

MICHIGAN.

GENERAL STATISTICS.

General character of the state.—Michigan was admitted to the Union as a state in 1837. With a gross area of 57,980 square miles, of which 500 represent water surface, it ranks twenty-second in size among the states. Its inhabitants in 1900 numbered 2,420,982 and in 1910, 2,810,173, and the estimated population in 1914 was 2,976,030. In total population Michigan ranked eighth among the states in 1910, and in density of population it ranked seventeenth, with 48.9 inhabitants per square mile, the corresponding figure for 1900 being 42.1.

The urban population of the state in 1910—that is, the population residing in incorporated places having 2,500 inhabitants or more—was 1,327,044, or 47.2 per cent of the total, as against 39.3 per cent in 1900.

There were in the state in 1914, 3 cities having an estimated population of more than 50,000 each, namely, Detroit, 537,650; Grand Rapids, 123,227; and Saginaw, 53,988. There were also 24 cities each having an estimated population of more than 10,000 but less than 50,000. These 27 cities, whose aggregate population in 1914 formed 40.4 per cent of the estimated total population of the state, reported 64.3 per cent of the state's manufactured products.

The transportation facilities of the state, both by rail and by water, are excellent. The steam-railway mileage in 1914, as reported by the Interstate Commerce Commission, was 8,934, and the length of road of electric railways was 1,396 miles in 1912 (the latest year for which statistics are available). In addition, four of the Great Lakes, which nearly surround the state, form an important factor in the transportation system, furnishing, with canals, a direct water outlet to the Atlantic seaboard.

The total value of farm crops in 1909 was \$162,004,681, of which 51 per cent (\$82,613,296)

represented grain and seeds, and 22.2 per cent (\$36,040,087) hay and forage. The total value of domestic animals on farms was \$131,746,348, of which 30.7 per cent (\$40,500,318) represented cattle and 54.1 per cent (\$71,312,474) horses.

The total mineral production of the state in 1914, according to the annual report of the United States Geological Survey, was valued at \$57,732,447, the principal products being copper ore, \$21,857,759, and iron ore, \$18,722,358. In that year Michigan ranked second among the states in the production of iron ore and third in copper, with 26 per cent and 14.3 per cent, respectively, of the total values reported for the United States.

Importance and growth of manufactures.—The manufactured products of Michigan in 1914 were valued at \$1,086,162,432; the average number of wage earners employed in its manufacturing industries was 271,090 (9.1 per cent of the total population of the state); and the value added by manufacture, which is the best measure of the importance of a manufacturing industry, amounted to \$493,361,368. The proportion which the manufactures of the state represented of the total value of products in the United States increased from 2.8 per cent in 1899 to 3.3 per cent in 1909 and to 4.5 per cent in 1914. The growing industrial importance of Michigan is indicated by the fact that in value of manufactured products it has advanced from ninth place among the states in 1899 to eighth in 1904 and to seventh in 1914.

Table 1 summarizes the more important data relative to all classes of manufactures combined in the state of Michigan for the censuses of 1914, 1909, 1904, and 1899, and gives the percentages of increase from census to census.

	MANUFACTURING INDUSTRIES.				PER CENT OF INCREASE. ¹		
	1914	1909	1904	1899	1909-1914	1904-1909	1899-1904
Number of establishments.....	8,724	9,159	7,448	7,310	-4.7	23.0	1.9
Persons engaged.....	320,611	271,071	200,196	(?)	18.3	35.4	.....
Proprietors and firm members.....	7,725	8,965	7,732	(?)	-13.8	18.9	.....
Salaried employees.....	41,796	30,607	17,235	13,350	36.6	77.6	20.1
Wage earners (average number).....	271,090	231,499	175,229	155,800	17.1	32.1	12.5
Primary horsepower.....	764,183	598,288	440,890	368,497	27.7	35.7	19.6
Capital.....	\$369,143,114	\$553,946,965	\$337,894,102	\$246,996,529	48.8	72.8	31.9
Salaries and wages.....	250,524,979	153,838,014	98,749,270	74,867,780	62.8	55.8	41.6
Salaries.....	68,272,695	34,870,214	17,470,433	12,335,974	95.8	99.6	46.4
Wages.....	182,252,284	118,967,800	81,278,837	62,531,812	53.2	46.4	30.0
Paid for contract work.....	7,973,706	3,397,011	4,475,051	(?)	131.7	-24.1	.....
Rent and taxes (including internal revenue).....	18,481,171	11,757,457	4,072,474	(?)	57.2	.....	.....
Cost of materials.....	592,801,064	368,612,022	230,080,931	175,966,128	60.8	60.2	30.8
Value of products.....	1,086,162,432	635,109,169	429,120,060	319,691,856	58.5	59.7	34.2
Value added by manufacture (value of products less cost of materials).....	493,361,368	316,497,147	199,039,129	143,725,728	55.9	59.0	38.5

¹ A minus sign (-) denotes decrease.

² Figures not available.

³ Exclusive of internal revenue.

During the 15 years covered by Table 1, the capital invested in manufacturing industries and the value of manufactured products more than trebled, and marked increases are shown for most of the items for which figures are given.

This table brings out the fact that the manufacturing industries of Michigan, as a whole, developed to a greater extent during each of the two more recent five-year periods, 1904-1909 and 1909-1914, than during the period 1899-1904. The increase in value of products in 1914 over 1909 was \$401,053,263, or 58.5 per cent, which was more than the total value of products for the state as reported at any census prior to 1904. During the period 1909-1914 the number of establishments decreased by 435, or 4.7 per cent, and the number of proprietors and firm members, by 1,240, or 13.8 per cent. The decrease in the number of establishments may be largely accounted for by

the decrease in the establishments engaged in the lumber and timber and flour-mill and gristmill industries, which also affects the number of proprietors and firm members, as these industries were principally in small mills under individual or partnership forms of ownership. The decrease in proprietors and firm members may also be due to changes in character of ownership, as shown in Table 16.

The amount paid for contract work in 1914 was more than double the amount reported for 1909. The increase was due largely to the changes in the methods employed in conducting the various manufacturing industries, and was most noticeable in the automobile industry.

Table 2 shows the relative importance of the leading manufacturing industries in 1914, and gives percentages of increase for the three five-year periods from 1899 to 1914.

INDUSTRY.	CENSUS OF 1914.						PER CENT OF INCREASE. ¹									
	Number of establishments.	Wage earners.		Value of products.		Value added by manufacture.		Wage earners (average number).			Value of products.			Value added by manufacture.		
		Average number.	Per cent distribution.	Amount.	Per cent distribution.	Amount.	Per cent distribution.	1909-1914	1904-1909	1899-1904	1909-1914	1904-1909	1899-1904	1909-1914	1904-1909	1899-1904
All industries.....	8,721	271,090	100.0	\$1,086,162,432	100.0	\$493,361,368	100.0	17.1	32.1	12.5	58.5	59.7	34.2	55.9	59.0	38.5
Automobiles, including bodies and parts.....	205	67,538	24.9	398,289,022	36.7	179,073,627	36.3	165.4	830.3	.....	312.1	1,108.6	.....	318.7	839.2	.....
Foundry and machine-shop products.....	705	26,497	9.8	64,576,497	5.9	37,456,742	7.6	22.4	32.0	0.4	42.2	44.4	23.6	40.3	53.8	16.6
Lumber and timber products.....	748	28,527	10.5	58,323,217	5.4	29,167,209	5.9	-19.9	4.2	-25.9	-4.9	7.5	-16.7	-10.2	(*)	-11.2
Furniture and refrigerators.....	202	16,267	6.0	33,857,041	3.1	19,435,818	4.0	-2.1	14.0	13.5	15.2	39.7	27.8	15.2	42.7	38.0
Flour-mill and gristmill products.....	427	1,370	0.5	27,381,474	2.5	4,082,303	0.8	-10.5	1.5	13.5	-21.5	31.5	22.5	-25.8	77.6	-4.3
Leather, tanned, curried, and finished.....	23	2,773	1.0	25,503,573	2.3	4,521,326	0.9	21.0	31.1	22.4	66.4	64.1	55.3	40.8	55.1	56.0
Printing and publishing.....	1,113	8,166	3.0	24,933,324	2.3	17,455,196	3.5	13.1	20.3	19.0	43.8	44.0	46.8	40.6	43.9	37.3
Paper and wood pulp.....	37	6,051	2.2	22,049,930	2.0	7,505,045	1.5	39.8	41.8	51.5	58.4	89.6	74.0	53.2	77.4	82.8
Butter, cheese, and condensed milk.....	364	1,367	0.5	21,549,597	2.0	3,687,094	0.6	27.4	22.6	74.0	50.8	74.0	109.5	61.6	61.6	83.3
Slaughtering and meat packing.....	36	1,181	0.4	21,266,915	2.0	1,983,717	0.4	30.9	50.8	6.4	58.3	111.4	17.7	12.1	143.3	24.9
Tobacco manufactures.....	626	9,075	3.3	15,041,247	1.9	11,703,664	2.4	15.2	22.5	21.7	27.7	36.4	28.3	30.5	27.8	14.8
Brass, bronze, and copper products.....	64	4,731	1.7	16,888,725	1.6	5,395,238	1.1	-0.8	.....	.....	21.4	.....	.....	10.2	.....	.....
Patent medicines and compounds and druggists' preparations.....	142	3,369	1.2	16,433,772	1.5	9,431,216	1.9	3.7	28.1	12.1	22.0	28.7	43.7	10.5	27.9	51.7
Food preparations, not elsewhere specified.....	56	1,683	0.6	16,005,282	1.5	8,966,167	1.8	29.2	25.2	179.1	39.3	70.2	257.0	33.0	49.9	270.5
Bread and other bakery products.....	622	4,014	1.5	16,000,068	1.5	6,691,071	1.4	52.2	20.2	65.1	44.4	55.7	73.6	51.7	35.2	76.9
Liquors, malt.....	70	2,097	0.8	15,041,247	1.4	10,713,219	2.2	37.3	20.1	29.7	52.9	40.6	32.1	44.4	39.8	29.1
Chemicals.....	36	4,509	1.7	13,891,415	1.3	7,517,930	1.5	42.1	-4.8	16.4	7.8	42.6	69.7	-3.8	68.7	73.8
Sugar, beet.....	10	1,326	0.5	11,023,058	1.0	4,778,673	1.0	-9.2	20.6	156.0	5.2	94.8	235.7	12.5	162.8	228.7
Stoves and furnaces, including gas and oil stoves.....	27	4,074	1.5	10,756,739	1.0	7,042,118	1.4	-9.1	0.2	.....	17.9	13.7	.....	11.7	19.2	.....
Gas, illuminating and heating.....	69	2,349	0.9	10,440,641	1.0	7,084,447	1.4	32.6	37.6	95.6	54.7	74.5	162.5	53.4	68.2	133.7
Canning and preserving.....	91	2,507	0.9	8,194,225	0.8	3,301,640	0.7	20.9	2.5	44.4	64.8	30.2	43.7	74.0	31.5	72.6
Agricultural implements.....	30	2,143	0.8	7,731,217	0.7	5,691,259	1.0	-9.2	-25.4	62.8	-16.6	6.3	37.5	-20.2	22.2	35.4
Cars and general shop construction and repairs by steam-railroad companies.....	26	5,803	2.1	7,569,197	0.7	4,304,747	0.9	7.4	21.8	12.6	10.7	27.4	23.9	9.7	41.6	25.2
Paints.....	21	695	0.3	6,110,200	0.6	2,777,385	0.6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wirework, including wire rope and cable, not elsewhere specified.....	33	1,314	0.5	5,891,274	0.5	1,973,142	0.4	44.6	-7.6	103.3	11.5	52.8	167.7	7.3	25.2	107.5
Copper, tin, and sheet-iron products.....	162	2,397	0.9	5,630,135	0.5	2,842,738	0.6	0.5	52.0	186.0	14.6	70.6	177.0	19.3	59.7	234.0
Iron and steel, blast furnaces.....	12	991	0.4	5,430,063	0.5	1,573,484	0.3	-2.5	-10.8	122.0	-6.4	25.4	99.6	-1.7	3.9	67.0
Boots and shoes.....	24	2,035	0.8	5,357,151	0.5	2,175,760	0.4	-17.1	42.5	54.3	1.9	48.9	84.4	14.0	26.0	101.7
Clothing, men's, including shirts.....	39	2,592	0.9	5,306,230	0.5	2,310,392	0.5	-20.1	54.3	-5.6	-18.8	55.4	2.6	-26.5	87.4	-2.7
Hosiery and knit goods.....	34	2,714	1.0	5,232,985	0.5	2,622,550	0.5	6.6	-17.5	23.0	29.9	11.2	29.8	32.3	11.3	33.6
Corsets.....	16	2,149	0.8	4,981,581	0.5	3,083,032	0.6	-12.7	78.6	-7.5	14.1	121.2	16.0	23.8	95.4	27.9
Cement.....	11	1,340	0.5	4,529,025	0.4	2,121,312	0.4	2.6	26.9	.....	55.4	13.9	.....	40.3	-8.4	.....
Salt.....	15	1,434	0.5	4,429,772	0.4	2,353,652	0.5	5.2	-1.8	-4.2	21.0	51.9	-2.3	17.1	65.6	-11.1
Cooperage and wooden goods, not elsewhere specified.....	82	1,967	0.7	3,833,953	0.4	1,775,786	0.4	-25.5	1.1	56.1	-3.8	2.5	95.7	-10.6	-5.4	105.0
Carriages and wagons and materials.....	177	1,117	0.5	3,774,827	0.3	1,846,976	0.4	-64.9	-37.0	4.7	-62.8	-31.8	15.5	-62.3	-24.1	29.8
Boxes, fancy and paper.....	23	1,461	0.5	3,747,876	0.3	1,617,079	0.3	10.2	58.6	47.2	41.2	190.6	155.0	56.1	114.7	123.1
Paper goods, not elsewhere specified.....	14	750	0.3	3,587,842	0.3	1,335,961	0.3	-36.5	.....	.....	1.0	.....	.....	-16.4	.....	.....
Electrical machinery, apparatus, and supplies.....	35	1,144	0.4	3,415,500	0.3	1,675,952	0.3	-6.1	130.2	187.5	46.8	231.5	60.3	29.3	217.9	59.4

¹ Percentages are based on figures in Table 37; a minus sign (-) denotes decrease; percentages are omitted where base is less than 100, or where comparable figures can not be given.

Table 2—Continued.

INDUSTRY.	Number of establishments.	CENSUS OF 1914.						PER CENT OF INCREASE. ¹								
		Wage earners.		Value of products.		Value added by manufacture.		Wage earners (average number).			Value of products.			Value added by manufacture.		
		Average number.	Per cent distribution.	Amount.	Per cent distribution.	Amount.	Per cent distribution.	1909-1914	1904-1909	1899-1904	1909-1914	1904-1909	1899-1904	1909-1914	1904-1909	1899-1904
Brick, tile, pottery, and other clay products.....	102	2,194	0.8	\$3,174,160	0.3	\$2,116,638	0.4	23.9	8.1	3.0	38.4	18.1	51.5	28.8	11.6	46.5
Confectionery.....	64	993	0.4	3,039,808	0.3	1,220,307	0.2	-5.6	34.4	26.7	3.3	73.3	25.4	6.4	72.2	18.9
Shipbuilding, including boat building.....	62	1,261	0.5	2,822,557	0.3	1,563,814	0.3	-46.2	17.3	-31.5	-43.9	69.3	-32.9	-38.5	34.3	-15.2
Musical instruments, pianos and organs and materials.....	17	1,070	0.4	2,681,855	0.2	1,422,486	0.3	-39.9	66.4	40.7	-26.5	113.0	68.1	-37.8	79.7	74.8
Wood distillation.....	10	645	0.2	2,678,151	0.2	970,382	0.2	-20.0	177.0	.....	11.6	225.1	.....	-23.0	221.4	.....
Clothing, women's.....	32	1,672	0.6	2,660,507	0.2	1,466,660	0.3	-23.8	7.4	32.7	-25.8	-1.2	65.4	-21.8	-1.1	94.7
Leather goods.....	103	675	0.2	2,425,554	0.2	1,012,458	0.2	-19.1	32.4	-12.0	-5.2	84.3	-4.3	-8.1	75.2	-2.8
Springs, steel, car and carriage, not made in steel works or rolling mills	6	638	0.2	2,174,957	0.2	992,242	0.2	8.5	82.0	-8.0	66.3	141.8	-7.4	32.4	189.6	-4.8
Gas and electric fixtures and lamps.	13	597	0.2	2,094,365	0.2	1,158,772	0.2	51.1	.....	.....	35.5	.....	.....	28.2	.....	.....
Wall plaster.....	13	631	0.2	2,073,741	0.2	1,330,812	0.3	-15.4	117.5	.....	46.0	68.8	.....	31.9	118.4	.....
Confectionery (ice cream).....	60	194	0.1	1,802,993	0.2	764,645	0.2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Window shades and fixtures.....	8	702	0.3	1,754,760	0.2	771,268	0.2	10.4	182.7	.....	35.4	155.1	.....	57.6	230.4	.....
Iron and steel, steel works and rolling mills.....	9	718	0.3	1,716,351	0.2	845,410	0.2	-39.3	16.2	-30.2	-35.7	-1.5	-24.1	-21.1	17.5	-24.6
Mineral and soda waters.....	120	391	0.1	1,695,666	0.2	877,099	0.2	55.2	44.8	6.1	86.4	81.3	27.7	61.8	63.2	27.2
Fur goods.....	35	380	0.1	1,679,920	0.2	861,965	0.2	-38.6	-2.5	17.4	-26.4	29.0	2.5	-33.7	76.9	26.1
Coffee, roasting and grinding.....	16	88	(?)	1,617,989	0.1	301,991	0.1	15.8	375.0	-52.9	72.5	605.3	-40.1	17.1	658.8	-40.1
Marble and stone work.....	111	461	0.2	1,561,481	0.1	924,667	0.2	-16.3	26.4	4.8	3.8	38.2	10.6	1.4	32.6	26.5
Iron and steel forgings.....	11	552	0.2	1,492,842	0.1	685,975	0.1	79.8	.....	.....	148.0	.....	.....	89.7	.....	.....
Coffins, burial cases, and undertakers' goods.....	23	540	0.2	1,354,669	0.1	708,764	0.1	23.0	-30.3	65.8	24.9	-11.4	54.9	19.6	-15.4	63.6
Cars and general shop construction and repairs by electric-railroad companies.....	18	885	0.3	1,326,474	0.1	694,590	0.1	54.2	35.4	86.8	1.9	121.3	96.7	96.9	28.0	95.0
Paving materials.....	9	570	0.2	1,228,604	0.1	847,706	0.2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Woolen goods.....	9	477	0.2	1,215,467	0.1	422,730	0.1	-13.9	.....	.....	-22.6	.....	.....	-40.3	.....	.....
Artificial stone products.....	217	483	0.2	1,059,966	0.1	659,670	0.1	-6.0	667.2	.....	16.7	663.0	.....	18.0	635.5	.....
Show cases.....	6	410	0.2	1,034,635	0.1	571,920	0.1	-50.2	33.4	963.8	-44.5	60.2	709.4	-46.5	61.4	670.9
Carriages and sleds, children's.....	8	462	0.2	970,486	0.1	528,848	0.1	-16.8	129.3	171.9	42.2	102.4	200.9	24.2	127.3	183.3
Cutlery and tools, not elsewhere specified.....	28	453	0.2	965,451	0.1	578,854	0.1	-32.2	54.3	36.6	-11.1	54.0	58.7	-21.8	58.1	56.5
Wood, turned and carved.....	45	576	0.2	949,751	0.1	610,665	0.1	-49.3	-7.3	33.6	-44.4	9.0	69.6	-43.2	9.8	53.5
Mattresses and spring beds.....	23	278	0.1	877,136	0.1	358,092	0.1	-9.2	57.7	-11.0	27.3	34.0	-1.3	28.9	54.1	-8.0
Ice, manufactured.....	11	443	0.2	764,956	0.1	636,620	0.1	409.2	.....	.....	284.2	.....	.....	301.3	.....	.....
Scales and balances.....	3	276	0.1	612,022	0.1	404,328	0.1	21.1	72.7	300.0	16.9	103.1	226.6	37.3	52.8	278.4
Signs and advertising novelties.....	18	140	0.1	566,058	0.1	387,133	0.1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mirrors, framed and unframed.....	8	189	0.1	549,741	(?)	109,166	(?)	-18.5	.....	.....	-18.0	.....	.....	-29.9	.....	.....
Baskets, and rattan and willow ware	13	238	0.1	530,756	(?)	251,661	(?)	-36.2	-7.9	-10.0	11.9	10.3	21.8	-17.7	6.3	30.9
Toys and games.....	7	251	0.1	529,373	(?)	283,650	0.1	-10.0	65.1	57.8	22.5	70.8	105.7	10.1	50.0	186.7
Soap.....	11	78	(?)	522,446	(?)	159,956	(?)	14.7	-48.1	7.4	-2.5	-33.0	13.3	-12.1	-39.9	29.5
Awnings, tents, and sails.....	24	154	0.1	501,915	(?)	240,519	(?)	19.4	74.3	-35.7	43.8	77.2	-9.2	69.7	51.5	1.0
Oil, essential.....	53	38	(?)	491,842	(?)	266,229	0.1	-23.6	315.4	-83.5	1.2	102.5	29.9	274.6	-4.1	12.1
All other industries.....	681	18,560	6.8	91,098,370	8.4	37,329,798	7.6	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹ Percentages are based on figures in Table 37; a minus sign (-) denotes decrease; percentages are omitted where base is less than 100, or where comparable figures can not be given.

² Less than one-tenth of 1 per cent.

Separate statistics are presented for 75 industries, or industry groups, for each of which products valued at more than \$490,000 were reported for 1914. These industries include 20, with products exceeding \$10,000,000 in value; 10, with products between \$5,000,000 and \$10,000,000; 32, with products between \$1,000,000 and \$5,000,000; and 13, with products valued at less than \$1,000,000. Among those included under the head of "all other industries," are 26 industries which have products exceeding in value some of those presented in the table. Of these industries, there were 14 which had a product in excess of \$1,000,000. These are included under the head of "all other industries," to avoid the possible disclosure of the operations of individual establishments. Of these industries, the smelting and refining of copper was the most important and ranked high among the industries of the state. The manufacture of cash registers and calcu-

lating machines was next in importance, followed by rubber goods; steam-railroad cars; coke; silk goods; varnishes; billiard tables and materials; fertilizers; smelting and refining, not from the ore; distilled liquors; glucose and starch; cleansing and polishing preparations; and house-furnishing goods, not elsewhere specified.

The industries in this table are arranged in the order of their importance as measured by value of products, but the arrangement would vary considerably if based on average number of wage earners or value added by manufacture. The automobile industry ranked first in all three respects. Foundry and machine shop and lumber and timber industries ranked second and third, respectively, in both value of products and value added by manufacture, but were third and second, respectively, in average number of wage earners. Furniture and refrigerators ranked fourth in all three respects.

Flour-mill and gristmill products ranked fifth in value of products, but was thirty-first in number of wage earners, and twentieth in value added by manufacture. The rank of the flour-mill and gristmill industry in value of products, as compared with its low rank in number of wage earners and value added by manufacture, is due in part to the fact that the work is done largely by machinery and comparatively few employees are required; therefore, the proportional value added to the raw material by manufacture is small in comparison with the corresponding proportions for most other industries. Leather, tanned, curried, and finished, sixth in value of products, was fourteenth in number of wage earners and eighteenth in value added by manufacture. Butter, cheese, and condensed milk held ninth place in value of products, but ranked thirty-second in number of wage earners, and twenty-second in value added by manufacture. Slaughtering and meat packing, tenth in value of output, was thirty-seventh in number of wage earners and thirty-second in value added by manufacture.

In rank according to value of products, there were a number of changes as compared with 1909. Automobiles, including bodies and parts, and butter, cheese, and condensed-milk industries held the same rank in value of products in 1914 as in 1909. Foundry and machine-shop products advanced from third in 1909 to second place in 1914, having displaced lumber and timber products, which took third place. Furniture and refrigerators and flour-mill and gristmill products, ranking fourth and fifth, respectively, in 1914 exchanged places during the five-year period from 1909, when they ranked fifth and fourth, respectively. Leather, tanned, curried, and finished, advanced from eighth place in 1909 to sixth place in 1914; paper and wood pulp, from tenth place in 1909 to eighth place in 1914; and slaughtering and meat packing, from thirteenth place in 1909 to tenth place in 1914. Printing and publishing ranked sixth in 1909 but seventh in 1914. For the remainder of the industries numerous changes from census to census are noticeable.

Automobiles, including bodies and parts.—Prior to 1904, the statistics for the manufacture of automobiles were reported with those for the carriage and wagon industry. Michigan has held first rank in the industry at each successive census since 1904, contributing 26.6 per cent of the total value of products in this industry for the United States in 1904; 38.8 per cent in 1909; and 62.9 per cent in 1914. It is interesting to note that 16.1 per cent of the entire number of establishments and 53.1 per cent of the average number of wage earners employed in the industry were reported for Michigan in 1914. The total value of products has grown from \$7,996,534 in 1904 to \$96,651,451 in 1909, and \$398,289,022 in 1914, being almost fifty times as great in 1914 as in 1904. In 1914 the automobile industry employed 24.9 per cent of

the wage earners engaged in manufactures in the state, and contributed 36.7 per cent of the total value of manufactured products. Of the total increase in value of manufactured products in the state from 1909 to 1914, \$301,637,571, or 75.2 per cent, was in this industry.

This classification also includes the manufacture of automobile accessories, but these products are interwoven with the manufacture of foundry and machine-shop products; brass, bronze, and copper products; rubber goods, not elsewhere specified; electrical machinery, apparatus, and supplies; and carriages and wagons. The statistics for automobile bodies and parts, therefore, do not represent the full extent of this branch of the industry.

Food and kindred products.—In Michigan this group of industries includes flour mills and gristmills, not including those doing custom grinding; the butter, cheese, and condensed-milk industry; slaughtering and meat packing, including the manufacture of sausage; food preparations, including fancy cereals, mincemeat, canned soups, and similar preparations; bakeries; beet-sugar industry; canning and preserving, which includes the canning and preserving of fruits, vegetables, and fish, and the preparation of pickles, preserves, and sauces; confectionery; and coffee, roasting and grinding. In 1914 the 1,986 establishments reported for these nine industries employed 14,529 wage earners, manufactured products valued at \$126,078,416, and added \$34,413,863 to the materials by the processes of manufacture. Although during the period 1909–1914 there was a decrease of 62, or 3 per cent, in the number of establishments, the number of wage earners increased by 2,423, or 20 per cent; the value of products by \$21,591,790, or 20.7 per cent; and the value added by manufacture, by \$6,528,937, or 23.4 per cent. With the exception of flour mills and gristmills, each of the industries showed an increase in value of products during the period.

Foundry and machine-shop products.—This industry group employed an average of 26,497 wage earners and reported an output valued at \$64,576,497 in 1914, which represent increases of 22.4 per cent and 42.2 per cent, respectively, over the corresponding figures for 1909. The nine industries of this group, together with the value of products of each, are general foundry and machine-shop products, \$39,428,783; engines, steam and gas, \$12,369,172; structural ironwork, \$4,918,366; steam fittings and steam and hot-water heating apparatus, \$2,915,323; plumbers' supplies, \$1,914,139; hardware, \$1,591,385; pumps, steam and other power, \$637,251; gas machines and gas and water meters, \$443,853; and automobile repairing, \$358,225.

The statistics do not fully represent the importance of this industry, as many establishments, primarily engaged in the manufacture of a distinctive product, were assigned to other classifications, although their subsidiary products included articles similar to those reported by foundries and machine shops.

Lumber and timber products.—Under this heading are included logging plants, whose chief products are logs and bolts; sawmills, shingle mills, and planing mills, producing rough lumber, shingles, lath, cooperage materials, sash, doors, blinds, interior finish and other millwork; and wooden packing-box factories. Statistics for mills engaged exclusively in custom sawing for local consumption are not included.

In 1914 the industry ranked third in the state in number of establishments, second in average number of wage earners, and third in value of products and in value added by manufacture. The number of wage earners employed was 28,527, and the total value of products amounted to \$58,523,217. In 1914 there were 748 establishments as compared with 1,180 in 1909. The supply of timber in the state has steadily declined. Since 1889 the value of products for the industry has decreased at each census year except 1909.

Furniture and refrigerators.—Michigan ranked second among the states in this industry and first in refrigerators alone in 1914. The value of the output of the industry amounted to \$33,857,041 in 1914, as compared with \$28,641,684 in 1909, an increase of 18.2 per cent.

In 1914 the furniture branch of the industry employed an average of 14,706 wage earners and turned out products valued at \$30,184,542, which were 90.4 per cent and 89.2 per cent, respectively, of the corresponding totals for the industry as a whole.

Leather, tanned, curried, and finished.—This classification includes not only establishments which are engaged primarily in the tanning, currying, and finishing of leather for themselves, but also those which treat hides or skins for others.

The industry has shown remarkable growth, the value of products having increased from \$1,744,000 in 1889 to \$25,503,573 in 1914. During the period 1909-1914 the number of wage earners increased by 482, or 21 per cent, and the value of products by \$10,172,469, or 66.4 per cent.

Printing and publishing.—Under this classification are included establishments engaged in printing and publishing newspapers and periodicals, books, and music; job printing; bookbinding and blank-book making; lithographing; and steel and copper plate engraving. The industry ranked first in the state in number of establishments—reporting about one-eighth of all manufacturing establishments—employed only 3 per cent of the wage earners, and contributed 2.3 per cent of the value of products. The number of wage earners increased from 7,219 in 1909 to 8,166 in 1914, or 13.1 per cent, and the value of products increased from \$17,348,341 in 1909 to \$24,953,324 in 1914, or 43.8 per cent.

Paper and wood pulp.—In 1914 the manufacture of paper and wood pulp ranked seventh among the industries of the state in average number of wage earners

and eighth in value of products. There were 37 establishments reported for the industry, 28 of which produced paper only. During the five-year period 1909-1914 the average number of wage earners increased from 4,327 to 6,051, or 39.8 per cent; the value of products from \$13,922,124 to \$22,049,990, or 58.4 per cent; and the value added by manufacture from \$4,897,529 to \$7,505,045, or 53.2 per cent.

Kalamazoo is the leading city of the state in this industry, with a product in 1914 of \$7,093,440, or 32.2 per cent of the total reported for the state. The total value of paper produced in mills properly belonging to Kalamazoo (11.2 per cent of the total product for the state is produced just outside the corporate limits of the city) constitutes 43.4 per cent of the total for the state.

Tobacco manufactures.—This industry reported 626 establishments, of which 609 manufactured cigars; 8, smoking tobacco; and 9, chewing tobacco and snuff. Cigars constituted 58.7 per cent of the value of the products for the entire industry. Although there was a decrease of 103 in the number of establishments in the industry from 1909 to 1914, the average number of wage earners increased from 7,876 to 9,075, or 15.2 per cent, and the value of products, from \$16,178,533 to \$20,667,016, or 27.7 per cent. The industry is centered in Detroit, where more than four-fifths of the total value of the products for the state were reported in 1914:

Brass, bronze, and copper products.—This classification includes statistics for 64 establishments, 54 of which were primarily engaged in the manufacture of brass castings and brass goods; 3, bronze products; 5, copper products; 1, metal spinings; and 1, aluminum castings. Although there was a slight decrease in number of wage earners during the period 1909-1914, the value of products increased by \$2,978,505, or 21.4 per cent.

Patent medicines and compounds and druggists' preparations.—Michigan ranked second among the states in this industry as a whole and first in the manufacture of druggists' preparations. The number of wage earners in the industry increased from 3,249 in 1909 to 3,369 in 1914, or 3.7 per cent, and the value of products increased from \$13,475,456 to \$16,433,772, or 22 per cent. The manufacture of druggists' preparations employed 2,175 wage earners, and its products amounted to \$11,738,662 in 1914, which were 64.6 per cent and 71.4 per cent, respectively, of the corresponding totals for the entire industry.

Chemicals.—This industry owes its importance to the extensive salt deposits of the state. During the five-year period 1909-1914 the average number of wage earners engaged in the manufacture of chemicals increased by 1,335, or 42.1 per cent, and the value of products increased by \$1,001,209, or 7.8 per cent. Although the chemical industry ranked only seven-

teenth among the selected industries of the state, Michigan ranked fourth among the states in value of manufactured chemical products.

Carriages and wagons and materials.—Due principally to the remarkable development of the automobile industry, the manufacture of carriages and wagons and materials, which ranked fifth among the selected industries of the state in 1904, dropped to eighteenth in 1909 and to thirty-fifth in 1914. This industry gave employment to an average of 6,400 wage earners in 1904, as compared with 4,034 in 1909 and only 1,417 in 1914, and reported products valued at \$14,889,457 in 1904, as compared with \$10,158,883 in 1909 and only \$3,774,827 in 1914.

Michigan ranked high among the states in the manufacture of stoves and furnaces, corsets, salt, fur goods, show cases, wall plaster, essential oil, and in wood distillation, although these industries are not among the most important in the state. The manufacture of steel springs for cars and carriages; window shades and fixtures; wirework, including wire rope and cable; and the turning and carving of wood are not fully represented by the statistics presented in the table, because, to a large extent, they are interwoven with one or more other industries.

Persons engaged in manufacturing industries.—Table 3 shows, for 1914 and 1909, the number of persons engaged in manufactures, distributed by sex, the average number of wage earners being distributed also by age. The sex and age classification of the average number of wage earners in this and other tables is an estimate obtained by the method described in the "Explanation of terms."

CLASS.	Census year.	PERSONS ENGAGED IN MANUFACTURING INDUSTRIES.					
		Total.	Male.	Female.	Per cent of total.		
					Male.	Female.	
All classes.....	1914 1909	320,611 271,071	278,229 231,015	42,382 39,156	86.8 85.6	13.2 14.4	
Proprietors and officials.....	1914 1909	17,463 16,996	16,900 16,434	563 562	96.8 96.7	3.2 3.3	
Proprietors and firm members.....	1914 1909	7,725 8,905	7,335 8,564	390 401	95.0 95.5	5.0 4.5	
Salaried officers of corporations.....	1914 1909	3,572 3,089	3,471 3,026	101 63	97.2 98.0	2.8 2.0	
Superintendents and managers.....	1914 1909	6,166 4,942	6,094 4,844	72 98	98.8 98.0	1.2 2.0	
Clerks and other subordinate salaried employees.....	1914 1909	32,058 22,576	22,928 16,183	9,130 6,393	71.5 71.7	28.5 28.3	
Wage earners (average number).....	1914 1909	271,060 231,499	238,401 199,298	32,689 32,201	87.9 86.1	12.1 13.9	
16 years of age and over.....	1914 1909	266,519 228,982	237,496 197,777	32,023 31,205	88.1 86.4	11.9 13.6	
Under 16 years of age.....	1914 1909	1,571 2,517	1,521 996	996 996	57.6 60.4	42.4 39.6	

The number of persons engaged in manufactures during 1914 was 320,611, of whom 271,090 were wage earners; 17,463, proprietors and officials; and 32,058 were clerks and other subordinate salaried employees. Of the wage earners 16 years of age and over, nearly nine-tenths were males. The largest number (32,689) of females reported was employed as wage earners, but the largest proportion (28.5 per cent) in the classes presented was reported as clerks and other subordinate salaried employees. Figures for the sex and age distribution of wage earners for individual industries will be found in Table 38.

Table 4 gives, for the several classes of persons engaged in manufactures, the percentages of increase from 1909 to 1914 and the per cent distribution at the two censuses.

CLASS.	PERSONS ENGAGED IN MANUFACTURING INDUSTRIES.								
	Per cent of increase, ¹ 1909-1914.			Per cent distribution.					
	Total.	Male.	Female.	Total.		Male.		Female.	
				1914	1909	1914	1909	1914	1909
All classes.....	18.3	20.0	8.2	100.0	100.0	100.0	100.0	100.0	100.0
Proprietors and officials.....	2.7	2.8	0.2	5.4	6.3	6.1	7.1	1.3	1.4
Proprietors and firm members.....	-13.8	-14.4	-2.7	2.4	3.3	2.6	3.7	0.9	1.0
Salaried officers of corporations.....	15.6	14.7	.....	1.1	1.1	1.2	1.3	0.2	0.2
Superintendents and managers.....	24.8	25.8	.....	1.9	1.8	2.2	2.1	0.2	0.3
Clerks and other subordinate salaried employees.....	42.0	41.7	42.8	10.0	8.3	8.2	7.0	21.5	16.3
Wage earners (average number).....	17.1	19.6	1.5	84.6	85.4	85.7	85.9	77.1	82.2
16 years of age and over.....	17.7	20.1	2.6	84.1	84.5	85.4	85.3	75.5	79.7
Under 16 years of age.....	-37.6	-40.5	-33.1	0.5	0.9	0.3	0.6	1.6	2.5

¹ A minus sign (-) denotes decrease; percentages are omitted where base is less than 100.

Increases are shown for the five-year period in the total number and for the several classes of employees, with the exception of proprietors and firm members and wage earners under 16 years of age. The decrease in proprietors and firm members was referred to in the discussion of Table 1. The decrease of 37.6 per cent in wage earners under 16 years of age does not materially affect the employment of wage earners in the state, as the proportion which this class formed of the total

for all classes was only nine-tenths of 1 per cent in 1909 and only one-half of 1 per cent in 1914. The largest percentage of increase for both sexes, 42 per cent, is shown for clerks and other subordinate salaried employees. The average number of wage earners for both sexes combined shows an increase of 17.1 per cent from 1909 to 1914; in 1909 they formed 85.4 per cent of the total for all classes, and in 1914, 84.6 per cent.

In order to compare the distribution of persons engaged in manufactures in 1914 with that shown at the census of 1904, it is necessary to use the classification employed at the earlier census. (See "Explanation of terms.") Table 5 makes this comparison according to occupational status.

CLASS.	PERSONS ENGAGED IN MANUFACTURING INDUSTRIES.									
	Number.			Per cent distribution.			Per cent of increase. ¹			
	1914	1909	1904	1914	1909	1904	1909-1914	1904-1909		
Total.....	320,611	271,071	200,196	100.0	100.0	100.0	18.3	35.4		
Proprietors and firm members.....	7,725	8,965	7,732	2.4	3.3	3.9	-13.8	15.9		
Salaried employees.....	41,796	30,607	17,235	13.0	11.3	8.6	36.6	77.6		
Wage earners (average).....	271,090	231,499	175,229	84.6	85.4	87.5	17.1	32.1		

¹ A minus sign (-) denotes decrease.

This table shows an increase during the decade 1904 to 1914 and for both five-year periods for each of the several classes of employees, with the exception of proprietors and firm members, which shows a decrease from 1909 to 1914 and also for the decade. During the decade there were decreases in the proportions that proprietors and firm members and wage earners formed of the total number engaged in the manufactures of the state at each successive census, and a corresponding increase in the proportion of salaried employees.

The average number of wage earners employed and their per cent distribution as males 16 years of age and over, females 16 years of age and over, and children under 16 years of age, are given in Table 6 for 1914, 1909, and 1904. The table also shows, for some of the important industries separately, a similar distribution of wage earners for 1914 and 1909.

INDUSTRY.	Census year.	WAGE EARNERS.			
		Average number. ¹	Per cent of total.		Under 16 years of age.
			Male.	Female.	
All industries.....	1914	271,090	87.6	11.8	0.6
	1909	231,499	85.4	13.5	1.1
	1904	175,229	84.3	13.8	1.9
Agricultural implements.....	1914	2,143	99.6		0.4
	1909	2,359	99.4	0.1	0.4
Automobiles, including bodies and parts.....	1914	67,538	97.8	2.1	0.1
	1909	25,444	98.9	1.1	(²)
Boots and shoes.....	1914	2,035	61.6	36.8	1.6
	1909	2,455	58.5	35.1	6.4
Boxes, fancy and paper.....	1914	1,461	66.3	31.7	2.0
	1909	1,326	45.4	49.1	5.5
Brass, bronze, and copper products.....	1914	4,731	94.5	3.6	1.8
	1909	4,771	93.7	3.1	3.2
Bread and other bakery products.....	1914	4,014	79.6	19.6	0.7
	1909	2,637	80.0	18.2	1.8
Brick, tile, pottery, and other clay products.....	1914	2,194	95.1	4.6	0.3
	1909	1,771	99.6	0.1	0.3
Butter, cheese, and condensed milk.....	1914	1,367	91.1	8.6	0.4
	1909	1,073	90.7	9.1	0.2
Canning and preserving.....	1914	2,507	44.3	54.4	1.2
	1909	2,073	47.1	51.1	1.8
Carriages and wagons and materials.....	1914	1,417	97.4	2.4	0.2
	1909	4,034	98.2	1.7	0.1

Table 6—Continued.

INDUSTRY.	Census year.	WAGE EARNERS.			
		Average number. ¹	Per cent of total.		Under 16 years of age.
			Male.	Female.	
Cars and general shop construction and repairs by steam-railroad companies.....	1914	5,803	100.0		
	1909	5,401	99.8	0.1	0.2
Cement.....	1914	1,340	100.0		
	1909	1,306	99.7	0.3	
Chemicals.....	1914	4,509	99.3	0.6	0.1
	1909	3,174	99.0	0.8	0.3
Clothing, men's, including shirts.....	1914	2,502	10.6	89.4	
	1909	3,580	12.5	87.5	
Clothing, women's.....	1914	1,672	6.2	92.4	1.4
	1909	2,194	7.0	92.2	0.8
Confectionery.....	1914	993	35.8	62.2	2.0
	1909	1,052	39.4	58.4	2.2
Cooperage and wooden goods, not elsewhere specified.....	1914	1,967	71.5	27.2	1.3
	1909	2,642	86.8	12.1	1.1
Copper, tin, and sheet-iron products.....	1914	2,397	84.7	15.1	0.2
	1909	2,386	83.2	10.8	6.0
Corsets.....	1914	2,149	17.9	81.1	1.0
	1909	2,461	18.4	79.7	2.0
Electrical machinery, apparatus, and supplies.....	1914	1,144	71.2	28.4	0.4
	1909	1,218	74.9	25.1	
Flour-mill and gristmill products.....	1914	1,370	97.2	2.3	0.5
	1909	1,530	98.8	0.9	0.3
Food preparations, not elsewhere specified.....	1914	1,683	71.2	28.8	0.1
	1909	1,803	62.8	37.2	
Foundry and machine-shop products.....	1914	26,497	97.6	2.2	0.2
	1909	21,649	98.0	1.4	0.5
Furniture and refrigerators.....	1914	16,267	96.0	3.4	0.7
	1909	16,610	95.6	2.7	1.7
Gas, illuminating and heating.....	1914	2,349	99.8	0.2	
	1909	1,771	99.7	0.2	0.1
Hosiery and knit goods.....	1914	2,714	24.4	74.1	1.5
	1909	2,545	20.9	76.4	2.6
Iron and steel, blast furnaces.....	1914	991	100.0		
	1909	1,016	99.9	0.1	
Leather, tanned, curried, and finished.....	1914	2,773	99.9	(²)	(²)
	1909	2,291	98.8	0.3	0.8
Liquors, malt.....	1914	2,097	98.8	0.9	0.4
	1909	1,527	99.1	0.9	
Lumber and timber products.....	1914	28,527	98.6	0.9	0.5
	1909	35,627	99.1	0.5	0.4
Musical instruments, pianos and organs and materials.....	1914	1,070	97.1	2.9	
	1909	1,779	96.7	2.8	0.5
Paper and wood pulp.....	1914	6,051	84.7	15.3	(²)
	1909	4,327	82.3	17.7	
Patent medicines and compounds and druggists' preparations.....	1914	3,369	61.4	37.5	1.1
	1909	3,249	50.7	47.9	1.4
Printing and publishing.....	1914	8,166	77.1	21.1	1.8
	1909	7,219	73.5	25.1	1.4
Salt.....	1914	1,434	93.2	6.8	
	1909	1,363	93.5	6.5	
Shipbuilding, including boat building.....	1914	1,261	99.8	0.2	0.1
	1909	2,344	99.7	0.3	
Slaughtering and meat packing.....	1914	1,181	99.4	0.6	
	1909	902	96.3	3.0	0.7
Stoves and furnaces, including gas and oil stoves.....	1914	4,074	99.1	0.2	0.7
	1909	4,482	98.1	0.1	1.8
Sugar, beet.....	1914	1,326	99.5	0.5	
	1909	1,460	99.7	0.3	
Tobacco manufactures.....	1914	9,075	21.1	74.5	4.4
	1909	7,876	28.3	65.4	6.3
Wirework, including wire rope and cable, not elsewhere specified.....	1914	1,314	92.6	6.7	0.7
	1909	999	89.3	9.0	1.7
All other industries.....	1914	33,618	87.9	13.6	9.5
	1909	36,363	82.6	16.4	1.0

¹ For method of estimating the distribution, by sex and age periods, of the average number for all industries combined, see "Explanation of terms."

² Less than one-tenth of 1 per cent.

For all industries combined, the proportion of male wage earners 16 years of age and over has been greater at each successive census, while the proportions of females and of children under 16 have decreased.

Of the 41 industries for which separate figures are given in this table, 23 show an increased proportion of males and 23 an increased proportion of females, while but 13 show an increase in the proportion of children under 16 years of age. Four of the industries which gave employment to children in 1909 reported no children in 1914, while 4 others reported children in 1914 but none in 1909. There were 9 industries which reported no children employed in 1914.

The largest proportion of adult female wage earners were employed in the manufacture of women's clothing, where 92.4 per cent of the wage earners were

women over 16 years of age. Other industries showing a large proportion of female wage earners were men's clothing, 89.4 per cent; corsets, 81.1 per cent; tobacco, 74.5 per cent; hosiery and knit goods, 74.1 per cent; confectionery, 62.2 per cent; and canning and preserving, 54.4 per cent. In all other industries, over one-half of the wage earners were males 16 years of age and over. The largest proportion of children wage earners, 4.4 per cent, was reported for the tobacco manufactures industry, where the average number of children employed was 402.

Table 7 shows the average number and the per cent distribution of wage earners employed in each of the 27 cities having more than 10,000 inhabitants, classified according to age periods, and in the case of those 16 years of age and over, according to sex, for 1914, 1909, and 1904.

Table 7

CITY.	AVERAGE NUMBER OF WAGE EARNERS IN MANUFACTURING INDUSTRIES.																				
	Total.			16 years of age and over.						Under 16 years of age.			Per cent of total.								
				Male.			Female.						16 years of age and over.			Under 16 years of age.					
	1914	1909	1904	1914	1909	1904	1914	1909	1904	1914	1909	1904	1914	1909	1904	1914	1909	1904			
Adrian.....	1,256	1,059	.....	1,002	924	.....	249	118	.....	5	17	.....	79.8	87.3	.....	19.8	11.1	.....	0.4	1.6	.....
Alpena.....	1,494	1,432	1,245	1,490	1,403	1,205	33	27	29	1	2	11	97.7	98.0	96.8	2.2	1.9	2.3	0.1	0.1	0.9
Ann Arbor.....	842	573	549	747	535	431	93	38	105	2	.....	13	88.7	93.4	78.5	11.0	6.6	19.1	0.2	.....	2.4
Battle Creek.....	4,569	4,175	3,389	3,999	3,415	2,862	599	752	519	1	8	8	87.0	81.8	84.4	13.0	18.0	15.3	(1)	0.2	0.2
Bay City.....	3,771	4,737	4,456	3,355	4,263	4,173	386	441	234	30	33	49	89.0	90.0	93.6	10.2	9.3	5.3	0.8	0.7	1.1
Benton Harbor.....	1,285	.....	.....	1,098	.....	.....	187	.....	.....	.....	.....	.....	85.4	.....	.....	14.6	.....	.....	.....	.....	.....
Detroit.....	99,909	81,011	48,483	82,012	64,138	35,907	16,598	15,061	10,810	993	1,812	1,766	82.3	79.2	74.1	16.7	18.6	22.3	1.0	2.2	3.6
Escanaba.....	777	720	.....	615	595	.....	159	122	.....	3	3	.....	79.2	82.6	.....	20.5	16.9	.....	0.4	0.4	.....
Flint.....	8,722	7,088	2,161	8,348	6,776	1,960	396	312	191	7	1	10	95.7	95.6	90.7	4.2	4.4	8.8	0.1	(1)	0.5
Grand Rapids.....	17,427	17,590	15,514	14,622	15,157	13,411	2,748	2,320	1,931	57	113	172	83.9	86.2	86.4	15.8	13.2	12.4	0.3	0.6	1.1
Hancock.....	142	.....	.....	129	.....	.....	11	.....	.....	2	.....	.....	90.8	.....	.....	7.7	.....	.....	1.4	.....	.....
Holland.....	2,165	2,182	.....	1,877	1,951	.....	18	186	.....	18	25	.....	86.7	90.2	.....	12.5	8.6	.....	0.8	1.2	.....
Ironwood.....	518	201	.....	511	197	.....	5	4	.....	.....	.....	.....	99.0	98.0	.....	1.0	2.0	.....	.....	.....	.....
Ishpeming.....	79	66	73	75	59	71	3	6	1	1	1	1	94.9	89.4	97.3	3.8	9.1	1.4	1.3	1.5	1.4
Jackson.....	4,906	4,788	3,967	4,019	3,784	2,772	867	1,023	1,170	20	11	25	81.9	78.4	69.9	17.7	21.4	29.5	0.4	0.2	0.6
Kalamazoo.....	5,525	6,272	5,666	4,253	4,390	4,041	1,233	1,844	1,568	39	38	57	77.0	70.0	71.3	22.3	29.4	27.7	0.7	0.6	1.0
Lansing.....	6,231	5,285	2,982	5,903	5,043	2,687	327	239	263	1	3	32	94.7	95.4	90.1	5.2	4.5	8.8	(1)	0.1	1.1
Manistee.....	1,853	2,125	2,084	1,471	1,806	2,009	365	306	28	17	13	47	79.4	85.0	96.4	19.7	14.4	1.3	0.9	0.6	2.3
Marquette.....	589	509	738	572	500	727	14	9	5	3	.....	6	97.1	98.2	98.5	2.4	1.8	0.7	0.5	.....	0.8
Menominee.....	1,988	1,700	1,489	1,725	1,530	1,387	223	148	76	40	22	26	86.8	90.0	93.1	11.2	8.7	5.1	2.0	1.3	1.7
Muskegon.....	4,646	4,522	3,078	3,960	3,871	2,437	640	615	529	46	36	112	85.2	85.6	79.2	13.8	13.6	17.2	1.0	0.8	3.6
Owosso.....	1,231	.....	.....	1,120	.....	.....	110	.....	.....	.....	.....	.....	91.0	.....	.....	8.9	.....	.....	.....	.....	.....
Pontiac.....	2,409	1,739	.....	2,336	1,629	.....	73	106	.....	.....	4	.....	97.0	93.7	.....	3.0	6.1	.....	.....	0.2	.....
Port Huron.....	1,296	1,580	2,136	1,045	1,435	1,907	251	142	227	.....	3	2	80.6	90.8	89.3	19.4	9.0	10.6	.....	0.2	0.1
Saginaw.....	6,342	5,368	4,445	5,479	4,937	3,897	847	706	489	16	25	59	86.4	86.4	87.7	13.4	13.2	11.0	0.3	0.5	1.3
Sault Ste. Marie.....	938	825	895	863	775	867	74	50	10	1	.....	12	92.0	93.9	96.9	7.9	6.1	1.8	0.1	.....	1.3
Traverse City.....	956	1,220	.....	712	1,102	.....	242	.....	.....	2	1	.....	74.5	90.3	.....	25.3	9.6	.....	0.2	0.1	.....

