,122,402	264,423	857,979	1,767,600	406,383	3,724,879	1,957,279
Elizabeth.....	26,560,257	8,565,061	1,052,344	7,512,717	16,428,569	1,566,627	29,147,334	12,718,765
Hackensack.....	1,787,311	478,674	118,504	360,170	899,340	409,297	1,977,966	1,078,020
Harrison.....	11,241,701	4,597,295	925,134	3,672,161	5,413,473	1,230,933	13,142,377	7,728,904
Hoboken.....	17,735,572	5,917,896	1,364,984	4,552,912	9,469,108	2,348,568	20,413,015	10,943,907
Irvington.....	2,806,290	380,529	102,656	277,873	2,343,001	82,760	3,017,824	674,823
Jersey City.....	120,141,941	18,204,200	5,048,633	13,215,567	89,317,227	12,560,514	128,774,978	39,457,751
Kearny.....	7,415,452	1,809,477	269,132	1,549,345	5,263,062	342,913	8,306,276	3,043,214
Montclair.....	982,042	182,472	43,711	138,761	668,579	130,991	1,025,585	357,006
Newark.....	181,530,641	44,852,938	11,777,343	33,075,595	114,679,408	21,998,295	202,511,520	87,832,112
Orange.....	8,362,617	3,235,190	772,282	2,462,908	3,688,432	1,438,995	9,175,910	5,487,478
Passaic.....	35,018,909	8,052,870	1,783,955	6,268,915	24,334,845	2,631,194	41,729,257	17,394,412
Paterson.....	62,876,266	18,185,459	2,980,915	15,204,544	34,727,598	9,963,209	69,584,351	34,856,753
Perth Amboy.....	69,109,510	3,665,330	986,001	2,679,329	63,932,054	1,512,126	73,092,703	9,100,649
Union.....	6,827,482	1,640,485	229,669	1,410,816	3,538,585	1,648,412	7,941,047	4,402,462
West Hoboken.....	4,830,311	1,692,857	267,930	1,424,927	2,488,025	679,429	5,577,439	3,089,414
West New York.....	8,953,573	965,826	236,588	729,238	7,408,709	579,038	9,273,717	1,865,008
Remainder.....	153,427,106	20,315,841	5,003,606	15,312,235	125,266,782	7,844,483	168,120,014	42,853,232
Per cent New York City is of total for district.....	67.8	73.3	76.6	72.2	63.9	77.7	68.3	74.4

<sup>1</sup> April 15, 1910.

Of the places outside of New York City for which statistics are given separately, Newark had the largest value of products in 1909, representing 6.8 per cent of the total for the metropolitan district. The population of Newark in 1910 formed 5.4 per cent of the total for the district.

The part of the district that was outside the cities and towns for which separate figures are given, with an aggregate population equal to 4.8 per cent of the total for the district, contributed 5.7 per cent of the value of the products.

The value of the manufactured products of New York City in 1909 was nearly 60 per cent greater than was reported by Chicago, the city next in rank in this respect, and it was also greater than the value of products reported by any state other than New York, with the exception of Pennsylvania. New York City ranked first in value of products among the cities of the United States in 5 of the 15 leading manufacturing industries of the United States, namely, the making of women's clothing, with over two-thirds (69.3 per cent) of the total for the United States; the making of men's clothing, including shirts, with 38.4 per cent of the total; printing and publishing, with 24.9 per cent; the bakery industry, with 15.6 per cent; and the manufacture of tobacco products, with 15 per cent.

The 22 cities and towns in the district exclusive of New York City for which separate statistics are shown in the table together reported 26 per cent of the value of products for the district in 1909 and a somewhat lower proportion of the population in 1910—22 per cent. In these cities and towns, which are mentioned here according to rank in value of products, the leading industry or industries were as follows: Newark, the smelting and refining of copper, the tanning, currying, and finishing of leather, foundries and machine shops, the manufacture of jewelry, and the brewery industry; Jersey City, slaughtering and meat packing, the manufacture of tobacco products, the gas and soap industries, the refining of sugar, and the refining of petroleum; Bay-

onne, the refining of petroleum and smelting and refining from clippings, sweepings, and scrap; Perth Amboy, the smelting and refining of copper and the manufacture of wire; Paterson, the silk-goods industry and the dyeing and finishing of textiles; Yonkers, the refining of sugar and the manufacture of carpets and rugs; Passaic, the manufacture of woolen and worsted goods and of cotton goods; Elizabeth, the sewing-machine industry and the manufacture of wire; Hoboken and Harrison, foundries and machine shops; West New York, the refining of lard and the manufacture of cottonseed oil and cake; Orange, the manufacture of phonographs and graphophones and of fur-felt hats; Kearny, slaughtering and meat packing and the manufacture of oilcloth and linoleum; Union, the silk-goods industry; Bloomfield, the manufacture of electrical machinery, apparatus, and supplies; West Hoboken, the silk-goods industry; East Orange, the manufacture of electrical machinery, apparatus, and supplies; Mount Vernon, the manufacture of brass and bronze products; Irvington, the reducing and refining of gold and silver from clippings, sweepings, and scrap; Hackensack, the silk-goods industry; New Rochelle, printing and publishing; and Montclair, the paper-goods industry.

Considerable industrial activity was manifested in 1909 by some of the places for which statistics are not shown separately. Among these were the following, with leading industries as stated: Weehawken, the manufacture of electrical machinery, apparatus, and supplies and of wall paper; Garwood, electrical machinery, apparatus, and supplies; Lodi, the dyeing and finishing of textiles; Belleville, the manufacture of fur-felt hats and of brass and bronze products; Rahway, printing and publishing and the manufacture of steel castings; Edgewater, the chemical industry; and Nutley, the manufacture of cutlery and of artificial leather.

Comparison with earlier censuses.—Table 5 is a comparative summary of the statistics for 1909, 1904, and 1899, together with the percentages of increase.

	1909			1904			1899			PER CENT OF INCREASE.		
	Total.	Territory added since 1904.	Remainder of district. <sup>1</sup>	Total.	Territory deducted since 1904.	Remainder of district. <sup>1</sup>	Total.	Territory deducted since 1904.	Remainder of district. <sup>1</sup>	1899-1909	1904-1909	1899-1904
Population.....	2 6,474,568	86,215	2 6,388,353	2 5,294,682	2 687	2 5,293,995	4 4,539,390	4 536	4 4,538,854	40.7	20.7	16.6
Number of establishments.....	31,782	186	31,596	25,257	4	25,261	23,262	2	23,260	35.8	25.1	8.6
Persons engaged in manufactures.....	948,706	1,398	947,308	764,370	138	764,508	(c)	85	(c)	(c)	24.0	(c)
Proprietors and firm members.....	34,476	212	34,264	28,870	(c)	28,870	(c)	(c)	(c)	(c)	18.7	(c)
Salariat employees.....	125,059	86	124,973	80,472	16	80,488	54,864	7	54,857	127.8	55.3	46.7
Wage earners (average number).....	789,175	1,100	788,075	654,988	122	654,866	539,690	78	539,612	46.0	20.3	21.4
Primary horsepower.....	820,413	2,524	817,889	578,371	605	577,766	(c)	(c)	(c)	(c)	41.6	(c)
Capital.....	\$2,117,433,047	\$3,839,007,412	\$1,133,594,040	\$1,572,628,047	\$585,677	\$1,572,042,370	\$1,224,823,447	\$189,884	\$1,224,633,563	72.6	34.4	25.4
Expenses.....	2,660,374,879	2,134,631	2,658,240,248	1,905,102,665	568,804	1,904,533,861	1,404,978,582	162,636	1,404,815,946	89.2	39.6	35.6
Services.....	607,765,267	691,479	607,063,788	436,238,272	101,154	436,137,118	332,657,663	46,306	332,611,357	82.5	39.2	31.1
Salaries.....	159,275,011	80,861	159,194,150	94,547,089	37,534	94,509,555	66,057,921	14,800	66,043,121	141.0	63.4	43.1
Wages.....	448,480,256	610,618	447,869,638	341,691,183	63,620	341,627,563	266,599,742	31,500	266,568,242	68.0	31.1	28.2
Materials.....	1,710,324,660	1,255,292	1,709,069,368	1,209,010,634	398,892	1,208,611,742	910,389,938	99,203	910,290,735	87.7	41.4	32.8
Miscellaneous.....	342,294,952	187,860	342,107,092	259,853,759	68,758	259,785,001	161,930,981	17,127	161,913,854	111.3	31.7	60.4
Value of products.....	2,970,143,382	2,568,790	2,967,574,592	2,144,488,093	692,929	2,143,795,164	1,614,267,347	229,948	1,614,037,399	83.9	38.4	32.8
Value added by manufacture.....	1,259,818,722	1,313,498	1,258,505,224	935,477,469	293,337	935,184,122	703,877,409	130,745	703,746,664	78.8	34.6	32.9

<sup>1</sup> Figures in this column used in computing percentages of increase.  
<sup>2</sup> April 15, 1910.

<sup>2</sup> State censuses of June 1, 1905.  
<sup>4</sup> June 1, 1900.

<sup>3</sup> Figures not available.

For purpose of accurate comparison the statistics for 1909 have been adjusted by segregating the figures of the territory added since 1904; and those for 1904 and 1899 by segregating the figures for the territory deducted since 1904.

The percentages of increase in all items, except average number of wage earners and miscellaneous expenses, were greater during the later five-year period 1904-1909 than during the period 1899-1904. The percentages of increase during the decade were especially large for salaries, salaried employees, and miscellaneous expenses. The average number of wage earners increased 46 per cent, wages 68 per cent, and the value of products 83.9 per cent.

The rate of increase from 1904 to 1909 in the amount of primary horsepower used was 41.6 per cent. Statistics as to the primary power used in 1899 are not available.

The proportions of the population and manufactures in the outside territory of the metropolitan district are in general increasing, as is indicated by the percentages in Table 6.

	PER CENT TERRITORY OUTSIDE OF NEW YORK CITY IS OF TOTAL FOR DISTRICT.		
	1909 <sup>1</sup>	1904 <sup>2</sup>	1899 <sup>2</sup>
Population.....	25.4	24.2	24.3
Number of establishments.....	17.0	17.5	17.3
Persons engaged in manufactures.....	28.2	27.6	(5)
Proprietors and firm members.....	15.2	14.6	(5)
Salaried employees.....	22.0	21.0	20.2
Wage earners (average number).....	29.7	29.0	28.0
Primary horsepower.....	47.5	44.1	(5)
Capital.....	35.4	35.7	30.3
Expenses.....	32.1	29.3	27.8
Services.....	26.6	26.4	25.3
Salaries.....	23.3	22.7	21.8
Wages.....	27.7	27.4	26.2
Materials.....	36.1	32.3	30.3
Miscellaneous.....	22.2	20.4	18.6
Value of products.....	31.6	28.8	27.3
Value added by manufacture.....	25.5	24.2	23.5

<sup>1</sup> Based on figures for district as constituted in 1909, exclusive of territory added since 1904.

<sup>2</sup> Based on figures for district as constituted in 1904, exclusive of territory deducted since 1904.

<sup>3</sup> Figures not available.

The proportion of the population of the district reported from the territory outside of New York City increased from 24.3 per cent in 1900 to 25.4 per cent in 1910; while the proportion of the value of products increased from 27.3 per cent in 1899 to 28.8 per cent in 1904 and 31.6 per cent in 1909.

**Leading industries.**—Table 7 (p. 911) gives statistics for 1909 for the industries of the district having products valued at \$500,000 or more, so far as separate figures can be presented.

Among the industries shown separately in the table there are 20 for which totals for the district can not be published, because to do so would disclose individual operations; and 3 which were not carried on in the part of the district which is outside the corporate

limits of New York City. In the case of all but 3 of the 20 industries of the former class the statistics shown are figures for New York City exclusively.

The leading industry of the New York metropolitan district in 1909 was the manufacture of women's clothing. The 3,058 establishments engaged in the industry there in that year reported products valued at \$270,646,086, or 9.1 per cent of the value of products of all industries in the district. The manufacture of men's clothing, including shirts, ranked next, with 2,630 establishments and products valued at \$224,943,048, or 7.6 per cent of the total. Other important industries, with the value of their products, were: Printing and publishing, \$194,486,953; slaughtering and meat packing, \$131,081,148; foundries and machine shops, \$107,297,665; the manufacture of tobacco products, \$78,783,942; the bakery industry, \$77,472,491; the manufacture of silk goods, including the operations of throwsters, \$74,570,282; the brewery industry, \$72,850,405; the making of millinery and lace goods, \$56,072,956.

Among the more important industries that can not be shown separately without disclosing the operations of individual establishments are the smelting and refining of copper, the refining of sugar, the refining of petroleum, the roasting and grinding of coffee, the smelting and refining of lead, the manufacture of carpets and rugs other than rag, of wire, of flour-mill and gristmill products, and of sewing machines and attachments, lapidary work, the manufacture of lead pencils, of oilcloth and linoleum, and the distillation of liquors. Four of these had products in 1909 valued at very much more than \$10,000,000.

**Comparative summary, by industries.**—The number of establishments, average number of wage earners, and value of products for such of the industries as can be shown separately and had a value of products amounting to \$10,000,000 or more in 1909 are given in Table 8 (p. 913) for the district as constituted in 1909, 1904, and 1899, respectively.

The greatest absolute increase in value of products shown for any single industry during the decade, amounting to \$165,984,908, or 158.6 per cent, was that for the women's clothing industry. The greatest relative increase for any of the industries included in the table, 673.4 per cent, was reported for smelting and refining from clippings, sweepings, and scrap.

An important industry not given in the comparative table is the manufacture of men's furnishing goods. At the censuses of 1904 and 1899 some of the establishments reporting as chief products suspenders, garters, and elastic woven goods were excluded from this industry. As it is not practicable to segregate these establishments, no proper comparison is possible.

# NEW YORK CITY METROPOLITAN DISTRICT.

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## SUMMARY FOR THE NEW YORK CITY METROPOLITAN DISTRICT, BY INDUSTRIES: 1909.

**Table 7**

INDUSTRY.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Miscellaneous expenses.	Value of products.	Value added by manufacture.
		Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).								
<b>All Industries</b> .....	<b>31,782</b>	<b>948,706</b>	<b>34,476</b>	<b>125,055</b>	<b>789,175</b>	<b>820,413</b>	<b>\$2,117,433,047</b>	<b>\$159,275,011</b>	<b>\$448,480,256</b>	<b>\$1,710,324,660</b>	<b>\$342,294,952</b>	<b>\$2,970,143,382</b>	<b>\$1,259,818,722</b>
Artificial flowers and feathers and plumes.....	328	9,807	431	906	8,530	216	7,989,321	1,026,438	3,459,096	12,268,057	1,452,932	21,197,040	8,928,083
Artificial stone.....	78	658	58	62	538	724	1,159,539	54,221	328,488	396,752	101,374	1,076,577	879,825
Automobiles, including bodies and parts.....	73	3,183	38	406	2,739	2,066	5,835,500	617,776	2,051,508	3,267,755	1,197,937	7,768,871	4,501,116
Awnings, tents, and sails.....	102	794	105	95	594	295	935,858	89,187	381,899	914,647	158,933	1,875,687	931,040
Bags, other than paper.....	14	893	9	82	802	397	1,407,779	122,360	277,031	3,407,866	193,714	4,093,706	685,840
Bags, paper.....	9	441	9	65	367	200	945,286	179,919	155,542	1,057,550	88,009	1,682,054	624,504
Baskets, and rattan and willow ware.....	33	505	32	38	435	167	476,225	42,686	299,327	453,483	114,737	1,074,259	620,776
Blackening and cleansing and polishing preparations.....	89	930	69	283	584	486	1,274,916	341,041	252,266	1,401,278	574,342	2,831,314	1,430,036
Books and shoes, including cut stock and findings.....	197	10,785	206	911	9,668	3,062	10,331,048	1,169,579	5,181,342	11,654,728	1,535,178	21,331,290	9,676,562
Boxes, cigar.....	131	1,396	32	108	1,256	913	930,242	138,760	558,450	915,826	133,685	1,842,913	927,087
Boxes, fancy and paper.....	244	9,882	271	672	8,939	2,640	6,124,236	758,541	3,422,516	5,031,900	1,157,352	11,664,690	6,032,730
Brass and bronze products.....	221	5,668	211	629	4,818	7,083	9,254,024	834,085	2,860,378	7,016,892	1,261,510	13,899,927	6,882,235
Bread and other bakery products.....	3,188	25,624	3,566	2,840	19,218	8,206	31,867,231	2,339,594	12,988,285	47,302,350	5,509,953	77,472,491	30,170,141
Brick and tile.....	19	869	18	39	812	2,868	1,234,288	51,615	395,666	194,757	949,802	755,045	755,045
Brushes.....	100	2,203	107	258	1,898	1,185	3,022,866	291,935	838,550	2,071,214	426,210	4,236,023	2,164,809
Buttons.....	206	5,942	266	359	5,317	2,065	3,816,014	437,109	2,220,200	3,494,352	521,668	7,851,408	4,357,056
Canning and preserving.....	109	1,623	113	279	1,231	1,394	4,002,697	303,567	595,816	3,996,013	759,638	6,394,143	2,398,130
Carrriages and wagons and materials.....	352	3,595	415	177	3,003	2,688	5,202,973	255,434	2,007,216	2,284,155	492,102	6,132,571	3,848,416
Cars and general shop construction and repairs by steam-railroad companies.....	15	7,220	.....	693	6,527	6,310	4,549,246	539,632	3,975,199	4,478,889	368,434	9,362,154	4,883,265
Cars and general shop construction and repairs by street-railroad companies.....	19	4,384	.....	249	4,135	5,050	9,727,277	257,740	2,620,117	3,076,782	319,970	6,280,610	3,203,828
Chemicals.....	68	6,233	18	1,010	5,205	15,043	30,592,316	1,821,533	3,201,333	19,465,937	2,561,521	31,453,662	11,987,725
Clocks and watches, including cases and materials.....	226	2,162	9	104	1,959	853	5,237,218	294,751	1,109,602	1,771,169	352,371	4,214,754	2,443,585
Clothing, men's, including shirts.....	2,630	82,618	3,781	6,963	71,874	8,214	92,480,114	8,301,209	40,105,627	115,831,472	39,662,224	224,943,048	109,111,578
Clothing, women's.....	3,058	113,859	4,410	12,280	97,169	11,999	82,872,421	13,351,994	54,484,844	146,799,740	24,933,901	270,646,086	123,840,346
Coffins, burial cases, and undertakers' goods.....	115	731	14	188	520	600	2,101,397	199,283	287,663	1,213,129	196,875	2,202,009	888,880
Confectionery.....	166	8,717	153	1,169	7,395	7,128	11,329,870	1,432,917	2,710,620	14,336,920	2,719,915	23,297,461	8,960,541
Cooperage and wooden goods, not elsewhere specified.....	70	2,435	65	125	2,245	2,963	6,681,717	174,982	1,070,361	4,867,356	373,842	7,665,105	2,197,749
Copper, tin, and sheet-iron products.....	614	16,202	572	1,480	14,150	9,248	30,549,085	1,848,360	8,217,995	17,343,960	2,220,470	32,831,045	15,487,085
Cordage and twine and jute and linen goods.....	314	6,626	2	263	6,371	13,635	13,730,735	353,503	2,177,320	6,152,150	1,318,787	10,168,084	4,015,934
Cordials and sirups.....	15	344	34	140	170	90	791,910	165,544	97,607	1,934,003	150,872	1,597,709	663,646
Coric, cutting.....	40	1,210	30	98	1,082	1,085	1,436,950	118,232	408,596	1,397,820	183,129	2,301,413	903,593
Corsets.....	50	4,458	42	443	3,973	901	3,947,876	576,370	1,516,500	3,477,259	1,367,385	7,946,519	4,469,260
Cotton goods, including cotton small wares.....	27	5,802	20	234	5,548	13,240	15,358,650	367,291	2,241,033	7,354,512	808,820	11,963,362	4,608,850
Cutlery and tools, not elsewhere specified.....	127	3,049	122	310	2,617	2,661	3,695,112	398,543	1,353,278	1,267,502	569,516	3,917,437	2,649,935
Dentists' materials.....	15	345	9	88	248	236	2,104,599	139,518	135,784	4,543,689	126,423	5,023,443	470,764
Dyeing and finishing textiles.....	123	12,332	94	831	11,407	19,663	24,638,493	1,505,647	5,465,548	8,099,303	1,885,688	19,708,877	11,609,574
Dyestuffs and extracts.....	24	378	11	245	522	3,761	4,708,332	411,715	342,305	4,108,284	621,112	4,468,799	1,039,515
Electrical machinery, apparatus, and supplies.....	224	10,731	97	3,124	16,510	17,657	39,639,581	3,792,667	8,846,952	21,017,199	5,312,274	42,625,196	21,907,997
Electroplating.....	109	727	135	56	536	525	360,068	49,773	340,317	227,090	94,510	670,190	749,100
Engraving and die-sinking.....	85	565	107	43	415	174	349,673	47,131	272,727	100,458	72,198	574,545	654,087
Fancy articles, not elsewhere specified.....	186	4,792	208	659	3,925	3,101	9,960,526	785,449	1,859,443	3,650,942	1,128,245	8,694,052	5,043,110
Fertilizers.....	13	1,295	2	144	1,149	2,275	7,072,644	227,400	588,440	5,322,004	433,111	7,254,333	1,932,329
Fireworks.....	8	608	3	44	561	130	910,301	82,880	238,577	460,225	139,589	684,685	624,460
Flags, banners, regalia, society badges, and emblems.....	59	759	64	102	593	117	824,952	81,104	225,740	745,335	177,745	1,435,091	689,756
Flavoring extracts.....	71	432	69	155	208	128	930,994	190,205	110,625	754,853	188,658	1,466,874	712,021
Food preparations.....	133	2,972	147	560	2,265	3,603	5,267,443	803,554	1,009,184	6,267,421	1,332,271	10,213,393	3,945,972
Foundry and machine-shop products.....	1,346	50,775	1,079	7,233	42,463	59,353	140,704,324	9,966,994	28,550,009	42,151,844	12,353,491	107,297,665	65,145,821
Fur goods.....	821	10,719	1,264	1,631	7,824	857	18,635,692	1,693,228	5,482,824	23,434,150	3,236,792	39,874,388	16,440,239
Furnishing goods, men's.....	330	10,760	417	1,604	8,729	1,428	13,386,885	1,026,320	3,762,299	17,063,707	2,546,743	20,264,496	11,800,786
Furniture and refrigerators.....	441	11,508	494	1,120	9,894	8,971	13,726,370	1,349,119	6,187,325	10,243,756	2,192,894	22,543,905	12,300,149
Furs, dressed.....	53	1,150	70	90	990	1,397	1,271,164	113,671	656,904	593,175	139,922	1,834,669	1,241,494
Gas and electric fixtures and lamps and reflectors.....	169	6,789	141	1,205	5,443	3,413	11,479,973	1,487,909	3,238,667	6,073,357	1,477,929	13,655,723	7,582,366
Gas, illuminating and heating.....	31	8,886	.....	2,825	6,061	28,881	231,325,446	2,952,102	3,888,165	15,425,665	9,951,608	43,934,683	28,609,018
Glass.....	9	948	3	61	884	450	1,260,955	96,277	486,696	280,502	106,528	1,127,865	847,363
Glass, cutting, staining, and ornamenting.....	144	2,684	167	216	2,301	630	2,252,506	290,617	1,505,239	1,298,170	359,726	3,954,295	2,656,125
Gold and silver, leaf and foil.....	53	603	63	15	525	66	380,994	10,388	271,835	595,632	74,338	1,066,846	471,214
Grease and tallow.....	42	823	43	63	717	1,401	3,576,687	101,791	417,260	1,682,517	391,196	2,750,728	1,077,211
Hair work.....	126	2,704	160	253	2,291	2	2,249,618	229,862	1,050,412	4,482,240	608,258	7,817,490	3,535,250
Hand stamps and stencils and brands.....	50	444	49	75	320	106	370,418	83,282	193,695	156,736	65,960	586,110	429,374
Hat and cap materials.....	41	1,408	41	106	1,261	1,230	3,351,914	138,179	515,118	3,444,123	188,329	4,771,957	1,327,834

<sup>1</sup> Excluding statistics for establishments located outside of the corporate limits of New York City, to avoid disclosure of individual operations. The figures for these establishments are included under the head of "All other industries."

<sup>2</sup> Excluding statistics for establishments located outside of the corporate limits of New York City and of Newark, to avoid disclosure of individual operations. The figures for these establishments are included under the head of "All other industries."

<sup>3</sup> Excluding statistics for establishments located outside of the corporate limits of New York City and of Paterson, to avoid disclosure of individual operations. The figures for these establishments are included under the head of "All other industries."



MANUFACTURES.

SUMMARY FOR THE NEW YORK CITY METROPOLITAN DISTRICT, BY INDUSTRIES: 1909—Continued.

Table 7—Continued.

INDUSTRY.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Miscellaneous expenses.	Value of products.	Value added by manufacture.
		Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).								
Hats and caps, other than felt, straw, and wool.	1 226	3,822	324	288	3,210	399	\$2,687,940	\$378,191	\$1,939,830	\$3,730,433	\$455,361	\$7,514,024	\$3,784,491
Hats, fur-felt.	88	8,951	92	635	8,224	6,887	9,880,172	788,896	4,814,828	8,076,808	1,504,270	16,252,554	8,175,746
Hats, straw.	44	2,526	49	351	2,126	550	3,071,865	499,587	1,329,271	3,602,124	497,693	6,919,714	3,917,590
Hosiery and knit goods.	201	6,717	222	546	5,919	1,731	8,466,808	799,817	2,537,863	8,006,423	1,230,356	14,555,024	6,488,581
House-furnishing goods, not elsewhere specified.	1 73	890	80	111	702	338	1,225,116	113,358	341,274	1,503,291	237,852	2,634,238	1,030,947
Ice, manufactured.	60	1,090	23	154	922	19,842	6,588,004	254,732	730,672	1,025,759	720,821	3,681,401	2,655,642
Ink, printing.	1 26	883	18	357	508	2,199	2,997,800	573,786	358,248	1,849,748	517,732	3,965,174	2,116,426
Instruments, professional and scientific.	75	2,002	66	277	1,659	2,101	4,522,045	330,716	1,032,353	988,077	265,593	2,935,982	1,947,905
Iron and steel, steel works and rolling mills.	12	3,152	342	2,810	15,885	20,781,838	417,088	1,723,824	3,326,160	377,925	6,717,834	3,391,674	
Iron and steel forgings.	13	766	10	107	649	1,718	1,913,756	184,247	451,078	622,730	117,974	1,096,559	3,391,674
Jewelry.	2 583	11,445	715	1,842	8,888	2,659	24,190,422	2,343,505	6,127,987	16,243,443	2,533,121	32,388,708	16,145,265
Jewelry and instrument cases.	69	1,140	82	90	968	181	956,651	92,802	520,828	688,758	115,385	1,721,921	1,033,183
Knolin and ground earths.	17	224	11	27	186	835	568,896	38,430	99,981	298,125	67,851	674,610	276,485
Lead, bar, pipe, and sheet.	1 6	211	1	33	177	1,127	945,381	71,678	114,369	1,573,627	112,260	2,160,261	317,774
Leather goods.	474	9,733	560	1,107	8,060	1,895	10,525,040	1,354,453	4,328,593	12,122,039	1,923,979	21,640,916	9,618,227
Leather, tanned, curried, and finished.	97	5,358	88	412	4,858	8,735	16,439,787	727,729	3,071,920	17,090,765	843,288	24,250,600	7,159,835
Liquors, malt.	100	9,404	21	1,547	7,836	44,218	125,783,586	4,510,995	6,700,965	17,515,039	30,255,275	72,850,405	55,334,766
Looking-glass and picture frames.	1 115	1,509	122	207	1,180	543	1,609,048	256,309	711,208	1,229,801	365,790	2,000,901	1,761,100
Lumber and timber products.	416	12,771	374	1,206	11,181	26,842	24,576,733	1,508,892	7,031,969	20,391,431	2,060,615	34,106,375	13,714,944
Marble and stone work.	335	6,247	348	579	5,320	12,732	12,777,174	913,093	4,975,899	6,169,872	1,429,717	15,506,534	9,336,662
Mattresses and spring beds.	144	1,001	157	275	1,469	972	2,600,982	259,185	849,018	3,284,838	513,838	5,403,647	2,118,800
Millinery and lace goods.	1,050	27,669	1,365	3,207	23,697	4,237	22,344,815	3,447,867	10,607,241	28,815,237	5,005,710	56,072,956	27,257,719
Mineral and soda waters.	377	2,823	432	353	2,038	1,821	5,660,392	363,226	1,254,647	1,911,418	1,228,852	5,632,875	3,721,394
Mirrors.	1 37	938	46	110	782	835	1,329,347	127,725	501,880	1,581,918	184,500	2,611,915	1,029,997
Models and patterns, not including paper patterns.	123	1,328	150	133	1,045	773	1,437,147	169,834	746,810	631,756	345,765	2,443,207	1,811,451
Mucilage and paste.	14	214	18	59	137	440	809,357	92,796	80,315	620,559	111,702	1,096,329	475,770
Musical instruments, pianos and organs and materials.	147	10,204	92	851	9,281	6,695	24,047,869	1,609,596	6,217,453	13,866,343	2,847,159	26,852,411	12,986,068
Oil, not elsewhere specified.	43	1,010	15	461	534	2,058	5,473,906	615,961	340,895	7,806,632	724,979	10,490,967	2,684,335
Optical goods.	34	485	43	74	368	162	631,798	90,096	195,698	124,917	786,985	1,000,901	616,017
Paint and varnish.	159	5,766	72	2,002	3,692	12,840	28,148,181	3,118,366	2,291,738	23,005,327	3,979,770	36,100,744	13,185,417
Paper and wood pulp.	15	786	4	59	723	7,115	2,659,147	125,391	420,952	1,503,734	102,288	2,379,942	876,208
Paper goods, not elsewhere specified.	95	4,760	60	803	3,897	4,989	8,498,291	983,118	1,646,539	6,075,613	1,424,236	11,111,353	5,035,740
Patent medicines and compounds and druggists' preparations.	518	6,956	349	2,321	4,286	5,656	18,877,603	3,395,749	2,086,829	11,489,412	7,299,491	30,897,557	19,408,145
Pens, fountain, stylographic, and gold.	1 30	1,108	25	353	730	192	1,853,306	374,431	426,874	1,562,874	453,157	3,218,760	1,655,886
Photographic apparatus and materials.	28	364	19	70	275	159	555,873	81,130	162,687	274,509	125,910	728,033	453,524
Photo-engraving.	1 46	1,617	25	305	1,187	275	806,616	359,061	1,194,603	490,228	227,390	2,516,654	2,026,626
Pipes, tobacco.	1 21	1,772	30	160	1,582	701	2,148,310	170,343	727,255	1,407,086	231,670	3,186,671	2,026,626
Pottery, terra cotta, and fire-clay products.	39	3,681	14	290	3,377	6,157	10,556,053	472,897	1,675,519	1,050,535	494,912	4,344,349	3,293,814
Printing and publishing.	3,305	80,491	2,716	24,689	53,086	42,370	135,743,840	30,285,297	38,363,052	49,535,891	51,348,284	194,486,953	144,951,092
Roofing materials.	10	235	5	68	162	690	1,467,103	98,247	93,530	917,873	157,291	1,417,916	500,443
Rubber goods, not elsewhere specified.	53	3,076	41	475	2,560	7,900	8,228,357	792,376	1,328,452	6,256,322	824,891	10,169,440	3,903,118
Scales and balances.	18	424	13	106	305	227	988,727	174,059	160,999	301,223	143,120	888,305	587,082
Shipbuilding, including boat building.	107	5,947	100	403	5,444	13,182	15,173,848	611,214	3,904,913	3,753,666	1,540,774	11,372,182	7,618,516
Show cases.	17	452	23	50	379	476	63,640	68,364	205,940	374,105	49,039	815,852	441,747
Signs and advertising novelties.	73	2,106	64	393	1,649	710	2,052,761	468,072	980,583	1,116,864	585,102	3,474,535	2,357,671
Silk and silk goods, including throwsters.	433	36,927	399	2,395	34,133	22,622	52,030,841	3,065,635	15,710,084	37,385,899	11,509,725	74,570,282	37,184,383
Silverware and plated ware.	71	3,638	66	660	2,912	2,635	7,054,356	710,494	3,169,374	792,894	7,746,402	4,577,028	4,577,028
Slaughtering and meat packing.	164	7,054	178	1,296	5,580	11,944	32,776,083	1,825,945	4,352,443	115,621,731	4,854,785	131,031,148	15,569,417
Smelting and refining, not from the ore.	22	1,228	26	176	1,026	3,816	7,566,270	252,878	641,853	13,597,289	461,242	16,362,751	2,765,462
Soap.	55	4,229	42	1,242	2,945	5,635	16,465,068	1,298,420	1,556,516	15,525,387	4,407,235	26,323,959	10,798,572
Soda-water apparatus.	30	241	27	58	156	192	730,281	51,105	109,013	352,881	61,307	745,185	392,304
Sporting and athletic goods.	34	469	32	69	398	168	562,278	72,775	184,055	477,917	111,417	933,721	505,804
Stationery goods, not elsewhere specified.	54	899	47	219	633	395	1,313,108	252,257	312,754	876,733	302,907	1,975,389	1,098,656
Statuary and art goods.	60	552	94	34	424	50	460,968	44,361	381,622	93,249	1,908,844	742,403	
Steam packing.	33	933	14	130	789	1,414	2,925,247	210,791	385,698	1,322,338	279,020	2,394,806	1,072,468
Stereotyping and electrotyping.	1 34	1,036	26	220	790	1,180	1,053,954	771,243	546,982	224,871	1,960,820	1,413,847	
Stoves and furnaces, including gas and oil stoves.	28	1,615	18	255	1,342	2,837	3,854,100	354,411	918,433	1,796,500	467,298	3,709,129	1,912,629
Sulphuric, nitric, and mixed acids.	6	494	60	434	1,575	1,575	3,450,357	105,142	281,437	1,062,224	182,917	2,127,637	1,065,413
Surgical appliances and artificial limbs.	57	725	56	176	493	303	968,036	201,963	282,248	515,973	241,660	1,464,721	948,748
Tobacco manufactures.	2,403	33,355	2,580	2,364	28,411	3,981	43,135,651	3,056,997	12,341,435	33,382,973	10,160,407	78,783,942	45,400,969
Toys and games.	72	1,424	76	129	1,219	353	1,236,621	122,009	462,644	843,677	182,504	1,827,319	983,742
Typewriters and supplies.	33	1,144	19	280	845	477	2,682,123	295,665	519,081	771,296	384,224	2,194,668	1,423,372
Umbrellas and canes.	1 134	2,322	170	255	1,607	495	2,218,949	248,348	898,774	4,112,850	433,572	6,373,852	2,200,990
Upholstering materials.	20	734	17	95	622	820	1,644,974	135,514	276,735	1,242,763	158,599	2,141,371	898,608
Wall paper.	11	1,199	7	202	990	1,338	3,640,717	676,263	515,567	1,735,473	703,912	3,554,771	1,819,298
Wall plaster.	1 12	912	5	103	804	3,730	3,833,326	227,638	429,051	1,754,982	316,660	2,902,908	1,147,926
Wirework, including wire rope and cable.	87	1,821	82	264	1,475	1,408	2,092,537	313,095	817,431	1,611,656	318,659	3,407,225	1,795,509
Wood, turned and carved.	104	1,234	130	87	1,017	1,199	1,216,895	108,312	584,786	774,466	1,993,014	1,993,014	1,218,548
Woolen, worsted, and felt goods, and wool hats.	27	8,759											

# NEW YORK CITY METROPOLITAN DISTRICT.

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COMPARATIVE SUMMARY FOR THE NEW YORK CITY METROPOLITAN DISTRICT, BY SELECTED INDUSTRIES:  
1909, 1904, AND 1899.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.			WAGE EARNERS (AVERAGE NUMBER).			VALUE OF PRODUCTS.			PER CENT OF INCREASE. <sup>1</sup>								
										Number of establishments.			Wage earners (average number).			Value of products.		
	1909	1904	1899	1909	1904	1899	1909	1904	1899	1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904
Clothing.....	5,688	4,103	3,794	169,048	120,656	84,083	\$495,589,134	\$325,555,086	\$224,422,767	49.9	38.6	8.1	101.0	40.1	43.5	120.8	62.2	45.1
Women's.....	3,058	2,180	1,647	97,109	72,630	48,390	270,046,086	171,457,727	104,661,178	85.7	40.3	32.4	109.5	33.8	56.5	158.6	67.8	63.8
Men's, including shirts.....	2,630	1,923	2,147	71,874	48,026	37,693	224,943,048	154,097,359	119,761,589	22.5	36.8	-10.4	90.4	49.5	27.4	87.9	46.0	28.7
Printing and publishing.....	3,305	2,635	2,111	53,086	43,808	39,389	194,480,953	145,336,333	103,465,731	56.6	25.4	24.8	34.8	21.2	11.2	88.0	33.8	40.5
Newspapers and periodicals.....	905	789	619	14,340	11,129	11,123	98,653,252	73,862,315	53,596,383	74.4	14.7	52.0	28.9	28.9	(?)	83.0	33.6	37.0
Book and job.....	1,807	1,387	1,123	23,261	18,977	14,308	64,036,884	47,251,456	28,474,411	60.9	30.3	23.5	61.9	22.6	32.1	124.9	35.5	65.9
Music.....	69	43	22	383	284	216	3,103,133	2,161,606	853,862	213.6	60.5	95.5	78.1	34.9	32.0	263.4	43.6	153.2
All other printing and publishing industries <sup>2</sup> .....	524	416	447	15,102	13,421	13,683	28,693,684	22,060,970	20,241,075	17.2	26.0	-0.9	10.4	12.5	-1.9	41.8	30.1	9.0
Textiles.....	825	555	408	71,789	69,027	52,398	152,010,420	101,353,613	85,204,647	76.3	48.6	18.6	37.0	21.0	12.7	78.4	50.0	19.0
Silk and silk goods, including throwsters.....	433	299	229	34,133	28,570	26,845	74,570,282	49,374,007	44,572,704	89.1	44.8	30.6	27.1	10.5	6.4	67.3	51.0	10.8
Woolen, worsted, and felt goods, and wool hats.....	27	18	22	8,381	5,912	4,657	21,044,791	10,778,800	7,624,092	22.7	50.0	-18.2	80.0	41.8	26.9	176.0	95.2	41.4
Dyeing and finishing textiles.....	123	88	80	11,407	8,066	6,457	11,708,877	12,693,073	9,558,051	53.8	39.8	10.0	76.7	41.4	24.9	106.2	55.3	32.8
Hosiery and knit goods.....	201	115	87	5,949	4,263	2,917	14,555,024	6,607,712	4,069,887	131.0	74.8	32.2	103.9	39.5	46.1	120.3	120.3	62.4
Cotton goods, including cotton small wares.....	27	17	32	5,548	4,233	4,771	11,963,362	6,839,065	6,181,705	-15.6	58.8	-46.9	16.3	31.1	-11.3	93.5	74.9	10.6
Cordage and twine and jute and linen goods.....	514	18	18	6,371	7,983	6,751	10,168,084	15,060,947	13,198,208	-22.2	-22.2	.....	-5.0	-20.2	18.2	-23.0	-32.5	14.1
Slaughtering and meat packing.....	164	93	116	5,580	2,815	2,539	131,081,148	72,282,033	56,414,945	41.4	76.3	-19.8	119.8	98.2	10.0	132.4	81.4	28.1
Foundry and machine-shop products.....	1,340	1,170	( <sup>6</sup> )	42,463	42,619	( <sup>6</sup> )	107,297,665	93,142,730	( <sup>6</sup> )	.....	15.0	.....	-0.4	.....	.....	15.2	.....	.....
Tobacco manufactures.....	2,403	2,585	2,218	28,411	20,448	23,847	78,783,942	56,219,444	49,624,497	8.3	-7.0	10.5	19.1	-23.0	65.4	58.8	40.1	13.3
Bread and other bakery products.....	3,188	2,616	2,523	19,218	15,432	13,005	77,472,491	53,739,165	38,881,101	26.4	21.9	3.7	47.8	24.5	18.7	99.3	44.2	38.2
Liquors, malt.....	100	121	128	7,836	7,355	6,507	72,850,405	60,043,479	53,230,700	-21.9	-17.4	-5.5	20.4	6.5	13.0	36.9	21.3	12.8
Millinery and lace goods.....	1,050	597	401	23,067	16,580	11,372	56,072,950	33,598,859	21,158,146	101.8	75.9	43.9	103.1	39.3	45.8	105.0	66.9	58.8
Gas, illuminating and heating.....	31	7	20	6,061	6,138	4,955	43,934,683	33,824,295	19,457,606	55.0	55.0	.....	22.3	-1.3	23.9	125.8	29.9	73.8
Electrical machinery, apparatus, and supplies.....	224	174	138	16,510	11,338	9,254	42,025,196	25,275,823	19,367,980	62.3	28.7	26.1	78.4	45.6	22.5	121.6	69.8	30.5
Fur goods.....	9	821	757	7,824	5,309	4,193	39,874,386	25,325,361	15,256,505	59.4	42.0	12.2	86.6	47.4	26.6	161.4	57.4	68.0
Paint and varnish.....	159	129	129	3,692	3,505	3,041	36,190,744	28,487,381	22,133,015	23.3	23.3	.....	21.4	5.3	15.3	63.5	27.0	28.7
Lumber and timber products.....	416	348	282	11,101	9,777	7,105	34,106,375	26,606,448	18,598,937	47.5	19.5	23.4	57.5	14.5	37.0	83.4	28.2	43.1
Copper, tin, and sheet-iron products.....	614	453	918	14,150	12,464	10,677	32,831,045	23,018,109	29,307,392	-33.1	35.5	-50.7	32.5	13.5	16.7	12.0	42.6	-21.5
Jewelry.....	10	583	373	8,888	6,713	5,610	32,388,788	20,605,626	17,076,426	78.3	56.3	14.1	58.4	32.4	19.7	89.7	57.2	20.7
Chemicals.....	68	72	76	5,205	4,387	3,413	31,453,662	21,301,430	15,335,030	-10.5	-5.6	-5.3	52.5	18.6	28.5	105.1	47.7	38.9
Patent medicines and compounds and druggists' preparations.....	518	426	303	4,286	3,747	3,474	30,897,557	22,275,160	20,477,851	71.0	21.6	40.6	23.4	14.4	7.9	50.9	38.7	8.8
Musical instruments, pianos and organs and materials.....	147	7	125	9,261	8,140	5,904	26,852,411	19,918,683	13,120,041	30.1	17.6	10.6	56.9	13.7	38.0	104.7	34.8	51.8
Soap.....	56	56	64	2,945	1,806	1,482	26,323,959	11,883,205	9,955,550	-14.1	-1.8	-12.5	98.7	63.1	21.9	164.4	121.5	19.4
Leather, tanned, curried, and finished.....	97	87	88	4,958	4,743	4,336	24,250,600	17,112,858	15,270,910	10.2	11.5	1.1	12.0	2.4	9.4	58.8	41.7	12.1
Confectionery.....	106	131	110	7,305	5,983	4,500	23,207,461	15,707,315	10,988,348	50.9	26.7	19.1	64.3	23.6	9.0	112.0	48.3	39.3
Furniture and refrigerators.....	441	337	216	9,894	7,287	7,475	22,543,905	14,994,467	14,492,701	104.2	30.9	56.0	32.4	35.8	-2.5	55.6	50.4	3.4
Leather goods, not elsewhere specified.....	474	398	325	8,060	8,264	6,790	21,640,916	18,636,664	13,844,866	45.8	19.1	22.5	18.7	-2.5	21.7	56.3	16.1	34.6
Boots and shoes, including cut stock and findings.....	197	150	205	9,668	7,739	7,413	21,331,290	16,511,906	13,668,039	-3.9	31.3	-26.8	30.4	24.9	4.4	56.1	29.2	20.9
Artificial flowers and feathers and plumes.....	328	159	162	8,530	3,384	4,066	21,197,040	4,049,428	5,057,935	102.5	106.3	-1.9	109.8	152.1	-10.8	319.1	423.5	-19.9
Smelting and refining, not from the ore.....	22	8	12	1,026	795	169	16,362,751	10,661,613	2,115,726	83.3	29.4	41.7	507.1	29.1	370.4	673.4	53.5	403.9
Hats, fur-felt.....	88	7	57	8,224	8,718	7,210	16,252,554	15,165,579	10,720,719	54.4	6.0	45.6	14.1	-5.7	20.9	51.6	7.2	41.5
Marble and stone work.....	335	213	( <sup>9</sup> )	5,320	5,603	( <sup>9</sup> )	15,506,534	13,818,375	( <sup>9</sup> )	.....	57.3	.....	-5.1	.....	.....	12.2	.....	.....
Brass and bronze products.....	221	174	171	4,818	3,592	3,217	13,809,127	8,330,154	7,934,738	29.2	27.0	1.8	49.8	34.1	11.7	75.2	66.9	5.0
Gas and electric fixtures and lamps and reflectors.....	169	131	113	5,443	3,737	3,017	13,655,723	8,401,401	5,441,000	50.0	29.0	15.0	80.4	45.7	23.9	151.0	62.5	54.4
Boxes, fancy and paper.....	244	197	181	8,939	8,322	6,379	11,664,690	9,820,192	6,544,655	34.8	23.9	8.8	40.1	7.4	30.5	78.2	18.8	50.0
Shipbuilding, including boat building.....	107	97	115	5,444	6,203	6,185	11,722,182	10,859,464	10,043,857	-7.1	10.3	-15.7	-12.0	-12.2	0.3	13.2	4.7	8.1
Paper goods, not elsewhere specified.....	95	75	78	3,897	3,221	2,450	11,111,353	7,405,089	5,034,059	21.8	26.7	-2.8	59.1	21.0	31.5	87.2	50.0	24.8
Oil, not elsewhere specified.....	43	36	44	534	318	244	10,490,967	5,003,767	4,789,571	-2.3	19.4	-18.2	118.9	67.9	30.3	119.0	77.7	23.3
Food preparations.....	133	110	107	2,265	1,788	1,485	10,213,393	6,708,259	5,534,616	24.9	20.9	2.8	52.5	26.7	20.4	84.5	52.2	21.2
Rubber goods, not elsewhere specified.....	53	52	68	2,560	2,730	3,052	10,159,440	7,172,073	9,326,922	-22.1	1.9	-23.5	-16.1	-6.4	-10.4	8.9	45.6	-23.1

<sup>1</sup> A minus sign (-) denotes decrease.

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

<sup>3</sup> Includes "bookbinding and blank-book making;" "engraving, steel and copper plate, including plate printing;" and "lithographing."

<sup>4</sup> Exclusive of "carpets and rugs other than rag" and "shoddy."

<sup>5</sup> Excluding statistics for four establishments, to avoid disclosure of individual operations.

<sup>6</sup> Comparable figures not available.

<sup>7</sup> Excluding statistics for two establishments, to avoid disclosure of individual operations.

<sup>8</sup> Excluding statistics for one establishment, to avoid disclosure of individual operations.

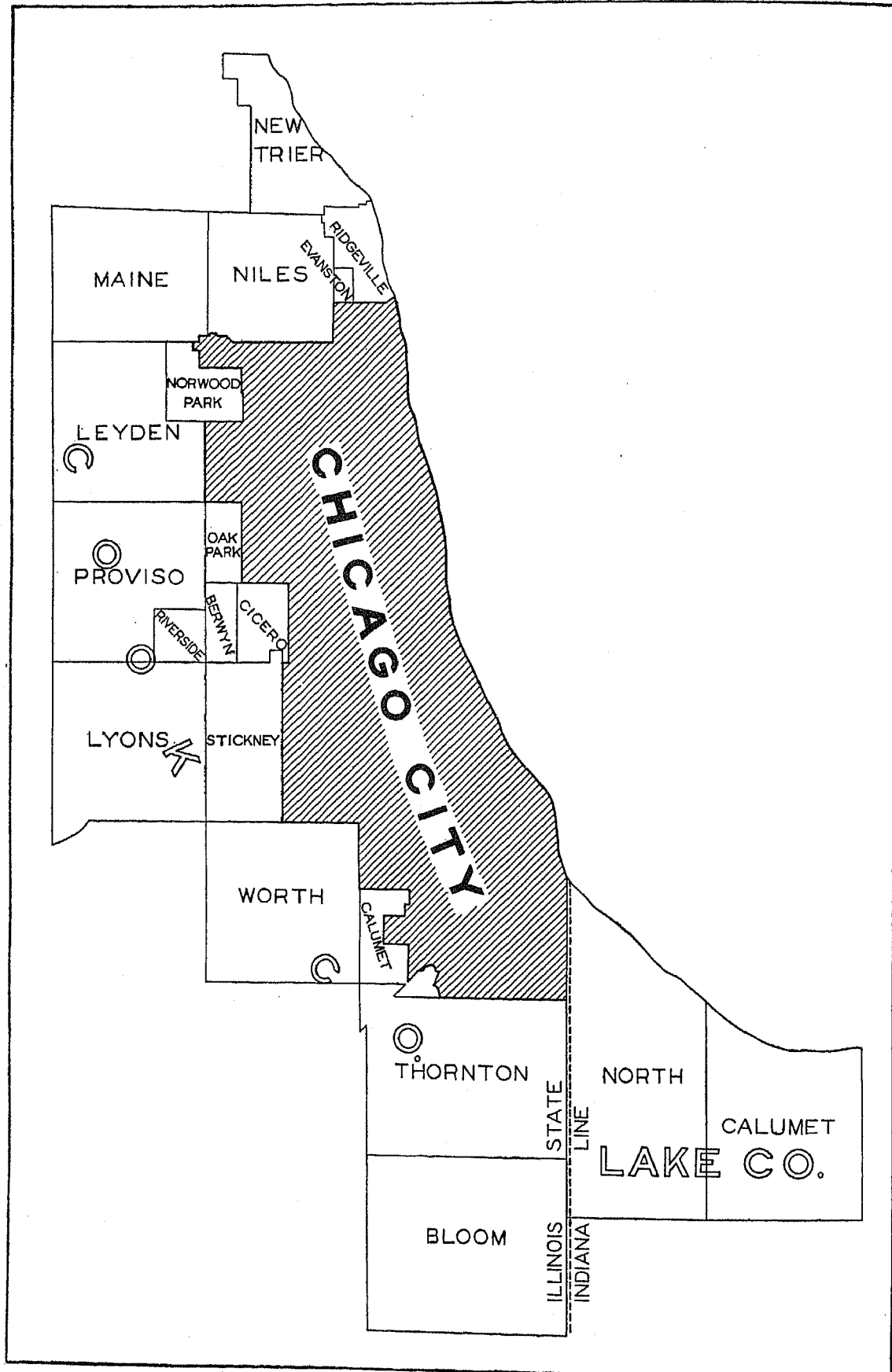
<sup>9</sup> Excluding statistics for eight establishments, to avoid disclosure of individual operations.

<sup>10</sup> Excluding statistics for three establishments, to avoid disclosure of individual operations.



MANUFACTURES.

CHICAGO METROPOLITAN DISTRICT: 1909.



## CHICAGO METROPOLITAN DISTRICT.

**Territory included.**—The metropolitan district of Chicago embraces 409,087 acres of territory, of which 118,433 acres constitute the area of Chicago and 290,654 acres the area of the outside territory. The population of the city of Chicago proper in 1910 was 2,185,283, and that of the outside territory 261,638, the total for the district being 2,446,921.

As defined at the census of 1910, the metropolitan district includes the central city, together with Berwyn, Bloom, Calumet, Cicero, Evanston, Leyden, Lyons, Maine, New Trier, Niles, Norwood Park, Oak Park, Proviso, Ridgeville, Riverside, Stickney, Thornton, and Worth townships, all in Cook County, Ill., and Calumet and North townships in Lake County, Ind. Within these townships, or coextensive with them, there are seven incorporated places of 10,000 or more inhabitants. Of these four are in Illinois, namely, Chicago Heights city, in Bloom township; Cicero town, coextensive with Cicero township; Evanston city, coextensive with Ridgeville township; and Oak Park village, coextensive with Oak Park township. The remaining three, which are in Indiana, are East Chicago city and Hammond city, both in North township; and Gary city in Calumet township.