¹ Less than one-tenth of 1 per cent.
² Includes statistics for West Bay City, which was annexed to Bay City in 1905.
³ Figures do not agree with those published because it was necessary to revise them in order to include data only for those establishments located within the corporate limits of the city.

The proportion of male wage earners 16 years of age and over is greatly in excess of that for females in every city, the smallest proportion being in Traverse City, where they formed 74.5 per cent of the total. In 10 cities, adult males constituted 90 per cent or more of the total, and in 8 cities, from 85 to 90 per cent. Only 3 cities, Traverse City, Kalamazoo, and Escanaba, reported 20 per cent or more female wage earners over 16 years of age in 1914. Eighteen cities reported an increase in the average number of wage earners in 1914

over 1909, while 6 cities—Bay City, Grand Rapids, Kalamazoo, Manistee, Port Huron, and Traverse City—show decreases. For 9 cities no figures are available for 1904. The cities, with the exception of Menominee and Ishpeming, show decreases for the decade in both number and proportion of wage earners under 16 years of age.

Table 8 gives percentages of increase from census to census, based on figures in Table 7, for cities where per cent of increase can be computed.

Table 8

PER CENT OF INCREASE IN AVERAGE NUMBER OF WAGE EARNERS.¹

CITY.	Period.	Total.	16 years of age and over.		Under 16 years of age.
			Male.	Female.	
			Adrian.....	1909-1914		18.6	8.4	111.0	.....
Alpena.....	1904-1914	20.0	21.2	.....	.....
	1909-1914	4.3	4.1	.....	.....
	1904-1909	15.0	16.4	.....	.....
Ann Arbor.....	1904-1914	53.4	73.3	-11.4	.....
	1909-1914	46.9	39.6	.....	.....
	1904-1909	4.4	24.1	-63.8	.....
Battle Creek.....	1904-1914	35.7	39.7	15.4	.....
	1909-1914	10.2	17.1	-20.3	.....
	1904-1909	23.2	19.3	44.9	.....
Bay City.....	1904-1914	-15.4	-19.6	65.0	.....
	1909-1914	-20.4	-21.3	-12.5	.....
	1904-1909	6.3	2.2	88.5	.....
Detroit.....	1904-1914	105.4	128.4	53.5	-43.8
	1909-1914	22.9	27.9	10.2	-45.2
	1904-1909	67.1	78.6	39.3	2.6
Escanaba.....	1909-1914	7.9	3.4	30.3	.....
Flint.....	1904-1914	303.6	326.0	91.6	.....
	1909-1914	23.1	23.2	17.3	.....
	1904-1909	228.0	245.7	63.4	.....
Grand Rapids.....	1904-1914	12.3	9.0	42.3	-66.9
	1909-1914	-0.9	-3.5	18.4	-49.6
	1904-1909	13.4	13.0	20.1	-34.3
Holland.....	1909-1914	0.1	-3.8	45.2	.....
Ironwood.....	1909-1914	156.7	159.4	.....	.....
Jackson.....	1904-1914	23.7	45.0	-25.9	.....
	1909-1914	2.5	7.1	-15.2	.....
	1904-1909	20.7	35.4	-12.6	.....
Kalamazoo.....	1904-1914	-2.5	5.2	-21.4	.....
	1909-1914	-11.9	-3.1	-33.1	.....
	1904-1909	10.7	8.6	17.6	.....
Lansing.....	1904-1914	109.0	119.7	24.3	.....
	1909-1914	17.9	17.1	36.8	.....
	1904-1909	77.2	87.7	-9.1	.....
Manistee.....	1904-1914	-11.1	-26.8	.....	.....
	1909-1914	-12.8	-18.5	19.3	.....
	1904-1909	2.0	-10.1	.....	.....
Marquette.....	1904-1914	-20.2	-21.3	.....	.....
	1909-1914	15.7	14.4	.....	.....
	1904-1909	-31.0	-31.2	.....	.....
Menominee.....	1904-1914	33.5	24.4	.....	.....
	1909-1914	16.9	12.7	50.7	.....
	1904-1909	14.2	10.3	.....	.....
Muskegon.....	1904-1914	50.9	62.5	21.0	-58.9
	1909-1914	2.7	2.3	4.1	.....
	1904-1909	46.9	58.8	16.3	-67.9
Pontiac.....	1909-1914	38.5	43.4	-31.1	.....
Port Huron.....	1904-1914	-39.3	-45.2	10.6	.....
	1909-1914	-18.0	-27.2	76.8	.....
	1904-1909	-26.0	-24.8	-37.4	.....
Saginaw.....	1904-1914	42.7	40.6	73.2	.....
	1909-1914	18.1	18.2	20.0	.....
	1904-1909	20.8	19.0	44.4	.....
Sault Ste. Marie.....	1904-1914	4.8	-0.5	.....	.....
	1909-1914	13.7	11.4	.....	.....
	1904-1909	-7.8	-10.6	.....	.....
Traverse City.....	1909-1914	-21.6	-35.4	106.8	.....

¹ A minus sign (-) denotes decrease; percentages are omitted where base is less than 100.

Detroit, by far the most important city in the state in respect to number of wage earners employed in 1914, reported an increase of 105.4 per cent in number of wage earners from 1904 to 1914. The number of wage earners under 16 years of age decreased by 43.8 per cent during the decade, while the proportion which this class formed of the total decreased from 3.6 per cent in 1904 to 1 per cent in 1914. Flint, where the principal industry is automobile manufacturing, re-

ported an increase in total number of wage earners of 303.6 per cent from 1904 to 1914 and 23.1 per cent from 1909 to 1914; Lansing shows an increase of 109 per cent from 1904 to 1914 and of 17.9 per cent from 1909 to 1914. Kalamazoo reported a decrease of 11.9 per cent for the period 1909-1914, while for the ten years from 1904 to 1914 a decrease of 2.5 per cent is reported. The decrease of 20.4 per cent from 1909 to 1914 in Bay City is largely due to the decline in planing-mill products.

Wage earners employed, by months.—The following table gives, for all industries combined, the total number of wage earners employed on the 15th of each month, or the nearest representative day, for 1914 and 1909, and the average number employed during each month in 1904, together with the percentage which the number reported for each month forms of the greatest number reported for any month.

Table 9

WAGE EARNERS IN MANUFACTURING INDUSTRIES.

MONTH.	Number. ¹			Per cent of maximum.		
	1914	1909	1904	1914	1909	1904
	January.....	273,067	211,679	165,269	96.8	84.6	90.0
February.....	277,824	215,230	167,441	98.5	87.3	91.1
March.....	282,176	223,087	169,583	100.0	89.2	92.3
April.....	281,040	222,273	172,322	99.6	88.9	93.8
May.....	278,103	226,811	180,731	98.6	90.7	98.4
June.....	269,532	229,058	183,707	95.5	91.6	100.0
July.....	268,399	232,023	178,153	95.1	92.8	97.0
August.....	274,164	235,804	176,583	97.2	94.3	96.1
September.....	273,896	240,310	179,584	97.1	95.1	97.8
October.....	270,454	241,912	181,898	95.8	96.7	99.0
November.....	254,678	246,729	177,239	90.3	95.7	96.5
December.....	249,777	250,078	170,268	88.5	100.0	92.7

¹ The figures for 1914 and 1909 represent the number employed on the 15th of each month, or the nearest representative day; those for 1904, the average number employed during the month.

For 1914 the spring months show the greatest activity of employment of wage earners in the combined industries of the state, the maximum number (282,176) of wage earners appearing for March, and the minimum number (249,777) for December. The year 1909 shows a very different condition, the maximum number being employed in December and the minimum number in January. In 1904 the maximum number was reported for June and the minimum number for January. The greatest difference between the maximum and minimum months of employment in any one of the three census years was 38,399, or 15.4 per cent of the maximum, in 1909.

Table 10 gives the total average number of wage earners employed during 1914, together with the total number employed on the 15th of each month, or the nearest representative day, for the combined industries of the state, for a number of selected industries, and for the total industries of each of the 27 cities having more than 10,000 inhabitants.

The total for the combined industries of the state and many of the important industries show great stability in the employment of wage earners, although in some of the industries there is a marked variation

in the number reported for the different months. The manufacture of beet sugar, a seasonal industry ranking eighteenth in value of products, shows the greatest degree of fluctuation, the number of wage earners in March being but 5.4 per cent of the number reported in October. Canning and preserving is also a seasonal industry, the number of wage earners in February being only 18.1 per cent of the number in September. The fluctuation of employment, however, in these two industries as well as the wide fluctuation in the shipbuilding, women's clothing, agricultural implements, and brick and tile industries are not

great enough to influence the steadiness of the total employment for all industries combined. The greatest stability of employment is shown for printing and publishing, coffins, burial cases and undertakers' goods, chemicals, and leather, tanned, curried, and finished, where the percentages which the minimum formed of the maximum were 96.6, 95.5, 95.3, and 95 per cent, respectively. The automobile industry, which reported nearly one-fourth of the total number of wage earners of the state, shows a fair degree of stability of employment, the percentage which the minimum formed of the maximum being 80.6.

Table 10

WAGE EARNERS: 1914.
[Month of maximum employment for each industry is indicated by boldface figures and that of minimum by *italic* figures.]

INDUSTRY AND CITY.	Average number employed during year.	Number employed on 15th day of the month or nearest representative day.												Per cent minimum is of maximum.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
All industries.....	271,090	273,067	277,824	282,176	281,040	278,103	269,532	268,399	274,164	273,866	270,454	254,678	<i>249,777</i>	88.5
Agricultural implements.....	2,143	2,379	2,588	2,611	2,488	2,383	2,387	2,473	2,130	<i>1,338</i>	1,343	1,704	1,892	51.2
Automobiles, including bodies and parts.....	67,538	70,793	72,626	74,423	73,785	69,085	60,926	<i>59,982</i>	67,164	69,521	69,020	61,111	62,020	80.6
Boots and shoes.....	2,035	2,297	2,226	2,181	1,902	1,888	1,932	2,113	2,162	2,072	1,881	<i>1,800</i>	1,966	78.4
Boxes, fancy and paper.....	1,461	1,477	<i>1,402</i>	1,503	1,453	1,448	1,456	1,428	1,431	1,459	1,431	1,470	1,574	89.1
Brass, bronze, and copper products.....	4,731	4,485	4,531	4,988	4,939	4,924	4,760	4,667	4,675	4,950	4,776	4,649	<i>4,421</i>	88.7
Bread and other bakery products.....	4,014	3,856	<i>3,849</i>	3,889	3,918	4,027	4,123	4,180	4,149	4,095	4,052	4,020	4,010	92.1
Brick, tile, pottery, and other clay products.....	2,194	<i>1,630</i>	1,743	1,941	2,241	2,746	2,704	2,599	2,564	2,435	2,172	1,862	1,691	59.4
Butter, cheese, and condensed milk.....	1,367	1,231	<i>1,221</i>	1,149	1,139	1,438	1,486	1,546	1,432	1,428	1,369	1,330	1,343	79.0
Canning and preserving.....	2,507	1,063	<i>965</i>	992	1,038	1,278	2,338	4,321	4,629	5,323	4,199	2,496	1,442	18.1
Carriages and wagons and materials.....	1,417	1,493	1,534	1,550	1,512	1,439	1,433	1,440	1,381	1,332	<i>1,273</i>	1,283	1,334	82.1
Cars and general shop construction and repairs by electric-railroad companies.....	885	872	878	889	886	896	939	926	876	860	861	865	872	91.6
Cars and general shop construction and repairs by steam-railroad companies.....	5,803	5,911	<i>6,457</i>	5,603	5,894	5,694	5,696	5,719	5,855	5,846	6,016	5,879	6,066	90.0
Cement.....	1,340	1,056	<i>972</i>	1,089	1,448	1,464	1,480	1,502	1,406	1,478	1,444	1,392	1,259	64.7
Chemicals.....	4,509	4,619	4,563	4,538	4,501	4,530	4,492	<i>4,403</i>	4,407	4,517	4,570	4,517	4,451	95.3
Clothing, men's, including shirts.....	2,592	2,765	2,858	2,778	2,666	2,452	2,410	<i>2,120</i>	2,255	2,316	2,417	2,449	2,538	74.2
Clothing, women's.....	1,672	2,715	2,641	2,144	2,001	1,496	1,268	<i>1,112</i>	1,176	1,289	1,389	1,387	1,455	41.0
Coffins, burial cases, and undertakers' goods.....	540	530	549	552	543	528	544	533	537	540	553	537	534	95.5
Confectionery.....	993	<i>907</i>	918	932	944	924	939	926	948	1,104	1,148	1,110	1,116	79.0
Cooperage and wooden goods, not elsewhere specified.....	1,967	2,040	2,122	1,987	2,012	1,771	1,930	1,990	2,010	2,057	1,983	1,868	1,828	83.5
Copper, tin, and sheet-iron products.....	2,397	2,496	2,443	2,547	2,571	2,481	2,491	2,368	2,274	2,379	2,407	2,205	<i>2,102</i>	81.8
Corsets.....	2,149	2,507	2,612	2,521	2,390	2,240	2,106	2,006	2,030	2,044	1,848	1,813	<i>1,671</i>	64.0
Electrical machinery, apparatus, and supplies.....	1,144	1,192	1,149	1,158	1,216	1,252	1,185	1,164	1,108	<i>1,029</i>	1,046	1,105	1,127	81.9
Flour-mill and gristmill products.....	1,370	1,396	1,404	1,392	1,333	1,316	<i>1,306</i>	1,329	1,346	1,398	1,410	1,401	1,406	92.6
Food preparations, not elsewhere specified.....	1,633	<i>1,327</i>	1,399	1,418	1,693	1,631	1,772	2,028	1,937	1,790	1,809	1,773	1,619	65.4
Foundry and machine-shop products.....	26,497	25,707	26,730	28,261	29,268	28,985	28,005	27,624	27,030	25,498	24,634	23,122	<i>23,100</i>	78.9
Furniture and refrigerators.....	16,267	16,884	17,482	17,524	16,921	16,126	16,017	16,014	15,991	<i>15,370</i>	15,474	15,559	15,536	87.7
Gas and electric fixtures and lamps.....	597	562	570	629	685	694	663	621	575	560	562	554	<i>509</i>	73.3
Gas, illuminating and heating.....	2,349	2,275	2,234	2,244	2,339	2,584	2,591	2,529	2,459	2,350	2,222	<i>2,157</i>	2,204	83.2
Hosiery and knit goods.....	2,714	<i>2,616</i>	2,664	2,679	2,688	2,747	2,750	2,802	2,651	2,770	2,828	2,706	2,667	92.5
Iron and steel, blast furnaces.....	991	1,175	1,193	1,081	1,146	1,055	1,063	895	921	889	886	<i>745</i>	843	62.4
Iron and steel, steel works and rolling mills.....	718	726	780	866	875	696	751	730	620	697	634	667	634	70.9
Iron and steel forgings.....	552	519	538	584	580	579	486	499	494	<i>484</i>	629	641	591	75.5
Leather goods.....	675	710	684	708	718	715	660	665	665	655	653	640	<i>627</i>	87.3
Leather, tanned, curried, and finished.....	2,773	2,789	2,865	2,832	2,768	2,747	2,772	2,819	2,748	2,726	<i>2,711</i>	2,751	2,758	95.0
Liquors, malt.....	2,097	1,946	<i>1,894</i>	1,933	2,040	2,151	2,371	2,340	2,291	2,165	2,040	1,993	2,000	79.9
Lumber and timber products.....	25,527	30,310	31,012	30,293	27,861	30,112	30,596	29,871	29,006	27,797	26,542	24,902	<i>24,022</i>	77.5
Musical instruments, pianos and organs and materials.....	1,070	1,119	1,102	1,162	1,122	1,070	1,040	1,039	1,043	1,092	1,033	<i>1,001</i>	1,017	86.1
Paper and wood pulp.....	6,951	5,910	<i>6,870</i>	6,028	5,955	6,074	6,083	6,059	6,059	6,060	6,215	6,111	6,122	91.4
Paper goods, not elsewhere specified.....	750	718	826	829	877	865	831	719	<i>539</i>	695	690	700	711	61.5
Patent medicines and compounds and druggists' preparations.....	3,369	3,424	3,440	3,504	3,481	3,393	3,252	<i>3,244</i>	3,292	3,330	3,371	3,373	3,321	92.6
Printing and publishing.....	8,166	8,105	8,238	8,323	8,263	8,176	8,091	8,093	<i>8,029</i>	8,120	8,178	8,119	8,214	96.6
Salt.....	1,434	1,329	<i>1,325</i>	1,345	1,450	1,426	1,390	1,428	1,364	1,516	1,621	1,563	1,411	81.7
Shipbuilding, including boat building.....	1,261	1,025	1,301	1,562	1,745	1,783	1,660	1,430	1,349	1,148	903	705	<i>431</i>	24.2
Slaughtering and meat packing.....	1,181	1,227	1,269	1,171	1,087	1,112	1,177	1,194	1,150	1,193	1,240	1,168	1,244	87.4
Springs, steel, car and carriage, not made in steel works or rolling mills.....	638	610	596	639	633	687	612	<i>408</i>	531	758	717	670	705	65.7
Stoves and furnaces, including gas and oil stoves.....	4,074	3,953	4,385	4,540	4,475	4,310	4,216	4,022	4,080	4,045	3,993	3,720	<i>3,119</i>	68.7

Table 10—Continued.

WAGE EARNERS: 1914.
[Month of maximum employment for each industry is indicated by boldface figures and that of minimum by *italic* figures.]

INDUSTRY AND CITY.	Average number employed during year.	Number employed on 15th day of the month or nearest representative day.												Per cent minimum is of maximum.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
		Sugar, beet.....	1,326	785	269	<i>249</i>	265	383	423	486	601	574	4,585		4,442	2,550	5.4
Tobacco manufactures.....	9,075	9,013	9,151	9,053	8,491	8,965	9,059	9,017	9,210	9,350	9,190	9,165	9,166	91.1
Wall plaster.....	631	560	593	659	718	696	685	618	614	612	588	595	544	75.8
Window shades and fixtures.....	702	754	721	706	691	684	686	700	701	680	701	705	689	90.2
Wirework, including wire rope and cable, not elsewhere specified.....	1,314	1,373	1,405	1,461	1,463	1,420	1,252	<i>1,183</i>	1,197	1,272	1,275	1,253	1,214	80.9
Wood distillation.....	645	617	633	618	627	630	638	<i>609</i>	702	672	667	617	650	86.8
Wood, turned and carved.....	576	670	650	696	691	626	512	606	551	496	481	483	474	68.1
All other industries.....	25,709	24,550	24,824	25,205	26,454	26,991	27,024	27,073	27,623	27,350	24,768	23,692	<i>22,954</i>	83.1
Total for cities.....	181,588	181,673	185,518	188,995	189,291	185,606	180,852	180,204	186,153	185,781	180,701	168,408	<i>165,781</i>	87.6
ADRIAN.....	1,256	1,305	1,377	1,415	1,462	1,389	1,257	<i>1,090</i>	1,156	1,132	1,173	1,191	1,125	74.6
ALPENA.....	1,494	1,449	1,592	1,593	1,519	1,593	1,572	1,575	1,542	1,439	1,345	<i>1,330</i>	1,373	83.2
ANN ARBOR.....	842	874	865	871	900	837	858	805	858	881	839	770	746	82.9
BATTLE CREEK.....	4,599	4,303	4,580	4,672	4,883	4,806	5,023	5,442	4,972	4,178	3,024	4,208	4,197	72.1
BAY CITY.....	3,771	<i>3,519</i>	3,532	3,730	3,930	3,975	3,941	3,932	3,834	3,837	3,766	3,705	3,531	88.5
BENTON HARBOR.....	1,285	<i>1,076</i>	1,093	1,231	1,300	1,340	1,388	1,398	1,434	1,408	1,373	1,243	1,136	75.0
DETROIT.....	99,693	100,568	103,260	105,164	105,129	102,649	98,220	97,682	102,167	101,747	97,023	90,968	<i>89,819</i>	85.4
ESCANABA.....	777	794	652	665	849	876	861	844	830	811	773	<i>694</i>	775	67.8
FLINT.....	8,722	8,830	8,744	8,894	8,442	7,095	7,265	8,804	10,148	10,308	9,924	7,797	8,413	68.3
GRAND RAPIDS.....	17,427	17,280	17,609	17,667	17,454	17,443	17,521	17,264	17,743	17,893	17,628	16,911	<i>16,711</i>	93.4
HANCOCK.....	142	145	141	141	143	142	141	142	141	<i>140</i>	142	143	143	96.6
HOLLAND.....	2,165	2,152	2,206	2,208	<i>1,986</i>	2,145	2,177	2,189	2,296	2,275	2,185	2,072	2,089	86.5
IRONWOOD.....	516	603	624	616	479	489	500	485	505	507	540	386	449	61.7
ISHPEMING.....	79	85	83	77	82	79	74	73	73	84	79	75	74	78.5
JACKSON.....	4,906	4,779	4,792	4,976	5,162	5,479	5,229	4,712	4,755	4,835	4,909	4,702	<i>4,542</i>	82.9
KALAMAZOO.....	5,525	5,688	5,879	5,943	5,880	5,619	5,548	5,422	5,442	5,437	5,296	<i>5,066</i>	5,110	85.2
LANSING.....	6,231	<i>5,707</i>	5,924	6,236	6,436	6,422	6,113	6,200	6,517	6,572	6,374	6,191	6,084	86.8
MANISTEE.....	1,853	2,073	2,066	2,071	1,977	1,995	1,995	1,842	1,568	1,691	1,759	1,715	<i>1,484</i>	71.6
MARQUETTE.....	589	565	572	583	603	595	622	680	654	609	557	540	482	70.9
MENOMINEE.....	1,988	2,014	2,144	2,108	2,047	1,950	1,930	1,864	2,035	1,970	2,135	1,950	1,709	79.7
MUSKOGON.....	4,646	4,651	4,660	4,653	4,848	4,963	5,188	4,814	4,461	4,346	4,387	<i>4,334</i>	4,447	83.5
OWOSSO.....	1,231	1,164	1,210	1,205	1,151	1,062	1,042	1,036	1,189	1,385	1,613	1,633	1,182	64.2
PONTIAC.....	2,409	2,544	2,700	2,809	2,940	2,935	2,357	1,870	2,100	2,577	2,474	2,061	<i>1,641</i>	52.4
PORT HURON.....	1,296	1,202	<i>1,116</i>	1,226	1,401	1,410	1,542	1,438	1,383	1,226	1,239	1,238	1,131	72.4
SAGINAW.....	6,342	6,419	6,282	6,633	6,546	6,443	6,576	6,583	6,369	6,395	6,256	5,906	<i>5,696</i>	85.9
SAULT STE. MARIE.....	933	1,070	1,020	894	<i>843</i>	989	982	997	969	888	897	859	848	78.8
TRAVERSE CITY.....	956	818	845	708	899	886	930	1,000	1,012	1,210	1,212	1,005	947	58.4

Of the 27 cities, Pontiac and Traverse City show much the greatest variation in the number of wage earners employed, the proportion that the minimum number formed of the maximum number for these two cities being 52.4 per cent and 58.4 per cent, respectively. The greatest stability of employment of wage earners was in Hancock and Grand Rapids, where the proportions that the minimum formed of the maximum were 96.6 per cent and 93.4 per cent, respectively.

Prevailing hours of labor.—In Table 11 the average number of wage earners reported for 1914 and 1909,

for all industries combined and for selected industries throughout the state, have been classified according to number of hours of labor per week prevailing in the establishments in which they were employed. A similar classification is given, for 1914 only, for all industries combined in each city having more than 10,000 inhabitants. The number employed in each establishment is classified as a total, even though a few employees worked a greater or smaller number of hours.

Table 11

INDUSTRY AND CITY.	Census year.	AVERAGE NUMBER OF WAGE EARNERS.								
		Total.	In establishments where the prevailing hours of labor per week were—							
			48 and under.	Between 48 and 54.	54.	Between 54 and 60.	60.	Between 60 and 72.	72.	Over 72.
All industries.....	1914	271,690	31,326	31,353	57,614	75,878	64,861	5,568	1,677	2,813
	1909	241,499	11,174	6,612	38,449	51,552	113,762	2,748	1,284	5,918
Agricultural implements.....	1914	2,143	199	411	788	411	334	.....	.....	.....
	1909	2,359	.....	.....	1,119	787	453	.....	.....	.....
Automobiles, including bodies and parts.....	1914	67,538	12,464	9,359	3,528	33,648	8,530	.....	.....	.....
	1909	25,444	2	17	4,775	7,086	13,564	.....	.....	.....
Boots and shoes.....	1914	2,635	115	20	1,462	232	266	.....	.....	.....
	1909	2,355	6	11	1,674	572	192	.....	.....	.....
Boxes, fancy and paper.....	1914	1,461	36	75	213	907	230	.....	.....	.....
	1909	1,326	.....	12	499	470	345	.....	.....	.....

Table 11—Continued.

INDUSTRY AND CITY.	Census year.	AVERAGE NUMBER OF WAGE EARNERS.								
		Total.	In establishments where the prevailing hours of labor per week were—							
			48 and under.	Between 48 and 54.	54.	Between 54 and 60.	60.	Between 60 and 72.	72.	Over 72.
Brass, bronze, and copper products.....	1914 1909	4,731 4,771	14 35	143 35	1,300 102	1,977 2,332	1,237 2,302			
Bread and other bakery products.....	1914 1909	4,014 2,637	425 128	561 120	1,394 702	598 195	966 1,211	56 201	14 52	28
Brick, tile, pottery, and other clay products.....	1914 1909	2,194 1,771	318 378	46 60	464 130	164 94	846 1,103	22		34
Butter, cheese, and condensed milk.....	1914 1909	1,367 1,073	145 145	24 13	81 27	43 44	833 750	232 68	8 25	1 1
Canning and preserving.....	1914 1909	2,507 2,073	395 6	11	607 58	384 373	1,081 1,589	29 15	27	5
Carriages and wagons and materials.....	1914 1909	1,417 4,034	66 55	29	196 53	526 2,105	598 1,321		2	
Cars and general shop construction and repairs by electric-railroad companies.....	1914 1909	885 574		552	12 360	22 19	186 190	110 2		3 3
Cars and general shop construction and repairs by steam-railroad companies.....	1914 1909	5,803 5,401	382	1,589 642	3,198 1,460	67 1,905	553 1,276	14 118		
Cement.....	1914 1909	1,340 1,306				100	500 38	359 294	131	250 974
Chemicals.....	1914 1909	4,509 3,174	29	18	20 2	2,040 1,426	1,741 35	611 174	96	50 1,441
Clothing, men's, including shirts.....	1914 1909	2,502 3,530	1,590 2,224	351 79	526 809	35 429	39			
Clothing, women's.....	1914 1909	1,672 2,194	77 114	1,070 823	525 1,161	48	48			
Coffins, burial cases, and undertakers' goods.....	1914 1909	540 439	2	2	117 56	254 151	165 230			
Confectionery.....	1914 1909	993 1,052	25 39	65 2	649 462	149 225	103 318	2 4	2	
Cooperage and wooden goods, not elsewhere specified.....	1914 1909	1,967 2,642	72 252	199	351 27	717 17	628 2,346			
Copper, tin, and sheet-iron products.....	1914 1909	2,397 2,386	105 81	947 54	818 907	181 620	346 723	1		
Corsets.....	1914 1909	2,149 2,491	13 7	1,236 42	900 1,990	299	123			
Electrical machinery, apparatus, and supplies.....	1914 1909	1,144 1,218	73 4	118 26	471 236	277 310	205 642			
Flour-mill and gristmill products.....	1914 1909	1,370 1,530	80 115	14 33	87 11	19 10	903 1,219	124 85	114 57	29
Food preparations, not elsewhere specified.....	1914 1909	1,683 1,303	553 5	67 17	122 34	61 127	797 834	23	270	60 7
Foundry and machine-shop products.....	1914 1909	26,497 21,649	832 160	2,374 108	6,872 3,938	12,821 9,335	3,596 8,096	2 14		
Furniture and refrigerators.....	1914 1909	16,267 16,610	645 53	2,104 44	6,041 1,249	3,044 3,155	4,433 12,109			
Gas and electric fixtures and lamps.....	1914 1909	597 395	7	21	47 23	542 156	1 190			
Gas, illuminating and heating.....	1914 1909	2,349 1,771	1		109 22	967 49	270 779	783 353	87 46	133 521
Hosiery and knit goods.....	1914 1909	2,714 2,545	26 8	201 303	2,315 807	172 756	666			
Iron and steel, blast furnaces.....	1914 1909	991 1,016						433 55		558 961
Iron and steel, steel works and rolling mills.....	1914 1909	718 1,183		121	70	457 317	61 866			
Iron and steel forgings.....	1914 1909	552 307		9	375 242	134	34 65			
Leather goods.....	1914 1909	675 834	5	181	127 43	251 276	111 515			
Leather, tanned, curried, and finished.....	1914 1909	2,773 2,291		11	972	563 519	1,227 1,772			
Liquors, malt.....	1914 1909	2,097 1,527	1,567 605	43 8	216 378	2	269 423		113	
Lumber and timber products.....	1914 1909	23,527 35,627	268 341	922 263	2,181 721	2,403 1,762	22,719 32,413	2 124	3	27
Musical instruments, pianos and organs and materials.....	1914 1909	1,070 1,779		2 1	98 51	335 1,106	365 270			
Paper and wood pulp.....	1914 1909	6,051 4,327		278	1,016	623 225	1,482 2,534	1,514 1,084	1,104 484	34
Paper goods, not elsewhere specified.....	1914 1909	750 1,181	3 3	28 15	357 410	10 592	286 161	66		

Table 11—Continued.

INDUSTRY AND CITY.	Census year.	AVERAGE NUMBER OF WAGE EARNERS.							
		Total.	In establishments where the prevailing hours of labor per week were—						
			48 and under.	Between 48 and 54.	54.	Between 54 and 60.	60.	Between 60 and 72.	72.
Patent medicines and compounds and druggists' preparations.....	1914 1909	3,809 3,249	77 71	2,761 580	380 2,181	132 357	19 79	1 1	
Printing and publishing.....	1914 1909	8,166 7,219	5,001 2,718	1,394 833	1,318 2,334	297 833	132 500	5 1	19
Salt.....	1914 1909	1,434 1,363	12 15	40 99	565 9	538 1,173	46 9	114 4	121 54
Shipbuilding, including boat building.....	1914 1909	1,261 2,344	98 2	30 8	730 85	14 1,093	389 1,161		
Slaughtering and meat packing.....	1914 1909	1,181 902	14 14	5 35	33 35	3 3	1,126 849	1 1	
Springs, steel, car and carriage, not made in steel works or rolling mills.	1914 1909	638 638			110	260 200	178 388	81	
Stoves and furnaces, including gas and oil stoves.....	1914 1909	4,074 4,482	5 255	724 671	2,432 60	290 1,180	623 2,316		
Sugar, beet.....	1914 1909	1,326 1,460						113 80	1,133 1,460
Tobacco manufactures.....	1914 1909	9,075 7,876	3,468 2,509	1,751 1,173	2,429 1,854	1,392 1,981	23 356	12 3	
Wall plaster.....	1914 1909	631 746	3 746	25	123 38	1	490 648		59
Window shades and fixtures.....	1914 1909	702 636	253 24	18	297 68	133 281	1 263		
Wirework, including wire rope and cable, not elsewhere specified....	1914 1909	1,314 909	3 909	12 21	129 232	701 299	469 397		
Wood distillation.....	1914 1909	645 806					167 345	245 88	233 367
Wood, turned and carved.....	1914 1909	676 1,137	12 10	18	72 20	127 36	365 1,053		
All other industries.....	1914 1909	25,709 27,537	1,549 822	1,452 553	10,887 6,922	6,814 7,421	4,442 11,633	414 53	23 37
Total for cities.....	1914	181,588	16,508	28,869	45,659	58,219	29,026	1,823	966
ADRIAN.....	1914	1,256	28	31	179	279	695	11	3
ALPENA.....	1914	1,494	33		42	310	848		201
ANN ARBOR.....	1914	842	189	6	237	316	80		14
BATTLE CREEK.....	1914	4,599	870	492	1,478	709	1,042		
BAY CITY.....	1914	3,771	237	184	1,249	497	1,402	100	42
BENTON HARBOR.....	1914	1,285	11	19	133	564	558		
DETROIT.....	1914	99,603	9,702	20,735	20,248	35,419	12,804	393	119
ESCANABA.....	1914	777	67	12	224	242	127		
FLINT.....	1914	8,722	157	341	406	7,568	116	102	2
GRAND RAPIDS.....	1914	17,427	1,721	2,484	9,048	1,997	1,911	266	
HANCOCK.....	1914	142	53		28		47	14	
HOLLAND.....	1914	2,165	232	27	939	409	490		68
IRONWOOD.....	1914	516	7	9	10		480	19	
ISHPEMING.....	1914	70	11	3	10		52		
JACKSON.....	1914	4,906	413	990	1,568	1,411	463	211	
KALAMAZOO.....	1914	5,525	251	682	2,392	861	1,102	237	
LANSING.....	1914	6,231	484	2,175	634	2,474	389	8	67
MANISTEE.....	1914	1,853	39	18	367	268	1,161		
MARQUETTE.....	1914	589	291	7	92	14	185		
MENOMINEE.....	1914	1,988	27		128	442	1,199	120	72
MUSHEGON.....	1914	4,646	581	301	2,587	378	444	72	283
OWOSSO.....	1914	1,231	70		71	345	625	25	15
PONTIAC.....	1914	2,409	68	14	257	1,785	214	67	14
PORT HURON.....	1914	1,296	279	185	185	91	327	2	222
SAGINAW.....	1914	6,312	607	236	2,932	586	1,767	164	
SAULT STE. MARIE.....	1914	938	33	2	124	592	178	4	4
TRAVERSE CITY.....	1914	956	54	6	41	561	290	4	

From this table it appears that there has been a general tendency to shorten the number of hours of labor for wage earners. The percentage distribution of wage earners, by the hours-per-week groups as given in the following tabular statement for 1914 and 1909, illustrates the change to shorter hours.

In 1914, 74,919, or 27.6 per cent, of the total wage earners worked in establishments operating 60 or more hours per week, as compared with 123,712, or 53.5 per cent, in this class of establishments in 1909.

PREVAILING HOURS OF LABOR PER WEEK.	PER CENT OF TOTAL NUMBER OF WAGE EARNERS.	
	1914	1909
48 and under.....	11.6	4.8
Between 48 and 54.....	11.6	2.9
54.....	21.3	16.6
Between 54 and 60.....	23.0	22.3
60.....	23.9	49.1
Between 60 and 72.....	2.1	1.2
72.....	0.6	0.6
Over 72.....	1.0	2.6

In 1909, for all industries combined and for many of them separately, the greatest number of wage earners in any one class was employed in establishments where the prevailing hours of labor were 60 per week, but in 1914 this condition appeared in establishments where the working hours were between 54 and 60. The number of wage earners whose working hours were under 54 per week increased from 17,786, or 7.7 per cent, in 1909 to 62,679, or 23.2 per cent, in 1914.

Of the wage earners employed in the lumber industry, 22,719, or 79.6 per cent, were in the establishments where the prevailing hours were 60 per week; in canning and preserving, 1,081, or 43.1 per cent, were in such establishments; in flour mills and gristmills, 903, or 65.9 per cent; in slaughtering and meat packing, 1,126, or 95.3 per cent. The greatest reduction in the number of hours per week during the census period 1909-1914 was in the automobile industry. In this industry no wage earners were reported working more than 60 hours per week at either census. In 1909, 13,564 wage earners, or 53.3 per cent, were in establishments where the prevailing hours were 60

per week; 7,086, or 27.8 per cent, in establishments working between 54 and 60 hours; 4,775, or 18.8 per cent, 54 hours; 17, between 48 and 54 hours; and only 2, or less than one-tenth of 1 per cent, under 48 hours. In 1914 the numbers are nearly reversed—8,539, or 12.6 per cent, being in establishments working 60 hours; 33,648, or 49.8 per cent, between 54 and 60 hours; 3,528, or 5.2 per cent, 54 hours; 9,359, or 13.9 per cent, between 48 and 54 hours; and 12,464, or 18.5 per cent, under 48 hours.

Of the total number of wage earners in the 27 cities, the greatest number in any one class was employed in establishments where the prevailing hours were between 54 and 60 per week. In Battle Creek, Grand Rapids, Holland, Jackson, Kalamazoo, Muskegon, and Saginaw, a greater number of the wage earners was employed in establishments where the prevailing hours were 54 per week than in any other class.

Location of establishments.—Table 12 shows, for 1914, 1909, and 1899, the extent to which the manufactures in Michigan were centralized in the cities having more than 10,000 inhabitants.

Table 12

	Census year.	Aggregate.	CITIES HAVING A POPULATION OF 10,000 OR OVER.								DISTRICTS OUTSIDE OF CITIES HAVING A POPULATION OF 10,000 OR OVER.	
			Total.		10,000 to 25,000.		25,000 to 100,000.		100,000 and over.		Number or amount.	Per cent of aggregate.
			Number or amount.	Per cent of aggregate.	Number or amount.	Per cent of aggregate.	Number or amount.	Per cent of aggregate.	Number or amount.	Per cent of aggregate.		
Number of places.....	1914		27		17		8		2			
	1910		24		15		7		2			
	1900		18		13		4		1			
Population ¹	1914	2,976,030	1,203,341	40.4	220,868	7.4	321,596	10.8	660,877	22.2	1,772,689	59.6
	1910	2,810,173	1,043,746	37.1	203,817	7.3	261,592	9.3	578,337	20.6	1,766,427	62.9
	1900	2,420,982	681,312	28.1	199,771	8.3	195,837	8.1	285,704	11.8	1,739,670	71.9
Number of establishments.....	1914	8,724	4,731	54.2	846	9.7	1,255	14.4	2,630	30.1	3,993	45.8
	1909	9,359	4,570	49.1	817	8.9	1,123	12.3	2,560	27.9	4,659	50.0
	1899	7,310	2,892	39.6	773	10.6	860	11.8	1,259	17.2	4,418	60.4
Average number of wage earners...	1914	271,090	181,588	67.0	19,816	7.3	44,742	16.5	117,030	43.2	89,502	33.0
	1909	231,499	156,747	67.7	20,433	8.8	37,713	16.3	98,601	42.6	74,752	32.3
	1899	153,800	84,805	54.4	21,274	13.7	25,153	16.1	38,373	24.6	70,995	45.6
Value of products.....	1914	\$1,086,162,432	\$698,097,162	64.3	\$86,049,374	6.1	\$181,907,676	16.7	\$450,140,112	41.4	\$388,065,270	35.7
	1909	685,109,169	465,291,235	67.9	52,798,619	7.7	117,232,598	17.1	295,170,018	43.1	219,907,934	32.1
	1899	319,691,856	178,124,393	55.7	43,156,684	13.5	46,601,785	14.6	88,365,924	27.6	141,567,463	44.3
Value added by manufacture.....	1914	493,361,368	313,497,742	63.5	26,834,982	5.4	82,676,454	16.8	203,896,306	41.3	179,953,626	36.5
	1909	316,497,147	225,647,464	71.3	23,980,450	7.6	56,450,253	17.8	145,216,761	45.9	90,849,683	28.7
	1899	143,723,728	85,008,397	59.1	22,296,278	15.5	21,353,692	14.9	41,358,427	28.8	58,717,331	40.9

¹ Census estimate of population for 1914.

In accepting the statistics in this table it must be remembered that three of the cities—Benton Harbor, Hancock, and Owosso—that had a population of 10,000 and over at the census of 1914 were included in the districts outside of the cities at prior censuses.

A comparison of the combined totals for the cities for 1914 with those for 1909 shows an increase in population, number of establishments, average number of wage earners, value of products, and value added by manufacture, a condition which also prevailed in the districts outside of the cities, with the exception of a decrease of 14.3 per cent in number of establishments. In 1914 the cities having over 10,000 inhabitants represented only 40.4 per cent of the estimated popu-

lation of the state, reported 54.2 per cent of the number of establishments, 67 per cent of the total average number of wage earners, 64.3 per cent of the total value of products, and 63.5 per cent of the value added by manufacture.

In 1900 Detroit was the only city in the state having over 100,000 inhabitants, but during the succeeding decade the population of Grand Rapids passed this figure, so that for 1909 and 1914 its statistics are included with those of Detroit in Table 12. In 1914 the group comprising the cities having between 25,000 and 100,000 inhabitants, which reported 16.7 per cent of the total value of the manufactured products of the state in that year, included Saginaw, Flint, Bay

City, Kalamazoo, Lansing, Jackson, Battle Creek, and Muskegon. In 1910 the population of Muskegon was less than 25,000, so that for 1909 the statistics for that city were included with those for the cities having between 10,000 and 25,000 inhabitants.

The group of cities having a population of between 10,000 and 25,000 was augmented in 1914 by the addition of Hancock, Benton Harbor, and Owosso, each of which had less than 10,000 inhabitants in 1909.

The relative importance in manufactures of each of the 27 cities having more than 10,000 inhabitants, as measured by average number of wage earners and by value of products, in 1914, 1909, and 1904, is shown in Table 13. The cities are listed in the order of their importance as shown by value of products. Those for which comparative figures are not shown for 1909 and 1904 had less than 10,000 inhabitants in those years.

CITY.	AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.		
	1914	1909	1904	1914	1909	1904
	Detroit.....	99,603	81,011	48,483	\$400,347,912	\$252,939,343	$128,246,680
Flint.....	8,722	7,088	2,161	53,375,039	24,118,007	6,177,170
Grand Rapids...	17,427	17,590	15,514	49,792,200	42,230,675	30,689,987
Lansing.....	6,231	5,285	2,982	26,984,496	16,567,093	6,887,415
Battle Creek.....	4,599	4,175	3,389	23,248,420	20,174,016	12,298,244
Kalamazoo.....	5,525	6,272	5,666	20,214,314	17,903,580	13,141,767
Saginaw.....	6,342	5,368	4,445	19,008,670	14,192,054	10,078,508
Jackson.....	4,906	4,788	3,967	16,809,846	13,984,121	8,348,125
Pontiac.....	2,409	1,739	.....	15,102,453	5,893,961	.....
Muskegon.....	4,646	4,522	3,078	11,147,605	9,647,823	6,319,441
Bay City.....	3,771	4,737	2,456	11,119,286	10,293,747	8,808,559
Holland.....	2,165	1,182	.....	8,683,835	5,802,043	.....
Adrian.....	1,256	1,059	.....	5,442,338	6,085,126	.....
Menominee.....	1,988	1,700	1,489	4,909,884	3,727,596	2,973,935
Manistee.....	1,853	2,125	2,084	4,136,210	3,344,087	3,266,601
Alpena.....	1,494	1,432	1,245	4,101,935	3,963,823	2,905,363
Port Huron.....	1,296	1,580	2,136	4,090,323	3,588,272	3,714,859
Sault Ste. Marie..	938	1,825	895	3,821,464	3,729,117	2,412,481
Owosso.....	1,231	.....	.....	3,468,534	.....	.....
Benton Harbor...	1,285	.....	.....	3,021,552	.....	.....
Ann Arbor.....	842	573	549	2,603,379	1,865,894	1,385,731
Traverse City...	956	1,220	.....	2,251,484	2,280,150	.....
Escanaba.....	777	720	.....	1,506,526	1,074,109	.....
Marquette.....	559	1,509	738	1,394,587	1,277,828	2,364,081
Ironwood.....	516	201	.....	793,247	377,416	.....
Hancock.....	142	.....	.....	402,980	.....	.....
Ishpeming.....	79	66	73	228,643	132,374	246,862

¹ Figures do not agree with those published because it was necessary to revise them in order to include data only for those establishments located within the corporate limits of the city.
² Includes statistics for West Bay City, which was annexed to Bay City in 1905.

Each city for which comparative figures are given, except Adrian and Traverse City, shows an increase in value of products from 1909 to 1914, and all, except Port Huron, Marquette, and Ishpeming, show increases from 1904 to 1909. There were decreases in the number of wage earners during the period 1909-1914 in Grand Rapids, Kalamazoo, Bay City, Manistee, Port Huron, and Traverse City.

Detroit is the leading manufacturing city of the state. The value of its manufactured products increased from \$252,939,343 in 1909 to \$400,347,912 in 1914, or 58.3 per cent, and the average number of wage earners, from 81,011 to 99,603, or 22.9 per cent. Notwithstanding the fact that the value of products increased 58.3 per cent, the proportion which Detroit contributed of the total value of the manufactured products of the state was the same in 1914 and 1909,

36.9 per cent, whereas in 1904 it was 29.9 per cent. The industries of the city gave employment to 36.7 per cent of the total number of wage earners in the manufacturing industries of the state in 1914, as compared with 35 per cent in 1909 and 27.7 per cent in 1904. Ranked by value of manufactured products, the city held fourth place in 1914 among the cities of the United States, as compared with sixth in 1909 and fourteenth in 1904. The leading industries of Detroit, arranged in the order of value of products, are indicated in the following tabular statement, which shows the absolute increase as well as per cent of increase between 1909 and 1914, and also the proportion which the value of products for each industry represents of the corresponding total for the state:

INDUSTRY.	VALUE OF PRODUCTS: 1914.			
	Amount.	Per cent of total for the industry in the state.	Increase over 1909.	
			Amount.	Per cent.
Automobiles, including bodies and parts.....	\$164,075,044	41.2	\$104,539,790	175.6
Foundry and machine-shop products.....	29,465,241	45.6	11,221,988	61.5
Slaughtering and meat packing.....	20,321,148	95.6	7,471,574	58.1
Tobacco manufactures.....	17,044,106	82.5	4,270,979	33.4
Brass, bronze, and copper products.....	14,620,751	86.7	2,332,420	19.0
Patent medicines and compounds and druggists' preparations.....	13,691,495	83.3	2,133,076	18.5
Printing and publishing.....	13,184,302	52.8	5,877,212	80.6
Liquors, malt.....	9,409,722	62.6	4,467,509	90.4

These eight industries in the aggregate represented 70.4 per cent of the total value of the manufactured products of the city and 25.9 per cent of the entire output of the state for all industries combined. The manufacture of automobiles, bodies, and parts was by far the most important industry in Detroit. The value of the output of the city in 1914 was 41.2 per cent of the state total for this industry.

In addition to the 74 industries presented separately for Detroit in Table 38, there were 108 others, which for various reasons were included in the group of "all other industries." Some of these industries were among the most important in the city, 9 of them having products in 1914 valued at more than \$1,000,000.¹

Flint, which ranked third in value of products in 1909, was second in 1914. The city owes its rapid advance from tenth place in 1904 to the development of the automobile industry, which, taken in connection with the foundry and machine shops, accounts for over nine-tenths of the total value of products of the city. The value of the city's manufactured prod-

¹ These industries were as follows:

- Cars, steam-railroad, not including operations of railroad companies.
- Cash registers and calculating machines.
- Corsets.
- Fertilizers.
- Flour-mill and gristmill products.
- Gas, illuminating and heating.
- Lamps.
- Rubber goods, not elsewhere specified.
- Steam fittings and steam and hot-water heating apparatus.

ucts was nearly nine times as great in 1914 as in 1904, and the average number of wage earners was more than four times as great. These increased ratios were greater than those for any other city of 10,000 population or over in the state.

Grand Rapids, the second manufacturing city in the state in 1909, ranked third in 1914. The value of its manufactured products increased from \$42,230,675 in 1909 to \$49,792,200 in 1914, or 17.9 per cent. The most important industry was the manufacture of furniture and refrigerators, Grand Rapids being the recognized center of the furniture and refrigerator industry in the United States. This industry, with products valued at \$14,940,141, contributed 30 per cent of the total value of the manufactured products of the city in 1914, and gave employment to 6,991, or 40.1 per cent, of the total number of wage earners reported for all manufacturing industries of the city. The value of products of the industry in the city represented 44.1 per cent, and the number of wage earners employed, 43 per cent of the corresponding totals for the industry in the state. There were 13 other important industries whose value of products exceeded \$1,000,000 each, among which may be mentioned the manufacture of bread and other bakery products; flour-mill and gristmill products; foundry and machine-shop products; malt liquors; leather, tanned, curried, and finished; printing and publishing; and lumber and timber products.

Lansing, which ranked sixth in value of products in 1909, was fourth in 1914. During this five-year period the value of the city's manufactured products increased from \$16,567,093 to \$26,984,496, or 62.9 per cent. The automobile industry, which was the important factor in the city's industrial advancement, contributed nearly two-thirds of the total manufactured products of the city. The manufacture of engines and foundry and machine-shop products were also important industries.

Battle Creek, although reporting an increase in value of manufactured products from \$20,174,016 in 1909 to \$23,248,420 in 1914, dropped from fourth place in importance in this respect in 1909 to fifth place in 1914. This city was one of the centers for the manufacture of food preparations, and was outranked only by New York City in this branch of manufacture. Other industries of importance in 1914 were the manufacture of agricultural implements, paper boxes, and foundry and machine-shop products.

Kalamazoo ranked fifth among the cities of the state in value of manufactured products in 1909 and sixth in 1914. The leading industries of the city were the manufacture of paper, foundry and machine-shop products, druggists' preparations, and printing and publishing.

In value of manufactured products, Saginaw ranked seventh both in 1909 and 1914. The leading indus-

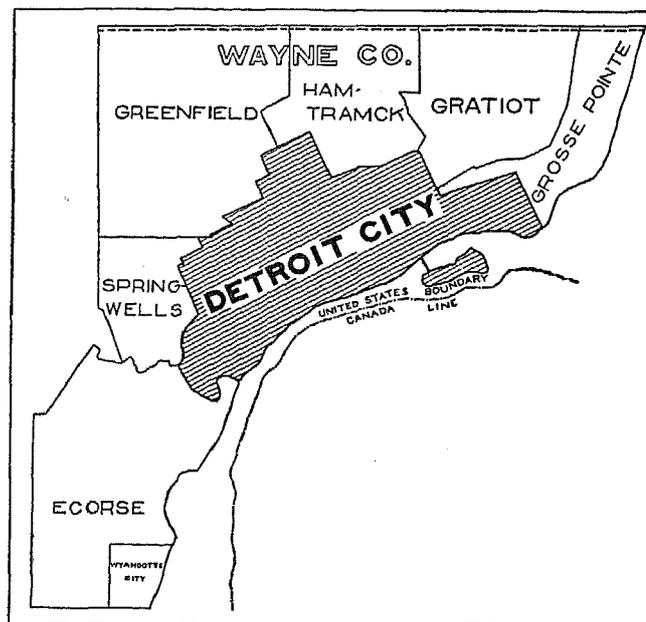
tries of the city were the manufacture of automobiles, including bodies and parts; cooperage and wooden goods; foundry and machine-shop products; leather, tanned, curried, and finished; and lumber and timber products.

The following tabular statement shows the principal industries, as measured by value of products, in the remaining cities in the state having 10,000 inhabitants or over, the cities being arranged according to value of products in 1914:

CITY.	Principal industries.
Jackson.....	Automobiles, including bodies and parts.
Pontiac.....	Automobiles, including bodies and parts, and steel springs.
Muskegon.....	Billiard tables and materials, engines, steam and gas, and furniture.
Bay City.....	Lumber and timber, and foundry and machine-shop products.
Holland.....	Leather, tanned, curried, and finished, and furniture.
Adrian.....	Wirework (woven-wire fencing).
Menominee.....	Lumber and timber products.
Manistee.....	Lumber and timber products.
Alpena.....	Cement, and leather, tanned, curried, and finished.
Port Huron.....	Liquors, malt.
Sault Ste. Marie.....	Leather, tanned, curried, and finished, and chemicals.
Owosso.....	Beef sugar.
Benton Harbor.....	Foundry and machine-shop products.
Ann Arbor.....	Foundry and machine-shop products.
Traverse City.....	Wooden goods.
Escanaba.....	Wooden goods.
Marquette.....	Cars and general shop construction and repairs by steam-railroad companies.
Ironwood.....	Lumber and timber products.
Hancock.....	Bread and other bakery products.
Ishpeming.....	Lumber, planing-mill products.

Detroit metropolitan district.—The metropolitan district of Detroit embraces 109,245 acres, of which 26,726 acres comprise the area of the city of Detroit. The estimated population of the city of Detroit on July 1, 1914, was 537,650 and that of the outlying territory, 61,529, the total for the district being 599,179.

The accompanying outline map of the district shows for 1914 the cities and townships that are included in the metropolitan district of Detroit:



Summary for the district.—Table 14 is a summary, for 1914, of the statistics of manufacturing industries,

with a statement of the estimated population in 1914 of the district, of the city of Detroit, and of the remainder of the district. The percentages which the figures for Detroit represent of the total for the district are shown for each item.

	DETROIT METROPOLITAN DISTRICT: 1914.			Per cent Detroit is of total for district.
	The district.	Detroit.	District exclusive of Detroit.	
Population ¹	599,179	537,650	61,529	89.7
Number of establishments.....	2,150	2,036	114	94.7
Persons engaged.....	147,714	120,075	27,639	81.3
Proprietors and firm members.....	1,605	1,540	65	96.0
Salaried employees.....	21,471	18,932	2,539	88.2
Wage earners (average number).....	124,638	99,603	25,035	79.9
Primary horsepower.....	240,086	180,608	59,478	75.2
Capital.....	\$405,376,813	\$293,493,334	\$111,883,479	72.4
Salaries and wages.....	123,044,832	95,728,459	27,316,373	77.8
Salaries.....	30,469,449	26,281,700	4,187,749	86.3
Wages.....	92,575,383	69,446,759	23,128,624	75.0
Paid for contract work.....	5,193,942	1,580,608	3,613,334	30.4
Rent and taxes (including internal revenue).....	9,090,126	8,748,403	941,723	90.3
Cost of materials.....	296,852,528	222,248,872	74,603,656	74.9
Value of products.....	569,519,227	400,347,912	169,171,315	70.3
Value added by manufacture (value of products less cost of materials).....	272,666,699	178,099,040	94,567,659	65.3

¹ Census estimate of population for 1914.

In 1914 there were 2,150 manufacturing establishments in the Detroit metropolitan district, which gave employment to 147,714 persons and paid out \$123,044,832 in salaries and wages. Of the persons employed, 124,638 were wage earners. Products valued at \$569,519,227 were reported, to produce which materials costing \$296,852,528 were used. The value added by manufacture was thus \$272,666,699. The great bulk of the value of products was reported by the factories within the central city. Detroit contained 89.7 per cent of the population of the district and contributed 70.3 per cent of the value of products. The manufacturing establishments constituted 94.7 per cent of the total number in the district and gave employment to 79.9 per cent of the wage earners.

A summary for the district, by industries, can not be shown for 1914, because so few industries reported for this district were located outside of the corporate limits of the city of Detroit. Of the industries included in the metropolitan district outside the city of Detroit, there were 10, each of which had a value of products of \$1,000,000 and over, as follows: Automobiles, including bodies and parts; chemicals; paints; foundry and machine-shop products; iron and steel, blast furnaces; brick and tile, terra-cotta, and fire-clay products; smelting and refining, not from the ore; shipbuilding, including boat building; cleansing and polishing preparations; and lumber and timber products.

Comparison with 1909 census.—Table 15 is a comparative summary of the statistics of the Detroit metropolitan district as a whole, for 1914 and 1909, together with the percentages of increase for the five-year period.

This table shows an increase in each item, with the exception of proprietors and firm members, during the five-year period 1909-1914. The population of the district increased 19.6 per cent, while the value of products increased 111.8 per cent. Although the number of establishments increased but 2.2 per cent, the number of wage earners employed increased 44.9 per cent.

	DETROIT METROPOLITAN DISTRICT.		Per cent of increase, ¹ 1909-1914.
	1914	1909	
Population.....	2 599,179	2 500,982	19.6
Number of establishments.....	2,150	2,104	2.2
Persons engaged.....	147,714	101,482	45.6
Proprietors and firm members.....	1,605	1,865	-13.9
Salaried employees.....	21,471	13,598	57.9
Wage earners (average number).....	124,638	86,021	44.9
Primary horsepower.....	240,086	138,480	75.9
Capital.....	\$405,376,813	\$210,401,902	92.7
Salaries and wages.....	123,044,832	62,037,838	98.3
Salaries.....	30,469,449	16,028,377	90.1
Wages.....	92,575,383	46,009,461	101.2
Cost of materials.....	296,852,528	137,848,079	115.3
Value of products.....	569,519,227	268,899,761	111.8
Value added by manufacture (value of products less cost of materials).....	272,666,699	131,051,682	108.1

¹ A minus sign (-) denotes decrease.

² Census estimate of population for 1914.

³ Apr. 15, 1910.

Character of ownership.—Table 16 presents statistics concerning character of ownership, or legal organization, of manufacturing enterprises. For all industries combined, comparative figures are given for 1914, 1909, and 1904; for selected industries, statistics for 1914 and 1909 are shown; and for individual cities the figures are for all industries combined and relate only to 1914. In order to avoid disclosing the operations of individual establishments, it is necessary to omit several important industries from the table.

For all industries combined, there was a considerable increase during the decade in the number of establishments under corporate ownership. The greatest proportion of the establishments—nearly one-half of the total in 1914—is shown for those under individual ownership, but in value of products and average number of wage earners, those owned by corporations greatly predominated. In 1914, although only 33.2 per cent of the total number of establishments in the state were under corporate ownership, this class reported 90.8 per cent of the total value of products and 89.2 per cent of the total average number of wage earners. In 1909 and 1904 the corresponding proportions were slightly less. The proportions of average number of wage earners and value of products reported by corporations have been greater at each successive census. For both 1914 and 1909, with a few exceptions, the largest proportion of the total value of products and average number of wage earners for each of the 16 industries, for which separate statistics are given, is shown for establishments under corporate ownership. This condition prevailed also in 1914 as regards all

industries combined in each of the 27 cities, except Hancock, which shows but 42.3 per cent of value of products under corporate ownership. In Flint the proportion reported for this class was 98.2 per cent, the largest reported for any of the cities shown. In the cities a greater proportion of the establishments are under corporate ownership than in the state as a whole.

Table 16

INDUSTRY AND CITY.	Census year.	AVERAGE NUMBER OF WAGE EARNERS.									VALUE OF PRODUCTS.								
		NUMBER OF ESTABLISHMENTS OWNED BY—			Total.	In establishments owned by—			Per cent of total.			Total.	Of establishments owned by—			Per cent of total.			
		Individuals.	Corporations.	All others.		Individuals.	Corporations.	All others.	Individuals.	Corporations.	All others.		Individuals.	Corporations.	All others.	Individuals.	Corporations.	All others.	
All industries.....	1914	4,282	2,900	1,542	271,090	16,674	241,829	12,587	6.2	89.2	4.6	\$1,086,162,432	\$50,886,390	\$986,655,727	\$48,620,315	4.7	90.8	4.5	
	1909	4,567	2,638	1,954	231,499	20,564	193,139	17,795	8.9	83.4	7.7	685,109,169	57,652,930	571,102,107	56,354,132	8.4	83.4	8.2	
	1904	3,602	2,044	1,800	175,229	20,527	131,894	22,508	11.7	75.3	13.0	421,120,060	47,121,641	328,185,756	53,812,663	11.0	76.5	12.5	
Agricultural implements.	1914	8	18	4	2,143	96	2,027	20	4.5	94.6	0.9	7,731,217	273,131	7,380,617	67,469	3.5	95.6	0.9	
	1909	8	18	6	2,359	45	2,293	21	1.9	97.2	0.9	9,272,787	172,670	9,047,413	52,704	1.9	97.6	0.6	
Automobiles, including bodies and parts.	1914	32	166	7	67,538	151	67,252	135	0.2	99.6	0.2	398,289,022	520,618	397,394,128	374,276	6.1	99.8	(1)	
	1909	10	94	9	25,444	71	24,858	515	0.3	97.7	2.0	96,651,451	172,570	94,777,846	1,701,035	0.2	98.1	1.8	
Bread and other bakery products.	1914	755	29	138	4,014	2,041	1,492	481	50.8	37.2	12.0	16,000,088	8,017,664	5,936,037	2,046,367	50.1	37.1	12.8	
	1909	686	24	106	2,637	1,398	896	343	53.0	34.0	13.0	11,082,213	5,800,674	3,684,576	1,566,963	52.4	33.2	14.4	
Butter, cheese, and condensed milk.	1914	115	135	114	1,367	187	939	241	13.7	68.7	17.6	21,549,597	3,193,218	14,348,845	4,007,534	14.8	66.6	18.6	
	1909	131	118	189	1,073	189	518	366	17.6	48.3	34.1	14,287,499	2,986,902	5,531,165	5,769,402	20.9	38.7	40.4	
Carriages and wagons and materials.	1914	111	24	42	1,417	329	853	235	23.2	60.2	16.6	3,774,827	742,965	2,543,444	488,418	19.7	67.4	12.9	
	1909	124	36	52	4,034	348	3,172	514	8.6	78.6	12.7	10,188,883	714,140	8,509,476	935,267	7.0	83.8	9.2	
Chemicals.....	1914	11	21	4	4,509	12	4,493	4	0.3	99.6	(1)	13,891,415	26,300	13,858,241	6,874	0.2	99.8	(1)	
	1909	19	14	3	3,174	20	3,143	5	0.6	99.2	0.2	12,890,206	46,873	12,836,877	6,456	0.4	99.6	(1)	
Clothing, men's, including shirts.	1914	12	20	7	2,502	242	2,136	124	9.7	85.4	5.0	5,306,230	469,938	4,324,947	511,345	8.9	81.5	9.6	
	1909	11	15	14	3,580	290	2,831	459	8.1	79.1	12.8	6,532,331	381,319	5,037,376	1,113,636	5.8	77.1	17.0	
Flour-mill and gristmill products.	1914	203	83	141	1,370	332	731	307	24.2	53.4	22.4	27,331,474	5,609,028	16,384,336	5,388,110	20.5	59.8	19.7	
	1909	250	91	179	1,530	454	722	354	29.7	47.2	23.1	34,880,803	10,277,037	16,720,675	7,883,091	29.5	47.8	22.7	
Foundry and machine-shop products.	1914	221	373	111	26,497	1,319	24,267	911	5.0	91.6	3.4	64,576,497	3,089,084	59,503,773	1,983,640	4.8	92.1	3.1	
	1909	200	326	128	21,649	1,501	18,878	1,270	6.9	87.2	5.9	45,399,023	3,000,602	39,567,319	2,831,102	6.6	87.2	6.2	
Furniture and refrigerators.	1914	35	145	22	16,267	500	15,441	326	3.1	94.9	2.0	33,857,041	978,206	32,309,066	569,769	2.9	95.4	1.7	
	1909	38	137	27	16,610	537	15,480	593	3.2	93.2	3.6	28,641,684	928,794	26,714,986	997,904	3.2	93.3	3.5	
Liquors, malt.....	1914	9	54	7	2,097	68	1,839	190	3.2	87.7	9.1	15,041,247	341,182	13,200,121	1,499,944	2.3	87.8	10.0	
	1909	12	54	13	1,527	55	1,321	151	3.6	86.5	9.9	9,840,108	317,671	8,309,820	1,212,617	3.2	84.4	12.3	
Lumber and timber products.	1914	317	266	165	23,527	3,221	21,867	3,439	11.3	76.6	12.1	58,533,217	6,318,672	45,236,061	6,968,484	10.8	77.3	11.9	
	1909	580	289	311	35,627	5,570	24,375	5,682	15.6	68.4	15.9	61,513,560	9,898,776	41,947,997	9,696,787	16.0	68.2	15.8	
Printing and publishing.	1914	635	295	183	8,166	1,615	5,863	688	19.8	71.8	8.4	24,933,324	3,567,182	19,620,496	1,765,646	14.3	78.6	7.1	
	1909	598	233	214	7,219	1,805	4,608	808	25.0	63.8	11.2	17,348,341	3,198,694	12,469,990	1,670,657	18.4	71.9	9.7	
Shipbuilding, including boat building.	1914	42	11	9	1,261	175	940	149	13.9	74.5	11.6	2,822,557	336,458	2,134,864	351,205	11.9	75.6	12.4	
	1909	59	13	10	2,344	422	1,756	166	18.0	74.9	7.1	5,033,836	446,136	4,227,161	360,539	8.9	84.0	7.2	
Slaughtering and meat packing.....	1914	20	8	8	1,181	43	1,092	46	3.6	92.5	3.9	21,266,915	650,577	20,116,733	499,605	3.1	94.6	2.3	
	1909	26	7	12	902	103	727	72	11.4	80.6	8.0	13,435,114	1,199,986	11,063,531	1,171,597	8.9	82.3	8.7	
Tobacco manufactures...	1914	527	31	68	9,075	1,506	6,333	1,236	16.6	69.8	13.6	20,667,016	3,179,142	15,274,344	2,213,530	15.4	73.9	10.7	
	1909	605	33	91	7,878	1,925	5,157	794	24.4	65.5	10.1	16,178,533	3,338,052	11,337,784	1,502,697	20.6	70.1	9.3	
Total for cities.....	1914	2,126	1,859	746	181,588	10,030	163,902	7,656	5.5	90.3	4.2	698,097,162	20,190,996	637,519,398	31,386,768	4.2	91.3	4.5	
ADRIAN.....	1914	34	21	13	1,256	102	1,001	153	8.1	79.7	12.2	5,442,338	349,498	4,734,595	358,245	6.4	87.0	6.6	
ALPENA.....	1914	28	17	9	1,494	73	1,390	31	4.9	93.0	2.1	4,101,035	126,258	3,867,843	107,834	3.1	94.3	2.6	
ANN ARBOR.....	1914	38	19	13	842	134	593	115	15.9	70.4	13.7	2,603,379	352,540	1,761,742	489,097	13.5	67.7	18.8	
BATTLE CREEK.....	1914	64	52	19	4,599	190	3,523	896	3.9	76.6	19.5	23,248,420	630,058	13,734,003	8,884,359	2.7	59.1	38.2	
BAY CITY.....	1914	76	46	20	3,771	462	3,036	273	12.3	80.5	7.2	11,119,286	1,270,219	8,919,281	929,786	11.4	80.2	8.4	
BENTON HARBOR.....	1914	25	22	15	1,285	132	1,029	124	10.3	80.1	9.6	3,021,552	515,895	2,317,335	188,322	17.1	76.7	6.2	
DETROIT.....	1914	882	890	294	99,603	4,397	91,757	3,449	4.4	93.1	3.5	400,347,912	13,557,817	376,187,763	10,602,302	3.4	94.0	2.6	
ESCANABA.....	1914	23	13	9	777	53	680	44	6.8	87.5	5.7	1,506,526	111,140	1,303,913	91,473	7.4	86.5	6.1	
FLINT.....	1914	40	34	20	8,722	160	8,416	146	1.8	96.5	1.7	53,375,039	373,390	52,389,060	612,589	0.7	98.2	1.1	
GRAND RAPIDS.....	1914	207	231	96	17,427	1,431	15,207	789	8.2	87.3	4.5	49,792,200	3,871,624	43,765,942	2,154,634	7.8	87.9	4.3	
HANCOCK.....	1914	10	4	7	142	40	52	50	28.2	36.6	35.2	402,080	115,191	170,511	117,278	28.6	42.3	20.1	
HOLLAND.....	1914	16	34	11	2,165	55	2,057	53	2.5	95.0	2.4	8,683,835	130,243	8,281,748	271,844	1.5	95.4	3.1	
IRONWOOD.....	1914	13	6	5	516	39	443	34	7.6	85.9	6.6	793,247	153,662	545,115	94,540	19.4	68.7	11.9	
ISHPEMING.....	1914	13	2	4	79	31	248	24	39.2	69.8	2.8	228,643	67,757	160,886	6,000	20.6	70.4	.....
JACKSON.....	1914	56	67	24	4,906	257	4,498	151	5.2	91.7	3.1	16,800,846	770,961	15,629,622	409,263	4.6	93.0	2.4	
KALAMAZOO.....	1914	96	84	33	5,525	420	4,948	157	7.6	89.6	2.8	20,214,314	1,048,046	18,785,086	381,182	5.2	92.9	1.9	
LANSING.....	1914	79	75	26	6,231	254	5,837	140	4.1	93.7	2.2	26,981,496	1,072,797	25,111,411	800,258	4.0	93.1	3.0	
MANISTEE.....	1914	23	17	7	1,833	91	1,654	78	4.9	90.9	4.2	4,136,210	201,789	3,776,401	158,020	4.9	91.3	3.8	
MARQUETTE.....	1914	21	10	3	589	77	487	25	13.1	82.7	4.2	1,894,587	146,318	1,176,671	71,598	10.5	84.4	5.1	
MENOMINEE.....	1914	21	23	5	1,988	136	1,802	50	6.8	90.6	2.5	4,999,884	308,750	4,458,901	232,233	6.2	89.2	4.3	
MUSKEGON.....	1914	37	44	12	4,640	328	4,281	37	7.1	92.1	0.8	11,147,605	1,097,375	10,050,450	89,780	9.0	90.2	0.8	

Size of establishments.—The tendency for manufacturing to become concentrated in large establishments is indicated by the statistics given in Table 17.

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
	1914	1909	1904	1914	1909	1904	1914	1909	1904	1914	1909	1904
All classes.....	8,724	9,159	7,446	271,090	231,499	175,229	\$1,086,162,432	\$685,109,169	\$429,120,060	\$493,361,368	\$316,497,147	\$199,039,129
Less than \$5,000.....	2,970	3,372	2,634	3,154	3,906	3,791	7,254,892	7,821,328	6,522,567	4,561,300	4,914,568	4,054,535
\$5,000 to \$20,000.....	2,566	2,665	2,281	10,556	12,382	12,581	26,702,525	27,353,330	24,062,938	14,339,662	14,559,126	12,787,421
\$20,000 to \$100,000.....	1,914	1,999	1,683	30,078	35,706	37,031	87,746,430	90,330,115	75,993,984	40,538,674	41,918,104	37,856,618
\$100,000 to \$1,000,000.....	1,103	1,035	807	117,227	123,279	100,364	329,969,154	301,233,306	222,432,102	157,753,189	146,842,096	108,962,893
\$1,000,000 and over.....	160	88	41	110,075	56,226	21,472	634,489,431	258,341,090	100,133,469	276,168,543	108,263,253	37,377,662
PER CENT DISTRIBUTION.												
All classes.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than \$5,000.....	34.1	36.8	35.4	1.2	1.7	2.2	0.7	1.1	1.5	0.9	1.6	2.0
\$5,000 to \$20,000.....	29.4	29.1	30.6	3.9	5.3	7.2	2.5	4.0	5.6	2.9	4.6	6.4
\$20,000 to \$100,000.....	21.9	21.8	22.6	11.1	15.4	21.1	8.1	13.2	17.7	8.2	13.2	19.0
\$100,000 to \$1,000,000.....	12.7	11.3	10.8	43.2	53.3	57.3	30.4	44.0	51.8	32.0	46.4	53.7
\$1,000,000 and over.....	1.8	1.0	0.6	40.6	24.3	12.3	58.4	37.7	23.3	56.0	34.2	18.8

For 1914, 1,268 establishments, or 14.5 per cent of the total number in the state, each reported products exceeding \$100,000 in value, as compared with 1,123, or 12.3 per cent of the total, for 1909, and 848, or 11.4 per cent, for 1904. For 1914 these establishments reported 83.8 per cent of the total average number of wage earners for the state, 88.8 per cent of the total value of products, and 88 per cent of the total value added by manufacture. In the same year the small establishments—those having products less than \$5,000—although representing 34.1 per cent of the total number of establishments, reported only 1.2 per cent of the total number of wage earners, seven-tenths

of 1 per cent of the total value of products, and nine-tenths of 1 per cent of the value added by manufacture. For the establishments having products valued at \$100,000 and over, the proportion of the total value of products shows an increase at each successive census, from 75.1 per cent in 1904 to 81.7 per cent in 1909 and 88.8 per cent in 1914.

Table 18 gives, for 1914 and 1909, for 16 of the more important industries, a classification of establishments, wage earners, value of products, and value added by manufacture, similar to that presented in Table 17 for all industries combined.

INDUSTRY AND VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.		PER CENT DISTRIBUTION.		AVERAGE NUMBER OF WAGE EARNERS.		PER CENT DISTRIBUTION.		VALUE OF PRODUCTS.		PER CENT DISTRIBUTION.		VALUE ADDED BY MANUFACTURE.		PER CENT DISTRIBUTION.	
	1914	1909	1914	1909	1914	1909	1914	1909	1914	1909	1914	1909	1914	1909	1914	1909
	AGRICULTURAL IMPLEMENTS	30	32	100.0	100.0	2,143	2,359	100.0	100.0	\$7,731,217	\$9,272,787	100.0	100.0	\$5,091,259	\$6,352,634	100.0	100.0
Less than \$5,000.....	5	6	16.7	18.8	5	5	0.2	0.2	9,823	14,397	0.1	0.2	5,638	9,519	0.1	0.1
\$5,000 to \$20,000.....	5	10	16.7	31.2	32	59	1.5	2.5	46,991	104,443	0.6	1.1	26,122	62,118	0.5	1.0
\$20,000 to \$100,000.....	9	6	30.0	18.8	209	171	9.8	7.2	473,587	369,672	6.1	4.0	235,684	209,509	4.6	3.3
\$100,000 and over.....	11	10	36.7	31.3	1,897	2,124	88.5	90.9	7,201,716	8,784,275	93.2	94.7	4,823,815	6,101,488	94.7	95.6
AUTOMOBILES, INCLUDING BODIES AND PARTS.....	205	113	100.0	100.0	57,538	25,444	100.0	100.0	398,289,022	96,651,451	100.0	100.0	179,073,627	42,769,030	100.0	100.0
Less than \$5,000.....	18	7	8.8	6.2	37	14	0.1	0.1	50,749	20,062	(?)	(?)	27,899	13,543	(?)	(?)
\$5,000 to \$20,000.....	26	14	12.7	12.4	133	78	0.2	0.3	366,649	149,312	0.1	0.2	177,233	51,043	0.1	0.1
\$20,000 to \$100,000.....	46	35	22.4	31.0	883	777	1.8	3.1	2,666,822	1,543,355	0.7	1.6	1,362,369	786,166	0.9	1.8
\$100,000 to \$1,000,000.....	65	41	31.7	36.3	7,792	6,005	11.5	23.6	22,777,262	16,527,352	5.7	17.1	10,188,916	8,492,259	5.7	19.9
\$1,000,000 and over.....	50	16	24.4	14.2	58,693	18,570	86.9	73.0	372,427,540	78,411,370	93.5	81.1	167,317,210	33,426,019	93.4	78.2
BREAD AND OTHER BAKERY PRODUCTS.....	922	816	100.0	100.0	4,014	2,637	100.0	100.0	16,000,068	11,082,243	100.0	100.0	6,691,971	4,411,614	100.0	100.0
Less than \$5,000.....	311	363	33.7	44.5	209	196	5.2	7.4	949,157	985,510	5.9	8.9	434,466	411,949	6.5	9.3
\$5,000 to \$20,000.....	474	359	51.4	44.0	1,164	811	29.0	30.8	4,632,098	3,356,822	28.9	30.3	1,974,465	1,340,055	29.5	30.4
\$20,000 to \$100,000.....	118	81	12.8	9.9	1,207	918	30.1	34.8	4,768,750	3,243,868	29.8	29.3	1,850,774	1,226,672	28.1	27.8
\$100,000 and over.....	119	13	2.1	1.6	11,434	712	35.7	27.0	15,650,063	3,496,013	35.3	31.5	2,492,266	1,432,938	35.9	32.5
BUTTER, CHEESE, AND CONDENSED MILK.....	364	435	100.0	100.0	1,367	1,073	100.0	100.0	21,549,597	14,287,499	100.0	100.0	3,087,094	1,910,697	100.0	100.0
Less than \$5,000.....	21	34	5.8	7.8	17	14	1.2	1.3	67,330	102,343	0.3	0.7	12,599	16,527	0.4	0.9
\$5,000 to \$20,000.....	100	166	27.5	38.2	118	162	8.6	15.1	1,365,082	2,054,246	6.3	14.4	191,323	296,219	6.3	15.5
\$20,000 to \$100,000.....	207	218	56.9	50.1	504	584	36.9	54.4	8,945,267	8,599,081	41.5	60.1	1,151,970	1,063,711	37.3	55.7
\$100,000 and over.....	136	17	9.9	3.9	1,728	313	63.3	20.2	11,171,858	3,540,829	51.8	24.8	1,173,202	534,240	56.0	28.0
CARRIAGES AND WAGONS AND MATERIALS.....	177	212	100.0	100.0	1,417	4,034	100.0	100.0	3,774,827	10,158,883	100.0	100.0	1,846,976	4,896,627	100.0	100.0
Less than \$5,000.....	97	105	54.8	50.0	122	122	8.6	3.0	252,819	257,940	6.7	2.5	179,330	168,562	9.7	3.4
\$5,000 to \$20,000.....	44	65	24.9	30.7	225	310	15.9	7.7	441,106	611,977	11.7	6.0	290,967	391,561	15.8	8.1
\$20,000 to \$100,000.....	26	19	14.7	9.0	348	415	24.6	19.3	863,554	931,216	22.9	9.2	964,575	445,362	25.1	9.1
\$100,000 and over.....	19	122	5.6	19.4	722	1,318	51.0	70.0	2,217,348	18,367,750	58.7	82.3	912,104	3,888,132	49.4	79.4

(See footnotes at end of table.)

Table 18—Continued. INDUSTRY AND VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.				VALUE OF PRODUCTS.				VALUE ADDED BY MANUFACTURE.				
	1914	1909	Per cent distribution.		1914	1909	Per cent distribution.		1914	1909	Per cent distribution.		1914	1909	Per cent distribution.	
			1914	1909			1914	1909			1914	1909			1914	1909
CHEMICALS.....	36	36	100.0	100.0	4,509	3,174	100.0	100.0	\$18,891,415	\$12,890,206	100.0	100.0	\$7,517,930	\$7,817,825	100.0	100.0
Less than \$5,000.....	16	20	44.4	55.6	21	16	0.5	0.5	32,486	36,830	0.2	0.3	23,280	26,160	0.3	0.3
\$5,000 to \$20,000.....	4	5	11.1	13.9	14	10	0.3	0.3	43,254	30,376	0.3	0.2	17,034	18,111	0.2	0.2
\$20,000 to \$100,000 ¹	11	3	30.6	22.2	366	652	8.1	20.5	2,154,746	2,460,303	15.5	19.1	952,007	1,425,001	12.7	18.2
\$1,000,000 and over.....	5	3	13.9	8.3	4,103	2,496	91.1	78.6	11,690,929	10,362,197	83.9	80.4	6,525,609	6,347,653	86.8	81.2
CLOTHING, MEN'S, INCLUDING SHIRTS.....	39	40	100.0	100.0	2,502	3,580	100.0	100.0	5,306,220	6,532,331	100.0	100.0	2,310,392	3,143,805	100.0	100.0
\$5,000 to \$20,000 ⁴	15	10	38.5	25.0	82	72	3.3	2.0	138,461	97,877	2.6	1.5	80,716	53,858	3.5	1.7
\$20,000 to \$100,000.....	14	17	35.9	42.5	272	418	10.9	11.7	711,519	838,922	13.4	13.1	368,957	421,450	16.0	13.4
\$100,000 and over ¹	10	13	25.6	32.5	2,148	3,090	85.9	86.3	4,456,230	5,575,532	84.0	85.4	1,860,719	2,668,497	80.5	81.9
FLOUR-MILL AND GRIST-MILL PRODUCTS.....	427	520	100.0	100.0	1,370	1,530	100.0	100.0	27,381,474	34,860,802	100.0	100.0	4,082,303	5,501,392	100.0	100.0
Less than \$5,000.....	45	39	10.5	7.5	27	20	2.0	1.3	124,169	109,662	0.5	0.3	30,535	17,068	0.7	0.3
\$5,000 to \$20,000.....	147	163	34.4	31.3	173	151	12.6	9.9	1,714,408	1,984,811	6.3	5.7	344,991	359,602	8.5	6.5
\$20,000 to \$100,000.....	188	257	44.0	49.4	457	532	33.4	38.0	7,787,576	11,369,606	28.4	32.6	1,234,361	1,941,702	31.7	35.3
\$100,000 to \$1,000,000.....	42	56	9.8	10.8	397	502	29.0	32.8	9,271,969	12,321,120	33.9	35.3	1,433,149	1,866,701	35.1	33.9
\$1,000,000 and over.....	5	5	1.2	1.0	316	275	23.1	18.0	8,473,352	9,075,604	30.9	26.0	979,267	1,316,319	24.0	23.9
FOUNDRY AND MACHINE-SHOP PRODUCTS.....	705	654	100.0	100.0	26,497	21,649	100.0	100.0	64,576,497	45,399,023	100.0	100.0	37,456,742	26,688,471	100.0	100.0
Less than \$5,000.....	177	161	25.1	24.6	208	195	0.8	0.9	473,571	382,955	0.7	0.8	345,923	269,894	0.9	1.0
\$5,000 to \$20,000.....	185	188	26.2	28.7	963	1,072	3.6	5.0	1,899,709	2,027,684	2.9	4.5	1,247,691	1,344,589	3.3	5.0
\$20,000 to \$100,000.....	193	194	28.1	29.7	4,075	4,539	15.4	21.0	9,390,370	9,254,081	14.5	20.4	5,761,531	5,473,522	15.4	20.5
\$100,000 to \$1,000,000.....	135	106	19.3	16.2	16,502	13,034	62.3	60.2	38,184,453	27,717,048	59.1	61.1	21,890,065	15,893,890	57.1	59.4
\$1,000,000 and over.....	9	5	1.3	0.8	4,749	2,809	17.9	13.0	14,628,394	6,017,255	22.7	13.3	8,711,532	3,746,576	23.3	14.0
FURNITURE AND REFRIGERATORS.....	202	202	100.0	100.0	16,267	16,610	100.0	100.0	33,857,041	28,641,684	100.0	100.0	19,495,818	16,923,456	100.0	100.0
Less than \$5,000.....	25	24	12.4	11.9	42	40	0.3	0.2	61,786	66,623	0.2	0.2	39,320	49,592	0.2	0.3
\$5,000 to \$20,000.....	32	31	15.8	15.3	164	217	1.0	1.3	328,425	342,083	1.0	1.2	204,387	209,509	1.0	1.2
\$20,000 to \$100,000.....	57	67	28.2	33.2	1,873	2,659	11.5	16.0	3,227,149	3,960,245	9.5	13.8	1,815,095	2,303,083	9.3	13.6
\$100,000 and over ¹	88	80	43.6	39.6	14,188	13,694	87.2	82.4	30,239,681	24,272,733	89.3	84.7	17,437,016	14,368,272	89.4	84.9
LIQUORS, MALT.....	70	79	100.0	100.0	2,097	1,527	100.0	100.0	15,041,247	9,840,108	100.0	100.0	10,713,219	7,419,069	100.0	100.0
\$5,000 to \$20,000 ⁴	8	16	11.4	20.3	27	41	1.3	2.7	84,006	153,658	0.6	1.6	55,108	105,434	0.5	1.5
\$20,000 to \$100,000.....	28	31	40.0	39.2	329	306	15.7	20.0	1,552,088	1,564,652	10.3	15.9	1,025,151	1,137,869	9.6	16.3
\$100,000 and over ¹	34	32	48.6	40.5	1,741	1,180	83.0	77.3	13,405,153	8,121,798	89.1	82.5	9,632,960	6,175,766	89.9	83.2
LUMBER AND TIMBER PRODUCTS.....	748	1,180	100.0	100.0	28,527	35,627	100.0	100.0	58,523,217	61,513,560	100.0	100.0	29,167,209	32,471,918	100.0	100.0
Less than \$5,000.....	232	429	31.0	36.4	411	812	1.4	2.3	537,700	957,731	0.9	1.6	349,885	639,110	1.2	2.0
\$5,000 to \$20,000.....	169	332	22.6	28.1	1,139	2,554	4.0	7.2	1,883,040	3,515,249	3.2	5.7	1,137,679	2,114,914	3.9	6.5
\$20,000 to \$100,000.....	191	249	25.5	21.1	5,142	7,328	18.0	20.6	9,011,769	11,689,560	15.4	19.0	5,002,231	6,632,352	17.1	20.4
\$100,000 to \$1,000,000.....	153	167	20.5	14.2	19,920	23,351	69.8	65.5	42,703,095	41,219,996	73.0	67.0	21,223,343	21,861,365	72.8	65.8
\$1,000,000 and over.....	3	3	0.4	0.3	1,915	1,582	6.7	4.4	4,387,013	4,131,024	7.5	6.7	1,454,071	1,724,177	5.0	5.3
PRINTING AND PUBLISHING.....	1,113	1,045	100.0	100.0	8,166	7,219	100.0	100.0	24,953,324	17,348,341	100.0	100.0	17,455,196	12,413,815	100.0	100.0
Less than \$5,000.....	563	579	50.6	55.4	686	803	8.4	11.1	1,421,223	1,380,472	5.7	8.0	1,118,488	1,069,979	6.4	8.6
\$5,000 to \$20,000.....	368	316	33.1	30.2	1,596	1,577	19.2	21.8	3,409,566	2,898,592	13.7	16.7	2,581,647	2,189,911	14.8	17.6
\$20,000 to \$100,000.....	133	122	11.9	11.7	2,253	2,361	27.6	32.7	5,838,012	5,574,727	23.4	32.1	4,277,695	3,965,107	24.5	31.9
\$100,000 and over ¹	49	28	4.4	2.7	3,061	2,478	44.8	34.3	14,284,523	7,494,550	57.2	43.2	9,477,366	5,188,818	54.3	41.8
SHIPBUILDING, INCLUDING BOAT BUILDING.....	62	91	100.0	100.0	1,261	2,344	100.0	100.0	2,822,557	5,033,836	100.0	100.0	1,563,814	2,544,064	100.0	100.0
Less than \$5,000.....	31	52	50.0	57.1	33	38	2.6	1.6	70,443	102,145	2.5	2.0	48,871	64,735	3.1	2.5
\$5,000 to \$20,000.....	17	21	27.4	23.1	65	101	5.2	4.3	166,843	197,958	5.9	3.9	101,373	117,093	6.5	4.6
\$20,000 to \$100,000.....	10	9	16.1	9.9	327	385	25.9	16.4	449,000	373,579	16.9	7.4	250,775	233,320	16.0	9.2
\$100,000 and over ¹	4	9	6.5	9.9	836	1,820	66.3	77.6	2,136,271	4,360,154	75.7	86.6	1,162,795	2,128,916	74.4	83.7
SLAUGHTERING AND MEAT PACKING.....	36	45	100.0	100.0	1,181	902	100.0	100.0	21,266,915	13,435,114	100.0	100.0	1,983,717	1,769,289	100.0	100.0
Less than \$5,000.....	8	7	22.2	15.6	7	5	0.6	0.6	17,234	19,165	0.1	0.1	6,053	6,915	0.3	0.4
\$5,000 to \$20,000.....	4	10	11.1	22.2	8	20	0.7	2.2	52,293	102,927	0.2	0.8	11,845	33,695	0.6	1.9
\$20,000 to \$100,000.....	14	18	38.9	40.0	55	94	4.7	10.4	588,269	862,649	2.8	6.4	135,302	193,145	6.8	10.9
\$100,000 to \$1,000,000.....	6	7	16.7	15.6	58	139	4.9	15.4	1,713,755	2,860,928	8.1	21.3	133,167	394,833	6.7	22.3
\$1,000,000 and over.....	4	3	11.1	6.7	1,053	644	89.2	71.4	18,935,364	9,589,445	88.8	71.4	1,697,260	1,140,701	85.6	64.5
TOBACCO MANUFACTURES.....	626	729	100.0	100.0	9,075	7,876	100.0	100.0	20,667,016	16,178,533	100.0	100.0	11,703,664	8,970,598	100.0	100.0
Less than \$5,000.....	415	503	66.3	69.0	321	405	3.5	5.1	808,987	1,022,291	3.9	6.3	492,567	644,046	4.2	7.2
\$5,000 to \$20,000.....	153	167	24.4	22.9	835	935	9.2	11.9	1,406,078	1,545,615	6.8	9.6	857,290	985,201	7.3	11.0
\$20,000 to \$100,000.....	39	40	6.2	5.5	848	892	9.3	11.3	1,496,756	1,427,187	7.2	8.8	838,506	830,372	7.2	9.3
\$100,000 to \$1,000,000.....	14	16	2.2	2.2	2,728	3,246	30.1	41.2	4,800,932	5,439,938	23.3	33.6	2,628,075	2,993,482	22.5	33.4
\$1,000,000 and over.....	5	3	0.8	0.4	4,343	2,398	47.9	30.4	12,145,263	6,743,502	58.8	41.7	6,887,226	3,517,497	58.8	39.2

¹ Includes the group "\$1,000,000 and over."
² Less than one-tenth of 1 per cent.

³ Includes the group "\$20,000 to \$100,000."
⁴ Includes the group "less than \$5,000."

For 1914, as compared with 1909, this table shows that for 5 of the 16 industries—automobiles, including bodies and parts, flour mills and gristmills, foundries and machine shops, furniture and refrigerators, and

slaughtering and meat packing—there were increases, and for the others, decreases in the number of establishments having products under \$5,000 in value.

Each of the industries, with the exception of bread and other bakery products in both years, and butter, cheese, and condensed milk and printing and publishing in 1909, shows that the great bulk of the manufacturing was done in establishments having products valued at \$100,000 and over. Ten of the industries, with establishments having products valued at over \$100,000, show increases in average number of wage earners, value of products, and value added by manufacture, while five others show decreases in each of these items. This class of establishments in the lumber and timber industry increased in value of products but decreased in the average number of wage earners and value added by manufacture. With the exception of agricultural implements, carriages and wagons, chemicals, men's clothing, and shipbuilding industries, the large establishments show a greater proportion of the average number of wage earners, value of products, and value added by manufacture for 1914 than for 1909.

In the automobile industry, establishments reporting products of \$1,000,000 and over in 1914 represented 86.9 per cent of the average number of wage earners engaged in the industry, 93.5 per cent of the value of products, and 93.4 per cent of the value added by manufacture.

Table 19 presents, for 1914, for all industries combined, in each of the 27 cities having more than 10,000 inhabitants, statistics similar to those given in Table 17 for the state as a whole.

CITY AND VALUE OF PRODUCT.	Number of establishments.	WAGE EARNERS.		VALUE OF PRODUCTS.		VALUE ADDED BY MANUFACTURE.	
		Average number.	Per cent of total.	Amount.	Per cent of total.	Amount.	Per cent of total.
ADRIAN.....	68	1,256	100.0	\$5,442,338	100.0	\$1,658,973	100.0
Less than \$5,000.....	30	29	1.6	57,498	1.1	38,088	2.3
\$5,000 to \$20,000.....	16	60	7.2	167,054	3.1	96,604	5.8
\$20,000 to \$100,000.....	13	293	23.3	744,103	13.7	395,563	24.0
\$100,000 and over ¹	9	853	67.9	4,473,683	82.2	1,125,718	67.9
ALPENA.....	54	1,494	100.0	4,101,935	100.0	1,704,102	100.0
Less than \$5,000.....	24	23	1.5	48,954	1.2	34,711	2.0
\$5,000 to \$20,000.....	15	92	6.2	152,247	3.7	81,033	4.8
\$20,000 to \$100,000.....	9	222	14.9	383,841	9.4	216,720	12.7
\$100,000 and over ¹	6	1,157	77.4	3,516,893	85.7	1,371,618	80.5
ANN ARBOR.....	75	842	100.0	2,603,379	100.0	1,301,816	100.0
Less than \$5,000.....	28	25	3.0	58,550	2.2	36,004	2.8
\$5,000 to \$20,000.....	25	112	13.3	278,884	10.7	178,504	13.7
\$20,000 to \$100,000.....	14	248	29.5	690,134	26.5	385,069	29.6
\$100,000 to \$1,000,000.....	8	457	54.3	1,575,811	60.5	702,239	53.9
BATTLE CREEK.....	135	4,599	100.0	23,248,420	100.0	15,090,220	100.0
Less than \$5,000.....	39	30	0.7	91,186	0.4	61,126	0.4
\$5,000 to \$20,000.....	46	146	3.2	434,418	1.9	265,066	1.8
\$20,000 to \$100,000.....	32	415	9.0	1,374,105	5.9	766,904	5.1
\$100,000 to \$1,000,000.....	14	2,083	45.3	5,563,217	23.9	2,988,811	19.8
\$1,000,000 and over.....	4	1,925	41.9	15,785,494	67.9	11,008,313	72.9
BAY CITY.....	142	3,771	100.0	11,119,286	100.0	4,715,881	100.0
Less than \$5,000.....	36	29	0.8	81,867	0.7	46,393	1.0
\$5,000 to \$20,000.....	48	202	5.4	428,395	3.9	223,277	4.7
\$20,000 to \$100,000.....	26	437	11.6	1,324,155	11.9	625,360	13.3
\$100,000 to \$1,000,000.....	32	3,103	82.3	9,284,869	83.5	3,820,861	81.0
BENTON HARBOR.....	62	1,285	100.0	3,021,552	100.0	1,811,513	100.0
Less than \$5,000.....	17	30	2.3	45,415	1.5	28,224	1.6
\$5,000 to \$20,000.....	21	96	7.5	229,583	7.6	104,875	5.8
\$20,000 to \$100,000.....	19	423	32.9	959,009	31.7	515,429	28.5
\$100,000 to \$1,000,000.....	5	736	57.3	1,787,545	59.2	1,162,985	64.2

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

CITY AND VALUE OF PRODUCT.	Number of establishments.	WAGE EARNERS.		VALUE OF PRODUCTS.		VALUE ADDED BY MANUFACTURE.	
		Average number.	Per cent of total.	Amount.	Per cent of total.	Amount.	Per cent of total.
DETROIT.....	2,036	99,603	100.0	\$100,347,912	100.0	\$178,099,040	100.0
Less than \$5,000.....	485	493	0.4	1,205,212	0.3	781,741	0.4
\$5,000 to \$20,000.....	628	2,568	2.6	6,616,883	1.7	3,982,430	2.2
\$20,000 to \$100,000.....	531	8,748	8.8	25,466,751	6.4	13,648,414	7.7
\$100,000 to \$1,000,000.....	314	30,899	30.9	90,555,696	22.6	46,237,047	26.0
\$1,000,000 and over.....	78	57,055	57.3	276,503,390	69.1	113,449,048	63.7
ESCANABA.....	45	777	100.0	1,506,526	100.0	870,829	100.0
Less than \$5,000.....	17	24	3.1	40,844	2.7	29,878	3.4
\$5,000 to \$20,000.....	18	92	11.8	173,888	11.5	109,110	12.5
\$20,000 to \$100,000.....	6	71	9.1	237,324	15.8	114,913	13.2
\$100,000 to \$1,000,000.....	4	590	75.9	1,054,470	70.0	616,922	70.8
FLINT.....	94	8,722	100.0	53,375,039	100.0	19,042,065	100.0
Less than \$5,000.....	27	42	0.5	78,055	0.1	47,303	0.2
\$5,000 to \$20,000.....	32	162	1.9	341,035	0.6	206,158	1.1
\$20,000 to \$100,000.....	15	243	2.8	612,714	1.1	324,449	1.7
\$100,000 and over ¹	20	8,275	94.9	52,343,235	98.1	18,461,155	97.0
GRAND RAPIDS.....	694	17,427	100.0	49,792,200	100.0	25,797,266	100.0
Less than \$5,000.....	183	197	1.1	464,164	0.9	313,723	1.2
\$5,000 to \$20,000.....	167	695	4.0	1,709,002	3.4	1,010,026	3.9
\$20,000 to \$100,000.....	131	2,494	14.3	5,968,773	12.0	3,285,800	12.7
\$100,000 to \$1,000,000.....	105	11,700	67.1	31,422,104	63.1	16,327,968	63.3
\$1,000,000 and over.....	8	2,341	13.4	10,228,157	20.5	4,850,750	18.8
HANCOCK.....	21	142	100.0	402,980	100.0	213,291	100.0
Less than \$5,000.....	6	3	2.1	15,401	3.8	6,021	2.8
\$5,000 to \$20,000.....	9	52	36.6	101,269	25.1	54,584	25.6
\$20,000 to \$100,000.....	6	87	61.3	286,310	71.0	152,686	71.6
HOLLAND.....	61	2,165	100.0	8,683,835	100.0	2,841,161	100.0
Less than \$5,000.....	16	16	0.7	44,522	0.5	30,381	1.1
\$5,000 to \$20,000.....	17	76	3.5	188,700	2.2	123,876	4.4
\$20,000 to \$100,000.....	14	258	11.9	809,045	9.3	325,296	11.4
\$100,000 and over ¹	14	1,815	83.8	7,641,568	88.0	2,361,598	83.1
IRONWOOD.....	24	516	100.0	793,247	100.0	379,149	100.0
Less than \$5,000.....	4	7	1.4	18,781	1.7	8,979	2.4
\$5,000 to \$20,000.....	16	77	14.5	177,155	22.3	98,727	26.0
\$20,000 and over ²	4	432	83.7	602,311	75.9	271,443	71.6
ISHPEMING.....	19	79	100.0	228,643	100.0	92,715	100.0
Less than \$5,000.....	10	13	16.5	24,230	10.6	13,145	14.2
\$5,000 and over ²	9	66	83.5	204,413	89.4	79,570	85.8
JACKSON.....	147	4,906	100.0	16,809,846	100.0	7,280,567	100.0
Less than \$5,000.....	31	48	1.0	97,305	0.6	60,559	0.8
\$5,000 to \$20,000.....	40	166	3.4	390,210	2.3	222,862	3.1
\$20,000 to \$100,000.....	46	847	17.3	2,211,404	13.2	1,067,435	14.7
\$100,000 to \$1,000,000.....	26	2,822	57.5	8,834,553	52.6	4,183,250	57.5
\$1,000,000 and over.....	4	1,023	20.9	5,276,374	31.4	1,746,461	24.0
KALAMAZOO.....	213	5,525	100.0	20,214,314	100.0	9,267,098	100.0
Less than \$5,000.....	69	75	1.4	154,603	0.8	88,645	1.0
\$5,000 to \$20,000.....	64	307	5.6	685,821	3.4	390,595	4.2
\$20,000 to \$100,000.....	44	720	13.0	2,009,567	9.9	1,102,600	11.9
\$100,000 and over ¹	36	4,423	80.1	17,364,323	85.9	7,685,252	82.9
LANSING.....	180	6,231	100.0	28,984,498	100.0	13,097,543	100.0
Less than \$5,000.....	48	56	0.9	124,632	0.5	84,706	0.6
\$5,000 to \$20,000.....	57	259	4.2	664,089	2.5	382,620	2.9
\$20,000 to \$100,000.....	41	593	9.5	1,772,657	6.0	852,638	6.5
\$100,000 and over ¹	34	5,323	85.4	24,423,118	90.5	11,777,579	89.9
MANISTEE.....	47	1,853	100.0	4,136,210	100.0	2,132,136	100.0
Less than \$5,000.....	12	25	1.3	64,883	1.6	32,336	1.5
\$5,000 to \$20,000.....	17	74	4.0	165,048	4.0	99,430	4.7
\$20,000 to \$100,000.....	10	270	14.6	525,891	12.7	210,338	9.9
\$100,000 to \$1,000,000.....	8	1,484	80.1	3,380,388	81.7	1,790,032	84.0
MARQUETTE.....	34	589	100.0	1,394,587	100.0	716,331	100.0
Less than \$5,000.....	13	22	3.7	33,668	2.4	19,844	2.8
\$5,000 to \$20,000.....	10	48	8.1	87,540	6.3	54,007	7.5
\$20,000 to \$100,000.....	6	84	14.3	234,047	16.8	149,575	20.9
\$100,000 to \$1,000,000.....	5	435	73.9	1,039,332	74.5	492,905	68.8
MENOMINEE.....	52	1,988	100.0	4,999,884	100.0	2,344,377	100.0
Less than \$5,000.....	11	15	0.8	20,550	0.5	16,036	0.7
\$5,000 to \$20,000.....	16	85	4.3	170,730	3.4	89,779	3.8
\$20,000 to \$100,000.....	10	140	7.0	400,988	8.0	152,322	6.5
\$100,000 to \$1,000,000.....	15	1,748	87.9	4,401,006	88.0	2,085,100	88.9
MUSKEGON.....	103	4,646	100.0	11,147,603	100.0	5,830,393	100.0
Less than \$5,000.....	24	22	0.5	59,486	0.5	37,760	0.6
\$5,000 to \$20,000.....	33	179	3.9	345,775	3.1	204,219	3.5
\$20,000 to \$100,000.....	23	413	8.9	1,161,243	10.4	482,116	8.3
\$100,000 and over ¹	23	4,032	86.8	9,581,101	85.9	5,106,292	87.6

²Includes the group "\$100,000 to \$1,000,000."