The territory comprised within the Chicago industrial district as constituted for the bulletin on industrial districts for 1904 did not include Bloom township, which contains Chicago Heights city, or Maine township, or the townships and incorporated places in Indiana; but it comprised, in addition to the territory represented by the other places mentioned above, Downers Grove and York townships in Dupage County, Ill., and Palos township in Cook County, Ill.

The relative location of the constituent divisions is indicated on the outline map of the district (p. 914).

**Summary for the district.**—Table 9 is a summary for 1909 of the statistics of manufacturing industries, with a statement of the population in 1910, for the Chicago metropolitan district, for the city of Chicago; for six of the seven other incorporated places within the district which had over 10,000 inhabitants in 1910—four cities, one town, and one village—and for the remainder of the district. The percentage which the figure for Chicago represents of the total for the district is shown in the case of each item. The statistics for Gary, Ind., are included in the "remainder" of the district to avoid disclosing the operations of individual establishments.

**Table 9**

	NUMBER OR AMOUNT.										Per cent Chicago is of total for district.
	The district.	Chicago.	District exclusive of Chicago.								
			Total.	Chicago Heights.	Cicero.	East Chicago.	Evanston.	Hammond.	Oak Park.	Remainder. <sup>1</sup>	
Population <sup>2</sup> .....	2,446,921	2,185,283	261,638	14,525	14,557	19,098	24,978	20,925	19,444	148,111	89.3
Number of establishments.....	10,202	9,656	546	79	7	10	60	49	23	312	94.6
Persons engaged in manufactures.....	393,859	356,954	36,905	4,444	735	2,568	1,040	4,379	362	23,377	96.6
Proprietors and firm members.....	8,600	8,166	444	60	2	6	63	33	21	259	94.8
Salaries.....	59,335	54,821	4,514	431	75	192	140	505	59	3,112	92.4
Wage earners (average number).....	325,924	298,977	31,947	3,953	658	2,370	837	3,841	282	20,006	90.2
Primary horsepower.....	739,229	525,236	213,993	10,176	1,580	7,017	1,056	7,348	758	185,058	71.1
Capital.....	\$1,144,002,902	\$971,840,545	\$172,162,357	\$10,420,527	\$2,496,100	\$4,614,380	\$4,241,198	\$16,270,855	\$6,060,795	\$128,058,502	85.0
Expenses.....	1,272,456,182	1,156,530,537	115,925,645	9,475,197	1,403,638	4,873,173	3,329,854	14,894,019	734,654	81,215,110	90.9
Services.....	266,626,915	240,036,910	26,590,005	3,076,709	503,248	1,532,365	767,307	2,474,818	253,611	17,981,947	90.0
Salaries.....	71,160,747	65,924,841	5,235,906	605,622	97,094	247,277	177,750	614,185	57,009	3,436,909	92.6
Wages.....	195,466,168	174,112,069	21,354,099	2,471,087	406,154	1,285,088	589,557	1,860,633	196,602	14,544,978	89.1
Materials.....	870,586,561	793,469,723	77,116,838	5,611,419	732,879	3,059,915	2,350,080	6,661,355	390,887	58,320,303	91.1
Miscellaneous.....	135,242,706	123,023,904	12,218,802	787,069	167,511	280,893	212,467	5,767,846	90,156	4,912,800	91.0
Value of products.....	1,408,779,818	1,281,171,181	127,608,637	10,839,268	1,461,164	5,483,500	3,778,298	15,580,260	1,117,697	89,348,460	90.9
Value added by manufacture.....	538,193,257	487,701,458	50,491,799	5,227,849	728,285	2,423,585	1,428,218	8,928,895	726,810	31,028,157	90.6

<sup>1</sup> Includes Gary, Ind., the statistics for which can not be shown without disclosing individual operations.

<sup>2</sup> April 15, 1910.

In 1909 the Chicago metropolitan district had 10,202 manufacturing establishments, which gave employment to an average of 393,859 persons during the year and paid out \$266,626,915 in salaries and wages. Of the persons employed 325,924 were wage earners. These establishments turned out products to the value of \$1,408,779,818, to produce which materials costing \$870,586,561 were utilized. The value added by manufacture was thus \$538,193,257. The Chicago

district ranked second in 1909 among all the metropolitan districts of the United States in the value of its manufactured products. It far exceeded any of them in the value of products of the slaughtering and meat-packing industry.

In the Chicago district, as in all but two of the districts, the greater part of the value of the manufactured products of the district was reported by factories within the central city. Chicago contained nearly

nine-tenths (89.3 per cent) of the population of the district, of which it is the manufacturing, commercial, and financial center, and contributed over nine-tenths (90.9 per cent) of the value of products. Its manufacturing establishments constituted 94.6 per cent of all in the district, and gave employment to 90.2 per cent of the average number of wage earners for that area.

Of the places outside Chicago for which statistics are given separately, Hammond reported the largest value of products, but this value represented only 1.1 per cent of the total for the metropolitan district. The population of this city formed only nine-tenths of 1 per cent of the total in the district.

The area comprised within the 17 townships, or parts of townships, outside of incorporated places having more than 10,000 inhabitants, included in the district, together with Gary city, for which statistics can not be shown separately without disclosing the operations of individual establishments, had a combined population equal to 6.1 per cent of the total for the district and contributed 6.3 per cent of the value of its products. The average value of products per establishment for this group was much greater than that for any of the places shown separately, except East Chicago and Hammond.

The leading industries in Chicago Heights in 1909 were foundries and machine shops, steel works and rolling mills, and steam-railroad car construction shops. The principal industry of Evanston was the

manufacture of wrought iron and steel pipe. In Cicero foundries and machine shops and the manufacture of wrought iron and steel pipe constituted the most important industries. The production of illuminating gas occupied first place in Oak Park. In Gary, Ind., three establishments—a steel plant, a blast furnace, and a cement factory, named in the order of their importance—together contributed nearly the total value of the manufactured products of the city. The principal industries of Hammond were distilleries, steam-railroad repair shops, and foundries and machine shops. The manufacture of iron and steel was the leading industry in East Chicago. An important industrial place for which the statistics are not shown separately is Indiana Harbor, Ind., with large steel works and rolling mills.

Comparison with earlier censuses.—Table 10 gives statistics for the district for 1909, 1904, and 1899. For purposes of comparison the statistics in this table are grouped in such a way as to show separately for 1909 figures for (1) the territory added to the district since 1904 (Bloom and Main townships in Illinois and Calumet and North townships in Indiana) and (2) the remainder of the district; and for 1904 and 1899 figures for (1) the territory deducted since 1904 (Downers Grove, York, and Palos townships in Illinois) and (2) the remainder of the district. Percentages of increase are shown only for the territory which was included in the district in both 1909 and 1904.

Table 10

	NUMBER OR AMOUNT.									PER CENT OF INCREASE.		
	1909			1904			1899			1899-1909	1904-1909	1899-1904
	Total.	Territory added since 1904.	Remainder of district. <sup>1</sup>	Total.	Territory deducted since 1904.	Remainder of district. <sup>1</sup>	Total.	Territory deducted since 1904.	Remainder of district. <sup>1</sup>			
Population.....	2,446,921	91,875	2,355,046	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	1,815,107	11,829	1,803,278	30.6		
Number of establishments.....	10,202	242	9,960	8,382	27	8,355	7,851	25	7,826	27.3	19.2	6.8
Persons engaged in manufactures.....	393,859	23,913	369,946	296,350	161	296,189	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )		24.9	
Proprietors and firm members.....	8,600	183	8,417	7,481	27	7,454	( <sup>6</sup> )	( <sup>6</sup> )	( <sup>6</sup> )		12.9	
Salaried employees.....	59,335	2,550	56,785	40,880	19	40,861	32,800	18	32,782	73.2	39.0	24.6
Wage earners (average number).....	325,924	21,180	304,744	247,989	115	247,874	224,991	99	224,892	35.5	22.9	10.2
Primary horsepower.....	739,229	188,321	550,908	379,536	262	379,274	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )		45.2	
Capital.....	\$1,144,002,902	\$117,915,318	\$1,026,087,584	\$664,215,775	\$120,088	\$664,095,687	\$519,409,858	\$140,329	\$519,329,529	97.6	54.5	27.9
Expenses.....	1,272,456,182	89,686,671	1,182,769,511	882,469,100	229,456	882,239,644	720,597,395	226,440	720,370,955	64.2	34.1	22.5
Services.....	266,626,915	17,004,035	249,622,880	186,165,672	64,009	186,101,663	143,083,714	70,732	143,012,982	74.5	34.1	30.1
Salaries.....	71,160,747	3,172,816	67,987,931	46,336,318	12,582	46,323,736	32,501,114	17,250	32,483,864	109.3	46.8	42.6
Wages.....	195,466,168	13,831,219	181,634,949	139,829,354	51,427	139,777,927	110,582,000	53,482	110,528,518	64.3	29.9	26.5
Materials.....	870,586,561	62,738,865	807,847,696	595,556,727	130,346	595,426,381	506,673,549	137,655	506,535,894	59.5	35.0	18.1
Miscellaneous.....	135,242,706	9,943,771	125,298,935	97,746,701	35,101	97,711,600	70,840,132	18,053	70,822,079	76.9	28.2	38.0
Value of products.....	1,408,779,818	99,028,732	1,309,751,086	970,974,280	272,730	970,701,550	806,404,641	288,520	806,170,121	62.5	34.9	20.4
Value added by manufacture.....	538,193,257	36,289,867	501,903,390	372,417,553	142,384	372,275,169	299,791,092	150,865	299,640,227	67.5	34.8	24.2

<sup>1</sup> Figures in this column used in computing percentages of increase. <sup>2</sup> April 15, 1910. <sup>3</sup> No population census in 1905. <sup>4</sup> June 1, 1900. <sup>5</sup> Figures not available.

In the area for which comparisons are made the percentages of increase in all the items shown, except one, for the three census years were larger during the more recent five-year period 1904-1909 than during the period 1899-1904. During the decade as a whole the rate of increase was much greater in salaries and capital than in any other items. The average number of

wage earners increased 35.5 per cent during this period and the amount paid for wages 64.3 per cent, a rate of gain approximately equal to that in value of products (62.5 per cent). The rate of increase in primary horsepower of all kinds from 1904 to 1909 was 45.2 per cent. Statistics as to the primary power used in 1899 are not available.

The proportions of the population and manufactures in the outside territory of the metropolitan district are constantly increasing, as is indicated by Table 11.

**Table 11**

	PER CENT TERRITORY OUTSIDE OF CHICAGO IS OF TOTAL FOR DISTRICT.		
	1909 <sup>1</sup>	1904 <sup>2</sup>	1899 <sup>2</sup>
Population.....	7.2	( <sup>3</sup> )	5.8
Number of establishments.....	3.1	2.3	2.0
Persons engaged in manufactures.....	3.5	2.2	( <sup>1</sup> )
Proprietors and firm members.....	3.1	2.5	( <sup>1</sup> )
Salaried employes.....	3.6	1.4	1.2
Wage earners (average number).....	3.5	2.4	1.6
Primary horsepower.....	4.7	2.6	( <sup>1</sup> )
Capital.....	5.3	4.0	1.5
Expenses.....	2.2	1.6	1.0
Services.....	3.8	2.2	1.6
Salaries.....	3.0	1.6	1.3
Wages.....	4.1	2.4	1.6
Materials.....	1.8	1.4	0.9
Miscellaneous.....	1.8	1.4	0.5
Value of products.....	2.2	1.6	1.0
Value added by manufacture.....	2.8	1.9	1.3

<sup>1</sup> Based on figures for district as constituted in 1909, exclusive of territory added since 1904.  
<sup>2</sup> Based on figures for district as constituted in 1904, exclusive of territory deducted since 1904.  
<sup>3</sup> No population census in 1905.      <sup>4</sup> Figures not available.

The proportion which the population outside Chicago, but within the area comprised in the district, in each census year formed of the total in that area increased from 5.8 per cent in 1900 to 7.2 per cent in 1910, and the proportion of the value of products of that area that was contributed by the outlying territory increased from 1 per cent in 1899 to 1.6 per cent in 1904, and to 2.2 per cent in 1909.

**Leading industries.**—Table 12 gives statistics for 1909 for the industries of the district having products valued at \$500,000 or more, so far as separate figures can be presented.

Among the industries shown separately in the table there are 23 for which totals for the district can not be published, because to do so would disclose individual operations; and 26 which were not carried on in the part of the district which is outside the corporate limits of Chicago. In all these cases the statistics shown are figures for Chicago exclusively.

The predominant industry of the Chicago metropolitan district is slaughtering and meat packing. The figures shown for this industry are for Chicago exclusively, one small establishment in 1909 engaged in the manufacture of sausage in the territory outside Chicago being excluded to avoid disclosing the operations of individual concerns. The 67 establishments in Chicago in 1909 reported products valued at \$325,061,657, or 23.1 per cent of the value of products of all industries in the district. Other important industries were foundries and machine shops, with a value of products amounting to \$104,319,563; the making of men's clothing, including shirts, with products valued at \$85,296,407; printing and publishing, with products valued at \$76,070,564; and steel works and rolling mills, with products valued at \$71,531,974.

The value of products shown for establishments engaged in the manufacture of electrical machinery, apparatus, and supplies, and of copper, tin, and sheet-iron products is much less than the actual figures for these industries in the district, statistics for the establishments outside of Chicago having been omitted in order to avoid disclosing the operations of individual concerns.

SUMMARY FOR THE CHICAGO METROPOLITAN DISTRICT, BY INDUSTRIES: 1909.

**Table 12**

INDUSTRY.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horsepower.	Capital.	Salaries.	Wages.	Cost of materials.	Miscellaneous expenses.	Value of products.	Value added by manufacture.
		Total.	Proprietors and firm members.	Salaried employes.	Wage earners (average number).								
<b>All industries.....</b>	<b>10,802</b>	<b>393,859</b>	<b>8,600</b>	<b>59,335</b>	<b>325,924</b>	<b>739,229</b>	<b>\$1,144,002,902</b>	<b>\$71,160,747</b>	<b>\$195,466,168</b>	<b>\$870,586,561</b>	<b>\$135,242,706</b>	<b>\$1,408,779,818</b>	<b>\$538,193,257</b>
Automobiles, including bodies and parts.....	141	1,725	17	248	1,460	734	2,094,348	304,511	1,131,443	1,706,765	522,345	3,939,735	2,232,970
Awnings, tents, and sails.....	33	350	34	34	282	158	275,350	26,144	139,065	569,207	62,783	915,463	346,256
Bags, other than paper.....	6	213	4	20	189	157	575,574	24,160	175,042	685,033	11,383	905,442	280,409
Baking powders and yeast.....	10	940	8	410	522	1,142	5,873,320	447,128	303,834	2,888,242	1,782,747	7,008,662	4,120,420
Belting and hose, leather.....	11	403	9	161	233	430	1,279,476	183,085	164,536	1,384,568	319,423	2,187,555	802,927
Boots and shoes, including cut stock and findings.....	31	3,328	29	270	3,027	1,103	3,850,595	324,805	1,919,794	6,044,689	494,674	9,855,302	3,810,013
Boxes, cigar.....	9	348	9	35	304	214	292,197	45,657	124,864	258,094	48,436	540,774	282,680
Boxes, fancy and paper.....	48	3,984	22	353	3,609	1,575	3,118,225	399,684	1,311,235	2,231,889	481,080	5,043,621	2,811,732
Brass and bronze products.....	156	1,430	38	225	1,167	1,099	2,491,807	303,717	810,203	3,265,574	306,699	5,131,391	1,865,817
Bread and other bakery products.....	1,278	9,257	1,351	1,183	6,723	3,899	20,988,156	1,160,173	4,373,201	16,983,122	2,057,451	28,146,786	11,163,604
Brick and tile.....	19	2,115	9	117	1,989	12,202	7,860,399	167,403	1,890,691	936,874	206,513	3,788,295	2,851,421
Brooms.....	128	282	34	26	222	169	249,943	25,136	118,294	402,356	30,790	680,003	277,647
Brushes.....	28	334	26	33	275	94	440,034	40,596	163,064	515,774	75,283	879,548	363,774
Canning and preserving.....	52	1,416	50	189	1,177	1,470	2,646,101	239,014	525,217	3,413,459	332,815	5,005,292	1,591,823
Carriages and wagons and materials.....	144	2,473	157	176	2,140	3,441	7,971,855	216,506	1,365,663	2,880,153	360,662	5,685,809	2,805,656
Cars and general shop construction and repairs by steam-railroad companies.....	28	12,598	.....	596	12,002	9,995	10,703,708	639,835	7,962,234	7,639,305	210,540	16,451,913	8,812,608
Cars and general shop construction and repairs by street-railroad companies.....	17	1,721	.....	57	1,664	1,584	3,061,331	64,086	1,068,627	1,519,690	94,075	2,753,388	1,238,698
Cars, steam-railroad, not including operations of railroad companies.....	24	11,857	.....	907	10,948	18,556	39,641,537	1,025,728	7,577,576	14,752,493	1,288,183	25,462,246	10,709,753
Chemicals.....	14	863	.....	2	164	697	2,496,331	231,119	467,658	1,310,406	326,070	3,250,423	1,934,017
Clothing, men's, including shirts.....	1,678	38,370	.....	830	3,925	33,615	36,521,124	4,291,750	15,770,654	42,763,038	13,782,710	85,296,407	42,528,369

<sup>1</sup> Excluding statistics for establishments located outside of the corporate limits of Chicago, to avoid disclosure of individual operations. The figures for these establishments are included under the head of "All other industries."

SUMMARY FOR THE CHICAGO METROPOLITAN DISTRICT, BY INDUSTRIES: 1909—Continued.

Table 12—Continued.

INDUSTRY.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Miscellaneous expenses.	Value of products.	Value added by manufacture.
		Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).								
Clothing, women's	1 204	6,666	254	797	5,615	698	\$5,193,048	\$915,022	\$2,996,959	\$8,658,249	\$1,566,443	\$15,678,925	\$7,018,076
Coffee and spice, roasting and grinding	52	1,775	22	747	1,066	2,575	8,696,361	1,078,172	520,858	14,968,956	1,631,221	19,593,188	4,624,232
Coffins, burial cases, and undertakers' goods	1 13	733	5	152	576	828	1,720,693	269,915	339,365	763,536	301,844	1,837,558	1,074,022
Confectionery	91	3,876	60	571	3,245	3,050	5,278,824	637,614	1,252,812	6,709,836	1,226,821	11,241,011	4,531,175
Cooperage and wooden goods, not elsewhere specified	1 37	1,269	32	71	1,166	1,984	1,860,251	109,580	600,885	2,187,908	145,909	3,368,165	1,180,257
Copper, tin, and sheet-iron products	1 268	4,610	256	495	3,859	2,859	12,215,669	659,461	2,472,424	6,463,004	937,770	12,241,950	5,778,946
Corsets	10	1,124	5	114	1,005	120	924,802	149,611	339,508	704,684	283,604	1,778,921	1,074,237
Cutlery and tools, not elsewhere specified	1 53	1,167	43	142	982	1,499	1,796,438	199,520	553,864	689,405	200,529	1,805,418	1,215,013
Electrical machinery, apparatus, and supplies	1 123	7,333	45	1,192	6,096	6,443	16,623,727	1,369,911	3,859,677	11,405,474	2,189,242	20,668,505	9,263,031
Fancy articles, not elsewhere specified	49	606	29	130	438	210	641,101	139,337	218,480	567,997	175,441	1,289,110	721,113
Flavoring extracts	10	184	10	89	85	234	652,257	104,617	56,348	465,899	122,195	890,576	424,677
Food preparations	78	1,134	59	273	802	1,632	2,384,062	350,223	400,939	4,100,975	534,280	6,017,603	1,916,628
Foundry and machine-shop products	721	41,857	365	6,161	35,331	63,273	105,493,763	8,309,667	23,440,577	48,816,110	12,833,792	104,319,563	55,503,453
Fur goods	1 50	455	58	89	308	167	908,497	108,181	172,832	1,060,345	172,016	1,902,507	842,162
Furnishing goods, men's	38	2,273	38	330	1,905	562	2,339,351	383,301	820,156	3,876,613	665,834	6,122,344	2,245,731
Furniture and refrigerators	208	11,188	151	1,080	9,957	14,454	16,498,370	1,456,603	6,076,242	9,146,266	2,231,022	20,638,171	11,491,905
Gas and electric fixtures and lamps and reflectors	1 63	2,068	30	436	1,602	1,060	2,706,026	587,709	914,339	2,124,310	515,641	4,683,034	2,558,724
Glass, cutting, staining, and ornamenting	46	1,028	33	156	839	476	993,100	165,495	523,245	727,922	145,532	1,753,482	1,025,560
Gloves and mittens, leather	1 25	1,223	29	85	1,109	570	899,939	129,563	441,017	1,307,652	127,568	2,181,350	873,698
Grease and tallow	1 10	773	7	117	649	2,207	2,181,134	186,800	452,288	3,780,957	222,796	4,947,923	1,166,966
Hats and caps, other than felt, straw, and wool	38	574	48	63	463	61	279,637	63,789	266,879	478,510	93,429	1,046,455	567,075
Hosiery and knit goods	29	837	36	58	743	167	908,497	90,071	288,518	782,713	136,974	1,477,380	694,667
Ice, manufactured	9	263	28	28	235	3,519	1,281,990	46,224	174,535	142,609	110,746	633,540	490,931
Iron and steel, steel works and rolling mills	16	16,730	1,483	15,245	165,245	1,113	1,676,952	90,172	370,587	817,003	112,169	1,614,914	797,911
Iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills	1 8	810	68	742	1,113	1,676,952	90,172	370,587	817,003	112,169	1,614,914	797,911	
Iron and steel, doors and shutters	5	325	2	35	288	242	328,555	43,776	200,868	256,277	27,360	580,809	324,532
Iron and steel forgings	14	913	11	95	807	2,330	2,899,223	137,042	599,748	1,485,340	172,903	2,647,523	1,162,183
Jewelry	55	1,169	55	204	910	284	1,573,730	193,505	605,931	1,218,314	215,906	2,634,642	1,416,328
Labels and tags	12	643	6	126	511	226	753,365	135,312	208,203	377,418	102,262	822,380	444,062
Leather goods	103	2,633	101	315	2,217	925	2,958,881	370,540	1,196,698	3,406,739	498,561	6,074,015	2,667,276
Leather, tanned, curried, and finished	24	2,841	23	144	2,674	6,212	14,485,671	242,402	1,417,978	10,787,874	652,306	13,243,550	2,455,676
Liquors, malt	48	3,498	2	591	2,905	15,882	29,741,494	1,157,792	2,391,182	4,967,808	8,279,545	10,712,962	14,745,154
Looking-glass and picture frames	62	2,441	46	327	2,068	2,178	2,757,696	895,378	1,121,472	1,768,490	633,337	4,488,081	2,719,591
Lumber and timber products	213	11,912	135	1,124	10,653	26,580	18,344,078	1,476,062	6,291,122	21,250,785	2,066,736	33,569,693	12,318,808
Marble and stone work	127	1,748	134	146	1,468	3,107	2,777,051	232,662	1,203,929	1,554,232	1,121,736	4,231,259	2,377,517
Mattresses and spring beds	64	966	55	108	803	565	1,042,537	147,340	430,756	1,481,221	257,310	2,633,266	1,152,045
Mineral and soda waters	70	670	77	119	474	799	1,120,939	111,192	318,968	572,189	381,582	1,657,706	1,085,517
Models and patterns, not including paper patterns	1 56	435	63	50	322	404	361,820	47,271	226,834	161,333	92,957	686,538	525,205
Musical instruments and materials, not specified	27	418	33	53	332	200	502,446	56,883	198,872	171,864	64,999	614,307	442,443
Musical instruments, pianos and organs and materials	42	7,185	12	648	6,525	5,670	21,348,793	908,446	3,720,625	6,311,560	1,427,792	14,555,453	8,243,893
Oil, not elsewhere specified	11	71	8	40	23	82	180,873	85,706	16,961	378,890	57,055	608,302	220,412
Paint and varnish	1 61	2,687	27	1,034	1,606	5,837	13,830,299	1,957,010	995,733	11,845,032	2,152,436	18,942,448	7,097,416
Paper goods, not elsewhere specified	1 41	1,255	27	271	957	607	1,866,605	289,754	409,922	1,362,839	455,965	2,830,754	1,437,915
Patent medicines and compounds and druggists' preparations	277	3,019	104	1,492	1,363	2,030	5,379,189	1,512,267	633,486	3,223,163	3,359,233	10,376,264	7,153,101
Photographic apparatus and materials	13	356	8	64	284	430	708,269	81,011	156,562	317,784	87,352	739,857	422,073
Photo-engraving	21	1,186	4	304	878	405	901,851	340,523	848,224	421,843	276,703	2,156,055	1,734,212
Pottery, terra-cotta, and fire-clay products	15	1,564	9	100	1,455	2,480	3,306,667	144,677	1,011,041	440,290	295,394	2,247,109	1,806,819
Printing and publishing	1,466	34,950	1,130	10,195	23,625	21,481	49,958,455	10,907,660	15,657,361	21,830,421	16,846,400	76,070,564	54,240,143
Signs and advertising novelties	43	1,478	19	256	1,198	716	2,568,381	295,162	723,824	884,378	757,233	2,972,697	2,088,319
Slaughtering and meat packing	1 67	27,147	66	5,017	22,064	45,629	115,311,628	5,534,973	11,984,893	285,250,405	12,001,412	325,061,657	39,811,252
Smelting and refining, not from the ore	1 7	127	4	32	91	168	816,079	71,104	63,277	2,237,114	33,941	2,573,769	336,655
Soap	27	3,329	17	1,173	2,139	4,967	11,473,794	1,332,988	1,035,233	13,787,459	2,466,122	19,939,041	6,151,582
Sporting and athletic goods	21	755	19	67	690	101	743,397	117,748	328,811	812,303	177,684	1,564,482	752,179
Stationery goods, not elsewhere specified	1 18	751	8	162	581	374	1,680,801	217,160	296,534	591,877	271,698	1,603,764	1,011,877
Statuary and art goods	12	437	11	46	380	214	445,885	58,531	261,489	125,304	47,041	783,242	638,038
Stereotyping and electrotyping	21	747	13	142	592	725	777,366	186,724	472,376	315,928	181,650	1,282,202	966,364
Stoves and furnaces, including gas and oil stoves	1 28	1,263	14	201	1,048	937	2,645,769	271,787	725,632	1,156,666	509,524	3,182,745	2,026,079
Surgical appliances and artificial limbs	24	807	13	265	529	592	1,658,164	371,882	279,012	916,537	275,641	2,074,528	1,167,991
Tobacco manufactures	1,102	6,936	1,166	427	5,343	783	10,451,273	716,830	2,864,769	6,827,850	3,821,879	16,919,417	10,001,507
Type founding and printing materials	10	588	9	141	438	391	1,852,184	201,266	302,566	375,385	309,042	1,247,937	872,552
Wood, turned and carved	38	624	29	543	543	1,190	903,648	58,138	386,847	477,908	95,176	1,182,779	704,871
All other industries	1,159	61,452	834	9,705	50,913	245,215	397,315,933	11,463,891	29,408,071	171,753,102	23,543,320	273,923,259	102,170,157

1 Excluding statistics for establishments located outside of the corporate limits of Chicago, to avoid disclosure of individual operations. The figures for these establishments are included under the head of "All other industries."

Comparative summary, by industries.—The number of establishments, average number of wage earners, and value of products for such of the industries as can be shown separately and had a value of products amounting to \$5,000,000 or more in 1909 are given in Table 13 for 1909, 1904, and 1899, respectively.

COMPARATIVE SUMMARY FOR THE CHICAGO METROPOLITAN DISTRICT, BY SELECTED INDUSTRIES: 1909, 1904, AND 1899.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.			WAGE EARNERS (AVERAGE NUMBER).			VALUE OF PRODUCTS.			PER CENT OF INCREASE. <sup>1</sup>								
	1909	1904	1899	1909	1904	1899	1909	1904	1899	Number of establishments.			Wage earners (average number).			Value of products.		
										1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904
Slaughtering and meat packing.....	267	56	51	22,064	22,767	25,474	\$325,061,657	\$270,548,962	\$257,270,151	31.4	19.6	9.8	-13.4	-3.1	-10.6	26.4	20.1	5.2
Slaughtering and meat packing, wholesale.....	29	24	28	21,494	22,391	25,141	317,585,257	262,586,609	248,811,997	3.6	20.8	-14.3	-14.5	-4.0	-10.9	27.6	20.9	5.5
Slaughtering, wholesale, not including meat packing.....	12	8	10	225	222	204	4,367,571	6,994,877	7,715,952	20.0	50.0	-20.0	10.3	1.4	8.8	-43.4	-37.6	-9.3
Sausage.....	226	24	13	345	154	129	3,108,829	967,470	742,202	100.0	8.3	84.6	167.4	124.0	19.4	318.9	221.3	30.4
Foundry and machine-shop products.....	721	599	(*)	35,331	30,002	(*)	104,319,563	71,243,847	(*)	.....	20.4	.....	.....	17.8	.....	.....	46.4	.....
Clothing.....	882	767	1,056	39,230	23,963	19,007	100,973,332	66,262,793	47,055,123	-16.5	15.0	-27.4	106.4	63.7	26.1	114.6	52.4	40.8
Men's, including shirts.....	2678	2693	2905	33,615	19,655	15,019	85,296,407	54,625,975	37,846,639	-25.1	14.3	-34.5	123.8	71.0	30.9	125.4	56.1	44.3
Women's.....	2204	174	151	5,615	4,308	3,988	15,676,925	11,636,818	9,208,454	35.1	17.2	15.2	40.8	30.3	8.0	70.2	34.7	26.4
Printing and publishing.....	1,466	1,308	1,123	23,625	17,594	15,531	76,070,564	53,472,267	30,417,539	30.5	12.1	16.5	52.1	34.3	13.3	108.9	42.3	46.8
Book and job.....	823	706	606	15,857	11,518	9,562	37,405,284	26,243,822	18,587,539	35.8	10.6	16.5	66.0	37.7	20.6	101.2	44.5	41.2
Newspapers and periodicals.....	485	459	371	4,119	3,481	3,814	30,991,282	21,991,468	14,122,484	30.7	5.7	23.7	8.0	18.3	-8.7	118.8	40.5	55.7
Music.....	24	32	22	62	40	53	946,517	579,417	282,297	9.1	-25.0	45.5	.....	.....	.....	235.3	63.4	105.2
All other printing and publishing industries.....	134	111	124	3,587	2,555	2,112	6,817,481	4,657,560	3,425,219	8.1	20.7	-10.5	69.8	40.4	21.0	99.0	46.4	36.0
Iron and steel, steel works and rolling mills.....	16	25	(*)	15,245	5,087	(*)	71,531,974	24,839,623	(*)	.....	220.0	.....	.....	109.7	.....	.....	158.0	.....
Lumber and timber products.....	213	164	135	10,653	8,060	5,866	33,559,593	20,336,622	12,965,292	57.8	29.0	.....	81.6	32.2	37.4	178.2	65.1	68.6
Bread and other bakery products.....	1,278	880	725	6,723	5,922	4,478	28,146,786	21,061,370	12,906,586	76.3	45.2	21.4	50.1	13.5	32.2	118.1	33.6	63.2
Cars, steam-railroad, not including operations of railroad companies.....	24	11	13	10,948	7,059	7,589	25,462,246	23,798,900	19,108,085	84.6	118.2	-15.4	44.3	55.1	-7.0	33.3	7.0	24.5
Electrical machinery, apparatus, and supplies.....	6	123	96	6,096	5,927	5,787	20,668,505	16,291,546	11,357,986	73.2	28.1	35.2	5.3	2.9	2.4	82.0	26.9	43.4
Furniture and refrigerators.....	208	160	120	9,957	9,754	7,975	20,638,171	17,722,381	12,539,210	73.3	30.0	33.3	24.9	2.1	22.3	64.6	16.5	41.3
Soap.....	27	23	27	2,139	1,835	1,484	19,939,041	13,769,946	9,064,989	.....	17.4	-14.8	44.1	16.6	23.7	120.0	44.8	51.9
Liquors, malt.....	48	56	37	2,905	2,763	2,272	19,712,962	16,983,421	14,956,865	29.7	-14.3	51.4	27.9	5.1	21.6	31.8	16.1	13.5
Coffee and spice, roasting and grinding.....	32	23	25	1,006	940	922	19,593,188	15,563,301	12,612,424	28.0	39.1	-8.0	9.1	7.0	2.0	55.3	25.9	23.4
Paint and varnish.....	261	52	46	1,606	1,105	866	18,942,448	12,664,948	8,096,007	32.6	17.3	13.0	56.4	34.4	38.0	134.0	49.6	56.4
Tobacco manufactures.....	1,102	993	846	5,343	4,401	3,516	16,919,417	11,124,658	8,235,267	30.3	11.0	17.4	52.0	21.4	25.2	105.4	52.1	35.1
Cigars and cigarettes.....	1,070	969	822	4,284	3,651	2,855	8,862,067	6,894,925	5,180,727	30.2	10.4	17.9	48.5	17.3	26.6	71.1	28.5	33.1
Chewing and smoking tobacco and snuff.....	32	24	24	1,059	750	631	8,057,350	4,229,733	3,054,540	33.3	33.3	.....	67.8	41.2	18.9	163.8	90.5	38.5
Cars and general shop construction and repairs by steam-railroad companies.....	28	22	24	12,002	8,592	6,787	16,451,913	11,171,554	8,185,431	16.7	27.3	-8.3	76.8	39.7	26.6	101.0	47.3	36.5
Musical instruments.....	69	56	57	6,857	5,370	4,532	15,169,760	9,151,010	7,403,628	21.1	23.2	-1.8	51.3	27.7	18.5	104.9	65.8	23.6
Pianos and organs and materials.....	42	32	31	6,525	4,886	4,107	14,555,453	8,487,726	6,896,335	35.5	31.2	3.2	58.9	33.5	19.0	111.1	71.5	23.1
Instruments and materials not specified.....	27	24	26	392	484	425	614,307	663,284	507,293	3.8	12.5	-7.7	-21.9	-31.4	13.9	21.1	-7.4	30.7
Leather, tanned, curried, and finished.....	24	23	22	2,674	2,479	2,047	13,243,550	9,420,426	6,979,289	9.1	4.3	4.5	30.6	7.9	21.1	89.8	40.6	35.0
Copper, tin, and sheet-iron products.....	7268	174	162	3,859	4,391	3,669	12,241,950	11,903,852	8,437,495	65.4	54.0	7.4	5.2	-12.1	19.7	45.1	2.8	41.1
Confectionery.....	91	63	52	3,245	2,965	2,600	11,241,011	6,592,183	5,757,334	75.0	46.3	21.2	24.8	9.4	14.0	95.2	70.5	14.5
Patent medicines and compounds and druggists' preparations.....	277	248	204	1,363	1,564	1,129	10,376,264	11,942,051	5,921,497	35.8	11.7	21.6	20.7	-12.9	38.5	75.2	-13.1	101.7
Boots and shoes, including cut stock and findings.....	31	25	45	3,027	2,446	2,992	9,855,302	6,599,350	6,813,763	-31.1	-11.4	-22.2	1.2	23.8	-18.2	44.6	50.2	-3.7
Baking powders and yeast.....	16	18	14	522	645	442	7,008,602	3,335,827	3,890,258	14.3	.....	.....	14.3	18.1	-19.1	45.9	110.1	80.2
Leather goods.....	103	85	92	2,317	2,041	2,023	6,074,015	5,044,854	3,857,944	43.1	21.2	18.1	4.6	8.6	0.9	57.4	20.4	39.8
Food preparations.....	78	47	49	802	608	563	6,017,603	3,228,835	3,066,960	59.2	66.0	-4.1	-2.5	31.9	8.0	96.2	80.4	5.3
Carrriages and wagons, and materials.....	144	130	104	2,140	1,804	1,592	5,685,809	4,137,325	3,075,016	38.5	10.8	25.0	34.4	14.8	17.1	84.9	37.4	34.5
Brass and bronze products.....	50	46	44	1,167	974	788	5,131,391	3,500,077	2,703,042	27.3	21.7	4.5	48.1	19.8	23.6	89.8	46.0	29.5
Boxes, fancy and paper.....	48	39	35	3,609	2,324	2,381	5,043,621	2,825,271	2,923,299	26.3	23.1	2.6	51.6	55.3	-2.4	72.5	78.5	-3.4
Canning and preserving.....	52	53	49	1,177	1,031	914	5,005,292	4,007,637	3,544,610	6.1	-1.9	8.2	28.8	14.2	12.8	41.2	24.9	13.1

<sup>1</sup> A minus sign (-) denotes decrease. Percentage not shown where base is less than 100 for wage earners.

<sup>2</sup> Excluding statistics for one establishment, to avoid disclosure of individual operations.

<sup>3</sup> Comparable figures not available.

<sup>4</sup> Includes "bookbinding and blank-book making;" "engraving, steel and copper plate, including plate printing;" and "lithographing."

<sup>5</sup> Excluding statistics for five establishments, to avoid disclosure of individual operations.

<sup>6</sup> Excluding statistics for two establishments, to avoid disclosure of individual operations.

<sup>7</sup> Excluding statistics for twenty-two establishments, to avoid disclosure of individual operations.

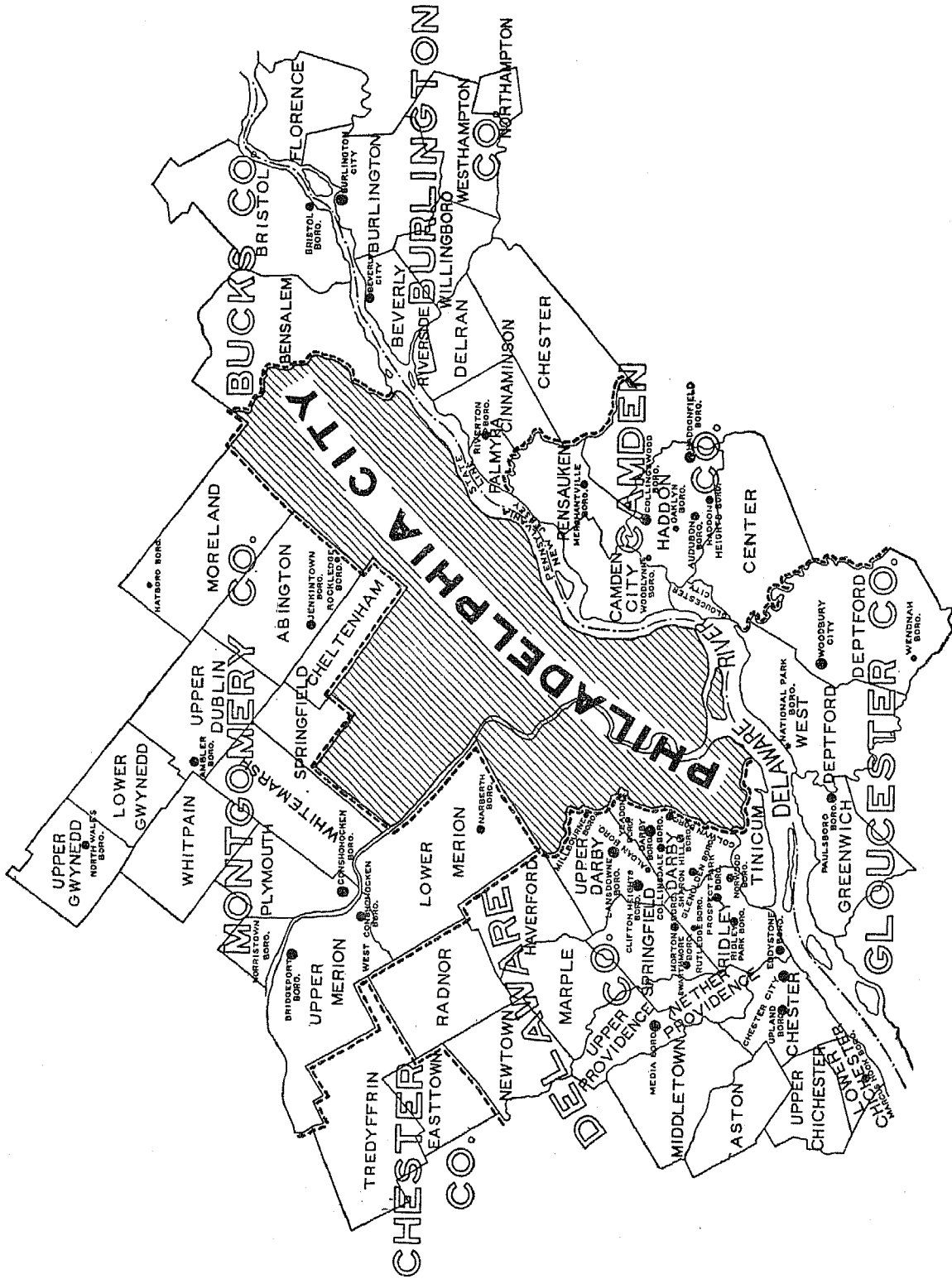
The greatest absolute increase during the decade in value of products shown for any individual industry included in the table was for slaughtering and meat packing—\$67,791,506, or 26.4 per cent; the greatest relative increase for any single industry (178.2 per cent) was reported for the lumber industry.

The blast-furnace industry, the manufacture of agricultural implements, the smelting and refining of lead, the gas industry, the refining of petroleum, and the manufacture of cordage and twine and jute and linen goods, of flour and grist mill products, of distilled liquors,

of oleomargarine, of cement, and of glucose and starch are among the important industries in the district that can not be shown separately, as to do so would disclose individual operations. They are mentioned in the order of their importance.

The inclusion, in this comparative table, of the 1909 statistics for industries in the territory added since 1904 raises very much the total value of products of steel—"iron and steel, steel works and rolling mills," and of musical instruments, pianos and organs and materials.

PHILADELPHIA METROPOLITAN DISTRICT: 1909.





## PHILADELPHIA METROPOLITAN DISTRICT.

**Territory included.**—The metropolitan district of Philadelphia embraces 437,733 acres of territory, of which 83,340 acres represent the area of Philadelphia, and 354,393 acres the area of the outside territory. The population of the city of Philadelphia proper in 1910 was 1,549,008, and that of the outside territory 423,334, the total for the district being 1,972,342.

As defined at the Thirteenth Census, the metropolitan district comprised, in addition to the city of Philadelphia, 6 cities, 42 boroughs, and 49 townships—a total of 97 civil divisions. Five of the cities, 11 of the boroughs, and 17 of the townships are situated in New Jersey. The district covered by the statistics published in the bulletin on industrial districts for 1904 contained, besides Philadelphia, 68 civil divisions, all but 8 of which are among the number included for 1909. These 8 divisions comprise Southampton township in Bucks County, Pa.; Thornbury and Willistown townships in Chester County, Pa.; and Bethel, Birmingham, Concord, Edgemont, and Thornbury townships in Delaware County, Pa.

The various cities, boroughs, and townships included in the metropolitan district in 1909 are shown below, by counties. Places included in the district in 1904 are indicated by (\*):

### PENNSYLVANIA.

#### PHILADELPHIA COUNTY.

\*Philadelphia city.

#### BUCKS COUNTY.

*Bensalem township.	Bristol township.
Bristol borough.	

#### CHESTER COUNTY.

*Easttown township.	Tredyffrin township.
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#### DELAWARE COUNTY.

*Aldan borough.	*Morton borough.
*Aston township.	*Nether Providence township.
*Chester city.	*Newtown township.
*Chester township.	*Norwood borough.
*Clifton Heights borough.	*Prospect Park borough.
*Collingdale borough.	*Radnor township.
*Colwyn borough.	*Ridley township.
*Darby borough.	*Ridley Park borough.
*Darby township.	*Rutledge borough.
*Eddystone borough.	*Sharon Hill borough.
*Glenolden borough.	*Springfield township.
*Haverford township.	*Swarthmore borough.
*Lansdowne borough.	*Tinicum township.
*Lower Chichester township.	*Upland borough.
*Marcus Hook borough.	*Upper Chichester township.
*Marple township.	*Upper Darby township.
*Media borough.	*Upper Providence township.
*Middletown township.	*Yeadon borough.
*Millbourne borough.	

### PENNSYLVANIA—Continued.

#### MONTGOMERY COUNTY.

*Abington township.	Norristown borough.
Ambler borough.	North Wales borough.
Bridgeport borough.	*Plymouth township.
*Cheltenham township.	*Rockledge borough.
*Conshohocken borough.	*Springfield township.
*Hatboro borough.	Upper Dublin township.
*Jenkintown borough.	Upper Merion township.
Lower Gwynedd township.	*West Conshohocken borough.
*Lower Merion township.	*Whitemarsh township.
*Moreland township.	Whitpain township.
*Narberth borough.	

#### NEW JERSEY.

#### BURLINGTON COUNTY.

Beverly city.	Florence township.
Beverly township.	Northampton township.
Burlington city.	Palmyra township.
Burlington township.	Riverside township.
Chester township.	Riverton borough.
Cinnaminson township.	Westhampton township.
Delran township.	Willingboro township.

#### CAMDEN COUNTY.

*Audubon borough.	*Haddon Heights borough.
*Camden city.	*Haddonfield borough.
*Center township.	*Merchantville borough.
*Collingswood borough.	*Oaklyn borough.
*Gloucester city.	*Pensauken township.
*Haddon township.	*Woodlynne borough.

#### GLOUCESTER COUNTY.

Deptford township.	Wenonah borough.
Greenwich township.	West Deptford township.
National Park borough.	Woodbury city.
Paulsboro borough.	

On page 920 is an outline map of the metropolitan district as constituted in 1909, showing the various cities, boroughs, and townships included.

**Summary for the district.**—Table 14 is a summary for 1909 of the statistics of manufacturing industries, with a statement of the population in 1910, for the Philadelphia district; for the cities of Philadelphia, Pa., Camden, N. J., and Chester, Pa., and the borough of Norristown, Pa.; and for the remainder of the district. The percentage which the figure for Philadelphia represents of the total for the district is shown in the case of each item.

In 1909 the Philadelphia metropolitan district had 9,568 manufacturing establishments, which gave employment to an average of 358,218 persons during the year, and paid out \$200,933,659 in salaries and wages. Of the persons employed, 308,947 were wage earners. These establishments turned out products to the value



## MANUFACTURES.

of \$911,014,010, to produce which materials costing \$529,992,413 were utilized. The value added by manufacture was thus \$381,021,597. The Philadel-

phia district ranked third in 1909 among all the metropolitan districts of the United States in the value of its manufactured products.

Table 14

	NUMBER OR AMOUNT.							Per cent Philadelphia is of total for district.
	The district.	Philadelphia.	District exclusive of Philadelphia.					
			Total.	Camden.	Chester.	Norristown.	Remainder.	
Population <sup>1</sup> .....	1,972,342	1,549,008	423,334	94,538	38,537	27,875	262,384	78.5
Number of establishments.....	9,568	8,379	1,189	365	128	111	585	87.6
Persons engaged in manufactures.....	358,218	294,498	63,720	18,709	7,867	4,223	32,021	82.2
Proprietors and firm members.....	10,263	9,162	1,101	315	102	104	580	89.3
Salaried employees.....	39,008	33,452	5,556	1,867	779	301	2,609	85.8
Wage earners (average number).....	308,947	251,894	57,053	16,527	6,986	3,818	20,732	81.5
Primary horsepower.....	497,453	365,980	131,503	29,056	17,131	5,713	79,608	73.6
Capital.....	\$863,968,450	\$691,396,873	\$172,571,577	\$49,158,308	\$22,928,262	\$6,983,733	\$92,501,274	80.0
Expenses.....	810,775,271	663,405,035	147,370,236	42,679,240	17,053,434	6,000,126	81,628,436	81.8
Services.....	200,933,659	165,827,013	35,106,646	11,013,136	4,356,504	1,931,184	17,805,872	82.5
Salaries.....	46,619,252	39,446,184	7,173,068	2,406,488	964,501	378,130	3,423,949	84.6
Wages.....	154,314,407	126,380,829	27,933,578	8,606,648	3,392,003	1,553,004	14,381,923	81.9
Materials.....	529,992,413	429,092,277	100,900,136	27,383,800	11,576,388	3,274,199	58,665,749	81.0
Miscellaneous.....	79,849,199	68,485,745	11,363,454	4,282,304	1,120,542	803,793	5,156,815	85.8
Value of products.....	911,014,010	746,075,659	164,938,351	49,137,874	19,373,314	7,413,211	89,013,952	81.9
Value added by manufacture.....	381,021,597	316,983,382	64,038,215	21,764,074	7,798,926	4,139,012	30,348,203	83.2

<sup>1</sup> April 15, 1910.

The greater part of the value of the manufactured products of the district was reported by factories within the central city. Philadelphia contained over three-fourths (78.5 per cent) of the population of the district in 1910, and contributed over four-fifths (81.9 per cent) of the value of manufactured products for 1909. Its manufacturing establishments constituted 87.6 per cent of the total number of such establishments in the district and gave employment to 81.5 per cent of the average number of wage earners for that area.

Of the places outside of Philadelphia for which statistics are given separately, Camden, N. J., had the largest value of manufactured products in 1909, representing 5.4 per cent of the total for the metropolitan district. The population of Camden was 4.8 per cent of the total for the district in 1910.

The group of cities, boroughs, and townships not shown separately, with a combined population equal to 13.3 per cent of the total for the district, contributed 9.7 per cent of the value of products.

The principal industries of Philadelphia in 1909, as measured by value of products, were the woolen and worsted goods industry, printing and publishing, the refining of sugar, foundries and machine shops, the making of women's clothing and of men's clothing, including shirts, and petroleum refining; of Camden, the tanning, currying, and finishing of leather, and shipbuilding; of Chester, the metal-working and textile industries; and of Norristown, the hosiery and knit-goods industry. A large number of other places in the district, statistics for which are not given separately, reported manufactured products ranging from approximately \$1,200,000 to \$10,000,000 in value in 1909. These places included, in Pennsylvania, Eddystone borough, with foundries and machine shops and tex-

tile dyeing and finishing works; Lower Merion township, with steel works and structural iron plants; Bristol borough, with leather and woolen factories; Marcus Hook borough, with petroleum refineries; Conshohocken borough, with steel works; Clifton Heights and Bridgeport boroughs, with woolen factories; Ambler borough, with plants manufacturing steam packing; and Upper Darby township, with flour mills and gristmills. In New Jersey, the places that reported a large value of products included Gloucester city, with factories manufacturing gas and lamp fixtures; Riverside township, with the manufacture of watch cases; and Burlington city and Florence township, with plants manufacturing cast-iron and steel pipe.

Comparison with earlier censuses.—Table 15 gives statistics for the district for 1909, 1904, and 1899, together with the percentages of increase from census to census. For purposes of accurate comparison the statistics for 1909 have been adjusted by segregating the figures for the territory added since 1904; and those for 1904 and 1899 by segregating the figures for the territory deducted since 1904.

The percentage of increase in all items shown except miscellaneous expenses was greater during the later five-year period 1904-1909 than during the period 1899-1904. For the decade 1899-1909 the relative increase was greater in the amount paid for salaries and in the number of salaried employees than for any other items. The average number of wage earners increased 23.2 per cent during this period, but the wages increased 40.3 per cent, a rate of gain somewhat less than that in value of products, 51.3 per cent. The rate of increase in primary horsepower of all kinds from 1904 to 1909 was 27.6 per cent. Statistics as to the primary power used in 1899 are not available.

Table 15

	NUMBER OR AMOUNT.									PER CENT OF INCREASE. <sup>1</sup>		
	1909			1904			1899			1899-1909	1904-1909	1899-1904
	Total.	Territory added since 1904.	Remainder of district. <sup>2</sup>	Total.	Territory deducted since 1904.	Remainder of district. <sup>2</sup>	Total.	Territory deducted since 1904.	Remainder of district. <sup>2</sup>			
										1909	1904	1899
Population.....	<sup>a</sup> 1,972,342	<sup>a</sup> 117,127	<sup>a</sup> 1,855,215	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	<sup>b</sup> 1,537,994	<sup>b</sup> 8,256	<sup>b</sup> 1,529,738	21.3	.....	.....
Number of establishments.....	9,568	227	9,341	7,780	0	7,771	8,196	6	8,190	14.1	20.2	-5.1
Persons engaged in manufactures.....	358,218	11,439	346,779	295,724	137	295,587	( <sup>6</sup> )	( <sup>6</sup> )	( <sup>6</sup> )	.....	17.3	.....
Proprietors and firm members.....	10,263	194	10,069	8,780	12	8,768	( <sup>6</sup> )	( <sup>6</sup> )	( <sup>6</sup> )	.....	14.8	.....
Salaried employees.....	39,008	906	38,102	25,488	10	25,478	19,163	12	19,151	98.9	49.5	33.0
Wage earners (average number).....	308,947	10,339	298,608	261,456	115	261,341	242,551	135	242,416	23.2	14.3	7.8
Primary horsepower.....	497,453	23,864	473,589	372,040	776	371,264	( <sup>6</sup> )	( <sup>6</sup> )	( <sup>6</sup> )	.....	27.6	.....
Capital.....	\$863,968,450	\$31,623,055	\$832,345,395	\$622,081,779	\$425,276	\$621,656,503	\$505,847,424	\$265,979	\$505,581,445	64.6	33.9	23.0
Expenses.....	\$10,775,271	\$6,626,193	\$4,149,078	\$61,889,762	\$467,060	\$61,422,702	\$62,835,584	\$201,076	\$62,634,508	56.0	30.4	19.7
Services.....	200,933,659	5,359,235	195,574,424	151,923,857	74,034	151,849,823	128,069,629	52,022	128,017,607	52.8	28.8	18.6
Salaries.....	46,619,252	1,024,957	45,594,295	28,830,421	18,180	28,812,241	21,105,446	8,778	21,096,668	116.1	58.2	36.6
Wages.....	154,314,407	4,334,278	149,980,129	123,093,436	55,854	123,037,582	106,964,183	43,244	106,920,939	40.3	21.9	15.1
Materials.....	529,992,413	19,351,001	510,641,412	357,566,027	364,723	357,201,304	330,895,698	142,671	330,753,027	54.4	31.9	17.1
Miscellaneous.....	79,849,199	1,915,957	77,933,242	62,399,878	28,303	62,371,575	43,870,257	6,383	43,863,874	77.7	24.9	42.2
Value of products.....	911,014,010	29,286,032	881,727,978	677,781,117	484,604	677,296,513	582,998,753	219,395	582,779,358	51.3	30.2	16.2
Value added by manufacture.....	381,021,597	9,935,031	371,086,566	290,215,090	119,881	290,095,209	252,103,055	76,724	252,026,331	47.2	27.6	15.1

<sup>1</sup> A minus sign (-) denotes decrease.

<sup>2</sup> Figures in this column used in computing percentages of increase.

<sup>3</sup> April 15, 1910.

<sup>4</sup> No population census of Pennsylvania in 1905.

<sup>5</sup> June 1, 1900.

<sup>6</sup> Figures not available.

The proportion of manufactures in the outside territory of the metropolitan district is constantly increasing, as is indicated by Table 16. The percentages for 1909 are based upon the figures for the district exclusive of the territory added since 1904, and those for 1904 and 1899 upon the figures for the district exclusive of the territory subsequently deducted.

Table 16

	PER CENT TERRITORY OUTSIDE OF PHILADELPHIA IS OF TOTAL FOR DISTRICT.		
	1909 <sup>1</sup>	1904 <sup>2</sup>	1899 <sup>2</sup>
Population.....	16.5	( <sup>3</sup> )	15.6
Number of establishments.....	10.3	8.8	8.4
Persons engaged in manufactures.....	15.1	12.1	( <sup>4</sup> )
Proprietors and firm members.....	9.0	7.2	( <sup>4</sup> )
Salaried employees.....	12.2	10.4	8.6
Wage earners (average number).....	15.6	12.4	11.4
Primary horsepower.....	22.7	21.8	( <sup>4</sup> )
Capital.....	16.9	16.3	11.8
Expenses.....	15.4	13.2	10.7
Services.....	15.2	12.4	11.2
Salaries.....	13.5	11.9	10.3
Wages.....	15.7	12.5	11.4
Materials.....	18.0	13.9	10.8
Miscellaneous.....	12.1	11.1	9.1
Value of products.....	15.4	12.7	10.8
Value added by manufacture.....	14.6	11.1	10.8

<sup>1</sup> Based on figures for district as constituted in 1909, exclusive of territory added since 1904.

<sup>2</sup> Based on figures for district as constituted in 1904, exclusive of territory deducted since 1904.

<sup>3</sup> No population census of Pennsylvania in 1905.

<sup>4</sup> Figures not available.

The proportion of the population of the district as originally constituted reported for the territory outside of Philadelphia increased from 15.6 per cent in 1900 to 16.5 per cent in 1910, and the proportion of the value of products contributed by the outlying terri-

tory increased steadily, from 10.8 per cent in 1899 to 12.7 per cent in 1904 and 15.4 per cent in 1909.

**Leading industries.**—Table 17 gives statistics for 1909 for the industries of the district having products valued at \$500,000 or more, so far as separate figures can be presented.

Among the 101 industries shown separately in the table, there are 17 for which the totals for the district can not be given without disclosing individual operations and 18 which were not carried on in 1909 in the part of the district that is outside the city limits. In the case of all these industries, with the exception of one in the former group, the statistics shown are figures for Philadelphia only.

Of the industries shown separately, the woolen and worsted goods industry ranked highest in value of products in 1909, with 8.4 per cent of the total reported for all industries in the district, followed by foundries and machine shops, with 6.5 per cent of this total, and printing and publishing, with 5.1 per cent. Two industries—the men's clothing and cotton-goods industries—each contributed 3.2 per cent of the total value of products for the district, the making of women's clothing exceeding them slightly, with 3.3 per cent. These small percentages tend to show the great total value of the manufactures, as well as their large variety. The industries in which this, the third greatest metropolitan district, led all other districts in 1909 were the manufacture of carpets and rugs, of felt hats, and of hosiery and knit goods.

SUMMARY FOR THE PHILADELPHIA METROPOLITAN DISTRICT, BY INDUSTRIES: 1909.

**Table 17**

INDUSTRY.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Miscellaneous expenses.	Value of products.	Value added by manufacture.
		Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).								
<b>All Industries.....</b>	<b>9,568</b>	<b>358,218</b>	<b>10,263</b>	<b>39,008</b>	<b>308,947</b>	<b>497,453</b>	<b>\$863,968,450</b>	<b>\$46,619,252</b>	<b>\$154,314,407</b>	<b>\$529,992,413</b>	<b>\$79,849,199</b>	<b>\$911,014,010</b>	<b>\$361,021,597</b>
Artificial flowers and feathers and plumes.....	29	915	35	76	804	70	934,444	71,509	261,863	674,942	111,125	1,313,601	638,050
Automobiles, including bodies and parts.....	22	943	17	93	833	657	1,911,164	130,404	562,271	1,160,387	229,995	2,161,774	1,001,387
Babbitt metal and solder.....	11	212	8	67	137	174	783,315	66,342	79,235	1,466,586	64,402	1,759,625	293,039
Belting and hose, leather.....	13	188	13	56	119	286	636,841	62,616	81,400	809,245	47,634	1,104,086	294,841
Belting and hose, woven and rubber.....	3	393	1	71	321	927	919,940	88,126	147,793	690,754	92,068	1,074,843	384,089
Blackening and cleansing and polishing preparations.....	34	250	33	82	135	238	406,299	82,406	59,664	320,428	90,189	623,597	303,169
Boots and shoes, including cut stock and findings.....	82	5,286	98	394	4,794	1,279	5,173,846	532,616	2,172,641	5,037,440	418,078	8,826,515	3,789,075
Boxes, cigar.....	7	346	9	17	320	362	364,160	26,376	124,521	322,814	28,594	542,983	220,169
Boxes, fancy and paper.....	70	3,852	71	254	3,527	1,488	2,556,384	250,340	1,157,609	1,682,977	341,850	3,963,100	2,280,123
Brass and bronze products.....	54	1,330	43	196	1,091	1,710	3,372,049	204,489	653,801	2,696,556	221,589	4,323,789	1,627,233
Bread and other bakery products.....	1,387	7,810	1,411	1,140	5,259	4,460	16,083,118	965,776	2,976,470	12,866,192	1,317,593	21,105,889	8,230,697
Brick and tile.....	55	1,997	77	80	1,840	4,492	3,847,396	85,052	974,607	576,623	303,078	2,335,712	1,759,089
Brushes.....	137	340	41	40	259	187	517,315	39,302	129,765	385,373	69,179	719,159	333,786
Buttons.....	121	740	23	49	698	393	651,121	66,777	284,600	585,627	54,206	1,158,550	572,923
Canning and preserving.....	123	804	26	150	628	723	1,827,752	165,589	226,086	1,771,581	184,596	2,537,593	765,952
Carpets and rugs, other than rag.....	90	11,546	102	445	10,999	12,165	24,175,744	748,987	4,991,642	14,000,176	2,009,846	23,961,307	9,961,131
Carriages and wagons and materials.....	128	1,955	147	117	1,691	1,352	3,001,171	143,813	1,065,511	1,313,599	215,206	3,357,654	2,044,055
Cars and general shop construction and repairs by steam-railroad companies.....	14	4,478	.....	388	4,090	2,786	5,011,514	280,615	2,849,401	2,892,185	159,812	6,182,014	3,280,829
Chemicals.....	23	2,677	18	326	2,333	5,946	15,620,510	497,463	1,340,705	7,793,494	656,759	11,720,552	3,927,058
Clocks and watches, including cases and materials.....	15	937	3	160	774	793	2,737,282	162,446	399,096	977,648	204,673	1,965,029	987,381
Clothing, horse.....	7	243	5	35	203	141	435,218	47,570	77,296	509,161	51,122	719,946	210,785
Clothing, men's, including shirts.....	461	14,597	723	1,180	12,694	2,447	15,310,716	1,307,794	6,111,911	14,774,702	4,118,327	29,598,311	14,823,609
Clothing, women's.....	355	15,696	581	1,556	13,559	2,010	10,610,904	1,535,681	6,593,104	16,692,952	1,526,447	30,193,475	13,500,523
Coffee and spice, roasting and grinding.....	69	728	85	251	302	1,367	1,015,919	229,106	196,240	3,845,563	232,397	5,033,514	1,187,951
Confectionery.....	149	3,667	157	377	3,133	1,887	4,580,167	463,067	1,080,794	4,676,066	762,840	7,862,383	3,187,317
Cooperage and wooden goods, not elsewhere specified.....	144	814	47	34	733	729	1,500,859	57,066	343,696	1,448,604	98,792	2,213,712	765,108
Copper, tin, and sheet-iron products.....	148	3,615	175	400	3,040	2,129	6,683,076	420,989	1,622,543	4,442,296	478,893	7,726,681	3,284,385
Cordage and twine and jute and linen goods.....	18	1,214	8	43	1,163	2,250	3,810,268	104,517	429,250	2,135,412	75,007	3,324,680	1,180,248
Cotton goods, including cotton small wares.....	161	14,107	149	809	13,149	21,562	27,357,043	1,451,018	5,814,873	16,556,128	2,189,029	29,496,078	12,639,050
Cutlery and tools, not elsewhere specified.....	40	1,355	45	159	1,151	2,659	3,595,982	178,229	682,821	824,793	266,180	2,289,062	1,464,269
Dentists' materials.....	20	812	24	112	676	266	2,218,673	152,776	334,447	1,223,444	167,372	2,148,996	625,552
Dyeing and finishing textiles.....	104	3,991	133	283	3,575	7,037	6,178,763	357,645	1,828,537	2,413,309	524,587	6,327,261	3,913,952
Electrical machinery, apparatus, and supplies.....	40	2,355	27	530	1,789	2,769	6,803,248	573,810	935,023	3,290,886	1,064,541	7,146,485	3,855,599
Fancy articles, not elsewhere specified.....	42	827	47	61	719	341	882,995	52,721	296,278	545,025	128,308	1,281,392	736,367
Fertilizers.....	12	1,068	9	152	907	3,546	4,864,497	237,597	420,166	3,533,270	402,357	4,958,699	1,425,429
Files.....	7	1,298	4	77	1,217	1,313	2,680,218	91,445	527,845	426,845	110,877	1,539,566	1,112,721
Flour-mill and gristmill products.....	63	332	83	44	205	3,352	1,593,178	54,595	120,799	4,348,714	99,037	5,036,925	688,211
Food preparations.....	73	1,093	73	415	1,175	2,141	4,867,923	518,080	567,601	3,578,821	627,357	6,364,404	2,785,583
Foundry and machine-shop products.....	635	29,508	571	3,838	25,099	36,505	79,759,158	4,712,254	14,781,794	29,228,846	4,971,559	59,633,212	30,404,366
Fur goods.....	47	284	59	44	181	10	872,276	31,289	128,529	461,921	97,122	1,031,564	560,643
Furnishing goods, men's.....	39	1,680	50	321	1,309	143	1,528,657	378,590	515,876	2,704,554	215,801	4,282,649	1,578,095
Furniture and refrigerators.....	151	4,189	106	497	3,526	4,065	7,647,916	619,031	2,009,627	3,841,914	736,207	8,306,258	4,464,344
Gas and electric fixtures and lamps and reflectors.....	141	1,376	38	242	1,096	879	2,088,017	254,323	604,091	812,770	347,055	2,177,032	1,364,262
Gas, illuminating and heating.....	12	3,256	.....	1,063	2,193	6,828	38,272,880	946,176	995,892	3,071,857	2,021,969	12,383,349	9,311,492
Glass.....	14	1,185	1	72	1,112	419	1,251,725	89,431	559,371	497,723	102,995	1,997,246	869,523
Glass, cutting, staining, and ornamenting.....	54	832	55	92	685	599	1,263,651	77,076	383,379	917,803	122,016	1,685,088	767,285
Grease and tallow.....	17	477	32	116	329	847	1,911,998	180,461	175,161	1,661,716	248,741	2,488,171	805,455
Hat and cap materials.....	6	205	6	38	161	185	398,676	33,336	68,394	532,928	125,508	822,369	289,441
Hats and caps, other than felt, straw, and wool.....	42	562	55	43	464	51	426,318	53,570	187,960	412,707	53,696	802,953	390,246
Hats, fur-felt.....	127	6,080	34	221	5,825	4,163	13,387,205	341,435	3,101,108	3,562,833	562,076	10,401,794	6,838,911

Excluding statistics for establishments located outside of the corporate limits of Philadelphia, to avoid disclosure of individual operations. The figures for these establishments are included under the head of "All other industries."

PHILADELPHIA METROPOLITAN DISTRICT.

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SUMMARY FOR THE PHILADELPHIA METROPOLITAN DISTRICT, BY INDUSTRIES: 1909—Continued.

**Table 17—Continued.**

INDUSTRY.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Miscellaneous expenses.	Value of products.	Value added by manufacture.
		Total.	Proprietors and firm members.	Salaries and employes.	Wage earners (average number).								
Hats, straw.....	9	531	7	64	460	85	\$498,430	\$116,568	\$213,979	\$403,000	\$48,652	\$872,135	\$469,135
House-furnishing goods, not elsewhere specified.....	10	610	18	60	532	511	1,262,790	73,034	149,240	995,956	157,346	1,488,736	492,750
Hosiery and knit goods.....	190	19,345	206	898	18,241	9,201	21,139,386	1,024,814	6,466,886	14,447,804	1,881,693	26,830,879	12,383,075
Ice, manufactured.....	64	916	24	139	753	16,617	6,770,869	128,237	510,706	684,893	376,088	2,174,057	1,489,164
Ink, printing.....	8	246	6	75	165	483	742,447	94,362	104,581	622,582	171,841	1,050,113	427,631
Instruments, professional and scientific.....	32	725	28	107	590	701	1,350,768	114,865	350,822	226,525	116,438	624,367	697,842
Iron and steel, steel works and rolling mills.....	21	10,078	6	879	9,193	48,598	32,725,245	1,306,326	5,330,367	12,800,813	1,777,100	23,990,217	11,189,404
Iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills.....	9	900	7	84	809	1,573	2,185,094	99,582	355,571	732,560	172,987	1,405,688	673,128
Iron and steel forgings.....	14	488	8	72	406	1,769	1,682,423	106,781	287,806	600,533	87,948	1,185,675	585,142
Jewelry.....	152	411	69	47	265	110	664,396	37,611	186,454	426,784	69,873	684,433	577,049
Labels and tags.....	12	344	11	58	275	314	453,056	55,150	126,316	269,549	56,084	568,859	309,310
Leather goods.....	88	2,115	112	279	1,724	465	2,743,425	373,519	789,857	2,163,672	208,045	4,039,367	1,875,695
Leather, tanned, curried, and finished.....	57	8,301	46	503	7,752	10,803	23,208,137	843,194	3,950,336	24,289,672	1,871,332	33,626,349	9,386,677
Liquors, distilled.....	6	140	50	30	60	549	1,209,000	42,189	70,096	383,126	535,165	835,966	552,840
Liquors, malt.....	52	2,410	32	423	1,955	14,031	29,919,166	1,065,199	1,511,845	4,169,247	5,323,271	15,170,357	11,010,110
Looking-glass and picture frames.....	39	431	51	44	330	145	417,367	36,496	174,989	395,988	66,679	830,181	434,193
Lumber and timber products.....	126	4,385	128	342	3,015	9,612	7,329,979	395,456	2,220,513	5,461,509	433,341	9,443,170	3,991,662
Marble and stone work.....	134	2,203	176	134	1,893	3,335	3,510,136	150,192	1,272,640	1,606,161	229,488	3,975,294	2,369,133
Mattresses and spring beds.....	138	408	37	62	309	471	602,928	49,928	138,118	650,779	93,409	1,068,682	411,908
Millinery and lace goods.....	96	3,941	131	275	3,535	569	2,814,129	227,634	1,181,553	3,230,505	511,138	5,921,256	2,690,751
Mineral and soda waters.....	109	611	113	112	386	438	1,403,267	134,547	230,009	748,855	485,637	2,182,368	1,433,519
Mucilage and paste.....	12	105	8	31	66	193	366,964	55,512	30,225	611,045	51,744	808,054	197,009
Musical instruments, pianos and organs and materials.....	14	501	13	30	458	361	562,611	41,596	155,286	400,101	66,043	775,237	375,136
Oil, not elsewhere specified.....	13	285	10	112	163	718	1,408,900	132,594	97,522	1,571,924	155,894	2,069,023	497,099
Optical goods.....	14	419	12	116	291	110	465,324	89,571	123,330	272,752	61,174	620,693	347,941
Paint and varnish.....	61	2,020	54	415	1,551	5,451	11,677,576	655,624	864,660	6,571,287	898,837	10,107,711	3,536,424
Paper and wood pulp.....	14	1,905	7	133	1,765	14,410	6,991,025	237,339	876,069	3,411,994	729,842	3,869,693	2,457,690
Paper goods, not elsewhere specified.....	38	1,777	35	319	1,423	1,500	3,416,254	328,215	562,690	2,342,113	422,689	3,907,711	1,565,598
Patent medicines and compounds and druggists' preparations.....	194	3,422	164	962	2,296	2,103	10,459,787	1,138,369	962,132	4,328,750	2,315,182	10,008,183	5,760,427
Photographic apparatus and materials.....	7	192	6	39	147	114	456,269	46,591	104,137	410,123	57,292	672,908	256,785
Photo-engraving.....	116	546	15	134	397	105	523,182	140,755	381,086	185,230	123,867	917,108	731,878
Pottery, terra-cotta, and fire-clay products.....	21	967	14	101	852	1,556	2,744,334	140,772	608,707	792,094	260,842	2,020,161	1,227,167
Printing and publishing.....	1,037	21,650	991	6,471	14,188	12,750	43,747,327	5,994,440	8,514,446	15,613,927	8,983,282	46,675,524	31,061,597
Shoddy.....	20	518	32	36	450	2,170	1,627,096	47,039	185,740	1,463,218	74,061	2,051,118	587,900
Silk and silk goods, including throwsters.....	38	3,543	32	270	3,241	2,423	6,355,129	323,449	1,306,130	3,648,775	544,529	6,808,089	3,159,314
Slaughtering and meat packing.....	98	1,633	127	240	1,266	3,712	5,333,504	311,658	899,096	21,922,302	593,046	24,726,467	2,804,165
Soap.....	41	1,336	44	295	997	1,840	4,637,198	346,746	473,442	5,837,845	1,185,448	6,643,437	2,805,592
Soda-water apparatus.....	4	248	6	52	188	180	713,086	44,660	122,242	194,941	141,624	585,189	390,248
Springs, steel, car and carriage.....	5	256	1	28	227	505	644,571	42,249	125,268	254,934	36,116	534,935	280,001
Steam packing.....	26	2,059	15	511	1,533	5,270	6,466,853	424,744	753,577	2,450,519	676,013	4,275,695	1,825,176
Stereotyping and electrotyping.....	16	315	13	39	263	284	283,911	49,321	196,217	113,131	43,495	520,969	407,838
Stoves and furnaces, including gas and oil stoves.....	20	984	18	120	846	891	2,392,606	174,461	550,130	785,586	289,699	2,069,846	1,284,200
Tobacco manufactures.....	558	9,117	601	636	7,880	1,328	9,274,919	768,388	3,089,955	6,049,325	3,265,287	15,577,862	9,528,537
Type founding and printing materials.....	8	405	6	104	295	275	1,086,090	91,660	160,000	196,477	108,236	580,172	393,666
Umbrellas and canes.....	131	1,297	31	100	1,166	1,542	3,413,424	101,891	504,830	1,060,134	114,393	2,074,521	1,014,387
Upholstering materials.....	13	445	10	48	387	810	1,641,174	44,948	177,928	1,094,603	166,737	1,728,857	634,254
Wall paper.....	7	606	1	63	542	770	1,655,254	120,016	258,745	1,228,758	171,211	2,005,354	776,596
Wall plaster.....	6	333	1	64	268	1,416	869,049	90,054	137,475	358,279	90,985	700,653	341,774
Wirework, including wire rope and cable.....	30	634	34	53	547	441	916,039	86,392	290,817	413,798	104,710	1,019,414	605,616
Wood, turned and carved.....	31	466	33	25	408	488	428,326	21,539	158,062	167,495	16,292	537,246	369,751
Woolen, worsted, and felt goods, and wool hats.....	164	27,577	180	917	26,480	47,893	73,330,391	1,666,839	10,538,596	54,478,419	3,651,564	76,261,845	21,783,426
All other industries.....	852	48,107	865	4,542	42,700	112,334	172,592,600	6,114,757	23,544,677	125,461,846	10,379,815	177,832,939	52,371,693

<sup>1</sup> Excluding statistics for establishments located outside of the corporate limits of Philadelphia, to avoid disclosure of individual operations. The figures for these establishments are included under the head of "All other industries."

<sup>2</sup> Excluding statistics for one establishment, to avoid disclosure of individual operations. The figures for this establishment are included under the head of "All other industries."

Comparative summary, by industries.—In Table 18 the number of establishments, average number of wage earners, and value of products are given for 1909, 1904,

and 1899, for such of the selected industries as can be shown separately and had a value of products amounting to \$4,000,000 or more in 1909.

COMPARATIVE SUMMARY FOR THE PHILADELPHIA METROPOLITAN DISTRICT, BY SELECTED INDUSTRIES: 1909, 1904, AND 1899.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.			WAGE EARNERS (AVERAGE NUMBER).			VALUE OF PRODUCTS.			PER CENT OF INCREASE. <sup>1</sup>								
	1909	1904	1899	1909	1904	1899	1909	1904	1899	Number of establishments.			Wage earners (average number).			Value of products.		
										1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904
Textiles.....	775	710	731	77,298	67,497	69,902	\$175,061,237	\$130,144,984	\$120,509,669	6.0	8.2	-2.1	10.6	14.5	-3.4	45.3	34.5	8.0
Woolen, worsted, and felt goods, and wool hats.....	164	155	159	26,480	20,954	21,370	76,261,845	49,207,220	42,838,249	3.1	5.8	-2.5	23.9	26.4	-1.9	78.0	55.0	14.9
Cotton goods, including cotton small wares.....	161	148	167	13,149	12,009	14,640	29,496,078	22,113,073	22,845,891	-3.6	8.8	-11.4	-10.2	9.5	-18.0	29.1	33.4	-3.2
Hosiery and knit goods.....	190	154	155	18,241	13,855	12,053	20,830,879	15,915,379	13,132,313	22.6	23.4	-0.6	51.3	36.3	11.1	104.3	68.6	21.2
Carpets and rugs, other than rag.....	90	95	88	10,999	13,175	12,190	23,961,307	26,281,499	21,986,062	2.3	-5.3	8.0	-9.8	-16.5	8.1	9.0	-8.8	19.5
Silk and silk goods, including throwsters.....	38	231	228	3,241	2,681	2,506	6,808,069	5,079,103	4,531,794	35.7	22.6	10.7	29.3	20.9	7.0	50.2	34.0	12.1
Dyeing and finishing textiles.....	104	101	95	3,575	3,698	4,996	6,327,261	5,425,431	7,583,304	9.5	3.0	6.3	-28.3	-3.3	-25.8	-16.6	-28.5	
Cordage and twine and jute and linen goods.....	8	12	14	1,163	1,284	1,795	3,324,000	4,121,444	6,171,145	-42.9	-33.3	-14.3	-35.2	-9.4	-28.5	-46.1	-19.3	-33.2
Shoddy.....	20	20	25	450	311	362	2,051,118	2,601,745	1,420,911	-20.0		-20.0	24.3	44.7	-14.1	44.4	2.5	40.9
Clothing.....	810	439	636	26,253	15,595	15,448	59,791,780	30,513,637	32,151,303	28.3	85.9	-31.0	69.9	68.3	1.0	86.0	63.8	13.6
Women's.....	355	183	191	13,559	7,018	6,233	30,193,475	12,871,357	9,452,259	85.9	94.0	-4.2	117.5	93.2	12.6	219.4	134.0	36.2
Men's, including shirts.....	461	256	445	12,694	8,577	9,215	29,598,311	23,642,280	22,699,044	3.6	80.1	-42.5	37.8	48.0	-6.9	30.4	25.2	4.2
Foundry and machine-shop products.....	635	490	(*)	25,099	30,428	(*)	59,633,212	64,633,889	(*)		29.6				-17.5			-7.7
Printing and publishing.....	1,037	823	798	14,188	12,652	11,686	46,675,524	35,751,312	27,219,183	29.9	26.0	3.1	21.4	12.1	8.3	71.5	30.6	31.3
Newspapers and periodicals.....	313	258	243	4,596	3,937	3,649	25,468,055	16,979,827	13,453,530	28.8	21.3	6.2	26.0	16.7	7.9	89.3	50.0	26.2
Book and job.....	577	443	424	6,406	6,048	5,373	15,636,573	14,043,287	10,150,202	36.1	30.2	4.5	19.2	5.9	12.6	54.1	11.4	38.4
All other printing and publishing industries.....	147	122	131	3,186	2,667	2,664	5,570,896	4,728,198	3,615,451	12.2	20.5	-6.9	19.6	19.5	0.1	54.1	17.8	30.8
Leather, tanned, curried, and finished	57	52	49	7,752	6,971	6,329	33,626,349	30,589,851	19,947,747	16.3	9.6	6.1	22.5	11.2	10.1	68.6	9.9	63.3
Slaughtering and meat packing.....	98	100	75	1,266	861	6,290	24,726,467	13,904,244	13,102,364	30.7	-2.0	33.3	83.5	47.0	24.8	88.7	77.8	6.1
Iron and steel, steel works and rolling mills.....	21	16	20	9,193	7,636	7,532	23,990,217	16,770,123	21,215,505	5.0	31.2	-20.0	22.1	20.4	1.4	13.1	43.1	-21.0
Bread and other bakery products.....	1,387	1,312	1,402	5,259	4,995	3,524	21,105,889	15,562,487	11,173,460	-1.1	5.7	-6.4	49.2	5.3	41.7	88.9	65.6	39.3
Tobacco manufactures.....	558	662	590	7,880	6,381	6,191	15,577,852	9,453,331	9,137,212	-5.4	-15.7	12.2	27.3	23.5	3.1	70.5	34.8	8.5
Liquors, malt.....	52	54	63	1,955	1,674	1,814	15,179,357	12,477,139	12,722,883	-17.5	-3.7	-14.3	7.8	16.7	-7.7	19.3	21.7	-1.9
Gas, illuminating and heating.....	12	9	13	2,193	2,038	2,662	12,383,349	8,146,740	5,883,245	-7.7	33.3	-30.8	-17.6	7.6	-23.4	110.5	52.0	38.5
Chemicals.....	23	28	(*)	2,333	2,009	(*)	11,720,552	9,152,321	(*)			-17.9		16.1				28.1
Hats, fur-felt.....	327	316	312	5,825	3,560	2,116	10,401,794	5,847,771	3,075,470	125.0	68.8	33.3	175.3	63.6	68.2	238.2	77.9	90.1
Paint and varnish.....	61	49	50	1,551	1,155	1,253	10,107,711	7,189,279	8,160,147	22.0	24.5	-2.0	23.8	34.3	-7.8	23.9	40.6	-11.9
Patent medicines and compounds and druggists' preparations.....	194	115	120	2,296	1,945	2,005	10,098,183	7,437,788	7,519,662	61.7	68.7	-4.2	14.5	18.0	-3.0	34.3	35.8	-1.1
Lumber and timber products.....	126	85	88	3,915	2,807	2,602	9,443,170	6,489,798	6,000,599	43.2	48.2	-3.4	50.5	39.5	-7.9	57.4	45.5	8.2
Boots and shoes, including cut stock and findings.....	82	68	103	4,794	3,508	4,257	8,826,515	6,144,808	7,004,141	-20.4	20.6	-34.0	12.6	36.7	-17.6	26.0	43.6	-12.3
Soap.....	41	37	37	997	885	541	8,643,437	6,210,517	2,920,642	10.8	10.8		84.3	12.7	63.6	195.9	39.2	112.6
Furniture and refrigerators.....	151	103	85	3,526	3,144	2,569	8,306,258	5,871,036	4,751,260	77.0	46.0	21.2	37.3	12.2	22.4	74.8	41.5	23.6
Confectionery.....	149	83	79	3,133	2,694	2,092	7,862,383	5,594,627	4,355,495	88.6	79.5	5.1	49.8	16.3	28.8	80.5	40.5	28.4
Copper, tin, and sheet-iron products.....	148	92	87	3,049	3,180	1,929	7,726,681	5,647,800	3,344,134	70.1	60.9	5.7	57.6	-4.4	64.9	131.1	36.8	68.9
Electrical machinery, apparatus, and supplies.....	49	40	43	1,789	1,536	1,201	7,146,485	5,065,862	4,280,699	14.0	22.5	-7.0	38.6	16.5	19.0	66.9	41.1	18.3
Food preparations.....	73	49	34	1,175	759	368	6,364,404	3,415,393	1,232,722	114.7	49.0	44.1	219.3	54.8	106.2	416.3	86.3	177.1
Cars and general shop construction and repairs by steam-railroad companies.....	14	11	13	4,090	3,842	3,177	6,182,014	5,275,345	4,238,156	7.7	27.3	15.4	28.7	6.5	20.9	45.9	17.2	24.5
Millinery and lace goods.....	96	42	37	3,535	1,451	759	5,921,260	2,132,167	1,445,984	159.5	128.0	13.5	365.7	143.6	91.2	309.5	177.7	47.5
Paper and wood pulp.....	14	15	12	1,765	1,540	1,065	5,869,693	4,174,472	2,925,530	16.7	-6.7	25.0	65.7	14.6	44.0	100.6	40.6	42.7
Flour-mill and gristmill products.....	63	29	39	206	187	183	5,036,925	4,149,012	2,778,118	61.5	117.2	-25.6	12.0	9.6	2.2	81.3	21.4	49.4
Coffee and spice, roasting and grinding.....	69	44	243	392	380	308	5,033,514	2,704,307	2,642,080	60.5	56.8	2.3	27.3	3.2	23.4	90.5	86.1	2.4
Fertilizers.....	12	9	9	907	600	458	4,958,699	2,689,160	2,475,451	33.3	33.3		98.0	51.2	31.0	100.3	84.4	8.6
Brass and bronze products.....	54	30	58	1,091	871	1,309	4,323,769	3,101,196	3,989,654	-6.9	8.0	-13.8	-16.7	25.3	-33.5	8.4	39.4	-22.3
Furnishing goods, men's.....	39	30	32	1,309	964	958	4,282,649	2,691,789	2,057,688	21.9	30.0	-6.2	32.5	35.8	-2.4	108.1	59.1	30.8
Steam packing.....	26	14	17	1,533	261	238	4,275,695	741,091	769,116	52.9	85.7	-17.6	544.1	487.4	9.7	455.9	476.9	-3.6
Leather goods.....	88	73	67	1,724	1,768	1,648	4,039,367	3,727,080	2,708,447	31.3	20.5	9.0	4.6	-2.5	7.3	49.1	8.4	37.6

<sup>1</sup> A minus sign (-) denotes decrease.

<sup>2</sup> Excluding statistics for two establishments, to avoid disclosure of individual operations.

<sup>3</sup> Excluding statistics for one establishment, to avoid disclosure of individual operations.

<sup>4</sup> Comparable figures not available.

<sup>5</sup> Includes "printing and publishing, music;" "bookbinding and blank-book making;" "engraving, steel and copper plate, including plate printing;" and "lithographing."

The greatest absolute increase in value of products during the decade in the area under consideration—\$33,423,596, or 78 per cent—is shown for the manufacture of woolen, worsted, and felt goods and wool hats. In this industry the city of Philadelphia ranks second among cities of the United States. The omission of the statistics for one establishment in 1899 has only the slightest effect upon the comparison.

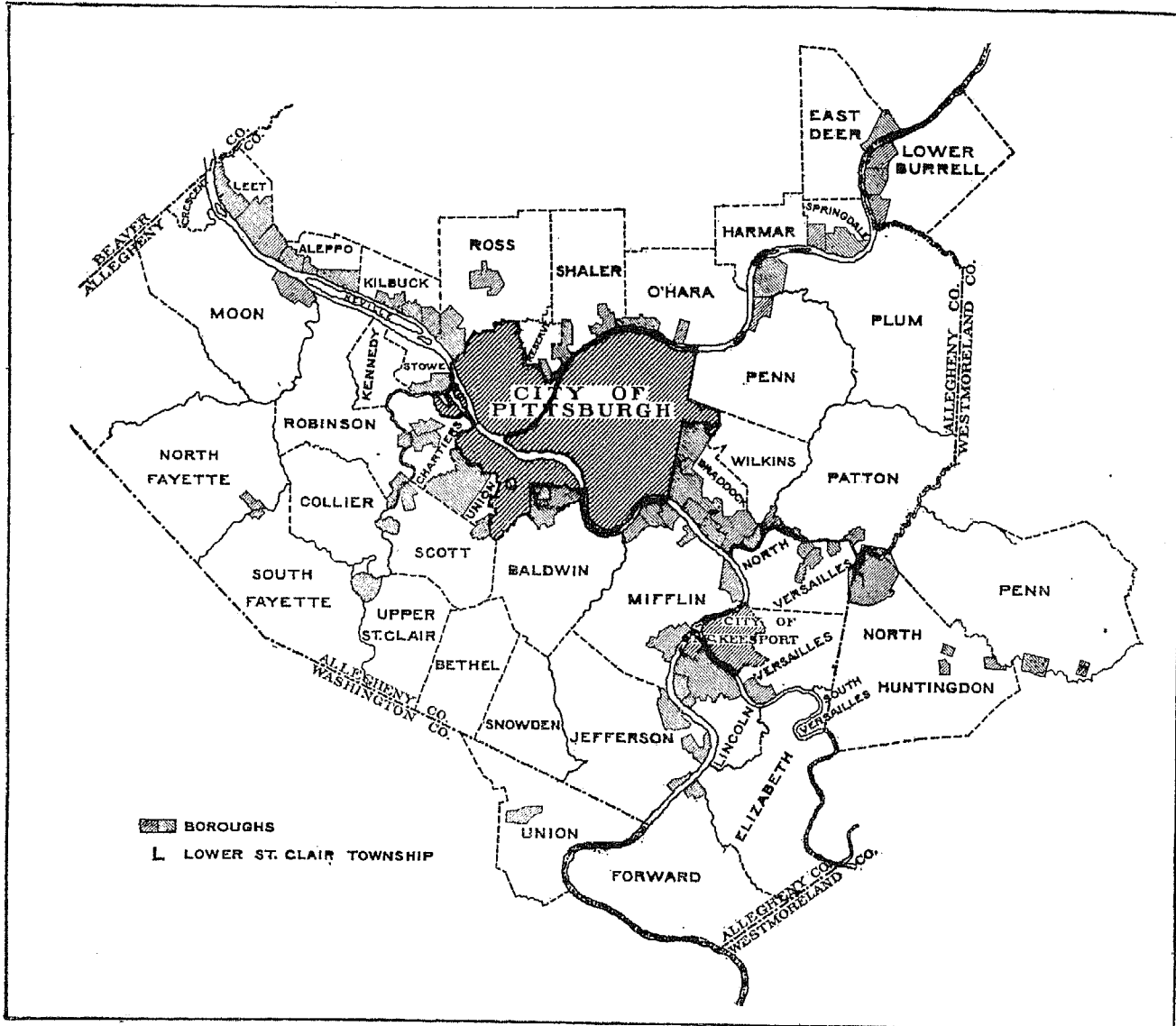
The apparent decrease for the dyeing and finishing of textiles is due to the necessary omission of statistics for two establishments, to present which would disclose the operations of individual establishments. In reality there has been a very considerable increase.

Among the important industries that can not be shown separately, since to do so would disclose the operations of individual establishments, are the refining of sugar and of petroleum, the shipbuilding indus-

try, and the manufacture of locomotives and of oilcloth and linoleum.

The relative gain shown in the table for the manufacture of steam packing is much increased by the inclusion of statistics for this industry from territory added to the district since 1904. The absolute gain in the manufacture of woolen, worsted, and felt goods and wool hats is likewise considerably raised by figures for that part of the industry reported from territory new to the district in 1909. Other prominent industries affected in substantially like measure as the latter are the tanning, currying, and finishing of leather and the manufacture of steel. Omitting from consideration these industries, the greatest relative gain in value of products during the decade was for food preparations, 416.3 per cent; and in absolute gain, for the manufacture of clothing—\$27,640,483.

PITTSBURGH METROPOLITAN DISTRICT: 1909.



## PITTSBURGH METROPOLITAN DISTRICT.

**Territory included.**—The metropolitan district of Pittsburgh embraces 405,880 acres of territory, of which 26,511 acres constitute the area of Pittsburgh and 379,369 acres the area of the outside territory. The population of the city of Pittsburgh proper in 1910 was 533,905 and that of the outside territory 510,838, the total for the district being 1,044,743. As defined at the census of 1910, the metropolitan district comprised 119 cities, boroughs, and townships situated in Allegheny, Washington, and Westmoreland Counties; the district covered by the statistics published for 1904 contained only 58 civil divisions, all of which were in Allegheny County.

The following is a list, by counties, of the various cities, boroughs, and townships included in the metropolitan district in 1909:

[Places included in the district in 1904 are indicated by \*. Allegheny, Elliott, Esplen, Montooth, Sheraden, Sterrett, and West Liberty, included in 1904 as separate subdivisions, are now part of the city of Pittsburgh.]

### ALLEGHENY COUNTY.

Aleppo township.  
Aspinwall borough.  
\*Avalon borough.  
\*Baldwin township.  
\*Bellevue borough.  
\*Ben Avon borough.  
Bethel township.  
\*Braddock borough.  
\*Braddock township.  
Bridgeville borough.  
\*Carnegie borough.  
\*Carrick borough.  
\*Chartiers township.  
Cheswick borough.  
Clairton borough.  
Collier township.  
Coraopolis borough.  
\*Crafton borough.  
Crescent township.  
\*Dormont borough.  
\*Dravosburg borough.  
\*Duquesne borough.  
East Deer township.  
East McKeesport borough.  
\*East Pittsburgh borough.  
\*Edgewood borough.  
Edgeworth borough.  
Elizabeth borough.  
Elizabeth township.  
\*Emsworth borough.  
\*Etna borough.  
Forward township.  
Glassport borough.  
\*Glenfield borough.  
\*Greentree borough.  
Harmar township.  
\*Hays borough.  
Haysville borough.  
Heidelberg borough.

### ALLEGHENY COUNTY—contd.

\*Homestead borough.  
\*Ingram borough.  
Jefferson township.  
\*Kennedy township.  
\*Kilbuck township.  
\*Knoxville borough.  
Leet township.  
Leetsdale borough.  
Lincoln township.  
\*Lower St. Clair township.  
McKeesport city.  
\*McKees Rocks borough.  
\*Miffin township.  
\*Millvale borough.  
Moon township.  
\*Mount Oliver borough.  
\*Munhall borough.  
\*Neville township.  
\*North Braddock borough.  
North Fayette township.  
North Versailles township.  
Oakdale borough.  
Oakmont borough.  
O'Hara township.  
Osborn borough.  
Patton township.  
Penn township.  
Pitcairn borough.  
\*Pittsburgh city.  
Plum township.  
Port Vue borough.  
\*Rankin borough.  
\*Reserve township.  
\*Robinson township.  
\*Ross township.  
\*St. Clair borough.  
\*Scott township.  
Sewickley borough.  
\*Shaler township.

### ALLEGHENY COUNTY—contd.

Sharpsburg borough.  
Snowden township.  
South Fayette township.  
South Versailles township.  
\*Spring Garden borough.  
Springdale borough.  
Springdale township.  
\*Stowe township.  
\*Swissvale borough.  
Tarentum borough.  
\*Thornburg borough.  
Trafford borough (part of).  
Turtle Creek borough.  
\*Union township.  
Upper St. Clair township.  
Verona borough.  
Versailles borough.  
Versailles township.  
Wall borough.  
West Elizabeth borough.  
\*West Homestead borough.  
\*Westview borough.  
\*Whitaker borough.

### ALLEGHENY COUNTY—contd.

\*Wilkins township.  
\*Wilkinsburg borough.  
Wilmerding borough.  
Wilson borough.

### WASHINGTON COUNTY.

Finleyville borough.  
Union township.

### WESTMORELAND COUNTY.

Arnold borough.  
Irwin borough.  
Jeannette borough.  
Lower Burrell township.  
Manor borough.  
New Kensington borough.  
North Huntingdon township.  
North Irwin borough.  
Parnassus borough.  
Penn borough.  
Penn township.  
Trafford borough (part of).

The relative location of the constituent divisions is indicated on the outline map of this district on page 928.

**Summary for the district.**—Table 19 is a summary for 1909 of the statistics of manufacturing industries, with a statement of the population, for the Pittsburgh metropolitan district; for the cities of Pittsburgh and McKeesport, and five of the leading boroughs; and for the remainder of the district. The percentage which the figure for Pittsburgh represents of the total for the district is shown in the case of each item. The statistics for Duquesne and North Braddock boroughs are included with the "remainder" of the district to avoid disclosing individual operations.

In 1909 the Pittsburgh metropolitan district had 2,369 manufacturing establishments, which gave employment to an average of 163,258 persons during the year and paid out \$115,049,924 in salaries and wages. Of the persons employed 140,464 were wage earners. These establishments turned out products to the value of \$578,815,493, to produce which materials costing \$366,892,433 were utilized. The value added by manufacture was thus \$211,923,060. The Pittsburgh district ranked fourth in 1909 among all the metropolitan districts of the United States in the value of its manufactured products. It far exceeded any of the others in the value of its iron and steel output.

In the Pittsburgh district, as in the Boston district, the greater part of the value of the manufactured products of the district was reported by factories outside the central city. Pittsburgh contained over one-half (51.1 per cent) of the population of the district of which it is the manufacturing, commercial, and finan-



cial center, and contributed slightly over two-fifths of the value of products for the district (42.1 per cent). Its manufacturing establishments constituted seven-tenths (70 per cent) of all in the district and gave employment to nearly one-half (48.8 per cent) of the average number of wage earners for that area.

Of the places outside Pittsburgh for which statistics are given separately, McKeesport had the largest value of products, representing 7.3 per cent of the total for the metropolitan district. This city contained 4.1 per cent of the total population of the district.

Table 19

	NUMBER OR AMOUNT.										Percent Pittsburgh is of total for district.
	The district.	Pittsburgh.	District exclusive of Pittsburgh.								
			Total.	McKeesport.	Braddock.	Wilkinsburg.	Homestead.	McKees Rocks.	Carnegie.	Remainder.	
Population <sup>2</sup> .....	1,044,743	533,905	510,838	42,694	19,357	18,924	18,713	14,702	10,009	386,439	51.1
Number of establishments.....	2,369	1,659	710	68	41	24	26	31	19	501	70.0
Persons engaged in manufactures.....	163,258	79,025	83,633	9,093	1,218	231	248	3,903	509	68,431	48.8
Proprietors and firm members.....	2,102	1,553	549	58	30	21	17	21	17	379	73.9
Salaried employees.....	20,692	10,598	10,994	789	142	25	60	291	70	8,717	51.2
Wage earners (average number).....	140,464	67,474	72,990	8,246	1,040	185	171	3,591	422	59,335	48.0
Primary horsepower.....	791,047	307,606	483,381	49,935	7,332	1,016	890	8,872	1,245	414,091	38.9
Capital.....	\$642,527,046	\$263,138,717	\$359,388,329	\$43,432,669	\$5,368,886	\$534,648	\$1,272,845	\$10,328,079	\$2,371,255	\$296,079,947	44.1
Expenses.....	519,820,653	220,734,669	299,086,044	35,473,003	4,629,078	473,042	558,990	8,467,279	2,908,978	246,575,674	42.5
Services.....	115,049,924	52,655,536	62,394,388	6,921,568	945,215	150,136	160,118	2,644,226	368,935	51,204,190	45.8
Salaries.....	24,934,082	12,682,604	12,251,478	890,769	180,350	20,840	49,353	334,734	93,614	10,701,818	50.9
Wages.....	90,115,842	30,972,932	30,142,910	6,030,799	784,865	129,296	110,765	2,309,492	275,321	40,502,372	44.4
Materials.....	366,892,433	148,526,783	218,365,650	27,295,785	3,347,362	262,265	321,940	5,406,846	2,441,093	179,290,409	40.5
Miscellaneous.....	37,878,296	19,552,200	18,326,066	1,255,700	336,501	60,611	76,932	416,207	98,950	16,081,075	51.6
Value of products.....	578,815,493	243,453,693	335,361,800	42,494,637	5,034,382	538,217	659,196	9,786,828	3,099,445	273,689,165	42.1
Value added by manufacture.....	211,923,060	94,926,910	116,996,150	15,198,832	1,747,020	275,952	337,256	4,379,982	658,352	94,398,756	44.8

<sup>1</sup> Includes Duquesne and North Braddock, the statistics for which can not be shown without disclosing individual operations.

<sup>2</sup> April 15, 1910.

The group of 112 boroughs and townships, which are not shown separately, with a combined population equal to 37 per cent of the total for the district, contributed 47.3 per cent of the value of its products. The average value of products per establishment for this group of places was much greater than that reported by any of the places shown separately, except McKeesport. A number of the places in this group had a larger output of iron and steel than some of the places for which separate figures are given. Munhall, which adjoins the borough of Homestead, is conspicuous in this regard, followed in importance accord-

ing to the value of iron and steel products by Bessemer, Duquesne, Rankin, Clairton, and Etna.

Comparison with earlier censuses.—Table 20 is a comparative summary of the statistics for the district as a whole for 1909, 1904, and 1899, together with the percentages of increase from census to census. For purposes of comparison with the statistics for the district as given for 1904<sup>1</sup> and 1899,<sup>2</sup> the totals for 1909 are segregated into figures for the territory added since 1904, and into those for the remainder of the district.

<sup>1</sup> Bureau of Census: Industrial Districts, 1905, p. 38.

Table 20

	NUMBER OR AMOUNT.						PER CENT OF INCREASE. <sup>1</sup>		
	1909			1904	1899	1899-1909	1904-1909	1899-1904	
	Total.	Territory added since 1904.	Remainder of district. <sup>2</sup>						
Population.....	<sup>1</sup> 1,044,743	<sup>3</sup> 237,780	<sup>3</sup> 806,957	( <sup>4</sup> )	<sup>6</sup> 623,342	29.5	-----	-----	
Number of establishments.....	2,369	350	2,019	( <sup>4</sup> )	<sup>6</sup> 1,477	36.7	8.6	25.9	
Persons engaged in manufactures.....	163,258	32,814	130,444	1,859	121,594	( <sup>5</sup> )	7.3	-----	
Proprietors and firm members.....	2,102	290	1,822	1,755	( <sup>5</sup> )	-----	3.8	-----	
Salaried employees.....	20,692	3,094	17,598	1,775	13,775	7,580	27.8	81.7	
Wage earners (average number).....	140,464	29,440	111,024	106,064	94,404	132.2	4.7	12.3	
Primary horsepower.....	791,047	140,259	650,788	596,463	( <sup>5</sup> )	-----	9.1	-----	
Capital.....	\$642,527,046	\$121,040,694	\$521,486,352	\$443,889,824	\$328,493,963	58.8	17.5	35.1	
Expenses.....	519,820,653	97,423,945	422,396,708	351,357,841	290,093,782	45.6	20.2	21.1	
Services.....	115,049,924	23,065,373	91,984,551	77,339,055	59,761,743	53.9	18.9	29.4	
Salaries.....	24,934,082	3,747,360	21,186,722	16,418,501	7,953,339	166.4	29.0	106.4	
Wages.....	90,115,842	19,318,013	70,797,829	60,920,554	51,808,404	36.7	16.2	17.6	
Materials.....	366,892,433	67,871,499	299,020,934	242,040,207	209,040,608	43.0	23.5	15.8	
Miscellaneous.....	37,878,296	6,487,073	31,391,223	31,978,579	21,291,431	47.4	-1.8	50.2	
Value of products.....	578,815,493	112,709,294	466,106,199	383,490,468	339,861,658	37.1	21.5	12.8	
Value added by manufacture.....	211,923,060	44,837,795	167,085,265	141,450,261	130,821,050	27.7	18.1	8.1	

<sup>1</sup> A minus sign (-) denotes decrease.

<sup>2</sup> Figures in this column used in computing percentages of increase.

<sup>3</sup> April 15, 1910.

<sup>4</sup> No population census in 1905.

<sup>5</sup> June 1, 1900.

<sup>6</sup> Figures not available.

The percentages of increase in value of products and value added by manufacture were greater during the more recent five-year period, 1904-1909, than during the period 1899-1904, but the number of wage earners and salaried employees and the expenditures for services increased at a more rapid rate during the

earlier than during the later period. The percentages of increase during the decade 1899-1909, were much larger in the number of salaried employees and in salaries than for any other items. The average number of wage earners increased only 17.5 per cent during this period, but the wages paid increased 36.7 per cent,

a rate of gain approximately equal to that in value of products, 37.1 per cent. The relative increase in primary horsepower of all kinds from 1904 to 1909 was 9.1 per cent. Statistics as to the primary power used in 1899 are not available.

The proportions of the population and manufactures in the outside territory of the metropolitan district are constantly increasing as is indicated by the percentages in Table 21. The percentages for 1909 are based upon the figures for the district exclusive of the territory added since 1904.

The proportion of the population of the district as originally constituted that was reported from the territory outside of Pittsburgh, increased from 27.6 per cent in 1900 to 33.8 per cent in 1910, and the proportion of the value of products of that district that was contributed by the outlying territory increased steadily from 35.8 per cent in 1899 to 44.9 per cent in 1904, and to 47.8 per cent in 1909.