Table 20—Continued.

INDUSTRY AND CITY.	TOTAL.		ESTABLISHMENTS EMPLOYING—																
	Estab-lish-ments.	Wage earners (average number).	No wage earners.	1 to 5 wage earners.		6 to 20 wage earners.		21 to 50 wage earners.		51 to 100 wage earners.		101 to 250 wage earners.		251 to 500 wage earners.		501 to 1,000 wage earners.		Over 1,000 wage earners.	
			Estab-lish-ments.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.
Iron and steel, steel works and rolling mills	9	718			1	19	2	89	3	209	3	401							
Iron and steel forgings.....	11	552		2	3	5	45	1	24		1	213	1	262					
Leather goods.....	103	675	19	60	90	15	166	7	232	1	67	1	129						
Leather, tanned, curried, and finished.....	23	2,773			3	37	3	80	7	492	8	1,442	2	722					
Liquors, malt.....	70	2,097		12	43	30	411	18	553	6	484	3	352	1	254				
Lumber and timber products.....	748	28,527	26	300	678	176	1,920	112	3,777	65	4,712	44	6,850	21	7,328	3	1,779	1	1,483
Musical instruments, pianos and organs and materials.....	17	1,070		3	4	2	16	5	154	4	271	2	355	1	270				
Paper and wood pulp.....	37	6,051		1	3	3	26	8	276	2	146	13	2,012	9	2,630	1	908		
Paper goods, not elsewhere specified.....	14	750		5	13	2	29	1	25	4	308								
Patent medicines and compounds and druggists' preparations.....	142	3,369	41	69	116	18	203	10	312			2	313			1	731	1	1,694
Printing and publishing.....	1,113	8,166	229	629	1,535	173	1,767	55	1,793	19	1,446	5	753	3	872				
Salt.....	15	1,434		1	4	2	24	3	132	3	232	5	700	1	342				
Shipbuilding, including boat building.....	62	1,261	8	38	84	6	66	4	137	4	315	1	182	1	477				
Slaughtering and meat packing.....	36	1,181	4	21	60	6	54	2	69			1	129	2	879				
Springs, steel, car and carriage, not made in steelworks or rolling mills.....	6	638		1	1					2	155	3	482						
Stoves and furnaces, including gas and oil stoves.....	27	4,074		5	25	4	48	5	159	3	230	6	964			4	2,648		
Sugar, beet.....	10	1,326						2	26	4	288	3	383			1	579		
Tobacco manufactures.....	628	9,075	188	326	675	82	870	9	961	6	408	7	1,189	4	1,709	2	1,597	2	2,366
Wall plaster.....	13	631		4	8	2	24	1	25	3	200	3	374						
Window shades and fixtures.....	8	702	1	1	1	2	18			1	56	2	374	1	253				
Wirework, including wire rope and cable, not elsewhere specified.....	33	1,314		10	14	7	78	7	230	5	341	3	383	1	268				
Wood distillation.....	10	645				1	15	2	82	5	315	2	233						
Wood, turned and carved.....	45	576	7	12	34	18	280	7	208	1	74								
All other industries.....	1,492	25,709	175	869	1,710	274	2,967	90	2,837	37	2,560	29	4,353	12	3,894	3	2,175	3	5,204
Total for cities.....	4,731	181,588	558	2,024	4,960	1,068	12,054	471	15,547	261	18,786	201	32,729	96	34,685	34	23,379	18	30,448
ADRIAN.....	68	1,256	12	30	57	11	138	7	224	5	274	2	295	1	268				
ALPENA.....	54	1,494	7	23	47	14	113	2	44	4	250	1	115	3	916				
ANN ARBOR.....	75	842	15	32	73	17	197	8	269	2	148	1	155						
BATTLE CREEK.....	135	4,599	24	63	101	27	321	7	283	3	217	6	1,107	2	816	3	1,694		
BAY CITY.....	142	3,771	20	60	166	28	300	17	596	5	302	9	1,286	2	582	1	559		
BENTON HARBOR.....	62	1,285		38	103	13	150	5	148	4	277	1	250	1	357				
DETROIT.....	2,036	99,603	252	811	1,964	471	5,424	234	7,736	103	7,430	86	14,030	43	16,492	21	14,834	15	31,484
ESCANABA.....	45	777	3	30	83	8	97	2	70			1	207	1	320				
FLINT.....	94	8,722	8	40	88	26	275	4	113	6	468	4	599	4	1,319				
GRAND RAPIDS.....	594	17,427	79	246	616	120	1,298	65	2,086	41	3,188	27	4,160	14	4,882	2	1,197		
HANCOCK.....	21	142	2	12	31	5	65	2	46										
HOLLAND.....	61	2,165	8	23	67	12	124	8	255	1	84	8	1,317	1	318				
IRONWOOD.....	24	516		15	43	8	64												
ISHPEMING.....	13	79	1	15	34	2	16	1	20										
JACKSON.....	147	4,906	8	56	139	49	546	13	422	8	550	10	1,963	2	775	1	511		
KALAMAZOO.....	213	5,525	26	98	241	44	483	16	544	18	1,280	7	1,098	3	971	1	908		
LANSING.....	180	6,231	12	61	221	42	498	14	480	13	880	4	699	2	843	1	506	1	2,104
MANISTEE.....	47	1,833	3	25	76	7	84	2	70	5	311	2	298	3	1,014				
MARQUETTE.....	34	589	4	17	41	9	105	1	23	2	150			1	270				
MENOMINEE.....	52	1,938	2	23	59	10	100	7	231	3	200	5	728	2	670				
MUSKOGON.....	103	4,646	7	45	120	21	230	13	395	9	671	3	617	3	1,592				
OWOSSO.....	45	1,231	4	18	39	15	175	1	31	4	339	3	647						
PONTIAC.....	46	2,409	4	19	49	12	115	3	124	1	67	5	869	1	441	1	744		
PORT HURON.....	89	1,296	12	45	115	17	222	7	232	6	424	2	303						
SAGINAW.....	241	6,342	25	101	215	58	698	24	798	16	1,091	13	1,850	3	856	1	834		
SAULT STE. MARIE.....	44	938	8	23	51	7	73	2	65	2	167			2	582				
TRAVERSE CITY.....	60	956	12	25	61	15	143	6	233			1	156	1	363				

Of the 8,724 establishments reported for all manufacturing industries in the state, there were 1,061, or 12.2 per cent, in operation during 1914 in which no wage earners were employed. These were small establishments in which the work was done by the proprietors or firm members. In some cases wage earners were employed, but the number was so small and the term of employment so short that in computing the average, as described in the "Explanation of terms," the number was less than one, and the establishment was classed as having "no wage earners." Cigar factories, newspaper and job printing offices, bakeries,

and flour mills and gristmills are the industries in which the largest number of these small establishments were reported.

The small establishments—those employing from 1 to 20 wage earners—still predominate in the majority of the industries of the state. While they represent 6,027, or 69.1 per cent of the total number of establishments, they gave employment to only 26,702 wage earners, or 9.8 per cent of the total for all establishments.

There were only 535, or 6.1 per cent of the total establishments in the state, that reported the employ-

ment of more than 100 wage earners each, but these establishments gave employment to 192,476, or 71.1 per cent of the total average number of wage earners. The group showing the largest number of wage earners was the one employing over 1,000 wage earners each. This group employed 60,394 wage earners, or 22.3 per cent of the total. The industries in which these large establishments are especially prominent are the steam-railroad repair shops and those manufacturing automobiles, including bodies and parts; brass, bronze,

and copper products; chemicals; foundry and machine-shop products; lumber and timber products; patent medicines and compounds and druggists' preparations; and tobacco manufactures.

Among the cities, high percentages of the total number of wage earners, reported by establishments employing more than 100 wage earners each, are shown for Flint, 89.2 per cent; Pontiac, 85.3 per cent; Ironwood, 79.3 per cent; Battle Creek, 78.6 per cent; Detroit, 77.4 per cent; and Holland, 75.5 per cent.

Table 21

INDUSTRY AND CITY.	Cen- sus year.	PER CENT OF TOTAL AVERAGE NUMBER OF WAGE EARNERS IN ESTABLISHMENTS EMPLOYING SPECIFIED NUMBER.							
		1 to 5	6 to 20	21 to 50	51 to 100	101 to 250	251 to 500	501 to 1,000	Over 1,000
All industries.....	1914 1909	3.6 4.4	6.2 7.7	8.4 10.3	10.8 13.3	13.8 16.7	18.0 22.8	12.0 13.5	22.3 11.4
Agricultural implements.....	1914 1909	0.7 1.3	4.5 2.8	6.9 8.8	14.7 6.2	20.9 7.2	52.3 73.7	.....	.....
Automobiles, including bodies and parts.....	1914 1909	0.1 0.2	0.7 0.9	1.5 2.4	2.6 4.1	7.7 14.3	11.4 8.0	11.9 20.5	64.1 49.6
Boots and shoes.....	1914 1909	0.3 0.8	3.7 1.0	1.3 2.7	21.6 18.7	24.8 24.9	15.6 11.2	32.7 40.6	.....
Boxes, fancy and paper.....	1914 1909	0.1	5.3 4.8	14.4 16.3	5.2 19.9	49.8 35.5	25.2 23.5	.....	.....
Brass, bronze, and copper prod- ucts.....	1914 1909	1.1 0.8	3.6 2.5	4.7 4.9	7.4 14.0	40.6 33.1	20.4 22.8	.....	22.3 21.9
Bread and other bakery prod- ucts.....	1914 1909	34.2 38.1	22.9 23.8	16.6 15.2	4.5 13.5	21.8 9.4	.....	.....	.....
Brick, tile, pottery, and other clay products.....	1914 1909	6.0 10.4	19.2 30.1	16.5 28.0	22.6 18.8	35.8 12.7	.....	.....	.....
Butter, cheese, and condensed milk.....	1914 1909	42.6 56.6	17.8 24.9	19.4 8.4	20.3 10.2	.....	.....	.....	.....
Canning and preserving.....	1914 1909	3.1 7.5	12.7 13.5	17.8 20.5	13.5 13.2	10.7 29.2	42.2 16.2	.....	.....
Carriages and wagons and ma- terials.....	1914 1909	15.2 6.1	25.8 8.5	14.7 7.1	31.0 20.5	13.3 14.4	30.9 30.9	12.5.....	.....
Cars and general shop construc- tion and repairs by electric- railroad companies.....	1914 1909	1.9 1.7	12.3 18.6	2.5 19.9	20.9 .....	.....	62.4 59.8	.....	.....
Cars and general shop construc- tion and repairs by steam- railroad companies.....	1914 1909	0.2 0.5	0.7 1.2	0.6 2.2	5.7 5.4	18.4 10.0	11.6 28.1	42.0 52.7	20.9
Cement.....	1914 1909	.....	1.1 6.6	2.8 28.7	25.0 64.7	44.1	26.9.....	.....	.....
Chemicals.....	1914 1909	0.6 0.8	1.9 1.2	3.1 0.8	3.0 3.0	3.3 15.6	23.4 10.3	67.8 68.3	.....
Clothing, men's, including shirts.....	1914 1909	1.0 0.4	5.4 4.7	9.4 7.1	12.5 10.9	7.6 22.7	43.1	20.9 54.2	.....
Clothing, women's.....	1914 1909	2.0 1.9	8.0 10.3	7.0 20.6	22.5 12.4	19.0 21.3	41.5 33.4	.....	.....
Coffins, burial cases, and under- takers' goods.....	1914 1909	2.0 2.7	19.6 19.8	23.3 24.6	10.6 12.3	44.4 40.5	.....	.....	.....
Confectionery.....	1914 1909	7.4 7.2	18.9 16.1	27.5 22.6	35.6 12.5	10.6 41.6	.....	.....	.....
Cooperage and wooden goods, not elsewhere specified.....	1914 1909	4.8 3.9	8.5 6.6	7.5 16.3	14.8 12.0	14.6 23.2	49.7 38.2	.....	.....
Copper, tin, and sheet-iron products.....	1914 1909	9.8 8.8	14.4 15.0	13.4 14.2	8.3 2.3	19.9 9.5	34.2 29.0	.....	.....
Corsets.....	1914 1909	0.7 0.5	2.2 1.4	1.6 4.1	2.9 3.8	25.2 5.0	26.8 23.1	40.6 62.2	.....
Electrical machinery, appara- tus, and supplies.....	1914 1909	3.9 2.5	4.7 9.6	17.7 19.5	29.9 4.2	43.8 35.4	.....	.....	.....
Flour-mill and gristmill prod- ucts.....	1914 1909	47.5 52.2	22.5 21.3	16.2 17.6	5.7 9.0	8.1.....	.....	.....	.....
Food preparations, not else- where specified.....	1914 1909	4.7 4.6	7.3 4.8	10.5 20.9	11.8 11.9	.....	65.8 39.1	.....	.....
Foundry and machine-shop products.....	1914 1909	2.5 2.7	7.7 9.0	13.0 13.5	16.0 19.4	21.5 28.9	18.8 12.7	16.6 13.8	3.9
Furniture and refrigerators.....	1914 1909	0.7 0.5	1.8 1.9	8.6 9.0	15.0 18.6	35.5 30.7	27.6 31.9	10.7 7.4	.....

INDUSTRY AND CITY.	Cen- sus year.	PER CENT OF TOTAL AVERAGE NUMBER OF WAGE EARNERS IN ESTABLISHMENTS EMPLOYING SPECIFIED NUMBER.							
		1 to 5	6 to 20	21 to 50	51 to 100	101 to 250	251 to 500	501 to 1,000	Over 1,000
Gas and electric fixtures and lamps.....	1914 1909	2.7 4.1	8.7 20.3	..... 5.8	26.5 69.9	.....	62.1.....	.....	.....
Gas, illuminating and heating.....	1914 1909	1.7 3.4	11.9 13.7	11.5 18.6	24.7 21.9	10.3 13.3	.....	39.8 29.0	.....
Hosiery and knit goods.....	1914 1909	0.3 0.3	6.2 6.3	8.7 6.5	15.3 21.8	10.2 30.0	59.4 35.0	.....	.....
Iron and steel, blast furnaces.....	1914 1909	.....	1.2	11.6 7.4	33.2 38.8	54.0 28.0	.....	25.9.....	.....
Iron and steel, steel works and rolling mills.....	1914 1909	.....	2.6	12.4	29.1 4.1	55.8 24.9	.....	15.7 55.3	.....
Iron and steel forgings.....	1914 1909	0.5 0.3	8.2	4.3	39.5 51.1	47.5 48.6	.....	.....	.....
Leather goods.....	1914 1909	13.3 8.2	24.6 20.4	34.4 26.6	9.9 27.2	17.8 17.6	.....	.....	.....
Leather, tanned, curried, and finished.....	1914 1909	.....	1.3 2.3	2.9 12.6	17.7 14.8	52.0 57.2	26.0 13.1	.....	.....
Liquors, malt.....	1914 1909	2.1 4.3	19.6 31.9	26.4 33.4	23.1 14.3	16.8 16.0	12.1.....	.....	.....
Lumber and timber products.....	1914 1909	2.4 3.6	6.7 8.9	13.2 14.3	16.5 17.3	24.0 26.4	25.7 19.5	6.2 10.0	5.2
Musical instruments, pianos and organs and materials.....	1914 1909	0.4 0.3	1.5 1.5	14.4 25.3	25.3 17.2	33.2 39.6	25.2 38.6	.....	.....
Paper and wood pulp.....	1914 1909	.....	0.4 1.3	4.6 5.5	2.4 6.1	33.3 61.3	44.3 8.0	15.0 17.7	.....
Paper goods, not elsewhere spec- ified.....	1914 1909	1.7 0.8	3.9 4.6	3.3 2.1	41.1 17.4	50.0 44.3	.....	.....	.....
Patent medicines and com- pounds and druggists' prepa- rations.....	1914 1909	3.4 4.7	6.0 5.4	9.3 11.8	.....	9.3 8.2	21.7 14.8	50.3 55.1	.....
Printing and publishing.....	1914 1909	18.8 19.7	21.6 26.2	22.0 20.1	17.7 11.6	9.2 18.9	10.7 3.5	.....	.....
Salt.....	1914 1909	0.3 1.3	1.7 6.8	9.2 7.9	16.2 34.9	48.8 40.1	23.8.....	.....	.....
Shipbuilding, including boat building.....	1914 1909	6.7 4.1	5.2 5.0	10.9 2.8	25.0 13.3	14.4 33.0	37.8 13.4	.....	28.4
Slaughtering and meat packing.....	1914 1909	4.2 5.9	4.6 6.2	5.8 16.5	.....	10.9 38.5	74.4 32.9	.....	.....
Springs, steel, car and carriage, not made in steel works or roll- ing mills.....	1914 1909	0.2 .....	.....	.....	24.3 29.6	75.5 70.4	.....	.....	.....
Stoves and furnaces, including gas and oil stoves.....	1914 1909	0.6 0.7	1.2 1.5	3.9 2.5	5.6 9.1	23.7 8.1	65.0 50.0	22.4.....	.....
Sugar, beet.....	1914 1909	.....	7.2 7.2	21.7 10.7	27.4 39.5	43.7 42.6	.....	.....	.....
Tobacco manufactures.....	1914 1909	7.4 9.9	9.6 11.1	2.9 7.2	4.5 4.8	13.1 16.2	18.8 18.0	17.6 18.7	26.1 14.1
Wall plaster.....	1914 1909	1.3 1.1	3.8 3.8	4.0 8.3	31.7 27.5	59.3 18.4	.....	.....	.....
Window shades and fixtures.....	1914 1909	0.1 0.3	2.6 .....	.....	8.0 10.7	53.3 41.3	36.0 44.2	.....	.....
Wirework, including wire rope and cable, not elsewhere spec- ified.....	1914 1909	1.1 4.7	5.9 11.0	17.5 27.0	26.0 17.2	29.1 40.2	20.4.....	.....	.....
Wood distillation.....	1914 1909	.....	2.3 0.4	12.7 3.1	48.8 43.3	36.1 39.2	.....	.....	.....
Wood, turned and carved.....	1914 1909	5.9 4.9	45.1 21.7	35.1 23.0	12.8 13.5	.....	36.8.....	.....	.....
All other industries.....	1914 1909	6.7 5.6	11.5 10.7	11.0 9.2	10.0 11.3	16.9 15.0	15.1 13.1	8.5 11.1	20.2 23.9

Table 21—Continued.

INDUSTRY AND CITY.	Cen- sus year.	PER CENT OF TOTAL AVERAGE NUMBER OF WAGE EARNERS IN ESTABLISHMENTS EMPLOYING SPECIFIED NUMBER.							
		1 to 5	6 to 20	21 to 50	51 to 100	101 to 250	251 to 500	501 to 1,000	Over 1,000
Total for cities.....	1914	2.7	6.6	8.6	10.3	18.0	19.1	12.9	21.7
ADRIAN.....	1914	4.5	11.0	17.8	21.8	23.5	21.3	.....	.....
ALPENA.....	1914	3.1	7.6	2.9	17.3	7.7	61.3	.....	.....
ANN ARBOR.....	1914	8.7	23.4	31.9	17.6	18.4	.....	.....	.....
BATTLE CREEK.....	1914	3.5	7.0	6.2	4.7	24.1	17.7	36.8	.....
BAY CITY.....	1914	4.4	8.0	15.8	8.0	33.6	15.4	14.8	.....
BENTON HARBOR.....	1914	8.0	11.7	11.5	21.6	19.5	27.8	.....	.....
DETROIT.....	1914	2.0	5.4	7.8	7.5	14.1	16.8	14.9	31.6
ESCANABA.....	1914	10.7	12.5	9.0	.....	26.6	41.2	.....	.....
FLINT.....	1914	1.0	3.2	1.3	5.4	6.9	15.1	.....	67.2
GRAND RAPIDS.....	1914	3.5	7.4	12.0	18.3	23.9	28.0	6.9	.....
HANCOCK.....	1914	21.8	45.8	32.4	.....	.....	.....	.....	.....
HOLLAND.....	1914	3.1	5.7	11.8	3.9	60.8	14.7	.....	.....
IRONWOOD.....	1914	8.3	12.4	.....	.....	.....	79.3	.....	.....
ISHPEMING.....	1914	43.0	20.3	36.7	.....	.....	.....	.....	.....
JACKSON.....	1914	2.8	11.1	8.6	11.2	40.0	15.8	10.4	.....
KALAMAZOO.....	1914	4.4	8.7	9.8	23.2	19.9	17.6	16.4	.....
LANSING.....	1914	3.5	8.0	7.7	14.1	11.2	13.5	8.1	33.8
MANISTEE.....	1914	4.1	4.5	3.8	16.8	16.1	54.7	.....	.....
MARQUETTE.....	1914	7.0	17.8	3.9	25.5	.....	45.8	.....	.....
MENOMINEE.....	1914	3.0	5.0	11.6	10.1	36.6	33.7	.....	.....
MUSKOGON.....	1914	2.6	5.0	8.5	14.4	13.3	22.0	34.3	.....
OWOSSO.....	1914	3.2	14.2	2.5	27.5	52.6	.....	.....	.....
PONTIAC.....	1914	2.0	4.8	5.1	2.8	36.1	13.3	30.9	.....
PORT HURON.....	1914	8.9	17.1	17.9	32.7	23.4	.....	.....	.....
SAGINAW.....	1914	3.4	11.0	12.6	17.2	29.2	13.5	13.2	.....
SAULT STE. MARIE.....	1914	5.4	7.8	6.9	17.8	.....	62.0	.....	.....
TRAVERSE CITY.....	1914	6.4	15.0	24.4	.....	16.3	38.0	.....	.....

Engines and power.—Table 22 shows, for 1914, 1909, and 1904, for all industries combined, the number and horsepower of engines or motors employed in generating power (including electric motors operated by purchased current). It also shows separately the number and horsepower of electric motors operated by current generated in the establishments reporting.

This table shows an increase in the power of engines and other prime movers employed in manufacturing industries of the state, amounting to 165,895 horsepower, or 27.7 per cent, from 1909 to 1914, nearly three-fourths of which was due to the increase in rented power. The use of rented power, now almost wholly electric, has greatly increased since 1904, when it represented only 3.4 per cent of the total primary power reported. In 1909 the amount of rented power had increased to 12.8 per cent of the total and in 1914 to 25.7 per cent of the total. The use of electric motors for the purpose of applying power generated within the same establishments has increased greatly, the horsepower of such motors increasing from 27,559 in 1904 to 58,794 in 1909 and 123,264 in 1914.

In 1914, as in 1909 and 1904, steam power formed the greater part of the total primary power reported, but notwithstanding an increase of 89,338 horsepower during the earlier five-year period and of 51,235 horsepower during the later period, the proportion which this kind of power formed of the total primary power decreased from 85.3 per cent in 1904 to 77.8 per cent in 1909 and 67.6 per cent in 1914. While the number of internal-combustion engines decreased from 1909 to 1914, there was an increase of 5,605 in horsepower during the same period. This class of power, however, represented only 2.6 per cent of the total primary power in 1914. During the period from 1909 to 1914 there was quite a decrease in the number and horsepower of water wheels, turbines, and motors, which formed 4.1 per cent of the total primary power in the later year.

Table 22

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.					
	1914	1909	1904	Amount.			Per cent distribution.		
				1914	1909	1904	1914	1909	1904
Primary power, total.....	25,686	15,527	6,616	764,183	598,288	440,890	100.0	100.0	100.0
Owned.....	5,790	6,967	6,616	568,075	521,543	426,074	74.3	87.2	96.6
Steam engines and turbines ¹	4,177	5,066	4,978	518,771	465,536	376,198	67.6	77.8	85.3
Internal-combustion engines.....	1,062	1,167	854	19,593	13,988	10,534	2.6	2.3	2.4
Water wheels, turbines, and motors.....	551	734	684	31,711	42,019	39,342	4.1	7.0	8.9
Rented.....	19,896	8,560	.....	196,108	76,745	14,816	25.7	12.8	3.4
Electric.....	19,896	8,560	(*)	192,502	74,270	12,411	25.2	12.4	2.8
Other.....	.....	.....	.....	3,606	2,475	2,405	0.5	0.4	0.5
Electric.....	28,992	12,917	.....	315,766	133,064	39,970	100.0	100.0	100.0
Rented.....	19,896	8,560	(*)	192,502	74,270	12,411	61.0	55.8	31.1
Generated by establishments reporting.....	9,096	4,357	1,826	123,264	58,794	27,559	39.0	44.2	68.9

¹ Figures for horsepower include for 1909 and 1904 the amounts reported under the head of "other" owned power.

* Not reported.

Fuel.—Closely related to the subject of power employed in manufactures is that of the fuel consumed in generating this power or otherwise used in the manufacturing processes.

Table 23 shows, for 1914, the quantity of each kind of fuel used, for which data were obtained, for all industries combined, and for certain selected industries in the state as a whole, and for all industries combined in each city.

Table 23 INDUSTRY AND CITY.	COAL.				Gas (1,000 cubic feet).	INDUSTRY AND CITY.	COAL.				Gas (1,000 cubic feet).
	An- thra- cite (tons, 2,240 lbs.).	Bitumi- nous (tons, 2,000 lbs.).	Coke (tons, 2,000 lbs.).	Oil, in- clud- ing gas- line (bar- rels).			An- thra- cite (tons, 2,240 lbs.).	Bitumi- nous (tons, 2,000 lbs.).	Coke (tons, 2,000 lbs.).	Oil, in- clud- ing gas- line (bar- rels).	
All industries.....	95,815	5,974,601	460,122	781,212	2,455,572	Shipbuilding, including boat building..	19	22,594	410	2,200	194
Agricultural implements.....	115	23,242	2,996	11,716	146	Slaughtering and meat packing.....	28	28,357	125	6	.....
Automobiles, including bodies and parts.....	3,188	304,003	16,297	245,415	1,322,789	Springs, steel, car and carriage, not made in steel works or rolling mills.....	.....	9,876	.....	25,198	1,074
Boxes, fancy and paper.....	38	39,011	.....	1	139	Stoves and furnaces, including gas and oil stoves.....	205	29,891	9,998	4,188	1,736
Brass, bronze, and copper products.....	498	48,577	24,103	33,615	14,752	Sugar, beet.....	.....	173,404	6,194	53	.....
Bread and other bakery products.....	8,417	20,599	19,216	83	16,200	Tobacco manufactures.....	716	15,920	101	16	15,582
Brick, tile, pottery, and other clay products.....	820	132,650	1,558	136,329	.....	Wall plaster.....	18	33,677	1,042	60	.....
Butter, cheese, and condensed milk.....	3,344	71,742	179	159	20	Wirework, including wire rope and cable, not elsewhere specified.....	12	7,841	341	28	14,702
Canning and preserving.....	416	22,537	238	432	229	Wood distillation.....	4,600	47,103	.....	3	5,235
Carriages and wagons and materials.....	133	11,006	183	142	480	All other industries.....	33,944	1,085,643	20,287	25,680	90,778
Cars and general shop construction and repairs by steam-railroad companies.....	47	111,827	358	13,258	377	Total for cities.....	45,626	2,527,995	157,945	541,734	1,011,991
Cement.....	.....	498,023	1,559	165	.....	ADRIAN.....	738	18,036	384	1,033	1,256
Chemicals.....	16,321	854,567	80,534	36	464,646	ALPENA.....	51	104,116	170	16	484
Confectionery.....	120	5,334	1,022	5	9,130	ANN ARBOR.....	96	26,747	640	706	15,121
Copper, tin, and sheet-iron products.....	160	11,549	947	762	9,519	BATTLE CREEK.....	6,026	117,506	4,035	7,556	316,378
Flour-mill and gristmill products.....	529	59,027	1,074	2,985	423	BAY CITY.....	113	52,720	5,947	29,652	2,368
Food preparations, not elsewhere specified.....	5,289	61,984	6,613	52	315,450	BENTON HARBOR.....	41	26,725	2,781	3,740	1,363
Foundry and machine-shop products.....	2,405	230,724	57,237	90,826	38,609	DETROIT.....	13,920	1,068,287	108,441	342,430	460,776
Furniture and refrigerators.....	5,797	118,146	3,191	750	4,000	ESCANABA.....	41	10,283	421	1,168	245
Gas, illuminating and heating.....	407	622,240	9,851	116,504	.....	FLINT.....	181	68,570	3,392	59,611	94,837
Grease and tallow, not including lubricating greases.....	80	10,956	.....	.....	.....	GRAND RAPIDS.....	3,393	225,453	6,442	13,528	34,364
Hosiery and knit goods.....	255	19,406	.....	5	151	HANCOCK.....	142	980	44	.....	204
Ice, manufactured.....	15	26,205	.....	25	.....	HOLLAND.....	29	32,510	924	104	351
Iron and steel, blast furnaces.....	.....	14,701	190,204	3	.....	IRONWOOD.....	116	678	313	1,144	.....
Iron and steel, steel works and rolling mills.....	.....	22,173	2,036	23,404	4,505	ISHPEMING.....	18	119	3	1	80
Iron and steel forgings.....	20	13,793	191	39,291	11,777	JACKSON.....	193	99,664	3,685	30,474	9,100
Leather, tanned, curried, and finished.....	63	84,275	.....	41	.....	KALAMAZOO.....	189	196,011	3,529	10,020	9,572
Liquors, malt.....	4,381	91,198	45	4,167	5,335	LANSING.....	217	61,362	5,379	16,158	17,446
Lumber and timber products.....	1,322	113,957	944	2,123	3,233	MANISTEE.....	150	37,487	666	994	187
Musical instruments, pianos and organs and materials.....	161	12,215	.....	.....	65	MARQUETTE.....	50	6,889	361	.....	300
Paper and wood pulp.....	.....	513,410	.....	.....	.....	MENOMINEE.....	325	24,524	776	2,563	801
Paper goods, not elsewhere specified.....	.....	14,321	22	.....	48	MUSKOGON.....	2,002	74,390	3,200	6	9,200
Patent medicines and compounds and druggists' preparations.....	111	28,792	87	38	3,835	OWOSSO.....	58	27,657	1,142	330	1,030
Paving materials.....	14	31,021	.....	.....	.....	PONTIAC.....	64	28,305	1,062	17,175	18,798
Printing and publishing.....	1,807	15,070	432	1,262	51,493	PORT HURON.....	252	33,777	1,212	548	1,273
Salt.....	.....	262,048	507	.....	.....	SAGINAW.....	403	104,002	2,425	1,874	5,536
.....	.....	.....	.....	.....	.....	SAULT STE. MARIE.....	16,264	15,972	126	870	1,151
.....	.....	.....	.....	.....	.....	TRAVERSE CITY.....	74	5,216	445	24	720

SPECIAL STATISTICS.

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

Automobiles, including bodies and parts.—Table 24 shows the number and value of the different classes of automobiles manufactured, as reported at the censuses of 1914, 1909, and 1904.

During 1914, 443,072 automobiles, valued at \$303,774,254, were made in the automobile factories of Michigan, as compared with 64,800, valued at \$70,359,749, in 1909, and 9,125, valued at \$6,552,804, in 1904, the number in 1914 being nearly forty-nine times, and the value forty-six times as great as in 1904. There were 437,093 passenger automobiles made in 1914, of which 367,092 were touring cars, 63,381 runabouts and buggies, and 6,620 closed and other passenger cars. There were also made 5,979 business vehicles, of which 1,295 were delivery wagons and 4,684 were trucks.

Table 24 Products, total value.....	1914		1909		1904	
	Num- ber.	Value.	Num- ber.	Value.	Num- ber.	Value.
Automobiles.....	443,072	303,774,254	64,800	70,359,749	9,125	6,552,804
Passenger vehicles.....	437,093	295,583,364	64,025	69,033,967	9,023	6,481,164
Touring cars.....	367,092	251,609,056	.....	.....	.....	.....
Runabouts and buggies.....	63,381	33,307,852	62,319	64,940,793	9,023	6,481,164
Closed (limousines, cabs, etc.).....	6,620	10,666,456	1,560	3,825,066	(1)	(1)
All other (omnibuses, sight-seeing wagons, government and municipal, etc.).....	(2)	(2)	146	273,108	(1)	(1)
Business vehicles.....	5,979	8,190,890	775	1,320,782	102	71,640
Delivery wagons.....	1,295	970,569	401	319,071	51	37,250
Trucks.....	4,684	7,220,321	374	1,001,711	51	36,390
All other products, including bodies and parts and repairs.....	.....	94,514,768	.....	26,291,702	.....	1,443,730

1 Not reported.
2 Figures for "all other" combined with those for "closed cars," to avoid disclosure of individual operations.

The greatest increase in the different classes of vehicles manufactured was in touring cars, which increased from 9,023 in 1904 to 62,319 in 1909 and 367,092 in 1914. The output of closed passenger

vehicles was more than four times greater in 1914 than in 1909. Of the various classes of business vehicles, trucks show the largest increase in both number and value, the number increasing from 51 in 1904 to 374 in 1909 and to 4,684 in 1914, and the value increasing from \$36,390 in 1904 to \$1,001,711 in 1909 and to \$7,220,321 in 1914. In 1914 all the automobiles were gasoline, except 1,661 which were electric, as compared with 538 in 1909 and 11 in 1904.

Of the 443,072 automobiles produced in Michigan during 1914, 313,395, or nearly three-fourths, were rated as having 20 but less than 30 horsepower. The corresponding figures for 1909 were 17,938 out of a total of 64,800, or about three-elevenths. The remainder were distributed in groups according to horsepower ratings as follows: 1,937 were of less than 10 horsepower in 1914, as compared with 4,328 in 1909; 39,250 were of 10 but less than 20 horsepower, against 13,814; 79,254 were of 30 to 50 horsepower, as compared with 28,103; and 9,236 had 50 or more horsepower, against 617.

There were 569,054 automobiles made in the United States during 1914 by the establishments engaged primarily in this industry, of which 77.9 per cent were made in Michigan, as compared with 51.2 per cent in 1909 and 42.1 per cent in 1904.

The products included under the head of "all other products" at the census of 1914, the value of which amounted to \$94,514,768, or 23.7 per cent of the total for all products, consisted largely of automobile bodies and parts manufactured by establishments where no finished vehicles were produced. The manufacture of bodies and parts is diversified to a considerable extent and, as these partly manufactured products become the materials for other establishments which assemble the parts and produce the complete vehicle, there is duplication in the total cost of materials and value of products reported for the industry approximately equivalent to the value of such bodies and parts as were used in the factories of the state.

Flour-mill and gristmill products.—Table 25 shows the quantity and value of the flour-mill and gristmill products for 1914, 1909, and 1904.

Although there was a general decrease in 1914 for all of the important products of this industry, as compared with 1909, it is still one of the most important industries of Michigan. Wheat flour, which contributed more than one-half of the total value of all products at each census, shows a decrease of 11.3 per cent in quantity and 14.8 per cent in value since 1909. The output of bran and middlings and feed and offal, which combined formed 35.2 per cent of the total value of products for this industry in 1914, decreased 29.6 per cent in quantity and 30.9 per cent in value from 1909 to 1914. The output of rye flour increased in both quantity and value during both five-year periods.

The equipment of the flour mills and gristmills of the state in 1914 included 2,029 stands of rolls, 182 runs of

stone, and 391 attrition mills. Six mills manufactured barrels in 1914 and one manufactured sacks.

	1914	1909	1904
Products, total value.....	\$27,381,474	\$34,860,803	\$26,512,027
Wheat flour:			
Barrels.....	3,058,744	3,447,800	3,901,219
Value.....	\$16,056,643	\$18,835,591	\$17,155,090
Rye flour:			
Barrels.....	74,662	61,063	61,842
Value.....	\$377,707	\$266,698	\$219,597
Buckwheat flour:			
Pounds.....	15,773,401	20,161,026	21,930,856
Value.....	\$447,545	\$547,024	\$524,429
Barley meal:			
Pounds.....	221,600	33,600	205,770
Value.....	\$6,638	\$499	\$2,411
Corn meal and corn flour:			
Barrels.....	131,648	177,189	210,116
Value.....	\$461,630	\$606,706	\$506,615
Hominy and grits:			
Pounds.....	466,510	38,610	43,802
Value.....	\$8,439	\$1,098	\$1,075
Bran and middlings:			
Tons.....	149,893	(1)	(1)
Value.....	\$3,298,041	(1)	(1)
Feed and offal:			
Tons.....	216,760	520,810	404,404
Value.....	\$6,350,156	\$13,970,459	\$7,850,231
Breakfast foods:			
Pounds.....	102,755		
Value.....	\$3,468		
All other cereal products, value.....	\$272,508	\$318,340	
All other products, value.....	\$98,699	\$311,361	\$252,579

¹ Included in "feed and offal."

Printing and publishing.—The number and aggregate circulation per issue of the various classes of publications in Michigan in 1914, 1909, and 1904 are shown in Table 26.

PERIOD OF ISSUE.	NUMBER OF PUBLICATIONS.			AGGREGATE CIRCULATION PER ISSUE.		
	1914	1909	1904	1914	1909	1904
Total.....	736	747	787	3,627,929	2,766,282	3,074,297
Daily.....	80	87	86	888,981	681,919	514,282
Sunday.....	14	15	12	342,163	256,583	172,687
Semiweekly and triweekly.....	28	34	30	45,883	82,640	99,339
Weekly.....	517	526	570	793,176	750,298	774,758
Monthly.....	84	73	74	1,428,889	927,601	1,372,519
Quarterly.....	4	4	4	12,400	48,100	67,500
All other classes.....	9	8	11	116,437	19,141	43,212

Although the total number of publications decreased, there was an increase in their aggregate circulation between 1909 and 1914, a condition which shows a gain over that from 1904 to 1909, when a decrease was reported for both items. The circulation of all classes of publications, except semiweeklies and triweeklies, and quarterlies, increased from 1909 to 1914, the greatest increase being in the monthlies, 501,288, or 54 per cent, due largely to an increase in agricultural publications. The combined circulation of the daily and Sunday editions was 1,231,144 in 1914, as compared with 938,502 in 1909, a gain of 31.2 per cent, while the number of publications decreased 7.8 per cent. Of the 80 dailies in 1914, 61, with an aggregate circulation of 644,219, were evening papers. The weeklies show a slight increase in circulation from 1909 to 1914, which more than made up the decrease reported for the earlier five-year period.

The triweeklies, which are combined with the semi-weeklies, were 7 in number in 1914, 6 in 1909, and 4 in 1904.

Of the 736 publications reported in 1914, 53 were printed in foreign languages, and reported a combined circulation of 169,612, or 4.7 per cent of the total. This represents an increase over 1909 of 3 in number of publications, and 25,530, or 17.7 per cent, in circulation. Eleven were printed in German, 8 each in Dutch and Finnish, 7 in Polish, 5 in English and German, 3 each in Italian and Swedish, 2 in Hungarian, and 1 each in Croatian, Flemish, Russian, Slovenian, Ukrainian, and English and Dutch. Five of these publications were dailies and 32 were weeklies.

Leather, tanned, curried, and finished.—Table 27 gives the quantity and cost of the materials used in this industry and the quantity and value of products for 1914, 1909, and 1904.

Table 27	1914	1909	1904
MATERIALS.			
Total cost.....	\$20,982,247	\$12,120,971	\$7,271,023
Cattle hides:			
Number.....	1,708,952	1,430,885	1,126,456
Cost.....	\$15,807,830	\$8,022,645	\$5,292,740
All other raw stock, cost.....	\$727,628	\$1,055,188	\$512,663
All other materials, cost.....	\$4,446,789	\$3,043,138	\$1,465,620
PRODUCTS.			
Total value.....	\$25,503,573	\$15,331,104	\$9,340,349
Leather:			
Sole—			
Sides.....	1,871,940	1,603,512	1,353,293
Value.....	\$12,641,509	\$7,326,276	\$4,954,749
Harness—			
Sides.....	403,346	214,879	195,695
Value.....	\$2,580,218	\$1,210,132	\$854,690
All other, value.....	\$9,212,158	\$6,405,052	\$3,224,996
All other products, value.....	\$451,361	\$225,619	\$153,650
Work on materials for others, value..	\$618,327	\$164,025	\$152,264

Of the materials used, cattle hides show the greatest increase in cost during the five-year period 1909–1914, \$7,785,185, or 97 per cent, but the number of hides used increased only 278,067, or 19.4 per cent. Nine and six-tenths per cent of the cattle hides tanned in the United States during 1914 were tanned in Michigan establishments.

The value of products in 1914 was \$25,503,573, representing an increase of 66.4 per cent over the value reported for 1909 and 173 per cent over the value for 1904. Sole leather, mainly hemlock, formed nearly one-half of the total value of products for the industry at each census. About one-half of the total value of the leather products is represented by the total for "all other" which includes "cattle side upper," horse, upholstery, case, bag, and strap, and bookbinders' leather, and finished splits.

"All other products," consisting of wool, hair, glue stock, fertilizer materials, etc., has doubled since 1909, and the amount received for tanning, currying, and finishing for others has increased nearly three times. There was an increase in each item over previous

censuses, except in "all other raw stock." Michigan ranked sixth in value of products in this industry.

Butter, cheese, and condensed milk.—Table 28 gives the quantity and value of the principal products for 1914, 1909, and 1904.

Table 28	1914	1909	1904
Products, total value.....	\$21,549,597	\$14,287,499	\$8,208,706
Butter:			
Pounds.....	43,220,077	35,511,760	21,013,000
Value.....	\$12,416,504	\$10,043,137	\$4,411,196
Packed solid—			
Pounds.....	32,925,538	30,328,760	19,272,730
Value.....	\$9,365,152	\$8,586,270	\$4,027,770
Prints or rolls—			
Pounds.....	10,294,439	5,183,000	1,740,270
Value.....	\$3,051,352	\$1,456,867	\$383,426
Cream sold:			
Pounds.....	7,604,889	2,572,764	3,139,609
Value.....	\$249,054	\$249,276	\$234,540
Cheese:			
Pounds.....	13,267,145	13,382,160	16,814,856
Value.....	\$1,773,576	\$1,911,875	\$1,718,076
Full-cream—			
Pounds.....	11,045,713	13,028,317	16,452,577
Value.....	\$1,588,656	\$1,860,879	\$1,676,280
Part-cream—			
Pounds.....	686,522	76,220	.....
Value.....	\$64,644	\$10,984	.....
Other kinds ¹ —			
Pounds.....	1,534,910	277,623	362,279
Value.....	\$120,276	\$40,012	\$41,796
Condensed milk:			
Pounds.....	76,514,655	32,404,944	27,681,608
Value.....	\$5,200,640	\$1,924,621	\$1,644,277
Sweetened—			
Pounds.....	37,057,100	27,695,866	27,266,506
Value.....	\$2,930,006	\$1,693,030	\$1,630,730
Unsweetened and evaporated—			
Pounds.....	39,457,555	4,709,078	415,102
Value.....	\$2,270,634	\$231,591	\$13,547
All other butter, cheese, and condensed-milk factory products, value ²	\$650,716	\$105,378	\$162,912
All other products, value.....	\$907,107	\$53,212	\$37,705

¹ Includes skimmed-milk cheese.

² Includes casein, sugar of milk, whey, skimmed milk and buttermilk sold.

From 1904 to 1914 the number of establishments engaged primarily in the manufacture of butter increased from 203 to 270, while the number of cheese factories decreased from 162 to 75. Nineteen condensed-milk factories were reported in 1914, as compared with 6 in 1904.

Butter was the most important product, as measured by value, in the last three censuses. The total value of butter represented 57.6 per cent of the total value of products for the industry in 1914; the corresponding percentages for 1909 were 70.3 and for 1904, 53.7. The output of cheese decreased in quantity but increased in value from 1904 to 1909, while from 1909 to 1914 it decreased in both quantity and value. The total output of condensed milk shows large increases during the decade, both in quantity and value, having increased by 48,833,047 pounds, or 176.4 per cent, in quantity, and by \$3,556,363, or 216.3 per cent, in value.

The proportions which the value of these three classes of products for the state formed of the corresponding totals for the United States in 1914, were as follows: Butter, 5.1 per cent; cheese, 3.9 per cent; and condensed milk, 8.7 per cent. Measured by value of products, Michigan held sixth place among the states in the manufacture of butter; third place, in the manufacture of cheese; and fourth, in the manufacture of condensed milk.

Paper and wood pulp.—Table 29 shows the quantity and cost of the principal materials used and the quantity and value of the various products, as reported at the censuses of 1914, 1909, and 1904. The table also gives the number and daily capacity of the paper machines used and the yearly capacity of both pulp and paper mills.

Table 29	1914	1909	1904
MATERIALS.			
Total cost.....	\$14,544,945	\$9,024,595	\$4,581,471
Pulp wood:			
Cords.....	182,314	132,846	82,386
Cost.....	\$1,270,466	\$858,230	\$486,748
Wood pulp, purchased:			
Tons.....	78,488	60,759	35,879
Cost.....	\$3,160,096	\$2,405,975	\$1,209,193
Ground—			
Tons.....	17,511	15,320	9,712
Cost.....	\$357,006	\$384,489	\$191,713
Sulphite fiber—			
Tons.....	42,765	29,070	15,197
Cost.....	\$2,022,085	\$1,329,972	\$630,701
Other chemical fiber—			
Tons.....	18,212	16,360	10,970
Cost.....	\$781,055	\$691,514	\$446,724
Rags, including cotton and flax waste and sweepings:			
Tons.....	16,006	11,039	8,192
Cost.....	\$425,935	\$383,886	\$199,937
Old and waste paper:			
Tons.....	200,370	114,497	60,417
Cost.....	\$3,419,791	\$2,193,302	\$1,058,014
All other materials, including fuel, cost..	\$6,268,657	\$3,183,202	\$1,567,574
PRODUCTS.			
Total value.....	\$22,049,990	\$13,922,124	\$7,340,631
Book, cover, plate, and coated paper:			
Tons.....	118,991	85,048	52,048
Value.....	\$10,075,238	\$6,490,865	\$3,028,907
Wrapping paper:			
Tons.....	59,873	50,328	32,654
Value.....	\$3,427,732	\$2,799,583	\$1,565,861
Boards:			
Tons.....	109,360	56,342	26,382
Value.....	\$3,633,395	\$1,866,436	\$812,781
Writing and all other fine paper:			
Tons.....	17,463	5,032	2,647
Value.....	\$1,850,801	\$705,772	\$256,062
All other paper:			
Tons.....	36,935	36,411	14,606
Value.....	\$1,092,933	\$1,709,006	\$611,053
Wood pulp made for sale or for consumption in mills other than where produced:			
Tons.....	16,464	8,199	11,158
Value.....	\$549,031	\$300,948	\$407,256
All other products, value.....	\$790,860	\$40,514	\$58,621
Wood pulp produced (including that used in mills where manufactured), total tons.....	81,451	65,231	33,612
Ground, tons.....	17,280	12,273	14,079
Sulphite fiber, tons.....	53,378	59,058	24,533
Other chemical fiber, tons.....	10,813		
EQUIPMENT.			
Paper machines:			
Total number.....	51	68	55
Capacity, yearly, tons.....	430,077	301,345	181,108
Fourdrinier—			
Number.....	55	43	34
Capacity per 24 hours, tons.....	809	573	441
Cylinder—			
Number.....	26	25	21
Capacity per 24 hours, tons.....	619	321	185
Pulp equipment:			
Grinders, number.....	19	17	20
Digesters, number.....	20	27	21
Capacity, yearly, tons of pulp, total.....	93,188	74,032	46,410
Mechanical, tons.....	24,510	18,303	25,810
Chemical, tons.....	68,678	56,629	20,600

Michigan ranked seventh among the states in the manufacture of paper and wood pulp in 1914, as compared with eighth in 1909. Of the 37 paper and pulp mills in the state in 1914, 1 was engaged exclusively in the manufacture of wood pulp, 28 made paper only, and 8 produced both pulp and paper.

The cost of pulp wood shows an increase of \$412,236, or 48 per cent, for the five-year period 1909–1914, as compared with \$371,482, or 76.3 per cent, between 1904 and 1909. In accepting these figures allowance should be made for the increase in the price of the wood during the decade. In 1914 a total of 182,314 cords of pulp wood were used in the industry, of which hemlock formed 43.5 per cent; spruce, 33.9 per cent; balsam fir and other kinds of wood, 11.1 per cent; and slabs and other mill waste, 11.5 per cent.

The wood pulp purchased increased 17,738 tons, or 29.2 per cent, in quantity, and \$754,121, or 31.3 per cent, in cost, from 1909 to 1914. Sulphite fiber was the principal kind of pulp purchased, forming 54.5 per cent of the total quantity purchased in 1914, as compared with 47.9 per cent in 1909 and 42.4 per cent in 1904. Nearly twice the quantity of rags were used in 1914 as in 1904, and the quantity of waste paper was more than three times as great in 1914 as in 1904.

Book paper was the principal product of the industry in 1914, as well as in the two preceding censuses. In 1914 its value constituted 45.7 per cent of the total for all products, as compared with 46.7 per cent in 1909 and 49.4 per cent in 1904. Among the other paper products, the largest increase in value from 1909 to 1914 was in that reported for boards, the value of which represented 16.5 per cent of the total value of products. The total production of wood pulp manufactured in the state in 1914, which includes that used in the mills where it was made, increased 110.9 per cent from 1904 to 1914. Sulphite fiber was the principal kind of pulp produced at each census.

The number of paper machines increased from 55 in 1904 to 81 in 1914, while their annual capacity increased 248,969 tons, or 137.5 per cent, during the same time. Fourdrinier machines formed considerably more than one-half of the total number at each census. The cylinder machines are generally used in the manufacture of tissue paper, boards, and certain other special kinds of paper. The number of pulp grinders and their yearly capacity increased slightly from 1909 to 1914. The number of digesters increased from 24 in 1904 to 29 in 1914, and their yearly capacity increased 48,076 tons, or 233.4 per cent, during the same period.

Slaughtering and meat packing.—Table 30 gives the quantity and value of the leading products manufactured in 1914, 1909, and 1904. Cured beef, lard compounds and substitutes, tallow, soap stock, oleo-margarine, sausage casings, and fertilizer materials are included in "all other products," to avoid the possible disclosure of the operations of individual establishments. These figures do not include those for establishments engaged primarily in the manufacture of sausage.