	PER CENT TERRITORY OUTSIDE OF PITTSBURGH IS OF TOTAL FOR DISTRICT.		
	1909 <sup>1</sup>	1904	1899
Population.....	33.8	( <sup>2</sup> )	27.6
Number of establishments.....	17.8	16.0	11.9
Persons engaged in manufactures.....	39.0	33.1	( <sup>3</sup> )
Proprietors and firm members.....	14.7	13.6	( <sup>3</sup> )
Salariat employees.....	39.8	39.9	22.8
Wage earners (average number).....	39.2	32.5	24.0
Primary horsepower.....	52.7	37.2	( <sup>3</sup> )
Capital.....	45.7	41.3	35.5
Expenses.....	47.7	45.0	35.3
Services.....	42.8	35.9	26.4
Salaries.....	49.1	40.6	29.1
Wages.....	48.5	34.7	27.4
Materials.....	50.3	48.5	38.5
Miscellaneous.....	37.7	40.3	28.5
Value of products.....	47.8	44.9	35.8
Value added by manufacture.....	43.2	38.7	31.4

<sup>1</sup> Based on figures for district as constituted in 1904 and 1899.  
<sup>2</sup> No population census in 1905.  
<sup>3</sup> Figures not available.

Leading industries.—Table 22 gives statistics for 1909 for the industries of the district having products valued at \$500,000 or more, so far as separate figures can be presented.

SUMMARY FOR THE PITTSBURGH METROPOLITAN DISTRICT, BY INDUSTRIES: 1909.

INDUSTRY.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horsepower.	Capital.	Salaries.	Wages.	Cost of materials.	Miscellaneous expenses.	Value of products.	Value added by manufacture.
		Total.	Proprietors and firm members.	Salariat employees.	Wage earners (average number).								
All industries.....	2,369	163,258	2,102	20,692	140,464	791,047	\$642,527,046	\$24,934,082	\$90,115,842	\$366,892,433	\$37,878,296	\$578,815,493	\$211,923,060
Brass and bronze products.....	15	822	16	102	704	2,850	4,273,850	146,022	424,736	2,468,600	166,707	3,397,537	928,937
Bread and other bakery products.....	301	3,323	427	569	2,327	2,490	6,601,004	539,854	1,244,127	1,028,571	9,568,400	4,165,318	
Brick and tile.....	41	911	37	61	813	5,769	2,002,934	63,123	384,936	269,966	130,089	908,346	638,380
Canning and preserving.....	111	3,073	14	1,349	1,710	1,811	6,823,389	1,337,569	615,275	2,391,890	6,201,320	3,809,910	
Carriages and wagons and materials.....	40	644	43	47	554	1,873	1,910,883	50,549	369,519	442,679	57,214	1,031,239	588,500
Cars and general shop construction and repairs by steam-railroad companies.....	16	10,374	.....	936	9,438	15,094	8,684,822	779,132	6,665,681	9,164,034	256,032	16,804,878	7,640,844
Chemicals.....	13	62	.....	14	48	260	446,276	25,365	31,561	391,810	49,278	591,850	139,040
Clothing, men's, including shirts.....	24	1,011	43	102	866	340	1,237,435	87,777	342,412	1,121,773	173,143	1,949,728	827,955
Coffee and spice, roasting and grinding.....	4	80	11	42	27	226	310,795	36,270	14,443	612,460	80,011	810,657	198,197
Confectionery.....	20	955	10	112	833	724	1,538,001	106,063	261,872	1,549,247	158,832	2,284,087	731,840
Cooperage and wooden goods, not elsewhere specified.....	17	237	19	21	197	159	477,176	22,727	108,784	411,717	19,002	656,831	245,114
Copper, tin, and sheet-iron products.....	69	1,933	70	143	1,720	4,076	3,925,925	177,858	946,072	2,119,639	282,006	5,254,789	3,135,150
Cutlery and tools, not elsewhere specified.....	20	1,522	22	109	1,391	3,769	3,565,921	160,712	738,757	1,550,084	159,692	3,086,268	1,536,184
Electrical machinery, apparatus, and supplies.....	18	10,867	11	2,820	8,030	13,160	48,184,808	3,240,797	4,760,067	8,521,905	2,148,067	20,260,163	11,738,258
Food preparations.....	16	269	18	46	205	563	672,554	36,366	82,277	634,283	100,747	968,541	334,258
Foundry and machine-shop products.....	218	22,118	111	3,553	18,454	41,908	70,585,128	4,404,869	12,780,152	24,140,317	4,361,783	52,411,013	28,270,696
Furniture and refrigerators.....	31	373	12	46	315	629	820,412	54,033	187,854	440,447	120,161	900,036	459,589
Glass.....	27	7,322	6	374	6,942	13,632	20,795,023	566,017	3,648,852	3,560,783	969,222	8,765,900	5,205,117
Ice, manufactured.....	31	426	7	104	315	119,136	4,024,177	119,368	214,422	282,327	245,415	1,370,635	1,088,368
Iron and steel, blast furnaces.....	13	6,474	.....	909	5,565	225,192	100,116,105	1,328,843	4,217,097	72,125,803	1,946,926	85,584,235	13,468,432
Iron and steel, steel works and rolling mills.....	54	55,321	.....	4,165	51,156	357,945	234,689,014	5,435,034	35,925,008	158,635,351	9,447,825	237,186,077	79,150,726
Iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills.....	9	1,055	3	98	954	2,302	2,653,885	134,445	478,137	1,677,205	147,473	2,662,158	984,653
Iron and steel forgings.....	8	590	2	57	531	2,149	1,592,457	72,360	308,299	690,021	118,396	1,336,375	646,354
Leather, tanned, curried, and finished.....	6	273	2	27	244	840	1,552,676	46,455	138,824	913,913	67,848	1,161,003	247,690
Liquors, distilled.....	8	168	6	38	124	1,260	2,074,435	72,322	72,298	732,544	2,516,355	3,649,731	2,017,187
Liquors, malt.....	28	1,589	.....	235	1,354	11,321	24,111,550	473,404	1,060,090	1,936,360	2,670,478	8,236,002	6,299,642
Lumber and timber products.....	80	1,419	90	142	1,187	5,408	3,560,889	155,714	774,708	1,854,023	233,545	3,188,759	1,334,736
Marble and stone work.....	36	424	43	35	346	900	756,255	45,676	242,968	298,671	70,319	737,183	438,512
Mattresses and spring beds.....	16	256	5	28	223	261	574,089	37,525	123,679	337,307	59,640	589,588	232,191
Oil, not elsewhere specified.....	8	110	8	35	67	113	4,024,177	64,002	36,754	437,834	76,825	730,888	289,054
Paint and varnish.....	24	533	15	146	372	2,463	3,878,767	171,737	209,220	2,638,230	354,286	3,779,518	1,141,288
Patent medicines and compounds and druggists' preparations.....	39	282	28	95	159	320	854,688	124,202	73,084	392,216	319,470	1,146,920	754,704
Petroleum refining.....	7	306	3	59	304	712	2,416,532	77,786	206,322	2,961,208	164,236	3,934,916	973,708
Pottery, terra-cotta, and fire-clay products.....	8	773	5	61	707	1,545	4,399,070	88,009	364,534	506,536	180,390	1,524,037	1,017,501
Printing and publishing.....	324	4,639	325	1,212	3,102	4,653	10,375,382	1,365,389	2,131,206	2,799,651	1,878,380	9,663,449	6,863,798
Shipbuilding, including boatbuilding.....	8	392	6	30	356	1,070	961,950	54,891	254,059	322,304	36,263	671,294	348,950
Slaughtering and meat packing.....	19	1,181	9	252	920	4,471	4,006,350	319,320	612,745	12,665,447	587,306	14,492,440	1,826,993
Smelting and refining, not from the ore.....	5	74	3	12	59	132	840,542	35,100	48,850	1,800,369	51,743	2,015,171	214,862
Soap.....	11	493	18	215	260	503	1,200,245	106,192	113,416	466,660	475,108	1,232,164	765,504
Springs, steel, car and carriage.....	8	965	2	112	851	1,984	3,878,657	218,651	463,240	1,930,710	145,594	3,168,338	1,237,628
Tobacco manufactures.....	248	3,562	255	168	3,139	213	1,920,770	144,063	865,218	1,200,809	1,120,041	3,718,594	2,512,735
All other industries.....	414	15,997	397	2,005	13,595	45,815	48,808,102	2,406,901	7,634,157	34,692,188	3,397,307	51,249,325	16,557,137

<sup>1</sup> Excluding statistics for establishments located outside of the corporate limits of Pittsburgh, to avoid disclosure of individual operations. The figures for these establishments are included under the head of "All other industries."

The predominant industry of the Pittsburgh metropolitan district is the manufacture of iron and steel. The products of steel works and rolling mills in this district in 1909 were valued at \$237,186,077, of which Pittsburgh<sup>1</sup> alone reported \$82,306,627; the output of blast furnaces was valued at \$85,584,235, Pittsburgh contributing \$20,668,023. The products of the foundries and machine shops had a value of \$52,411,013, of which \$21,690,645 was reported by Pittsburgh. In each instance, therefore, the territory outside the city contributed by far the greater part of the total for the district.

The combined product of steel works and rolling mills and of blast furnaces in the entire district had an aggregate value of \$322,770,312, or 55.8 per cent of the value of products for all industries in the district and 23.4 per cent of the value of products of these two branches of the iron and steel industry in the United

States. By adding the value of products of the foundries and machine shops, \$52,411,013, the total becomes \$375,181,325, or 64.8 per cent of the total value of products for all industries in the district. Of this combined total, Pittsburgh alone contributed \$124,665,295, or 21.5 per cent.

Other prominent industries were the manufacture of electrical machinery, apparatus, and supplies, with products valued at \$20,260,163; steam-railroad repair shops, with products valued at \$16,804,878; and slaughtering and meat packing, with products valued at \$14,492,440.

The manufacture of coke is omitted from the table as to include it would disclose the operations of individual establishments.

Comparative summary, by industries.—The number of establishments, average number of wage earners, and value of products for such of the industries as can be shown separately and had a value of products amounting to \$2,000,000 or over in 1909, are given in Table 23 for the district as constituted in 1904 and 1899.

<sup>1</sup> Thirteenth Census of the United States: 1910. Volume IX, Manufactures, pp. 1106-9.

COMPARATIVE SUMMARY FOR THE PITTSBURGH METROPOLITAN DISTRICT, BY SELECTED INDUSTRIES: 1909, 1904, AND 1899.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.			WAGE EARNERS (AVERAGE NUMBER).			VALUE OF PRODUCTS.			PER CENT OF INCREASE. <sup>1</sup>								
										Number of establishments.			Wage earners (average number).			Value of products.		
	1909	1904	1899	1909	1904	1899	1909	1904	1899	1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904
Iron and steel industries.....	69	78	79	48,178	46,920	41,943	\$270,939,355	\$226,543,315	\$205,233,498	-12.7	-11.5	-1.3	14.9	2.7	11.0	32.0	19.6	10.4
Iron and steel <sup>2</sup> .....	50	50	58	45,616	45,512	39,431	260,725,905	222,182,110	195,981,129	-13.8	.....	-13.8	15.7	0.2	15.4	33.0	17.3	13.4
All other iron and steel industries <sup>3</sup> .....	19	28	21	2,562	1,408	2,512	10,213,480	4,361,205	9,252,369	-9.5	-32.1	33.3	2.0	82.0	-43.9	10.4	184.2	-52.9
Foundry and machine-shop products. Slaughtering and meat packing.....	190	170	(*)	13,979	13,207	(*)	39,081,192	31,837,305	(*)	.....	11.8	.....	.....	5.8	.....	.....	22.8	.....
Cars and general shop construction and repairs by steam-railroad companies.....	12	8	13	6,172	4,585	2,637	11,478,749	6,107,325	2,643,464	-7.7	50.0	-38.5	134.1	34.6	73.9	334.2	87.9	131.0
Printing and publishing.....	289	240	102	2,931	2,901	2,423	9,369,020	7,990,843	5,031,170	78.4	20.4	48.1	21.0	1.0	10.7	86.2	17.2	58.8
Newspapers and periodicals.....	103	96	56	1,157	1,289	1,295	5,874,748	5,119,240	3,330,540	83.9	7.3	71.4	-10.7	-2.0	-0.5	76.4	14.8	53.7
Book and job.....	161	132	85	1,343	1,406	975	2,821,906	2,594,861	1,520,381	89.4	22.0	55.3	37.7	-4.5	44.2	84.4	8.7	69.6
All other printing and publishing industries <sup>7</sup> .....	25	12	21	431	206	153	672,366	276,742	170,258	19.0	108.3	-42.9	181.7	109.2	34.0	294.9	143.0	62.5
Bread and other bakery products.....	328	261	153	2,208	2,045	1,895	8,066,993	6,893,103	3,470,742	114.4	25.7	70.0	58.3	8.0	46.0	158.4	30.1	98.6
Liquors, malt.....	21	19	15	1,107	969	614	6,627,755	5,372,943	5,266,755	40.0	10.5	26.7	80.3	14.2	57.8	25.8	23.4	2.0
Canning and preserving.....	6	6	6	1,710	1,406	1,444	6,201,830	6,216,778	4,429,332	120.0	83.3	20.0	18.4	21.0	-2.0	40.0	-0.2	40.4
Tobacco manufactures.....	232	265	218	3,103	3,171	2,125	3,674,907	4,034,717	2,492,001	6.4	-12.5	21.6	40.0	-2.1	49.2	47.5	-8.9	61.9
Glass.....	14	14	21	2,508	2,407	2,465	3,637,065	2,875,828	2,824,292	-33.3	.....	-33.3	1.7	4.2	-2.4	28.8	26.5	1.8
Brass and bronze products.....	12	15	9	629	527	231	3,188,424	2,462,427	1,701,183	33.3	-20.0	66.7	172.3	19.4	128.1	87.4	29.5	44.7
Paint and varnish.....	21	15	7	287	201	243	3,085,635	2,127,065	2,020,135	75.0	40.0	25.0	18.1	-1.4	19.8	52.1	45.1	4.8
Petroleum refining.....	4	5	5	219	198	181	2,818,219	2,175,774	1,513,440	-20.0	-20.0	.....	36.0	10.6	23.0	86.2	29.5	43.8
Lumber and timber products.....	61	64	45	991	1,088	834	2,036,133	3,141,804	2,406,617	35.6	-4.7	42.2	18.8	-8.0	30.5	9.5	-16.1	30.5

<sup>1</sup> A minus sign (-) denotes decrease.  
<sup>2</sup> Includes blast furnaces and steel works and rolling mills.  
<sup>3</sup> Includes at all censuses, "iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills;" "iron and steel forgings;" "iron and steel pipe, wrought;" and "tin plate and terneplate." For 1909 and 1904, "iron and steel, doors and shutters." For 1904, "ordnance and accessories." For 1904 and 1899, "iron and steel, nails and spikes, cut and wrought, including wire nails, not made in steel works or rolling mills." And for 1899, "wire."  
<sup>4</sup> Comparable figures not available.  
<sup>5</sup> Excluding statistics for three establishments, to avoid disclosure of individual operations.  
<sup>6</sup> Excluding statistics for one establishment, to avoid disclosure of individual operations.  
<sup>7</sup> Includes "printing and publishing, music;" "bookbinding and blank-book making;" "engraving, steel and copper plate, including plate printing;" and "lithographing."  
<sup>8</sup> Excluding statistics for two establishments, to avoid disclosure of individual operations.

The greatest absolute increase in value of products during the decade in the area under consideration is shown for the manufacture of iron and steel, by steel works and rolling mills and blast furnaces—\$65,705,888, or 32 per cent. The greatest relative increase, 334.2 per cent, was reported for cars and general shop construction and repairs by steam-railroad companies. The manufacture of electrical machinery, apparatus, and supplies is an important industry in this district, but the statistics can not be given in this

table, as to do so would disclose individual operations. Other important industries not shown separately, for the same reason, in this table are, in the order of their importance, the manufacture of iron and steel bolts, nuts, washers, and rivets, not made in steel works or rolling mills; confectionery; springs, steel, car and carriage; and liquors, distilled. Smelting and refining, not from the ore, is also omitted, because comparable figures for 1904 can not be given without disclosing individual operations.

## BOSTON METROPOLITAN DISTRICT.

**Territory included.**—The metropolitan district of Boston embraces 335,905 acres of territory, of which 26,289 acres constitute the area of Boston and 309,616 acres the area of the outside territory. The population of the city of Boston proper in 1910 was 670,585, and that of the outside territory 849,885, the total for the district being 1,520,470.

As defined for the three censuses, the metropolitan district comprised 14 cities and 33 towns, as follows:

### SUFFOLK COUNTY.

Boston city. Chelsea city.	Revere town. Winthrop town.
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### ESSEX COUNTY.

Lynn city. Marblehead town. Nahant town. Peabody town.	Salem city. Saugus town. Swampscott town.
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### MIDDLESEX COUNTY.

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

Braintree town. Brookline town. Canton town. Dedham town. Dover town. Hyde Park town. Milton town.	Needham town. Norwood town. Quincy city. Randolph town. Wellesley town. Westwood town. Weymouth town.
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On page 935 is an outline map of the metropolitan district as constituted in 1909, showing the various cities and towns included.

**Summary for the district.**—Table 24 is a summary for 1909 of the statistics of manufacturing industries, with a statement of the population in 1910, for the Boston metropolitan district; for the cities of Boston, Cambridge, Chelsea, Everett, Lynn, Malden, Medford, Melrose, Newton, Quincy, Salem, Somerville, Waltham, and Woburn, and the towns of Arlington, Brookline, Framingham, Hyde Park, Peabody, Revere, Wakefield, Watertown, Weymouth, and Winthrop; and for the remainder of the district. The percentage

which the figure for Boston represents of the total for the district is given in the case of each item.

In 1909 the Boston metropolitan district had 5,389 manufacturing establishments, which gave employment to an average of 214,641 persons during the year, and paid out \$132,394,865 in salaries and wages. Of the persons employed, 185,952 were wage earners. These establishments turned out products to the value of \$564,054,506, to produce which materials costing \$315,770,540 were utilized. The value added by manufacture was thus \$248,283,966. The Boston district ranked fifth in 1909 among all the metropolitan districts of the United States in the value of its manufactured products.

In the Boston district, as in the Pittsburgh district, the greater part of the value of the manufactured products of the district was reported by factories outside the central city. Boston contained less than one-half (44.1 per cent) of the population of the district of which it is the manufacturing, commercial, and financial center, and contributed a little more than two-fifths (42.1 per cent) of the value of products. Its manufacturing establishments constituted nearly three-fifths (58.5 per cent) of all in the district, and gave employment to a little more than one-third of the wage earners (37.4 per cent).

Of the places outside of Boston for which statistics are given separately, Lynn had the largest value of products, representing 12.7 per cent of the total for the metropolitan district; but it contained only 5.9 per cent of the total population.

The group of 23 towns that are not shown separately, each having less than 10,000 inhabitants, had a combined population of 8 per cent of the total for the district and contributed 6 per cent of the value of the products.

The principal industries of Boston in 1909, as measured by value of products, were printing and publishing and the manufacture of boots and shoes, of clothing, of foundry and machine shop products, and of confectionery. The leading industry of Lynn was the manufacture of boots and shoes, in which it led all other places in the United States. The leading industries of Cambridge were foundry and machine shop products, printing and publishing following; of Somerville, slaughtering and meat packing; of Chelsea, rubber goods; of Peabody, the tanning, currying, and finishing of leather; of Salem, boots and shoes; of Watertown, rubber boots and shoes; and of Quincy, shipbuilding.

Table 24

	Population. <sup>1</sup>	Number of establishments.	PERSONS ENGAGED IN MANUFACTURES.				Primary horsepower.	Capital.
			Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).		
The district.....	1,520,470	5,389	214,641	4,989	23,700	185,952	223,886	\$444,568,420
Boston.....	670,585	3,155	85,158	2,873	12,048	69,637	68,419	175,181,571
District exclusive of Boston—total.....	849,885	2,234	129,483	2,116	11,652	116,315	155,467	269,376,849
Arlington.....	11,187	19	335	18	34	283	851	777,613
Brookline.....	27,792	16	404	19	45	340	339	616,841
Cambridge.....	104,839	275	17,475	223	1,992	15,200	21,372	37,628,906
Chelsea.....	32,452	110	6,694	98	642	5,954	8,339	11,020,840
Everett.....	33,484	62	3,096	56	360	2,680	7,816	22,904,589
Framingham.....	12,948	27	3,307	19	219	3,069	4,486	7,770,084
Hyde Park.....	15,507	40	4,049	37	292	4,320	8,556	8,158,338
Lynn.....	89,336	431	30,685	469	2,348	27,368	17,089	42,784,070
Malden.....	44,404	86	3,259	71	288	2,900	3,433	9,910,489
Medford.....	23,150	40	673	33	80	560	1,123	1,595,568
Melrose.....	15,715	25	1,141	21	82	1,038	1,535	2,014,905
Newton.....	39,506	46	2,378	39	160	2,174	4,153	5,669,420
Peabody.....	15,721	74	5,231	55	326	4,850	9,981	15,804,274
Quincy.....	32,452	183	6,247	241	514	5,492	9,147	11,974,782
Revere.....	18,210	14	125	12	12	101	548	661,166
Salem.....	43,697	155	6,852	149	365	6,338	11,436	9,345,244
Somerville.....	77,236	114	5,951	97	574	5,280	7,680	17,282,271
Wakefield.....	11,404	23	2,359	14	115	2,230	1,720	3,864,496
Waltham.....	27,834	80	6,354	67	250	6,037	7,583	12,870,737
Watertown.....	12,875	25	4,805	13	457	4,335	4,862	7,220,006
Weymouth.....	12,895	41	2,238	45	202	1,991	1,902	5,503,936
Winthrop.....	10,132	7	19	6	6	7	41	25,479
Woburn.....	15,303	50	1,867	65	149	1,653	3,560	8,405,106
Remainder.....	121,302	282	13,844	249	1,040	12,055	17,606	25,267,720
Per cent Boston is of total for district.....	44.1	58.5	39.7	57.6	53.4	37.4	30.6	39.4

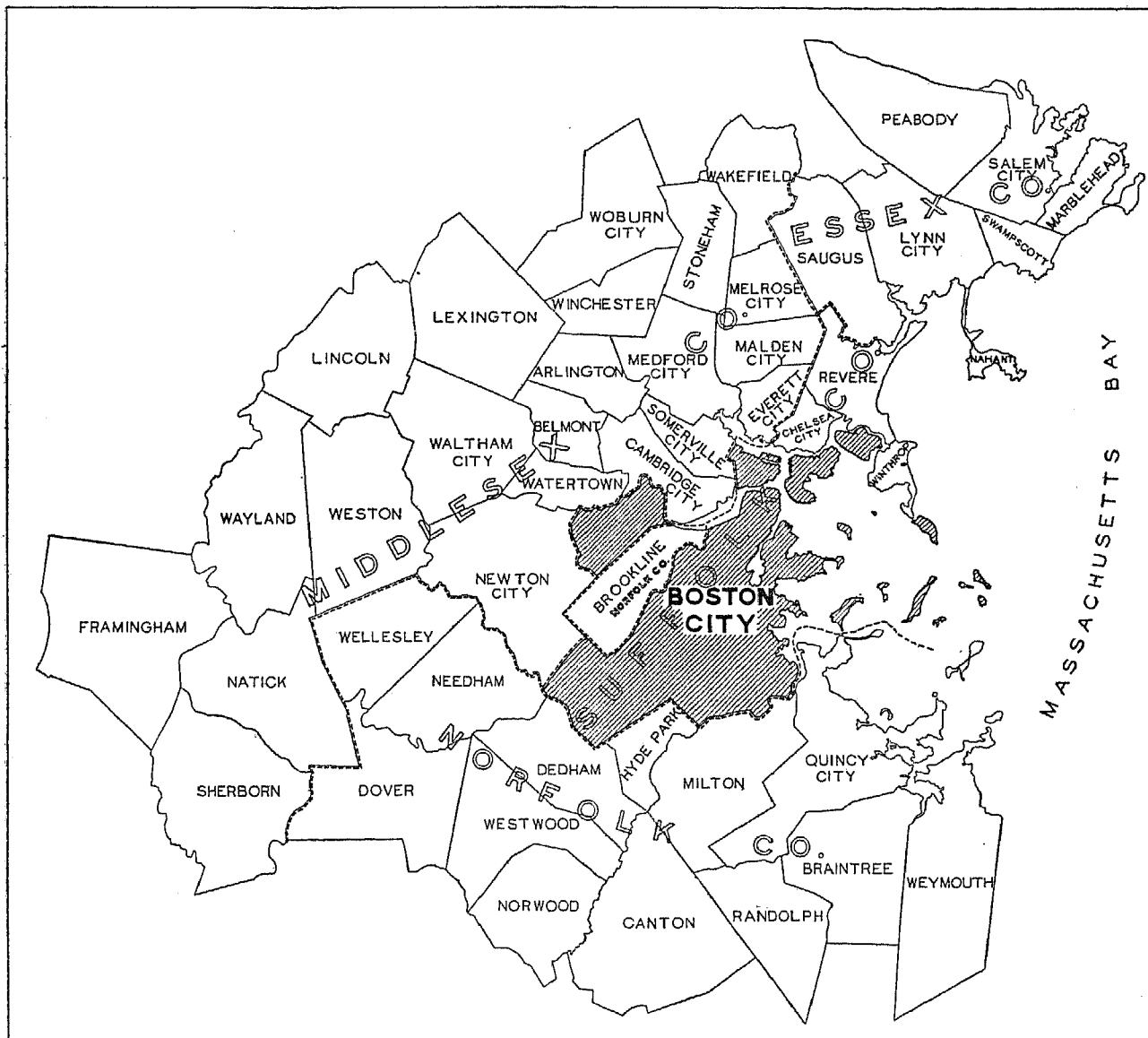
	EXPENSES.						Value of products.	Value added by manufacture.
	Aggregate.	Services.			Materials.	Miscellaneous.		
		Total.	Salaries.	Wages.				
The district.....	\$503,201,166	\$132,394,865	\$29,073,546	\$103,321,319	\$315,770,540	\$55,035,761	\$564,054,506	\$248,283,966
Boston.....	211,132,069	55,550,637	15,640,830	39,909,807	124,577,155	31,004,277	237,457,472	112,880,317
District exclusive of Boston—total.....	292,069,097	76,844,228	13,432,716	63,411,512	191,193,385	24,031,484	326,597,034	135,403,649
Arlington.....	587,799	222,825	45,621	177,204	310,930	54,044	695,356	384,426
Brookline.....	469,711	231,548	37,065	104,483	196,048	42,115	532,505	330,255
Cambridge.....	38,452,610	10,789,652	2,404,198	8,365,454	23,565,657	4,117,801	44,227,895	20,661,738
Chelsea.....	15,898,771	4,105,557	869,302	3,320,255	10,568,746	1,134,485	17,002,492	6,433,740
Everett.....	7,514,065	1,979,008	471,250	1,507,848	4,506,266	1,028,701	8,746,923	4,240,637
Framingham.....	5,573,259	1,772,073	325,652	1,446,421	3,411,366	389,880	6,916,864	3,505,558
Hyde Park.....	6,914,496	2,852,513	376,038	2,475,875	3,351,227	710,756	7,336,084	3,984,857
Lynn.....	65,098,218	18,673,532	3,007,714	15,665,818	41,361,687	5,063,599	71,503,140	30,142,053
Malden.....	6,814,078	1,676,775	380,323	1,340,452	4,887,552	749,751	8,205,852	3,818,900
Medford.....	1,828,641	445,874	114,773	331,101	1,249,874	132,893	2,045,289	795,415
Melrose.....	2,364,261	578,648	85,766	492,882	1,588,707	196,906	2,824,069	1,235,062
Newton.....	5,243,565	1,427,171	301,883	1,125,288	3,383,489	432,905	6,278,714	2,895,225
Peabody.....	14,568,353	3,055,531	417,369	2,638,162	10,192,687	1,320,735	15,543,732	5,356,045
Quincy.....	9,739,261	4,239,743	806,103	3,433,640	3,843,867	1,655,651	10,505,403	6,061,530
Revere.....	381,297	65,177	11,035	54,092	292,263	23,837	407,366	115,103
Salem.....	12,680,200	3,289,140	396,354	2,892,786	8,639,856	751,204	14,576,276	5,936,420
Somerville.....	36,581,008	3,561,375	691,587	2,869,808	31,022,862	1,094,771	38,686,527	6,763,065
Wakefield.....	4,302,044	1,202,751	156,791	1,045,960	2,834,060	264,333	5,527,102	2,692,142
Waltham.....	7,133,686	3,694,661	406,369	3,288,292	2,444,341	994,684	7,814,178	5,369,837
Watertown.....	9,708,625	2,674,923	439,918	2,235,005	6,462,761	570,941	11,545,555	5,082,794
Weymouth.....	5,902,901	1,350,229	240,294	1,109,935	4,204,440	348,232	6,627,168	2,422,728
Winthrop.....	36,902	7,311	2,500	4,751	24,094	4,597	42,168	17,174
Woburn.....	4,663,614	1,120,786	194,512	932,274	3,114,507	422,321	5,408,081	2,293,574
Remainder.....	29,611,732	7,751,335	1,299,609	6,451,726	19,335,558	2,524,839	33,593,397	14,257,839
Per cent Boston is of total for district.....	42.0	42.0	53.8	38.6	39.5	56.3	42.1	45.5

<sup>1</sup> April 15, 1910.

# BOSTON METROPOLITAN DISTRICT.

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BOSTON METROPOLITAN DISTRICT: 1909.



Comparison with earlier censuses.—Table 25 is a comparative summary of the statistics for the district as a whole for 1909, 1904,<sup>1</sup> and 1899,<sup>1</sup> together with the percentages of increase from census to census.

The percentages of increase in average number of wage earners and in wages and miscellaneous expenses—and for total expenses—value of products, and value added by manufacture, were greater during the earlier five-year period, 1899–1904, than during the period 1904–1909. For the decade as a whole the relative increase was greatest in the amounts paid for salaries and for miscellaneous expenses, and in the number of salaried employees. The average number of wage earners increased 41.3 per cent and the amount paid for wages 57 per cent, a gain approximately equal to that in value of products—59.4 per cent. The relative increase in primary horsepower of all kinds from 1904 to 1909 was 38.2 per cent. Statistics as to the primary power used in 1899 are not available.

	NUMBER OR AMOUNT.			PER CENT OF INCREASE. <sup>1</sup>		
	1909	1904	1899	1899-1909	1904-1909	1899-1904
Population.....	2,520,470	2,354,653	1,240,504	21.7	12.2	8.4
Number of establishments.....	5,389	4,870	5,005	7.7	10.7	-2.7
Persons engaged in manufactures.....	214,641	182,270	( <sup>o</sup> )	.....	17.8	.....
Proprietors and firm members.....	4,989	5,123	( <sup>o</sup> )	.....	-2.6	.....
Salaried employees.....	23,700	16,666	12,731	86.2	42.2	30.9
Wage earners (average number).....	185,952	160,481	131,623	41.3	15.9	21.9
Primary horsepower.....	223,886	161,954	( <sup>o</sup> )	.....	38.2	.....
Capital.....	\$444,558,420	\$311,058,956	\$266,437,063	66.9	42.9	16.8
Expenses.....	503,201,168	396,582,631	308,584,166	63.1	26.9	28.5
Services.....	132,394,865	102,501,622	79,465,909	66.6	23.2	29.0
Salaries.....	29,073,546	18,637,473	13,071,864	112.7	56.0	36.3
Wages.....	103,321,319	83,864,219	65,794,045	57.0	23.2	27.5
Materials.....	315,770,540	249,836,542	200,057,065	57.8	26.4	24.9
Miscellaneous.....	55,035,761	44,244,397	29,061,192	89.4	24.4	57.2
Value of products.....	564,054,506	457,254,360	353,955,958	59.4	23.4	29.2
Value added by manufacture.....	248,283,966	207,417,818	153,898,893	61.3	19.7	34.8

<sup>1</sup> A minus sign (-) denotes decrease.

<sup>2</sup> April 15, 1910.

<sup>3</sup> State census, May 1, 1905.

<sup>4</sup> June 1, 1900.

<sup>5</sup> Figures not available.

<sup>1</sup> Bureau of Census: Industrial Districts, 1905, pp. 32, 33.

The proportions which the population and the statistics of manufactures for the territory outside of Boston represent of the totals for the metropolitan district are shown in Table 26.

	PER CENT TERRITORY OUTSIDE OF BOSTON IS OF TOTAL FOR DISTRICT.		
	1909	1904	1899
Population	55.9	56.0	55.1
Number of establishments	41.5	43.6	42.5
Persons engaged in manufactures	60.3	60.8	(1)
Proprietors and firm members	42.4	44.7	(1)
Salaried employees	46.6	43.4	39.6
Wage earners (average number)	62.6	63.1	59.8
Primary horsepower	69.4	69.4	(1)
Capital	60.6	57.7	51.2
Expenses	58.0	59.2	55.5
Services	58.0	58.7	54.2
Salaries	46.2	43.9	40.2
Wages	61.4	62.0	57.1
Materials	60.5	62.1	58.9
Miscellaneous	43.7	43.5	35.8
Value of products	57.9	59.7	54.0
Value added by manufacture	54.5	56.7	47.7

<sup>1</sup> Figures not available.

The proportion of the population of the district reported from the territory outside of Boston increased from 55.1 per cent in 1900 to 55.9 per cent in 1910, while the proportion of the value of products increased from 54 per cent in 1899 to 57.9 per cent in 1909.

**Leading industries.**—Table 27 gives statistics for 1909 for the industries of the district having products valued at \$500,000 or more, so far as separate figures can be presented.

The manufacture of boots and shoes is the leading industry in the Boston district. The value of the products in 1909 amounted to 18.3 per cent of the value of the products for all industries. Two industries—printing and publishing and slaughtering and meat packing—each contributed 6.3 per cent of the value of products for the district; and two others—leather, tanned, curried, and finished, and foundry and machine-shop products—5.8 per cent and 5.3 per cent, respectively.

#### SUMMARY FOR THE BOSTON METROPOLITAN DISTRICT, BY INDUSTRIES: 1909.

INDUSTRY.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horsepower.	Capital.	Salaries.	Wages.	Cost of materials.	Miscellaneous expenses.	Value of products.	Value added by manufacture.
		Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).								
<b>All industries</b> .....	5,389	214,641	4,989	23,700	185,952	223,886	\$444,558,420	\$29,073,546	\$103,321,319	\$315,770,540	\$55,035,761	\$564,054,506	\$248,283,966
Automobiles, including bodies and parts.....	24	1,001	14	139	848	623	1,556,831	138,006	619,408	1,054,842	169,277	2,280,000	1,225,167
Awnings, tents, and sails.....	25	309	29	40	240	46	189,040	31,931	132,216	251,032	37,920	527,045	276,013
Belting and hose, leather.....	15	76	.....	30	46	43	411,771	37,400	35,232	512,504	28,304	698,278	185,774
Blacking and cleansing and polishing preparations.....	52	718	43	207	468	805	1,521,478	301,119	217,058	1,629,244	398,972	3,212,367	1,583,123
Boots and shoes, including cut stock and findings.....	379	38,711	411	2,802	35,498	16,035	40,954,462	2,863,520	19,124,600	68,508,765	5,025,947	103,242,953	34,734,188
Boxes, fancy and paper.....	48	2,377	35	158	2,184	1,242	1,402,661	202,662	867,627	1,678,118	258,364	3,315,959	1,637,841
Brass and bronze products.....	46	1,067	40	73	954	1,973	1,885,918	102,327	617,779	1,664,303	213,430	2,925,298	1,260,995
Bread and other bakery products.....	535	5,018	569	811	3,638	7,887	9,095,032	568,053	2,045,634	8,786,364	1,591,750	14,363,718	5,577,354
Brushes.....	17	1,250	14	108	1,128	382	1,880,065	136,476	447,549	1,158,000	224,376	2,202,880	1,044,820
Canning and preserving.....	28	499	21	122	356	589	1,046,197	137,224	154,354	1,452,880	172,684	2,070,803	617,923
Carriages and wagons and materials.....	58	741	72	45	624	849	964,989	41,540	410,246	465,705	90,630	1,213,649	747,944
Cars and general shop construction and repairs by steam-railroad companies.....	12	3,855	.....	170	3,685	3,926	3,258,702	154,420	2,385,208	2,336,201	22,298	4,948,127	2,611,926
Cars and general shop construction and repairs by street-railroad companies.....	14	1,018	.....	18	1,000	1,356	1,313,596	23,588	687,288	490,210	14,047	1,215,732	725,522
Chemicals.....	17	892	8	150	734	2,012	2,835,041	226,972	481,179	1,856,886	450,091	3,600,363	1,743,477
Clothing, men's, including shirts.....	210	5,720	268	461	4,991	1,290	6,065,004	579,803	2,484,549	8,116,856	2,292,149	15,252,827	7,135,971
Clothing, women's.....	139	4,740	165	456	4,119	660	2,789,911	442,666	1,887,998	4,771,104	548,834	8,748,500	3,077,306
Coffee and spice, roasting and grinding.....	12	644	10	270	355	936	2,621,518	444,448	193,184	3,879,975	670,652	5,543,838	1,663,863
Coffins, burial cases, and undertakers' goods.....	5	211	5	29	177	327	496,902	28,480	106,416	272,933	44,705	512,893	230,960
Confectionery.....	78	5,659	53	650	4,956	3,378	6,028,139	1,001,577	1,606,018	7,436,106	1,411,233	12,487,864	5,051,758
Cooperage and wooden goods, not elsewhere specified.....	13	405	8	22	375	776	579,993	35,995	201,623	600,678	43,281	937,048	336,370
Copper, tin, and sheet-iron products.....	99	2,350	94	279	1,977	982	5,174,517	306,472	1,129,482	2,231,785	409,384	4,629,656	2,397,871
Cordage and twine and jute and linen goods.....	6	743	1	47	695	1,983	1,940,311	70,491	288,046	1,111,120	100,580	1,608,541	497,421
Cotton goods, including cotton small wares.....	6	2,642	3	47	2,592	7,402	4,691,657	98,211	1,041,301	2,237,334	290,078	4,426,628	2,189,194
Cutlery and tools, not elsewhere specified.....	32	1,597	32	122	1,443	1,404	2,437,535	190,312	629,494	1,021,080	829,292	3,182,744	2,161,664
Dyeing and finishing textiles.....	11	1,288	6	62	1,220	3,609	2,203,627	109,548	571,943	783,910	178,717	2,086,930	1,303,020
Electrical machinery, apparatus, and supplies.....	53	12,373	19	1,508	10,846	11,462	23,392,474	1,759,833	5,884,212	7,917,558	1,986,290	19,787,013	11,869,455
Fancy articles, not elsewhere specified.....	18	327	16	31	280	72	291,429	30,206	114,559	205,962	69,362	506,704	300,742
Flavoring extracts.....	21	123	18	40	65	22	287,345	92,965	30,986	266,022	77,688	611,661	344,739
Food preparations.....	25	456	27	181	248	434	722,543	231,917	143,291	749,275	346,919	1,654,763	905,488
Foundry and machine-shop products.....	363	16,174	261	2,006	13,907	18,007	38,311,242	2,563,245	8,789,883	11,620,707	3,398,855	29,752,537	18,131,830

<sup>1</sup> Excluding statistics for establishments located outside of the corporate limits of Boston, to avoid disclosure of individual operations. The figures for these establishments are included under the head of "All other industries."



BOSTON METROPOLITAN DISTRICT.

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SUMMARY FOR THE BOSTON METROPOLITAN DISTRICT, BY INDUSTRIES: 1909—Continued.

Table 27—Continued.

INDUSTRY.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Miscellaneous expenses.	Value of products.	Value added by manufacture.
		Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).								
Fur goods.....	12	267	16	46	205	28	\$722,717	\$30,259	\$149,316	\$545,551	\$82,639	\$336,052	\$390,501
Furnishing goods, men's.....	27	2,141	21	255	1,865	896	2,958,800	379,359	827,326	3,607,193	607,797	6,107,598	2,500,375
Furniture and refrigerators.....	91	3,381	95	290	2,996	4,471	5,546,316	357,882	1,875,336	2,701,662	706,016	6,657,891	3,856,229
Gas, illuminating and heating.....	19	1,195	.....	171	1,024	4,420	39,524,593	202,742	577,181	2,114,345	700,691	6,274,063	4,159,718
Glue.....	8	449	6	43	400	1,591	2,289,349	56,674	160,995	643,781	138,533	970,537	326,876
Grease and tallow.....	15	303	10	55	238	572	685,839	79,855	148,830	805,023	80,072	1,176,442	371,410
Hosiery and knit goods.....	32	2,535	21	129	2,385	1,266	3,031,502	231,230	908,035	2,580,003	270,330	4,940,772	2,360,769
House-furnishing goods, not elsewhere specified.....	14	315	15	26	274	285	620,637	30,639	112,267	558,487	97,357	844,841	286,354
Jewelry.....	42	1,130	40	121	969	535	1,143,398	130,998	487,675	733,603	133,565	1,804,643	1,021,040
Lasts.....	10	260	9	25	226	847	669,600	36,680	186,848	197,286	95,497	604,513	407,227
Leather goods.....	69	1,081	71	160	850	385	985,52	160,180	410,191	1,155,667	185,862	2,094,291	938,624
Leather, tanned, curried, and finished.....	109	9,038	92	513	8,433	15,542	29,511,938	741,561	4,504,568	22,913,876	1,816,609	32,493,668	9,579,792
Liquors, malt.....	20	1,338	2	210	1,126	4,799	13,435,765	478,169	1,019,213	1,956,874	2,434,017	7,553,669	5,596,795
Looking-glass and picture frames.....	26	280	25	60	175	102	225,217	49,632	114,047	204,403	84,296	538,595	334,192
Lumber and timber products.....	123	2,533	120	244	2,169	7,393	3,912,853	281,119	1,438,170	3,187,661	453,444	6,112,989	2,925,328
Marble and stone work.....	195	3,051	258	187	2,606	7,547	3,455,026	225,457	1,931,735	1,624,653	463,931	4,896,578	3,271,925
Mattresses and spring beds.....	35	648	32	98	518	439	665,559	118,917	259,246	1,077,536	191,851	1,820,305	748,769
Millinery and lace goods.....	67	1,894	71	219	1,604	324	1,478,094	252,854	636,167	2,147,694	290,036	3,748,470	1,600,776
Mineral and soda waters.....	54	386	64	04	228	282	933,060	121,140	154,350	465,061	264,434	1,191,833	726,772
Mucilage and paste.....	13	103	9	39	55	482	585,402	61,332	37,719	975,656	87,186	1,260,266	284,610
Musical instruments, pianos and organs and materials.....	34	3,086	20	303	2,763	2,337	8,660,626	464,000	1,767,582	2,634,723	702,856	6,145,903	3,511,180
Oil, not elsewhere specified.....	6	256	3	31	222	563	675,964	47,834	132,784	1,691,743	141,707	2,068,154	376,411
Paint and varnish.....	28	569	13	186	370	1,522	1,752,100	244,575	213,436	1,706,955	363,146	2,904,313	1,197,358
Patent medicines and compounds and druggists' preparations.....	106	1,856	71	378	907	484	3,187,013	495,629	433,865	2,037,322	1,779,165	5,641,942	3,604,620
Photo-engraving.....	20	645	19	120	406	111	379,302	161,538	325,712	139,352	92,251	791,479	652,127
Printing and publishing.....	784	17,289	620	3,048	12,712	9,816	24,070,792	4,611,452	8,721,281	9,475,017	8,114,400	35,796,494	26,321,477
Shipbuilding, including boat building.....	48	3,743	50	313	3,380	3,247	6,918,752	570,509	2,137,903	2,514,333	1,011,058	6,486,527	3,972,194
Silk and silk goods, including throwsters.....	5	524	6	33	485	788	385,355	42,076	175,498	429,238	45,270	759,540	330,302
Slaughtering and meat packing.....	42	2,980	36	340	2,604	3,814	12,846,390	407,791	1,430,903	31,648,702	625,361	35,714,106	4,065,404
Soap.....	25	541	19	137	385	1,063	2,196,412	189,686	189,197	1,955,689	740,651	3,690,120	1,734,437
Soda-water apparatus.....	5	439	1	94	344	741	2,840,180	117,787	227,890	389,747	209,723	1,323,017	933,270
Stationary goods, not elsewhere specified.....	6	423	1	44	378	107	209,595	36,700	151,317	339,256	130,009	744,359	405,103
Stoves and furnaces, including gas and oil stoves.....	7	819	2	107	710	807	1,804,448	169,841	535,127	470,653	193,237	1,507,932	1,037,279
Tobacco manufactures.....	200	2,807	205	188	2,414	70	2,771,842	251,094	1,830,556	2,121,929	832,661	5,719,211	3,597,282
Window shades and fixtures.....	10	134	7	16	111	9	173,888	17,807	61,799	479,878	58,261	667,275	187,307
Woolen, worsted, and felt goods, and wool hats.....	12	1,732	4	93	1,635	5,144	5,279,399	149,597	725,239	3,946,006	302,357	5,609,089	1,663,083
All other industries.....	719	32,106	684	3,291	28,131	50,435	94,120,241	4,086,934	15,043,512	58,473,473	9,112,507	98,903,705	40,428,232

<sup>1</sup> Excluding statistics for establishments located outside the corporate limits of Boston, to avoid disclosure of individual operations. The figures for these establishments are included under the head of "All other industries."

Comparative summary, by industries.—The number of establishments, average number of wage earners, and value of products for such of the industries as can be shown separately and have a value of products amounting to \$4,000,000 or more in 1909, are given in Table 28 for the district for 1909, 1904, and 1899.

The greatest absolute increase in value of products during the decade—\$51,869,122, or 101 per cent—is

shown for boots and shoes. The greatest relative increase, 220.3 per cent, was reported for the manufacture of hosiery and knit goods. Among the more important industries that can not be shown at all in any tables are, in the order of their importance, sugar refining, the rubber boot and shoe industry, and the manufacture of chocolate and cocoa products, of rubber goods, of rubber and woven belting and hose, of clocks and watches, and of paper and wood pulp.



## MANUFACTURES.

COMPARATIVE SUMMARY FOR THE BOSTON METROPOLITAN DISTRICT, BY SELECTED INDUSTRIES:  
1909, 1904, AND 1899.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.			WAGE EARNERS (AVERAGE NUMBER).			VALUE OF PRODUCTS.			PER CENT OF INCREASE. <sup>1</sup>								
	1909	1904	1899	1909	1904	1899	1909	1904	1899	Number of establishments.			Wage earners (average number).			Value of products.		
										1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904
Boots and shoes, including cut stock and findings.....	379	387	448	35,498	28,011	22,707	\$103,242,953	\$67,945,133	\$51,373,831	-15.4	-2.1	-13.6	56.3	26.7	23.4	101.0	52.0	32.3
Printing and publishing.....	784	694	697	12,712	10,724	10,677	35,796,494	29,760,753	27,315,573	12.5	13.0	-0.4	19.1	18.5	0.4	31.0	20.3	9.0
Newspapers and periodicals.....	251	236	207	3,811	3,452	3,490	16,912,492	16,615,499	13,270,745	21.3	6.4	14.0	11.1	10.4	0.6	27.4	1.8	25.2
Book and job.....	430	368	364	5,719	4,843	4,428	13,944,512	9,753,314	10,055,107	18.1	17.5	0.5	29.2	18.1	9.4	38.7	43.0	-3.0
Music.....	11	10	9	102	89	160	468,197	505,990	407,634	22.2	.....	11.1	-36.2	14.6	-44.4	14.9	-7.5	24.1
All other printing and publishing industries <sup>2</sup> .....	92	82	117	3,080	2,340	2,659	4,471,293	2,885,950	3,582,087	-21.4	12.2	-29.9	15.8	31.6	-12.0	24.8	54.9	-19.4
Slaughtering and meat packing.....	42	34	24	2,604	2,464	1,663	35,714,106	31,590,422	19,042,769	75.0	23.5	41.7	56.6	5.7	48.2	87.5	13.1	65.9
Leather, tanned, curried, and finished	109	104	97	8,433	6,933	4,789	32,493,668	25,071,158	18,802,569	12.4	4.8	7.2	70.1	21.6	44.8	74.7	29.6	34.8
Foundry and machine-shop products	363	307	(*)	13,907	14,033	(*)	29,752,537	27,385,675	(*)	.....	18.2	.....	-0.9	.....	.....	.....	8.6	.....
Clothing.....	349	258	278	9,110	7,052	5,571	24,001,327	18,819,344	13,551,804	25.5	35.3	-7.2	63.5	29.2	26.6	77.1	27.5	38.9
Men's, including shirts.....	210	149	178	4,991	3,855	3,413	15,252,827	12,389,560	9,763,057	18.0	40.9	-16.3	46.2	29.5	13.0	56.2	23.2	26.8
Women's.....	139	109	100	4,119	3,197	2,158	8,748,500	6,438,784	3,788,747	39.0	27.5	9.0	90.9	28.8	48.1	130.9	35.9	69.9
Textiles.....	78	82	88	10,220	10,071	8,909	21,458,183	18,401,951	13,805,250	-11.4	-4.9	-6.8	14.8	1.6	13.0	55.4	16.6	33.3
Woolen, worsted, and felt goods, and wool hats.....	12	14	11	1,635	1,878	1,540	5,609,088	4,116,845	2,370,981	9.1	-14.3	27.3	6.2	-12.9	21.9	136.6	36.2	73.6
Hosiery and knit goods.....	32	31	35	2,385	1,365	1,156	4,940,772	2,873,309	1,642,616	-8.6	3.2	-11.4	106.5	74.7	18.2	220.3	72.0	88.3
Cotton goods, including cotton small wares.....	6	5	10	2,592	2,839	2,643	4,428,528	3,213,679	3,324,170	-40.0	20.0	-50.0	-1.9	-8.7	7.4	33.2	37.7	-3.3
Dyeing and finishing textiles.....	11	14	12	1,220	1,101	1,069	2,086,930	1,690,035	1,398,893	-8.3	-21.4	16.7	14.1	10.8	3.0	49.2	31.3	13.7
Cordage and twine and jute and linen goods.....	6	6	8	695	1,195	1,051	1,608,541	3,280,304	2,705,243	-25.0	.....	-25.0	-33.9	-41.8	13.7	-40.5	-51.0	21.3
Silk and silk goods, including throwsters.....	5	7	7	485	510	637	759,540	788,321	784,006	-28.6	-23.6	.....	-23.9	-4.9	-19.9	-3.1	-3.7	0.6
All other textiles <sup>4</sup> .....	6	5	5	1,217	1,183	814	2,026,783	2,539,458	1,679,341	20.0	20.0	.....	49.5	2.9	45.3	20.7	-20.2	51.2
Electrical machinery, apparatus, and supplies.....	53	42	38	10,846	7,192	4,454	19,787,013	12,786,569	8,851,042	39.5	26.2	10.5	141.9	50.8	60.4	123.6	54.7	44.5
Bread and other bakery products.....	535	531	468	3,638	3,221	3,158	14,363,718	10,883,020	9,282,837	14.3	0.8	13.5	15.2	12.9	2.0	54.7	32.0	17.2
Confectionery.....	78	67	56	4,956	3,633	2,309	12,487,864	8,109,237	5,141,066	39.3	16.4	19.6	114.6	36.4	57.3	142.9	54.0	57.7
Liquors, malt.....	6	23	5	1,126	950	1,261	7,513,668	6,715,215	7,513,668	-20.0	-13.0	-8.0	-10.7	18.5	-24.7	0.5	12.5	-10.7
Furniture and refrigerators.....	91	81	78	2,096	2,833	2,744	6,657,891	5,382,857	5,438,724	16.7	12.3	3.8	9.2	5.8	3.2	22.4	23.7	-1.0
Shipbuilding, including boat building.....	43	51	56	3,380	3,431	1,351	6,486,527	6,162,794	2,605,805	-14.3	-5.9	-8.9	150.2	-2.9	157.7	148.9	5.3	136.5
Gas, illuminating and heating.....	19	20	24	1,024	806	813	6,274,063	4,482,519	3,755,171	-20.8	-5.0	-16.7	26.0	27.0	-0.9	67.1	40.0	19.4
Musical instruments, pianos and organs and materials.....	34	35	36	2,763	3,060	2,414	6,145,903	6,373,907	4,915,586	-5.6	-2.9	-2.8	14.5	-0.7	26.8	25.0	-3.6	29.7
Lumber and timber products.....	123	123	89	2,169	2,530	1,645	6,112,989	7,261,235	4,900,269	38.2	.....	38.2	31.9	-14.3	53.8	22.5	-15.8	45.5
Tobacco manufactures.....	200	163	163	2,414	2,587	1,881	5,719,211	4,841,685	3,748,480	22.7	22.7	.....	28.3	-6.7	37.5	52.6	18.1	20.2
Patent medicines and compounds and druggists' preparations.....	106	88	85	907	780	922	5,641,942	5,767,461	4,175,120	24.7	20.5	3.5	-1.0	16.3	-15.4	35.1	-2.2	38.1
Coffee and spice, roasting and grinding.....	12	15	(*)	355	293	(*)	5,543,838	3,479,213	(*)	.....	-20.0	.....	21.2	.....	.....	59.3	.....	.....
Cars and general shop construction and repairs by steam-railroad companies.....	12	13	10	3,685	2,939	2,027	4,948,127	4,008,695	2,527,804	20.0	-7.7	30.0	81.8	25.4	45.0	95.7	23.4	58.6
Marble and stone work.....	195	151	(*)	2,606	2,737	(*)	4,896,578	4,461,882	(*)	.....	20.1	.....	-4.8	.....	.....	9.7	.....	.....
Copper, tin, and sheet-iron products..	99	73	76	1,977	1,477	1,450	4,629,656	3,451,651	2,827,926	30.3	35.6	-3.9	36.3	33.9	1.9	63.7	34.1	22.1

<sup>1</sup> A minus sign (-) denotes decrease.<sup>2</sup> Includes "bookbinding and blank-book making;" "engraving, steel and copper plate, including plate printing;" and "lithographing."<sup>3</sup> Comparable figures not available.<sup>4</sup> Includes "carpets and rugs, other than rag," and "shoddy."<sup>5</sup> Excluding statistics for one establishment, to avoid disclosure of individual operations.