	1914	1909	1904
Products, total value.....	\$20,685,737	\$12,842,201	\$6,193,280
Fresh meat:			
Beef—			
Pounds.....	23,050,744	24,099,494	12,149,200
Value.....	\$3,517,274	\$1,931,123	\$850,668
Veal—			
Pounds.....	2,800,785	2,603,074	992,370
Value.....	\$408,809	\$309,668	\$83,703
Mutton and lamb—			
Pounds.....	4,782,158	3,509,894	2,350,900
Value.....	\$608,761	\$363,474	\$199,644
Pork—			
Pounds.....	30,382,616	16,479,567	9,909,375
Value.....	\$5,232,513	\$2,014,770	\$839,370
Pork, pickled and other cured:			
Pounds.....	43,017,100	36,145,040	30,277,890
Value.....	\$5,697,111	\$4,707,180	\$3,003,527
Sausage:			
Pounds.....	8,409,965	8,174,244	3,022,472
Value.....	\$1,103,782	\$804,620	\$219,210
Lard:			
Pounds.....	27,342,302	13,351,255	8,146,572
Value.....	\$2,744,566	\$1,859,703	\$624,370
Hides and pelts:			
Cattle—			
Number.....	62,035		
Pounds.....	3,457,996		
Value.....	\$531,873		26,455
Cal¹—			
Number.....	9,716	2,082,942	1,619,500
Pounds.....	118,823	\$365,080	\$131,686
Value.....	\$20,772		
Sheep—			
Number.....	125,534	88,285	44,510
Value.....	\$128,302	\$94,862	\$39,058
All other products, value.....	\$671,604	\$391,816	\$202,046

The slaughtering and meat-packing industry has made large gains in Michigan during the past few years, the total value of products in 1914 being more than three times that reported in 1904. The combined value of fresh and cured pork, the most important products in 1914, represented 52.9 per cent of the total for the industry, as compared with 52.4 per cent in 1909. The most noticeable increase reported was in lard, which more than doubled in quantity in 1914, as compared with 1909. All of the other enumerated products show gains, both in quantity and value, for each five-year period.

Beet sugar.—The following table shows the quantity of beets used and the quantity and value of the different products made from sugar beets of domestic growth for 1914, 1909, and 1904.

	1914	1909	1904
Beets used, tons.....	862,653	816,609	535,508
Products, total value.....	\$11,023,058	\$10,476,876	\$5,378,004
Sugar:			
Granulated—			
Tons.....	111,570	103,864	59,968
Value.....	\$9,944,717	\$9,756,587	\$5,184,031
Raw—			
Tons.....	305	551	2,016
Value.....	\$22,239	\$41,404	\$120,109
Molasses and sirup:			
Gallons.....	4,133,121	5,016,748	1,081,131
Value.....	\$277,266	\$337,200	\$21,741
Pulp, value.....	\$778,836	\$339,025	\$45,414
All other products, value.....		\$2,660	\$0,709

In 1914 Michigan ranked third in value of products among the states producing beet sugar (being exceeded by Colorado and California), and reported products valued at \$11,023,058, which represented 17.6 per cent of the total production in the United States.

The quantity of beets used increased from 535,508 tons in 1904 to 816,609 tons in 1909 and 862,053 tons in 1914. In 1914, 99,214 acres were required to grow the 862,053 tons of beets used in the manufacture of sugar. Only 53 acres of this land were owned or operated by the factories.

Practically the entire production was granulated sugar, which constituted 90.2 per cent of the total value of products in 1914, as compared with 93.1 per cent in 1909 and 96.4 per cent in 1904. The quantity of raw sugar produced shows a decrease from 2,016 tons in 1904 to 551 tons in 1909 and to 305 tons in 1914.

Molasses and sirup, which in 1914 amounted to 4,133,121 gallons, valued at \$277,266, were inferior products, from which nearly all the sugar had been extracted, and were used mostly in the manufacture of feed for cattle.

Carriages and wagons and materials.—Table 32 shows the kind, number, and value of the different kinds of vehicles manufactured in 1914, 1909, and 1904.

	1914	1909	1904
Products, total value.....	\$3,774,827	\$10,158,883	\$14,889,457
Carriages (family and pleasure):			
Number.....	25,265	91,558	174,889
Value.....	\$1,424,549	\$4,453,090	\$7,784,444
Wagons (business, farm, etc.):			
Number.....	11,454	28,720	52,273
Value.....	\$730,293	\$1,686,172	\$2,362,958
Public conveyances:			
Number.....	2	201	120
Value.....	\$400	\$118,490	\$116,026
Sleighs and sleds:			
Number.....	12,205	32,751	53,180
Value.....	\$307,967	\$570,207	\$977,822
All other products, including parts, and amount received for repair work, value.....	\$1,311,618	\$3,430,924	\$3,658,207

¹ Includes 143 automobiles, valued at \$179,819, manufactured by establishments devoted primarily to the manufacture of carriages and wagons.

The extraordinary development of the automobile industry, particularly in this state, is the direct cause of the large decline in the carriage and wagon industry. There has been a decrease in the total value of products at each successive census, the decrease from 1904 to 1909 being \$4,730,574, or 31.8 per cent, and from 1909 to 1914, \$6,384,056, or 62.8 per cent. Each class of vehicles shown decreased, both in number and value, at each census. During the decade the greatest absolute decrease was in family and pleasure carriages, the number decreasing 149,624, or 85.6 per cent, and their value, \$6,359,895, or 81.7 per cent, while the greatest relative decrease was in number and value of public conveyances, 98.3 per cent and 99.7 per cent, respectively.

Laundries.—Statistics for power laundries are not included in the general tables or in the totals for all manufacturing industries. Table 33, however, summarizes these statistics for Michigan for 1914 and 1909.

In 1914 Michigan ranked ninth among the states in amount received for work done and eighth in the number of persons engaged in the industry. This table shows increases in all items, with the exception

of the amount paid for contract work, which shows a decrease of \$2,516, or 78.8 per cent. Receipts for work done increased 56.8 per cent; number of wage earners, 31.5 per cent; and amount paid to wage earners, 62.8 per cent. Establishments owned by individuals reported \$1,019,899, or 19.9 per cent of the amount received for work done; those owned by corporations, \$2,616,599, or 51.2 per cent; and those under other forms of ownership, \$1,478,788, or 28.9 per cent.

Table 33

	POWER LAUNDRIES.		
	Number or amount.		Per cent of increase, ¹ 1909-1914.
	1914	1909	
Number of establishments.....	234	219	6.8
Persons engaged.....	5,837	4,328	30.2
Proprietors and firm members.....	270	249	8.4
Salaried employees.....	485	350	32.9
Wage earners (average number).....	4,902	3,729	31.5
Primary horsepower.....	6,457	4,071	58.6
Capital.....	\$3,172,343	\$2,009,251	57.9
Salaries and wages.....	2,619,264	1,602,951	63.4
Salaries.....	453,146	275,133	66.5
Wages.....	2,161,118	1,327,818	62.8
Paid for contract work.....	675	3,191	-78.8
Rent and taxes.....	151,940	89,333	70.1
Cost of materials.....	924,502	621,786	49.3
Amount received for work done.....	5,115,286	3,261,841	56.8

¹ A minus sign (-) denotes decrease.

Table 34 shows, for 1914 and 1909, the number of wage earners employed in the laundries on the 15th of each month, or the nearest representative day, and the percentage which this number represents of the greatest number employed in any month of the same year.

Table 35 gives statistics as to the kinds and amounts of power used in the laundries of the state in 1914 and 1909, together with percentages of increase for the five-year period.

Table 36 shows the kinds and quantities of fuel used in the laundries, as reported at the censuses of 1914 and 1909, with percentages of increase.

Table 34

MONTH.	WAGE EARNERS.			
	Number.		Percent of maximum.	
	1914	1909	1914	1909
January.....	4,738	3,434	90.2	83.8
February.....	4,691	3,423	89.4	83.6
March.....	4,731	3,463	90.2	84.5
April.....	4,793	3,567	91.4	87.1
May.....	4,854	3,639	92.5	88.8
June.....	5,045	3,821	96.2	93.3
July.....	5,230	4,066	90.7	99.3
August.....	5,245	4,066	100.0	100.0
September.....	5,110	3,957	97.4	97.3
October.....	4,899	3,795	93.4	92.7
November.....	4,738	3,726	90.3	91.0
December.....	4,757	3,732	90.7	91.1

Table 35

KIND.	NUMBER OF ENGINES OR MOTORS.		HORSEPOWER.		
			Amount.		Per cent of increase, ¹ 1909-1914
	1914	1909	1914	1909	
Primary power, total.....	417	279	6,457	4,071	58.6
Owned.....	178	189	5,491	3,638	50.9
Steam.....	163	163	5,429	3,537	53.5
Internal-combustion engines.....	15	25	62	100	-38.0
Water motors.....		1		1	
Rented.....	239	90	966	433	123.1
Electric.....	239	90	966	430	124.7
Other.....				3	
Electric.....	306	191	1,335	874	52.7
Rented.....	239	90	966	430	124.7
Generated by establishments reporting.....	157	101	369	444	-16.9

¹ A minus sign (-) denotes decrease.

Table 36

KIND.	Unit.	QUANTITY.		Per cent of increase, ¹ 1909-1914
		1914	1909	
Anthracite coal.....	Tons, 2,240 lbs.....	1,777	854	108.1
Bituminous coal.....	Tons, 2,000 lbs.....	58,417	43,080	35.6
Coke.....	Tons, 2,000 lbs.....	318	361	-11.9
Oil.....	Barrels.....	216	640	-66.2
Gas.....	1,000 cubic feet.....	14,691	14,981	-2.5

¹ A minus sign (-) denotes decrease.

GENERAL TABLES.

Table 37 gives, for 1914, 1909, and 1904, the number of establishments, average number of wage earners, primary horsepower, wages, cost of materials, and value of products, for selected industries in the state and in the cities having 50,000 inhabitants or more; and for the cities having from 10,000 to 50,000 inhabitants, similar data for all industries combined.

Table 38 presents, for 1914, in the state as a whole and in cities with 50,000 inhabitants or more, statistics in detail for each industry that can be shown without disclosing the operations of individual establishments; and for the cities having from 10,000 to 50,000 inhabitants, for all industries combined.

MANUFACTURES.

TABLE 37.—COMPARATIVE SUMMARY FOR 1914, 1909, AND 1904.

INDUSTRY AND CITY.	Census year.	Number of establishments.	Wage earners (average number).	Primary horse-power.	Expressed in thousands.			INDUSTRY AND CITY.	Census year.	Number of establishments.	Wage earners (average number).	Primary horse-power.	Expressed in thousands.		
					Wages.	Cost of materials.	Value of products.						Wages.	Cost of materials.	Value of products.
All industries.....	1914	8,724	271,090	764,183	\$182,252	\$592,801	\$1,086,162	1914	23	540	1,077	\$315	\$648	\$1,355	
	1909	9,159	231,499	598,288	118,968	338,612	655,109	1909	18	439	711	203	493	1,085	
	1904	7,446	175,229	440,890	81,278	230,031	423,120	1904	16	630	982	301	525	1,225	
Agricultural implements	1914	30	2,143	5,941	1,456	2,640	7,731	Coffins, burial cases, and undertakers' goods.	1914	23	540	1,077	\$315	\$648	\$1,355
	1909	32	2,359	5,195	1,261	2,890	9,273		1909	18	439	711	203	493	1,085
	1904	42	3,164	5,986	1,686	3,497	8,720		1904	16	630	982	301	525	1,225
Artificial stone products.	1914	217	483	1,258	306	400	1,060	Confectionery.....	1914	64	993	1,157	448	1,820	3,040
	1909	191	514	634	255	349	908		1909	56	1,052	812	361	1,797	2,944
	1904	27	67	38	35	43	119		1904	44	783	616	232	1,033	1,699
Automobiles, including bodies and parts.	1914	205	67,538	79,379	57,792	219,215	398,289	Cooperage and wooden goods, not elsewhere specified.	1914	82	1,967	7,316	912	2,063	3,839
	1909	113	25,444	25,938	15,491	53,882	96,651		1909	101	2,642	8,500	1,016	2,004	3,889
	1904	33	2,735	1,800	1,268	3,443	7,997		1904	98	2,614	7,205	958	1,794	3,893
Awnings, tents, and sails.	1914	24	154	45	104	261	502	Copper, tin, and sheet-iron products.	1914	162	2,397	2,789	1,437	2,807	5,650
	1909	17	129	44	67	199	349		1909	152	2,336	1,876	1,122	2,545	4,929
	1904	5	74	14	32	98	197		1904	67	1,570	1,445	687	1,396	2,889
Baskets, and rattan and willow ware.	1914	13	238	574	113	285	537	Corsets.....	1914	16	2,149	959	873	1,899	4,982
	1909	18	373	900	159	174	480		1909	14	2,461	734	835	1,877	4,368
	1904	22	405	655	160	147	435		1904	11	1,378	816	469	700	1,975
Boots and shoes.....	1914	24	2,035	1,596	932	3,181	5,357	Cutlery and tools, not elsewhere specified.	1914	28	453	1,194	320	387	965
	1909	23	2,455	786	936	3,347	5,236		1909	37	683	1,379	307	384	1,124
	1904	23	1,723	649	681	2,016	3,531		1904	30	433	802	193	262	730
Boxes, fancy and paper...	1914	23	1,461	5,935	748	2,131	3,748	Electrical machinery, apparatus, and supplies.	1914	35	1,144	1,584	656	1,740	3,416
	1909	19	1,326	1,564	447	1,618	2,653		1909	40	1,218	1,355	494	1,030	2,327
	1904	22	836	558	230	431	913		1904	14	529	379	177	294	702
Brass, bronze, and copper products.	1914	64	4,731	14,251	3,030	11,473	16,869	Flour-mill and gristmill products.	1914	427	1,370	35,321	860	23,299	27,381
	1909	60	4,771	11,622	2,450	8,993	13,890		1909	520	1,530	38,991	806	29,359	34,861
	1904	136	2,029	2,036	936	1,703	3,695		1904	405	1,508	34,755	707	23,414	26,512
Bread and other bakery products.	1914	922	4,014	3,479	2,459	9,308	16,000	Food preparations, not elsewhere specified.	1914	58	1,683	9,790	1,110	7,039	16,005
	1909	816	2,637	1,933	1,444	6,671	11,082		1909	49	1,303	8,983	724	4,750	11,492
	1904	614	2,194	1,201	1,032	3,853	7,116		1904	55	1,041	5,499	460	2,256	6,764
Brick, tile, pottery, and other clay products.	1914	102	2,194	11,505	1,245	1,058	3,174	Foundry and machine-shop products.	1914	705	26,497	52,085	18,992	27,120	64,576
	1909	131	1,771	8,772	892	649	2,293		1909	654	21,649	34,152	12,344	15,711	45,399
	1904	175	1,639	8,519	752	469	1,941		1904	452	16,996	21,278	8,657	14,086	31,434
Butter, cheese, and condensed milk.	1914	364	1,367	6,659	863	18,463	21,550	Fur goods.....	1914	25	380	503	183	818	1,680
	1909	435	1,073	4,776	554	12,377	14,287		1909	31	619	232	207	994	2,284
	1904	371	875	3,794	432	7,027	8,209		1904	20	636	350	242	1,036	1,771
Canning and preserving...	1914	91	2,507	4,791	944	4,893	8,194	Furniture and refrigerators.	1914	202	16,267	28,204	9,488	14,361	33,857
	1909	104	2,073	3,374	665	3,074	4,971		1909	202	16,610	27,435	8,300	11,718	25,042
	1904	134	2,022	2,636	521	2,374	3,817		1904	142	14,665	10,812	6,468	8,640	20,502
Carriages and wagons and materials.	1914	177	1,417	2,739	982	1,928	3,775	Gas and electric fixtures and lamps.	1914	13	597	993	445	936	2,094
	1909	212	4,034	6,362	2,210	5,262	10,159		1909	20	395	386	219	642	1,546
	1904	218	6,400	8,411	3,053	8,440	14,889		1904	3	76	45	37	243	496
Carriages and sleds, children's.	1914	8	402	598	224	443	970	Gas, illuminating and heating.	1914	59	2,349	34,935	1,584	3,356	10,441
	1909	9	555	484	214	257	652		1909	55	1,771	6,055	1,096	2,129	6,745
	1904	8	242	409	84	150	337		1904	46	1,287	2,379	575	1,120	3,866
Cars and general shop construction and repairs by electric-railroad companies.	1914	18	835	413	629	632	1,326	Hosiery and knit goods...	1914	34	2,714	3,373	1,096	2,610	5,233
	1909	15	574	1,701	318	949	1,301		1909	35	2,545	3,291	769	2,047	4,029
	1904	4	424	225	246	313	588		1904	38	3,085	2,501	769	1,844	3,624
Cars and general shop construction and repairs by steam-railroad companies.	1914	26	5,803	8,595	3,905	3,264	7,569	Ice, manufactured.....	1914	11	443	4,433	389	128	765
	1909	32	5,401	5,742	3,500	2,916	6,838		1909	5	87	1,959	77	40	199
	1904	34	4,435	4,153	2,497	2,509	5,369	Iron and steel, blast furnaces.	1914	12	991	14,045	782	3,877	5,450
Cement.....	1914	11	1,310	24,158	975	2,408	4,529		1909	11	1,016	17,493	632	4,224	5,824
	1909	13	1,306	21,773	826	1,403	2,915		1904	11	1,139	7,491	588	3,104	4,044
	1904	13	1,029	18,593	669	909	2,560	Iron and steel, steel works and rolling mills.	1914	9	718	4,688	498	871	1,716
Chemicals.....	1914	36	4,509	45,944	3,405	6,373	13,891		1909	8	1,183	4,290	661	1,598	2,670
	1909	36	3,174	26,594	2,012	5,072	12,890		1904	5	1,018	4,630	527	1,800	2,712
	1904	14	3,333	22,860	1,848	4,408	9,037	Iron and steel forgings....	1914	11	552	1,832	476	807	1,493
Clothing, men's, including shirts.	1914	39	2,502	1,075	1,094	2,996	5,306		1909	4	307	483	182	240	602
	1909	40	3,580	1,151	1,221	3,389	6,532	Leather goods.....	1914	103	675	462	379	1,413	2,426
	1904	43	2,320	931	717	2,526	4,203		1909	57	894	760	434	1,458	2,560
Clothing, women's.....	1914	32	1,672	552	715	1,194	2,661		1904	45	630	342	339	760	1,389
	1909	52	2,194	581	745	1,710	3,587	Leather, tanned, curried, and finished.	1914	23	2,773	6,787	1,739	20,982	25,504
	1904	44	2,043	922	658	1,731	3,629		1909	24	2,201	6,719	1,133	12,121	15,331
Coffee, roasting and grinding.	1914	16	88	205	50	1,316	1,618		1904	25	1,747	4,391	866	7,271	9,340
	1909	12	76	278	40	680	938	Liquors, malt.....	1914	70	2,097	13,039	1,703	4,328	15,041
	1904	4	16	74	8	99	133		1909	79	1,527	9,219	1,073	2,421	9,840
									1904	86	1,271	7,518	864	1,694	6,099
								Lumber and timber products.	1914	748	28,527	112,584	15,105	29,356	58,523
									1909	1,180	35,027	133,739	16,298	29,042	61,514
									1904	1,058	34,193	119,485	15,095	24,729	57,217

1 Excludes statistics for two establishments, to avoid disclosure of individual operations.
 2 Includes "sand-lime brick."
 3 Includes "canning and preserving, fish;" "canning and preserving, fruits and vegetables;" and "pickles, preserves, and sauces."
 4 Includes "stamped and enameled ware, not elsewhere specified," and "tinware, not elsewhere specified."
 5 Includes "automobile repairing;" "engines, steam, gas, and water;" "gas machines and gas and water meters;" "hardware;" "plumbers' supplies, not elsewhere specified;" "pumps, steam and other power;" "steam fittings and steam and hot-water heating apparatus;" and "structural ironwork, not made in steel works or rolling mills."
 6 Excludes statistics for one establishment, to avoid disclosure of individual operations.
 7 Includes "saddlery and harness" and "trunks and valises."
 8 Includes "boxes, wooden packing;" "lumber, planing-mill products, not including planing mills connected with sawmills;" "pulp wood;" and "window and door screens and weather strips."

TABLE 37.—COMPARATIVE SUMMARY FOR 1914, 1909, AND 1904—Continued.

INDUSTRY AND CITY.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (aver- age num- ber).	Pri- mary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.	INDUSTRY AND CITY.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (aver- age num- ber).	Pri- mary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.
THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.															
Marble and stone work...	1914	111	461	1,644	\$390	\$637	\$1,561	Slaughtering and meat packing.	1914	36	1,181	3,275	\$315	\$10,283	\$21,267
	1909	113	551	1,570	393	592	1,504		1909	45	902	3,404	481	11,666	13,435
	1904	73	436	872	287	400	1,088		1904	26	499	989	265	5,629	6,356
Mattresses and spring beds.	1914	23	278	517	182	519	877	Soap.....	1914	11	78	245	49	362	522
	1909	14	306	508	140	407	689		1909	8	68	882	37	354	536
	1904	12	194	377	93	331	514		1904	11	131	477	55	497	800
Mineral and soda waters..	1914	120	391	814	246	819	1,696	Springs, steel, car and car-riage, not made in steel works or rolling mills.	1914	6	638	1,000	472	1,183	2,175
	1909	97	252	506	138	368	910		1909	5	588	908	309	558	1,308
	1904	84	174	88	102	170	502		1904	6	323	572	128	282	541
Mirrors, framed and un- framed.	1914	8	189	442	114	342	541	Stoves and furnaces, in- cluding gas and oil stoves.	1914	27	4,074	5,916	2,988	3,715	10,757
	1909	8	232	303	128	375	659		1909	33	4,482	5,910	2,832	2,816	9,123
	1904	8	232	303	128	375	659		1904	27	4,472	4,589	2,491	2,737	8,026
Musical instruments, pi- anos and organs and materials.	1914	17	1,070	1,927	677	1,259	2,682	Sugar, beet.....	1914	10	1,326	10,306	932	6,244	11,023
	1909	17	1,779	2,690	1,075	2,009	4,226		1909	11	1,460	8,854	910	6,228	10,477
	1904	13	1,069	1,310	537	750	1,984		1904	19	1,211	8,766	581	3,761	5,378
Oil, essential.....	1914	53	38	619	17	226	492	Tobacco manufactures....	1914	628	9,075	5,143	3,779	8,963	20,667
	1909	23	54	365	17	415	486		1909	729	7,876	3,076	7,208	16,179	
	1904	6	13	11	8	166	240		1904	706	6,428	1,156	2,467	4,847	
Paper and wood pulp....	1914	37	6,051	62,528	3,559	14,545	22,050	Toys and games.....	1914	7	251	198	149	246	529
	1909	32	4,327	48,700	2,142	9,025	13,922		1909	8	279	994	135	174	432
	1904	30	3,052	31,357	1,306	4,581	7,341		1904	5	169	318	70	81	253
Paper goods, not else- where specified.	1914	14	750	2,009	402	2,282	3,588	Wall plaster.....	1914	13	631	4,295	421	743	2,074
	1909	18	1,191	2,580	483	1,953	3,551		1909	16	746	3,029	276	412	1,421
	1904	6	341	976	146	816	1,329		1904	8	343	2,125	167	380	842
Patent medicines and compounds, and drug- gists' preparations.	1914	142	3,369	2,694	1,994	7,003	16,434	Window shades and fix- tures.	1914	8	702	1,149	285	983	1,755
	1909	159	3,249	2,270	1,509	4,941	13,475		1909	7	636	1,236	261	807	1,296
	1904	96	2,536	2,301	952	3,798	10,470		1904	3	225	342	85	360	508
Printing and publishing..	1914	1,113	8,166	13,033	5,602	7,498	24,953	Wirework, including wire rope and cable, not else- where specified.	1914	33	1,314	2,269	788	3,918	5,894
	1909	1,045	7,219	7,651	4,000	4,925	17,348		1909	37	909	1,900	428	3,446	5,285
	1904	937	5,999	5,292	2,981	3,424	12,050		1904	30	984	1,365	392	1,990	3,459
Salt.....	1914	15	1,434	8,316	991	2,067	4,421	Wood distillation.....	1914	10	645	2,644	415	1,708	2,678
	1909	27	1,363	6,628	745	1,643	3,653		1909	12	806	5,012	504	1,155	2,399
	1904	41	1,388	6,091	626	1,191	2,495		1904	9	291	366	166	351	738
Scales and balances.....	1914	3	276	298	200	208	612	Wood, turned and carved.	1914	45	576	2,901	318	339	950
	1909	4	228	310	137	229	624		1909	53	1,137	4,695	548	634	1,708
	1904	7	132	140	58	65	258		1904	74	1,226	3,897	528	589	1,567
Shipbuilding, including boat building.	1914	62	1,261	7,585	1,040	1,259	2,823	Woolen goods.....	1914	9	477	1,311	230	793	1,215
	1909	91	2,344	6,485	1,380	2,490	5,034		1909	15	554	1,900	235	863	1,571
	1904	57	1,998	4,164	1,068	1,079	2,973		1904	15	482	1,186	170	595	977
Show cases.....	1914	6	410	845	272	463	1,035	All other industries.....	1914	789	20,159	61,768	13,174	58,697	100,806
	1909	11	823	1,403	459	796	1,866		1909	784	21,169	36,918	11,095	54,638	89,850
	1904	10	617	942	314	502	1,165		1904	578	15,963	34,177	7,540	46,437	67,684

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

INDUSTRY AND CITY.	1914	1909	1904	1914	1909	1904	1914	1909	1904	INDUSTRY AND CITY.	1914	1909	1904	1914	1909	1904	
																	DETROIT—All indus- tries.
	2,036	81,011	114,190	43,097	139,218	252,939	Bread and other bakery products.			1914	265	1,108	1,112	635	2,897	4,826	
	1,362	48,483	.....	22,558	66,551	128,247				1909	159	874	.....	424	1,566	2,932	
Automobiles, including bodies and parts.	1914	122	33,439	39,458	26,368	101,382	164,076	Brick, tile, pottery, and other clay products.			1914	9	160	864	110	95	269
	1909	68	15,675	14,666	9,621	31,363	59,536				1909	13	220	625	129	90	329
	1904	19	2,034	.....	959	2,631	6,240				1904	6	32	.....	18	15	55
Awnings, tents, and sails.	1914	8	114	22	80	172	336	Carriages and wagons and materials.			1914	27	255	286	182	275	560
	1909	7	100	20	54	133	238				1909	34	263	188	164	189	507
	1904	3	60	.....	25	71	152				1904	25	834	.....	403	794	1,515
Boots and shoes.....	1914	6	965	531	430	1,014	2,255	Clothing, men's, includ- ing shirts.			1914	20	1,682	812	765	2,273	3,897
	1909	8	1,327	362	491	1,762	2,744				1909	22	2,786	951	963	2,352	4,761
	1904	8	926	.....	400	1,117	2,039				1904	28	1,560	.....	472	1,791	2,957
Boxes, cigar.....	1914	4	256	205	99	140	279	Clothing, women's.....			1914	19	1,070	229	484	595	1,406
	1909	4	249	164	76	111	238				1909	27	921	154	357	651	1,494
	1904	4	202	.....	62	86	184				1904	15	708	.....	233	694	1,168
Boxes, fancy and paper...	1914	11	352	193	144	189	491	Coffee, roasting and grind- ing.			1914	5	40	143	29	791	965
	1909	7	366	142	115	143	382				1909	6	41	186	24	452	617
	1904	8	415	.....	97	115	313	Coffins, burial cases, and undertakers' goods.			1914	7	91	170	67	128	275
Brass, bronze, and copper products.	1914	38	3,880	13,074	2,485	10,296	14,630				1909	5	95	143	56	117	268
	1909	37	4,032	10,661	2,049	8,273	12,297				1904	5	129	.....	63	138	285
	1904	23	2,032	.....	937	3,429	5,682										

1 Includes "envelopes."
 2 Excludes statistics for two establishments, to avoid disclosure of individual operations.
 3 Includes "perfumery and cosmetics."
 4 Includes "bookbinding and blank-book making;" "engraving, steel and copper plate, including plate printing;" and "lithographing."
 5 Excludes statistics for one establishment, to avoid disclosure of individual operations.
 6 Includes "sausage."
 7 Figures do not agree with those published in 1909 because certain establishments revised their reports for that census.
 8 Includes "sand-lime brick."

MANUFACTURES.

TABLE 37.—COMPARATIVE SUMMARY FOR 1914, 1909, AND 1904—Continued.

INDUSTRY AND CITY.	Census year.	Number of establishments.	Wage earners (average number).	Primary horse-power.	Expressed in thousands.			INDUSTRY AND CITY.	Census year.	Number of establishments.	Wage earners (average number).	Primary horse-power.	Expressed in thousands.		
					Wages.	Cost of materials.	Value of products.						Wages.	Cost of materials.	Value of products.
CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.															
DETROIT—Continued.								DETROIT—Continued.							
Confectionery.....	1914	32	460	616	\$230	\$884	\$1,488	Photo-engraving.....	1914	9	104	61	\$105	\$35	\$282
	1909	23	357	341	139	629	1,136		1909	7	153	116	116	60	351
	1904	16	387	.....	115	517	845		1904	6	160	.....	126	49	299
Copper, tin, and sheet-iron products.	1914	168	1,957	2,106	1,163	2,108	4,369	Pickles, preserves, and sauces.	1914	13	460	417	198	1,379	1,974
	1909	72	1,932	.....	851	1,932	3,534		1909	9	408	549	157	855	1,568
	1904	28	1,256	.....	508	1,117	2,258		1904	8	609	.....	174	1,144	1,788
Cutlery and tools, not elsewhere specified.	1914	17	330	837	251	213	651	Printing and publishing..	1914	265	3,472	7,098	2,629	4,044	13,168
	1909	19	259	719	139	184	466		1909	224	2,509	2,602	1,570	2,044	7,291
	1904	5	72	.....	32	61	146		1904	155	1,920	.....	1,114	1,410	4,855
Electrical machinery, apparatus, and supplies.	1914	20	591	1,037	334	1,223	2,240	Slaughtering and meat packing.	1914	9	1,102	3,047	761	18,489	20,321
	1909	23	541	575	226	493	1,148		1909	29	811	3,092	433	11,221	12,850
	1904	8	90	.....	35	65	191		1904	11	420	.....	222	4,753	5,350
Emery and other abrasive wheels.	1914	3	78	164	43	123	225	Soap.....	1914	5	51	181	34	318	450
	1909	4	102	155	61	155	284		1909	4	54	858	33	320	483
	1904	3	59	.....	37	31	135		1904	6	90	.....	38	316	515
Food preparations, not elsewhere specified.	1914	13	181	1,841	91	1,779	2,067	Stoves and furnaces, including gas and oil stoves.	1914	8	2,362	3,358	1,748	1,788	5,921
	1909	11	48	552	29	526	652		1909	8	2,808	2,741	1,809	1,570	5,676
	1904	9	73	.....	30	417	613		1904	6	3,122	.....	1,814	1,751	5,565
Foundry and machine-shop products.	1914	221	11,250	20,210	8,558	12,351	29,465	Tobacco manufactures....	1914	157	7,131	5,036	2,864	7,309	17,044
	1909	215	8,694	10,336	4,828	7,614	18,243		1909	198	5,883	925	2,177	5,869	12,773
	1904	125	6,341	.....	3,396	6,185	13,647		1904	225	4,002	.....	1,341	3,301	7,727
Fur goods.....	1914	18	207	190	155	626	1,102	Wirework, including woven-wire fencing.	1914	10	206	177	108	166	424
	1909	19	371	24	181	707	1,735		1909	12	207	175	81	127	357
	1904	10	268	.....	130	677	1,121		1904	11	277	.....	93	149	322
Furnishing goods, men's..	1914	6	70	36	27	98	148	All other industries.....	1914	323	15,775	52,042	11,270	29,868	60,880
	1909	8	337	118	110	158	360		1909	358	17,875	39,178	9,844	31,691	59,846
	1904	3	241	.....	61	85.	200		1904	239	11,107	.....	5,418	20,597	32,925
Furniture and refrigerators.	1914	29	1,787	2,899	1,108	1,359	3,383	GRAND RAPIDS—	1914	594	17,427	30,393	10,296	23,995	49,792
	1909	33	2,290	3,722	1,186	1,302	3,763	All industries.	1909	524	17,690	27,676	9,217	19,736	42,231
	1904	24	1,049	.....	811	1,038	2,624		1904	383	15,514	.....	7,318	14,422	30,690
Hosiery and knit goods...	1914	9	280	245	102	365	615	Automobiles, including bodies and parts.	1914	8	87	94	61	114	250
	1909	9	334	214	91	326	559		1909	3	86	110	58	147	389
	1904	12	497	.....	129	372	720	Brass and copper products	1914	7	432	560	257	281	707
Iron and steel, steel works and rolling mills.	1914	4	456	3,489	317	561	1,117		1909	5	405	401	209	243	680
	1909	5	989	3,430	559	1,317	2,297		1904	3	356	.....	136	138	399
	1904	4	832	.....	431	1,604	2,362	Bread and other bakery products.	1914	67	441	244	227	943	1,682
Jewelry.....	1914	18	133	57	101	154	386		1909	66	361	185	185	872	1,476
	1909	9	92	28	63	43	204		1904	30	310	.....	137	613	1,173
	1904	5	55	.....	23	22	62	Butter.....	1914	6	27	126	19	621	747
Leather goods.....	1914	532	239	228	145	534	913		1909	4	16	134	12	216	249
	1909	22	403	530	211	819	1,396	Carriages and wagons and materials.....	1914	13	104	139	72	63	199
	1904	10	304	.....	163	349	632		1909	8	87	173	43	70	194
Liquors, malt.....	1914	19	1,165	6,088	1,020	2,523	9,410		1904	11	184	.....	95	231	495
	1909	18	616	3,886	495	1,185	4,942	Clothing, men's, including shirts.	1914	8	139	45	66	102	397
	1904	19	493	.....	368	795	3,272		1909	6	239	70	84	220	513
Lumber and timber products.	1914	47	1,802	7,043	1,231	3,782	6,454		1904	6	283	.....	86	245	450
	1909	59	2,046	4,629	1,013	3,759	6,110	Copper, tin, and sheet-iron products.	1914	11	54	35	29	69	131
	1904	30	1,039	.....	554	1,196	2,167		1909	11	101	39	53	102	231
Marble and stone work...	1914	19	202	650	178	203	522		1904	5	50	.....	30	43	101
	1909	19	194	560	131	172	413	Flour-mill and gristmill products.	1914	9	107	1,537	78	2,652	3,142
	1904	12	174	.....	112	109	312		1909	8	118	1,510	72	3,045	3,781
Mineral and soda waters..	1914	19	166	148	117	240	530		1904	6	106	.....	64	2,160	2,371
	1909	13	81	85	45	113	266	Foundry and machine-shop products.	1914	61	1,532	2,831	989	1,086	3,023
	1904	11	56	.....	42	49	150		1909	49	1,532	2,107	825	1,134	2,740
Models and patterns, not including paper patterns.	1914	15	201	149	186	43	306		1904	33	964	.....	473	682	1,668
	1909	17	183	95	125	24	238	Furniture and refrigerators.	1914	67	6,091	10,253	4,353	5,719	14,949
	1904	7	68	.....	36	4	50		1909	54	7,250	10,305	3,903	4,937	12,630
Paint and varnish.....	1914	10	325	1,090	214	1,955	3,867		1904	38	6,654	.....	3,240	3,583	9,409
	1909	12	353	1,304	234	2,241	4,201	Hosiery and knit goods...	1914	4	422	251	148	505	1,064
	1904	9	356	.....	198	2,461	4,449		1909	4	216	109	74	393	647
Patent medicines and compounds and druggists' preparations.	1914	63	2,895	2,214	1,713	6,016	13,691		1904	4	275	.....	106	391	590
	1909	74	2,818	1,819	1,328	4,304	11,553	Leather, tanned, curried, and finished.	1914	3	177	620	115	1,031	1,304
	1904	42	2,280	.....	859	3,509	9,423		1909	3	98	437	56	545	705

¹ Includes "stamped and enameled ware, not elsewhere specified," and "tinware, not elsewhere specified."

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

³ Includes "automobile repairing;" "engines, steam, gas, and water;" "gas machines and gas and water meters;" "hardware;" "plumbers' supplies, not elsewhere specified;" "pumps, steam and other power;" "steam fittings and steam and hot-water heating apparatus;" and "structural ironwork, not made in steel works or rolling mills."

⁴ Figures do not agree with those published in 1909 because certain establishments revised their reports for that census.

⁵ Includes "saddlery and harness" and "trunks and valises."

⁶ Includes "boxes, wooden packing;" "lumber, planing-mill products, not including planing mills connected with sawmills;" and "window and door screens and weather strips."

⁷ Includes "perfumery and cosmetics."

⁸ Includes "bookbinding and blank-book making;" "engraving, steel and copper plate, including plate printing;" and "lithographing."

⁹ Includes "sausage."

¹⁰ Includes "automobile repairing;" "engines, steam, gas, and water;" "hardware;" "plumbers' supplies, not elsewhere specified;" "steam fittings and steam and hot-water heating apparatus;" and "structural ironwork, not made in steel works or rolling mills."

¹¹ Excludes statistics for two establishments, to avoid disclosure of individual operations.

TABLE 37.—COMPARATIVE SUMMARY FOR 1914, 1909, AND 1904—Continued.

INDUSTRY AND CITY.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earn- ers (aver- age num- ber).	Pri- mary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.	INDUSTRY AND CITY.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earn- ers (aver- age num- ber).	Pri- mary horse- power.	Wages.	Cost of mate- rials.	Value of prod- ucts.
CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.															
GRAND RAPIDS—Con- Liquors, malt.....	1914	3	174	1,328	\$123	\$315	\$1,261	SAGINAW—Contd. Cooperage and wooden goods, not elsewhere specified.	1914	6	429	1,415	\$183	\$663	\$1,048
	1909	3	136	725	94	168	912		1909	9	642	1,643	207	699	1,206
	1904	3	136	725	94	168	912		1904	9	502	1,643	174	454	918
Lumber and timber prod- ucts.	1914	16	539	2,469	345	1,240	1,925	Flour-mill and gristmill products.	1914	3	27	699	17	595	602
	1909	20	594	2,504	343	907	1,697		1909	4	58	457	32	558	731
	1904	29	361	1,833	183	607	967		1904	4	55	457	24	551	652
Marble and stone work...	1914	7	36	151	30	43	126	Foundry and machine- shop products.	1914	18	792	2,082	565	932	2,265
	1909	6	41	77	34	39	108		1909	23	698	1,674	432	788	1,838
	1904	4	36	151	27	49	102		1904	14	760	1,674	420	918	1,884
Patent medicines and compounds and drug- gists' preparations.	1914	16	64	22	28	140	341	Furniture.....	1914	8	451	926	256	311	820
	1909	18	58	33	24	117	285		1909	12	417	806	199	326	881
	1904	8	20	8	8	20	83		1904	5	174	806	50	92	212
Printing and publishing...	1914	84	942	1,145	673	888	2,886	Liquors, malt.....	1914	5	84	808	71	125	499
	1909	68	832	781	489	587	2,057		1909	5	74	170	58	110	393
	1904	48	597	318	318	357	1,292		1904	6	58	170	39	90	297
Tobacco, cigars.....	1914	32	667	4	261	712	1,293	Lumber and timber prod- ucts.	1914	11	652	4,162	367	1,868	2,503
	1909	36	453	5	188	302	725		1909	12	696	2,682	335	1,629	2,404
	1904	34	303	133	159	575	675		1904	13	672	2,682	260	1,314	1,908
All other industries.....	1914	172	4,432	8,539	2,422	7,316	14,284	Printing and publishing...	1914	22	159	316	120	207	542
	1909	152	4,962	7,971	2,466	5,692	12,212		1909	22	164	411	100	127	428
	1904	149	5,009	2,282	5,138	11,010	11,010		1904	23	146	411	85	81	317
SAGINAW—All indus- tries.	1914	241	6,342	15,959	3,671	10,656	10,009	Tobacco manufactures....	1914	27	124	1	66	96	237
	1909	202	5,368	11,867	2,750	7,634	14,192		1909	27	127	1	56	82	203
	1904	179	4,445	1,981	5,367	10,079	10,079		1904	20	147	1	68	73	214
Automobiles, including bodies and parts.	1914	7	447	445	292	687	1,800	All other industries.....	1914	116	3,028	4,970	1,644	4,794	8,531
	1909	3	255	580	181	140	386		1909	76	2,154	3,273	1,158	2,652	6,394
	1904	9	53	27	75	131	131		1904	76	1,878	3,273	804	1,719	8,546

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

ADRIAN.....	1914	68	1,256	2,840	\$698	\$3,783	\$5,442	KALAMAZOO.....	1914	213	5,525	19,548	\$3,284	\$10,947	\$20,214
	1909	80	1,059	3,211	540	4,150	6,085		1909	193	6,272	14,449	3,149	9,505	17,904
	1904	80	1,059	3,211	540	4,150	6,085		1904	157	5,666	14,449	2,562	6,896	13,142
ALPENA.....	1914	54	1,494	11,537	895	2,398	4,102	LANSING.....	1914	180	6,231	12,614	4,373	13,887	26,984
	1909	58	1,432	10,670	711	2,301	3,964		1909	169	5,285	8,720	2,707	8,802	16,567
	1904	57	1,245	534	1,684	2,905	2,905		1904	98	2,982	1,389	3,473	6,887	
ANN ARBOR.....	1914	75	842	2,376	516	1,302	2,603	MANISTEE.....	1914	47	1,853	7,548	968	2,004	4,136
	1909	63	573	1,458	287	1,010	1,866		1909	64	2,125	6,811	1,019	1,289	3,344
	1904	65	549	244	774	1,886	1,886		1904	47	2,084	999	1,274	3,257	
BATTLE CREEK.....	1914	135	4,599	17,049	3,191	8,158	23,248	MARQUETTE.....	1914	34	580	2,156	378	678	1,395
	1909	105	4,175	14,923	2,354	7,068	20,174		1909	35	509	1,575	313	565	1,278
	1904	120	3,389	1,886	3,934	12,298	12,298		1904	31	738	436	1,392	2,364	
BAY CITY.....	1914	142	3,771	15,911	2,129	6,403	11,119	MENOMINEE.....	1914	52	1,938	6,901	1,000	2,656	5,000
	1909	152	4,737	17,872	2,118	5,647	10,294		1909	52	1,700	4,770	718	1,657	3,728
	1904	173	4,456	2,001	4,948	8,809	8,809		1904	45	1,489	705	1,373	2,974	
ESCANABA.....	1914	45	777	2,591	469	636	1,507	MUSKEGON.....	1914	103	4,646	12,499	2,641	5,317	11,148
	1909	39	720	1,416	405	364	1,074		1909	101	4,522	10,426	2,107	4,938	9,648
	1904	70	2,161	1,041	3,769	6,177	6,177		1904	70	3,078	1,211	3,526	6,319	
FLINT.....	1914	94	8,722	10,576	7,235	34,333	53,375	PONTIAC.....	1914	46	2,409	3,111	2,010	10,440	15,102
	1909	104	7,088	8,240	4,429	13,971	24,118		1909	42	1,739	2,854	1,087	3,241	5,804
	1904	70	2,161	1,041	3,769	6,177	6,177		1904	74	2,138	1,107	1,747	3,715	
HOLLAND.....	1914	61	2,165	3,696	1,162	5,843	8,684	PORT HURON.....	1914	89	1,206	4,400	735	2,227	4,090
	1909	61	2,162	3,446	1,069	3,478	5,802		1909	82	1,580	3,130	791	1,950	3,588
	1904	14	201	521	88	201	377		1904	74	2,138	1,107	1,747	3,715	
IRONWOOD.....	1914	24	516	641	305	414	793	SAULT STE. MARIE.....	1914	44	938	2,326	621	2,352	3,821
	1909	14	201	521	88	201	377		1909	46	825	2,949	432	2,441	3,729
	1904	15	73	73	42	142	247		1904	38	895	462	1,427	2,412	
ISHPEMING.....	1914	19	79	230	46	135	229	TRAVERSE CITY.....	1914	60	956	4,553	499	1,087	2,251
	1909	19	66	73	37	52	132		1909	61	1,220	4,231	444	1,183	2,289
	1904	15	73	73	42	142	247		1904	61	1,220	4,231	444	1,183	2,289
JACKSON.....	1914	147	4,906	9,740	3,263	9,529	16,810								
	1909	163	4,788	6,355	2,437	8,156	13,984								
	1904	147	3,967	1,838	4,272	8,348	8,348								

1 Includes "lumber, planing-mill products, not including planing mills connected with sawmills" and "window and door screens and weather strips."
 2 Excludes statistics for two establishments, to avoid disclosure of individual operations.
 3 Excludes statistics for one establishment, to avoid disclosure of individual operations.
 4 Includes "bookbinding and blank-book making;" "engraving, steel and copper plate, including plate printing;" and "lithography."
 5 Figures do not agree with those published because it was necessary to revise them in order to include data only for those establishments located within the corporate limits of the city.
 6 Includes "engines, steam, gas, and water."
 7 In 1904 the statistics for West Bay City, which was annexed in 1905, are included.

OR MORE, BY INDUSTRIES, AND FOR CITIES OF 10,000 TO 50,000 INHABITANTS: 1914.

EXPENSES.							Value of products.	Value added by manufacture.	POWER.				
Salaries and wages.			For contract work.	Rent and taxes.		For materials.			Primary horsepower.				
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, including internal revenue and corporation income.	Principal materials.			Fuel and rent of power.	Total.	Steam engines. ¹	Internal-combustion engines. ²	Water wheels and motors. ¹	Electric (rented).	Electric horsepower generated in establishments reporting.

THE STATE—ALL INDUSTRIES COMBINED AND SPECIFIED INDUSTRIES.

\$23,793,282	\$44,479,413	\$182,252,284	\$7,973,706	\$3,496,634	\$14,984,537	\$569,328,043	\$23,473,021	\$1,036,162,432	\$493,361,368	764,183	516,771	23,199	31,711	192,502	123,264	1
212,821	404,324	1,456,438	25	3,084	98,357	2,530,201	109,657	7,731,217	5,091,259	5,941	2,856	151	.....	2,934	795	2
390	2,964	3,936	400	1,248	27	3,608	117	18,750	15,025	3	.....	.....	.....	3	.....	3
29,363	11,183	306,059	5,481	9,936	7,624	387,627	12,699	1,059,966	659,670	1,258	437	381	.....	440	110	4
1,654,064	13,370,697	19,412,428	10,921	189,963	348,617	37,538,985	854,274	71,540,077	33,146,818	30,823	8,095	339	.....	22,389	4,256	5
3,372,901	5,217,331	38,380,041	3,569,709	705,270	1,536,088	179,283,363	1,533,773	326,748,945	145,926,809	48,556	15,025	3,490	.....	30,041	8,227	6
10,907	7,013	111,750	732	15,142	3,074	82,548	7,699	358,225	267,978	254	5	88	.....	161	9	7
10,907	5,993	107,117	732	13,011	3,058	73,151	6,954	332,623	252,518	231	.....	83	.....	148	9	8
.....	1,020	4,633	.....	2,131	16	9,397	745	25,602	15,460	23	5	5	.....	13	.....	9
33,673	21,931	104,024	1,500	11,704	2,587	250,156	2,240	501,915	240,519	45	.....	.....	.....	45	5	10
13,740	2,833	113,348	.....	1,640	4,147	280,807	3,988	536,756	251,961	574	518	12	.....	44	5	11
.....	1,000	800	.....	1,200	116	7,040	256	16,800	9,004	.....	.....	.....	.....	.....	.....	12
44,313	53,771	241,711	5,264	13,376	5,148	620,977	8,039	1,261,748	632,732	272	.....	2	.....	270	13	13
116,002	144,805	932,241	.....	27,339	26,892	3,149,200	32,101	5,357,451	2,175,760	1,596	837	64	.....	695	110	14
110,802	138,926	914,514	.....	26,633	25,788	3,076,282	31,241	5,230,590	2,123,157	1,640	790	64	.....	686	110	15
5,200	5,879	17,727	.....	706	1,104	73,008	860	126,571	52,603	56	47	.....	.....	9	.....	16
13,560	5,680	125,266	.....	4,044	3,021	189,424	5,273	393,771	199,074	277	100	90	.....	87	.....	17
114,533	55,757	747,977	1,439	16,636	30,607	2,020,332	110,465	3,747,876	1,617,079	5,935	5,396	.....	.....	539	1,597	18
128,629	54,182	782,255	22,690	11,186	24,075	2,274,054	22,855	3,580,741	1,283,832	6,025	5,391	66	.....	568	108	19
411,933	379,811	3,029,911	6,632	18,748	97,612	11,109,573	363,894	16,868,725	5,395,288	14,251	11,278	283	.....	2,685	3,798	20
195,831	481,026	2,459,486	3,691	237,015	78,721	8,988,553	319,544	16,000,068	6,691,971	3,479	846	126	.....	2,507	1,078	21
34,490	225,487	226,107	.....	12,200	13,221	1,082,472	27,794	2,044,869	934,603	479	275	.....	.....	204	.....	22
161,341	255,539	2,233,379	3,691	224,725	65,500	7,906,081	291,750	13,955,199	5,757,368	3,000	571	126	.....	2,303	1,078	23
115,547	42,943	959,673	47,966	11,563	23,055	275,169	560,960	2,474,465	1,638,336	9,794	8,525	250	102	917	281	24
95,962	17,357	750,347	46,466	10,894	16,055	159,659	433,759	1,898,376	1,204,953	7,326	6,144	163	102	917	275	25
19,585	25,586	209,326	1,500	669	7,000	115,510	127,201	576,089	333,378	2,468	2,361	87	.....	6	.....	26
700	3,650	65,070	.....	1,109	1,059	162,691	2,186	267,765	102,888	70	.....	15	.....	55	.....	27
7,771	11,970	73,222	.....	1,632	3,993	163,292	1,800	348,434	183,342	51	.....	13	.....	38	.....	28
114,043	84,919	510,981	16,305	18,337	21,013	11,556,297	109,805	13,479,297	1,813,195	4,035	3,224	107	8	686	116	29
70,450	59,131	583,183	2,470	3,306	16,254	2,594,561	45,681	4,421,946	1,781,704	3,712	3,285	190	.....	237	35	30
80,264	55,271	470,781	.....	830	14,186	2,059,412	33,849	3,630,504	1,537,243	3,165	2,829	143	.....	193	.....	31
10,096	3,860	107,822	2,470	2,476	2,035	528,677	10,394	774,287	235,216	541	466	41	.....	44	.....	32
.....	4,580	.....	.....	33	33	6,472	.....	17,155	9,245	6	.....	6	.....	.....	.....	33
.....	1,248	30,359	80	1,448	469	7,789	.....	68,794	59,282	78	.....	18	.....	60	.....	34
14,275	1,900	89,886	.....	1,050	2,795	165,753	5,876	324,043	152,414	594	495	7	25	77	.....	35
40,315	66,661	223,849	.....	240	5,792	429,680	12,958	970,486	527,848	508	500	.....	.....	88	.....	36
101,227	148,240	891,778	2,202	28,231	37,987	1,710,598	45,624	3,450,784	1,694,562	2,145	728	208	17	1,194	.....	37
101,227	147,808	872,390	2,202	26,026	37,715	1,693,715	44,651	3,391,593	1,653,227	2,106	726	190	17	1,173	.....	38
.....	432	19,338	.....	2,205	272	16,883	973	59,191	41,335	39	.....	18	.....	21	.....	39
14,953	34,094	629,366	.....	17,681	617,140	.....	14,744	1,326,474	604,500	413	125	.....	.....	288	10	40
207,175	184,319	3,905,314	1,165	.....	8,958	3,030,784	233,666	7,569,197	4,304,747	8,595	4,176	551	.....	3,868	2,297	41
76,844	151,180	974,813	1,093	45,189	53,014	1,253,515	1,154,199	4,520,026	2,121,312	24,158	19,262	201	2,000	2,605	10,533	42
15,922	5,289	87,948	750	855	300	1,788,293	21,547	2,030,753	217,913	833	797	12	.....	24	.....	43
351,534	343,420	3,404,598	259,853	4,168	234,816	4,175,229	2,193,256	13,891,415	7,617,930	45,044	38,163	3,605	60	4,216	7,466	44
115,726	131,014	929,318	23,235	21,434	25,290	2,752,319	16,839	4,734,975	1,965,817	939	740	1	.....	198	57	45
111,676	126,842	910,497	23,235	19,270	24,900	2,718,063	16,241	4,649,194	1,914,890	926	740	.....	.....	186	57	47
4,050	4,172	18,821	.....	2,164	330	34,256	598	85,781	50,927	13	.....	1	.....	12	.....	46
85,166	169,685	715,153	1,550	23,827	13,798	1,176,124	17,723	2,060,507	1,466,660	552	145	.....	.....	407	.....	48
4,350	2,538	12,006	.....	2,235	372	33,350	366	57,502	23,786	27	.....	.....	.....	27	.....	49
64,665	151,856	587,859	1,550	14,480	10,379	808,980	12,783	1,992,509	1,170,746	412	125	.....	.....	287	.....	50
11,251	8,282	39,126	.....	1,044	1,974	122,567	1,831	227,296	102,898	48	20	.....	.....	28	.....	51
14,900	7,009	76,162	.....	6,058	1,073	211,227	2,743	383,200	169,230	65	.....	.....	.....	65	.....	52
33,409	33,009	49,632	73	14,705	4,747	1,306,886	9,112	1,017,989	301,991	205	.....	.....	.....	205	140	53
52,553	79,588	315,143	450	10,549	16,372	629,179	13,726	1,354,669	706,764	1,077	710	49	40	278	56	54
61,125	33,162	264,440	.....	2,183	21,464	4,866,967	116,594	6,039,547	1,055,986	1,791	1,791	.....	.....	245	55	55
114,101	184,847	554,734	4,774	106,862	25,747	2,775,720	82,129	4,842,801	1,984,952	2,774	1,253	30	.....	1,491	266	56
99,690	159,506	448,039	851	96,965	15,991	1,778,824	40,677	3,039,808	1,220,307	1,157	579	8	.....	570	263	57
14,411	25,341	106,695	3,920	9,897	9,756	996,896	41,452	1,802,993	764,645	1,617	674	224	.....	921	3	58
5,500	1,876	130,943	1,500	1,656	3,955	440,538	4,603	718,082	273,841	348	266	28	.....	54	.....	59
91,858	51,066	535,849	8,993	28,722	13,139	859,054	11,801	2,047,704	1,176,849	392	.....	42	.....	350	.....	60
290,551	387,163	873,069	87,071	8,826	27,592	1,876,817	21,732	4,981,581	3,083,032	959	668	25	.....	266	437	61
2,100	3,492	13,863	.....	3,650	575	113,047	1,628	148,665	33,990	80	.....	8	.....	72	.....	62
9,400	2,070	48,915	.....	360	1,159	26,687	6,144	106,307	73,476							

TABLE 38.—DETAIL STATEMENT FOR THE STATE AND FOR CITIES OF 50,000 INHABITANTS OR

INDUSTRY AND CITY.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.										WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.					Capital.
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			Total.	16 and over.		Under 16.				
					Male.	Female.	Average number.	Number, 15th day of—			Male.	Female.	Male.	Female.			
								Maximum month.	Minimum month.								