## ST. LOUIS METROPOLITAN DISTRICT.

**Territory included.**—The St. Louis metropolitan district, which was the sixth in importance in the United States in manufacturing industries in 1909, embraces 197,993 acres of territory, of which 39,276 acres constitute the area of St. Louis and 158,717 acres the area of the outside territory. The population of the district in 1910 was 828,733 and that of the city of St. Louis proper was 687,029. As defined at the census of 1910, the metropolitan district includes, in addition to the city of St. Louis, Carondelet and Central townships, and Kirkwood city (in Bonhomme, Carondelet, and Central townships) in St. Louis County, Mo.; East St. Louis city, and Canteen, Centerville, and Stites townships in St. Clair County, Ill.; and Nameoki and Venice townships in Madison County, Ill. The part of Kirkwood city in Bonhomme township, Mo., and Nameoki and Venice townships (in which Granite City is situated) have been added to the district as it was constituted for the report for the census of 1905 on Industrial

Districts, Bulletin No. 101. A part of Centerville township was annexed to Belleville city in 1906 and is now outside the district. It is impracticable to segregate statistics for manufacturing establishments, if any, within this small area in 1904 and 1899. Canteen township was organized from a part of Centerville township in 1910. Parts of Centerville township were also added to East St. Louis city in 1908 and 1909.

On page 940 is an outline map of the St. Louis district showing the cities of St. Louis, East St. Louis, and Kirkwood, and the various townships included.

**Summary for the district.**—Table 29 is a summary for 1909 of the statistics of manufacturing industries, with a statement of the population in 1910, for the St. Louis metropolitan district, for the cities of St. Louis and East St. Louis, and for the remainder of the district, the percentage which the figure for St. Louis represents of the total for the district being shown in the case of each item.

	NUMBER OR AMOUNT.					Per cent St. Louis is of total for district.
	The district.	St. Louis.	District exclusive of St. Louis.			
			Total.	East St. Louis.	Remainder.	
Population <sup>1</sup> .....	828,733	687,029	141,704	58,547	83,157	82.9
Number of establishments.....	2,951	2,667	284	139	145	90.4
Persons engaged in manufactures.....	126,453	104,587	21,866	6,005	15,861	82.7
Proprietors and firm members.....	2,045	1,869	176	92	84	91.4
Salaried employees.....	17,873	15,347	2,526	661	1,865	85.9
Wage earners (average number).....	106,535	87,371	19,164	5,252	13,912	82.0
Primary horsepower.....	228,925	163,615	65,310	23,273	42,037	71.5
Capital.....	\$356,356,250	\$269,392,377	\$86,963,879	\$31,297,548	\$55,666,331	75.6
Expenses.....	394,139,219	297,246,790	96,892,429	16,701,465	80,190,964	75.4
Services.....	82,157,263	68,205,900	13,951,363	3,940,653	10,010,710	83.0
Salaries.....	22,612,726	19,670,911	2,941,815	690,549	2,251,268	87.0
Wages.....	59,544,537	48,534,989	11,009,548	3,250,104	7,759,444	81.5
Materials.....	266,552,373	188,189,163	78,363,210	11,440,076	66,923,134	70.6
Miscellaneous.....	45,429,583	40,851,727	4,577,856	1,320,736	3,257,120	89.9
Value of products.....	430,170,244	328,495,313	101,674,931	18,227,960	83,446,971	76.4
Value added by manufacture.....	163,617,871	140,306,150	23,311,721	6,787,894	16,523,837	85.8

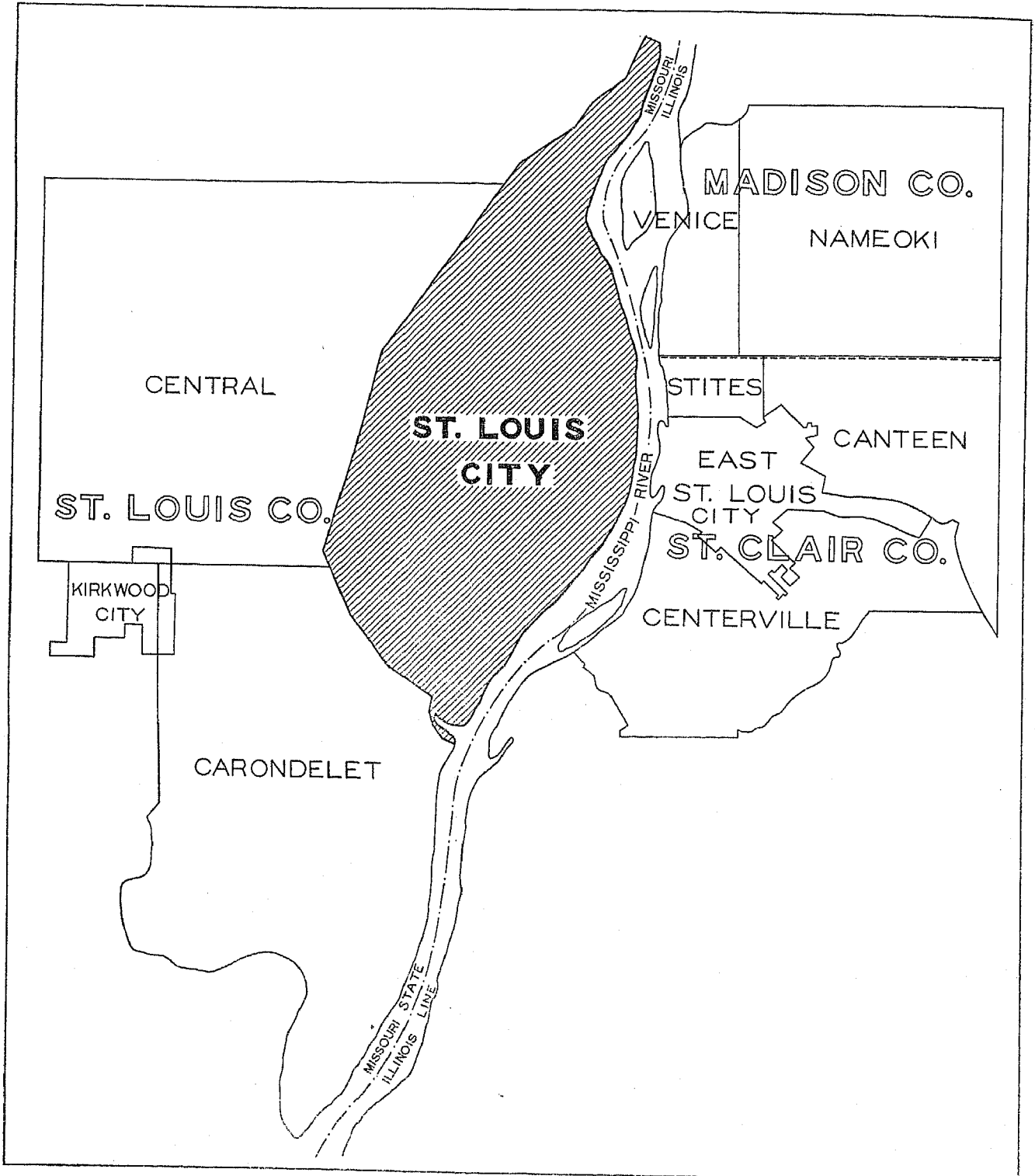
<sup>1</sup> April 15, 1910.

In the St. Louis district, as in Cleveland, Detroit, and all but two of the other districts, the greater part of the value of manufactured products of the district was reported by factories within the central city. St. Louis contained over four-fifths (82.9 per cent) of the population of the district of which it is the manufacturing, commercial, and financial center, and contributed over three-fourths (76.4 per cent) of the value of products for the district. Its manufacturing establishments constituted over nine-tenths (90.4 per cent) of all in the district, and gave employment to more

than four-fifths (82 per cent) of the average number of wage earners for that area. The principal industries of East St. Louis in 1909 were flour mills and grist mills, foundries and machine shops, steel works and rolling mills, and the chemical industry.

Granite City, which is included with the "remainder" of the district, as it was returned as of less than 10,000 population in 1910, has important manufactures, with large values of products. These manufactures include steel, glucose, babbitt metal and solder, tin plate and terneplate, and stamped and enameled ware.

ST. LOUIS METROPOLITAN DISTRICT: 1909.



Comparison with earlier censuses.—Table 30 is a comparative summary for the district as a whole for 1909, 1904, and 1899, together with the percentages of increase from census to census. For purposes of accurate comparison with the statistics for the dis-

trict as given for 1904<sup>1</sup> and 1899,<sup>1</sup> the totals for 1909 are segregated into figures for the territory added since 1904, and into those for the remainder of the district.

<sup>1</sup> Bureau of the Census: Industrial Districts, 1905, p. 45.

Table 30	NUMBER OR AMOUNT.					PER CENT OF INCREASE. <sup>1</sup>		
	1909			1904	1899	1899-1909	1904-1909	1899-1904
	Total.	Territory added since 1904.	Remainder of district. <sup>2</sup>					
Population	\$ 828,733	\$ 23,954	\$ 804,779	( <sup>3</sup> )	\$ 638,134	26.1		
Number of establishments	2,951	49	2,902	2,603	2,731	0.3	11.5	-4.7
Persons engaged in manufactures	126,453	7,314	119,139	106,041	( <sup>4</sup> )		12.4	
Proprietors and firm members	2,045	30	2,015	1,944	( <sup>4</sup> )		3.7	
Salaried employees	17,873	688	17,185	12,413	9,157	87.7	38.4	35.6
Wage earners (average number)	106,535	6,596	99,939	91,684	70,556	41.6	9.0	29.9
Primary horsepower	228,925	20,344	208,581	131,405	( <sup>4</sup> )		58.7	
Capital	\$356,356,256	\$26,042,286	\$330,313,970	\$289,133,806	\$159,634,795	108.9	14.2	81.1
Expenses	394,139,219	19,065,226	375,073,993	282,152,003	201,154,271	86.5	32.9	40.3
Services	82,157,263	4,518,038	77,639,225	61,913,138	42,087,942	84.5	25.4	47.1
Salaries	22,612,726	817,684	21,795,042	14,546,325	10,396,824	109.0	49.8	39.9
Wages	59,544,537	3,700,354	55,844,183	47,366,813	31,691,118	76.2	17.9	49.5
Materials	266,552,373	13,113,277	253,439,096	180,806,473	131,029,394	93.4	40.2	38.0
Miscellaneous	45,429,583	1,433,911	43,995,672	39,432,392	28,036,935	56.9	11.6	40.9
Value of products	430,170,244	20,728,878	409,441,366	319,709,859	228,089,639	79.5	28.1	40.2
Value added by manufacture	163,617,871	7,615,601	156,002,270	138,993,386	97,060,245	60.7	12.3	43.1

<sup>1</sup> A minus sign (—) denotes decrease.

<sup>2</sup> Figures in this column used in computing percentages of increase.

<sup>3</sup> April 15, 1910.

<sup>4</sup> No population census in 1905.

<sup>5</sup> June 1, 1900.

<sup>6</sup> Figures not available.

The percentage of increase in salaried employees, salaries, and cost of materials was greater during the more recent five-year period, 1904-1909, than during the period 1899-1904. The number of establishments increased during the later five years, while an actual decrease was reported for the earlier period. The percentages of increase during the decade 1899-1909 were much larger in salaries and capital than for any other items. The average number of wage earners increased 41.6 per cent and their wages 76.2 per cent, a rate of gain almost as great as that in value of products—79.5 per cent. The rate of increase in primary horsepower of all kinds from 1904 to 1909 was 58.7 per cent. Statistics as to the primary power used in 1899 are not available.

The proportions of the population and manufactures in the outside territory, as compared with the total for the metropolitan district, are constantly increasing, as is indicated by the percentages in Table 31. The percentages for 1909 are based upon the figures for the district exclusive of the territory added since 1904.

The proportion of the population of the district as originally constituted, reported from the territory outside of St. Louis, increased from 9.9 per cent in 1900

to 14.6 per cent in 1910, and the proportion of the value of products increased steadily from 15.1 per cent in 1899 to 16.4 per cent in 1904 and 19.8 per cent in 1909.

Table 31

	PER CENT TERRITORY OUTSIDE OF ST. LOUIS IS OF TOTAL FOR DISTRICT.		
	1909 <sup>1</sup>	1904	1899
Population	14.6	( <sup>2</sup> )	9.9
Number of establishments	8.1	4.6	3.1
Persons engaged in manufactures	12.1	9.5	( <sup>3</sup> )
Proprietors and firm members	7.2	3.1	( <sup>3</sup> )
Salaried employees	10.7	8.3	3.2
Wage earners (average number)	12.6	9.8	8.1
Primary horsepower	21.6	17.4	( <sup>3</sup> )
Capital	18.4	8.0	5.7
Expenses	20.7	18.1	16.3
Services	12.1	9.3	6.8
Salaries	9.7	7.4	3.1
Wages	13.1	10.0	8.0
Materials	25.7	23.8	22.3
Miscellaneous	7.1	5.7	2.3
Value of products	19.8	16.4	15.1
Value added by manufacture	10.1	6.7	5.2

<sup>1</sup> Based on figures for district as constituted in 1904 and 1899.

<sup>2</sup> No population census in 1905.

<sup>3</sup> Figures not available.

Leading industries.—Table 32 gives statistics for 1909 for the industries of the district, having products valued at \$500,000 or more, so far as separate figures can be presented.

SUMMARY FOR THE ST. LOUIS METROPOLITAN DISTRICT, BY INDUSTRIES: 1909.

Table 32

INDUSTRY.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Miscellaneous expenses.	Value of products.	Value added by manufacture.
		Total.	Proprietors and firm members.	Salaries employed.	Wage earners (average number)								
All industries.....	2,951	126,453	2,045	17,873	106,535	228,925	\$356,356,256	\$22,612,726	\$59,544,537	\$266,552,373	\$45,429,583	\$430,170,244	\$163,617,871
Automobiles, including bodies and parts.....	11	340	2	56	282	139	620,371	61,895	197,452	726,798	93,499	1,302,283	575,485
Awnings, tents, and sails.....	12	287	2	68	217	81	465,171	65,894	87,089	556,008	63,075	826,487	270,479
Blacking and cleansing and polishing preparations.....	23	164	17	50	97	150	207,608	60,982	52,577	290,656	105,250	570,914	280,258
Boots and shoes, including cut stock and findings.....	33	13,006	3	865	12,138	7,547	10,562,837	990,893	6,169,631	23,735,168	1,644,884	33,970,372	10,235,204
Boxes, fancy and paper.....	19	865	9	66	790	493	680,947	80,560	280,224	463,904	74,375	959,532	495,628
Brass and bronze products.....	11	325	6	50	269	385	963,035	76,162	179,661	1,631,835	74,074	2,164,768	582,933
Bread and other bakery products.....	484	3,476	475	648	2,353	8,086	7,240,585	585,435	1,287,883	4,992,567	803,152	9,047,142	4,054,575
Brick and tile.....	14	2,016	2	79	1,935	3,302	4,972,103	128,560	983,715	660,832	233,268	2,424,352	1,793,520
Canning and preserving.....	19	293	10	92	191	161	975,608	97,421	75,296	628,066	87,598	932,133	334,127
Carriages and wagons and materials.....	85	2,608	63	250	2,289	3,173	5,209,760	362,377	1,261,795	3,867,741	409,728	6,401,405	2,533,664
Cars and general shop construction and repairs by steam-railroad companies.....	12	2,930	-----	140	2,790	2,644	2,084,188	134,168	1,636,377	1,328,248	41,290	3,140,082	1,811,834
Clothing, men's, including shirts.....	50	5,246	32	463	4,751	879	5,419,636	581,726	1,966,168	5,382,012	700,988	9,687,421	4,305,409
Clothing, women's.....	58	2,745	49	257	2,439	438	2,050,468	301,456	1,021,016	2,901,808	326,582	4,880,032	1,984,244
Coffee and spice, roasting and grinding.....	23	1,091	6	515	570	1,886	4,547,171	607,302	268,406	7,217,065	740,472	9,513,595	2,296,530
Coffins, burial cases, and undertakers' goods.....	6	596	-----	106	490	608	1,173,575	132,066	268,230	664,539	184,358	1,371,092	706,553
Confectionery.....	25	1,453	14	217	1,222	823	1,747,211	349,724	512,420	2,174,930	440,604	3,848,422	1,673,483
Cooperage and wooden goods, not elsewhere specified.....	28	1,174	16	84	1,074	2,921	1,993,922	111,762	554,888	1,847,839	187,141	3,009,209	1,161,370
Copper, tin, and sheet-iron products.....	126	3,632	113	355	3,164	2,031	6,632,822	428,466	1,580,170	4,851,264	480,289	8,018,879	3,167,015
Electrical machinery, apparatus, and supplies.....	16	912	7	206	699	650	1,523,842	265,414	380,114	636,129	267,054	2,060,635	1,444,506
Fertilizers.....	4	186	-----	50	136	780	912,025	68,375	62,153	384,450	49,963	638,430	233,989
Flavoring extracts.....	8	165	3	88	74	55	355,894	104,156	28,794	264,230	78,766	622,676	358,446
Flour-mill and gristmill products.....	16	355	4	105	246	4,082	2,252,576	152,634	144,915	5,853,013	220,359	6,578,904	724,991
Food preparations.....	21	559	18	159	382	946	2,377,416	206,776	169,722	3,498,913	259,348	4,454,774	955,861
Foundry and machine-shop products.....	176	7,800	83	1,107	6,610	11,009	17,581,220	1,415,475	4,239,599	8,125,592	1,534,408	17,338,198	9,212,606
Furnishing goods, men's.....	8	239	8	56	225	10	337,737	54,525	82,937	391,022	33,065	679,722	288,700
Furniture and refrigerators.....	165	3,310	22	406	2,882	5,163	5,689,684	504,488	1,620,135	2,735,029	578,957	6,110,965	3,375,936
Gas and electric fixtures and lamps and reflectors.....	7	257	4	51	202	185	490,237	64,956	126,313	285,412	48,406	547,446	262,034
Ice, manufactured.....	13	264	-----	42	222	8,790	2,384,270	50,472	172,067	312,303	44,511	805,644	493,341
Iron and steel, steel works and rolling mills.....	9	6,293	-----	579	5,714	21,004	19,921,785	591,813	3,444,088	0,264,040	1,262,804	12,037,791	5,773,751
Jewelry.....	8	268	4	40	224	117	147,678	31,842	152,947	228,493	33,034	532,637	304,144
Leather goods.....	132	1,204	21	223	960	693	2,292,601	271,519	514,931	1,629,336	359,916	3,108,131	1,478,705
Leather, tanned, curried, and finished.....	9	246	3	23	220	519	1,478,051	42,487	145,548	1,593,805	51,646	2,034,970	436,114
Liquors, malt.....	14	5,598	-----	589	5,009	26,102	47,252,731	1,128,556	2,484,081	6,091,627	8,313,901	24,191,737	17,500,110
Lumber and timber products.....	86	3,574	30	420	3,118	10,077	7,121,163	496,848	1,852,297	4,432,065	431,959	8,197,133	3,765,068
Marble and stone work.....	44	705	34	83	588	1,188	1,321,432	120,852	495,983	762,294	130,149	1,670,011	907,717
Millinery and lace goods.....	18	655	13	128	514	64	440,308	97,111	182,561	548,877	102,493	1,045,408	496,531
Mineral and soda waters.....	44	355	29	100	228	132	559,123	95,613	115,089	179,944	109,775	611,266	431,322
Paint and varnish.....	123	869	1	270	598	2,139	4,661,187	398,199	315,048	3,738,225	552,908	5,564,021	1,825,796
Paper goods, not elsewhere specified.....	9	404	3	41	360	209	657,021	57,724	150,670	380,044	96,286	796,028	415,984
Patent medicines and compounds and druggists' preparations.....	199	1,626	87	677	862	800	4,506,796	879,642	364,259	2,280,680	1,730,626	6,846,391	4,565,711
Pottery, terra-cotta, and fire-clay products.....	113	2,246	2	195	2,049	4,230	8,770,838	294,825	1,000,843	634,417	327,657	2,682,754	2,048,337
Printing and publishing.....	375	8,685	246	2,258	6,181	14,736	13,138,946	2,859,936	4,051,105	5,258,278	3,505,974	17,785,074	12,526,796
Roofing materials.....	4	81	2	23	56	120	386,914	21,092	31,353	435,179	44,680	565,917	130,738
Slaughtering and meat packing.....	28	6,354	19	976	5,359	13,148	18,107,879	1,057,528	3,065,827	74,920,220	1,826,870	81,903,483	6,983,263
Stoves and furnaces, including gas and oil stoves.....	13	2,048	2	373	1,673	1,826	7,254,137	535,244	1,198,582	2,457,524	774,328	5,923,888	3,465,864
Wirework, including wire rope and cable.....	19	832	6	143	683	853	2,241,833	247,129	364,982	1,697,227	375,121	3,323,043	1,025,816
All other industries.....	750	23,066	569	4,095	23,402	63,471	124,637,914	5,250,586	14,132,440	66,006,766	15,494,902	109,389,449	43,382,693

<sup>1</sup> Excluding statistics for establishments located outside of the corporate limits of St. Louis, to avoid disclosure of individual operations. The figures for these establishments are included under the head of "All other industries."

Among the 46 industries shown separately in the table there are 10 for which totals for the district can not be published, because to do so would disclose individual operations; and 16 which were not carried on in the part of the district which is outside the corporate limits of St. Louis. In all these cases the statistics shown are figures for St. Louis exclusively.

The most important industry in the St. Louis metropolitan district, measured by value of products, was slaughtering and meat packing, while the manufacture

of boots and shoes was second in this respect, but led in average number of wage earners and wages. The establishments in the boot and shoe industry, all of which were within the city limits, contributed over two-thirds of the value of products for this industry reported for the state. The tobacco industry, for which separate figures can not be given without disclosing the operations of individual establishments, ranked third, followed by the manufacture of malt liquors.

Comparative summary, by industries.—The number of establishments, average number of wage earners, and value of products reported for such of the industries as can be shown separately and had a value of products amounting to \$4,000,000 or more in 1909 are given in Table 33 for 1909, 1904, and 1899.

The greatest absolute increase in value of products during the decade in the area under consideration was reported for the slaughtering and meat-packing industry—\$41,186,839, or 101.2 per cent. The greatest relative increase, 383.1 per cent, is shown for the manufacture of copper, tin, and sheet-iron products, but as figures for one establishment are omitted from the total for the industry for 1899, in order to

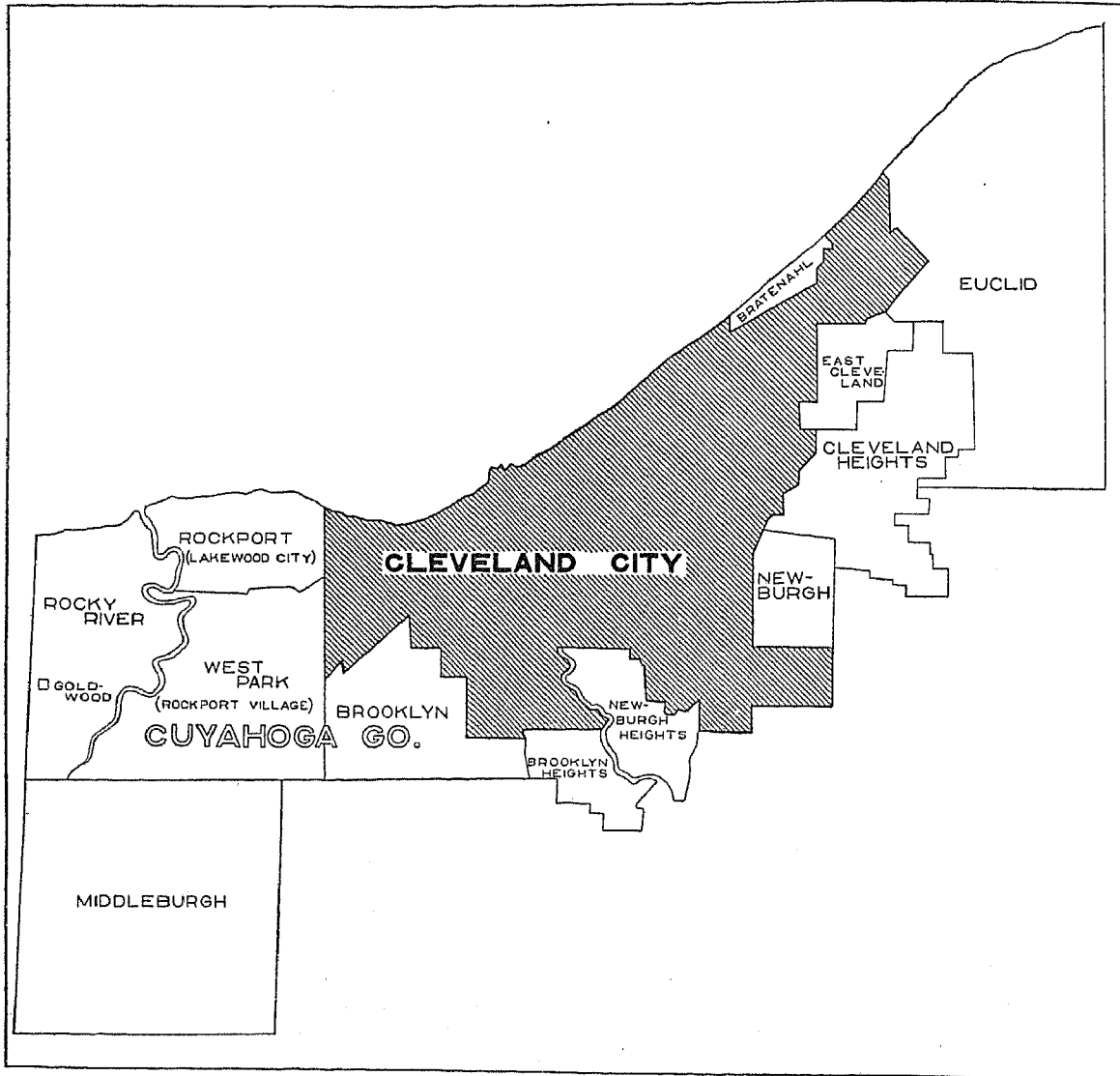
avoid disclosing individual operations, the actual percentage of increase in this industry is less than that shown in the table. Moreover, the increase shown is due, in part, to the inclusion of a large establishment in Granite City, which was not a part of the district for 1904 and 1899. The manufacture of boots and shoes, including cut stock and findings, shows exceptional development during the decade, the average number of wage earners in the industry having increased 124.9 per cent and the value of products 300.3 per cent. The total for steel works and rolling mills is considerably increased for 1909 by the addition of statistics for establishments not included in the district as constituted for 1904.

COMPARATIVE SUMMARY FOR THE ST. LOUIS METROPOLITAN DISTRICT, BY SELECTED INDUSTRIES: 1909, 1904, AND 1899.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.			WAGE EARNERS (AVERAGE NUMBER).			VALUE OF PRODUCTS.			PER CENT OF INCREASE. <sup>1</sup>								
										Number of establishments.			Wage earners (average number).			Value of products.		
	1909	1904	1899	1909	1904	1899	1909	1904	1899	1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904
Slaughtering and meat packing.....	28	26	31	5,359	4,938	3,019	\$81,903,483	\$57,900,808	\$40,716,644	-9.7	7.7	-16.1	77.5	8.5	63.6	101.2	41.3	42.4
Boots and shoes, including cut stock and findings.....	33	22	35	12,138	9,331	5,398	33,970,372	19,662,388	8,487,020	-5.7	50.0	-37.1	124.9	30.1	72.9	300.3	72.8	131.7
Liquors, malt.....	14	28	28	5,009	4,947	2,670	24,191,737	20,930,462	11,673,599	-50.0	-50.0	.....	87.6	1.3	85.3	107.2	15.6	79.3
Printing and publishing.....	375	375	336	6,181	5,905	4,297	17,785,074	16,475,759	10,939,864	11.6	.....	11.6	43.8	4.7	37.4	62.6	7.9	50.6
Book and job.....	207	188	175	3,865	3,541	2,336	8,484,969	7,740,475	4,430,502	18.3	10.1	7.4	65.5	9.1	51.6	91.5	9.6	74.7
Newspapers and periodicals.....	124	150	130	1,698	1,682	1,281	8,328,800	7,545,139	5,494,315	-4.6	-17.3	15.4	32.6	1.0	31.3	51.6	10.4	37.3
All other printing and publishing industries <sup>4</sup> .....	44	37	31	618	682	680	971,305	1,100,145	1,015,047	41.9	18.9	19.4	-9.1	-9.4	0.3	-4.3	-18.4	17.2
Foundry and machine-shop products.....	176	148	( <sup>5</sup> )	6,610	6,438	( <sup>5</sup> )	17,338,198	12,990,608	( <sup>5</sup> )	.....	18.9	.....	.....	2.7	.....	.....	33.5	.....
Clothing.....	108	99	178	7,190	5,646	5,461	14,573,473	9,925,417	9,303,208	-39.3	9.1	-44.4	31.7	27.3	3.4	56.6	46.8	6.7
Men's, including shirts.....	50	53	136	4,751	3,942	3,504	9,687,421	6,850,351	6,315,762	-63.2	-6.7	-61.0	35.6	20.5	12.5	53.4	41.4	8.5
Women's.....	58	46	42	2,439	1,704	1,957	4,886,052	3,075,066	2,987,446	38.1	26.1	9.5	24.6	43.1	-12.9	63.6	58.9	2.9
Iron and steel, steel works and rolling mills.....	9	6	( <sup>5</sup> )	5,714	2,587	( <sup>5</sup> )	12,027,791	4,797,866	( <sup>5</sup> )	.....	50.0	.....	.....	120.9	.....	.....	150.9	.....
Coffee and spice, roasting and grinding.....	23	19	20	570	484	419	9,513,595	6,725,109	4,765,504	15.0	21.1	-5.0	36.0	17.8	15.5	99.6	41.5	41.1
Bread and other bakery products.....	484	322	396	2,353	1,633	1,453	9,047,142	6,319,019	4,912,543	22.2	50.3	-18.7	58.7	21.7	30.3	84.2	43.2	28.6
Lumber and timber products.....	86	70	55	3,118	3,039	2,251	8,197,133	5,644,664	4,288,351	56.4	22.9	27.3	38.5	-2.6	35.0	91.1	45.2	31.6
Copper, tin, and sheet-iron products.....	126	67	44	3,164	1,750	741	8,018,879	4,483,335	1,660,018	186.4	88.1	52.3	327.0	80.8	136.2	383.1	78.9	170.1
Patent medicines and compounds and druggists' preparations.....	699	95	86	862	861	861	6,846,391	5,182,444	4,664,118	15.1	4.2	10.5	0.1	0.1	.....	46.8	32.1	11.1
Flour-mill and gristmill products.....	16	9	18	246	196	281	6,578,904	3,974,437	4,557,507	-11.1	77.8	-50.0	-12.5	25.5	-30.2	44.4	65.5	12.8
Carriages and wagons and materials.....	85	102	108	2,289	2,239	2,028	6,401,405	5,809,708	4,057,170	-21.3	-16.7	-5.6	12.9	2.2	10.4	37.5	10.2	24.7
Furniture and refrigerators.....	65	51	40	2,882	2,364	2,283	6,110,965	4,057,216	3,208,765	62.5	27.4	27.5	26.2	21.9	3.5	87.0	50.6	24.1
Stoves and furnaces, including gas and oil stoves.....	13	14	( <sup>5</sup> )	1,673	1,875	( <sup>5</sup> )	5,923,388	5,523,277	( <sup>5</sup> )	.....	-7.1	.....	.....	-10.8	.....	.....	7.2	.....
Paint and varnish.....	23	25	18	698	552	448	5,504,021	5,909,089	3,863,746	27.8	-8.9	38.9	33.5	8.3	23.2	43.8	-5.8	32.7
Food preparations.....	21	24	23	382	490	381	4,454,774	2,409,270	1,694,555	-8.7	-12.5	4.3	0.3	22.0	28.6	102.9	84.9	42.2

<sup>1</sup> A minus sign (-) denotes decrease.  
<sup>2</sup> Excluding statistics for two establishments, to avoid disclosure of individual operations.  
<sup>3</sup> Excluding statistics for one establishment, to avoid disclosure of individual operations.  
<sup>4</sup> Includes "printing and publishing, music;" "bookbinding and blank-book making;" "engraving, steel and copper plate, including plate printing;" and "lithographing."  
<sup>5</sup> Comparable figures not available.  
<sup>6</sup> Excluding statistics for three establishments, to avoid disclosure of individual operations.  
<sup>7</sup> Excluding statistics for four establishments, to avoid disclosure of individual operations.

CLEVELAND METROPOLITAN DISTRICT: 1909.





## CLEVELAND METROPOLITAN DISTRICT.

**Territory included.**—The metropolitan district of Cleveland embraces 103,174 acres of territory, of which 29,209 acres constitute the area of Cleveland and 73,965 acres the area of the outside territory. The population of the city of Cleveland proper in 1910 was 560,663, and that of the outside territory 52,607, the total for the district being 613,270. As defined at the census of 1910, the metropolitan district includes the central city, together with Bratenahl, Brooklyn, Brooklyn Heights, Cleveland Heights, East Cleveland, Euclid, Goldwood, Middleburgh, Newburgh, Newburgh Heights, Rockport, Rocky River, and West Park townships in Cuyahoga County. The industrial district covered by the report on industrial districts for the census of 1904 (Bulletin No. 101) did not include Middleburgh township, but it comprised, in addition to the territory represented by the other places named above, the area which now constitutes Bedford, Independence, South Newburgh, and Warrensville townships. Glenville township (the part which remained after the organization of Bratenahl township in 1904), part of Brooklyn township, and part of Newburgh Heights township were added to Cleveland in 1905; Corlett township, which formed part of Newburgh township in 1904, was annexed in 1909; and part of what was Collinwood township in 1904 was annexed in 1910. Goldwood township was organized from part of Rocky River township in 1910.

The location of each of the constituent divisions of the district is indicated on the outline map (p. 944).

**Summary for the district.**—Table 34 is a summary for 1909 of the statistics of manufacturing industries, with a statement of the population in 1910, for the Cleveland metropolitan district, for the city of Cleveland, and for the remainder of the district, the percentage which the figure for Cleveland represents of the total for the district being shown in the case of each item.

In 1909 the Cleveland metropolitan district had 2,230 manufacturing establishments, which gave employment to an average of 103,709 persons during the year, and paid out \$66,805,430 in salaries and wages. Of the persons employed, 89,088 were wage earners. These establishments turned out products to the value of \$281,992,131, to produce which materials costing \$159,896,454 were utilized. The value added by manufacture was thus \$122,095,677. The Cleveland district ranked seventh in 1909 among the metropolitan districts of the United States in the value of its manufactured products.

The percentages which the figures relating to manufacturing industries in the central city in 1909 form of the total for the district are higher than in any other of the districts except two—Detroit, which exceeds in percentage of establishments and salaried employees, and Minneapolis-St. Paul, where the concentration is greater in 7 of the 15 items shown. They are remarkable for their small degree of variation, ranging from 92.5 per cent for primary horsepower to 97 per cent in the case of proprietors and firm members.

Table 34	NUMBER OR AMOUNT.			Per cent Cleveland is of total for district.
	The district.	Cleveland.	District exclusive of Cleveland. <sup>1</sup>	
Population <sup>2</sup> .....	613,270	560,663	52,607	91.4
Number of establishments.....	2,230	2,148	82	96.3
Persons engaged in manufactures.....	103,709	98,686	5,023	95.2
Proprietors and firm members.....	1,771	1,718	53	97.0
Salaried employees.....	12,850	12,240	610	95.3
Wage earners (average number).....	89,088	84,728	4,360	95.1
Primary horsepower.....	216,166	199,898	16,268	92.5
Capital.....	\$236,911,140	\$227,397,484	\$9,513,656	96.0
Expenses.....	254,566,810	245,390,440	9,176,370	96.4
Services.....	66,805,430	63,558,820	3,246,610	95.1
Salaries.....	16,150,153	15,505,840	644,304	96.0
Wages.....	50,655,277	48,052,971	2,602,306	94.9
Materials.....	159,896,454	154,915,023	4,981,431	96.9
Miscellaneous.....	27,864,926	26,910,597	954,329	96.6
Value of products.....	281,992,131	271,960,833	10,031,298	96.4
Value added by manufacture.....	122,095,677	117,045,810	5,049,867	95.9

<sup>1</sup> Includes Lakewood city, coextensive with Rockport township, the statistics for which can not be shown without disclosing individual operations.  
<sup>2</sup> April 15, 1910.

**Comparison with earlier censuses.**—Table 35 is a comparative summary of the statistics for the district as a whole for 1909, 1904, and 1899, together with the percentages of increase from census to census. For purposes of accurate comparison the totals for 1909 have been adjusted by segregating the figures for the territory added since 1904; and those for 1904 and 1899 by segregating the figures for the territory deducted since 1904.

The percentage of increase in all items shown except capital was greater during the more recent five-year period, 1904–1909, than during the period 1899–1904. The percentage of increase during the decade 1899–1909 was considerably larger in salaries, miscellaneous expenses, and number of salaried employees than for any other items. The average number of wage earners increased only 56.4 per cent, but the wages increased 86.1 per cent, a rate of increase considerably less than that in value of products, 98.6 per cent. The relative increase in primary horsepower of all kinds from 1904 to 1909 was 36.9 per cent. Statistics as to the primary power used in 1899 are not available.

MANUFACTURES.

**Table 35**

	NUMBER OR AMOUNT.									PER CENT OF INCREASE.		
	1909			1904			1899			1899-1909	1904-1909	1899-1904
	Total.	Territory added since 1904.	Remainder of district. <sup>1</sup>	Total.	Territory deducted since 1904.	Remainder of district. <sup>1</sup>	Total.	Territory deducted since 1904.	Remainder of district. <sup>1</sup>			
Population.....	2 613,270	2 7,080	2 606,190	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	4 420,508	4 5,523	4 414,985	46.1	.....	.....
Number of establishments.....	2,230	9	2,221	1,720	21	1,699	1,423	17	1,406	58.0	30.7	20.8
Persons engaged in manufactures.....	103,709	128	103,581	76,671	612	76,059	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	.....	36.2	.....
Proprietors and firm members.....	1,771	2	1,769	1,529	11	1,518	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	.....	16.5	.....
Salariated employees.....	12,850	17	12,833	7,341	54	7,287	5,189	26	5,163	148.6	76.1	41.1
Wage earners (average number).....	89,088	109	88,979	67,801	547	67,254	57,222	325	56,897	56.4	32.3	18.2
Primary horsepower.....	216,166	213	215,953	159,297	1,516	157,781	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	.....	36.9	.....
Capital.....	\$236,911,140	\$175,137	\$236,736,003	\$164,091,287	\$1,773,818	\$162,917,469	\$105,381,527	\$698,423	\$104,683,104	126.1	45.3	55.6
Expenses.....	254,566,810	166,977	254,399,833	160,593,829	1,117,785	159,476,044	121,538,825	427,823	121,111,002	110.1	59.5	31.7
Services.....	66,895,430	61,847	66,743,583	44,216,685	390,559	43,826,126	32,962,656	193,111	32,769,545	103.7	52.3	33.7
Salaries.....	16,150,153	17,33	16,132,816	8,859,767	88,484	8,771,283	5,614,108	39,600	5,574,508	189.4	83.9	57.3
Wages.....	50,655,277	44,510	50,610,767	35,356,918	302,075	35,054,843	27,348,548	153,511	27,195,037	86.1	44.4	28.9
Materials.....	159,896,454	95,125	159,801,329	100,783,886	596,355	100,187,531	77,956,310	220,410	77,735,909	105.6	59.5	28.9
Miscellaneous.....	27,864,926	10,005	27,854,921	15,593,258	130,871	15,462,387	10,619,850	14,302	10,605,548	162.6	80.1	45.8
Value of products.....	281,992,131	205,791	281,786,340	179,184,277	1,300,824	177,883,453	142,464,823	604,754	141,860,069	98.6	58.4	25.4
Value added by manufacture.....	122,095,677	110,666	121,985,011	78,400,391	704,469	77,695,922	64,598,504	384,344	64,124,160	90.2	57.0	21.2

<sup>1</sup> Figures in this column used in computing percentages of increase.  
<sup>2</sup> April 15, 1910.

<sup>3</sup> No population census in 1905.  
<sup>4</sup> June 1, 1900.

<sup>5</sup> Figures not available.

The proportions which the population and manufactures outside of the city of Cleveland represent of the totals for the metropolitan district are shown for 1909, 1904, and 1899 in Table 36. The percentages for 1909 are based upon the figures for the district exclusive of the territory added since 1904; and those for 1904 and 1899 upon the figures for the district exclusive of the territory deducted.

Except for population and number of establishments, for which the proportion in the outside territory decreased, there was an increase in the percentages for every item shown from census to census. However, from 1904 to 1909 some items show an increase, while others show a decrease. The proportion of the value of products contributed by the territory outside of the city of Cleveland increased steadily from 1.8 per cent in 1899 to 3.4 per cent in 1904 and 3.5 per cent in 1909.

A considerable area has been annexed to the city of Cleveland since 1904, but it is not practicable to ascertain the figures for the manufacturing establishments reported therefrom. The fact that losses or only slight gains in the relative importance of the outside territory are shown in 1909 as compared with

1904 for most of the items in the table is due in part to these annexations.

**Table 36**

	PER CENT TERRITORY OUTSIDE OF CLEVELAND IS OF TOTAL FOR DISTRICT.		
	1909 <sup>1</sup>	1904 <sup>2</sup>	1899 <sup>2</sup>
Population.....	7.5	( <sup>3</sup> )	8.0
Number of establishments.....	3.3	4.9	4.0
Persons engaged in manufactures.....	4.7	4.9	( <sup>4</sup> )
Proprietors and firm members.....	2.9	4.8	( <sup>4</sup> )
Salariated employees.....	4.6	5.0	1.9
Wage earners (average number).....	4.8	4.8	2.7
Primary horsepower.....	7.4	4.3	( <sup>5</sup> )
Capital.....	3.9	4.0	3.3
Expenses.....	3.5	3.2	1.8
Services.....	4.8	4.7	2.4
Salaries.....	3.9	5.4	2.2
Wages.....	5.1	4.6	2.5
Materials.....	3.1	2.6	1.6
Miscellaneous.....	3.4	2.7	1.4
Value of products.....	3.5	3.4	1.8
Value added by manufacture.....	4.0	4.3	1.9

<sup>1</sup> Based on figures for district as constituted in 1909, exclusive of territory added since 1904.

<sup>2</sup> Based on figures for district as constituted in 1904, exclusive of territory deducted since 1904.

<sup>3</sup> No population census in 1905.

<sup>4</sup> Figures not available.

**Leading industries.**—Table 37 gives the statistics for 1909 for the industries of the district having products valued at \$500,000 or more, so far as separate figures can be presented.

# CLEVELAND METROPOLITAN DISTRICT.

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## SUMMARY FOR THE CLEVELAND METROPOLITAN DISTRICT, BY INDUSTRIES: 1909.

INDUSTRY.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horsepower.	Capital.	Salaries.	Wages.	Cost of materials.	Miscellaneous expenses.	Value of products.	Value added by manufacture.
		Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).								
<b>All industries.....</b>	<b>2,230</b>	<b>103,709</b>	<b>1,771</b>	<b>12,860</b>	<b>89,088</b>	<b>216,166</b>	<b>\$236,911,140</b>	<b>\$16,150,153</b>	<b>\$50,665,277</b>	<b>\$159,896,454</b>	<b>\$27,864,926</b>	<b>\$281,992,131</b>	<b>\$122,095,677</b>
Automobiles, including bodies and parts.....	32	7,115	20	687	6,408	9,135	10,600,162	875,471	4,022,846	10,417,034	2,719,144	21,403,926	10,986,892
Boots and shoes, including cut stock and findings.....	6	631	8	66	557	304	466,861	84,441	225,339	509,505	38,574	951,470	441,905
Boxes, fancy and paper.....	6	790		51	739	647	823,648	67,539	265,692	626,980	110,064	1,140,581	513,595
Brass and bronze products.....	28	931	23	107	801	872	2,730,769	120,863	518,327	1,362,392	214,408	2,567,768	1,205,376
Bread and other bakery products....	210	1,732	213	267	1,222	14	2,619,019	312,142	820,767	2,766,268	441,383	4,812,449	2,040,181
Brick and tile.....	16	640	11	31	598	2,235	1,046,947	48,588	317,216	226,617	90,069	861,131	634,514
Cars and general shop construction and repairs by steam-railroad companies.....	9	3,256		268	2,988	3,470	1,410,633	252,986	1,922,294	2,726,481	50,565	4,952,326	2,225,845
Chemicals.....	5	557		88	469	1,840	1,571,754	140,581	307,084	978,241	168,026	1,865,957	887,716
Clothing, men's, including shirts....	93	3,166	110	311	2,745	346	3,318,688	373,505	1,095,644	3,202,770	722,112	5,953,321	2,760,551
Clothing, women's.....	96	6,226	100	708	5,418	771	4,940,683	1,126,263	2,903,174	6,496,487	1,311,241	12,788,775	6,292,288
Confectionery.....	16	908	10	95	803	679	1,294,403	149,651	253,380	1,553,118	328,825	2,851,927	1,298,809
Cooperage and wooden goods, not elsewhere specified.....	10	289	9	19	261	533	500,289	35,501	136,266	470,501	46,516	708,106	237,605
Copper, tin, and sheet-iron products.	37	1,631	32	135	1,364	1,231	4,781,532	182,547	630,659	1,627,901	230,011	2,966,476	1,338,575
Cutlery and tools, not elsewhere specified.....	15	1,662	11	207	1,444	3,246	4,097,006	227,837	759,362	664,732	418,831	2,395,436	1,730,704
Electrical machinery, apparatus, and supplies.....	140	1,899	20	301	1,578	1,980	3,308,386	346,012	760,159	1,780,067	595,849	4,035,808	2,255,741
Food preparations.....	17	237	19	35	183	284	269,060	48,291	69,163	448,041	76,933	718,176	270,135
Foundry and machine-shop products.....	239	20,622	125	2,357	18,140	24,759	42,445,280	3,187,777	10,624,367	15,559,650	3,913,638	37,929,051	22,369,401
Furniture and refrigerators.....	25	557	19	71	467	578	660,051	72,665	288,072	490,742	65,200	1,068,551	577,809
Gas and electric fixtures and lamps and reflectors.....	17	409	16	67	326	199	313,359	96,495	192,863	228,775	85,045	653,709	424,934
Hosiery and knit goods.....	13	1,365	12	119	1,234	407	1,894,348	184,747	484,818	1,812,609	227,440	2,967,248	1,144,439
Iron and steel, steel works and rolling mills.....	14	8,278	2	738	7,538	60,575	26,086,577	848,507	5,149,604	28,039,016	1,635,723	38,463,316	10,424,300
Iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills.....	10	2,663		177	2,486	3,760	0,125,408	253,680	1,175,605	3,001,215	232,357	5,428,356	2,427,141
Iron and steel forgings.....	10	544	4	56	484	2,174	1,809,719	75,190	301,978	504,055	83,174	992,693	488,638
Leather, tanned, curried, and finished.....	4	124	1	15	108	422	385,757	18,170	69,155	468,162	36,671	636,153	187,991
Liquors, malt.....	11	904	5	155	744	3,395	9,887,715	357,945	593,579	1,484,143	1,861,581	5,124,476	3,640,335
Lumber and timber products.....	56	1,628	26	155	1,347	5,959	2,647,529	177,296	799,965	2,869,205	244,914	4,299,586	1,460,381
Millinery and lace goods.....	6	536	4	60	472	143	458,565	83,214	189,079	726,461	33,450	1,266,250	479,789
Oil, not elsewhere specified.....	10	171	2	114	55	93	332,669	150,192	35,466	594,367	101,239	978,544	384,177
Paint and varnish.....	24	1,258	5	493	760	2,624	5,393,459	704,448	468,471	3,888,978	823,090	6,138,466	2,249,488
Patent medicines and compounds and druggists' preparations.....	50	322	56	141	125	66	429,277	123,731	62,188	315,940	353,954	1,010,113	694,173
Printing and publishing.....	250	4,688	176	1,398	3,114	3,334	6,957,828	1,505,926	2,013,158	2,782,781	2,089,088	9,648,012	6,865,231
Slaughtering and meat packing.....	35	1,336	28	232	1,076	2,570	3,555,435	259,535	599,489	15,398,662	478,096	17,192,048	1,793,386
Stoves and furnaces, including gas and oil stoves.....	20	2,097	7	247	1,843	1,899	4,092,596	281,126	1,155,072	2,286,206	669,240	4,977,096	2,690,890
Tobacco manufactures.....	258	2,240	282	91	1,867	29	928,101	135,376	734,479	1,047,764	561,484	2,772,681	1,724,917
Wirework, including wire rope and cable.....	17	1,219	6	159	1,054	1,700	2,224,887	209,892	657,620	1,171,177	242,764	2,472,290	1,301,113
All other industries.....	625	21,278	409	2,629	18,240	73,833	71,496,840	3,331,963	10,042,977	41,369,205	6,543,527	67,069,857	25,700,652

<sup>1</sup> Excluding statistics for establishments located outside of the corporate limits of Cleveland, to avoid disclosure of individual operations. The figures for these establishments are included under the head of "All other industries."

The 35 industries shown separately in the table include 10 for which totals for the district can not be published, because to do so would disclose individual operations; and 18 which were not carried on in the part of the district which is outside the corporate limits of Cleveland. In all these cases the statistics shown are figures for Cleveland exclusively.