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

1 Dairymen's, poultrymen's, and apiarists' supplies.	14	162	13	9	21	9	110	Oc ^a	120	Jy	104	120	111	9			\$376,605
2 Druggists' preparations.	15	3,718	5	35	1,057	446	2,175	Ja	2,231	Jy	2,123	2,175	1,143	1,019	11	2	12,797,223
3 Electrical machinery, apparatus, and supplies.	35	1,408	12	80	110	62	1,144	My	1,252	Se	1,026	1,139	810	324	4	1	2,651,519
4 Electroplating.	18	151	22	9	5	2	113	Mh	131	Jy	94	110	103	5	2		77,384
5 Emery and other abrasive wheels.	3	93		6	5	4	78	Ap	91	Se	67	70	51	19			164,783
6 Engines, steam, gas, and water.	48	5,210	17	178	400	188	4,427	My	5,324	Ja	3,332	4,660	4,647	11	2		13,320,820
7 Engraving, steel and copper plate, including plate printing.	12	115	8	5	4	7	91	De	100	My ^a	87	99	75	23	1		106,145
8 Fancy articles, not elsewhere specified.	8	252	4	16	11	9	212	Ap	243	Ne	167	177	97	79	1		241,662
9 Flavoring extracts.	10	54	6	6	9	5	28	Oc	31	Fe ^a	25	28	9	19			110,790
10 Flour-mill and gristmill products.	427	2,353	515	174	194	100	1,370	Oc	1,410	Je	1,306	1,432	1,392	33	7		10,049,641
11 Food preparations, not elsewhere specified.	56	2,572	41	64	569	215	1,683	Jy	2,028	Ja	1,327	1,908	1,358	549	1		6,495,414
12 Foundry and machine-shop products.	502	20,714	331	876	1,302	597	17,608					15,979	15,533	426	19	1	49,834,654
13 Boiler shops.	15	664	10	31	50	19	554	Ja	607	No	494	530	530				1,784,352
14 Foundries.	58	5,589	26	131	115	38	5,279	Mh	6,166	No	4,346	4,863	4,659	197	6	1	5,346,425
15 Machine shops.	429	14,461	295	714	1,137	540	11,775	Ap	12,861	No	10,245	10,586	10,344	229	13		42,703,877
16 Fur goods.	35	543	33	33	49	48	11,380	De	609	Ap	231	527	238	282	4	3	1,476,303
17 Furnishing goods, men's.	16	231	13	12	8	11	187	No	220	Ap	164	208	25	183			210,125
18 Furniture.	192	16,447	86	491	764	400	14,706					14,363	13,764	529	61	9	32,900,916
19 Wood, other than rattan and willow.	157	14,875	65	438	661	347	13,364	Fe	14,265	De	12,670	13,225	12,726	430	60	9	30,151,092
20 Rattan, willow, and metal.	12	513	9	12	62	11	419	Mh	507	De	308	212	182	30			952,395
21 Store and office fixtures.	23	1,059	12	41	41	42	923	Se	940	Ja	902	926	856	69	1		1,797,429
22 Gas and electric fixtures.	8	99	7	8	8	10	66	Ja	79	Je	51	77	54	23			112,836
23 Gas, illuminating and heating.	59	3,300	2	161	498	290	2,349	Je	2,591	No	2,157	2,237	2,233	4			49,188,848
24 Gas machines and gas and water meters.	7	197	3	13	24	9	148	Se	156	Mh	141	146	146				277,527
25 Glass, cutting, staining, and ornamenting.	12	153	6	13	6	3	125	Ja	143	De	104	113	104	9			152,274
26 Grease and tallow, not including lubricating greases.	9	138	7	9	8	2	112	Au	118	No	104	105	105				496,140
27 Hair work.	5	25	4	3		6	12	No	16	Au	8	12		12			9,877
28 Hand stamps.	8	34	10	3	1	1	19	Ja ^a	20	Au ^a	18	21	18	2	1		13,794
29 Hardware.	21	843	10	31	39	21	742					735	660	72	3		1,179,215
30 Builders' hardware.	6	249	3	11	16	9	210	Ja ^a	216	Jy ^a	206	210	144	66			566,707
31 All other.	15	594	7	20	23	12	532	Fe	593	Au	458	525	516	6	3		612,533
32 Hats and caps, other than felt, straw, and wool.	5	91	9	1	5	3	73	Au ^a	77	Ja	64	69	51	18			88,595
33 Hosiery and knit goods.	34	3,036	19	92	110	101	2,714	Oc	2,828	Ja	2,616	2,660	649	1,972	10	29	5,295,553
34 Ice, manufactured.	11	512	1	24	29	15	443	Jy	704	Fe	214	461	461				1,408,771
35 Iron and steel, blast furnaces.	12	1,073	31	31	35	16	991	Fe	1,193	No	745	966	966				9,802,954
36 Iron and steel, steel works and rolling mills.	9	811		32	50	11	718	Ap	875	Au	620	634	626	7	1		2,482,433
37 Iron and steel forgings.	11	605	2	19	23	9	552	No	641	Se	484	592	588	4			1,543,144
38 Jewelry.	25	202	26	14	7	12	143	De ^a	151	Jy	137	152	125	13	13	1	245,644
39 Labels and tags.	5	117	1	8	2	8	98	Oc	108	Au	94	99	62	37			156,772
40 Lamps.	5	574	4	11	18	10	531	My	630	De	454	454	403	51			1,216,498
41 Leather goods, not elsewhere specified.	10	205	4	19	7	12	163	Ja	186	De	129	154	90	61	2	1	319,273
42 Leather, tanned, curried, and finished.	23	2,971	2	70	94	32	2,773	Fe	2,855	Oc	2,711	2,726	2,724	1	1		19,002,119
43 Lime.	8	172	6	8	5	3	150	My	204	Fe	85	153	152	1			519,952
44 Liquors, malt.	70	2,593	35	177	255	29	2,097	Je	2,371	Fe	1,894	2,024	1,999	17	8		17,253,699
45 Liquors, vinous.	4	15	5				10	Se	30	Fe ^a	2	16	6		10		77,850
46 Looking-glass and picture frames.	8	297	7	16	13	2	259	No	299	Ja	198	249	169	76	1	3	363,664
47 Lubricating greases.	4	54		7	11	8	28	Mh ^a	30	De	25	25	25				311,785
48 Lumber and timber products.	477	23,106	473	502	526	117	21,483	Fe	24,300	De	17,540	23,567	23,483	35	43		42,163,112
49 Lumber, planing-mill products, not including planing mills connected with sawmills.	217	6,028	181	317	366	220	4,944	Je	5,273	Ja	4,516	4,853	4,757	62	31	3	16,019,667
50 Marble and stone work.	111	691	122	42	47	19	461	Jy	545	Fe	345	466	464	2			1,233,541
51 Mattresses and spring beds.	23	368	26	26	24	15	278	Ap	308	Ja	260	261	216	48			939,096
52 Millinery and lace goods.	13	136	9	7	1	8	111	Mh	163	Au	51	105	22	82			72,318
53 Mineral and soda waters.	120	609	141	29	32	16	391	Oc	490	De	278	420	410	7	3		1,634,370
54 Mirrors, framed and unframed.	8	211	4	8	6	4	189	Ja ^a	193	Au ^a	183	189	189				317,471
55 Models and patterns, not including paper patterns.	29	343	31	27	3	13	269	Au	297	Ja	217	245	229	15	1		195,500
56 Mucilage and paste.	3	11	2				9	Je ^a	12	De ^a	8	9	8	1			4,312
57 Musical instruments and materials, not specified.	14	191	9	6	11	26	139	Fe	162	No	124	141	133	8			293,183
58 Musical instruments, pianos.	12	1,063	2	37	73	26	925	Mh	907	No	853	874	847	27			6,446,110
59 Oil, essential.	53	110	62	7	1	2	33	Au	120	Fe ^a	2	124	124				368,876

¹ Owned power only.

² Includes rented power, other than electric.

MORE, BY INDUSTRIES, AND FOR CITIES OF 10,000 TO 50,000 INHABITANTS: 1914—Continued.

EXPENSES.										Value of products.	Value added by manufacture.	POWER.				
Salaries and wages.			For contract work.	Rent and taxes.		For materials.		Electric horsepower generated in establishments reporting.	Primary horsepower.							
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, including internal revenue and corporation income.	Principal materials.	Fuel and rent of power.		Total.			Steam engines. ¹	Internal combustion engines. ²	Water wheels and motors. ¹	Electric (rented).	

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

\$14,222	\$24,169	\$70,366	\$23,000	\$2,230	\$2,909	\$143,838	\$4,152	\$328,996	\$181,006	282	-----	23	150	109	-----	1
215,735	1,858,023	1,851,666	200	68,829	148,030	5,064,288	65,188	11,738,662	6,609,186	1,800	1,480	17	-----	303	1,579	2
218,363	149,003	656,486	5,409	18,627	19,531	1,695,318	44,230	3,415,500	1,675,952	1,584	126	163	-----	1,295	30	3
9,660	6,198	86,664	50	9,018	647	27,549	10,477	179,615	141,589	362	-----	52	-----	310	-----	4
15,930	9,104	22,961	-----	1,820	2,957	117,205	5,923	225,003	101,875	164	100	-----	-----	64	-----	5
403,551	548,256	3,887,286	91,408	167,493	96,493	5,797,979	163,653	12,369,172	6,407,540	9,082	1,724	559	27	6,752	2,656	6
8,800	7,208	72,015	385	6,392	5,068	35,715	2,571	156,303	118,017	50	-----	-----	-----	50	5	7
28,246	16,141	94,184	-----	5,536	2,862	151,517	4,249	356,902	201,136	200	125	-----	-----	75	-----	8
11,261	9,481	12,297	-----	2,169	1,329	105,130	524	180,837	75,177	6	-----	-----	-----	6	-----	9
236,764	245,665	859,540	7,222	27,322	110,786	23,053,463	245,718	27,381,474	4,082,303	35,321	15,008	2,096	13,369	4,848	931	10
220,305	734,851	1,110,048	9,062	26,374	71,943	6,721,217	317,898	16,005,282	8,966,167	9,760	4,964	50	130	4,616	4,268	11
1,897,527	1,976,981	12,444,035	137,128	178,011	411,407	14,703,132	1,095,401	39,423,783	23,630,250	35,529	13,984	1,606	405	19,534	6,949	12
80,004	93,525	376,287	29,869	2,056	24,288	924,639	34,427	1,554,692	595,626	1,740	1,328	35	-----	377	155	13
274,853	141,014	3,561,963	17,309	39,968	57,053	2,896,862	438,400	8,696,459	5,451,107	6,985	3,089	30	35	3,831	1,597	14
1,642,670	1,742,412	8,206,785	89,950	135,987	330,066	10,971,631	622,484	29,177,632	17,583,517	26,894	9,567	1,541	370	15,326	5,197	15
63,735	95,622	182,648	5,198	34,729	8,137	894,858	13,097	1,679,920	861,965	503	275	-----	5	223	16	16
16,237	7,964	67,140	5,023	7,191	1,843	276,969	2,322	419,677	140,386	104	12	6	-----	86	-----	17
1,255,195	1,286,172	8,559,524	233,811	59,711	345,345	12,127,961	391,476	30,184,542	17,665,106	25,404	21,749	119	510	3,028	3,856	18
1,133,749	1,140,628	7,776,716	217,977	50,298	323,393	10,844,652	350,700	27,037,615	15,842,163	23,043	19,894	71	385	2,793	3,322	19
38,486	66,565	251,134	-----	1,500	5,799	424,966	16,213	1,081,409	640,200	1,954	1,575	48	125	206	334	21
82,960	78,979	521,674	15,834	7,913	16,153	858,313	24,563	2,065,618	1,182,742	69	-----	-----	-----	69	-----	22
10,424	17,522	40,964	-----	4,996	666	141,109	2,246	271,772	128,417	-----	-----	-----	-----	-----	-----	-----
232,790	512,846	1,584,126	19,424	2,004	462,449	1,029,680	2,326,514	10,440,641	7,084,447	34,935	84,000	308	-----	627	-----	23
23,488	64,318	113,450	3,963	3,300	3,864	124,478	4,461	443,853	314,914	118	-----	12	-----	106	-----	24
18,729	9,418	88,098	60	6,480	2,089	157,709	3,226	291,062	130,127	127	25	-----	-----	102	10	25
16,296	9,305	83,042	-----	785	2,220	214,124	26,006	425,003	184,873	466	285	4	-----	177	70	26
2,800	2,500	5,550	-----	3,871	85	4,858	161	25,928	20,909	1	-----	-----	-----	1	-----	27
2,029	1,049	13,393	33	3,270	113	14,261	104	46,668	32,213	11	-----	-----	-----	11	-----	28
71,692	52,369	439,794	1,795	12,115	12,242	622,331	27,191	1,591,385	941,923	879	240	44	-----	595	-----	29
21,982	28,732	122,651	-----	1,599	5,999	175,391	4,685	549,237	369,161	283	60	10	-----	213	-----	30
49,910	23,014	317,143	1,795	10,555	6,342	446,940	22,446	1,042,148	572,762	596	180	34	-----	382	-----	31
960	15,600	49,365	-----	5,650	465	105,456	1,435	216,994	110,103	10	-----	-----	-----	10	-----	32
187,799	136,105	1,096,335	4,515	13,165	51,432	2,537,426	72,999	5,232,985	2,622,550	3,373	1,431	770	370	802	422	33
30,048	29,215	369,823	265	180	11,153	39,575	97,771	764,956	636,629	4,433	4,035	-----	-----	2,123	88	34
116,018	41,851	781,852	-----	121,186	121,186	2,339,237	1,546,342	5,450,063	1,573,484	14,015	13,495	640	-----	3,090	-----	35
79,916	79,439	497,999	-----	427	16,379	730,895	140,046	1,716,351	845,410	4,688	2,900	-----	-----	1,788	339	36
46,102	26,413	476,390	2,360	4,169	15,800	707,997	98,870	1,492,842	685,975	1,532	675	-----	-----	857	368	37
19,090	11,868	106,158	3,066	14,160	1,720	156,164	2,052	407,286	249,070	64	-----	-----	-----	64	-----	38
12,140	11,724	52,366	4,670	2,900	1,117	78,529	2,523	203,470	122,418	56	-----	-----	-----	47	-----	39
48,906	61,892	493,626	5,000	780	13,570	779,097	13,141	1,822,593	1,030,355	924	280	-----	-----	644	-----	40
46,072	20,989	77,761	-----	5,100	3,049	442,116	2,880	684,492	219,496	156	-----	-----	-----	120	-----	41
267,499	154,900	1,733,861	2,714	1,200	196,615	20,691,334	290,913	25,803,573	4,521,326	6,787	5,680	25	-----	1,082	2,622	42
13,500	5,630	87,823	-----	-----	6,693	59,161	72,451	317,724	186,112	653	535	6	-----	112	-----	43
489,908	307,018	1,702,740	13,104	3,100	2,180,989	4,004,023	324,005	15,041,247	10,713,219	13,039	10,074	646	3	2,316	388	44
-----	-----	2,500	-----	262	-----	2,805	286	11,060	7,969	5	-----	-----	-----	5	-----	45
35,655	18,808	126,366	-----	3,330	4,483	188,849	5,000	456,328	292,479	264	250	-----	-----	14	-----	46
12,935	18,208	18,566	-----	224	2,212	192,641	4,737	300,949	163,571	309	148	28	-----	133	-----	47
937,940	514,164	11,148,312	1,572,305	22,857	920,497	13,878,808	229,851	33,873,367	19,764,708	79,422	76,207	672	978	1,565	5,542	48
583,968	449,663	3,002,386	22,361	35,375	173,648	12,040,383	167,816	19,767,965	7,559,766	25,442	20,969	698	315	3,560	1,539	49
53,610	53,995	390,448	27,151	10,251	10,397	612,455	24,359	1,561,481	924,667	1,644	405	136	-----	1,103	-----	50
40,370	83,630	161,886	8,325	4,645	9,752	599,803	9,241	877,136	358,092	517	200	-----	-----	317	-----	51
10,182	5,513	65,463	601	9,312	979	104,146	942	248,790	143,702	16	-----	-----	-----	16	-----	52
49,094	40,779	245,999	1,303	27,659	15,336	802,835	15,732	1,695,666	877,099	814	275	155	12	371	118	53
27,730	10,473	114,003	-----	4,411	3,151	335,529	6,046	540,741	199,166	442	310	40	40	52	25	54
35,563	11,973	235,008	300	10,794	2,069	53,904	7,247	431,528	365,377	267	-----	-----	-----	267	-----	55
-----	-----	-----	-----	-----	64	6,500	56	17,300	10,744	1	-----	-----	-----	1	-----	56
15,240	27,891	95,115	40	5,150	2,854	43,479	3,966	328,702	281,257	76	-----	-----	-----	76	-----	57
118,132	107,848	587,466	188	1,960	20,094	1,104,169	24,290	2,415,999	1,287,540	1,481	1,430	-----	-----	51	164	58
16,800	3,400	17,277	-----	-----	2,711	220,628	4,994	491,842	260,220	619	404	215	-----	-----	-----	59

*Same number reported for one or more other months.

MANUFACTURES.

TABLE 38.—DETAIL STATEMENT FOR THE STATE AND FOR CITIES OF 50,000 INHABITANTS OR

INDUSTRY AND CITY.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.							WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.				Capital.		
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			16 and over.		Under 16.			
					Male.	Female.	Average number.	Number, 15th day of—		Total.	Male.	Female.		Male.	Female.
								Maximum month.	Minimum month.						

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

1	Optical goods.....	9	195	5	7	22	20	141	Fe	164	Se	124	129	61	61	5	2	\$390,167
2	Paints.....	21	1,108	3	56	248	108	695	Ap	782	De	554	637	587	68	1	1	7,223,501
3	Paper and wood pulp.....	37	6,451	6	144	188	62	6,051	Se	4,234	Ja	1,637	6,146	5,203	942	1	1	22,953,000
4	Paper exclusively.....	28	4,529	6	100	137	52	4,234	Oc	4,299	Se	4,176	4,309	3,465	843	1	1	15,161,658
5	Paper and pulp.....	9	1,922	1	44	51	10	1,817	Oc	1,916	Ja	1,637	1,837	1,738	99	1	1	7,791,342
6	Patent medicines and compounds.....	102	1,690	76	108	213	164	1,029	Mh	1,124	De	945	572	435	75	5	7	3,847,798
7	Paving materials.....	9	607	4	14	19	5	570	Au	848	Ja	318	716	716	1	1	1	4,253,885
8	Perfumery and cosmetics.....	25	301	17	26	34	59	165	De	205	Jy	146	206	65	139	1	1	528,315
9	Photo-engraving.....	12	174	7	13	18	7	129	Ap	138	Ja	123	133	127	4	2	2	132,485
10	Plumbers' supplies, not elsewhere specified.....	13	840	8	31	65	27	709	Oc	770	De	631	664	643	21	1	1	2,004,085
11	Pottery.....	6	375	5	11	12	8	339	Mh	483	Au	234	384	270	114	1	1	601,438
12	Printing and publishing, book and job.....	404	5,189	377	307	418	227	3,860					3,887	2,880	950	51	6	6,860,748
13	Job printing.....	377	4,769	358	275	259	187	3,690	Mh	3,805	Au	3,549	3,718	2,746	915	51	6	6,264,222
14	Book publishing and printing.....	7	83	6	8	7	8	54	My	72	Ja	45	47	29	18	1	1	177,029
15	Book publishing without printing.....	10	195	5	13	147	29	2	Mh	11	Ja	0	11	8	3	3	3	173,428
16	Linotype work and typesetting.....	10	141	8	11	5	3	114	Oc	121	Mh	107	111	97	14	1	1	246,069
17	Printing and publishing, newspapers and periodicals.....	660	6,166	767	356	1,293	480	3,270					3,611	3,011	522	34	44	8,597,065
18	Printing and publishing.....	47	2,312	19	100	829	164	1,200	De	1,250	Ja	1,166	1,505	1,414	89	2	2	3,881,962
19	Printing, publishing, and job printing.....	506	3,338	500	201	378	225	2,034	My	2,061	Au	2,004	2,069	1,568	426	31	44	4,458,635
20	Publishing without printing.....	107	516	248	55	86	91	36	My	37	Ja	34	37	29	7	1	1	256,468
21	Printing materials.....	6	12	4	1	1	1	6	De	8	Ja	5	8	8	1	1	1	23,701
22	Pumps, not including power pumps.....	8	47	6	1	2	2	36	Je	38	Ja	33	35	35	1	1	1	103,579
23	Pumps, steam and other power.....	4	293	15	27	5	5	246	Se	267	Ja	220	237	237	1	1	1	788,822
24	Refrigerators.....	10	1,681	5	43	51	21	1,561	Mh	1,840	Se	915	1,650	1,603	3	44	44	3,272,082
25	Saddlery and harness.....	81	467	89	16	29	5	328	My	347	Fe	315	348	327	21	1	1	1,082,509
26	Salt.....	15	1,595	52	62	47	1,434	Oc	1,621	Fe	1,325	1,421	1,325	96	1	1	1	8,061,144
27	Sand-lime brick.....	12	163	18	4	5	136	Au	176	De	86	186	185	65	5	1	1	501,202
28	Sausage.....	19	105	23	2	5	3	69	Oc	77	Ap	65	70	65	1	1	1	139,585
29	Saws.....	11	88	17	5	14	6	46	Ja	55	Jy	42	46	30	15	1	1	133,614
30	Scales and balances.....	3	307	9	7	15	276	Mh	294	Jy	240	268	268	268	1	1	1	616,397
31	Shipbuilding, iron and steel.....	6	1,010	5	27	36	7	935	My	1,340	De	236	350	350	1	1	1	5,858,876
32	Shipbuilding, wooden, including boat building.....	56	420	56	14	15	9	326					300	297	2	1	1	830,900
33	New vessels and repair work.....	13	193	16	3	6	168	My	250	De	90	149	148	148	1	1	1	507,123
34	Small boats.....	43	227	40	11	9	9	158	Ap	204	De	105	151	149	2	1	1	323,777
35	Shirts.....	16	490	10	19	29	21	411	Mh	456	Au	305	455	52	403	4	4	308,907
36	Show cases.....	6	488	22	37	10	410	Ap	438	Ja	386	408	408	404	4	1	1	927,689
37	Signs and advertising novelties.....	18	222	19	19	21	23	140	Jy	158	Fe	119	151	122	29	1	1	593,242
38	Slaughtering and meat packing.....	17	1,313	11	30	131	34	1,112	De	1,174	Ap	1,022	1,243	1,241	2	2	2	4,252,977
39	Soap.....	11	106	8	6	9	5	73	Mh	83	Ja	71	81	68	11	2	2	648,557
40	Sporting and athletic goods.....	15	303	15	13	10	9	252	Mh	278	Se	208	247	195	52	1	1	532,042
41	Springs, steel, car and carriage, not made in steel works or rolling mills.....	6	680	21	12	12	9	638	Se	758	Jy	493	710	705	5	1	1	1,073,321
42	Stamped and enameled ware, not elsewhere specified.....	14	990	38	27	17	908	Ap	994	No	701	816	751	61	4	1	1	1,510,186
43	Statuary and art goods.....	4	56	7	6	1	1	41	Je	45	Ap	36	38	38	1	1	1	30,025
44	Steam fittings and steam and hot-water heating apparatus.....	14	1,244	9	18	97	25	1,095	Mh	1,272	No	927	1,003	985	18	1	1	2,272,775
45	Steam packing.....	3	54	2	6	9	2	35	Se	52	Je	23	50	50	1	1	1	47,646
46	Stereotyping and electrotyping.....	4	87	5	7	5	70	De	77	Ja	60	70	69	69	1	1	1	86,253
47	Stoves and hot-air furnaces.....	22	4,528	9	106	489	92	3,832					3,887	3,850	7	30	30	11,460,120
48	Stoves and ranges.....	8	3,668	75	361	62	3,170	Mh	3,615	De	2,227	3,242	3,205	7	30	30	30	9,450,259
49	Hot-air furnaces and fireless cookers.....	14	860	9	31	128	30	662	Oc	696	Ja	591	645	645	1	1	1	2,000,861
50	Stoves, gas and oil.....	5	292	20	21	9	242	Mh	285	No	208	242	242	242	1	1	1	975,349
51	Structural ironwork, not made in steel works or rolling mills.....	31	1,727	10	87	220	33	1,371	Au	1,617	De	1,149	1,371	1,363	8	1	1	3,864,329
52	Sugar, beet.....	10	1,762	88	300	48	1,326	Oc	4,585	Mh	249	4,511	4,490	418	285	1	1	26,488,262
53	Tinware, not elsewhere specified.....	8	754	3	25	26	13	717	Mh	917	No	557	703	703	1	1	1	1,791,893
54	Tobacco, chewing and smoking, and snuff.....	17	2,116	13	22	277	24	1,780	My	1,869	No	1,702	1,756	470	1,185	16	85	4,820,010
55	Tobacco, cigars.....	609	8,308	663	117	168	65	7,295	Se	7,468	Ap	6,743	7,863	1,547	5,993	23	300	5,204,665
56	Tools, not elsewhere specified.....	24	448	19	24	18	15	372	Mh	407	No	336	375	364	5	6	6	947,295
57	Toys and games.....	7	289	5	12	15	6	251	Oc	303	Fe	224	275	226	47	2	2	355,112
58	Trunks and valises.....	12	223	13	12	9	11	184	Ap	207	De	163	163	123	32	6	2	412,256
59	Umbrellas and canes.....	5	27	3	6	1	1	17	(^c)	17	(^c)	17	17	5	12	1	1	18,306
60	Vinegar and cider.....	66	179	73	14	1	4	87	No	84	Ja	27	190	177	13	1	1	601,398
61	Vinegar.....	13	70	13	9	1	2	45	No	84	Ja	27	72	60	12	1	1	417,973
62	Cider.....	53	109	60	5	2	42	42	No	147	My	8	118	117	1	1	1	182,425

¹ Owned power only.

² Includes rented power, other than electric.

³ Same number reported for one or more other months.

MORE, BY INDUSTRIES, AND FOR CITIES OF 10,000 TO 50,000 INHABITANTS: 1914—Continued.

EXPENSES.										Value of products.	Value added by manufacture.	POWER.				
Salaries and wages.			For contract work.	Rent and taxes.		For materials.		Primary horsepower.								
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, including internal revenue and corporation income.	Principal materials.	Fuel and rent of power.	Total.	Steam engines. ¹			Internal-combustion engines. ²	Water wheels and motors. ¹	Electric (rented).	Electric horsepower generated in establishments reporting.	

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

\$13,300	\$18,670	\$76,201	-----	\$4,893	\$2,161	\$126,397	\$2,577	\$288,234	\$159,280	84	50	-----	-----	34	-----	1
222,684	532,204	459,897	-----	17,435	54,239	3,271,453	61,302	6,110,200	2,777,385	2,543	1,544	206	-----	793	1,076	2
448,815	238,455	3,559,470	\$42,214	18,037	241,293	13,077,332	1,407,613	22,049,990	7,595,045	62,528	48,187	1,225	11,479	1,637	14,922	3
319,932	166,091	2,468,091	42,214	18,037	151,309	10,468,051	1,034,102	16,999,133	5,496,983	41,058	33,207	925	3,909	927	10,364	4
128,883	72,364	1,091,379	-----	-----	89,984	2,609,281	433,511	5,050,852	2,008,060	21,470	12,890	300	7,570	710	4,558	5
262,741	367,171	558,016	1,330	29,743	39,192	1,452,537	23,317	3,871,014	2,395,160	821	574	30	-----	217	365	6
39,196	22,130	442,817	9,286	1,200	23,034	293,037	90,861	1,225,604	847,706	9,016	4,221	169	-----	4,656	815	7
55,506	78,736	84,519	-----	13,915	7,337	333,418	3,808	824,096	426,870	73	30	-----	-----	43	-----	8
20,169	24,333	131,936	17,548	12,059	1,459	37,440	3,499	335,429	297,490	86	-----	-----	-----	36	-----	9
70,377	65,010	464,456	380	2,902	13,773	917,038	36,826	1,914,139	960,275	1,391	1,030	-----	-----	361	578	10
23,300	23,538	193,606	-----	-----	1,337	109,994	15,991	434,841	308,856	319	40	-----	-----	279	10	11
608,350	630,071	2,621,231	127,170	213,687	66,686	2,976,893	106,896	9,380,560	6,296,771	6,679	404	25	2	6,153	370	12
554,049	413,653	2,475,871	55,418	200,999	60,865	2,909,244	99,623	8,663,600	5,654,733	3,971	464	25	2	3,480	370	13
12,256	10,769	31,459	1,580	2,160	1,319	38,789	2,217	145,392	104,356	48	30	-----	-----	18	-----	14
26,856	194,657	609	69,310	4,844	3,422	13,030	-----	332,042	319,012	-----	-----	-----	-----	-----	-----	15
15,189	10,987	113,301	862	5,684	1,080	15,830	5,056	239,556	218,870	2,660	-----	-----	-----	2,660	-----	16
665,230	1,469,600	2,333,351	426,948	172,888	93,530	3,215,882	127,677	12,290,227	8,946,668	5,271	178	683	38	4,372	63	17
211,501	898,897	1,076,969	6,948	41,898	49,002	1,842,870	55,719	6,271,929	4,373,340	2,412	12	9	-----	2,391	-----	18
341,527	443,725	1,229,365	70,119	117,023	41,917	1,302,737	70,630	5,082,201	3,708,834	2,821	166	674	38	1,943	63	19
82,202	126,978	26,987	349,881	13,967	1,711	70,275	1,328	936,097	864,494	38	-----	-----	-----	38	-----	20
2,446	80	5,800	339	2,370	62	5,546	28,313	28,199	22,340	12	-----	-----	-----	12	-----	21
1,500	4,000	20,160	170	112	588	39,145	1,019	80,210	40,046	63	-----	62	-----	1	-----	22
34,371	27,226	196,059	152	772	12,618	190,963	9,847	637,251	436,441	363	325	-----	-----	38	70	23
123,210	68,862	928,805	-----	240	31,807	1,817,650	24,136	3,672,499	1,830,713	2,800	2,700	2	-----	98	503	24
19,466	27,738	197,044	19,256	21,193	10,048	786,729	8,197	1,328,575	533,649	212	-----	5	-----	207	-----	25
118,939	167,450	990,738	19,965	42,438	1,398,913	663,207	6,820	4,420,772	2,353,652	8,310	7,156	-----	-----	1,160	699	26
18,890	5,695	86,557	3,180	250	5,811	74,799	20,609	264,854	169,446	1,392	1,392	-----	-----	-----	-----	27
3,120	6,788	45,200	-----	3,208	1,019	461,850	7,483	601,178	131,845	219	98	8	-----	113	-----	28
8,367	21,275	30,428	35	3,229	585	24,494	3,021	126,865	99,350	144	70	10	-----	64	-----	29
21,840	14,647	200,415	-----	3,100	4,183	201,055	6,039	612,022	404,328	298	100	-----	-----	193	-----	30
63,969	39,219	810,473	-----	37,210	946,969	60,412	60,412	2,261,069	1,253,767	4,617	4,525	-----	-----	92	2,241	31
20,501	17,524	229,043	5,693	5,592	7,343	242,957	8,484	561,488	310,047	2,948	2,373	298	16	261	-----	32
3,948	5,696	111,824	5,246	432	5,192	75,485	2,743	204,371	126,143	2,433	2,299	37	-----	106	-----	33
16,643	11,828	117,219	447	5,160	2,151	167,472	5,741	357,117	183,004	515	83	261	16	155	-----	34
33,981	35,301	164,881	23,215	17,559	2,652	222,327	8,847	571,255	344,575	136	-----	-----	-----	136	-----	35
41,070	62,008	272,071	7,695	451,865	10,850	451,865	10,850	1,034,635	571,920	845	465	-----	-----	380	-----	36
37,502	37,249	94,909	48,975	4,447	4,152	175,598	3,327	596,058	387,133	59	-----	-----	-----	59	-----	37
103,166	157,739	769,514	-----	2,700	25,051	18,749,135	69,739	20,065,737	1,851,872	3,056	2,545	4	-----	467	820	38
12,900	15,140	49,279	-----	1,590	5,453	354,450	6,040	522,446	159,856	245	203	-----	-----	42	-----	39
17,548	17,501	127,552	8,500	6,708	4,863	134,485	8,564	482,047	338,998	749	512	12	-----	225	1	40
52,715	20,134	471,873	-----	15,298	1,116,063	60,652	60,652	2,174,957	992,242	1,000	625	30	-----	345	357	41
84,818	41,663	534,273	-----	16,740	17,524	869,872	42,939	1,843,049	930,238	1,918	1,100	15	-----	803	400	42
7,920	612	44,387	500	2,160	180	4,629	315	76,805	71,951	5	-----	-----	-----	5	-----	43
59,360	119,985	795,982	430	4,625	15,646	1,049,769	79,923	2,915,323	1,785,631	1,232	1,128	8	-----	96	483	44
8,222	7,904	24,728	1,690	2,845	169	44,112	355	99,245	54,778	29	-----	-----	-----	29	-----	45
11,500	11,921	58,759	877	5,479	535	35,782	4,405	161,418	121,231	177	-----	-----	-----	177	-----	46
396,351	715,800	2,794,524	3,573	5,280	96,310	3,043,472	126,041	9,658,368	6,488,855	5,441	4,670	144	33	594	1,560	47
305,725	548,360	2,300,451	-----	87,214	87,214	2,074,585	104,228	7,500,285	5,321,472	4,789	4,395	132	-----	262	1,485	48
90,626	167,440	494,073	3,573	5,280	9,066	968,887	21,813	2,158,083	1,167,383	652	275	12	33	332	75	49
41,829	55,252	193,539	-----	1,515	8,059	532,593	12,515	1,098,371	553,263	475	-----	-----	-----	475	-----	50
205,044	275,042	1,038,744	5,983	13,156	34,200	2,143,854	62,722	4,918,366	2,711,790	3,257	870	29	-----	2,358	836	51
170,642	304,023	931,667	33,046	-----	139,223	5,761,344	483,041	11,023,058	4,778,673	10,306	10,255	41	10	-----	696	52
35,869	41,289	365,754	-----	360	12,195	1,002,940	20,791	1,759,382	735,651	479	304	75	-----	10	152	53
115,757	319,308	699,728	-----	21,514	2,341,142	3,465,215	35,093	8,545,154	5,044,846	1,082	707	14	-----	361	459	54
145,854	280,274	3,079,464	1,251	107,553	1,270,455	5,436,451	26,593	12,121,862	6,658,818	4,061	-----	81	-----	3,980	1	55
41,515	37,677	271,135	3,700	12,624	10,434	337,629	16,137	859,144	505,378	961	245	125	-----	591	-----	56
30,660	17,000	149,485	8,649	3,669	2,104	240,644	5,079	529,373	283,650	198	150	20	-----	28	30	57
24,359	12,034	104,122	-----	8,780	5,038	169,670	3,504	482,487	259,313	94	48	-----	-----	46	17	58
6,400	720	7,229	-----	7,230	187	27,019	132	66,767	39,618	6	-----	-----	-----	6	-----	59
18,175	2,896	50,404	4,335	1,707	5,855	241,932	10,546	485,811	232,783	1,349	896	235	20	198	7	60
13,200	2,216	29,641	2,203	910	4,268	150,810	4,367	303,759	148,582	323	191	22	-----	110	7	61
4,975	680	20,763	2,132	797	1,587	91,172	6,179	181,552	84,201	1,026	705	213	20	88	-----	62

* None reported for one or more other months.

* Same number reported throughout the year.

TABLE 38.—DETAIL STATEMENT FOR THE STATE AND FOR CITIES OF 50,000 INHABITANTS OR

INDUSTRY AND CITY.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.								WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.				Capital.
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			16 and over.		Under 16.		
					Male.	Female.	Average number.	Number, 15th day of—		Male.	Female.	Male.	Female.	
								Maximum month.	Minimum month.					

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

1	Wall plaster.....	13	776	2	25	87	31	631	Ap	718	De	544	544	516	28			\$3,579,337
2	Window shades and fixtures.....	8	812	1	16	73	20	702	Ja	754	Se	680	685	508	177			1,321,221
3	Wirework, including wire rope and cable, not elsewhere specified.	33	1,576	16	67	128	51	1,314					1,272	1,178	85	9		5,058,621
4	Wire rope, cable, and woven-wire fencing.	11	822	2	26	95	30	669	Ap	775	Jy	525	657	656	1			3,948,419
5	All other.....	22	754	14	41	33	21	645	Mh	692	De	564	615	522	84	9		1,110,202
6	Wood distillation.....	10	709		31	30	3	615	Au	702	Jy	609	676	676				3,164,001
7	Wood, turned and carved.....	45	661	39	26	9	11	579	Mh	696	De	474	591	571	17	3		1,013,124
8	Wooden goods, not elsewhere specified	32	1,912	24	47	75	19	1,747	Fe	1,954	My	1,591	1,766	1,201	540	21	4	2,680,405
9	Woolen goods.....	9	509	6	10	11	5	477	De	520	Au	448	523	317	211			1,304,476
10	All other industries*.....	323	22,997	240	717	3,474	1,178	17,383					17,114	14,257	2,788	38	36	71,133,961

* All other industries embrace—	Canning and preserving, fish.....	1					3		Coke, not including gas-house coke.....	1								Furs, dressed.....	3
Aluminum ware.....	Card cutting and designing.....	1					1		Dental goods.....	2								Glass.....	2
Ammunition.....	Cars, steam-railroad, not including operations of railroad companies.....	1					2		Dyestuffs and extracts.....	1								Gloves and mittens, leather.....	3
Artificial flowers.....	Cash registers and calculating machines.....	1					6		Enameling.....	3								Glucose and starch.....	1
Artists' materials.....	Charcoal, not including production in the lumber and wood distillation industries.....	2					2		Engraving and desinking.....	7								Gold and silver, reducing and refining, not from the ore.....	2
Babbit metal.....	China decorating, not including that done in potteries.....	2					2		Engraving, wood.....	3								Graphite, ground and refined.....	1
Bags, other than paper.....	Cleansing and polishing preparations.....	10					10		Envelopes.....	3								Grindstones.....	2
Bags, paper, not including bags made in paper mills.....	Clocks.....	2					2		Explosives.....	1								Hats, fur-felt.....	1
Baking powders and yeast.....	Cloth, sponging and refinishing.....	2					2		Feathers and plumes.....	1								Hats, straw.....	1
Belted, leather.....	Clothing, horse.....	2					2		Fertilizers.....	3								Horseshoes, not made in steel works or rolling mills.....	1
Belted, woven.....									Files.....	2								House-furnishing goods, not elsewhere specified.....	10
Billiard tables and materials.....									Firearms.....	2								Ink, printing.....	2
Bluing.....									Flags and banners.....	2								Ink, writing.....	3
Boot and shoe findings.....									Flax and hemp, dressed.....	1									
Buttons.....									Fondry supplies.....	3									

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

	2,036	120,075	1,540	3,725	11,208	3,999	99,603	Mh	105,164	De	89,819	96,776	79,684	16,127	452	513	\$263,493,334
1	DETROIT—All industries.....																
2	Artificial stone products.....	16	101	9	11	4	77	Je	96	Fe	64	79	78		1		138,527
3	Automobile bodies and parts.....	90	14,270	30	369	601	220	Ap	14,225	De	10,923	12,073	11,726	326	19	2	21,103,624
4	Automobiles.....	32	23,640	2	610	1,968	671	Mh	22,336	Jy	17,205	19,935	19,675	226	33	1	61,726,935
5	Automobile repairing.....	7	50	9	5	3	33	Ap	52	Au	26	36	36				57,223
6	Awning, tents, and sails.....	8	171	5	20	27	114	Je	159	De	85	82	57	25			139,862
7	Bookbinding and blank-book making	9	145	5	8	3	6	Mh	155	No	96	106	45	55	3	3	110,858
8	Boots and shoes.....	6	1,053	4	16	29	44	Au	1,071	My	802	905	552	338	0	6	1,246,772
9	Boxes, cigar.....	4	271	6	4	3	2	Se	263	My	249	253	68	155	10	20	154,021
10	Boxes, fancy and paper.....	11	400	10	16	10	12	My	365	Se	342	366	109	235	6	16	439,121
11	Boxes, wooden packing.....	10	406	3	21	5	8	De	394	Fe	338	415	387		23		916,191
12	Brass, bronze, and copper products..	38	4,296	16	105	208	87	Mh	4,133	De	3,607	3,684	3,636	66	77	5	9,127,523
13	Bread and bakery products.....	275	2,416	302	45	168	51	Je	1,850			1,887	1,535	340	0	3	4,225,767
14	Biscuits and crackers.....	7	359	4	13	65	10	Je	310	Ap	234	260	166	94			1,002,651
15	All other.....	268	2,057	298	32	103	41	Oc	1,620	Fe	1,532	1,627	1,369	246	9	3	3,223,116
16	Brick, building.....	4	91	6	3		82	Au	134	De	39	94	94				92,901
17	Brooms, from broom corn.....	4	53	6		1	1	(*)	45	(*)	45	45	44	1			65,038
18	Butter.....	5	80	1	8	7	7	Je	62	No	50	54	54				260,321
19	Carriages and wagons and materials.	27	318	37	11	8	7	Au	279	Ja	233	265	251	14			511,377
20	Chemicals.....	7	1,672		36	135	12	Ja	1,613	De	1,387	1,362	1,332	27	1	2	9,785,510
21	Cleansing and polishing preparations.	7	21	6	4	5	1	Se	7	Je	3	6	5	1			12,741
22	Clothing, men's.....	13	1,860	11	23	110	79	Fe	1,938	Jy	1,425	1,670	153	1,517			2,469,233
23	Clothing, women's.....	10	1,123	14	15	18	6	Ja	1,856	Jy	524	873	75	792	2	4	767,292
24	Shirt waists, dresses, and wrap-pers.	11	1,047	6	14	15	6	Ja	1,856	Jy	524	813	66	741	2	4	720,552
25	All other.....	8	76	8	1	3		Jy	69	De	54	60	9	51			46,740
26	Coffee, roasting and grinding.....	5	81		7	28	6	De	42	Ja	38	42	29	13			338,172
27	Coffins, burial cases, and undertakers' goods.	7	134	12	4	14	2	Jy	105	Oc	100	100	78	20	1	1	160,825
28	Confectionery.....	32	565	33	22	28	22	De	518	Ja	427	513	190	305	1	17	675,266
29	Cooperage.....	5	69	6	1		1	Je	73	My	51	62	82				129,153
30	Copper, tin, and sheet-iron products.	68	2,231	67	92	81	34	Ap	2,173	De	1,639	1,840	1,531	304	5		3,467,555
31	Cutlery and tools, not elsewhere specified.	17	397	13	25	17	12	Jy	348	No	317	330	322	2	6		782,005
32	Electrical machinery, apparatus, and supplies.	20	773	5	53	80	44	My	655	Fe	532	589	402	182	4	1	1,845,481
33	Electroplating.....	10	110	13	6	4	2	Se	95	Ja	74	85	80	3	2		52,711
34	Emery and other abrasive wheels....	3	93		6	5	4	Ap	91	Se	67	70	51	19			164,783
35	Engines, steam, gas, and water.....	14	2,707	4	76	250	74	Ap	2,653	Ja	1,538	2,658	2,645	11	2		5,256,373
36	Food preparations, not elsewhere specified.	13	243	10	9	30	4	Oc	185	Au	176	195	134	61			616,147

* Owned power only.

* Includes rented power, other than electric.

MORE, BY INDUSTRIES, AND FOR CITIES OF 10,000 TO 50,000 INHABITANTS: 1914—Continued.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.				
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.				Electric horsepower generated in establishments reporting.
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, including internal revenue and corporation income.	Principal materials.	Fuel and rent of power.			Total.	Steam engines. ¹	Internal combustion engines. ²	Water wheels and motors. ¹		Electric (rented).