The principal industry of the Cleveland metropolitan district in 1909, measured by value of products, was steel works and rolling mills, closely followed by foundries and machine shops. The latter industry, however, ranked first in all other items except primary horsepower and cost of materials. The automobile industry, with products valued at \$21,403,926,

occupied third place. Slaughtering and meat packing, the making of women's clothing, printing and publishing, the paint and varnish industry, and the manufacture of men's clothing were among the leading industries of the district. The blast-furnace industry was also important, but it can not be shown separately without disclosing the operations of individual establishments.

**Comparative summary, by industries.**—The number of establishments, average number of wage earners, and value of products for such of the industries as can be shown separately and had a value of products amounting to \$4,000,000 or more in 1909 are given in Table 38 for 1909, 1904, and 1899.

MANUFACTURES.

COMPARATIVE SUMMARY FOR THE CLEVELAND METROPOLITAN DISTRICT, BY SELECTED INDUSTRIES:  
1909, 1904, AND 1899.

Table 38 INDUSTRY.	NUMBER OF ESTABLISHMENTS.			WAGE EARNERS (AVERAGE NUMBER).			VALUE OF PRODUCTS.			PER CENT OF INCREASE. <sup>1</sup>								
										Number of establishments.			Wage earners (average number).			Value of products.		
	1909	1904	1899	1909	1904	1899	1909	1904	1899	1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904
Iron and steel, steel works and rolling mills.....	214	9	(*)	7,538	8,577	(*)	\$38,463,316	\$32,270,437	(*)	.....	55.6	.....	-12.1	.....	.....	.....	19.2	.....
Foundry and machine-shop products.	239	170	(*)	18,140	13,632	(*)	37,929,051	24,016,327	(*)	.....	40.0	.....	33.1	.....	.....	.....	52.2	.....
Automobiles, including bodies and parts.....	32	10	(*)	6,408	1,800	(*)	21,403,926	4,624,080	(*)	.....	220.0	.....	250.0	.....	.....	.....	362.9	.....
Clothing.....	189	148	195	8,163	4,876	3,829	18,742,096	10,406,100	\$7,623,547	-3.1	27.7	-24.1	113.2	67.4	27.3	145.8	80.1	36.5
Women's.....	98	78	77	5,418	3,394	2,362	12,788,775	7,427,553	4,213,248	24.7	23.1	1.3	129.4	59.6	43.7	203.5	72.2	76.3
Men's, including shirts.....	93	70	118	2,745	1,482	1,467	5,953,321	2,978,547	3,410,299	-21.2	32.9	-40.7	87.1	85.2	1.0	74.6	99.9	-12.7
Slaughtering and meat packing.....	235	19	10	1,070	978	577	17,192,048	10,610,214	7,514,470	250.0	84.2	90.0	86.5	10.0	69.5	128.8	61.9	41.3
Printing and publishing.....	250	192	129	3,114	2,303	1,972	9,648,012	6,158,562	4,356,625	93.8	30.2	48.8	57.9	35.2	16.8	121.5	56.7	41.4
Newspapers and periodicals.....	88	79	38	851	758	710	4,655,255	3,365,938	2,073,324	126.3	8.9	107.9	19.9	12.3	6.8	124.5	38.3	62.3
Book and job.....	132	89	69	1,830	1,273	681	4,093,203	2,866,858	1,787,106	91.3	48.3	29.0	87.2	44.2	29.8	129.1	73.0	32.4
All other printing and publishing industries.....	32	24	22	427	272	281	899,553	425,766	496,195	45.5	33.3	9.1	52.0	57.0	-3.2	81.3	111.3	-14.2
Paint and varnish.....	24	20	16	760	575	391	6,138,466	3,700,467	2,902,471	60.0	20.0	25.0	94.4	32.2	47.1	111.5	65.9	27.5
Iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills.....	10	8	7	2,486	1,962	1,305	5,428,856	3,620,854	2,405,856	42.9	25.0	14.3	90.5	26.7	50.3	125.6	49.9	50.5
Liquors, malt.....	11	9	10	744	601	477	5,124,478	3,986,059	4,033,915	10.0	22.2	-10.0	56.0	23.8	26.0	27.0	28.6	-1.2
Stoves and furnaces, including gas and oil stoves.....	20	17	(*)	1,843	1,527	(*)	4,977,090	3,004,903	(*)	.....	17.0	.....	20.7	.....	.....	.....	65.0	.....
Cars and general shop construction and repairs by steam-railroad companies.....	9	6	10	2,988	1,313	1,443	4,952,326	1,681,287	1,584,977	-10.0	50.0	-40.0	107.1	127.6	-9.0	212.5	194.6	6.1
Bread and other bakery products...	210	150	104	1,252	1,249	552	4,812,449	3,049,516	1,525,387	101.9	40.0	44.2	126.8	0.2	126.3	215.5	57.8	99.9
Lumber and timber products.....	56	43	45	1,347	1,091	1,268	4,299,586	3,877,171	2,798,756	24.4	30.2	-4.4	6.2	23.5	-14.0	53.6	10.9	38.5
Electrical machinery, apparatus, and supplies.....	40	30	25	1,578	1,235	1,467	4,035,808	2,652,987	2,551,743	60.0	33.3	20.0	7.6	27.8	-15.8	58.2	62.1	4.0

<sup>1</sup> A minus sign (-) denotes decrease.  
<sup>2</sup> Excluding statistics for one establishment, to avoid disclosure of individual operations.  
<sup>3</sup> Comparable figures not available.  
<sup>4</sup> Excluding statistics for two establishments, to avoid disclosure of individual operations.  
<sup>5</sup> Includes "printing and publishing, music;" "bookbinding and blank-book making;" "engraving steel and copper plate, including plate printing;" and "lithographing."

Comparable figures are not available for 1899 for the three most important industries in the district. The greatest absolute and relative increases during the five-year period, 1904-1909, in average number of wage earners and value of products are shown for the manufacture of automobiles, including bodies and parts.

## BUFFALO METROPOLITAN DISTRICT.

**Territory included.**—The metropolitan district of Buffalo embraces 132,413 acres of territory, of which 24,791 acres constitute the area of Buffalo and 107,622 acres the area of the outside territory. The population of the city of Buffalo proper in 1910 was 423,715, and that of the outside territory 64,946, the total for the district being 488,661. As defined at the census of 1910 the metropolitan district comprised the cities of Buffalo, Lackawanna, and Tonawanda, and the towns of Cheektowaga, Hamburg, Lancaster, Tonawanda, and West Seneca, all of which are in Erie County, and the city of North Tonawanda in Niagara County.

The industrial district covered by the figures published for 1904 and 1899 did not include Lancaster or North Tonawanda, but comprised, in addition to the territory represented by the other places just mentioned, the towns of Amherst and East Hamburg.

Since the census of 1904 Lackawanna has been incorporated as a city, but the figures for it can not be shown separately, as to do so would disclose the operations of an individual establishment of great importance, which is engaged in the iron and steel and certain related industries. On page 950 is an outline map of the metropolitan district as constituted in 1909, showing the various cities and towns included.

**Summary for the district.**—Table 39 is a summary for 1909 of the statistics of manufacturing industries, with a statement of the population in 1910, for the Buffalo metropolitan district, for the cities of Buffalo and North Tonawanda, and for the remainder of the district, the percentage which the figure for Buffalo represents of the total for the district being shown in the case of each item. The statistics for Lackawanna are included in the "remainder" of the district to avoid disclosing individual operations.

	NUMBER OR AMOUNT.					Per cent Buffalo is of total for district.
	The district.	Buffalo.	District exclusive of Buffalo.			
			Total.	North Tona- wanda.	Remainder. <sup>1</sup>	
Population <sup>2</sup> .....	488,661	423,715	64,946	11,955	52,991	86.7
Number of establishments.....	1,964	1,763	211	81	130	89.3
Persons engaged in manufactures.....	75,086	61,246	13,840	3,146	10,694	81.6
Proprietors and firm members.....	1,638	1,469	149	66	83	90.9
Salaried employees.....	9,876	8,345	1,531	266	1,265	84.5
Wage earners (average number).....	63,572	51,412	12,160	2,824	9,336	80.9
Primary horsepower.....	322,280	121,791	200,489	15,888	184,601	37.8
Capital.....	\$280,032,887	\$193,041,267	\$87,011,020	\$8,273,779	\$78,737,841	68.9
Expenses.....	249,930,260	185,019,696	54,010,564	8,330,317	46,049,747	78.0
Services.....	47,363,003	38,074,567	9,288,436	1,832,530	7,405,906	80.4
Salaries.....	11,190,444	9,347,339	1,843,105	300,262	1,542,843	83.5
Wages.....	36,172,559	28,727,228	7,445,331	1,532,268	5,863,063	79.4
Materials.....	180,458,300	136,538,241	43,920,059	6,389,208	37,530,851	75.7
Miscellaneous.....	22,108,957	20,406,888	1,702,069	589,079	1,112,990	92.3
Value of products.....	279,852,346	218,803,994	61,048,352	9,599,776	51,448,576	78.2
Value added by manufacture.....	99,394,046	82,265,753	17,128,293	3,210,568	13,917,725	82.8

<sup>1</sup> Includes Lackawanna, the statistics for which can not be shown without disclosing individual operations.

<sup>2</sup> April 15, 1910.

In 1909 the Buffalo metropolitan district had 1,964 manufacturing establishments, which gave employment to an average of 75,086 persons during the year and paid out \$47,363,003 in salaries and wages. Of the persons employed, 63,572 were wage earners. These establishments turned out products to the value of \$279,852,346, to produce which materials costing \$180,458,300 were utilized. The value added by manufacture was thus \$99,394,046. The Buffalo district ranked eighth in 1909 among all the metropolitan districts of the United States in the value of its manufactured products.

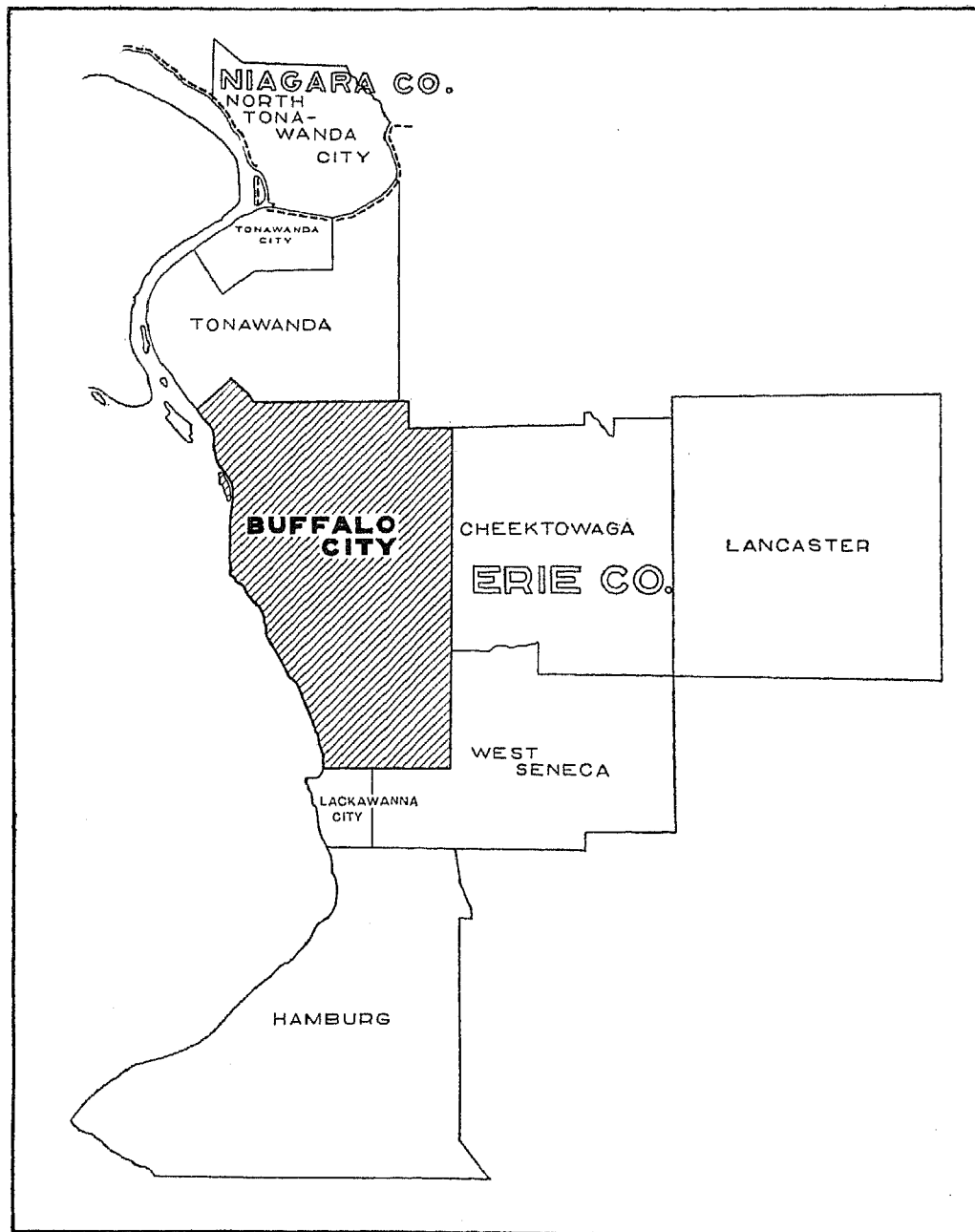
The greater part of the value of the manufactured products of the district was reported by factories within the central city. Buffalo contained nearly

nine-tenths (86.7 per cent) of the population of the district of which it is the manufacturing, commercial, and financial center, and contributed nearly eight-tenths (78.2 per cent) of the value of products for the district. Its manufacturing establishments constituted 89.3 per cent of all in the district, and gave employment to 80.9 per cent of the average number of wage earners for that area.

The group of five towns and one city having less than 10,000 population, and Lackawanna city, statistics for which can not be shown separately without disclosing the operations of individual establishments, had a combined population equal to 10.8 per cent of the total for the district and contributed 18.4 per cent of the value of its products.

## MANUFACTURES.

BUFFALO METROPOLITAN DISTRICT: 1909.



Comparison with earlier censuses.—Table 40 is a comparative summary of the statistics for the district as a whole for 1909, 1904, and 1899, together with the percentages of increase from census to census. For purposes of accurate comparison the statistics for 1909 have been adjusted by segregating the figures for the territory added since 1904; and those for 1904 and 1899 by segregating the figures for the territory deducted since 1904.

The percentage of increase in the items shown, except average number of wage earners and wages, and for capital, services, miscellaneous expenses, and

value added by manufacture, was greater during the more recent five-year period, 1904–1909, than during the period 1899–1904. The percentages of increase during the decade 1899–1909 were especially large in salaries, capital, materials, salaried employees, and miscellaneous expenses. The average number of wage earners increased 60.6 per cent and their wages 98.9 per cent, which was a much less gain than in the value of products—137.9 per cent. The relative increase in primary horsepower of all kinds from 1904 to 1909 was 77.4 per cent. Statistics as to the primary power used in 1899 are not available.

Table 40

	NUMBER OR AMOUNT.									PER CENT OF INCREASE. <sup>1</sup>		
	1909			1904			1899			1899-1909	1904-1909	1899-1904
	Total.	Territory added since 1904.	Remainder of district. <sup>2</sup>	Total.	Territory deducted since 1904.	Remainder of district. <sup>2</sup>	Total.	Territory deducted since 1904.	Remainder of district. <sup>2</sup>			
Population.....	488,661	21,618	467,043	423,390	17,068	416,322	385,498	6,573	378,925	23.3	12.2	9.9
Number of establishments.....	1,904	106	1,858	1,631	16	1,615	1,563	12	1,551	19.8	15.0	4.1
Persons engaged in manufactures.....	75,036	3,661	71,425	59,287	103	59,184	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	.....	27.1	.....
Proprietors and firm members.....	1,638	82	1,556	1,639	16	1,623	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	.....	4.1	.....
Salaried employees.....	9,876	299	9,577	5,854	5	5,849	3,951	4	3,947	142.6	63.7	48.2
Wage earners (average number).....	63,572	3,280	60,292	48,794	82	48,712	37,568	35	37,533	60.6	23.8	29.8
Primary horsepower.....	322,280	16,661	305,629	172,688	431	172,257	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	.....	77.4	.....
Capital.....	\$280,052,887	\$9,084,435	\$270,968,452	\$188,384,845	\$186,830	\$188,198,015	\$105,094,082	\$102,322	\$104,991,760	158.1	44.0	79.2
Expenses.....	249,930,260	9,472,029	240,458,231	149,666,495	176,181	149,490,314	100,927,024	117,811	100,809,213	138.5	60.9	48.3
Services.....	47,363,003	2,178,889	45,184,114	31,072,320	43,646	31,028,674	20,912,547	18,146	20,894,401	116.2	45.6	48.5
Salaries.....	11,190,444	335,570	10,854,874	6,276,393	5,945	6,270,448	3,634,828	3,440	3,631,388	198.9	73.1	72.7
Wages.....	36,172,559	1,843,319	34,329,240	24,795,927	37,701	24,758,226	17,277,719	14,706	17,263,013	98.9	38.7	43.4
Materials.....	180,458,300	6,654,914	173,803,386	102,623,748	113,153	102,510,595	71,090,632	90,163	71,000,469	144.8	69.5	44.4
Miscellaneous.....	22,108,957	638,220	21,470,731	15,970,427	19,382	15,951,045	8,923,845	9,502	8,914,343	140.9	34.6	78.9
Value of products.....	270,852,346	10,293,548	269,558,798	108,111,668	212,630	167,899,028	113,430,772	135,284	113,295,488	137.9	60.6	48.2
Value added by manufacture.....	99,394,046	3,638,634	95,755,412	65,487,910	99,477	65,388,433	42,340,140	45,121	42,295,019	126.4	46.4	54.6

<sup>1</sup> A minus sign (-) denotes decrease. <sup>2</sup> Figures in this column used in computing percentages of increase. <sup>3</sup> April 15, 1910. <sup>4</sup> State census, June 1, 1905. <sup>5</sup> June 1, 1900. <sup>6</sup> Figures not available.

The proportions of the population and manufactures in the outside territory as compared with the total metropolitan district are in general increasing, as is indicated by the percentages in Table 41. The percentages for 1909 are based upon the figures for the district exclusive of the territory added since 1904, and those for 1904 and 1899 upon the figures for the district exclusive of the territory deducted.

Table 41

	PER CENT TERRITORY OUTSIDE OF BUFFALO IS OF TOTAL FOR DISTRICT.		
	1909 <sup>1</sup>	1904 <sup>2</sup>	1899 <sup>2</sup>
Population.....	9.3	9.5	7.0
Number of establishments.....	5.7	4.8	4.7
Persons engaged in manufactures.....	14.3	10.3	( <sup>3</sup> )
Proprietors and firm members.....	4.3	3.9	( <sup>3</sup> )
Salaried employees.....	12.9	10.0	4.6
Wage earners (average number).....	14.7	10.6	8.7
Primary horsepower.....	60.2	57.7	( <sup>3</sup> )
Capital.....	28.8	27.2	8.8
Expenses.....	18.9	12.6	7.1
Services.....	15.7	12.5	8.6
Salaries.....	13.9	11.6	5.6
Wages.....	16.3	12.7	9.2
Materials.....	21.4	13.8	7.1
Miscellaneous.....	5.0	5.4	3.5
Value of products.....	18.8	12.2	6.8
Value added by manufacture.....	14.1	9.8	6.2

<sup>1</sup> Based on figures for district as constituted in 1909, exclusive of territory added since 1904. <sup>2</sup> Based on figures for district as constituted in 1904, exclusive of territory deducted since 1904. <sup>3</sup> Figures not available.

The proportion of the population of the district that was reported from the territory outside of Buffalo increased from 7 per cent in 1900 to 9.3 per cent in

1910, and the proportion of the value of products of that district that was contributed by the outlying territory increased steadily from 6.8 per cent in 1899 to 18.8 per cent in 1909.

Leading industries.—Table 42 gives statistics for 1909 for the industries of the district having products valued at \$500,000 or more, so far as separate figures can be presented.

Among the 29 industries shown separately in the table there are 12 for which totals for the district can not be published, because to do so would disclose individual operations; and 7 which were not carried on in the part of the district which is outside the corporate limits of Buffalo. In all these cases the statistics shown are figures for Buffalo exclusively.

The most important industry as measured by value of products was the manufacture of iron and steel, which is included under "all other industries," to avoid disclosure of individual operations. Of the industries shown separately, slaughtering and meat packing ranked highest in value of products, with 9.1 per cent of the total reported for all industries in the district, closely followed by foundries and machine shops, with 8.4 per cent of this total, and flour mills and gristmills, with 7.3 per cent. Other important industries, arranged according to value of products, were the manufacture of automobiles, including bodies and parts, the lumber and soap industries, printing and publishing, and the malt and malt-liquor industries.



MANUFACTURES.

SUMMARY FOR THE BUFFALO METROPOLITAN DISTRICT, BY INDUSTRIES: 1909.

**Table 42**

INDUSTRY.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Miscellaneous expenses.	Value of products.	Value added by manufacture.
		Total.	Proprietors and firm members.	Salaries employees.	Wage earners (average number).								
<b>All industries.....</b>	<b>1,964</b>	<b>75,086</b>	<b>1,638</b>	<b>9,876</b>	<b>63,572</b>	<b>322,280</b>	<b>\$280,052,887</b>	<b>\$11,190,444</b>	<b>\$36,172,559</b>	<b>\$180,458,300</b>	<b>\$22,108,957</b>	<b>\$279,852,346</b>	<b>\$99,394,046</b>
Automobiles, including bodies and parts.....	23	3,640	13	583	3,044	4,561	9,300,037	283,056	2,199,567	4,595,655	1,102,677	9,597,763	5,002,108
Blacking and cleansing and polishing preparations.....	111	287	4	147	136	209	942,202	123,055	66,554	411,139	230,481	963,586	552,447
Boots and shoes, including cut stock and findings.....	114	722	14	55	653	370	909,755	55,264	267,136	834,868	63,903	1,355,821	520,953
Brass and bronze products.....	118	414	12	55	347	2,417	1,046,601	71,657	210,942	1,141,075	95,633	1,790,549	649,474
Bread and other bakery products.....	203	1,848	195	261	1,392	1,224	4,478,564	251,023	749,587	3,441,903	447,465	5,720,259	2,278,356
Carriages and wagons and materials..	55	535	56	29	450	574	1,010,649	44,500	258,832	571,805	60,641	1,237,668	665,863
Cars and general shop construction and repairs by steam-railroad companies.....	17	3,474	.....	284	3,190	2,768	2,390,773	218,579	1,938,340	2,276,958	94,771	4,524,448	2,247,400
Clothing, men's, including shirts.....	160	1,681	70	181	1,490	385	2,308,623	181,935	600,778	1,796,766	463,658	3,698,623	1,901,857
Clothing, women's.....	114	655	12	87	556	61	448,391	62,666	181,899	565,054	93,111	1,014,059	449,005
Confectionery.....	26	633	22	106	505	604	614,336	92,522	160,073	738,814	117,585	1,179,919	441,105
Cooperage and wooden goods, not elsewhere specified.....	113	104	12	10	172	206	305,536	11,582	94,126	428,078	22,413	608,941	180,863
Copper, tin, and sheet-iron products..	73	1,912	78	265	1,569	1,955	4,146,847	283,640	864,560	2,290,255	255,967	4,166,751	1,376,496
Electrical machinery, apparatus, and supplies.....	18	347	4	61	282	654	1,174,867	84,975	141,327	335,849	60,020	661,287	325,438
Flour-mill and gristmill products.....	19	842	10	325	507	11,473	5,510,380	333,786	342,145	17,825,995	934,453	20,358,557	2,532,662
Foundry and machine-shop products..	168	11,118	100	1,178	9,840	13,161	22,812,333	1,494,641	5,766,209	10,247,368	3,200,403	23,549,910	13,302,552
Furniture and refrigerators.....	133	2,347	25	270	2,052	2,846	4,083,497	311,618	1,030,648	2,155,903	304,191	4,184,964	2,029,061
Jewelry.....	14	401	22	81	298	116	1,307,483	99,059	173,650	385,255	77,813	979,250	593,995
Leather goods.....	122	609	27	73	509	460	937,585	96,134	262,166	520,546	85,463	1,129,321	608,775
Leather, tanned, curried, and finished.	4	579	7	59	513	1,297	3,058,110	85,065	246,027	2,193,954	133,576	2,808,993	615,039
Liquors, malt.....	116	828	.....	155	673	4,888	12,783,514	412,529	536,338	1,480,712	2,935,828	6,496,549	5,016,837
Lumber and timber products.....	58	3,047	49	287	2,711	11,029	6,383,495	295,421	1,452,301	6,402,776	503,273	9,321,233	2,918,457
Malt.....	16	362	8	66	288	3,862	15,471,572	144,429	221,795	5,656,794	357,141	7,094,746	1,437,952
Marble and stone work.....	21	427	20	33	374	460	782,556	38,581	252,154	460,317	111,812	984,873	534,556
Mattresses and spring beds.....	8	230	4	36	190	137	256,132	25,732	91,147	276,144	44,142	554,814	278,670
Patent medicines and compounds and druggists' preparations.....	07	018	50	316	252	374	1,161,646	216,608	102,118	438,022	1,419,153	2,953,515	2,514,593
Printing and publishing.....	176	4,103	142	791	3,170	3,636	6,842,971	807,256	1,973,911	2,399,934	1,217,709	7,842,910	5,442,976
Slaughtering and meat packing.....	139	1,929	35	232	1,662	3,743	7,270,613	329,310	963,210	21,788,626	307,906	25,416,054	3,627,428
Soap.....	8	1,592	2	230	1,360	2,489	7,256,506	214,556	544,592	5,760,070	548,499	8,652,900	2,892,830
Tobacco manufactures.....	204	798	227	88	533	21	630,258	33,523	291,233	503,155	178,187	1,273,222	710,067
All other industries.....	566	28,914	418	3,582	24,914	246,320	154,427,060	4,482,742	14,183,194	82,483,620	6,545,123	119,730,861	37,247,241

<sup>1</sup> Excluding statistics for establishments located outside of the corporate limits of Buffalo, to avoid disclosure of individual operations. The figures for these establishments are included under the head of "All other industries."

BUFFALO METROPOLITAN DISTRICT.

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Comparative summary, by industries.—The number of establishments, average number of wage earners, and value of products for such of the leading industries as can be shown separately and had products of \$2,000,000 or more in 1909 are given in Table 43 for 1909, 1904, and 1899, respectively.

COMPARATIVE SUMMARY FOR THE BUFFALO METROPOLITAN DISTRICT, BY SELECTED INDUSTRIES: 1909, 1904, AND 1899.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.			WAGE EARNERS (AVERAGE NUMBER).			VALUE OF PRODUCTS.			PER CENT OF INCREASE. <sup>1</sup>								
										Number of establishments.			Wage earners (average number).			Value of products.		
	1909	1904	1899	1909	1904	1899	1909	1904	1899	1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904
Slaughtering and meat packing.....	* 39	* 33	* 32	1,662	1,182	974	\$25,416,654	\$16,219,823	\$11,771,727	21.9	18.2	3.1	70.6	40.6	21.4	115.9	56.7	37.8
Foundry and machine-shop products	103	128	(*)	9,840	7,762	(*)	23,549,910	15,880,210	(*)	.....	31.2	.....	.....	26.8	.....	.....	48.3	.....
Flour-mill and gristmill products....	19	14	13	507	431	201	20,358,557	9,889,016	3,350,836	46.2	35.7	7.7	162.2	17.6	114.4	507.6	105.9	185.1
Automobiles, including bodies and parts.....	23	* 5	3	3,044	625	23	9,597,763	1,385,509	77,689	666.7	360.0	66.7	.....	387.0	.....	.....	502.7	.....
Lumber and timber products.....	58	37	36	2,711	2,069	2,161	9,321,233	5,573,289	5,014,241	61.1	56.8	2.8	25.5	31.0	-4.3	85.9	67.2	11.1
Soap.....	8	10	9	1,360	1,140	743	8,652,900	4,792,915	3,818,571	-11.1	-20.0	11.1	83.0	19.3	53.4	126.6	80.5	25.5
Printing and publishing.....	176	170	138	3,170	2,887	2,404	7,842,910	6,470,549	4,045,460	27.5	3.5	23.2	31.9	9.8	20.1	93.9	21.0	60.2
Newspapers and periodicals.....	45	45	35	1,182	935	737	4,165,243	2,950,295	1,749,037	28.6	.....	.....	28.6	66.1	28.4	23.5	138.1	41.2
Book and job.....	104	103	87	913	737	1,071	1,739,634	1,307,512	1,455,933	19.5	1.0	18.4	-14.8	20.6	-20.3	19.5	33.0	-10.2
All other printing and publishing industries <sup>2</sup> .....	27	22	16	1,075	1,195	576	1,938,033	2,221,742	840,400	68.8	22.7	37.5	86.6	-10.0	107.5	130.6	-12.8	164.3
Malt.....	16	17	16	288	225	205	7,094,746	3,035,801	1,959,967	.....	-5.9	6.2	40.5	28.0	9.8	262.0	133.7	54.9
Liquors, malt.....	* 16	* 10	* 18	673	501	560	6,496,549	5,187,216	4,269,973	-11.1	-15.8	5.6	20.2	13.9	5.5	52.1	25.2	21.5
Bread and other bakery products....	203	150	160	1,392	1,330	1,607	5,720,259	4,492,465	2,564,864	26.9	35.3	6.3	38.2	4.7	32.1	123.0	27.3	75.2
Clothing.....	74	102	134	1,986	2,143	1,885	4,712,682	4,877,942	3,216,366	-44.8	-27.5	-23.9	5.4	-7.3	13.7	46.5	-3.4	51.7
Men's, including shirts.....	* 60	91	124	1,430	1,777	1,627	3,698,623	4,369,341	2,943,117	-51.6	-34.1	-26.6	-12.1	-19.5	9.2	25.7	-15.4	48.5
Women's.....	* 14	11	10	556	366	258	1,014,059	508,601	273,249	40.0	27.3	10.0	115.5	51.9	41.9	271.1	90.4	86.1
Cars and general shop construction and repairs by steam-railroad companies.....	* 7	10	* 9	3,190	4,094	3,245	4,524,448	5,120,717	4,191,455	-22.2	-30.0	11.1	-1.7	-22.1	26.2	7.9	-11.6	22.2
Furniture and refrigerators.....	* 33	26	* 21	2,052	1,659	1,220	4,184,964	2,543,082	1,828,706	57.1	26.9	23.8	68.2	23.7	36.0	128.8	64.6	39.1
Copper, tin, and sheet-iron products..	73	40	* 27	1,569	1,479	354	4,166,751	2,555,076	828,720	170.4	82.5	48.1	343.2	6.1	317.8	402.8	63.1	208.3
Patent medicines and compounds and druggists' preparations.....	67	47	* 47	252	264	489	2,953,515	2,025,361	1,933,044	42.6	42.6	.....	-48.5	-4.5	-46.0	52.8	45.8	4.8
Leather, tanned, curried, and finished	4	4	3	513	686	561	2,808,993	2,428,392	1,663,350	33.3	.....	33.3	-8.6	-25.2	22.3	68.9	15.7	46.0

<sup>1</sup> A minus sign (-) denotes decrease. Percentage not shown where base is less than 100 for wage earners, or less than \$100,000 for value of products.  
<sup>2</sup> Excluding statistics for one establishment, to avoid disclosure of individual operations.  
<sup>3</sup> Excluding statistics for two establishments, to avoid disclosure of individual operations.  
<sup>4</sup> Comparable figures not available.  
<sup>5</sup> Includes "bookbinding and blank-book making;" "engraving, steel and copper plate, including plate printing;" and "lithographing;" and for 1909 and 1904 "printing and publishing, music."

The greatest absolute increase in value of products during the decade in the area under consideration, \$17,007,721, or 507.6 per cent, is shown for flour mills and gristmills, and the next greatest relative increase is in copper, tin, and sheet-iron products.

Of the industries shown in the comparative table, only two—lumber and timber products and foundry and machine-shop products—are greatly affected by the inclusion of statistics for manufactures in territory added to the district since 1904.

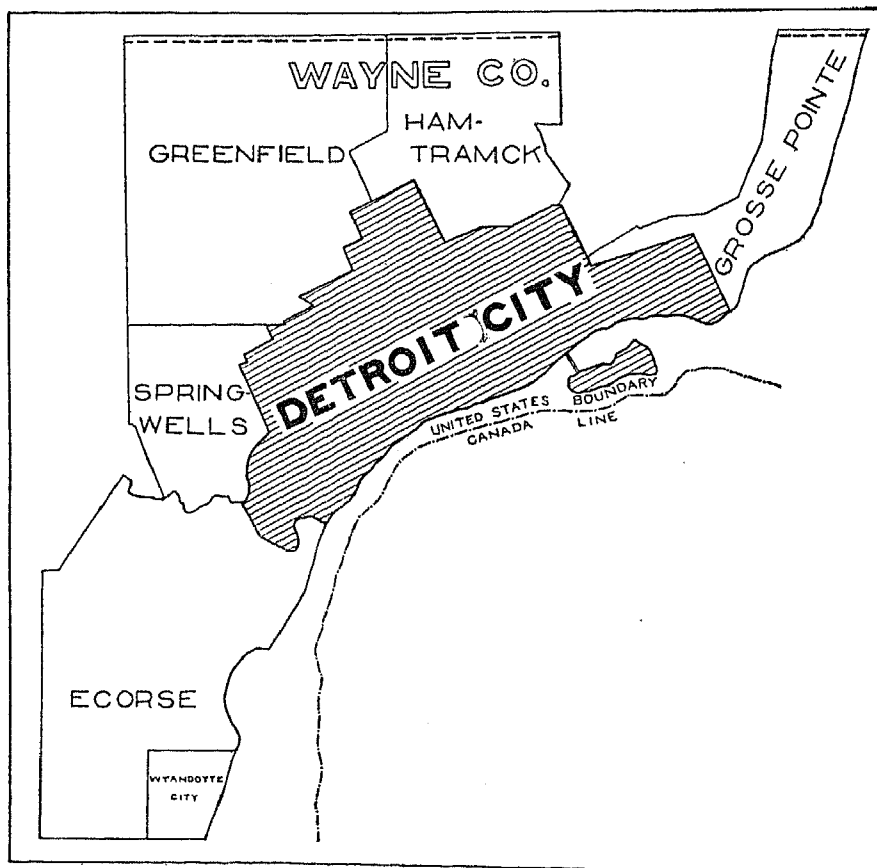
## DETROIT METROPOLITAN DISTRICT.

**Territory included.**—The metropolitan district of Detroit embraces 96,554 acres, of which 26,103 acres comprise the area of Detroit and 70,451 acres the area of the outside territory. The population of the city of Detroit proper in 1910 was 465,766 and that of the outlying territory 35,216, the total for the district being 500,982. In addition to the city of Detroit the district includes Wyandotte city and the townships of Ecorse, Greenfield, Grosse Pointe, Hamtramck, and Springwells, all of which are in Wayne County. Owing to the fact that adjacent territory in Canada, including the thriving municipalities of Windsor and Walkerville, is industrially to a large extent tributary to

Detroit, the statistics for the district do not adequately represent the area closely associated with the development of Detroit. A tendency on the part of the city to enlarge its area in conformity with the metropolitan development seems to be indicated by its recent acquisitions of territory, namely, part of Greenfield township (288 acres) added in 1905; part of Springwells township (4,416 acres), including Delray village, added in 1906; and parts of Grosse Pointe, Greenfield, and Hamtramck townships (3,255 acres) added in 1907.

The following is an outline map of the district showing the various cities and townships included:

DETROIT METROPOLITAN DISTRICT: 1909.



Detroit was first settled in 1701 by the French, in whose possession it remained until surrendered to the British in 1760. In 1796 it became territory of the United States. It was incorporated as a town in 1802 and as a city in 1815. Detroit was the seat of government of Michigan territory until 1837, when the territory

became a state, and was capital of the state until 1847. The progress of the city commercially, industrially, and in other respects, particularly during the decade 1899-1909, has been very marked. While Detroit has many industrial advantages, perhaps the most important is its geographical position with reference

to the Great Lakes, the city being situated on the Detroit River, the channel of communication between the upper and lower lakes.

Summary for the district.—Table 44 is a summary of the statistics of manufacturing industries in 1909, with a statement of the population in 1910, for the Detroit metropolitan district, for the city of Detroit, and for the territory outside Detroit, the percentage which the figure for Detroit represents of the total for the district being shown in the case of each item.

The percentages which the figures for the central city represent of the total for the metropolitan district are much larger than in the case of most of the other metropolitan districts discussed in this report. It should be borne in mind in this connection that certain Canadian municipalities are closely associated with the city commercially and industrially. The percentages representing the contribution of Detroit to the totals for the district are remarkable for their small degree of variation, being over 90 in the case of every item except primary horsepower, for which the figure is 83.7.

**Table 44**

	NUMBER OR AMOUNT.			Per cent Detroit is of total for district.
	The district.	Detroit.	District exclusive of Detroit.	
Population <sup>1</sup> .....	500,982	465,760	35,216	93.0
Number of establishments.....	2,104	2,039	65	96.8
Persons engaged in manufactures.....	101,482	95,841	5,641	94.4
Proprietors and firm members.....	1,865	1,804	61	96.7
Salaried employees.....	13,596	13,020	576	95.8
Wage earners (average number).....	86,021	81,011	5,010	94.2
Primary horsepower.....	136,460	114,190	22,270	83.7
Capital.....	\$210,401,992	\$190,124,928	\$20,277,064	90.4
Expenses.....	228,207,916	215,227,611	12,980,305	94.3
Services.....	62,037,838	58,208,672	3,771,166	93.9
Salaries.....	16,028,377	15,259,770	768,607	95.2
Wages.....	46,009,461	43,008,902	3,000,559	93.5
Materials.....	137,848,079	130,217,541	7,630,538	94.5
Miscellaneous.....	28,321,999	26,743,398	1,578,601	94.4
Value of products.....	268,899,701	252,992,123	15,907,578	94.1
Value added by manufacture.....	131,051,682	122,774,582	8,277,100	93.7

<sup>1</sup> April 15, 1910.

Leading industries.—Table 45 gives the statistics for the district for 1909, by industries, separate figures being shown for industries having products valued at \$500,000 or over, except where such figures would disclose the operations of individual concerns.

SUMMARY FOR THE DETROIT METROPOLITAN DISTRICT, BY INDUSTRIES: 1909.

**Table 45**

INDUSTRY.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horsepower.	Capital.	Salaries.	Wages.	Cost of materials.	Miscellaneous expenses.	Value of products.	Value added by manufacture.
		Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).								
<b>All industries.....</b>	<b>2,104</b>	<b>101,482</b>	<b>1,865</b>	<b>13,596</b>	<b>86,021</b>	<b>136,460</b>	<b>\$210,401,992</b>	<b>\$16,028,377</b>	<b>\$46,009,461</b>	<b>\$137,848,079</b>	<b>\$28,321,999</b>	<b>\$268,899,701</b>	<b>\$131,051,682</b>
Automobiles, including bodies and parts.....	168	17,437	.....	1,762	15,675	14,666	28,927,610	1,781,089	9,620,799	31,362,816	4,031,212	59,536,154	28,173,338
Boots and shoes, including cut stock and findings.....	8	1,453	6	120	1,327	362	1,581,616	159,878	490,659	1,701,978	192,048	2,743,913	1,041,935
Brass and bronze products.....	37	4,374	16	326	4,032	10,651	7,306,220	460,889	2,048,987	8,272,612	547,573	12,297,331	4,024,719
Bread and other bakery products.....	274	1,624	281	226	1,117	1,118	2,023,013	219,683	643,737	2,920,029	326,084	4,869,289	1,949,280
Brick and tile.....	18	545	24	19	502	1,879	765,261	25,757	311,796	203,224	53,005	794,132	590,908
Canning and preserving.....	9	496	6	82	408	549	1,275,792	99,309	156,923	854,966	69,208	1,608,254	713,288
Carriages and wagons and materials.....	134	321	44	14	263	188	654,849	26,630	164,230	189,026	22,711	606,648	317,622
Clothing, men's, including shirts.....	22	3,008	27	195	2,786	951	2,472,588	249,973	983,231	2,351,801	539,850	3,760,840	2,409,045
Clothing, women's.....	27	1,041	29	91	921	154	825,433	81,971	357,317	661,199	141,525	1,493,831	832,632
Coffee and spice, roasting and grinding.....	6	68	1	26	41	186	220,585	30,724	23,856	452,075	31,610	616,503	164,428
Confectionery.....	23	501	30	84	387	341	374,491	68,813	138,886	629,377	145,577	1,136,465	507,088
Copper, tin, and sheet-iron products.....	72	2,152	74	146	1,932	1,453	3,890,125	158,324	350,637	1,932,126	221,820	3,534,425	1,602,299
Electrical machinery, apparatus, and supplies.....	23	685	15	129	541	575	1,055,892	144,529	225,745	493,221	193,301	1,147,922	654,701
Flour-mill and gristmill products.....	15	220	5	46	169	1,150	1,431,775	64,880	78,060	4,422,024	256,133	5,089,114	667,080
Foundry and machine-shop products.....	1215	10,212	125	1,393	8,694	10,336	20,434,102	1,412,656	4,827,966	7,614,067	2,549,920	18,296,033	10,681,966
Fur goods.....	119	510	24	124	371	24	884,029	112,471	180,850	706,846	186,363	1,737,783	1,030,937
Furniture and refrigerators.....	133	2,528	28	210	2,290	3,722	3,203,273	256,688	1,186,158	1,301,810	610,804	3,761,834	2,460,024
Gas and electric fixtures and lamps and reflectors.....	11	243	9	34	200	202	345,674	37,651	114,236	324,098	71,799	612,465	288,367
Hosiery and knit goods.....	9	367	7	26	334	214	423,975	25,426	91,249	325,787	25,501	559,398	233,611
Iron and steel, steel works and rolling mills.....	5	1,064	.....	75	989	3,430	1,969,480	114,316	558,871	1,316,652	168,877	2,297,048	980,366
Leather goods.....	122	516	18	95	403	530	821,356	84,532	210,576	818,508	86,976	1,396,320	577,812
Liquors, malt.....	18	838	13	179	646	3,886	5,208,290	249,952	494,702	1,184,890	1,772,265	4,942,213	3,757,323
Looking-glass and picture frames.....	12	367	15	25	327	265	405,111	40,665	158,051	222,193	68,820	567,910	345,717
Lumber and timber products.....	63	2,658	56	244	2,368	5,724	5,309,164	264,700	1,157,914	4,320,849	306,977	6,899,666	2,578,817
Paint and varnish.....	12	724	11	355	358	1,304	3,177,728	497,405	233,709	2,241,498	702,171	4,201,252	1,959,754
Patent medicines and compounds and druggists' preparations.....	74	4,289	54	1,417	2,818	1,819	10,179,080	1,853,467	1,323,477	4,303,728	2,366,780	11,558,419	7,254,691
Printing and publishing.....	228	4,068	210	1,327	2,525	2,609	4,180,614	1,165,913	1,572,047	2,046,914	1,315,719	5,202,872	5,255,958
Shipbuilding, including boat building.....	117	607	22	100	485	1,079	1,611,177	77,173	308,726	511,909	144,554	1,101,635	589,726
Slaughtering and meat packing.....	20	983	33	139	811	3,092	3,340,183	138,182	432,996	11,220,715	306,960	12,849,574	1,628,859
Stoves and furnaces, including gas and oil stoves.....	8	3,130	.....	322	2,808	2,741	6,238,684	480,823	1,809,363	1,570,270	1,008,834	5,676,418	4,166,142
Tobacco manufactures.....	203	6,650	207	459	5,894	925	5,488,671	638,216	2,177,068	5,871,500	3,174,103	12,779,032	6,907,532
All other industries.....	500	27,894	460	3,806	23,619	60,335	84,376,251	5,005,623	13,093,589	35,499,365	6,682,843	72,265,062	36,766,697

<sup>1</sup> Excluding statistics for establishments located outside of the corporate limits of Detroit, to avoid disclosure of individual operations. The figures for these establishments are included under the head of "All other industries."

## MANUFACTURES.

Among the 31 industries shown separately in the table are 9 for which the totals for the district can not be published, because to do so would disclose individual operations; and 17 which were not carried on in the part of the district which is outside the corporate limits of Detroit. In all these cases the statistics shown are figures for Detroit exclusively.

By far the most important industry in Detroit is the manufacture of automobiles, including bodies and parts. The figures given for this industry in the table do not include statistics for one establishment located outside the city limits. The 68 establishments engaged in this industry in Detroit reported 22.1 per cent of the value of products for all industries in the metropolitan district. Aside from the omission of the establishment located outside the limits of

Detroit, the statistics given for the industry do not adequately represent the importance of the industry in the district, owing to the fact that many establishments engaged in the manufacture of brass and bronze products and foundry and machine-shop products, which are also leading industries in the district, turn out automobile accessories and manufacture and repair automobile engines and parts.

Other important industries, arranged according to the value of products, were slaughtering and meat packing, the manufacture of tobacco products and of patent medicines and compounds, printing and publishing, and the lumber industry. The manufacture of chemicals, an industry for which separate statistics can not be published without disclosing individual operations, is also of considerable importance.

## CINCINNATI METROPOLITAN DISTRICT.

**Territory included.**—The metropolitan district of Cincinnati embraces 111,772 acres of territory, of which 31,893 acres constitute the area of Cincinnati and 79,878 acres the area of the outside territory. The population of the city of Cincinnati proper in 1910 was 363,591, and that of the outside territory, 200,213, the total for the district being 563,804.

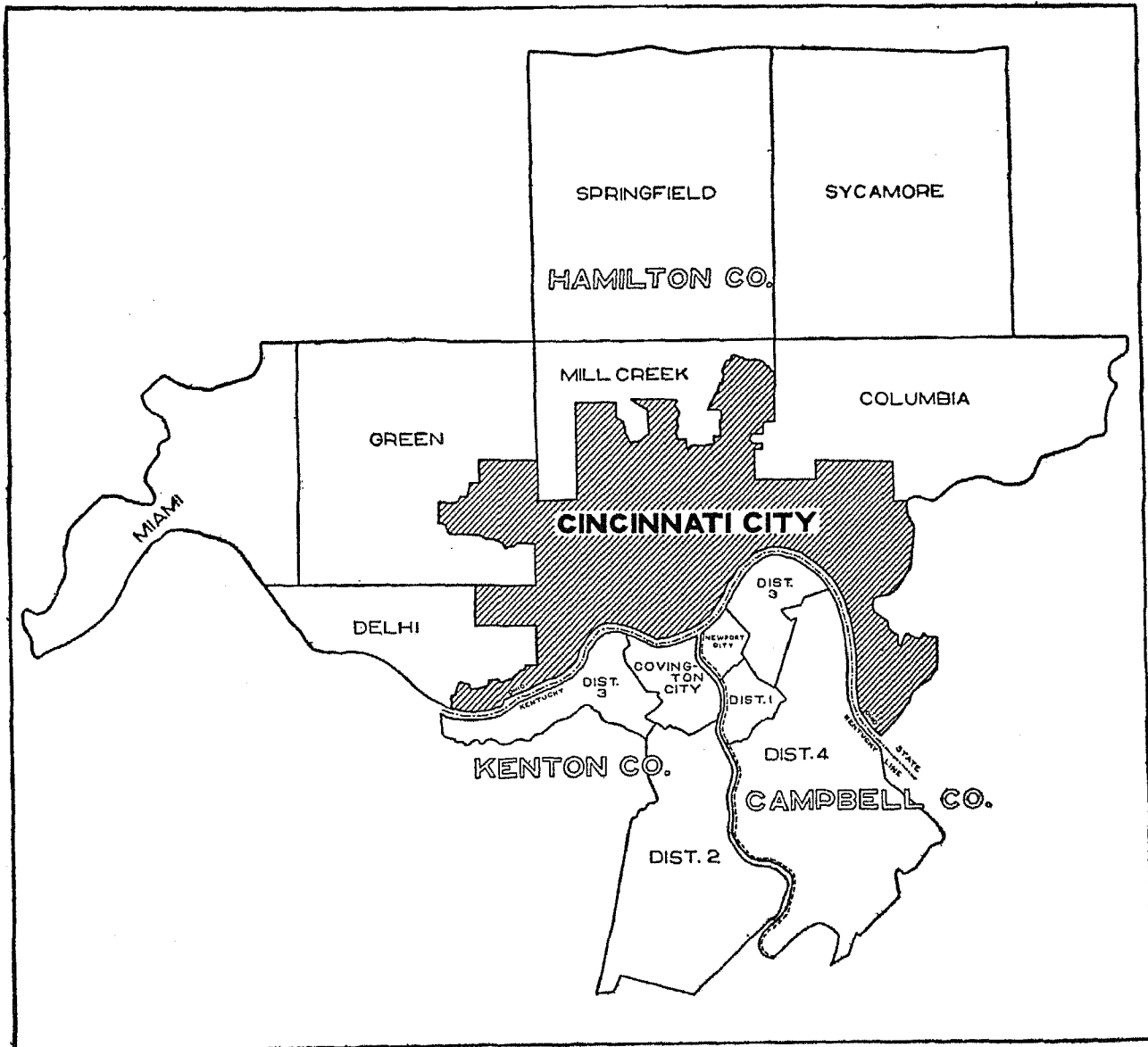
As defined at the census of 1910, the metropolitan district comprised, in addition to the central city, seven townships in Hamilton County, Ohio—Columbia, Delhi, Green, Miami, Millcreek, Springfield, and Sycamore—and seven magisterial districts in Kentucky—the first, second, third, and fourth in Campbell County, and the first, second, and third in Kenton County.

The incorporated places of over 10,000 inhabitants within the district, besides Cincinnati, are Norwood city, Ohio, which is included in Columbia and Millcreek townships; Newport city, Ky., which comprises district 2 and part of district 1 in Campbell County; and Covington city, Ky., which comprises district 1 and part of districts 2 and 3 of Kenton County.

The report for 1904 included all the cities named and all the townships except Miami, Springfield, and Sycamore. In 1907 a part of Millcreek township was annexed to Cincinnati, and in 1909 Spencer and parts of Anderson and Delhi townships were added to the city.

The following is an outline map of the metropolitan district as constituted in 1909, showing the various cities, townships, and magisterial districts included:

CINCINNATI METROPOLITAN DISTRICT: 1909.



Summary for the district.—Table 46 is a summary for 1909 of the statistics of manufacturing industries, with a statement of the population in 1910, for the Cincinnati metropolitan district; for Cincinnati and Norwood cities in Ohio, and Covington and Newport

cities in Kentucky, and for the territory outside these cities which is included in the metropolitan district. The percentage which the figure for Cincinnati represents of the total for the district is shown in the case of each item.

Table 46	NUMBER OR AMOUNT.							Per cent Cincinnati of total for district.
	The district.	Cincinnati.	District exclusive of Cincinnati.					
			Total.	Covington.	Newport.	Norwood.	Remainder.	
Population <sup>1</sup> .....	563,804	363,591	200,213	53,270	30,309	16,185	100,449	64.5
Number of establishments.....	2,827	2,184	643	196	144	49	254	77.3
Persons engaged in manufactures.....	95,571	72,488	23,083	4,523	2,995	4,445	11,115	75.8
Proprietors and firm members.....	2,593	2,015	578	189	146	31	212	77.7
Salaried employees.....	12,646	10,281	2,365	397	217	507	1,244	81.3
Wage earners (average number).....	80,332	60,192	20,140	3,942	2,632	3,007	9,659	74.9
Primary horsepower.....	140,254	88,597	51,657	8,256	3,750	6,881	33,270	63.2
Capital.....	\$212,555,469	\$150,254,292	\$62,301,177	\$6,633,612	\$4,568,332	\$13,367,715	\$37,731,518	70.7
Expenses.....	233,538,340	174,788,679	58,749,661	8,011,897	5,858,015	8,534,513	36,345,236	74.8
Services.....	57,337,552	43,860,281	13,477,271	2,265,391	1,618,096	2,712,070	6,881,705	76.5
Salaries.....	15,601,542	12,759,309	2,842,233	427,176	277,465	631,512	1,506,080	81.8
Wages.....	41,736,010	31,100,972	10,635,038	1,838,215	1,340,631	2,080,567	5,375,625	74.5
Materials.....	139,107,061	101,031,950	37,175,111	4,470,939	3,366,278	4,020,773	25,317,121	73.3
Miscellaneous.....	37,093,727	28,996,448	8,097,279	1,275,567	873,641	1,801,661	4,146,410	78.2
Value of products.....	260,399,619	194,515,692	65,883,927	8,711,929	6,490,596	9,084,332	40,997,070	74.7
Value added by manufacture.....	121,292,558	92,583,742	28,708,816	4,240,990	3,124,318	5,663,559	15,679,949	76.3

<sup>1</sup> April 15, 1910.