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

\$60,570	\$145,924	\$421,220	\$15,000	\$2,520	\$19,444	\$592,187	\$150,742	\$2,073,741	\$1,330,812	4,295	1,725	8	2,562	290	1	
63,176	64,252	205,374	923	7,810	10,362	969,937	13,545	1,754,750	771,268	1,149	985	.....	164	10	2	
128,839	207,150	788,227	2,968	14,406	44,890	3,864,574	53,558	5,891,274	1,973,142	2,269	1,078	.....	1,184	530	3	
57,192	152,585	429,446	.....	3,874	31,587	3,271,098	29,820	4,474,288	1,173,370	1,599	818	.....	781	345	4	
71,647	54,565	358,781	2,968	10,532	13,303	593,476	23,738	1,416,986	799,772	670	280	.....	403	185	5	
101,475	31,917	414,721	18,297	8,798	43,268	1,354,680	353,089	2,678,151	970,382	2,644	1,815	133	30	666	1,271	6
46,013	10,417	317,731	300	4,421	8,631	323,967	15,119	949,751	610,665	2,901	2,550	12	20	319	188	7
113,090	85,896	780,655	81,650	1,361	31,930	1,607,349	10,677	3,119,971	1,501,945	6,968	6,689	106	25	148	83	8
20,725	14,456	229,943	.....	.....	.....	758,893	33,844	1,215,467	422,730	1,311	800	41	25	445	75	9
1,994,576	5,196,809	11,207,975	736,780	233,980	1,747,405	52,810,242	2,949,803	92,944,064	37,178,009	47,686	33,494	490	800	12,902	15,820	10

Instruments, professional and scientific.....	8	Musical instruments, organs.....	3	Regalia and society badges and emblems.....	1	Suspenders, garters, and elastic woven goods.....	4
Iron and steel, bolts, nuts, washers, and rivets.....	3	Musical instruments, piano materials.....	2	Roofing materials.....	5	Type founding.....	1
Iron and steel, doors and shutters.....	2	Needles, pins, and books and eyes.....	2	Rubber goods, not elsewhere specified.....	6	Typewriters.....	1
Lasts.....	1	Oil, not elsewhere specified.....	1	Rules, ivory and wood.....	2	Upholstering materials, not elsewhere specified.....	7
Lead, bar, pipe, and sheet.....	1	Oilcloth and linoleum, floor.....	1	Screws, machine.....	4	Varnishes.....	5
Linen goods.....	1	Paper goods, not elsewhere specified.....	11	Sewing machines and attachments.....	1	Washing machines and clothes wringers.....	6
Liquors, distilled.....	1	Paper patterns.....	1	Silk goods, including throwsters.....	2	Waste.....	3
Lithographing.....	6	Pens, fountain and stylographic.....	1	Smelting and refining, copper.....	4	Watch cases.....	1
Malt.....	3	Pens, steel.....	1	Smelting and refining, not from the ore.....	4	Whips.....	1
Matches.....	1	Photographic apparatus.....	1	Soda-water apparatus.....	1	Windmills.....	1
Mats and matting, from cocoa fiber and grass.....	1	Photographic materials.....	2	Stationary goods, not elsewhere specified.....	4	Window and doorscreens and weather strips.....	13
Minerals and earths, ground.....	1	Pickles, preserves, and sauces.....	39	Stencils and brands.....	2	Wood preserving.....	1
Motorcycles, bicycles, and parts.....	4	Pipes, tobacco.....	1	Surgical appliances.....	7		
		Printing and publishing, music.....	3				
		Pulp, from fiber other than wood.....	1				
		Pulp wood.....	1				

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

\$10,186,829	\$16,094,871	\$69,446,759	\$1,580,608	\$1,669,979	\$7,078,424	\$216,802,396	\$5,446,476	\$400,347,912	\$178,099,040	180,608	100,547	2,592	155	77,314	36,940	1
10,221	3,037	48,677	790	4,996	877	48,225	1,764	151,060	101,071	98	.....	3	.....	95	.....	2
992,042	785,229	10,212,530	7,688	157,757	182,366	19,357,429	416,237	38,468,974	18,695,308	14,377	1,910	235	.....	12,232	760	2
2,180,703	2,607,378	16,125,914	15,369	81,476	596,660	80,815,885	792,668	125,606,970	43,998,417	25,081	10,885	100	.....	14,096	6,169	4
6,800	2,530	23,299	.....	1,176	586	13,824	1,471	72,072	56,777	54	.....	6	.....	48	.....	5
24,683	18,556	80,263	1,500	6,040	1,507	170,267	1,576	335,521	163,673	22	.....	.....	.....	22	.....	6
14,254	8,432	58,791	5,211	7,910	505	30,747	1,363	159,582	127,472	61	.....	.....	.....	61	.....	7
42,332	73,169	430,197	.....	22,433	12,924	1,003,326	10,828	2,254,502	1,240,348	531	325	.....	.....	206	107	8
6,300	4,056	98,792	.....	3,540	1,771	136,122	3,454	278,735	139,159	205	100	90	.....	15	.....	9
34,499	19,405	144,452	.....	14,836	4,293	182,690	6,803	490,882	301,389	193	65	.....	.....	128	39	10
50,147	12,309	234,625	.....	3,394	6,675	372,305	15,167	810,085	422,613	1,493	975	.....	.....	518	33	11
343,006	315,085	2,455,339	6,632	16,304	79,678	9,967,187	328,915	14,629,751	4,333,649	13,074	10,678	79	.....	2,317	3,458	12
106,302	301,653	1,200,261	1,520	108,529	41,116	4,215,231	147,314	7,488,821	3,126,276	1,827	760	21	.....	1,046	1,007	13
14,785	119,852	98,611	.....	11,810	5,543	426,511	13,504	851,147	411,132	250	205	.....	.....	45	.....	14
91,517	181,771	1,101,650	1,520	96,719	35,573	3,788,720	133,810	6,637,674	2,715,144	1,577	555	21	.....	1,001	1,007	15
3,837	.....	57,388	6,210	2,100	1,967	13,967	32,744	131,784	85,073	375	335	.....	.....	40	.....	16
.....	1,300	36,574	.....	.....	598	91,420	1,061	140,572	48,091	27	.....	2	.....	25	.....	17
16,835	12,630	40,104	.....	7,245	677	883,750	12,084	1,107,106	211,272	180	52	.....	.....	128	.....	18
18,575	9,117	182,310	625	20,890	3,952	265,497	6,547	560,434	285,390	286	.....	10	.....	276	.....	19
148,720	177,205	1,105,863	250,503	1,000	99,339	1,177,919	455,617	3,874,528	2,241,092	13,890	10,216	.....	.....	3,683	1,219	20
1,250	3,738	2,103	36	1,715	110	10,594	214	27,187	16,379	4	.....	.....	.....	4	.....	21
78,756	80,128	743,499	23,235	13,480	20,110	2,206,291	11,178	3,770,564	1,553,095	803	740	.....	.....	63	57	22
38,300	18,630	484,260	1,550	15,955	5,832	584,367	10,374	1,405,732	810,991	229	.....	.....	.....	229	.....	23
37,800	10,961	459,554	1,550	13,500	5,638	496,513	9,441	1,260,822	754,868	189	.....	.....	.....	189	.....	24
500	1,719	24,706	.....	2,455	194	87,854	933	144,910	56,123	40	.....	.....	.....	40	.....	25
27,100	31,019	29,032	73	8,265	2,605	789,742	5,566	964,712	173,404	143	.....	.....	.....	143	140	26
7,200	15,862	66,967	.....	7,393	2,017	125,546	2,375	275,331	147,410	170	155	.....	.....	15	1	27
48,394	41,847	229,864	354	72,067	5,633	862,880	20,801	1,485,569	601,888	616	334	3	.....	279	67	28
1,200	676	39,040	1,300	12	2,178	80,183	1,048	167,779	80,543	40	25	4	.....	11	.....	29
172,258	107,768	1,162,940	8,010	31,947	84,402	2,059,505	48,392	4,369,116	2,261,219	2,106	1,394	15	.....	697	542	30
43,515	28,182	254,488	3,700	10,914	7,446	197,165	15,398	650,913	438,357	837	150	.....	.....	687	.....	31
161,807	106,194	334,444	2,621	13,930	11,681	1,190,116	32,828	2,240,405	1,017,461	1,097	26	150	.....	921	.....	32
7,600	5,146	67,032	25	7,425	476	20,928	7,822	133,401	105,151	256	.....	52	.....	204	.....	33
15,930	9,104	42,961	.....	1,620	2,957	117,205	5,923	225,003	101,875	164	100	.....	.....	64	.....	34
218,364	284,159	1,941,903	90,056	155,063	44,786	3,644,009	74,614	7,156,018	3,436,795	4,132	1,510	20	.....	2,062	2,576	35
21,810	34,211	90,555	3,289	6,314	4,989	1,754,629	24,126	2,067,478	288,726	1,841	1,000	8	.....	173	.....	36

* Same number reported for one or more other months.

* Same number reported throughout the year.

MANUFACTURES.

TABLE 38.—DETAIL STATEMENT FOR THE STATE AND FOR CITIES OF 50,000 INHABITANTS OR

INDUSTRY AND CITY.	Num-ber of estab-lish-ments.	PERSONS ENGAGED IN THE INDUSTRY.								WAGE EARNERS DEC. 15, OR NEAR-EST REPRESENTATIVE DAY.				Capital.	
		Total.	Propri-eters and firm mem-bers.	Sala-ried offi-cers, super-in-tend-ents, and man-agers.	Clerks, etc.		Wage earners.			Total.	16 and over.		Under 16.		
					Male.	Fe-male.	Aver-age num-ber.	Number, 15th day of—			Male.	Fe-male.	Male.		Fe-male.
								Maximum month.	Minimum month.						

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

DETROIT—Continued.																		
1	Foundry and machine-shop products	151	8,140	73	367	579	256	6,874							\$23,427,319			
2	Boiler shops and foundries	18	2,420	9	58	77	17	2,259	Mh	2,694	De	1,752	2,052	1,900	85	6	1	2,935,631
3	Machine shops	133	5,729	64	309	502	239	4,615	Ap	4,072	De	3,985	4,023	3,967	48	8		20,491,688
4	Fur goods	18	319	14	20	37	41	207	De	412	Ap	67	324	135	182	4	3	888,056
5	Furnishing goods, men's	6	88	5	2	6	5	70	No	90	Au	42	82	8	74			44,052
6	Furniture and refrigerators	29	1,997	20	57	78	55	1,787	Fe	1,979	Je	1,674	1,813	1,656	144	11	2	3,285,875
7	Glass, cutting, staining, and ornamenting	4	70		8	4		58	Ja	61	My	52	60	59	1			23,039
8	Hardware	10	524	2	18	21	9	474	Fe	517	Au	401	472	463	6	3		497,121
9	Hosiery and knit goods	9	331	3	24	18	6	280	Se	300	Au	260	266	41	217			742,681
10	House-furnishing goods, not elsewhere specified	6	48	6	5	8	8	21	Oc	29	Ja	14	27	13	14			120,931
11	Iron and steel, steel works and rolling mills	4	521		17	40	8	456	Ap	558	Au	385	418	411	7			1,616,083
12	Iron and steel forgings	7	436	2	12	16	7	399	No	473	Se	316	413	409	4			1,075,061
13	Jewelry	18	184	18	14	7	12	133	De	145	Jy	126	141	118	11	12		239,439
14	Leather, tanned, curried, and finished	3	333		11	17	4	301	Fe	323	Ap	265	253	253				1,533,133
15	Liquors, malt	19	1,418	11	72	151	19	1,165	Je	1,293	Fe	1,078	1,135	1,126	9			8,636,110
16	Lumber, planing-mill products, not including planing mills connected with sawmills	34	1,639	21	90	91	27	1,410	Je	1,542	De	1,277	1,284	1,232		2		4,437,503
17	Marble and stone work	19	258	20	18	12	6	202	Au	237	Fe	143	193	193				484,975
18	Mineral and soda waters	19	223	26	13	13	5	166	Jy	219	De	128	130	123	2			320,222
19	Models and patterns, not including paper patterns	15	245	15	21	1	7	201	Au	225	Ja	151	171	170		1		117,329
20	Musical instruments and materials, not specified	5	8	6				2	No	3	Ja	1	2	2				7,352
21	Paint and varnish	10	858	1	59	381	92	325	Mh	383	De	253	332	307	23	1	1	3,567,635
22	Patent medicines and compounds, and druggists' preparations	63	4,669	41	98	1,066	539	2,895	Mh	3,013	Jy	2,739	2,820	1,369	1,428	13	10	15,037,457
23	Photo-engraving	9	141	7	7	18	5	104	Oc	112	Jy	98	107	102	3	2		104,070
24	Pickles, preserves, and sauces	13	601	12	31	72	26	460	Ja	21	Je	15	441	191	249		1	2,231,579
25	Preserves	4	40		8	9	5	13	Ja	21	Je	15	17	9	8			40,255
26	Pickles and sauces	9	561	12	23	63	21	442	Ja	527	Jy	357	424	182	241		1	2,191,324
27	Plumbers' supplies, not elsewhere specified	7	199	5	12	10	4	168	My	188	Oc	147	181	173	3			447,614
28	Printing and publishing, book and job	166	2,695	144	165	297	116	1,973					2,008	1,501	475	29	3	3,778,095
29	Job printing	154	2,388	138	144	150	85	1,871	Oc	1,953	Au	1,790	1,911	1,416	463	29	3	3,394,084
30	Book publishing without printing	7	185	3	11	143	23											169,102
31	Linotype work and typesetting	5	122	3	10	4	3	102	Oc	108	Fe	95	97	85	12			214,909
32	Printing and publishing, newspapers and periodicals	75	1,934	30	100	730	200	874					1,185	1,107	71	7		3,119,227
33	Printing and publishing	6	1,299	2	37	518	79	663	De	702	Ja	635	956	397	57	2		2,473,454
34	Printing, publishing, and job printing	22	449	12	31	143	53	210	De	224	Ja	196	228	210	14	4		490,318
35	Publishing without printing	47	186	16	32	69	68	1	(4)	1	(4)	1	1					155,455
36	Saddlery and harness	18	103	19	1	4	1	78	My	96	Oc	71	82	71	11			128,079
37	Sausage	3	31	6		4	1	20	De	28	Je	18	22	22				27,952
38	Saws	3	10	4		1	1	4	Ap	9	De	3	4	4				3,950
39	Shipbuilding, wooden, including boat building	6	61	4	4	3	1	49	My	74	No	20	44	44				108,232
40	Shirts	7	57	6	4	11		36	Mh	45	De	27	42	8	34			51,280
41	Signs and advertising novelties	10	73	9	7	7	4	46	Au	55	De	40	48	45	3			31,678
42	Slaughtering and meat packing	10	1,268	5	26	128	29	1,082	Oc	1,135	Ap	999	1,205	1,205				4,093,337
43	Smelting and refining, not from the ore	3	20	2	3		1	14	My	19	De	13	13	13				51,013
44	Soap	5	74	5	5	9	4	51	Se	56	Ja	46	55	48	5	2		575,265
45	Statuary and art goods	4	56	7	6	1	1	41	Je	45	Ap	36	38	38				30,025
46	Stoves and furnaces, including gas and oil stoves	8	2,751		66	286	37	2,362	Mh	2,833	De	1,439	2,449	2,414	5	30		7,789,515
47	Structural ironwork, not made in steel works or rolling mills	21	946	9	55	101	11	770	No	822	Ap	709	697	691		6		1,706,289
48	Tobacco, chewing and smoking, and snuff	14	2,112	10	22	277	24	1,779	My	1,866	No	1,701	1,755	469	1,185	16	85	4,816,286
49	Tobacco, cigars	143	5,719	145	66	109	47	5,352	De	5,495	Ap	4,833	5,827	499	5,021	9	298	3,688,435
50	Trunks and valises	6	73	4	6	9	6	49	Oc	54	Ja	43	45	38	5	2		116,956

¹ Owned power only.

² Includes rented power, other than electric.

MORE, BY INDUSTRIES, AND FOR CITIES OF 10,000 TO 50,000 INHABITANTS: 1914—Continued.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.				
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.				
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, including internal revenue and corporation income.	Principal materials.	Fuel and rent of power.			Total.	Steam engines. ¹	Internal-combustion engines. ²	Water wheels and motors. ¹	Electric (rented).	Electric horsepower generated in establishments reporting.

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

\$826,838	\$941,315	\$5,155,229	\$63,961	\$106,675	\$156,074	\$5,951,918	\$426,889	\$17,185,368	\$10,806,561	12,451	5,945	470	150	5,886	2,706	1
143,036	88,827	1,785,455	1,508	18,160	33,467	1,376,946	190,367	4,264,398	2,697,085	3,964	2,659	23	150	1,282	1,486	2
683,802	852,488	3,369,774	62,453	88,515	122,607	4,574,972	236,522	12,920,970	8,109,476	8,487	3,284	447	5	4,604	1,220	3
34,285	83,684	154,729	4,350	31,673	6,204	622,066	4,429	1,101,568	475,073	190	.....	.....	.....	185	.....	4
2,957	5,553	27,079	.....	3,853	267	97,516	880	148,238	49,842	36	.....	.....	.....	36	.....	5
124,902	159,887	1,107,958	2,481	11,064	40,910	1,319,058	40,272	3,383,262	2,023,932	2,899	2,585	62	.....	252	714	6
11,215	4,800	40,817	.....	5,040	750	76,733	1,279	145,690	67,687	48	.....	.....	.....	48	.....	7
45,088	20,338	277,988	1,795	9,780	4,909	380,666	18,419	905,310	506,225	484	180	34	.....	270	.....	8
42,735	24,028	102,133	1,775	8,105	7,988	357,234	7,802	614,832	249,796	245	150	.....	.....	95	107	9
3,962	5,613	10,464	.....	2,802	372	114,226	1,037	165,195	49,932	86	.....	.....	.....	86	.....	10
49,986	60,474	316,826	.....	427	11,183	469,366	91,927	1,116,541	555,248	3,489	2,190	.....	.....	1,299	390	11
24,206	18,125	329,178	418	4,169	10,810	537,315	45,697	1,012,373	429,361	1,268	600	.....	.....	668	368	12
19,090	11,888	101,218	3,066	12,462	1,622	152,139	1,910	385,962	231,913	67	.....	.....	.....	57	.....	13
45,900	54,328	203,303	.....	8,076	8,076	1,268,481	13,690	1,715,017	432,846	765	760	.....	.....	5	825	14
246,531	207,111	1,019,906	.....	1,100	1,364,892	2,365,641	160,989	8,409,722	6,887,692	6,088	4,199	500	.....	1,889	205	15
175,507	122,162	988,884	.....	18,491	54,503	3,302,072	54,784	5,566,510	2,209,654	5,503	4,315	196	.....	992	253	16
26,530	16,470	177,530	16,361	4,254	3,778	194,861	7,788	521,819	319,170	650	180	44	.....	426	4	17
26,288	17,613	116,995	.....	10,508	3,649	235,894	3,660	539,083	299,529	148	.....	.....	.....	140	.....	18
27,363	6,140	186,429	.....	7,012	1,597	38,497	4,994	306,300	262,809	149	.....	.....	.....	149	.....	19
.....	.....	920	40	742	5	920	138	9,626	3,568	8	.....	.....	.....	8	.....	20
196,904	385,270	213,688	3,000	14,400	37,360	1,923,642	30,990	3,867,143	1,912,511	1,090	422	20	.....	648	166	21
366,766	1,947,677	1,712,583	7,851	100,792	171,043	5,940,284	75,637	13,691,495	7,675,694	2,214	1,840	30	.....	344	1,944	22
17,700	22,565	104,866	17,548	11,104	1,170	31,842	2,848	282,297	247,612	61	.....	.....	.....	61	.....	23
65,018	96,810	197,870	.....	3,906	13,516	1,368,821	9,941	1,973,696	594,934	417	332	.....	.....	85	63	24
5,894	4,751	9,912	.....	3,306	523	74,338	1,372	106,580	30,870	40	35	.....	.....	5	.....	25
59,124	92,059	187,958	.....	600	12,993	1,294,483	8,569	1,867,116	564,064	377	297	.....	.....	80	63	26
21,378	13,542	122,575	380	2,860	3,582	282,739	10,727	580,606	287,140	337	200	.....	.....	137	120	27
358,186	422,929	1,436,586	107,189	128,407	33,362	1,708,914	54,686	5,370,012	3,606,412	4,704	.....	3	.....	4,701	.....	28
317,991	222,362	1,335,460	40,804	119,532	28,933	1,683,116	50,219	4,850,528	3,117,193	2,050	.....	3	.....	2,047	.....	29
25,006	190,180	.....	65,523	4,819	3,394	11,835	.....	310,058	298,223	.....	.....	.....	.....	.....	.....	30
15,189	10,387	101,126	862	4,056	1,015	13,963	4,467	299,426	190,996	2,654	.....	.....	.....	2,654	.....	31
256,860	871,381	777,724	229,029	49,232	35,700	1,820,588	36,392	5,779,364	3,920,384	1,582	.....	1	.....	1,581	.....	32
116,971	609,984	638,261	275	14,744	31,710	1,370,091	30,889	4,215,478	2,814,498	1,303	.....	.....	.....	1,303	.....	33
73,827	151,445	139,313	17,236	23,472	3,141	389,472	7,230	950,048	553,346	277	.....	1	.....	276	.....	34
66,062	110,002	150	211,518	11,016	849	61,025	273	613,838	552,540	2	.....	.....	.....	2	.....	35
500	3,000	50,962	.....	10,147	648	144,317	1,801	236,668	90,550	64	.....	.....	.....	64	.....	36
.....	4,500	13,906	.....	720	193	192,973	1,725	244,000	49,302	40	.....	.....	.....	40	.....	37
.....	1,044	2,256	35	1,261	6	2,408	1	11,719	9,310	10	10	.....	.....	.....	.....	38
6,308	3,805	41,875	172	3,620	1,048	40,998	1,335	102,685	60,352	55	.....	16	.....	39	.....	39
10,300	12,673	21,075	.....	11,793	726	55,011	338	126,747	71,398	9	.....	.....	.....	9	.....	40
9,722	8,991	37,984	1,075	3,173	164	30,740	283	116,488	85,465	5	.....	.....	.....	5	.....	41
97,730	150,231	747,224	.....	1,860	24,092	18,227,622	66,326	20,077,148	1,783,200	3,007	2,545	.....	.....	462	820	42
2,650	230	9,060	.....	720	133	21,925	1,100	42,121	19,096	13	.....	.....	.....	13	.....	43
11,100	14,620	33,954	.....	1,194	4,797	311,800	6,371	449,792	131,621	161	153	.....	.....	8	.....	44
7,920	612	44,387	500	2,160	180	4,629	315	76,895	71,951	5	.....	.....	.....	5	.....	45
263,831	431,604	1,747,947	.....	1,380	54,177	1,717,379	70,247	5,921,410	4,133,284	3,358	2,785	132	.....	441	1,120	46
121,007	105,651	576,938	5,945	12,795	15,717	1,080,157	33,215	2,129,542	1,016,170	2,222	.....	3	.....	2,219	.....	47
115,757	319,308	699,612	.....	21,502	2,339,915	3,463,262	35,068	8,540,267	5,041,937	1,080	707	14	.....	359	459	48
85,843	185,012	2,164,807	400	65,611	956,959	3,792,700	17,927	8,503,839	4,693,212	3,956	.....	.....	.....	3,956	.....	49
10,671	9,150	37,769	.....	6,900	1,451	53,104	1,307	168,322	113,911	40	.....	.....	.....	40	.....	50

* Same number reported for one or more other months.

* Same number reported throughout the year.

MANUFACTURES.

TABLE 38.—DETAIL STATEMENT FOR THE STATE AND FOR CITIES OF 50,000 INHABITANTS OR

INDUSTRY AND CITY.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.								WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.				Capital.	
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			Total.	16 and over.		Under 16.		
					Male.	Female.	Average number.	Number, 15th day of—			Male.	Female.	Male.		Female.
								Maximum month.	Minimum month.						

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

DETROIT—Continued.																		
1	Window and door screens and weather strips.	3	42	4	3	5	7	23	Oc ²	25	Mh ²	22	22	22				\$240,026
2	Wirework, including woven-wire fencing.	10	237	8	11	8	4	206	Ja	230	De	170	172	149	22	1		383,745
3	Wood, turned and carved.	9	109	6	7	1	2	93	Fe	95	No	91	91	88		3		143,038
4	All other industries*.	248	18,591	160	561	2,683	938	14,249					13,158	11,331	1,742	65	20	60,883,952

* All other industries embrace—	Carriages and sleds, children's.	2	Engraving, steel and copper plate, including plate printing.	8	Gas machines and gas and water meters.	4	
Agricultural implements.	2	Cars and general shop construction and repairs by steam-railroad companies.	1	Engraving, wood.	2	Gold and silver, reducing and refining, not from the ore.	1
Artificial flowers.	1	Cars, steam-railroad, not including operations of railroad companies.	1	Envelopes.	1	Grease and tallow, not including lubricating greases.	2
Artificial limbs.	3	Cash registers and calculating machines.	5	Fancy articles, not elsewhere specified.	1	Hair work.	4
Artists' materials.	1	Cement.	1	Fertilizers.	1	Hand stamps.	6
Babbitt metal.	2	Cloth, sponging and refinishing.	1	Files.	1	Hats and caps, other than felt, straw, and wool.	4
Baking powders.	2	Confectionery (ice cream).	3	Flags and banners.	2	Hats, straw.	1
Baskets, and rattan and willow ware.	1	Corsets.	3	Flavoring extracts.	2	Horseshoes, not made in steel works or rolling mills.	1
Belting, leather.	1	Cotton goods.	1	Flour-mill and gristmill products.	3	Ice, manufactured.	3
Billiard tables and materials.	1	Dental goods.	2	Foundry supplies.	3	Ink, printing.	1
Blacking, stains, and dressings.	2	Enameling.	2	Fuel, manufactured.	1		
Bluing.	3	Engraving and diesinking.	7	Furs, dressed.	1		
Brushes.	4			Gas and electric fixtures.	3		
Buttons.	1			Gas, illuminating and heating.	1		
Card cutting and designing.	1						
Carpets, rag.	1						

¹ Owned power only.

² Includes rented power, other than electric.

MORE, BY INDUSTRIES, AND FOR CITIES OF 10,000 TO 50,000 INHABITANTS: 1914—Continued.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.				
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.				Electric horsepower generated in establishments reporting.
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, including internal revenue and corporation income.	Principal materials.	Fuel and rent of power.			Total.	Steam engines. ¹	Internal combustion engines. ²	Water wheels and motors. ¹		Electric (rented).

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

\$14,772	\$7,069	\$7,944	\$1,000	\$2,860	\$1,739	\$37,239	\$459	\$77,343	\$39,645	47				47		1
22,862	7,380	108,474	1,127	7,151	6,550	161,856	4,130	424,207	258,221	177	160			17	150	2
13,544	2,142	55,607		1,560	1,263	51,036	4,120	181,031	125,875	272	190			82		3
1,533,377	4,190,311	10,077,129	668,013	160,118	514,549	24,456,786	1,598,936	55,640,063	29,534,341	36,897	27,704	261		8,932	10,316	4

Ink, writing.....	2	Millinery and lace goods.....	11	Printing materials.....	3	Steam fittings and steam and hot-water heating apparatus.....	6
Instruments, professional and scientific.....	4	Mirrors, framed and unframed.....	2	Pulp, from fiber other than wood.....	1	Steam packing.....	2
Iron and steel, blast furnaces.....	1	Motorcycles, bicycles, and parts.....	2	Pumps, not including power pumps.....	1	Stencils and brands.....	1
Iron and steel, bolts, nuts, washers, and rivets.....	2	Mucilage and paste.....	1	Pumps, steam and other power.....	1	Stereotyping and electrotyping.....	3
Iron and steel, doors and shutters.....	2	Musical instruments, pianos.....	3	Roofing materials.....	1	Surgical appliances.....	2
Lamps.....	3	Needles, pins, and hooks and eyes.....	2	Rubber goods, not elsewhere specified.....	1	Toys and games.....	1
Lasts.....	1	Oil, not elsewhere specified.....	1	Sand-lime brick.....	2	Type founding.....	1
Lead, bar, pipe, and sheet.....	1	Oilcloth and linoleum, floor.....	1	Salt.....	1	Umbrellas and canes.....	3
Leather goods, not elsewhere specified.....	8	Optical goods.....	5	Scales and balances.....	2	Upholstering materials, not elsewhere specified.....	2
Liquors, vinous.....	1	Paper and wood pulp.....	1	Screws, machine.....	2	Vinegar.....	1
Lithographing.....	5	Paper goods, not elsewhere specified.....	2	Shipbuilding, iron and steel.....	1	Wall plaster.....	2
Looking-glass and picture frames.....	6	Paper patterns.....	1	Show cases.....	2	Waste.....	2
Malt.....	3	Paving materials.....	2	Sporting and athletic goods.....	2	Window shades and fixtures.....	4
Mattresses and spring beds.....	6	Pens, fountain and stylographic.....	1	Stationery goods, not elsewhere specified.....	1		
		Pottery.....	3				
		Printing and publishing, music.....	2				

² Same number reported for one or more other months.

MANUFACTURES.

TABLE 38.—DETAIL STATEMENT FOR THE STATE AND FOR CITIES OF 50,000 INHABITANTS OR

INDUSTRY AND CITY.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.							WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.					Capital.	
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			Total.	16 and over.		Under 16.		
					Male.	Female.	Average number.	Number, 15th day of—			Male.	Female.	Male.		Female.
								Maximum month.	Minimum month.						

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

1	GRAND RAPIDS—All industries.	504	20,732	466	743	1,427	719	17,427	Se	17,893	De	16,711	17,579	14,750	2,772	49	3	\$46,842,756
2	Artificial stone products.	7	19	4	2			13	Je ^a	19	Fe	1	18	18				33,138
3	Automobile bodies and parts.	5	38	3	2	2	2	29	My	32	De ^a	27	27	27				47,202
4	Automobiles.	3	82	3	2	14	5	58	Ja	69	De	42	59	59				374,230
5	Automobile repairing.	6	23	7	1	2		13	Je ^a	14	Jy	11	16	16				13,643
6	Brass and copper products.	7	476	9	7	21	7	432	De	473	My	408	470	396	73	1		722,095
7	Bread and other bakery products.	67	579	73	9	39	17	441	Jy	468	Fe	418	448	307	133	3	5	1,420,033
8	Butter.	6	59	3	6	14	9	27	Je	41	Ja ^a	20	21	21				171,327
9	Carpets, rug.	3	11	3				8	(^a)	8	(^a)	8	8	6	2			10,265
10	Carriages and wagons and materials.	13	125	12	6	1	2	104	Au ^a	106	Je	101	106	104	2			203,568
11	Clothing, men's, including shirts.	8	239	4	7	12	17	199	Ap	230	Au	175	195	24	171			144,217
12	Coffins, burial cases, and undertakers' goods.	4	106	1	7	30	10	58	My	67	Fe ^a	52	60	42	18			332,045
13	Confectionery and ice cream.	12	254	11	6	28	6	203					194	84	110			432,357
14	Confectionery.	7	230	5	6	28	6	185	Oc	237	Ja	154	183	73	110			411,932
15	Ice cream.	5	24	6				18	Jy ^a	29	Ja ^a	11	11	11				20,425
16	Copper, tin, and sheet-iron products.	11	76	14	5	1	2	54	Se	82	Ja	36	43	39	4			39,190
17	Flour-mill and gristmill products.	9	170	9	14	27	13	107	Je	111	No	100	101	100	1			917,921
18	Foundry and machine-shop products.	42	1,294	40	56	70	66	1,062					1,065	982	81	2		2,448,792
19	Foundries.	6	377		8	3	4	362	Mh	415	De	316	316	292	24			506,822
20	Machine shops.	35	917	40	48	67	62	700	Ja	790	Se	652	749	690	57	2		1,941,970
21	Furniture and refrigerators.	67	7,810	26	232	379	182	6,991	Fe	7,204	No	6,756	7,062	6,936	104	22		17,314,174
22	Hardware.	6	206	2	10	15	8	171	Mh	188	Se	159	162	135	27			443,870
23	Hosiery and knit goods.	4	454	2	10	7	13	422	Se	525	Ja	324	354	64	289		1	759,327
24	Jewelry.	3	9	4				5	Je	6	Fe	4	6	4				1,325
25	Leather, tanned, curried, and finished.	3	187		5	3	2	177	Mh	190	Oc	161	170	169	1			586,222
26	Liquors, malt.	3	196		11	11		174	Je	229	Fe	146	152	145	7			2,120,995
27	Lumber, planing-mill products, not including planing mills connected with sawmills.	12	441	8	25	21	16	371	Au	393	De	337	341	291	48	2		1,406,937
28	Marble and stone work.	7	52	7		8	1	36	My ^a	39	Ja ^a	33	38	38				110,661
29	Mineral and soda waters.	5	26	6	1	1	2	16	Je	23	Ja ^a	12	14	13				47,093
30	Patent medicines and compounds and druggists' preparations.	16	140	11	14	11	40	64	Oc ^a	67	Fe	56	67	32	35	1		225,109
31	Printing and publishing, book and job.	43	652	28	45	37	23	519	Fe	564	Je	433	513	384	115	13	1	96,757
32	Printing and publishing, newspapers and periodicals.	35	576	20	38	153	57	308					294	267	27			1,011,405
33	Printing, publishing, and job printing.	18	551	15	32	148	48	308	Mh	324	Se	293	294	267	27			1,002,076
34	Publishing without printing.	17	25	5	6	5	9											9,329
35	Stoves and hot-air furnaces.	4	38	6		1	1	30	Oc	42	Jy	25	27	27				28,752
36	Structural ironwork, not made in steel works or rolling mills.	3	24	6	2	3	1	12	No	15	Oc	10	12	12				35,991
37	Tobacco, cigars.	32	746	30	14	31	4	667	Se	722	Ja	574	717	114	603			468,363
38	Wood, turned and carved.	10	67	16	2	1	1	47	Ap ^a	55	Se	37	48	48				46,609
39	All other industries*.	138	5,607	98	205	485	210	4,609					4,771	3,846	920	4	1	14,828,243

*All other industries embrace—

Artificial limbs.	1	Canning, vegetables.	1	Dairymen's and poultrymen's supplies.	1	Gas, illuminating and heating.	1
Awning, tents, and sails.	2	Cars and general shop construction and repairs by electric-railroad companies.	1	Electroplating.	2	Glass, cutting, staining, and ornamenting.	1
Babbitt metal.	1	Cars and general shop construction and repairs by steam-railroad companies.	1	Engines, steam, gas, and water.	2	Grease and tallow, not including lubricating greases.	1
Baking powders.	1	Chemicals.	1	Engraving, steel and copper plate, including plate printing.	1	Hair work.	1
Baskets, and rattan and willow ware.	1	Clocks.	1	Fancy articles, not elsewhere specified.	5	Hats and caps, other than felt, straw, and wool.	1
Belting, leather.	3	Clothing, women's.	2	Feathers and plumes.	1	House-furnishing goods, not elsewhere specified.	1
Bookbinding and blank-book making.	4	Coffee, roasting and grinding.	2	Flavoring extracts.	2	Ink, writing.	1
Boots and shoes.	2	Cooperage.	1	Food preparations, not elsewhere specified.	1	Iron and steel forgings.	1
Boxes, cigar.	1	Corsets.	2	Fur goods.	3	Lithographing.	1
Boxes and cartons, paper.	2	Cutlery and edge tools.	2	Furnishing goods, men's.	2	Lumber and timber products.	1
Brick, building.	1						
Brooms, from broom corn.	2						
Brushes.	2						

^a Owned power only.

^a Includes rented power, other than electric.

MORE, BY INDUSTRIES, AND FOR CITIES OF 10,000 TO 50,000 INHABITANTS: 1914—Continued.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.				
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.				Electric horsepower generated in establishments reporting.
Officials.	Clarks, etc.	Wage earners.		Rent of factory.	Taxes, including internal revenue and corporation income.	Principal materials.	Fuel and rent of power.			Total.	Steam engines. ¹	Internal combustion engines. ²	Water wheels and motors. ¹		Electric (rented).

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

\$1,905,191	\$2,173,868	\$10,296,498	\$257,990	\$253,676	\$692,915	\$23,092,464	\$902,470	\$49,792,200	\$25,797,266	30,393	20,344	886	1,056	8,107	4,017	1
1,500	9,657	575	205	12,013	213	34,306	21,180	59	40	7	12	2	3	2	3	2
4,055	15,344	2,108	265	50,703	1,218	103,253	51,832	24	24	24	24	24	24	24	24	24
4,904	22,977	46,127	1,500	2,792	59,632	2,399	146,420	84,998	40	40	30	8	4	5	4	5
22,000	37,033	256,575	650	2,926	8,223	706	27,850	18,891	22	22	17	5	5	5	5	5
13,385	76,970	226,776	540	9,319	271,391	9,391	707,423	420,641	560	350	206	4	340	6	6	6
7,080	19,641	19,399	17,876	9,324	920,944	22,475	1,682,198	738,779	244	70	174	7	8	7	7	7
12,448	2,850	71,902	4,020	676	616,399	4,167	747,184	126,618	126	10	116	8	8	8	8	8
25,228	42,412	65,976	3,920	140	245	7,495	6,343	14	14	5	9	9	9	9	9	9
16,050	45,577	37,409	2,015	2,455	65,270	2,982	199,341	131,089	139	65	74	10	10	10	10	10
28,320	33,857	94,943	7,776	2,586	190,451	1,857	397,104	204,856	45	45	45	11	11	11	11	11
28,320	33,857	70,013	1,560	6,637	133,772	3,412	304,870	167,686	206	206	206	12	12	12	12	12
4,250	1,803	28,722	15,388	4,337	397,802	8,362	643,952	237,788	326	235	91	196	13	13	13	13
29,112	36,900	77,581	13,708	4,114	332,492	5,921	529,376	190,993	235	235	235	14	14	14	14	14
144,746	102,757	688,079	3,081	19,297	7,288	29,353	521,524	318,900	467	467	467	15	15	15	15	15
17,860	4,985	226,864	3,061	19,297	22,492	497,230	25,994	1,451,046	927,822	1,560	440	108	180	332	334	20
126,888	97,772	461,215	149,315	37,098	203,516	5,558,052	160,613	14,940,141	9,221,476	10,263	9,048	29	126	1,051	1,156	21
698,708	679,476	4,353,023	1,585	5,601	171,861	6,310	479,705	301,534	172	60	112	22	22	22	22	22
21,604	28,016	102,230	5,060	5,372	560,581	4,373	1,063,785	498,831	261	55	91	23	23	23	23	23
28,034	11,872	148,069	534	5,776	1,009,349	21,902	1,394,369	363,118	620	305	315	24	24	24	24	24
17,604	2,441	114,616	48,662	287,171	48,662	287,171	1,261,224	945,760	1,328	1,155	173	25	25	25	25	25
50,308	14,792	122,870	1,414	17,775	1,078,837	9,755	1,677,643	589,051	1,708	1,285	423	26	26	26	26	26
55,314	33,352	250,419	12,382	1,414	17,775	1,078,837	9,755	1,677,643	589,051	1,708	1,285	423	15	27	27	27
1,300	2,420	11,254	284	1,080	40,817	2,005	125,561	82,739	151	151	151	28	28	28	28	28
28,110	36,628	28,361	298	572	23,958	432	61,219	36,829	14	14	14	29	29	29	29	29
95,757	56,707	348,260	4,488	3,854	138,371	1,734	341,191	201,036	22	22	22	30	30	30	30	30
94,696	193,994	262,784	8,308	18,065	11,094	374,269	13,409	1,154,989	767,311	515	120	395	104	31	31	31
92,446	189,286	262,784	52,046	19,209	13,177	387,514	10,669	1,443,124	1,044,941	567	1	566	32	32	32	32
2,250	4,708	27,279	24,767	18,401	13,092	386,563	10,669	1,369,587	972,355	567	1	566	33	33	33	33
3,592	1,475	20,607	808	85	951	73,537	72,586	72,586	72,586	72,586	72,586	34	34	34	34	34
17,883	67,981	280,734	1,800	259	31,000	259	77,350	46,091	17	17	17	35	35	35	35	35
2,700	766	31,138	399	399	16,894	1,642	43,445	24,909	95	95	95	36	36	36	36	36
476,603	605,764	2,547,225	27,392	76,076	186,118	6,587,343	504,637	14,103,052	7,011,052	9,043	5,906	481	200	2,456	1,549	39

Mattresses and spring beds.....	3	Paper and wood pulp.....	1	Sewing machines and attachments...	1	Stoves, gas and oil.....	1
Millinery and lace goods.....	1	Paper goods, not elsewhere specified.	2	Shipbuilding, wooden, including boat building	1	Surgical appliances.....	1
Mirrors, framed and unframed.....	1	Photo-engraving.....	1	Show cases.....	1	Tools, not elsewhere specified.....	1
Models and patterns, not including paper patterns.....	3	Photographic materials.....	1	Signs and advertising novelties.....	1	Trunks and valises.....	2
Motorcycles, bicycles, and parts.....	2	Pickles, preserves, and sauces.....	1	Soap.....	3	Typewriters.....	1
Mucilage and paste.....	1	Plumbers' supplies, not elsewhere specified.....	1	Sporting and athletic goods.....	1	Umbrellas and canes.....	1
Musical instruments and materials, not specified.....	4	Printing materials.....	1	Stationery goods, not elsewhere specified.....	1	Upholstering materials, not elsewhere specified.....	2
Musical instruments, organs.....	1	Roofing materials.....	2	Steam fittings and steam and hot-water heating apparatus.....	1	Vinegar and cider.....	1
Musical instruments, pianos.....	1	Rubber goods, not elsewhere specified.....	2	Steam packing.....	1	Window and door screens and weather strips.....	3
Musical instruments, piano materials.....	1	Saddlery and harness.....	3	Stencils and brands.....	1	Wirework, not elsewhere specified.....	3
Optical goods.....	1	Sand-lime brick.....	1	Stereotyping and electrotyping.....	1	Wooden goods, not elsewhere specified.....	2
Paints.....	2	Sausage.....	1				
		Saws.....	2				

* Same number reported for one or more other months.

* Same number reported throughout the year.

MANUFACTURES.

TABLE 38.—DETAIL STATEMENT FOR THE STATE AND FOR CITIES OF 50,000 INHABITANTS OR

INDUSTRY AND CITY.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.							WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.					Capital.	
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			Total.	16 and over.		Under 16.		
					Male.	Female.	Average number.	Number, 15th day of—			Male.	Female.	Male.		Female.
								Maximum month.	Minimum month.						

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

1	SAGINAW—All industries.....	241	7,661	228	257	541	293	6,342	Mh	6,633	De	5,696	6,380	5,512	852	14	2	\$17,698,108
2	Automobiles, including bodies and parts.....	7	514	2	15	35	15	447	Jy	523	No	309	391	391				\$12,434
3	Bread and other bakery products....	18	202	17	6	15	14	149	Je	159	Ap	144	148	102	46			363,087
4	Carriages and wagons and materials...	6	22	7				15	De	31	Fe ²	9	25	25				33,275
5	Confectionery and ice cream.....	7	78	10	4	9	4	51	No	69	Ja	38	62	22	40			105,585
6	Coppers and wooden goods, not elsewhere specified.	6	461	10	5	13	4	429	Ap	508	De	302	467	351	104	10	2	600,554
7	Copper, tin, and sheet-iron work.....	14	68	20	2		4	42	Oc	65	Mh	30	46	46				52,974
8	Engines, steam, gas, and water.....	3	118	4	9	3	6	96	Je	109	No	78	93	93				151,166
9	Flour-mill and gristmill products....	3	45	2	4	9	3	27	Je	30	Fe ³	25	28	26	2			306,980
10	Foundry and machine-shop products.	15	876	9	44	85	42	696	Au	730	Ap	667	672	672				2,664,240
11	Furniture.....	8	535	6	11	57	10	451	No	569	Je	416	446	445	1			1,422,573
12	Liquors, malt.....	5	109	3	10	10	2	84	Jy	120	Fe	59	93	93				774,669
13	Lumber and timber products.....	11	717	12	16	25	12	652	Ap	785	De	449	702	697	2	3		1,474,539
14	Marble and stone work.....	6	39	7	2	1	2	27	Je	37	De ³	13	29	29				42,057
15	Patent medicines and compounds....	4	15	1	3	2	3	6	Au ³	10	Ja ³	5	10	9	1			50,291
16	Printing and publishing, book and job.	13	77	19		1	4	53	Je ³	57	De ³	50	49	42	7			94,485
17	Printing and publishing, newspapers and periodicals.	9	206	3	19	59	19	106	Ap	115	Au	95	112	102	9	1		266,520
18	Tobacco manufactures.....	27	167	33	6	3	1	124	Jy	132	Ap	117	130	103	27			92,330
19	All other industries*.....	79	3,412	63	101	213	148	2,887					2,877	2,264	613			8,384,349

*All other industries embrace—
 Agricultural implements..... 1
 Artificial stone products..... 5
 Awnings, tents, and sails..... 1
 Bluing..... 1
 Bookbinding and blank-book making 1
 Boxes, cigar..... 1
 Boxes and cartons, paper..... 1
 Brass products..... 1
 Brick and tile..... 1

Butter..... 1
 Buttons..... 1
 Canning, vegetables..... 1
 Carpets, rag..... 1
 Cars and general shop construction and repairs by electric-railroad companies..... 1
 Cars and general shop construction and repairs by steam-railroad companies 1

Cash registers..... 1
 Chemicals..... 1
 Clothing, women's..... 3
 Coffee, roasting and grinding..... 3
 Coffins, burial cases, and undertakers' goods..... 1
 Corsets..... 1
 Electrical machinery, apparatus, and supplies..... 1

Electroplating..... 2
 Enameling..... 1
 Food preparations, not elsewhere specified..... 3
 Fur goods..... 1
 Furnishing goods, men's..... 1
 Gas, illuminating and heating..... 1
 Glass..... 1

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

1	ADRIAN.....	68	1,506	57	44	107	42	1,256	Ap	1,462	Jy	1,060	1,319	1,052	262	5		\$5,031,755
2	ALPENA.....	54	1,636	48	37	48	9	1,494	Mh	1,599	No	1,330	1,452	1,419	32	1		4,711,967
3	ANN ARBOR.....	75	1,079	74	61	76	26	842	Ap	900	De	746	764	678	84	2		2,888,476
4	BATTLE CREEK.....	135	6,026	126	154	840	307	4,599	Jy	5,442	Oc	3,924	4,464	3,882	581	1		19,893,219
5	BAY CITY.....	142	4,658	111	172	389	215	3,771	My	3,975	Ja	3,519	3,712	3,302	380	29	1	10,617,962
6	BENTON HARBOR.....	62	1,709	62	69	217	76	1,285	Au	1,434	Ja	1,076	1,442	1,232	210			3,932,039
7	ESCANABA.....	45	921	55	37	39	13	777	My	876	No	594	782	619	160	3		1,351,211
8	FLEET.....	91	9,963	85	171	737	248	8,722	Se	10,308	My	7,095	8,719	8,316	366	7		27,151,086
9	HANCOCK.....	21	199	27	10	15	5	142	Ja	145	Se	140	143	139	11	1		419,869
10	HOLLAND.....	61	2,716	241	79	163	68	2,165	Au	2,296	Ap	1,986	2,347	2,035	293	13	6	7,744,162
11	IRONWOOD.....	24	558	21	5	14	2	516	Fe	624	No	385	457	452	5			1,458,443
12	ISHPEMING.....	19	117	22	6	9	1	79	Fe	93	Au ³	73	79	75	3	1		188,980
13	JACKSON.....	147	5,846	112	219	412	107	4,906	My	5,479	De	4,542	4,807	3,938	849	5	15	14,055,794
14	KALAMAZOO.....	213	6,780	157	279	560	259	5,525	Mh	5,943	No	5,066	5,400	4,157	1,205	23	15	18,528,558
15	LANSING.....	180	7,201	161	214	402	193	6,231	Se	6,572	Ja	5,703	6,202	5,875	326	1		23,174,393
16	MANISTEE.....	47	2,112	47	68	102	42	1,853	Ja	2,073	De	1,484	1,742	1,383	343	14	2	5,345,971
17	MARQUETTE.....	34	704	27	27	53	8	580	Jy	680	De	482	607	590	14	3		1,683,282
18	MENOMINEE.....	52	2,243	33	64	95	53	1,988	Fe	2,144	De	1,709	2,277	1,976	255	21	25	6,825,323
19	MUSKEGON.....	102	5,238	74	166	216	136	4,646	Je	5,188	No	4,334	4,684	3,993	645	24	22	11,329,319
20	OWOSSO.....	45	1,425	35	50	74	35	1,231	Oc	1,613	Jy	1,036	1,786	1,579	156	1		4,146,992
21	PONTIAC.....	46	2,861	39	103	205	105	2,409	Ap	2,940	De	1,541	1,715	1,663	52			5,744,456
22	PORT HURON.....	89	1,596	73	82	95	50	1,296	Je	1,542	Fe	1,116	1,295	1,044	251			4,622,191
23	SAULT STE. MARIE.....	44	1,062	36	30	47	11	938	Ja	1,070	Ap	843	918	845	72	1		5,791,036
24	TRAVERSE CITY.....	60	1,135	56	48	45	30	956	Oc	1,212	Mh	708	1,220	909	309	2		1,986,358

¹ Owned power only.

² Includes rented power, other than electric.

MORE, BY INDUSTRIES, AND FOR CITIES OF 10,000 TO 50,000 INHABITANTS: 1914—Continued.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.				
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.				Electric horsepower generated in establishments reporting.
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, including internal revenue and corporation income.	Principal materials.	Fuel and rent of power.			Total.	Steam engines. ¹	Internal-combustion engines. ²	Water wheels and motors. ¹		Electric (rented).