In 1909 the Cincinnati metropolitan district had 2,827 manufacturing establishments, which gave employment to an average of 95,571 persons during the year, and paid out \$57,337,552 in salaries and wages. Of the persons employed, 80,332 were wage earners. These establishments turned out products to the value of \$260,399,619, to produce which materials costing \$139,107,061 were utilized. The value added by manufacture was thus \$121,292,558. The Cincinnati district ranked tenth in 1909 among the metropolitan districts of the United States in the value of its manufactured products.

In the Cincinnati district, as in all the districts except Pittsburgh and Boston, the greater part of the value of the manufactured products of the district was reported by factories within the central city. Cincinnati contained nearly two-thirds (64.5 per cent) of the population of the district of which it is the manufacturing, commercial, and financial center, and contributed about three-fourths (74.7 per cent) of the value of products. Its manufacturing establishments constituted nearly eight-tenths (77.3 per cent) of all in the district and gave employment to approximately three-fourths of the wage earners (74.9 per cent).

Of the places outside Cincinnati for which statistics are given separately Norwood had the largest value of products, representing 3.7 per cent of the total for the metropolitan district; and it contained 5.4 per cent of the total population. The average value of manufactured products per establishment for this city was larger than for any other city shown, not excepting Cincinnati.

The group of seven townships or parts of townships, and of five magisterial districts or parts of districts, outside of incorporated places having a population of more than 10,000 had a combined population equal to 17.8 per cent of the total for the district, and contributed 15.7 per cent of the value of its products.

The principal industries of Cincinnati in 1909, as measured by value of products, were slaughtering and meat packing, foundries and machine shops, and the manufacture of men's clothing. Those of Norwood were printing and publishing, and the manufacture of paper goods (playing cards and games), furniture, and foundry and machine-shop products. During the decade this city increased in population from 6,480 to 16,185. The leading industries in Covington were foundries and machine shops and the manufacture of chewing and smoking tobacco; and in Newport, steel works and rolling mills and breweries. The most important places from a manufacturing standpoint outside of these cities were Ivorydale, with its large soap works; Lockland village, with the manufacture of roofing materials and mattresses and spring beds; and St. Bernard, with the manufacture of soap.

Comparison with earlier censuses.—Table 47 is a comparative summary of the statistics for the district as a whole for 1909, 1904, and 1899, together with the percentages of increase from census to census. For the purposes of comparison with the statistics for the district as given for 1904<sup>1</sup> and 1899,<sup>1</sup> the totals for 1909 are segregated into figures for the territory added since 1904, and into those for the remainder of the district.

<sup>1</sup> Bureau of Census: Industrial Districts, 1905, p. 54.



**Table 47**

	NUMBER OR AMOUNT.					PER CENT OF INCREASE. <sup>1</sup>		
	1909			1904	1899	1899-1909	1904-1909	1899-1904
	Total.	Territory added since 1904.	Remainder of district. <sup>2</sup>					
Population.....	3 563,804	3 29,229	3 534,575	( <sup>3</sup> )	3 473,282	13.0		
Number of establishments.....	2,827	85	2,742	2,600	2,073	-7.8	5.5	-12.5
Persons engaged in manufactures.....	95,571	3,184	92,387	85,147	( <sup>4</sup> )		8.5	
Proprietors and firm members.....	2,593	73	2,520	2,587	( <sup>4</sup> )		-2.6	
Salaried employees.....	12,646	278	12,368	9,825	6,819	81.4	25.9	44.1
Wage earners (average number).....	80,332	2,833	77,499	72,735	64,409	20.3	6.5	12.9
Primary horsepower.....	140,254	9,399	130,855	91,798	( <sup>4</sup> )		42.5	
Capital.....	\$212,555,469	\$6,058,352	\$206,497,117	\$170,760,226	\$121,072,067	69.3	20.9	40.0
Expenses.....	233,538,340	8,606,054	224,932,286	180,967,427	141,767,041	58.7	24.3	27.7
Services.....	57,337,552	1,898,757	55,438,795	44,862,069	34,151,990	62.3	23.6	31.4
Salaries.....	15,601,542	400,277	15,201,265	10,929,512	7,170,868	112.0	39.1	52.4
Wages.....	41,736,010	1,498,480	40,237,530	33,932,557	26,981,122	49.1	18.6	25.8
Materials.....	139,107,061	6,040,873	133,066,188	102,721,628	82,263,028	61.8	29.5	24.9
Miscellaneous.....	37,093,727	686,424	36,427,303	33,383,730	25,352,023	43.7	9.1	31.7
Value of products.....	260,399,619	9,324,048	251,075,571	203,095,605	104,217,216	52.9	23.6	23.7
Value added by manufacture.....	121,292,558	3,283,175	118,009,383	100,373,977	81,054,188	44.0	17.6	22.5

<sup>1</sup> A minus sign (-) denotes decrease.  
<sup>2</sup> Figures in this column used in computing percentages of increase.  
<sup>3</sup> April 15, 1910.  
<sup>4</sup> No population census in 1905.  
<sup>5</sup> June 1, 1900.  
<sup>6</sup> Figures not available.

In all items shown, except number of establishments and cost of materials, the percentage of increase was greater during the earlier five-year period, 1899-1904, than during the period 1904-1909. During the decade as a whole the rate of increase was much greater in number of salaried employees and salaries than for any other items. The average number of wage earners increased only 20.3 per cent during this period, but the wages increased 49.1 per cent, a rate of gain approximately equal to that in value of products (52.9 per cent). The increase in primary horsepower of all kinds from 1904 to 1909 was 42.5 per cent. Statistics as to the primary power used in 1899 are not available.

The proportion of population and manufactures in the outside territory of the district as compared with the total for the city of Cincinnati is, in general, increasing, as indicated by the percentages in Table 48. The percentages for 1909 are based upon the figures for the district exclusive of the territory added since 1904.

**Table 48**

	PER CENT TERRITORY OUTSIDE OF CINCINNATI IS OF TOTAL FOR DISTRICT.		
	1909 <sup>1</sup>	1904	1899
Population.....	32.0	( <sup>2</sup> )	31.1
Number of establishments.....	20.4	16.5	17.5
Persons engaged in manufactures.....	21.5	19.0	( <sup>2</sup> )
Proprietors and firm members.....	20.0	15.7	( <sup>2</sup> )
Salaried employees.....	16.9	16.6	9.6
Wage earners (average number).....	22.3	19.5	14.7
Primary horsepower.....	32.3	27.0	( <sup>2</sup> )
Capital.....	27.2	23.7	15.2
Expenses.....	22.3	18.9	13.9
Services.....	20.9	18.7	13.5
Salaries.....	16.1	16.9	10.2
Wages.....	22.7	19.3	14.4
Materials.....	23.4	18.9	13.2
Miscellaneous.....	20.4	18.9	16.5
Value of products.....	22.5	18.2	13.7
Value added by manufacture.....	21.5	17.5	14.2

<sup>1</sup> Based on figures for district as constituted in 1904 and 1899.  
<sup>2</sup> No population census in 1905.  
<sup>3</sup> Figures not available.

The proportion of the population of the district, as originally constituted, that was reported from the

territory outside of Cincinnati, increased from 31.1 per cent in 1900 to 32 per cent in 1910, and the proportion of the value of products of that district that was contributed by the outlying territory increased steadily from 13.7 per cent in 1899 to 18.2 per cent in 1904 and 22.5 per cent in 1909.

Leading industries.—Table 49 gives the statistics for 1909 for the industries of the district having products valued at \$500,000 or more, so far as separate figures can be presented.

Among the 45 industries shown separately in the table there are 14 for which totals for the district can not be published, because to do so would disclose the operations of individual establishments, and 8 which were not carried on in the part of the district which is outside the corporate limits of Cincinnati. In all these cases the statistics shown are figures for Cincinnati exclusively.

The manufacture of soap is a very prominent industry in the district, but it is not shown separately because only the comparatively small part of it reported from the city of Cincinnati can be given without disclosure of the operations of individual establishments.

The manufacture of foundry and machine-shop products was the leading industry in the Cincinnati district, the value of the products amounting to 10.1 per cent of the value of the products for all industries. There were two other industries having also a considerable proportion of the total—slaughtering and meat packing, with 7.7 per cent, and men's clothing, including shirts, with 6.8 per cent. Printing and publishing and the manufacture of malt liquors, carriages and wagons and materials, and lumber and timber products were also prominent.

Important industries for which complete figures can not be given without disclosing the operations of individual concerns are, in the order of their importance, liquors, distilled, and electrical machinery, apparatus, and supplies.

SUMMARY FOR THE CINCINNATI METROPOLITAN DISTRICT, BY INDUSTRIES: 1909.

**Table 49**

INDUSTRY.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Miscellaneous expenses.	Value of products.	Value added by manufacture.
		Total.	Proprietors and firm members.	Salaries employed.	Wage earners (average number).								
<b>All industries</b> .....	2,827	95,571	2,593	12,646	80,332	140,254	\$212,555,489	\$15,601,542	\$41,736,010	\$139,107,061	\$37,093,727	\$260,399,619	\$121,292,558
Bags, paper.....	5	358	.....	59	299	320	673,221	72,156	129,254	729,570	88,965	1,088,250	358,680
Boots and shoes, including cut stock and findings.....	132	8,702	21	692	7,989	4,631	7,656,352	1,015,788	3,517,986	8,583,670	1,091,444	14,998,672	6,415,002
Boxes, fancy and paper.....	15	738	9	60	699	218	442,245	69,947	134,858	291,704	56,734	679,170	387,466
Brass and bronze products.....	16	650	14	62	574	444	1,319,651	81,369	336,079	443,067	72,208	1,069,245	626,178
Bread and other bakery products.....	264	2,017	268	252	1,497	955	2,865,239	240,612	817,761	3,395,179	467,103	5,691,232	2,206,053
Canning and preserving.....	19	315	5	93	217	420	640,176	104,583	77,465	482,804	114,346	825,010	342,116
Carriages and wagons and materials.....	99	3,370	86	433	2,851	3,325	6,020,606	455,415	1,621,880	4,367,976	793,276	8,157,065	3,789,689
Cars and general shop construction and repairs by steam-railroad companies.....	7	1,747	.....	68	1,679	1,590	1,651,864	60,896	1,039,010	797,824	71,284	1,969,014	1,171,190
Chemicals.....	111	162	4	36	122	508	712,874	63,250	76,268	474,291	110,802	898,729	424,438
Clothing, men's, including shirts.....	301	8,492	371	1,001	7,120	776	10,421,295	1,211,737	2,071,422	8,709,525	2,978,071	17,646,324	8,936,799
Clothing, women's.....	26	1,541	41	175	1,325	176	1,229,502	216,923	618,775	1,513,764	298,714	2,912,862	1,390,098
Coffee and spice, roasting and grinding.....	18	356	7	128	221	691	1,083,400	130,513	91,271	1,595,209	148,570	2,110,024	514,815
Confectionery.....	122	922	21	130	771	573	970,132	138,741	279,006	1,221,923	191,436	2,029,075	807,152
Cooperage and wooden goods, not elsewhere specified.....	20	697	17	48	632	1,269	1,445,850	75,438	291,804	766,016	85,888	1,232,289	466,273
Copper, tin, and sheet-iron products.....	65	1,390	61	203	1,126	1,409	2,652,111	203,115	548,661	2,969,153	286,921	4,470,093	1,500,940
Cordage and twine and jute and linen goods.....	3	569	2	21	546	975	874,617	25,596	160,561	534,344	57,032	893,912	269,568
Electrical machinery, apparatus, and supplies.....	113	393	9	71	313	397	529,186	95,304	200,215	333,495	83,472	835,500	502,005
Fertilizers.....	5	442	.....	96	346	1,314	1,551,162	70,217	156,346	1,003,766	213,652	1,075,679	671,913
Flags, banners, regalia, society badges, and emblems.....	8	498	3	92	403	317	668,178	88,122	162,418	503,151	91,803	888,361	385,210
Flour-mill and gristmill products.....	11	124	8	38	78	1,062	570,850	42,339	53,614	1,432,174	49,407	1,635,493	203,319
Foundry and machine-shop products.....	238	13,716	130	1,880	11,706	18,372	29,542,095	2,378,730	6,793,105	11,127,047	3,165,929	26,186,468	15,059,421
Furnishing goods, men's.....	10	302	13	45	244	14	283,746	50,618	76,599	509,649	62,662	760,348	250,699
Furniture and refrigerators.....	63	3,059	68	237	2,754	5,079	4,953,600	291,900	1,422,175	2,338,774	748,992	5,646,080	3,307,306
Hats and caps, other than felt, straw, and wool.....	112	323	20	43	260	33	263,776	44,842	112,280	283,528	29,508	532,325	248,797
Ice, manufactured.....	15	243	5	58	180	4,471	2,343,548	73,093	115,427	161,161	110,508	567,814	406,653
Ink, printing.....	7	273	.....	92	181	1,417	1,545,929	189,288	129,855	794,337	459,361	1,884,894	1,090,557
Jewelry.....	115	284	25	49	210	88	1,002,134	52,464	156,398	517,559	59,717	935,935	418,376
Leather goods.....	19	664	23	108	535	252	1,500,970	100,886	278,183	799,053	135,783	1,518,778	719,125
Leather, tanned, curried, and finished.....	113	1,043	10	36	997	2,269	6,503,170	71,187	570,074	3,677,293	207,483	5,058,920	1,381,657
Liquors, distilled.....	14	300	.....	29	271	1,750	2,833,836	62,549	178,395	1,824,464	6,333,076	8,744,761	6,920,297
Liquors, malt.....	26	2,371	.....	389	1,982	13,591	17,929,034	790,475	1,400,039	2,656,167	4,304,883	11,016,171	8,360,004
Lumber and timber products.....	80	2,809	66	330	2,413	9,318	8,388,650	412,398	1,306,785	4,345,585	553,179	7,401,553	3,055,973
Marble and stone work.....	39	396	47	43	306	1,012	639,390	50,846	208,549	290,104	91,138	731,601	441,587
Millinery and lace goods.....	11	494	10	56	428	59	136,086	48,828	120,381	294,157	29,545	546,648	252,491
Musical instruments, pianos and organs and materials.....	17	760	5	43	712	835	1,184,890	61,919	371,324	1,080,430	113,361	1,752,617	672,187
Oil, not elsewhere specified.....	4	111	2	45	64	152	524,279	47,695	40,541	461,286	80,954	672,682	211,396
Paint and varnish.....	24	636	19	209	408	1,356	4,026,491	282,229	214,994	2,488,801	324,074	3,879,810	1,394,009
Patent medicines and compounds and druggists' preparations.....	55	542	43	218	281	424	1,004,884	206,275	114,279	516,796	250,209	1,293,009	776,213
Printing and publishing.....	318	6,806	281	1,525	5,000	6,058	13,183,475	1,638,634	3,236,020	4,220,558	2,828,940	13,998,611	9,778,053
Safes and vaults.....	15	703	1	123	579	970	1,156,228	256,800	358,838	629,840	84,376	1,401,157	771,317
Signs and advertising novelties.....	6	357	2	66	289	275	798,835	62,066	130,791	329,528	279,837	938,808	609,340
Slaughtering and meat packing.....	61	1,400	78	183	1,139	3,745	4,701,132	204,899	683,195	17,497,119	466,588	19,922,613	2,425,494
Stoves and furnaces, including gas and oil stoves.....	15	1,092	3	217	872	1,086	2,150,012	209,126	485,300	1,013,055	368,058	2,324,950	1,311,895
Tobacco manufactures.....	300	3,462	321	243	2,898	634	3,009,283	257,593	1,126,640	2,421,365	1,262,330	5,496,839	3,075,474
Wood, turned and carved.....	10	317	7	36	274	837	733,996	64,857	138,113	315,324	51,936	870,093	554,769
All other industries.....	530	19,625	467	2,587	16,571	44,787	55,221,433	3,229,210	8,633,080	38,367,816	7,340,171	64,699,380	26,331,564

<sup>1</sup>Excluding statistics for establishments located outside of the corporate limits of Cincinnati, to avoid disclosure of individual operations. The figures for these establishments are included under the head of "All other industries."

Comparative summary, by industries.—The number of establishments, average number of wage earners, and value of products for such of the industries as can be shown separately and had a value of products amounting to \$2,000,000 or more in 1909 are given in Table 50 for 1909, 1904, and 1899.

COMPARATIVE SUMMARY FOR THE CINCINNATI METROPOLITAN DISTRICT, BY SELECTED INDUSTRIES: 1909, 1904, AND 1899.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.			WAGE EARNERS (AVERAGE NUMBER).			VALUE OF PRODUCTS.			PER CENT OF INCREASE. <sup>1</sup>									
										Number of establishments.			Wage earners (average number).			Value of products.			
	1909	1904	1899	1909	1904	1899	1909	1904	1899	1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904	
Foundry and machine-shop products.	238	206	(?)	11,706	9,588	(?)	\$26,186,468	\$18,793,155	(?)	.....	15.5	.....	.....	22.1	.....	.....	.....	39.3	.....
Liquors, malt, distilled, and vinous.	37	38	39	2,302	2,086	1,757	22,152,542	21,771,153	\$19,210,452	-5.1	-2.6	-2.6	31.0	10.4	18.7	15.3	1.8	13.3	
Clothing.	327	356	580	8,445	6,590	6,829	20,559,186	17,866,150	14,991,077	-43.6	-8.1	-38.6	23.7	28.1	-3.5	37.1	15.1	19.2	
Men's, including shirts.	301	327	539	7,120	5,410	5,439	17,646,324	15,154,335	12,905,093	-44.2	-8.0	-39.3	30.9	31.4	-0.4	36.7	16.4	17.4	
Women's.	26	29	41	1,325	1,171	1,390	2,912,862	2,711,815	2,085,984	-36.6	-10.3	-29.3	-4.7	13.2	-15.8	39.6	7.4	30.0	
Slaughtering and meat packing.	61	* 48	* 33	1,139	878	882	19,922,613	13,509,702	10,783,241	84.8	27.1	45.5	29.1	29.7	-0.5	84.8	47.6	25.3	
Boots and shoes, including cut stock and findings.	* 32	* 35	49	7,989	6,044	6,786	14,998,672	11,152,013	8,668,117	-34.7	-8.6	-28.6	17.7	20.2	-2.1	73.0	34.5	28.7	
Printing and publishing.	318	283	260	5,000	4,420	4,047	13,998,611	11,163,285	8,455,346	22.3	12.4	8.8	23.5	13.1	9.2	65.6	25.4	32.0	
Newspapers and periodicals.	105	102	85	947	838	1,076	5,462,314	4,418,781	3,594,243	23.5	2.9	20.0	-12.0	13.0	-22.1	52.0	23.6	22.9	
Book and job.	187	148	123	2,252	2,072	1,641	4,841,576	3,856,413	2,545,828	35.8	12.8	20.3	37.2	8.7	26.3	90.2	25.6	51.5	
Music.	8	6	7	52	57	51	324,612	193,528	266,985	14.3	33.3	-14.3	.....	.....	.....	21.6	67.7	-27.5	
All other printing and publishing industries. <sup>2</sup>	38	27	45	1,749	1,453	1,279	3,370,109	2,604,563	2,048,290	15.6	40.7	-40.0	36.7	20.3	13.6	64.5	25.1	31.6	
Carriages and wagons and materials.	99	92	91	2,851	3,244	3,310	8,157,665	8,799,029	8,050,291	8.8	7.6	1.1	-13.9	-12.1	-2.0	1.3	-7.3	9.3	
Lumber and timber products.	80	65	54	2,413	2,154	1,705	7,401,558	6,507,172	4,663,369	48.1	23.1	20.4	41.5	12.0	26.3	58.7	13.7	39.5	
Bread and other bakery products.	264	237	314	1,497	1,440	1,199	5,691,232	4,231,455	3,309,397	-15.9	11.4	-24.5	24.9	4.0	20.1	72.0	34.5	27.9	
Furniture and refrigerators.	63	69	* 54	2,754	3,045	2,355	5,646,080	6,377,756	3,594,196	16.7	-8.7	27.8	16.9	-24.4	54.8	57.1	-11.5	77.4	
Tobacco manufactures.	300	325	373	2,898	3,834	4,188	5,496,839	6,721,170	7,657,562	-19.6	-7.7	-12.9	-30.8	-24.4	-8.5	-28.2	-18.2	-12.2	
Cigars and cigarettes.	286	313	357	2,541	3,402	3,737	3,879,701	4,607,195	4,973,865	-19.9	-8.6	-12.3	-32.0	-25.3	-9.0	-22.0	-15.8	-7.4	
Chewing and smoking tobacco and snuff.	14	12	16	357	432	451	1,617,138	2,113,975	2,683,697	-12.5	16.7	-25.0	-20.8	-17.4	-4.2	-39.7	-23.5	-21.2	
Leather, tanned, curried, and finished.	* 13	10	16	697	976	958	5,058,920	3,404,866	3,503,225	-18.2	30.0	-37.5	4.1	2.2	1.9	44.4	48.6	-2.8	
Copper, tin, and sheet-iron products.	65	51	41	1,126	1,122	851	4,470,093	2,714,012	1,803,271	58.5	27.4	24.4	32.3	0.4	31.8	147.9	64.7	50.5	
Paint and varnish.	* 24	26	25	408	277	278	3,879,810	2,672,698	2,298,236	-4.0	-7.7	4.0	46.8	47.3	-0.4	63.8	45.2	16.3	
Stoves and furnaces, including gas and oil stoves.	* 15	14	(*)	872	659	(*)	2,324,950	1,058,851	(*)	.....	7.1	.....	.....	32.3	.....	.....	119.6	.....	
Coffee and spice, roasting and grinding.	* 8	10	10	221	170	109	2,110,024	1,835,366	1,416,395	-20.0	-20.0	.....	102.8	30.0	56.0	49.0	15.0	29.6	
Confectionery.	* 22	15	18	771	653	441	2,029,075	1,568,021	1,333,604	22.2	46.7	-16.7	74.8	18.1	48.1	52.1	29.4	17.6	

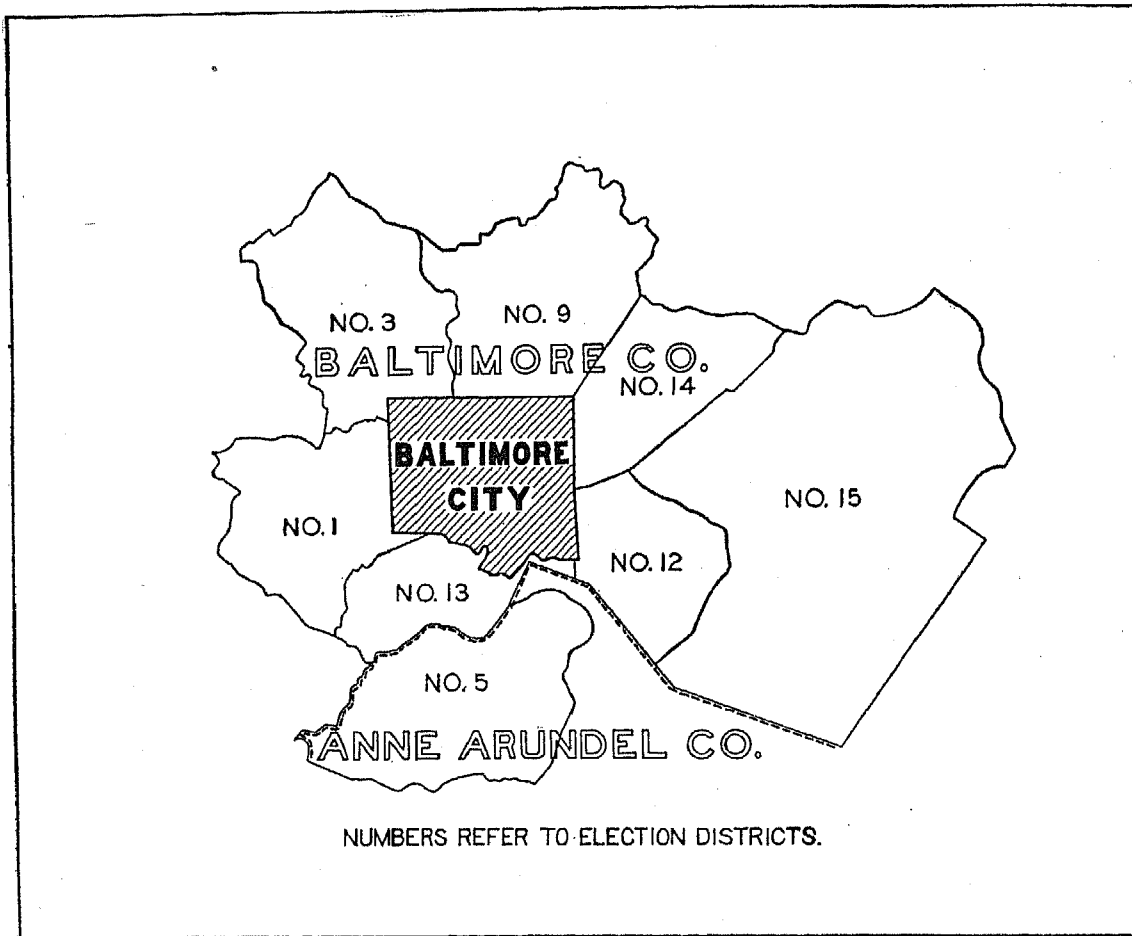
<sup>1</sup> A minus sign (-) denotes decrease. Percentages not shown where base is less than 100 for wage earners.  
<sup>2</sup> Comparable figures not available.  
<sup>3</sup> Excluding statistics for two establishments, to avoid disclosure of individual operations.  
<sup>4</sup> Excluding statistics for one establishment, to avoid disclosure of individual operations.  
<sup>5</sup> Includes bookbinding and blank-book making; "engraving, steel and copper plate including plate printing;" and "lithographing."  
<sup>6</sup> Excluding statistics for three establishments, to avoid disclosure of individual operations.

The greatest absolute increase in value of products during the decade shown for any industry in the table is for slaughtering and meat packing—\$9,139,372, or 84.8 per cent. The greatest relative increase, 147.9 per cent, was reported for the manufacture of copper, tin, and sheet-iron products.

Among important industries that can not be shown at all in any tables without disclosing the operations of individual establishments are, in the order of their importance, the manufacture of roofing materials, mattresses and spring beds, paper goods, and cottonseed oil and cake.

MANUFACTURES.

BALTIMORE METROPOLITAN DISTRICT: 1909.



## BALTIMORE METROPOLITAN DISTRICT.

**Territory included.**—The metropolitan district of Baltimore embraces 184,660 acres of territory, of which 19,290 acres constitute the area of Baltimore, and 165,370 acres the area of the outside territory. The population of the city of Baltimore proper in 1910 was 558,485, and that of the outside territory 100,230, the total for the district being 658,715.

As defined at the census of 1910, the metropolitan district comprised, in addition to the city of Baltimore, eight election districts, namely, Districts 1, 3, 9, 12, 13, 14, and 15, in Baltimore County, and District 5 in Anne Arundel County. The report for 1904 included all this territory but District 5.

On page 962 is an outline map of the metropolitan district as constituted in 1909, showing Baltimore and the election districts included.

**Summary for the district.**—Table 51 is a summary for 1909 of the statistics of manufacturing industries, with a statement of the population in 1910 for the Baltimore metropolitan district, for the city of Baltimore, and for the remainder of the district; the percentage which the figure for Baltimore represents of the total for the district being shown for each item.

Table 51	NUMBER OR AMOUNT.			Per cent Baltimore is of total for district.
	The district.	Baltimore.	District exclusive of Baltimore.	
Population <sup>1</sup> .....	658,715	558,485	100,230	84.8
Number of establishments.....	2,668	2,502	166	93.8
Persons engaged in manufactures.....	94,954	83,473	11,481	87.9
Proprietors and firm members.....	2,700	2,660	130	95.3
Salaried employees.....	10,339	9,369	970	90.6
Wage earners (average number).....	81,825	71,444	10,381	87.3
Primary horsepower.....	125,080	76,764	48,316	61.4
Capital.....	\$199,735,181	\$164,436,758	\$35,298,423	82.3
Expenses.....	237,569,865	168,914,786	68,655,079	71.1
Services.....	48,585,334	41,741,875	6,843,459	85.9
Salaries.....	11,888,229	10,571,088	1,317,141	88.9
Wages.....	36,697,105	31,170,787	5,526,318	84.9
Materials.....	165,085,541	107,023,883	58,061,658	64.8
Miscellaneous.....	23,898,990	20,149,028	3,749,962	84.3
Value of products.....	260,213,324	186,977,710	73,235,614	71.9
Value added by manufacture.....	95,127,783	79,953,827	15,173,956	84.0

<sup>1</sup> April 15, 1910.

In 1909 the Baltimore metropolitan district had 2,668 manufacturing establishments, which gave employment to an average of 94,954 persons during the year, and paid out \$48,585,334 in salaries and wages. Of the persons employed 81,825 were wage earners. These establishments turned out products to the value of \$260,213,324, to produce which materials costing \$165,085,541 were utilized. The value added by manufacture was thus \$95,127,783. The Baltimore

district ranked eleventh in 1909 among all the metropolitan districts of the United States in the value of its manufactured products.

In the Baltimore district, as in most of the other districts, the greater part of the value of the manufactured products of the district was reported by factories within the central city. Baltimore contained more than four-fifths (84.8 per cent) of the population of the district of which it is the manufacturing, commercial, and financial center, and contributed a little more than seven-tenths (71.9 per cent) of the value of products for the district. Its manufacturing establishments constituted over nine-tenths (93.8 per cent) of all in the district, and gave employment to nearly nine-tenths (87.3 per cent) of the wage earners.

As there are no incorporated places in any of the election districts, separate figures are not given for any places except Baltimore, although Sparrow Point and Canton are of much industrial importance. For the steel works, blast furnaces, steel shipbuilding plant, and coke ovens at Sparrow Point a combined value of products was reported for 1909 reaching into the millions. A large value of products was also reported for a copper smelter and refinery and for a petroleum refinery at Canton. None of these industries can be reported separately, as to do so would disclose the operations of individual establishments.

**Comparison with earlier censuses.**—Table 52 is a comparative summary of the statistics for the district as a whole for 1909, 1904,<sup>1</sup> and 1899,<sup>1</sup> together with the percentages of increase from census to census. For purposes of accurate comparison the statistics have been adjusted by segregating the figures of the territory added since 1904.

The percentages of increase in all items, except capital and miscellaneous expenses, were greater for the later five-year period, 1904–1909, than during the period 1899–1904. The percentages of increase during the decade 1899–1909 were especially large in salaries, salaried employees, and miscellaneous expenses. The average number of wage earners increased 12.4 per cent and their wages 38.9 per cent, a rate of gain not equal to that in value of products—45.4 per cent. The rate of increase in primary horsepower from 1904 to 1909 was 16.1 per cent. Statistics as to the primary power used in 1899 are not available.

<sup>1</sup> Bureau of the Census: Industrial Districts, 1905, p. 50.

## MANUFACTURES.

Table 52	NUMBER OR AMOUNT.				PER CENT OF INCREASE. <sup>1</sup>			
	1909			1904	1899	1899-1909	1904-1909	1899-1904
	Total.	Territory added since 1904.	Remainder of district. <sup>2</sup>					
Population.....	\$ 658,715	\$ 7,767	\$ 650,948	( <sup>1</sup> )	\$ 577,670	12.7		
Number of establishments.....	2,668	13	2,655	2,243	2,352	12.9	18.4	-4.6
Persons engaged in manufactures.....	94,954	1,351	93,603	81,235	( <sup>2</sup> )		15.2	
Proprietors and firm members.....	2,790	6	2,784	2,506	( <sup>2</sup> )		11.1	
Salaried employees.....	10,339	93	10,246	7,297	5,744	78.4	40.4	27.0
Wage earners (average number).....	81,825	1,252	80,573	71,432	71,088	12.4	12.3	-0.4
Primary horsepower.....	125,080	3,066	122,014	105,063	( <sup>2</sup> )		16.1	
Capital.....	\$109,735,181	\$3,047,558	\$106,687,623	\$166,770,882	\$122,009,527	61.2	17.9	36.7
Expenses.....	237,569,865	2,810,937	234,758,928	180,810,209	154,392,949	52.1	29.8	17.1
Services.....	48,585,334	557,770	48,027,564	36,648,368	32,298,174	48.7	31.0	13.5
Salaries.....	11,888,229	126,332	11,761,897	7,724,061	6,187,327	90.1	52.3	24.8
Wages.....	36,697,105	431,438	36,265,667	28,924,307	26,110,847	38.9	25.4	10.8
Materials.....	165,085,541	2,031,174	163,054,367	124,600,047	108,775,530	49.9	30.9	14.5
Miscellaneous.....	23,898,990	221,993	23,676,997	19,561,794	13,319,245	77.8	21.0	46.9
Value of products.....	260,213,324	2,951,340	257,261,984	202,659,272	170,000,124	45.4	25.9	14.6
Value added by manufacture.....	95,127,783	920,166	94,207,617	78,059,225	68,133,594	38.3	20.7	

<sup>1</sup> A minus sign (-) denotes decrease.<sup>2</sup> Figures in this column used in computing percentages of increase.<sup>3</sup> April 15, 1910.<sup>4</sup> No population census in 1905.<sup>5</sup> June 1, 1900.<sup>6</sup> Figures not available.

The proportions of the population and manufactures in the outside territory of the district are in general increasing, as is indicated by Table 53. The percentages for 1909 are based upon the figures for the district exclusive of the territory added since 1904.

Table 53	PER CENT TERRITORY OUTSIDE OF BALTIMORE IS OF TOTAL FOR DISTRICT.		
	1909 <sup>1</sup>	1904	1899
Population.....	14.2	( <sup>2</sup> )	10.5
Number of establishments.....	5.8	3.6	3.3
Persons engaged in manufactures.....	10.8	8.6	( <sup>3</sup> )
Proprietors and firm members.....	4.5	3.0	( <sup>3</sup> )
Salaried employees.....	8.6	6.7	4.2
Wage earners (average number).....	11.3	8.7	7.1
Primary horsepower.....	37.1	38.3	( <sup>3</sup> )
Capital.....	16.4	10.8	12.1
Expenses.....	28.0	27.0	24.4
Services.....	13.1	10.7	9.1
Salaries.....	10.1	8.3	5.1
Wages.....	14.0	11.4	10.0
Materials.....	34.4	35.0	30.8
Miscellaneous.....	14.9	6.8	9.1
Value of products.....	27.3	25.2	23.6
Value added by manufacture.....	15.1	9.6	12.1

<sup>1</sup> Based on figures for district as constituted in 1904 and 1899.<sup>2</sup> No population census in 1905.<sup>3</sup> Figures not available.

The proportion of the population of the district reported from the territory outside of Baltimore increased from 10.5 per cent in 1900 to 14.2 per cent in 1910, while the proportion of the value of products increased from 23.6 per cent in 1899 to 25.2 per cent in 1904 and to 27.3 per cent in 1909.

**Leading industries.**—Table 54 gives statistics for 1909 for the industries of the district having products valued at \$500,000 or more, so far as separate figures can be presented.

Among the 30 industries shown separately in the table there are 6 for which totals for the district can not be published, because to do so would disclose individual operations; and 9 which were not carried on in the part of the district which is outside the corporate limits of Baltimore. In all these cases the statistics shown are figures for the city of Baltimore exclusively.

As shown in the table, the manufacture of men's clothing is the leading industry in the Baltimore district and is wholly within the city of Baltimore, the value of the products amounting in 1909 to 13.9 per cent of the value of products for all industries. Another leading industry is the smelting and refining of copper, but it can not be presented without disclosure of individual operations.

Two industries—copper, tin, and sheet-iron products and slaughtering and meat packing—have substantially the same proportion of the district's value of products—5.5 and 5.2 per cent, respectively. Other industries of nearly as great importance are the manufacture of foundry and machine-shop products and of tobacco products.

## BALTIMORE METROPOLITAN DISTRICT.

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## SUMMARY FOR THE BALTIMORE METROPOLITAN DISTRICT, BY INDUSTRIES: 1909.

INDUSTRY.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Miscellaneous expenses.	Value of products.	Value added by manufacture.
		Total.	Proprietors and firm members.	Salaries employed.	Wage earners (average number).								
<b>All industries.....</b>	<b>2,668</b>	<b>94,954</b>	<b>2,790</b>	<b>10,339</b>	<b>81,825</b>	<b>125,080</b>	<b>\$199,735,181</b>	<b>\$11,888,229</b>	<b>\$36,697,105</b>	<b>\$165,085,541</b>	<b>\$23,898,990</b>	<b>\$260,213,324</b>	<b>\$95,127,783</b>
Belting and hose, woven and rubber.	4	315	1	35	279	305	825,720	48,785	87,058	995,018	119,463	1,317,501	322,483
Boots and shoes, including cut stock and findings.....	14	670	11	65	594	252	677,706	64,484	239,242	912,172	146,576	1,431,017	518,845
Bread and other bakery products.....	410	2,429	432	296	1,701	1,010	2,753,849	197,643	780,407	3,795,757	461,778	5,970,981	2,175,224
Canning and preserving.....	57	3,893	58	264	3,571	2,368	4,325,220	266,053	936,271	4,821,265	384,402	6,626,226	1,704,960
Carriages and wagons and materials.....	43	511	49	37	425	429	658,577	37,193	241,716	285,768	46,113	750,703	494,935
Cars and general shop construction and repairs by steam-railroad companies.....	18	4,481	.....	318	4,163	6,318	3,471,038	229,111	2,705,389	4,353,393	46,956	7,364,880	2,981,457
Clothing, men's, including shirts.....	324	20,670	453	1,621	18,596	3,785	19,293,106	1,767,616	7,326,304	20,672,395	3,862,384	36,269,212	15,596,817
Clothing, women's.....	69	2,953	99	282	2,572	348	1,685,753	270,207	878,116	2,279,483	491,341	4,333,171	2,053,688
Coffee and spice, roasting and grinding.....	15	332	14	149	169	531	954,593	178,410	77,213	2,430,610	73,952	2,877,712	447,102
Confectionery.....	50	1,867	45	258	1,564	1,416	2,700,836	277,469	458,707	3,116,303	427,610	5,011,253	1,894,950
Copper, tin, and sheet-iron products.....	65	5,265	58	528	4,679	4,642	21,640,215	685,039	1,568,361	9,350,634	1,126,767	14,350,235	4,999,601
Fertilizers.....	16	1,490	5	227	1,228	3,685	7,989,458	374,553	542,662	6,175,708	529,740	8,409,656	2,293,948
Foundry and machine-shop products.....	111	6,040	99	508	4,433	5,708	9,323,414	665,348	2,582,872	5,427,002	1,237,951	10,961,564	5,534,562
Furnishing goods, men's.....	23	543	30	79	434	50	395,207	67,200	137,453	491,754	66,787	890,783	399,029
Furniture and refrigerators.....	134	1,358	48	153	1,197	1,786	1,824,983	145,388	547,704	1,013,534	210,269	2,197,239	1,183,705
Glass.....	4	842	6	38	798	310	706,073	57,147	404,379	179,535	64,376	850,545	671,010
Hats, straw.....	7	1,808	4	110	1,694	930	2,607,298	295,635	687,648	1,783,214	294,920	3,347,330	1,564,116
Ice, manufactured.....	112	242	1	46	195	5,102	1,964,302	65,482	151,028	222,110	172,731	693,828	471,718
Leather goods.....	135	410	40	64	306	181	610,078	54,872	142,634	560,318	83,622	963,019	402,701
Liquors, distilled.....	13	306	2	76	228	1,917	3,550,272	147,330	110,375	811,438	2,507,907	3,681,619	2,870,181
Liquors, malt.....	15	636	6	148	782	5,688	7,808,729	316,968	636,045	1,385,223	1,934,429	5,017,678	3,632,455
Lumber and timber products.....	58	2,501	62	294	2,235	6,147	3,062,107	217,208	971,147	3,284,547	283,372	5,230,404	1,945,857
Marble and stone work.....	52	895	49	82	764	1,428	1,234,894	158,302	499,130	783,025	148,701	1,789,724	976,699
Paint and varnish.....	12	190	20	43	127	450	502,670	35,198	54,982	699,514	127,358	1,000,838	301,424
Patent medicines and compounds and druggists' preparations.....	171	1,813	53	580	1,180	667	4,056,157	744,013	425,844	2,136,457	925,660	5,470,590	3,334,133
Printing and publishing.....	243	4,189	229	1,074	2,886	3,203	5,640,382	1,201,885	1,758,475	2,234,055	1,374,766	7,579,430	5,345,375
Shipbuilding, including boat building.....	113	616	11	50	555	3,563	2,077,571	66,744	340,326	260,687	127,403	871,470	611,383
Slaughtering and meat packing.....	52	1,316	60	227	1,029	2,976	3,776,659	264,194	601,631	11,479,830	481,626	13,653,693	2,173,863
Tobacco manufactures.....	220	3,866	244	319	3,303	559	6,450,005	369,280	1,170,929	5,537,513	2,535,263	10,288,867	4,751,354
Umbrellas and canes.....	9	640	15	111	514	95	827,463	144,271	167,745	1,075,854	135,879	1,649,810	673,966
All other industries.....	609	22,597	586	2,347	19,664	59,231	76,364,846	2,475,180	9,165,312	66,502,025	3,479,758	89,432,247	22,930,222

<sup>1</sup> Excluding statistics of establishments located outside the corporate limits of Baltimore, to avoid disclosure of individual operations. The figures for these establishments are included under the head of "All other industries."



MANUFACTURES.

Comparative summary, by industries.—The number of establishments, average number of wage earners, and value of products for such of the industries as can be shown separately and had a value of products amounting to \$2,000,000 or more in 1909 are given in Table 55 for 1909, 1904, and 1899.

COMPARATIVE SUMMARY FOR THE BALTIMORE METROPOLITAN DISTRICT, BY SELECTED INDUSTRIES: 1909, 1904, AND 1899.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.			WAGE EARNERS (AVERAGE NUMBER).			VALUE OF PRODUCTS.			PER CENT OF INCREASE. <sup>1</sup>								
										Number of establishments.			Wage earners (average number).			Value of products.		
	1909	1904	1899	1909	1904	1899	1909	1904	1899	1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904
Clothing.....	393	181	213	21,168	14,565	13,923	\$40,602,383	\$28,341,141	\$23,349,392	84.5	117.1	-15.0	52.0	45.3	4.6	73.9	43.3	21.4
Men's, including shirts.....	324	130	155	18,596	12,823	12,044	36,269,212	25,276,257	20,842,738	109.0	149.2	-16.1	54.4	45.0	6.5	74.0	43.5	21.3
Women's.....	69	51	58	2,572	1,742	1,879	4,333,171	3,064,884	2,506,654	19.0	35.3	-12.1	36.9	47.6	-7.3	72.9	41.4	22.3
Copper, tin, and sheet-iron products.	65	<sup>2</sup> 50	<sup>2</sup> 50	4,679	2,512	2,745	14,350,235	8,608,602	5,933,166	10.2	30.0	-15.3	70.5	86.3	-8.5	141.9	66.7	45.1
Slaughtering and meat packing.....	52	44	50	1,029	562	466	13,653,693	6,847,973	6,476,918	4.0	18.2	-12.0	120.8	83.1	20.6	110.8	90.4	5.7
Foundry and machine-shop products	111	87	(*)	4,333	4,622	(*)	10,961,564	9,561,706	(*)	.....	27.6	.....	-6.3	.....	.....	14.6	.....	.....
Tobacco manufactures.....	220	288	324	3,303	3,650	4,027	10,288,867	10,545,035	9,581,893	-32.1	-23.6	-11.1	-18.0	-9.5	-9.4	7.4	-2.4	10.1
Liquors.....	28	30	22	1,010	876	659	8,699,297	6,206,447	4,175,569	27.3	-6.7	36.4	53.3	15.3	32.9	108.3	40.2	48.6
Malt.....	15	16	12	782	655	538	5,017,678	4,185,170	2,934,028	25.0	-6.3	33.3	45.4	19.4	21.7	71.0	19.9	42.6
Distilled.....	13	14	10	228	221	121	3,681,619	2,021,277	1,241,541	30.0	-7.1	40.0	88.4	3.2	82.6	196.5	82.1	62.8
Fertilizers.....	16	15	19	1,228	930	762	8,469,656	5,562,156	3,895,437	-15.8	6.7	-21.1	61.2	32.0	22.0	117.4	52.3	42.8
Printing and publishing.....	243	208	222	2,886	2,445	2,873	7,579,430	5,648,462	4,942,851	9.5	16.8	-6.3	0.5	18.0	-14.9	53.3	34.2	14.3
Book and job.....	151	124	142	1,675	1,270	1,178	3,491,225	2,164,562	2,037,037	6.3	21.8	-12.7	42.2	31.3	8.3	71.4	61.3	6.3
Newspapers and periodicals.....	53	56	44	600	667	1,179	3,049,576	2,602,307	2,186,437	20.5	-5.4	27.3	-49.1	-10.0	-43.4	39.5	14.5	21.8
All other printing and publishing industries <sup>4</sup> .....	39	28	36	611	502	516	1,038,629	821,593	719,377	8.3	39.3	-22.2	18.4	21.7	-2.7	44.4	26.4	14.2
Cars and general shop construction and repairs by steam railroad companies.....	<sup>2</sup> 8	7	6	4,163	3,712	2,438	7,364,880	4,777,818	3,529,959	33.3	14.3	-16.7	70.8	12.1	52.3	108.6	54.1	35.4
Canning and preserving.....	57	50	48	3,571	4,197	5,680	6,526,225	6,410,929	10,791,369	18.8	14.0	4.2	-37.1	-14.9	-26.1	39.5	1.8	-40.6
Bread and other bakery products.....	410	352	350	1,701	1,475	1,437	5,970,981	4,530,180	3,696,370	17.1	16.5	0.6	18.4	15.3	2.6	61.5	31.5	22.8
Patent medicines and compounds and druggists' preparations.....	<sup>2</sup> 71	<sup>2</sup> 67	57	1,180	954	956	5,470,590	4,750,493	3,195,665	24.6	6.0	17.5	23.4	23.7	-0.2	71.2	15.2	48.7
Lumber and timber products.....	58	39	41	2,235	1,624	1,681	5,230,404	3,425,350	3,426,781	41.5	48.7	-4.9	33.0	37.6	-3.4	52.6	52.7	-0.1
Confectionery.....	50	43	42	1,564	1,049	858	5,011,253	2,597,943	1,923,939	19.0	16.3	2.4	82.3	49.1	22.3	160.5	92.9	35.0
Hats, straw.....	7	6	(*)	1,694	1,130	(*)	2,347,330	2,035,519	(*)	.....	16.7	.....	48.7	.....	.....	15.3	.....	.....
Furniture and refrigerators.....	<sup>2</sup> 34	<sup>2</sup> 38	<sup>2</sup> 36	1,157	1,776	1,627	2,197,239	2,854,496	2,690,610	-5.6	-10.5	5.6	-28.9	-34.9	9.2	-18.3	-23.0	6.1

<sup>1</sup> A minus sign (-) denotes decrease.  
<sup>2</sup> Excluding statistics for one establishment, to avoid disclosure of individual operations.  
<sup>3</sup> Comparable figures not available.  
<sup>4</sup> Includes "printing and publishing, music;" "bookbinding and blank-book making;" "engraving, steel and copper plate, and plate printing;" and "lithography."  
<sup>5</sup> Excluding statistics for two establishments, to avoid disclosure of individual operations.

The greatest absolute increase in value of products during the decade, \$15,426,474, or 74 per cent, is shown for the manufacture of men's clothing. The greatest relative increase, 196.5 per cent, was reported for the manufacture of distilled liquors.

The inclusion of the 1909 statistics for establishments within the territory added to the district since 1904 affects considerably the totals for the fertilizer and canning and preserving industries, and to a much smaller degree those for lumber and timber products.

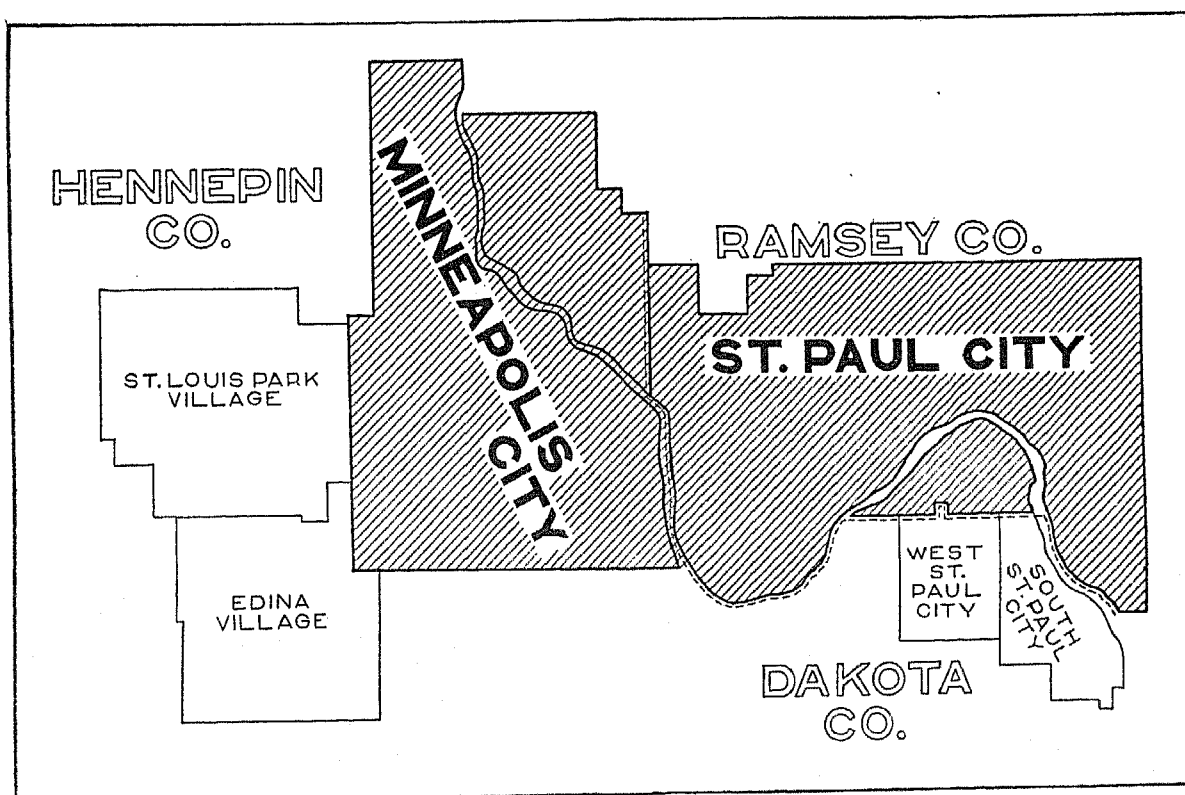
## MINNEAPOLIS-ST. PAUL METROPOLITAN DISTRICT.

**Territory included.**—The Minneapolis-St. Paul metropolitan district embraces 94,539 acres, of which 32,069 acres represent the area of Minneapolis, 33,390 acres the area of St. Paul, and 29,080 acres the area of the outside territory. The population of Minneapolis in 1910 was 301,408, that of St. Paul 214,744, and that of the outside territory 10,104, the total for the district being 526,256. As defined at the census of 1910 the Minneapolis-St. Paul metropolitan district comprises, in addition to the cities of Minneapolis and St. Paul, the villages of Edina and St. Louis Park in Hennepin County and the cities of South St. Paul and West St. Paul in Dakota County. The territory

comprised within the Minneapolis-St. Paul industrial district as constituted for the bulletin on industrial districts for 1904 did not include South St. Paul and West St. Paul cities, but it contained in addition to the other places named above, Brooklyn, Crystal Lake, Richfield (now Richfield village), and St. Anthony townships and Robbinsdale and West Minneapolis villages in Hennepin County and New Canada and Rose townships and North St. Paul village in Ramsey County.

The location of each of the places included in 1909 is indicated on the following outline map of the district:

MINNEAPOLIS-ST. PAUL METROPOLITAN DISTRICT: 1909.



**Summary for the district.**—Table 56 is a summary for 1909 of the statistics of manufacturing industries, with a statement of the population in 1910, for the Metropolitan-St. Paul district, for the cities of Minneapolis and St. Paul, and for the remainder of the district; the percentages which the figures for Minneapolis and St. Paul separately represent of the total for the district being shown in the case of each item.

In 1909 the Minneapolis-St. Paul metropolitan district had 1,844 manufacturing establishments, which

gave employment to an average of 59,920 persons during the year and paid out \$38,596,508 in salaries and wages. Of the persons employed, 48,268 were wage earners. These establishments turned out products to the value of \$244,339,598, to produce which materials were used costing \$166,823,348. The value added by manufacture was thus \$77,516,250. The Minneapolis-St. Paul district ranked twelfth in 1909 among the metropolitan districts of the United States in the value of its manufactured products.

Table 56

	NUMBER OR AMOUNT.				PER CENT OF TOTAL FOR DISTRICT.	
	The district.	Minneapolis.	St. Paul.	District exclusive of Minneapolis and St. Paul.	Minneapolis.	St. Paul.
Population <sup>1</sup> .....	526,256	301,408	214,744	10,104	57.3	40.8
Number of establishments.....	1,844	1,102	719	23	59.8	39.0
Persons engaged in manufactures.....	59,920	33,923	23,530	2,467	56.6	39.3
Proprietors and firm members.....	1,674	1,012	649	13	90.5	38.8
Salaried employees.....	9,978	5,949	3,542	487	59.6	35.5
Wage earners (average number).....	48,268	26,962	19,339	1,967	55.9	40.1
Primary horsepower.....	119,219	89,247	26,204	3,768	74.9	22.0
Capital.....	\$160,628,295	\$90,382,225	\$60,466,777	\$9,779,293	56.3	37.6
Expenses.....	225,488,583	153,760,750	52,772,885	18,954,948	68.2	23.4
Services.....	38,596,508	21,915,335	14,999,780	1,681,393	56.8	38.9
Salaries.....	10,871,801	6,277,221	4,048,175	546,405	57.7	37.2
Wages.....	27,724,707	15,638,114	10,951,605	1,134,988	56.4	39.5
Materials.....	166,823,348	119,993,135	30,299,634	16,530,579	71.9	18.2
Miscellaneous.....	20,068,727	11,852,280	7,473,471	742,376	59.1	37.2
Value of products.....	244,339,598	165,404,680	58,990,025	19,944,893	67.7	24.1
Value added by manufacture.....	77,516,250	45,411,545	28,690,391	3,414,314	58.6	37.0

<sup>1</sup> April 15, 1910.

The percentages which the combined statistics for the central cities represent of the total for the metropolitan district are larger in the majority of instances than those for any of the other metropolitan districts, although those for Cleveland and Detroit are larger in a number of items. The percentage is not less than 90 for any item, the range being from 90.1 per cent for cost of materials to 99.3 per cent for proprietors and firm members. The two cities contained 98.1 per cent of the population of the district and contributed over nine-tenths (91.8 per cent) of the value of the manufactured products of the district.

Comparison with earlier censuses.—Table 57 gives statistics for the district for 1909, 1904, and 1899.

For purposes of comparison the statistics in this table are grouped in such a way as to show separately for 1909 figures for (1) the territory added to the district since 1904 (South St. Paul and West St. Paul) and (2) the remainder of the district; and for 1904 and 1899 figures for (1) the territory deducted since 1904 (Brooklyn, Crystal Lake, Richfield, and St. Anthony townships, together with Robbinsdale and West Minneapolis villages, in Hennepin County and New Canada and Rose townships and North St. Paul village in Ramsey County) and (2) the remainder of the district. Percentages of increase are shown for the territory included in the metropolitan district in both 1909 and 1904.

Table 57

	NUMBER OR AMOUNT.									PER CENT OF INCREASE.		
	1909			1904			1899			1899-1909	1904-1909	1899-1904
	Total.	Territory added since 1904.	Remainder of district. <sup>1</sup>	Total.	Territory deducted since 1904.	Remainder of district. <sup>1</sup>	Total.	Territory deducted since 1904.	Remainder of district. <sup>1</sup>			
Population.....	526,256	7,170	519,086	473,782	12,854	461,408	377,467	9,610	367,857	41.1	12.5	25.4
Number of establishments.....	1,844	10	1,834	1,506	11	1,495	1,340	8	1,332	37.7	22.7	12.2
Persons engaged in manufactures.....	59,920	1,785	58,135	44,297	947	43,350	(5)	(5)	(5)	.....	34.1	.....
Proprietors and firm members.....	1,674	9	1,671	1,423	7	1,416	(5)	(5)	(5)	.....	18.0	.....
Salaried employees.....	9,978	362	9,636	5,830	150	5,674	4,380	110	4,280	124.9	69.7	32.6
Wage earners (average number).....	48,268	1,430	46,838	37,944	784	36,260	33,755	865	32,890	42.4	29.2	10.2
Primary horsepower.....	119,219	2,799	116,420	90,111	1,010	89,101	(5)	(5)	(5)	.....	30.7	.....
Capital.....	\$160,628,295	\$5,822,620	\$154,805,776	\$108,209,964	\$4,233,052	\$103,976,912	\$79,283,521	\$2,213,377	\$77,070,144	100.9	48.9	34.9
Expenses.....	225,488,583	17,441,729	208,046,854	148,422,314	1,473,728	146,948,586	112,570,667	1,411,631	111,159,036	87.2	41.6	32.2
Services.....	38,596,508	1,212,465	37,384,013	25,142,703	606,469	24,536,234	19,406,751	500,418	18,906,333	97.7	52.4	29.8
Salaries.....	10,871,801	358,349	10,513,452	5,994,418	197,893	5,796,515	4,158,905	109,253	4,049,652	159.6	81.4	43.1
Wages.....	27,724,707	854,146	26,870,561	19,148,285	408,666	18,739,619	15,247,846	391,165	14,856,681	80.9	43.4	26.1
Materials.....	166,823,348	15,975,889	150,847,459	109,364,757	676,400	108,688,357	85,836,608	730,113	85,106,555	77.2	38.8	27.7
Miscellaneous.....	20,068,727	253,345	19,815,382	13,014,854	190,859	12,823,995	7,327,248	181,100	7,146,148	177.3	44.4	92.0
Value of products.....	244,339,598	18,420,484	225,919,114	161,803,453	1,613,133	160,190,320	126,613,742	1,512,417	125,101,325	80.6	41.0	28.0
Value added by manufacture.....	77,516,250	2,444,595	75,071,655	52,438,696	936,733	51,501,963	40,777,074	782,304	39,994,770	87.7	45.8	28.8

<sup>1</sup> Figures in this column used in computing percentages of increase.  
<sup>2</sup> April 15, 1910.

<sup>3</sup> State census, June 1, 1905.  
<sup>4</sup> June 1, 1900.

<sup>5</sup> Figures not available.

The relative increase in all the items for which comparative figures are given in the table, except miscellaneous expenses, was larger during the more recent five-year period, 1904-1909, than during the period 1899-1904. For the decade as a whole the relative increase was much greater in miscellaneous expenses, number of salaried employees, and salaries than for any other items. The average number of

wage earners increased 42.4 per cent during this period, but the amount paid for wages increased 80.9 per cent, a rate of gain approximately equal to that in value of products, 80.6 per cent. The relative increase from 1904 to 1909 in the amount of primary power of all kinds used was 30.7 per cent. Statistics as to the amount of primary power used in 1899 are not available.

The proportions which the population and statistics of manufacturing industries of the territory outside Minneapolis and St. Paul represented of the total for the area comprised in the district in both 1909 and 1904 are shown in Table 58. The percentages for 1909 are based upon the figures for the district exclusive of the territory added since 1904 and those for 1904 and 1899 upon the figures for the district exclusive of the territory subsequently deducted.

The proportion which the population of the territory outside of Minneapolis and St. Paul, but within the area comprised in the district, represented of the total for that area was the same for 1899 and 1909, while the proportion of the value of manufactured products of that area which was reported from such outlying territory decreased from five-tenths of 1 per cent in 1899 to four-tenths of 1 per cent in 1904 but increased to seven-tenths of 1 per cent in 1909. The percentages for all but one of the other items also decreased from 1899 to 1904, but increased from 1904 to 1909. The decade shows a steady increase.

Table 58

	PER CENT TERRITORY OUTSIDE OF MINNEAPOLIS-ST. PAUL IS OF TOTAL FOR DISTRICT.		
	1909 <sup>1</sup>	1904 <sup>2</sup>	1899 <sup>3</sup>
Population.....	0.6	0.5	0.6
Number of establishments.....	0.7	0.3	0.5
Persons engaged in manufactures.....	1.2	0.9	( <sup>3</sup> )
Proprietors and firm members.....	0.6	0.2	( <sup>3</sup> )
Salaried employees.....	1.4	0.7	1.0
Wage earners (average number).....	1.1	0.6	0.8
Primary horsepower.....	0.8	0.6	( <sup>3</sup> )
Capital.....	2.6	1.4	1.6
Expenses.....	0.7	0.4	0.5
Services.....	1.3	0.7	1.1
Salaries.....	1.8	1.0	1.5
Wages.....	1.0	0.6	1.0
Materials.....	0.4	0.3	0.3
Miscellaneous.....	2.5	0.8	0.4
Value of products.....	0.7	0.4	0.5
Value added by manufacture.....	1.3	0.8	0.9

<sup>1</sup> Based on figures for district as constituted in 1909, exclusive of territory added since 1904.

<sup>2</sup> Based on figures for district as constituted in 1904, exclusive of territory deducted since 1904.

<sup>3</sup> Figures not available.

Leading industries.—Table 59 gives statistics for 1909 for the industries of the district having products valued at \$500,000 or more, so far as separate figures can be presented.

SUMMARY FOR THE MINNEAPOLIS-ST. PAUL METROPOLITAN DISTRICT, BY INDUSTRIES: 1909.

Table 59

INDUSTRY.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.			Primary horsepower.	Capital.	Salaries.	Wages.	Cost of materials.	Miscellaneous expenses.	Value of products.	Value added by manufacture.	
		Total.	Proprietors and firm members.	Salaried employees.									Wage earners (average number).
<b>All industries.....</b>	<b>1,844</b>	<b>59,920</b>	<b>1,674</b>	<b>9,978</b>	<b>48,268</b>	<b>119,219</b>	<b>\$160,628,295</b>	<b>\$10,871,801</b>	<b>\$27,724,707</b>	<b>\$166,823,348</b>	<b>\$244,339,598</b>	<b>\$77,516,250</b>	
Agricultural implements.....	1 10	573	1	72	500	735	1,332,094	75,702	340,985	669,946	172,438	1,509,533	839,587
Artificial stone.....	1 48	464	61	33	370	205	375,324	22,758	224,511	168,657	37,789	548,573	379,916
Boots and shoes, including cut stock and findings.....	9	2,195	2	175	2,018	849	3,618,742	253,106	1,032,575	3,235,184	454,960	5,144,543	1,909,359
Boxes, fancy and paper.....	7	610	2	60	548	423	905,507	86,040	225,038	451,585	98,879	988,606	517,021
Bread and other bakery products.....	1 169	1,663	185	214	1,264	800	4,138,935	229,472	734,041	2,779,482	531,870	4,978,477	2,198,995
Butter, cheese, and condensed milk.	13	151	10	64	77	859	379,707	41,614	56,072	2,529,913	99,675	2,794,601	264,688
Canning and preserving.....	12	297	11	58	228	104	647,038	62,884	86,082	704,914	59,172	976,454	270,540
Carriages and wagons and materials..	1 34	429	33	51	345	427	708,643	57,130	222,114	331,280	68,311	816,207	484,927
Cars and general shop construction and repairs by steam-railroad companies.....	10	5,251	-----	269	4,982	5,195	8,281,634	274,391	3,440,205	4,183,112	51,308	7,949,016	3,765,904
Clothing, men's, including shirts....	30	1,906	37	179	1,690	331	1,783,787	194,565	567,982	2,255,321	183,342	3,528,281	1,272,860
Confectionery.....	21	671	20	153	498	319	806,287	175,093	170,473	985,288	185,502	1,609,356	624,068
Cooperage and wooden goods, not elsewhere specified.....	19	656	14	41	601	981	908,045	49,308	327,045	1,128,795	77,484	1,699,792	570,997
Copper, tin, and sheet-iron products.	78	1,121	71	136	914	424	2,570,297	138,272	545,411	1,074,716	196,800	2,220,929	1,146,213
Electrical machinery, apparatus, and supplies.....	13	232	3	42	187	205	427,208	54,141	100,751	220,183	60,722	526,101	305,918
Flour-mill and gristmill products....	2 13	3,594	6	1,309	2,279	50,598	19,869,105	1,295,351	1,530,425	70,952,696	3,448,932	78,669,808	7,717,112
Food preparations.....	25	505	21	104	380	710	1,390,247	207,598	191,180	2,442,238	382,883	3,723,829	1,281,591
Foundry and machine-shop products	144	5,758	94	880	4,784	7,032	13,208,513	993,031	3,082,677	5,780,604	1,355,040	12,394,257	6,607,653
Fur goods.....	31	1,219	34	190	995	272	2,122,833	218,632	541,092	2,123,248	367,886	3,620,432	1,497,234
Furniture and refrigerators.....	42	1,451	35	152	1,264	1,877	2,865,578	181,191	734,299	1,512,522	258,107	2,940,460	1,427,938
Leather goods.....	23	661	15	114	532	312	1,097,459	124,530	288,657	1,005,264	131,092	1,720,326	715,072
Liquors, malt.....	7	1,445	1	374	1,070	3,390	13,874,264	431,436	627,709	1,454,486	2,817,920	7,081,277	5,626,791
Lumber and timber products.....	1 81	5,990	30	811	5,649	14,623	13,235,052	506,919	3,189,833	6,961,605	961,248	13,186,892	6,225,287
Marble and stone work.....	20	508	17	50	495	871	919,304	60,380	387,007	580,349	97,377	1,174,074	613,725
Patent medicines and compounds and druggists' preparations.....	77	799	62	443	294	417	2,138,966	236,476	122,082	614,867	756,789	2,119,126	1,504,250
Printing and publishing.....	1 329	6,258	374	2,044	3,840	3,963	9,934,236	1,934,362	2,599,881	3,215,188	2,649,703	12,298,881	9,083,693
Slaughtering and meat packing.....	16	1,811	13	364	1,434	3,043	6,130,705	373,870	868,347	17,213,913	299,775	19,819,223	2,605,310
Tobacco manufactures.....	1 109	1,142	114	124	904	27	1,057,660	188,760	470,924	722,874	349,714	2,002,089	1,270,215
All other industries.....	484	12,500	408	1,960	10,126	20,162	46,400,825	2,404,793	5,098,269	31,539,128	3,964,009	48,324,405	10,785,277

<sup>1</sup> Excluding statistics for establishments located outside of the corporate limits of Minneapolis and St. Paul, to avoid disclosure of individual operations. The figures for these establishments are included under the head of "All other industries."

<sup>2</sup> Excluding statistics for establishments located outside of the corporate limits of Minneapolis, to avoid disclosure of individual operations. The figures for these establishments are included under the head of "All other industries."

Among the 27 industries shown separately in the table are 8 for which the totals for the district can not be published because to do so would disclose individual operations. Of the remaining industries only two were carried on in the part of the district which is outside the corporate limits of Minneapolis and St. Paul.

MANUFACTURES.

The principal industry of the Minneapolis-St. Paul metropolitan district is the manufacture of flour-mill products; the industry, however, with the exception of two establishments in St. Paul, was confined to Minneapolis in 1909.

The value of products reported by the flour mills of Minneapolis alone was \$78,669,808, as shown in the table, and constituted 56.5 per cent of the total for the industry in the state, and 32.2 per cent of the value of all products for the district.

Other important industries, arranged according to the value of products in 1909, were slaughtering and meat packing, the lumber industry, foundries and machine shops, printing and publishing, steam-railroad repair shops, and breweries. The manufacture of linseed oil and that of bags, other than paper bags, industries for which separate statistics can not be published without disclosing individual operations, were also of considerable importance.

Comparative summary, by industries.—The number of establishments, average number of wage earners, and

value of products for such of the industries as can be shown separately and had a value of products amounting to \$2,000,000 or more in 1909, are given in Table 60 for 1909, 1904, and 1899.

The greatest absolute increase in value of products during the decade is shown for the flour-mills and gristmills, amounting to \$29,000,190, or 58.4 per cent; comparisons for this industry, however, are affected to some extent by the omission of establishments from the figures for the different censuses in order to avoid disclosing the operations of individual concerns. The statistics for slaughtering and meat packing are incomparable because of the fact that in the territory added to the district subsequent to 1904 the operations in this industry were of large magnitude and the figures for this added area in 1904 and 1899 are not included in the table. Omitting this industry from consideration, the greatest relative gain in value of products during the decade was for food preparations, 491.1 per cent, followed by butter, cheese, and condensed milk, with 283 per cent.

COMPARATIVE SUMMARY FOR THE MINNEAPOLIS-ST. PAUL METROPOLITAN DISTRICT, BY SELECTED INDUSTRIES: 1909, 1904, AND 1899.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.			WAGE EARNERS (AVERAGE NUMBER).			VALUE OF PRODUCTS.			PER CENT OF INCREASE. <sup>1</sup>								
	1909	1904	1899	1909	1904	1899	1909	1904	1899	Number of establishments.			Wage earners (average number).			Value of products.		
										1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904
Flour-mill and gristmill products....	13	12	11	2,279	2,227	2,036	\$78,669,808	\$82,754,446	\$49,669,618	18.2	8.3	9.1	10.3	2.3	7.8	58.4	25.4	26.3
Slaughtering and meat packing.....	16	16	7	1,434	109	89	19,819,223	1,186,256	1,288,484	128.6	.....	128.6	.....	1,215.6	.....	1,438.2	1,570.7	-7.9
Lumber and timber products.....	51	49	39	5,649	5,324	5,715	13,186,892	11,969,297	15,576,737	30.8	4.1	25.6	-1.2	6.1	-6.8	-15.3	10.2	-23.2
Foundry and machine-shop products.	144	103	(*)	4,784	3,198	(*)	12,394,257	7,792,439	(*)	.....	39.8	.....	.....	49.6	.....	.....	59.1	.....
Printing and publishing.....	329	303	266	3,840	3,059	2,767	12,298,881	8,654,736	6,271,356	23.7	8.6	13.9	38.8	25.5	10.6	96.1	42.1	38.0
Newspapers and periodicals....	120	139	124	1,710	1,228	1,489	7,598,366	5,159,432	4,053,462	-3.2	-13.7	12.1	14.8	39.5	-17.7	87.5	47.3	27.3
Book and job.....	178	143	120	1,791	1,579	943	4,053,347	3,063,893	1,694,748	43.3	24.5	19.2	89.9	13.4	67.4	139.2	32.3	80.8
All other printing and publishing industries <sup>5</sup> .....	31	21	22	339	254	335	647,168	431,411	523,146	40.9	47.0	-4.5	1.2	33.5	-24.2	23.7	50.0	-17.5
Cars and general shop construction and repairs by steam-railroad companies.....	10	7	11	4,982	3,459	2,669	7,949,016	4,372,590	3,637,325	-9.1	42.8	-36.4	86.7	44.0	29.6	118.5	81.8	20.2
Liquors, malt.....	7	10	11	1,070	632	470	7,081,277	3,869,531	2,843,013	-36.4	-30.0	-9.1	127.7	69.3	34.5	149.1	83.0	36.1
Boots and shoes, including cut stock and findings.....	9	10	9	2,018	1,470	1,596	5,144,543	2,839,425	2,654,006	.....	-10.0	11.1	26.4	37.3	-7.9	93.8	81.2	7.0
Bread and other bakery products....	169	111	102	1,264	1,026	744	4,973,477	3,531,280	2,163,157	65.7	52.3	8.8	69.9	23.2	37.9	129.9	40.8	63.2
Food preparations.....	25	14	17	380	261	183	3,723,829	1,471,051	630,004	47.1	78.6	-17.6	107.6	45.6	42.6	491.1	153.1	133.5
Fur goods.....	31	26	18	995	1,177	730	3,020,482	3,253,105	1,940,188	72.2	19.2	44.4	36.3	-15.5	61.2	86.0	11.3	67.7
Clothing, men's, including shirts.....	30	22	31	1,690	1,315	1,820	3,528,281	2,328,879	2,303,224	-3.2	36.4	-29.0	-7.1	28.5	-27.7	53.2	61.5	1.1
Furniture and refrigerators.....	42	36	23	1,264	1,064	792	2,940,460	1,965,257	1,382,825	82.6	16.7	56.5	59.6	18.8	34.3	112.6	49.6	42.1
Butter, cheese, and condensed milk..	13	16	20	77	71	72	2,794,601	711,566	729,633	-35.0	-18.8	-20.0	.....	.....	.....	283.0	292.7	-2.5
Copper, tin, and sheet-iron products.	78	53	40	914	791	740	2,220,929	1,647,725	1,583,960	95.0	34.5	45.0	23.5	15.5	6.9	40.2	34.8	4.0
Patent medicines and compounds and druggists' preparations.....	77	52	33	294	223	119	2,119,126	2,232,368	663,612	133.3	48.1	57.6	147.1	31.8	87.4	219.3	-5.1	236.4
Tobacco manufactures.....	109	115	106	904	1,012	902	2,002,089	1,813,885	1,415,247	2.8	-5.2	8.5	0.2	-10.7	12.2	41.5	10.4	28.2

<sup>1</sup> A minus sign (-) denotes decrease. Percentages not shown where base is less than 100 for wage earners.

<sup>2</sup> Excluding statistics for two establishments, to avoid disclosure of individual operations.

<sup>3</sup> Excluding statistics for one establishment, to avoid disclosure of individual operations.

<sup>4</sup> Comparable figures not available.

<sup>5</sup> Includes "printing and publishing, music;" "bookbinding and blank making;" "engraving, steel and copper plates, including plate printing;" and "lithographing."

## SAN FRANCISCO-OAKLAND METROPOLITAN DISTRICT.

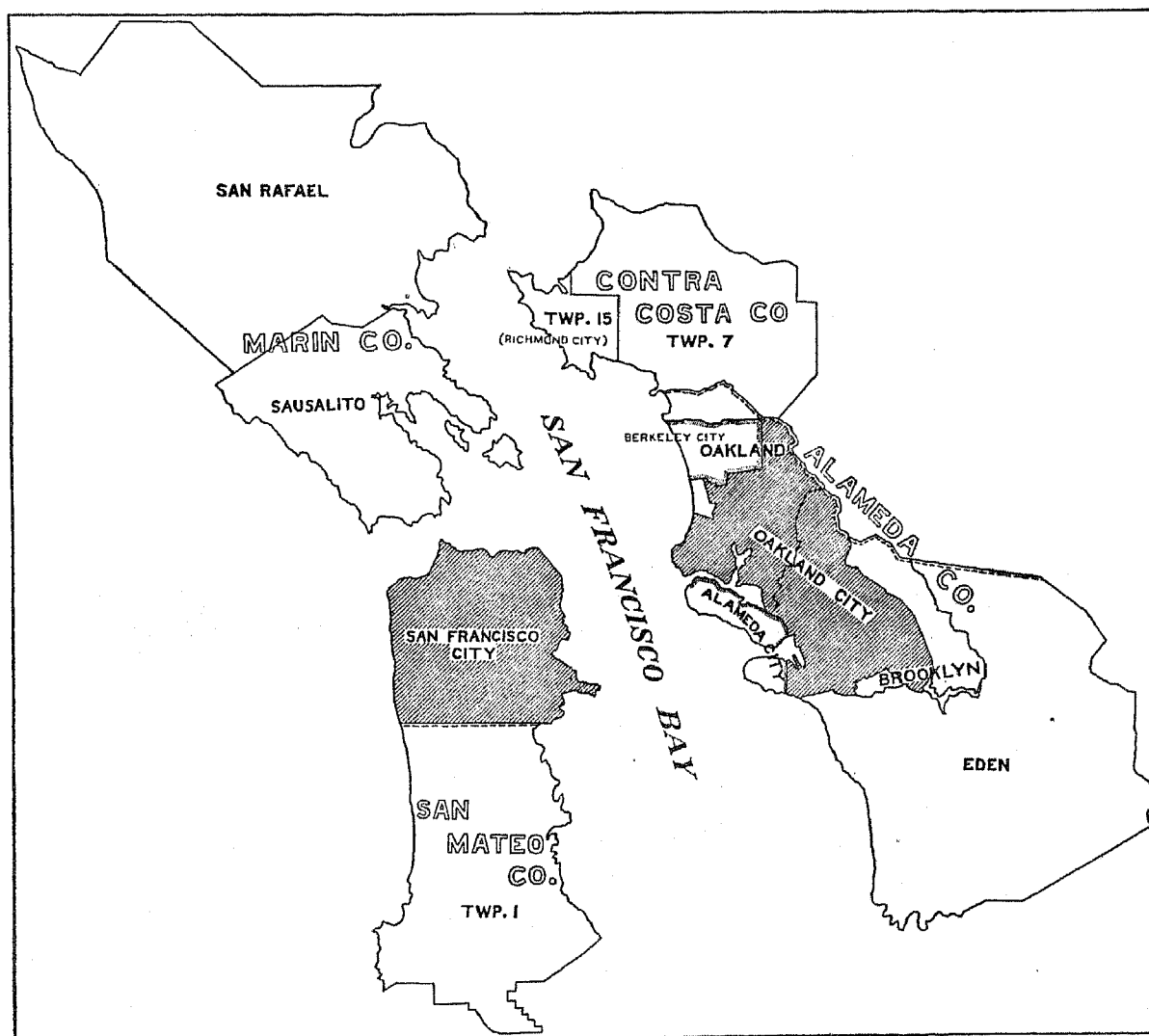
**Territory included.**—The San Francisco-Oakland metropolitan district embraces 289,381 acres of territory, of which 29,760 acres constitute the area of San Francisco, 29,248 acres the area of Oakland, and 230,373 acres the area of the outside territory. The population of the city of San Francisco in 1910 was 416,912, that of the city of Oakland 150,174, and that of the outside territory 119,787, the total for the district being 686,873.

As defined at the census of 1910, the metropolitan district comprised, in addition to the cities of San Francisco and Oakland, Alameda and Berkeley, with that part of Brooklyn township not included in Oak-

land city, and that part of Oakland township not included in Oakland and Berkeley; Eden township in Alameda County; townships 7 and 15 in Contra Costa County; San Rafael and Sausalito townships in Marin County; and township 1 in San Mateo County. The industrial district as constituted for the bulletin on industrial districts for 1904 and 1899 did not embrace Eden township in Alameda County or the townships in Contra Costa County and Marin County, but, in addition to the places mentioned, included part of township 2 of San Mateo County, including San Mateo city.

The following is an outline map of the metropolitan district as constituted in 1909:

SAN FRANCISCO-OAKLAND METROPOLITAN DISTRICT: 1909.



**Summary for the district.**—Table 61 is a summary for 1909 of the statistics of manufacturing industries, with a statement of the population in 1910, for the San

Francisco-Oakland district; for the cities of San Francisco, Oakland, Alameda, and Berkeley; and for the remainder of the district. The percentages which

the figures for San Francisco and Oakland separately represent of the total for the district are shown in the case of each item.

In 1909 the San Francisco-Oakland metropolitan district had 2,539 manufacturing establishments, which gave employment to an average of 53,177 persons during the year and paid out \$43,298,791 in salaries and wages. Of the persons employed, 41,615

were wage earners. These establishments turned out products to the value of \$199,593,117, to produce which materials costing \$117,440,976 were utilized. The value added by manufacture was thus \$82,152,141. The San Francisco-Oakland district ranked thirteenth in 1909 among the metropolitan districts discussed in this report in the value of its manufactured products.

Table 61

	NUMBER OR AMOUNT.							PER CENT OF TOTAL FOR DISTRICT.	
	The district.	San Francisco.	Oakland.	District exclusive of San Francisco-Oakland.				San Francisco.	Oakland.
				Total.	Alameda.	Berkeley.	Remainder.		
Population <sup>1</sup> .....	686,873	416,912	150,174	119,787	23,383	40,434	55,970	60.7	21.9
Number of establishments.....	2,539	1,796	441	302	51	84	167	70.7	17.4
Persons engaged in manufactures.....	53,177	36,910	8,538	7,729	1,076	1,420	5,233	69.4	16.1
Proprietors and firm members.....	3,390	2,544	554	292	50	115	127	75.0	15.3
Salaried employees.....	8,172	6,122	1,079	971	111	221	639	74.9	13.2
Wage earners (average number).....	41,615	28,244	6,905	6,466	915	1,084	4,467	67.9	16.6
Primary horsepower.....	81,821	49,934	13,683	18,204	1,526	2,433	14,245	61.0	16.7
Capital.....	\$187,701,402	\$133,823,673	\$19,113,246	\$34,764,483	\$3,002,220	\$3,464,693	\$28,297,570	71.3	10.2
Expenses.....	178,793,979	119,782,203	20,559,203	38,452,573	2,307,413	4,134,822	32,016,338	67.0	11.5
Services.....	43,298,791	30,467,015	6,617,538	6,214,238	967,839	1,094,255	4,152,144	70.4	15.3
Salaries.....	10,786,718	8,085,568	1,800,297	1,400,858	170,892	254,292	975,674	75.0	12.1
Wages.....	32,512,073	22,381,452	5,317,241	4,813,380	796,047	839,963	3,176,470	68.8	16.4
Materials.....	117,440,976	70,217,321	11,847,233	29,376,422	929,353	2,686,878	25,766,191	64.9	10.1
Miscellaneous.....	18,054,212	13,097,867	2,094,432	2,861,913	410,221	353,689	2,098,003	62.5	11.6
Value of products.....	199,593,117	133,041,069	22,342,926	44,209,122	2,554,417	4,435,374	37,218,331	66.7	11.2
Value added by manufacture.....	82,152,141	56,823,748	10,495,693	14,832,700	1,625,064	1,748,496	11,450,140	69.2	12.8

<sup>1</sup> April 15, 1910.

The greater part of the value of the manufactured products of the district was reported by factories within the central cities. San Francisco and Oakland combined contained over four-fifths (82.6 per cent) of the population of the district of which they are the manufacturing, commercial, and financial center, and contributed nearly eight-tenths (77.9 per cent) of the value of products. Their manufacturing establishments constituted 88.1 per cent of all in the district and gave employment to 84.5 per cent of the average number of wage earners for that area.

Of the two cities outside of San Francisco and Oakland for which statistics are given separately, Berkeley had the larger value of products, representing 2.2 per cent of the total for the metropolitan district. The population of Berkeley formed 5.9 per cent of the total for the district.

The average value of products per establishment was larger for San Francisco than for any other city of the district.

The group of eight townships or parts of townships not shown separately, with a combined population equal to 8.1 per cent of the total for the district, contributed 18.6 per cent of the value of the products.

The principal industries of San Francisco in 1909, as measured by value of products, were the refining of sugar, printing and publishing, slaughtering and meat packing, and foundries and machine shops; of Oakland, the lumber industry, and foundries and machine shops;

of Alameda, shipbuilding; and of Berkeley, foundries and machine shops.

Comparison with earlier censuses.—Table 62 is a comparative summary for the statistics for the San Francisco-Oakland district as a whole for 1909, 1904, and 1899, together with the percentages of increase from census to census.

For purposes of accurate comparison the statistics for 1909 have been adjusted by segregating the figures for the territory added since 1904; and those for 1904 by segregating the figures for the territory deducted since 1904. The figures for 1899, however, as published in the report for 1904, are not affected except as to population, no manufactures being reported for 1899 from the deducted territory.

The percentage of increase in all items shown, except capital and cost of materials, was greater during the earlier five-year period, 1899-1904, than during the period 1904-1909. The percentages of increase during the decade, 1899-1909, were much larger in salaries, miscellaneous expenses, capital, and number of salaried employees than in any other items. The average number of wage earners increased only 9.8 per cent during this period, but the amount paid for wages increased 62.9 per cent, a rate of gain approximately equal to that in value of products—65.9 per cent. The rate of increase in primary horsepower of all kinds from 1904 to 1909 was 50.5 per cent. Statistics as to the power used in 1899 are not available.

**Table 62**

	1909			1904			1899	PER CENT OF INCREASE. <sup>1</sup>		
	Total.	Territory added since 1904.	Remainder of district. <sup>2</sup>	Total.	Territory deducted since 1904.	Remainder of district. <sup>2</sup>	Total.	1899-1909	1904-1909	1899-1904
Population.....	* 586, 873	* 41,065	* 645, 807	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	* 450, 549	43.3	.....	.....
Number of establishments.....	2, 539	29	2, 510	2, 621	5	2, 616	2, 016	24.5	-4.1	29.8
Persons engaged in manufactures.....	53, 177	664	52, 513	54, 256	44	54, 212	( <sup>5</sup> )	.....	-3.3	.....
Proprietors and firm members.....	3, 390	17	3, 373	3, 373	8	3, 365	( <sup>5</sup> )	.....	0.2	.....
Salaried employees.....	8, 172	63	8, 104	6, 008	3	6, 005	3, 801	113.2	35.0	58.0
Wage earners (average number).....	41, 615	579	41, 036	44, 875	33	44, 842	37, 390	9.8	-8.5	19.9
Primary horsepower.....	81, 821	893	80, 928	53, 772	.....	53, 772	( <sup>5</sup> )	.....	50.6	.....
Capital.....	\$187, 701, 402	\$2, 155, 186	\$185, 546, 216	\$119, 442, 595	\$40, 300	\$119, 396, 095	\$79, 054, 236	134.7	55.4	51.0
Expenses.....	178, 793, 979	1, 604, 362	177, 189, 617	139, 048, 227	62, 960	138, 985, 267	104, 231, 107	70.0	27.5	33.1
Services.....	43, 296, 791	443, 947	42, 854, 844	36, 432, 676	32, 529	36, 400, 147	24, 098, 021	77.7	17.7	51.3
Salaries.....	10, 786, 718	107, 598	10, 679, 120	7, 525, 931	2, 250	7, 523, 681	4, 348, 075	145.5	41.0	73.0
Wages.....	32, 512, 073	336, 349	32, 175, 724	28, 906, 745	30, 279	28, 876, 466	19, 748, 946	62.9	11.4	46.2
Materials.....	117, 440, 976	927, 782	116, 513, 194	88, 554, 355	24, 318	88, 530, 037	72, 746, 695	60.2	31.6	21.7
Miscellaneous.....	16, 054, 212	232, 638	15, 821, 574	14, 061, 196	6, 113	14, 055, 083	7, 386, 391	141.3	26.8	90.3
Value of products.....	199, 598, 117	1, 781, 458	197, 816, 659	159, 039, 080	75, 857	158, 967, 223	119, 240, 348	85.9	24.4	33.3
Value added by manufacture.....	82, 152, 141	853, 076	81, 299, 065	70, 473, 725	51, 539	70, 427, 186	46, 493, 653	74.9	15.4	51.5

<sup>1</sup> A minus sign (-) denotes decrease.  
<sup>2</sup> Figures in this column used in computing percentages of increase.  
<sup>3</sup> April 15, 1910.  
<sup>4</sup> No population census in 1905.  
<sup>5</sup> June 1, 1900. Excluding Township 2 of San Mateo County, not a part of the district in 1909; no manufactures were reported from this township.  
<sup>6</sup> Figures not available.

The proportions which the population and the statistics of manufacturing industries in the territory outside the central cities, but within the area comprised in the district, represent of the total for that area are shown in Table 63. The percentages for 1909 are based upon the figures for the district exclusive of the territory added since 1904, and those for 1904 and 1899 upon the figures for the district exclusive of the territory subsequently deducted.

**Table 63**

	PER CENT TERRITORY OUTSIDE OF SAN FRANCISCO AND OAKLAND IS OF TOTAL FOR DISTRICT.		
	1909 <sup>1</sup>	1904 <sup>2</sup>	1899 <sup>2</sup>
Population.....	12.2	( <sup>3</sup> )	9.1
Number of establishments.....	10.9	4.4	3.6
Persons engaged in manufactures.....	13.5	6.6	( <sup>4</sup> )
Proprietors and firm members.....	8.2	2.4	( <sup>4</sup> )
Salaried employees.....	11.1	7.1	3.3
Wage earners (average number).....	14.3	6.8	6.3
Primary horsepower.....	21.4	7.7	( <sup>4</sup> )
Capital.....	17.6	6.6	5.4
Expenses.....	20.8	8.1	5.9
Services.....	13.5	6.2	6.0
Salaries.....	12.1	6.4	4.0
Wages.....	13.9	6.2	6.5
Materials.....	24.4	9.3	6.2
Miscellaneous.....	14.8	5.1	2.9
Value of products.....	21.4	7.6	5.7
Value added by manufacture.....	17.2	5.5	5.0

<sup>1</sup> Based on figures for district as constituted in 1909, exclusive of territory added since 1904.  
<sup>2</sup> Based on figures for district as constituted in 1904, exclusive of territory deducted since 1904.  
<sup>3</sup> No population census in 1905.  
<sup>4</sup> Figures not available.

The proportion of the population of the district as originally constituted that was reported for the terri-

tory outside of San Francisco and Oakland increased from 9.1 per cent in 1900 to 12.2 per cent in 1910, and the proportion of the value of products of the district that was contributed by the outlying territory increased steadily from 5.7 per cent in 1899 to 7.6 per cent in 1904, and 21.4 per cent in 1909. The great increase of the manufacturing activities in the outside area shown for the period 1904-1909 was due in part to the earthquake and fire in San Francisco in 1906.

**Leading industries.**—Table 64 gives statistics for 1909 for the industries of the district having products valued at \$500,000 or more, so far as separate figures can be presented.

Among the 38 industries shown separately in the table there are 6 for which totals for the district can not be published, because to do so would disclose individual operations; the statistics shown are for San Francisco exclusively. Four industries were not carried on in the part of the district outside the corporate limits of San Francisco-Oakland.

Of the industries shown separately, slaughtering and meat packing ranked highest in value of products, with 10.1 per cent of the total reported for all industries in the district, followed by printing and publishing with 7.1 per cent, and foundries and machine shops with 6.4 per cent. Three industries—canning and preserving and the lumber and bakery industries—each contributed 3.8 per cent of the total value of manufactured products for the district.



## MANUFACTURES.

SUMMARY FOR THE SAN FRANCISCO-OAKLAND METROPOLITAN DISTRICT, BY INDUSTRIES: 1909.

INDUSTRY.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Miscellaneous expenses.	Value of products.	Value added by manufacture.
		Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).								
<b>All industries.....</b>	<b>2,539</b>	<b>53,177</b>	<b>3,390</b>	<b>8,172</b>	<b>41,615</b>	<b>81,821</b>	<b>\$187,701,402</b>	<b>\$10,786,718</b>	<b>\$32,512,073</b>	<b>\$117,440,976</b>	<b>\$18,054,212</b>	<b>\$199,593,117</b>	<b>\$82,152,141</b>
Boots and shoes, including cut stock and findings.....	18	425	73	31	321	131	672,102	35,632	203,853	552,976	65,039	976,361	423,385
Bread and other bakery products.....	275	2,412	396	296	1,720	1,072	4,309,777	316,482	1,437,204	4,315,532	524,608	7,562,415	3,246,883
Butter, cheese, and condensed milk.....	13	107	13	24	70	87	232,464	33,940	48,866	794,610	29,115	951,108	156,498
Canning and preserving.....	34	2,238	19	204	2,015	1,283	6,005,636	336,093	874,433	5,271,293	539,521	7,655,728	2,384,435
Carriages and wagons and materials.....	50	386	58	41	287	457	575,353	45,470	246,763	265,511	79,960	739,594	474,083
Cars and general shop construction and repairs by steam-railroad companies.....	5	2,149	.....	69	2,080	1,662	1,058,406	86,414	1,873,033	2,367,923	76,408	4,403,781	2,035,858
Chemicals.....	10	210	2	37	171	1,063	2,023,781	52,946	127,426	678,109	141,533	1,134,647	456,538
Clothing, men's, including shirts.....	54	2,051	252	140	1,659	390	1,747,342	132,644	755,629	2,164,598	380,012	3,812,513	1,647,915
Clothing, women's.....	51	994	296	69	629	95	501,035	73,395	277,756	719,824	117,067	1,347,079	627,255
Coffee and spice, roasting and grinding.....	19	402	13	254	225	775	2,440,324	427,071	152,607	3,548,908	521,158	4,972,739	1,423,831
Confectionery.....	36	878	44	177	657	358	1,386,567	185,043	308,192	1,115,962	255,220	2,066,460	950,507
Cooperage and wooden goods, not elsewhere specified.....	11	321	8	31	282	861	1,196,560	53,246	219,538	1,104,378	79,011	1,603,925	400,547
Copper, tin, and sheet-iron products.....	87	1,493	152	167	1,174	1,077	5,786,774	237,321	1,034,531	2,290,563	325,267	4,309,247	2,018,684
Fertilizers.....	3	94	.....	13	81	420	885,985	20,726	56,656	785,645	34,146	1,044,344	154,609
Firearms and ammunition.....	3	176	.....	29	147	305	1,483,834	47,300	79,011	477,302	46,361	783,264	305,962
Flour-mill and gristmill products.....	12	224	6	75	143	1,453	1,855,397	104,337	127,845	3,015,867	91,959	3,472,314	456,447
Food preparations.....	41	574	77	126	371	950	2,045,085	146,399	218,531	1,830,812	220,191	2,689,200	858,388
Foundry and machine-shop products.....	214	4,840	173	697	3,970	8,692	14,788,833	982,681	3,759,659	6,262,648	1,118,188	12,833,346	6,570,698
Furnishing goods, men's.....	13	109	4	28	77	3	241,064	20,510	42,650	368,386	56,789	564,368	195,982
Furniture and refrigerators.....	60	1,362	58	134	1,170	1,418	2,318,559	155,460	1,115,600	1,416,107	284,128	3,310,394	1,894,287
Gas and electric fixtures and lamps and reflectors.....	18	451	13	103	335	279	1,160,465	116,567	267,809	442,287	47,962	655,799	513,512
Gas, illuminating and heating.....	8	1,081	.....	348	733	2,670	23,076,810	428,277	683,089	1,368,099	868,880	4,473,761	3,105,662
Gloves and mittens, leather.....	14	377	16	62	299	29	684,496	72,128	159,214	318,628	56,275	675,328	356,700
Jewelry.....	124	587	125	32	430	248	221,460	36,937	366,894	501,922	107,477	1,121,151	619,229
Leather goods.....	23	370	20	61	299	173	740,730	55,628	212,008	371,130	91,676	886,615	515,485
Leather, tanned, curried, and finished.....	17	619	15	46	558	1,260	2,479,329	88,908	415,217	2,654,645	128,955	3,622,171	967,526
Liquors, malt.....	28	682	8	128	546	2,467	8,498,806	263,877	329,550	1,107,819	1,043,408	4,345,015	3,237,796
Lumber and timber products.....	124	2,996	88	316	2,592	11,116	5,438,090	403,348	2,367,874	3,917,645	492,307	7,575,745	3,658,100
Marble and stone work.....	32	679	34	105	540	1,400	1,317,191	146,134	459,854	844,245	197,611	1,770,134	934,889
Mattresses and spring beds.....	19	398	13	72	313	438	894,635	93,974	208,008	665,489	180,375	1,221,708	556,309
Oil, not elsewhere specified.....	5	101	10	17	74	279	658,065	21,745	54,009	1,010,529	38,027	1,173,865	163,336
Paint and varnish.....	21	427	8	82	337	1,013	2,058,808	113,770	227,626	2,074,346	116,865	2,947,017	873,271
Patent medicines and compounds and druggists' preparations.....	34	362	14	164	184	145	702,645	173,827	89,782	422,087	241,484	1,094,201	672,204
Printing and publishing.....	416	6,154	358	1,872	3,924	4,191	8,619,796	2,208,569	3,642,201	3,577,030	2,787,419	14,153,964	10,576,934
Shipbuilding, including boat building.....	23	1,759	22	97	1,640	2,457	7,846,946	174,263	1,405,652	1,031,730	789,925	3,594,350	2,562,020
Slaughtering and meat packing.....	43	1,063	56	100	817	2,080	5,969,267	288,306	485,929	16,918,049	539,741	20,203,050	3,285,001
Soap.....	11	108	12	24	72	290	489,166	41,121	56,526	554,581	79,610	827,020	272,439
Tobacco manufactures.....	130	1,314	376	79	859	71	956,893	91,854	479,498	698,056	434,911	2,043,154	1,344,498
All other industries.....	560	12,114	558	1,742	9,814	28,613	64,323,476	2,414,375	7,341,550	39,528,105	4,230,554	60,769,853	21,244,748

<sup>1</sup> Excluding statistics for establishments located outside of the corporate limits of San Francisco, to avoid disclosure of individual operations. The figures for these establishments are included under the head of "All other industries."

Comparative summary, by industries.—The number of establishments, average number of wage earners, and value of products for such of the industries as can be shown separately and had products valued at \$2,000,000 or more in 1909 are given in Table 65 for 1909, 1904, and 1899.

COMPARATIVE SUMMARY FOR THE SAN FRANCISCO-OAKLAND METROPOLITAN DISTRICT, BY SELECTED INDUSTRIES: 1909, 1904, AND 1899.

INDUSTRY.	NUMBER OF ESTABLISHMENTS.			WAGE EARNERS (AVERAGE NUMBER).			VALUE OF PRODUCTS.			PER CENT OF INCREASE. <sup>1</sup>								
										Number of establishments.			Wage earners (average number).			Value of products.		
	1909	1904	1899	1909	1904	1899	1909	1904	1899	1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904
Slaughtering and meat packing.....	43	50	34	817	707	290	\$20,203,050	\$15,700,661	\$8,769,769	26.5	-14.0	47.1	181.7	15.6	143.8	130.4	28.7	79.0
Printing and publishing.....	416	420	280	3,924	4,016	2,968	14,153,964	11,781,800	6,895,670	48.6	-1.0	50.0	32.2	-2.3	35.3	105.3	20.1	70.9
Newspapers and periodicals.....	167	198	129	1,294	1,363	1,210	7,847,650	6,172,339	3,983,969	29.5	-15.7	53.5	6.9	-5.1	12.6	97.0	27.1	54.9
Book and job.....	219	188	125	1,577	1,770	1,232	4,478,321	4,032,202	2,103,096	75.2	17.7	48.8	52.4	6.0	43.7	112.9	10.5	92.7
All other printing and publishing industries <sup>2</sup> .....	30	36	26	753	883	526	1,827,993	1,557,259	808,603	15.4	-16.7	38.5	43.2	-14.7	67.9	126.1	17.4	92.6
Foundry and machine-shop products.....	214	187	( <sup>3</sup> )	3,970	4,126	( <sup>3</sup> )	12,833,346	10,949,163	( <sup>3</sup> )	.....	14.4	.....	.....	-3.8	.....	.....	17.2	.....
Canning and preserving.....	34	41	37	2,015	1,765	1,667	7,655,728	5,111,865	3,530,713	-8.1	-17.1	10.8	20.9	14.2	5.9	116.8	49.8	44.8
Lumber and timber products.....	124	85	54	2,592	2,157	1,377	7,575,745	5,838,293	3,154,870	129.6	45.9	57.4	88.2	20.2	56.6	140.1	29.8	85.1
Bread and other bakery products.....	275	235	169	1,720	1,615	933	7,562,415	5,809,937	2,963,219	62.7	17.0	39.1	84.4	6.5	73.1	155.2	30.2	96.1
Clothing.....	105	132	149	2,288	3,361	4,016	5,159,592	6,437,287	6,284,007	-29.5	-20.5	-11.4	-43.0	-31.9	-16.3	-17.9	-19.8	2.4
Men's, including shirts.....	54	64	95	1,650	2,438	2,740	3,812,513	4,804,404	4,350,176	-43.2	-35.7	-11.6	-39.5	-32.0	-11.0	-12.4	-20.0	10.4
Women's.....	51	48	54	629	923	1,276	1,347,079	1,632,883	1,933,831	-5.6	0.3	-11.1	-50.7	-31.9	-27.7	-30.3	-17.5	-15.6
Coffee and spice, roasting and grinding.....	19	25	22	225	275	231	4,972,739	3,979,865	2,766,387	-13.6	-24.0	13.6	-2.6	-18.2	19.0	79.8	24.9	43.9
Gas, illuminating and heating.....	8	3	4	733	575	509	4,473,761	3,248,456	2,222,405	100.0	166.7	.....	44.0	27.5	13.0	101.3	37.7	46.2
Liquors, malt.....	28	28	31	546	618	481	4,345,615	4,385,809	3,108,997	-9.7	.....	-9.7	13.5	-11.7	28.5	39.8	-0.9	41.1
Copper, tin, and sheet-iron products.....	87	54	30	1,174	1,526	1,434	4,309,247	4,768,565	4,427,147	190.0	61.1	80.0	-18.1	-23.1	6.4	-2.7	-9.6	7.7
Leather, tanned, curried, and finished.....	17	24	26	558	638	621	3,622,171	2,937,510	3,066,355	-34.6	-29.2	-7.7	-10.1	-12.5	2.7	18.1	23.3	-4.2
Shipbuilding, including boat building.....	23	28	28	1,640	3,720	3,346	3,594,350	6,381,332	6,189,520	-17.9	-17.9	.....	-51.0	-55.9	11.2	-43.9	-43.7	3.1
Flour-mill and gristmill products.....	12	13	11	143	248	202	3,472,314	3,832,041	2,164,112	9.1	-7.7	-18.2	-29.2	-42.3	22.8	60.4	-9.9	78.0
Furniture and refrigerators.....	60	49	22	1,170	842	496	3,310,304	1,899,576	880,363	172.7	22.4	122.7	135.9	39.0	69.8	276.0	74.3	115.8
Paint and varnish.....	21	13	9	337	271	36	2,947,617	2,196,656	447,019	133.3	61.5	44.4	.....	24.4	.....	558.5	34.2	390.7
Food preparations.....	41	43	28	371	266	219	2,689,200	1,024,058	749,895	46.4	-4.7	53.6	69.4	39.5	21.5	260.0	162.6	37.1
Confectionery.....	36	44	14	657	702	378	2,066,469	1,932,036	844,825	157.1	-18.2	214.3	73.8	-6.4	85.7	144.6	3.7	135.8
Tobacco manufactures.....	130	199	124	859	1,300	997	2,043,154	2,159,650	1,416,599	4.8	34.7	60.5	-13.8	-33.9	30.4	44.2	-5.4	52.4

<sup>1</sup> A minus sign (-) denotes decrease.  
<sup>2</sup> Excluding statistics for two establishments, to avoid disclosure of individual operations.  
<sup>3</sup> Includes "printing and publishing, music;" "bookbinding and blank-book making;" "engraving, steel and copper plate, including plate printing;" and "lithographing."  
<sup>4</sup> Comparable figures not available.  
<sup>5</sup> Excluding statistics for one establishment, to avoid disclosure of individual operations.

The greatest absolute increase in value of products during the decade in the area under consideration, \$11,433,281, or 130.4 per cent, is shown for slaughtering and meat packing. The greatest relative increase shown for any of the industries included in the tables was reported for the manufacture of paint and var-

nish—558.5 per cent. Among the important industries that can not be shown separately, as to do so would disclose the operations of individual establishments, are the refining of sugar and of petroleum and the manufacture of explosives and of paper bags.