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

\$529, 010	\$755, 483	\$3, 670, 558	\$48, 102	\$73, 545	\$253, 780	\$10, 276, 968	\$379, 015	\$19, 003, 670	\$8, 352, 687	15, 959	11, 887	53	4, 019	1, 412	1
42, 988	60, 928	292, 222	1, 375	18, 824	9, 298	661, 922	25, 405	1, 299, 939	612, 612	445	140		305	235	2
8, 100	20, 874	90, 418	620	5, 580	2, 913	366, 315	11, 277	601, 771	224, 179	135			135		3
4, 880	9, 804	9, 671		965	458	6, 889	603	29, 935	22, 503	62	35		27		4
21, 336	24, 773	183, 383		2, 760	1, 211	113, 653	2, 661	169, 616	53, 302	39			39		5
				300	8, 097	661, 001	2, 257	1, 047, 791	384, 533	1, 415	1, 400		15		6
2, 500	1, 404	28, 728		1, 580	506	50, 676	293	119, 529	68, 560	15		15			7
12, 450	7, 644	64, 513			1, 346	88, 882	5, 615	216, 174	121, 777	67			67		8
7, 150	6, 670	16, 514		2, 400	3, 335	587, 967	7, 403	661, 934	60, 559	699			324	8	9
102, 772	169, 189	500, 572	36, 183	1, 080	25, 367	800, 814	36, 844	2, 049, 102	1, 211, 414	2, 015	875		1, 065	71	10
27, 584	40, 355	255, 801		480	12, 132	295, 703	15, 759	819, 790	508, 328	926	900	6	20		11
17, 879	10, 729	71, 051		2, 000	91, 601	112, 107	13, 037	499, 306	374, 182	808			70	50	12
22, 503	27, 607	366, 741		180	18, 939	1, 859, 421	3, 687	2, 502, 833	634, 725	4, 162	4, 152		76	685	13
1, 065	885	27, 619		144	545	35, 353	1, 571	86, 016	49, 092	107	25	21	61		14
3, 900	5, 215	5, 031		352	508	36, 549	287	60, 831	23, 995	28			18		15
	3, 905	37, 614	3, 339	4, 518	709	44, 469	1, 606	127, 765	81, 690	60			60		16
37, 260	41, 800	82, 736	2, 637	10, 734	2, 536	155, 860	5, 000	414, 333	253, 473	256	150		106	63	17
7, 334	3, 272	66, 017		1, 913	17, 654	95, 461	575	237, 137	141, 101	1			1		18
209, 609	320, 429	1, 550, 934	3, 948	19, 735	56, 625	4, 303, 926	240, 230	8, 064, 808	3, 520, 652	4, 719	3, 018	11	1, 690	300	19

Glass, cutting, staining, and ornamenting.....	1	Matches.....	1	Rules, ivory and wood.....	1	Slaughtering and meat packing.....	2
Graphite, ground and refined.....	1	Mattresses and spring beds.....	1	Saddlery and harness.....	3	Soap.....	1
Hand stamps.....	1	Mineral and soda waters.....	3	Salt.....	1	Tools, not elsewhere specified.....	2
Hosiery and knit goods.....	1	Mirrors, framed and unframed.....	1	Sausage.....	1	Trunks and valises.....	1
Ice, manufactured.....	1	Musical instruments and materials, not specified.....	1	Saws.....	1	Umbrellas and canes.....	1
Jewelry.....	1	Musical instruments, piano materials.....	1	Shipbuilding, wooden, including boat building.....	1	Vinegar.....	1
Leather, tanned, curried, and finished.....	2	Optical goods.....	1	Shirts.....	1	Window shades and fixtures.....	1
Line.....	1	Roofing materials.....	1	Show cases.....	1	Wood, turned and carved.....	1

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

\$86, 296	\$152, 678	\$697, 635	\$11, 264	\$16, 588	\$37, 931	\$3, 709, 460	\$73, 905	\$5, 442, 338	\$1, 658, 973	2, 840	1, 803	42	995	409	1
75, 961	65, 541	895, 042	13, 610	4, 850	80, 576	2, 025, 990	372, 143	4, 101, 935	1, 704, 102	11, 537	8, 265	285	2, 100	887	4, 745
92, 008	53, 310	516, 276	27, 440	12, 015	28, 550	1, 192, 027	109, 536	2, 603, 379	1, 301, 816	2, 370	1, 096	73	1, 207	5	3
502, 763	1, 152, 737	3, 190, 521	34, 556	33, 992	203, 046	7, 679, 922	478, 278	23, 248, 420	15, 090, 220	17, 040	8, 361	39	473	8, 176	6, 666
364, 963	353, 980	2, 129, 272	89, 325	17, 679	207, 376	6, 189, 234	214, 171	11, 119, 286	4, 715, 881	15, 911	12, 927	35	2, 949	2, 961	5
132, 069	271, 209	722, 606	57, 999	13, 618	33, 428	1, 085, 747	124, 292	3, 021, 552	1, 811, 513	2, 245	1, 187		1, 060	102	6
88, 899	32, 542	468, 833	571	8, 298	38, 257	609, 560	31, 537	1, 506, 626	870, 829	2, 591	2, 180	103	308	45	7
507, 560	1, 002, 475	7, 234, 980	200	497, 817	346, 362	3, 832, 845	500, 129	53, 375, 039	19, 042, 065	10, 576	1, 813	67	100	8, 606	463
14, 910	13, 410	94, 172		3, 817	15, 875	182, 343	7, 346	402, 080	213, 291	273	106		167		8
184, 131	231, 756	1, 162, 387	13, 705	3, 764	53, 243	5, 723, 769	118, 005	8, 683, 835	2, 841, 161	3, 696	2, 658	27	1, 011	620	9
9, 388	9, 260	305, 140	12, 134	2, 632	19, 850	408, 512	5, 596	763, 247	379, 149	641	481	30	130	45	11
10, 276	8, 480	46, 191	155	2, 297	2, 998	131, 433	4, 495	228, 643	92, 715	230	110		120		12
461, 661	617, 741	3, 203, 323	67, 810	64, 048	142, 194	9, 153, 022	376, 257	16, 800, 846	7, 280, 567	9, 740	3, 520	497	2	5, 721	1, 707
649, 293	794, 926	3, 284, 360	59, 107	54, 103	206, 480	10, 305, 501	641, 715	20, 214, 314	9, 267, 098	10, 548	16, 754	213		3, 581	3, 548
463, 598	560, 864	4, 373, 265	51, 063	104, 536	214, 425	13, 536, 674	350, 279	26, 984, 496	13, 097, 543	12, 614	3, 515	280	265	8, 554	350
123, 237	100, 232	967, 573	327, 013	2, 832	78, 886	1, 915, 968	88, 106	4, 136, 210	2, 132, 136	7, 548	7, 043	304		201	
56, 130	55, 113	378, 220	22, 475	6, 730	38, 950	645, 652	32, 604	1, 394, 587	716, 331	2, 156	929	2	3	1, 222	
147, 056	144, 452	999, 510	106, 600	6, 358	147, 829	2, 553, 532	101, 975	4, 990, 884	2, 344, 377	6, 901	4, 141	22	1, 020	1, 718	891
338, 567	330, 564	2, 640, 992		13, 858	179, 127	4, 975, 072	342, 140	11, 147, 605	5, 830, 393	12, 499	5, 605	771	35	6, 088	543
96, 509	109, 466	724, 049	2, 126	3, 536	47, 512	1, 753, 956	97, 045	3, 463, 534	1, 617, 533	4, 266	3, 477	15		774	634
298, 182	323, 622	2, 009, 654	1, 348	102, 292	96, 659	10, 321, 576	127, 814	15, 102, 453	4, 653, 063	3, 111	1, 184	30	80	1, 817	180
119, 206	112, 892	734, 916	45, 481	16, 414	94, 534	2, 094, 347	132, 309	4, 090, 323	1, 863, 577	4, 400	2, 840	540		1, 320	68
100, 208	62, 922	620, 643	2, 513	6, 515	58, 052	2, 063, 659	288, 040	3, 821, 464	1, 469, 705	2, 326	692	99		1, 535	23
77, 175	70, 396	499, 453	81, 100	6, 021	36, 853	1, 056, 772	30, 061	2, 251, 484	1, 164, 651	4, 553	3, 507		202	844	272

* Same number reported for one or more other months.

MINNESOTA.

By MARTHA W. WILLIAMS and EDITH EATON.

GENERAL STATISTICS.

General character of the state.—Minnesota was admitted to the Union as a state in 1858. Its gross area is 84,682 square miles, of which 80,858 represent land surface. In 1914 there were in the state 2,455 square miles in national forests, 1,691 square miles in unappropriated and unreserved public lands of the United States, and 897 square miles in Indian reservations. The inhabitants of the state in 1900 numbered 1,751,394 and in 1910, 2,075,708, and the estimated population in 1914 was 2,213,919. Minnesota ranked eleventh in area and nineteenth in population among the states in 1910. In density of population it ranked twenty-ninth in that year, with 25.7 inhabitants per square mile.

The urban population in 1910—that is, the population residing in cities and towns of 2,500 inhabitants or more—was 850,294, or 41 per cent of the total, as against 34.1 in 1900. In 1914 there were nine cities in the state estimated to have more than 10,000 inhabitants, namely, Duluth, Hibbing, Mankato, Minneapolis, St. Cloud, St. Paul, Stillwater, Virginia, and Winona. The aggregate population of these nine cities formed 33.8 per cent of the estimated total population of Minnesota in that year. Statistics for Virginia can not be shown separately without disclosing the operations of individual establishments.

Minnesota has a great diversity of natural resources. Its iron ore deposits are the richest in the country, the production of 1914 amounting to 21,946,901 long tons, or 53 per cent of the total mined in the United States. The iron mines do not contribute directly to the state's

manufactures, because the ore is shipped to blast furnaces in other states. The wheat fields and the forests, however, furnish the raw materials for two of the most important industries. In 1909 the total value of farm crops was \$193,451,474, of which amount, \$56,007,435 was contributed by wheat, \$34,023,389 by oats, \$30,510,145 by corn, and \$17,213,817 by barley. In that year Minnesota ranked first in the production of barley and third in that of wheat and oats. In 1914 the amount of lumber sawed and otherwise put through manufacturing processes was valued at \$44,675,000. The transportation facilities, both rail and water, are excellent. The steam-railway mileage in 1914 was 9,040, and the electric-railway mileage in 1912 (the latest year for which figures are available) was 522. In addition, the state has several ports of entry on Lake Superior, and there are on or within its borders seven navigable rivers.

Importance and growth of manufactures.—In 1914, as in 1909, Minnesota ranked thirteenth among the states in the value of its manufactures, while in the average number of wage earners engaged in such industries, it held eighteenth place. The state contributed 2 per cent of the total value of products manufactured in the United States in 1914—practically the same proportion as in 1909 and 1904.

Table 1 summarizes the more important data relative to all classes of manufactures combined in the state of Minnesota, for the censuses of 1914, 1909, 1904, and 1899, and gives the percentages of increase from census to census.

Table 1	MANUFACTURING INDUSTRIES.				PER CENT OF INCREASE. ¹		
	1914	1909	1904	1899	1909-1914	1904-1909	1899-1904
Number of establishments.....	5,974	5,561	4,756	4,096	7.4	16.9	16.1
Persons engaged.....	115,690	104,406	83,301	(²)	10.8	25.3	.....
Proprietors and firm members.....	5,233	5,376	4,524	(²)	-2.7	18.8	.....
Salaried employees.....	17,623	14,263	9,141	6,625	23.6	56.0	38.0
Wage earners (average number).....	92,834	84,767	69,636	64,557	9.5	21.7	7.9
Primary horsepower.....	358,737	297,670	220,934	180,124	20.5	34.7	22.7
Capital.....	\$354,434,177	\$275,416,029	\$184,903,271	\$133,076,669	28.7	49.0	38.9
Salaries and wages.....	80,591,183	62,922,303	44,875,985	35,093,419	28.1	40.2	27.9
Salaries.....	22,084,170	15,451,500	9,032,840	6,064,220	42.9	71.1	49.0
Wages.....	58,507,013	47,470,803	35,843,145	29,029,190	23.2	32.4	23.5
Paid for contract work.....	2,600,106	2,483,017	4,378,700	(²)	4.7	-43.3	.....
Rent and taxes (including internal revenue).....	7,381,132	4,979,543	2,138,692	(²)	48.2	.....	.....
Cost of materials.....	336,849,214	281,622,287	210,553,949	150,299,277	19.6	33.8	40.1
Value of products.....	493,354,136	409,419,621	307,858,073	223,692,922	20.5	33.0	37.6
Value added by manufacture (value of products less cost of materials).....	156,504,922	127,797,334	97,304,124	73,393,645	22.5	31.3	32.6

¹ A minus sign (-) denotes decrease.

² Figures not available.

³ Exclusive of internal revenue.

The general increase in the manufacturing activities of the state was greater during the years 1904 to 1909 than for the other five-year periods shown in the

table. The decrease of 43.3 per cent, shown for contract work, is no indication of a depression in any industry of the state, because the expenditure for

such work depends upon the methods followed in carrying on the various industries, and not on the magnitude of the operations. The decrease of 2.7 per cent in the number of proprietors and firm members was doubtless in some degree due to the changes in character of ownership. During the period between the censuses the form of ownership of some establishments changed from "individual" or "firm" to "corporation," and proprietors and firm members reported at one census were classed as officials of cor-

porations at a later date. The value added by manufacture, although greater in amount at each of the successive censuses for which figures are given in the table, shows a smaller proportional increase—32.6 per cent from 1899 to 1904, 31.3 per cent from 1904 to 1909, and 22.5 per cent from 1909 to 1914.

Table 2 shows the relative importance of the leading manufacturing industries in 1914, and gives percentages of increase for the three five-year periods from 1899 to 1914.

INDUSTRY.	CENSUS OF 1914.						PER CENT OF INCREASE. ¹									
	Number of establishments.	Wage earners.		Value of products.		Value added by manufacture.		Wage earners (average number).			Value of products.			Value added by manufacture.		
		Average number.	Per cent distribution.	Amount.	Per cent distribution.	Amount.	Per cent distribution.	1909-1914	1904-1909	1899-1904	1909-1914	1904-1909	1899-1904	1909-1914	1904-1909	1899-1904
All industries.....	5,974	92,834	100.0	\$493,354,136	100.0	\$156,504,922	100.0	9.5	21.7	7.9	20.5	33.0	37.6	22.5	31.3	32.6
Flour-mill and gristmill products.....	280	4,564	4.9	143,243,708	30.0	20,929,137	13.4	5.0	-3.0	11.0	6.5	14.0	47.1	40.3	14.8	41.8
Slaughtering and meat packing.....	29	2,537	2.8	47,710,059	9.7	5,973,375	3.8	34.7	39.6	106.0	85.3	46.4	125.2	66.0	44.8	151.5
Lumber and timber products.....	453	20,947	22.6	44,674,948	9.1	21,848,154	14.0	1.2	1.1	-8.6	5.5	0.8	-10.7	1.7	-11.3	4.2
Butter and cheese.....	807	1,458	1.6	33,746,396	6.8	2,977,283	1.9	23.1	13.7	40.7	33.5	98.5	51.8	15.4	49.0	34.1
Foundry and machine-shops products.....	409	7,051	7.6	21,405,023	4.3	11,470,566	7.3	17.5	49.2	7.3	37.1	64.1	27.8	36.2	65.4	26.3
Printing and publishing.....	994	6,134	6.6	20,186,594	4.1	14,626,901	9.3	8.7	22.3	11.9	26.3	38.2	41.1	23.1	35.4	38.9
Cars and general shop construction and repairs by steam-railroad companies.....	38	10,551	11.4	14,594,018	3.0	8,266,790	5.3	28.2	42.7	22.7	15.5	71.2	16.8	34.7	67.5	24.6
Liquors, malt.....	65	2,052	2.2	14,265,296	2.9	10,963,095	7.0	24.1	59.7	20.9	35.0	71.1	38.6	33.3	85.3	23.7
Oil, linseed.....	6	400	0.4	12,556,906	2.5	1,077,899	0.7	7.0	5.9	127.7	12.0	57.3	114.4	-20.3	45.5	188.5
Bread and other bakery products.....	443	2,169	2.3	5,724,162	1.8	3,929,774	2.5	27.9	25.9	38.6	28.6	46.9	67.4	31.8	51.9	59.8
Boots and shoes.....	14	2,012	2.2	5,918,031	1.2	1,937,639	1.2	-24.5	55.4	-15.4	-21.8	81.5	15.3	-26.4	71.2	24.2
Malt.....	9	163	0.2	5,036,696	1.1	1,173,479	0.8	21.7	100.0	146.4	30.6	260.2	395.0	49.7	160.5	300.3
Clothing, men's, including shirts.....	45	2,468	2.7	5,616,322	1.1	1,975,894	1.3	14.5	44.1	-20.5	25.9	67.9	10.1	20.1	55.8	12.2
Paper and wood pulp.....	8	1,345	1.4	5,572,537	1.1	2,327,583	1.5	121.6	53.3	.....	133.7	108.1	.....	145.8	101.9	.....
Food preparations, not elsewhere specified.....	27	426	0.5	4,978,745	1.0	1,929,386	1.2	5.2	49.4	36.9	18.4	164.4	127.0	39.6	107.7	212.7
Patent medicines and compounds and druggists' preparations.....	99	613	0.7	4,879,026	1.0	2,537,951	1.6	29.1	38.1	83.0	10.6	40.7	236.5	-6.8	51.6	195.9
Coffee, roasting and grinding.....	11	313	0.3	4,728,582	1.0	909,889	0.6	-8.5	81.9	-73.0	57.8	65.0	45.3	41.3	45.4	16.0
Hosiery and knit goods.....	13	2,088	2.2	4,665,325	0.9	2,138,906	1.4	98.5	71.1	109.9	108.0	86.4	193.4	84.9	100.5	170.9
Furniture and refrigerators.....	61	1,739	1.9	4,215,497	0.9	2,467,858	1.6	2.6	9.3	25.3	12.1	38.4	31.7	32.2	15.5	51.4
Fur goods.....	36	838	0.9	4,207,468	0.9	1,530,828	1.0	-20.6	-14.6	63.5	11.4	11.7	70.8	-2.1	14.3	60.3
Gas, illuminating and heating.....	47	1,038	1.1	4,158,606	0.8	2,477,336	1.6	22.4	47.5	53.3	44.7	41.4	88.9	20.6	45.8	82.5
Agricultural implements.....	17	872	0.9	3,812,728	0.8	2,339,218	1.5	-14.0	-13.8	26.7	26.5	4.5	63.5	21.6	7.2	71.8
Copper, tin, and sheet-iron products.....	143	1,087	1.2	3,398,243	0.7	1,733,535	1.1	0.6	22.8	17.0	22.9	49.4	14.5	22.2	41.5	13.2
Marble and stone work.....	127	1,579	1.7	3,121,447	0.6	1,910,314	1.2	-9.2	110.2	-32.8	5.3	138.2	13.0	-0.5	112.4	7.1
Confectionery.....	78	843	0.9	3,039,435	0.6	1,310,072	0.8	17.9	10.7	64.4	29.5	40.1	67.2	34.2	29.3	75.2
Tobacco manufactures.....	324	1,261	1.4	2,872,493	0.6	1,744,024	1.1	-21.8	-9.4	14.0	-14.7	5.0	29.7	-17.3	0.1	38.8
Leather goods.....	95	750	0.8	2,505,751	0.6	1,117,578	0.7	-13.8	29.5	30.0	-0.5	44.6	37.8	-1.5	35.8	62.6
Brick, tile, pottery, and other clay products.....	65	1,446	1.6	2,582,846	0.5	1,715,098	1.1	-0.3	11.0	2.4	16.3	24.1	47.0	6.2	23.7	48.6
Copperage and wooden goods, not elsewhere specified.....	28	787	0.8	2,226,774	0.5	950,239	0.6	-7.4	14.8	2.5	1.8	15.0	11.4	24.3	7.6	12.0
Carriages and wagons and materials.....	129	854	0.9	2,205,608	0.4	1,175,642	0.8	-1.6	-6.0	-20.9	1.4	16.4	-11.4	-1.4	19.1	-12.5
Paint and varnish.....	15	144	0.2	1,683,962	0.3	622,613	0.4	-12.2	110.2	50.0	13.1	110.0	98.0	3.8	135.3	71.1
Artificial stone products.....	191	738	0.8	1,617,746	0.3	943,072	0.6	13.0	140.4	.....	48.4	183.9	.....	32.6	187.9	.....
Mattresses and spring beds.....	13	440	0.5	1,594,845	0.3	683,527	0.4	-2.9	135.9	-8.6	5.8	159.6	10.7	-1.3	145.8	24.6
Boxes and cartons, paper.....	13	650	0.7	1,321,846	0.3	771,968	0.5	9.2	85.3	36.8	29.2	124.3	132.7	42.4	132.6	82.0
Woolen goods.....	16	448	0.5	1,297,654	0.3	448,143	0.3	61.7	-19.2	14.3	85.7	-11.6	59.2	65.9	-17.7	45.8
Canning and preserving.....	35	436	0.5	1,284,340	0.3	478,288	0.3	5.1	57.8	115.6	-4.4	72.6	133.6	6.7	30.6	183.5
Mineral and soda waters.....	128	309	0.3	1,266,028	0.3	739,157	0.5	25.6	30.9	9.3	45.8	51.7	19.0	34.4	39.7	26.2
Automobiles, including bodies and parts.....	24	486	0.5	1,230,338	0.2	595,348	0.4	273.8	.....	.....	186.7	.....	.....	238.1	.....	.....
Millinery and lace goods.....	9	308	0.3	944,666	0.2	297,070	0.2	-38.2	.....	.....	1.6	.....	.....	-10.8	.....	.....
Cars and general shop construction and repairs by electric-railroad companies.....	8	435	0.5	862,575	0.2	495,761	0.3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Steam packing.....	5	174	0.2	752,521	0.2	398,874	0.3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Electrical machinery, apparatus, and supplies.....	17	236	0.3	748,048	0.2	401,107	0.3	26.2	10.0	97.7	42.4	24.1	86.0	31.0	29.1	123.6
Soap.....	6	46	(2)	614,028	0.1	151,308	0.1	.....	.....	.....	24.0	41.8	.....	-7.4	41.7	.....
Photo-engraving.....	11	234	0.3	605,781	0.1	515,027	0.3	39.3	64.7	92.4	73.1	141.4	107.1	65.6	154.9	103.3
Signs and advertising novelties.....	23	233	0.3	592,525	0.1	305,583	0.2	105.2	.....	.....	59.4	.....	.....	41.0	.....	.....
Paving materials.....	7	184	0.2	550,676	0.1	283,421	0.2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Furnishing goods, men's.....	6	142	0.2	456,263	0.1	129,532	0.1	-22.0	243.4	.....	8.6	211.1	.....	-23.7	275.6	.....
Awnings, tents, and sails.....	17	110	0.1	444,251	0.1	193,253	0.1	(3)	10.0	-4.8	12.4	39.1	29.7	14.2	39.7	7.1
Brass, bronze, and copper products.....	9	99	0.1	358,643	0.1	116,675	0.1	.....	.....	.....	158.3	.....	.....	143.8	.....	.....
Lime.....	5	223	0.2	342,490	0.1	203,513	0.1	9.9	58.6	.....	10.0	7.6	.....	20.8	4.3	.....

¹ Percentages are based on figures in Table 34; a minus sign (-) denotes decrease; percentages are omitted where base is less than 100, or where comparable figures can not be given.

² Less than one-tenth of 1 per cent.

³ Same number reported in both years.

Table 2—Continued.

INDUSTRY.	CENSUS OF 1914.						PER CENT OF INCREASE. ¹									
	Number of establishments.	Wage earners.		Value of products.		Value added by manufacture.		Wage earners (average number).			Value of products.			Value added by manufacture.		
		Average number.	Per cent distribution.	Amount.	Per cent distribution.	Amount.	Per cent distribution.	1909-1914	1904-1909	1899-1904	1909-1914	1904-1909	1899-1904	1909-1914	1904-1909	1899-1904
Gas and electric fixtures.....	15	111	0.1	341,289	0.1	176,655	0.1									
Shipbuilding, including boat building.	30	125	0.1	317,111	0.1	159,617	0.1	-40.2	-6.7	63.5	-15.9	10.2	52.7	-26.9	-8.8	72.7
Stoves and furnaces, not including gas and oil stoves.....	9	169	0.2	316,335	0.1	203,423	0.1	-8.6	69.7		-47.3	97.4		-42.8	75.7	
Musical instruments, pianos and organs.....	4	108	0.1	315,246	0.1	159,222	0.1	-24.5	62.2	-34.3	6.8	434.5	3.8	-5.4	522.2	(²)
Jewelry.....	25	154	0.2	307,833	0.1	204,736	0.1	29.4	58.7	257.1	20.8	68.9	420.7	22.0	71.4	716.7
Glass, cutting, staining, and ornamenting.....	15	153	0.2	283,075	0.1	188,063	0.1	16.8	32.3	167.6	19.4	73.0	107.6	21.3	74.2	111.9
Brooms.....	19	99	0.1	265,993	0.1	129,042	0.1				-1.5			1.5		
Hats and caps, other than felt, straw, and wool.....	9	127	0.1	240,849	(³)	80,492	0.1	119.0	-23.7		113.3	-1.7		30.6	6.9	
Paper goods, not elsewhere specified.....	6	112	0.1	240,397	(³)	135,884	0.1	28.7	262.5		-4.8	460.0		23.9	319.2	
Optical goods.....	8	54	0.1	218,776	(³)	143,826	0.1				167.1	3.8	-35.8	136.1	29.8	-50.0
Dairymen's, poultrymen's, and apiarists' supplies.....	7	61	0.1	218,512	(³)	127,646	0.1				87.2			85.5		
Clothing, women's.....	8	94	0.1	209,009	(³)	115,589	0.1				-31.5	-3.8	-25.8	-40.5	10.8	-27.0
Grease and tallow.....	11	39	(³)	207,993	(³)	78,137	(³)				16.8	24.4		5.8	50.8	
All other industries.....	339	4,908	5.3	24,751,322	5.0	8,368,412	5.3	-11.7	24.5	16.4	12.4	37.1	33.9	3.0	48.6	34.8

¹ Percentages are based on figures in Table 34; a minus sign (-) denotes decrease; percentages are omitted where base is less than 100, or where comparable figures can not be given.

² Same number reported in both years.

³ Less than one-tenth of 1 per cent.

Separate statistics are presented for 63 industries or industry groups, for each of which products valued at more than \$200,000 were reported in 1914. These industries include 9 with products exceeding \$10,000,000 in value, 5 with products between \$5,000,000 and \$10,000,000 in value, 24 between \$1,000,000 and \$5,000,000, and 25 with products valued at less than \$1,000,000. Among those included under the head of "all other industries," the statistics for which can not be shown separately without the possibility of disclosing the operations of individual establishments, are a number which have products exceeding in value some for which figures are shown in the table, the principal ones being bags, other than paper; belting, leather; iron and steel, blast furnaces; leather, tanned, curried, and finished; mats and matting; roofing materials; and stationery goods, not elsewhere specified. The manufacture of bags, other than paper, in which Minnesota ranked fourth among the states, is the most important of these industries.

The rank of some of the industries shown separately in the table changes to a marked degree when determined by average number of wage earners and value added by manufacture instead of by value of products. The flour-mill and gristmill industry, which ranked first in value of products, was fifth in number of wage earners and second in value added by manufacture. Lumber, third in value of products, was first in wage earners and value added by manufacture. Butter and cheese and slaughtering and meat packing are also of less importance when measured by the number of persons employed or the value added by the processes to which the raw material is subjected.

In rank according to the value of products there were a number of changes in 1914 as compared with

1909. Of the more important industries shown in the table, flour-mill and gristmill products, butter and cheese, and cars and general shop construction and repairs by steam railroad companies held the same rank in value of products at both censuses. Slaughtering and meat packing and the lumber industry exchanged places, while foundry and machine-shop products and printing and publishing reversed the order of their importance. Food preparations held the same rank at both censuses. For the remainder of these industries slight changes are noticeable from the earlier census to the later.

Flour-mill and gristmill products.—Minnesota is the leading state of the Union in this industry, contributing 30 per cent of the total value of products of the state and 16.9 per cent of the total value of products reported in 1914 for the industry in the entire United States. During the decade the value of the output increased 21.5 per cent, but there has been a steady decline in the percentage of increase shown from census to census. The statistics for 1914 include all mills grinding wheat, corn, rye, and other cereals, as well as those making hominy and grits, except custom mills grinding for toll or local consumption. Measured by value of products, the industry ranks first in the state. The growth of the industry is further evidenced by the increase in the average number of wage earners from 1909 to 1914, notwithstanding a decrease in the number of establishments. The decrease of 36 in the number of mills reported for 1914 as compared with 1909 (see Table 34) may be due in part to the fact that some mills engaged in merchant grinding during 1909 reported only custom work in 1914 and were not enumerated. It is also evident that some of the small mills went out of business during the period between the censuses.

Slaughtering and meat packing.—This classification includes wholesale slaughtering and meat-packing establishments and those engaged primarily in the manufacture of sausage. There has been a marked growth in the industry since 1899. In that year the value of products was \$7,810,555 and in 1914, \$47,710,059, an increase of \$39,899,504, or 510.8 per cent. In 1914 the industry ranked second in the state in value of products, having advanced from the third place which it held at the three previous censuses.

Lumber and timber products.—This industry embraces not only logging operations, sawmills, and planing mills, but also wooden-box factories, the manufacture of window and door screens and weather strips, and the cutting of logs for wood-pulp manufacture, etc. In capital invested, number of wage earners, amount paid in wages, and value added by manufacture it leads all others in the state. In value of products it was third in importance in the state in 1914 and second in 1909. The increase in this item from 1909 to 1914 was \$2,322,441, or 5.5 per cent.

Butter and cheese.—The establishments included under this classification are engaged almost wholly in the manufacture of butter, as very little cheese was manufactured in 1914. The industry developed rapidly during the decade 1904–1914, the value of products increasing from \$12,871,129 to \$33,746,396, a gain of 162.2 per cent. For the five-year period 1909–1914 the value of products increased \$8,458,934, or 33.5 per cent. In the production of butter alone Minnesota ranks second among the states of the Union, but in the combined industries, butter, cheese, and condensed milk, it holds third place. In 1914 there was one establishment in the state manufacturing condensed milk.

Foundry and machine-shop products.—Not only foundries and machine shops, but also such allied industries as the manufacture of engines, gas meters, hardware, plumbers' supplies, steam fittings, structural ironwork, and automobile repairing are included in this classification. A number of the most important establishments were engaged in the manufacture of structural steel, ornamental and architectural ironwork, and various classes of engines and castings. The large increase in number of establishments is due to the inclusion in 1914 of 150 shops where the repair work on automobiles was of the character of machine-shop work. The value of products more than doubled during the decade 1904–1914 and for the five-year period 1909–1914 increased \$5,796,307, or 37.1 per cent.

Cars and general shop construction and repairs by steam-railroad companies.—The industry represents the work done in the steam-railroad repair shops but does not include the minor repairs made in round-houses. The operations consist almost exclusively of

repairs to the rolling stock and equipment. The railroad repair shops gave employment in 1914 to more wage earners—10,551—and distributed a greater amount for wages—\$7,544,270—than any other industry in the state, with the exception of lumber.

Liquors, malt.—This industry more than doubled its products during the decade. There was no increase in the number of breweries from 1909 to 1914, but the average number of wage earners increased 24.1 per cent, and the value of products 35 per cent.

Oil, linseed.—Flax, which is one of the principal agricultural products of Minnesota and the Dakotas, furnishes the raw material for the manufacture of linseed oil. Recent improvements in the methods of agriculture and the rotation of crops have made it highly profitable to raise flax, thereby stimulating the manufacture of linseed oil. In 1889 there were only three establishments located in the state, and the production of oil in that year was valued at \$1,548,000. During the decade following the value of the output increased \$1,725,000, or 111.4 per cent, while from 1899 to 1909 it advanced from \$3,273,000 to \$11,037,000, a gain of 237.2 per cent. In 1914 Minnesota ranked second only to New York in the production of linseed oil. Of the total value of the output in the United States, this state contributed more than one-fourth. During the five years from 1909 to 1914 the value of products advanced \$1,319,990, or 12 per cent.

Persons engaged in manufacturing industries.—Table 3 shows, for 1909 and 1914, the number of persons engaged in manufactures, distributed by sex, the average number of wage earners being distributed also by age. The sex and age classification of the average number of wage earners in this and other tables is an estimate obtained by the method described in the "Explanation of terms."

CLASS.	Census year.	Total.	Male.	Female.	Per cent of total.	
					Male.	Female.
All classes.....	1914	115,690	100,158	15,532	86.6	13.4
	1909	104,406	90,058	14,348	86.3	13.7
Proprietors and officials.....	1914	9,542	9,300	242	97.5	2.5
	1909	9,142	8,908	234	97.4	2.6
Proprietors and firm members..	1914	5,233	5,071	162	96.9	3.1
	1909	5,376	5,206	170	96.8	3.2
Salaried officers of corporations	1914	1,731	1,681	50	97.1	2.9
	1909	1,596	1,560	36	97.7	2.3
Superintendents and managers	1914	2,578	2,548	30	98.8	1.2
	1909	2,170	2,142	28	98.7	1.3
Clerks and other subordinate salaried employees.	1914	13,314	10,163	3,151	76.3	23.7
	1909	10,497	7,891	2,606	75.2	24.8
Wage earners (average number).....	1914	92,834	80,095	12,139	86.9	13.1
	1909	84,767	73,259	11,508	86.4	13.6
16 years of age and over.....	1914	92,560	80,509	12,051	87.0	13.0
	1909	84,461	73,038	11,423	86.5	13.5
Under 16 years of age.....	1914	274	196	88	67.9	32.1
	1909	306	221	85	72.2	27.8

Of the 115,690 persons engaged in the manufactures of the State during 1914, more than four-fifths were wage earners. The sex distribution of this class was 86.9 per cent male and 13.1 per cent female. Clerks and other salaried employees, numbering 13,314, showed a larger proportion of females than any of the other classes, but the relative importance of this class was slightly less than in 1909. Of the 9,542

proprietors and officials, males constituted 97.5 per cent. Figures for individual industries will be found in Table 35.

Table 4 gives, for the several classes of persons engaged in manufactures, the percentages of increase from 1909 to 1914 and the per cent distribution at the two censuses.

Table 4

CLASS.	PERSONS ENGAGED IN MANUFACTURING INDUSTRIES.								
	Per cent of increase, ¹ 1909-1914.			Per cent distribution.					
	Total.	Male.	Female.	Total.		Male.		Female.	
				1914	1909	1914	1909	1914	1909
All classes.....	10.8	11.2	8.3	100.0	100.0	100.0	100.0	100.0	100.0
Proprietors and officials.....	4.4	4.4	3.4	8.2	8.8	9.3	9.9	1.6	1.6
Proprietors and firm members.....	-2.7	-2.6	-4.7	4.5	5.1	5.1	5.8	1.0	1.2
Salaried officers of corporations.....	8.5	7.8	.....	1.5	1.5	1.7	1.7	0.3	0.3
Superintendents and managers.....	18.8	19.0	.....	2.2	2.1	2.5	2.4	0.2	0.2
Clerks and other subordinate salaried employees.....	26.8	28.8	20.9	11.5	10.1	10.1	8.8	20.3	18.2
Wage earners (average number).....	9.5	10.2	5.5	80.2	81.2	80.6	81.3	78.2	80.2
16 years of age and over.....	9.6	10.2	5.5	80.0	80.9	80.4	81.1	77.6	79.6
Under 16 years of age.....	-10.5	-15.8	.....	0.2	0.3	0.2	0.2	0.6	0.6

¹ A minus (-) denotes decrease; percentages are omitted where base is less than 100.

With the exception of proprietors and firm members and wage earners under 16 years of age, there was an increase in all classes of employees engaged in the manufactures of the state. The decrease in the number of proprietors and firm members is most pronounced in the butter and cheese, flour-mill and grist-mill, and lumber industries, and is accounted for by the fact that a number of small establishments went out of business between censuses, while some controlled by individuals or partners later became incorporated companies. The decrease in the number of children employed is insignificant when considered in relation to the proportion which this class forms of the total number of wage earners, being two-tenths of 1 per cent in 1914 and three-tenths of 1 per cent in 1909. Wage earners over 16 years of age represented 80 per cent of the total number of persons engaged in manufacturing industries in the state in 1914 and 80.9 per cent in 1909.

In order to compare the distribution of persons engaged in manufactures in 1914 with that shown at the census of 1904 it is necessary to use the classification employed at the earlier census. (See "Explanation of terms.")

Table 5 makes this comparison according to occupational status.

The table shows that during the decade ending with 1914, there were slight decreases in the proportions which proprietors and firm members and wage earners form of the total number of persons engaged in the manufactures of the state and a corresponding increase

in the proportion of salaried employees. The decrease in proprietors and firm members shown for the five-year period 1909-1914 is explained in the analysis of Table 4.

Table 5

Class.	PERSONS ENGAGED IN MANUFACTURING INDUSTRIES.								
	Number.			Per cent distribution.			Per cent of increase. ¹		
	1914	1909	1904	1914	1909	1904	1909-1914	1904-1909	
Total.....	115,690	104,406	83,301	100.0	100.0	100.0	10.8	25.3	
Proprietors and firm members.....	5,233	5,376	4,524	4.5	5.1	5.4	-2.7	18.8	
Salaried employees.....	17,623	14,293	9,141	15.2	13.7	11.0	23.6	56.0	
Wage earners (average).....	92,834	84,767	69,636	80.2	81.2	83.6	9.5	21.7	

¹ A minus sign (-) denotes decrease.

The average number of wage earners employed and their per cent distribution as males 16 years of age and over, females 16 years and over, and children under 16 years is given in Table 6 for 1914, 1909, and 1904. The table also shows, for some of the important industries separately, a similar distribution of wage earners for 1914 and 1909.

For all industries combined, there was but slight fluctuation from census to census in the proportion of male and female wage earners over 16 years of age, but the proportion for children has gradually declined.

Of the 41 industries for which comparative figures are given in Table 6, 19 show an increased proportion of males and 18 an increased proportion of females, while in but 7 has there been an increase in

the proportion of children. Nine of the industries that gave employment to children in 1909 reported no employees of this class for 1914.

The industries in which women greatly predominate as wage earners are men's clothing, hosiery and knit goods, and millinery and lace goods. In the manufacture of confectionery, fur goods, patent medicines and compounds, paper boxes, food preparations, and in the roasting and grinding of coffee, although the proportion was smaller, the females also outnumbered

the males. In the preparation of food products, the compounding of patent medicines and drugs, and in the manufacture of signs and advertising novelties there were considerable increases in the proportion of female wage earners 16 years of age and over in 1914, as compared with 1909. In the canning and preserving industry children under 16 years of age formed 9.2 per cent of the total average number of wage earners in 1909, as compared with nine-tenths of 1 per cent in 1914.

Table 6

INDUSTRY.	Census year.	WAGE EARNERS.					INDUSTRY.	Census year.	WAGE EARNERS.				
		Average number. ¹	Per cent of total.			Under 16 years of age.			Average number. ¹	Per cent of total.			Under 16 years of age.
			16 years of age and over.		Under 16 years of age.					16 years of age and over.		Under 16 years of age.	
			Male.	Female.						Male.	Female.		
All Industries.....	1914 1909 1904	92,894 84,767 89,636	86.7 86.2 87.4	13.0 13.5 12.1	0.3 0.4 0.5	Fur goods.....	1914 1909	838 1,056	37.7 42.7	62.3 57.2	0.1		
Agricultural implements.....	1914 1909	872 1,014	100.0 99.8	.....	0.2	Furniture and refrigerators.....	1914 1909	1,730 1,695	98.8 98.4	0.9 0.9	0.3 0.7	
Artificial stone products.....	1914 1909	738 653	99.9 100.0	0.1	.....	Gas, illuminating and heating.....	1914 1909	1,038 848	100.0 100.0	.....	.....
Automobiles, including bodies and parts..	1914 1909	486 130	99.8 95.4	0.2 4.6	.....	Hosiery and knit goods.....	1914 1909	2,088 1,052	14.6 15.6	85.4 81.7	2.7	
Boots and shoes.....	1914 1909	2,012 2,094	71.1 63.8	28.2 35.7	0.7 0.5	Leather goods.....	1914 1909	750 870	89.5 82.9	5.9 17.1	13.6		
Boxes and cartons, paper.....	1914 1909	650 595	43.7 44.4	55.4 54.8	0.9 0.8	Lime.....	1914 1909	223 203	100.0 100.0	.....	.....
Bread and other bakery products.....	1914 1909	2,169 1,696	72.2 70.8	27.1 28.3	0.7 0.0	Liquors, malt.....	1914 1909	2,052 1,053	99.8 97.1	0.2 2.8	0.1		
Brick, tile, pottery, and other clay products.	1914 1909	1,440 1,450	100.0 99.2	0.1	0.7	Lumber and timber products.....	1914 1909	20,947 20,704	99.8 99.7	0.2 0.2	0.1 0.1		
Butter and cheese.....	1914 1909	1,458 1,184	97.7 99.0	2.1 0.7	0.2 0.3	Marble and stone work.....	1914 1909	1,570 1,738	100.0 99.9	.....	0.1	
Canning and preserving.....	1914 1909	436 415	61.9 51.3	37.2 39.5	0.9 9.2	Mattresses and spring beds.....	1914 1909	440 453	87.3 85.9	12.7 14.1	.....	
Carriages and wagons and materials.....	1914 1909	854 808	99.4 99.4	0.6 0.6	.....	Millinery and lace goods.....	1914 1909	398 498	10.1 2.4	89.9 97.6	.....	
Cars and general shop construction and repairs by steam-railroad companies.	1914 1909	10,551 8,232	99.9 99.9	(²) 0.1	0.1	Mineral and soda waters.....	1914 1909	369 246	95.5 94.3	4.5 3.7	2.0		
Clothing, men's, including shirts.....	1914 1909	2,468 2,156	23.3 10.6	76.6 89.4	0.1	Oil, linseed.....	1914 1909	400 374	100.0 100.0	.....	.....
Coffee, roasting and grinding.....	1914 1909	313 342	44.4 30.9	55.6 58.2	0.9	Paper and wood pulp.....	1914 1909	1,345 607	97.4 98.4	2.6 1.6	.....	
Confectionery.....	1914 1909	843 715	33.3 35.9	66.5 63.5	0.2 0.6	Patent medicines and compounds and druggists' preparations.	1914 1909	613 475	43.9 56.0	56.0 43.4	0.2 0.6		
Cooperage and wooden goods, not elsewhere specified.	1914 1909	787 850	98.6 98.2	2.0 1.4	0.4	Photo-engraving.....	1914 1909	234 168	87.6 94.6	12.4 5.4	.....	
Copper, tin, and sheet-iron products.....	1914 1909	1,087 1,081	93.4 94.4	6.5 5.6	0.1	Printing and publishing.....	1914 1909	6,134 5,611	76.3 73.8	22.5 25.3	1.2 0.9		
Electrical machinery, apparatus, and supplies.	1914 1909	236 187	94.1 96.3	5.5 2.1	0.4 1.6	Signs and advertising novelties.....	1914 1909	238 116	62.2 94.8	37.8 5.2	.....	
Flour-mill and gristmill products.....	1914 1909	4,564 4,345	98.0 98.3	2.0 1.7	.....	Slaughtering and meat packing.....	1914 1909	2,587 1,921	97.6 97.5	2.4 2.2	0.3	
Food preparations, not elsewhere specified.	1914 1909	426 465	45.1 50.1	54.7 49.6	0.2 0.2	Tobacco manufactures.....	1914 1909	1,261 1,613	69.6 72.5	29.7 26.5	0.7 1.0		
Foundry and machine-shop products.....	1914 1909	7,951 6,002	99.6 99.5	0.3 0.4	0.1 0.1	Woolen goods.....	1914 1909	448 277	54.2 63.1	45.5 46.2	0.3 0.7		
						All other industries.....	1914 1909	7,816 7,575	74.4 72.4	25.5 27.1	0.1 0.5		

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

² Less than one-tenth of 1 per cent.

Table 7 shows the average number and the per cent distribution of wage earners employed in each of the eight cities having more than 10,000 inhabitants, classified according to age periods and in the case of

those 16 years of age and over, according to sex, for 1914, 1909, and 1904. Statistics for Virginia can not be shown separately without disclosing the operations of individual establishments.

Table 7

SEX AND AGE.	Cen- sus year.	AVERAGE NUMBER OF WAGE EARNERS IN--							
		Duluth.	Hibbing.	Mankato.	Minneapolis.	St. Cloud.	St. Paul.	Stillwater.	Winona.
Total.....	1914	5,538	65	755	28,295	1,429	10,483	621	2,070
	1909	6,083	....	807	26,902	620	10,339	688	2,032
	1904	3,987	....	724	21,671	....	14,363	655	1,953
10 years of age and over:									
Male.....	1914	4,956	56	637	22,791	1,320	15,340	482	1,630
	1909	5,015	....	662	22,822	595	14,553	532	1,630
	1904	3,093	....	567	18,402	....	10,673	905	1,727
Female.....	1914	574	9	118	5,479	108	4,108	127	422
	1909	444	....	135	4,074	30	4,742	153	396
	1904	273	....	102	3,202	....	3,658	50	218
Under 16 years of age..									
	1914	8	....	....	34	1	37	12	9
	1909	23	....	10	60	1	44	3	6
	1904	21	....	56	67	....	32	....	8
Per cent of total:									
10 years of age and over:									
Male.....	1914	89.5	86.2	84.4	80.5	92.4	78.7	77.6	79.2
	1909	82.3	....	82.0	84.6	95.0	75.3	77.3	80.2
	1904	62.6	....	78.3	84.9	....	74.3	64.8	88.4
Female.....	1914	10.4	13.8	15.6	19.3	7.6	21.1	20.5	20.4
	1909	7.3	....	16.7	15.1	4.8	24.5	22.2	19.5
	1904	6.8	....	14.1	14.8	....	25.5	5.2	11.2
Under 16 years of age.									
	1914	0.1	....	....	0.1	0.1	0.2	1.9	0.4
	1909	0.4	....	1.2	0.2	0.2	0.2	0.4	0.3
	1904	0.5	....	7.6	0.3	....	0.2	....	0.4

¹ Figures do not agree with those published because it was necessary to revise them in order to include data only for those establishments located within the corporate limits of the city.

Table 8 gives percentages of increase from census to census, based on figures in Table 7.

Table 8

CITY.	PER CENT OF INCREASE IN AVERAGE NUMBER OF WAGE EARNERS. ¹				
	Period.	Total.	16 years of age and over.		Under 16 years of age.
			Male.	Female.	
Duluth.....	1904-1914	38.9	34.2	110.3	....
	1909-1914	-9.0	-11.7	29.3	....
	1904-1909	52.6	52.0	62.6	....
Mankato.....	1904-1914	4.3	12.3	15.7	....
	1909-1914	-6.4	-3.8	-12.6	....
	1904-1909	11.5	16.8	32.4	....
Minneapolis.....	1904-1914	30.0	23.9	70.8	....
	1909-1914	4.9	-0.1	34.3	....
	1904-1909	24.4	24.0	27.2	....
St. Cloud.....	1904-1914	....	....	....	....
	1909-1914	....	....	....	....
	1904-1909	128.3	121.8	....	....
St. Paul.....	1904-1914	35.6	43.7	12.2	....
	1909-1914	0.7	5.4	-13.4	....
	1904-1909	34.6	36.4	29.6	....
Stillwater.....	1904-1914	-35.0	-46.7	....	....
	1909-1914	-9.7	-9.4	-17.0	....
	1904-1909	-28.0	-41.2	....	....
Winona.....	1904-1914	6.0	-5.1	93.6	....
	1909-1914	1.9	0.6	6.6	....
	1904-1909	4.0	-5.6	81.7	....

¹ A minus sign (-) denotes decrease; percentages are omitted where base is less than 100.

Of the eight cities for which separate totals are given, the manufactures in five gave employment to more than 1,000 wage earners on the average during the year. Minneapolis reported nearly one-third of the total wage earners of the state, and nearly one-half of the combined total for the cities shown in the

table. Four cities for which comparative figures are given show increases from census to census in the number of women employed.

The number of male wage earners greatly exceeds that of female in all cities, but an increasing proportion of women is shown in several cities. The number of female wage earners reported for St. Paul, Mankato, and Stillwater was less than the number in 1909. Minneapolis employed more women than any other city—principally in the manufacture of hosiery and knit goods, bags, and men's clothing. The manufactures of St. Paul, however, gave employment to the largest proportion of female wage earners, the industries furnishing employment being fur goods and millinery and lace goods.

The employment of children in the cities of Minnesota showed a steady decline from census to census. The total reported for the eight cities in 1914 was only 101, as compared with 154 in 1909, and 183 in 1904.

Wage earners employed, by months.—The following table gives, for all industries combined, the total number of wage earners employed on the 15th of each month, or the nearest representative day, for the years 1914 and 1909, and for 1904 the average number employed during each month, together with the percentage which the number reported for each month forms of the greatest number reported for any month.

Table 9

MONTH.	WAGE EARNERS IN MANUFACTURING INDUSTRIES.					
	Number. ¹			Per cent of maximum.		
	1914	1909	1904	1914	1909	1904
January.....	98,336	79,918	68,195	98.2	88.2	61.5
February.....	100,110	80,909	68,793	100.0	80.3	62.2
March.....	96,982	82,081	68,460	96.9	80.6	61.9
April.....	92,417	81,134	65,771	92.3	80.5	58.3
May.....	92,257	82,952	69,055	92.2	81.5	62.7
June.....	92,310	85,038	69,603	92.2	83.8	63.4
July.....	92,007	84,607	68,806	91.9	83.4	62.5
August.....	91,128	85,817	69,992	91.0	84.7	63.9
September.....	89,739	87,613	71,358	89.6	85.7	65.8
October.....	90,525	90,020	74,507	90.4	89.0	66.0
November.....	89,202	89,593	72,275	89.1	88.8	67.0
December.....	88,995	86,896	68,817	88.9	85.9	62.4

¹ The figures for 1914 and 1909 represent the number employed on the 15th of each month, or the nearest representative day; those for 1904, the average number employed during the month.

The greatest number of wage earners were employed in the first three months of 1914, the maximum number, 100,110, being reported for February. During 1904 and 1909 the greatest activity is shown for the fall months, the maximum number appearing for October. The greatest difference between the maximum and minimum months in any one of the three census years was 11,115 in 1914.

Table 10 gives the total average number of wage earners employed during 1914, together with the total number employed on the 15th of each month, or the nearest representative day, for the combined industries of the state, for a number of selected industries,

and for the total industries of each city having a population of more than 10,000, for which statistics can be shown.

Table 10 shows that for the majority of the principal industries of the state there is a satisfactory stability of employment. Lumber, the most important industry, as measured by the number of wage earners, shows the greatest actual difference between the minimum and maximum months of employment. The timber camps which operate in winter account for the heavy enrollment of labor during that season. Brick and tile, also a seasonal industry, but of less

importance, shows a greater relative fluctuation, the number of wage earners reported for the minimum month of employment being 35.8 per cent of the number for the maximum month. Agricultural implement factories also show wide variation between the periods of greatest and least activity, March showing the employment of 1,104 wage earners and November only 414. The least fluctuation in number employed is shown for printing and publishing and tobacco manufactures, for which industries the percentages that the minimum formed of the maximum were 98.3 and 97.2, respectively.

Table 10

WAGE EARNERS: 1914.

[Month of maximum employment for each industry is indicated by boldface figures and that of minimum by italic figures.]

INDUSTRY AND CITY.	Average number employed during year.	Number employed on 15th day of the month or nearest representative day.												Per cent minimum is of maximum.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
All industries.....	92,834	98,336	100,110	96,982	<i>92,417</i>	<i>92,257</i>	<i>92,310</i>	<i>92,007</i>	<i>91,128</i>	<i>89,739</i>	<i>90,525</i>	<i>89,202</i>	<i>88,985</i>	88.9
Agricultural implements.....	872	1,031	1,091	1,104	1,065	998	957	1,012	782	554	532	<i>414</i>	924	37.5
Boots and shoes.....	2,012	1,964	2,288	2,151	2,100	2,115	2,047	2,026	1,827	1,761	1,900	2,027	1,968	77.2
Bread and other bakery products.....	2,169	2,073	2,094	2,095	2,140	2,158	2,199	2,182	2,194	2,250	2,227	2,192	2,224	92.1
Brick, tile, pottery, and other clay products.....	1,446	801	802	900	1,224	1,928	2,200	2,235	2,170	1,770	1,365	1,071	888	35.8
Butter and cheese.....	1,458	1,325	1,319	1,346	1,440	1,515	1,597	1,697	1,582	1,520	1,443	1,411	1,401	82.6
Carriages and wagons and materials.....	854	890	946	946	914	856	854	870	870	800	756	<i>751</i>	795	79.4
Cars and general shop construction and repairs by steam-railroad companies.....	10,551	10,495	10,573	11,005	10,764	10,516	10,526	10,743	10,440	10,424	10,510	10,516	<i>10,100</i>	91.8
Clothing, men's, including shirts.....	2,468	2,649	2,607	2,646	2,597	2,652	2,433	2,319	2,425	2,426	2,326	2,217	2,319	83.6
Confectionery.....	843	769	817	795	785	766	732	717	780	978	1,000	977	1,000	71.7
Copper, tin, and sheet-iron products.....	1,087	<i>966</i>	973	1,010	1,061	1,149	1,187	1,202	1,205	1,185	1,104	1,021	981	80.2
Flour-mill and gristmill products.....	4,564	4,647	4,673	4,588	4,492	4,483	4,485	<i>4,466</i>	4,482	4,661	4,530	4,616	4,645	95.6
Foundry and machine-shop products.....	7,051	6,690	6,566	6,601	6,943	7,189	7,488	7,646	7,655	7,465	7,105	6,601	6,633	86.2
Fur goods.....	838	760	771	778	781	765	761	818	864	898	920	970	970	78.4
Furniture and refrigerators.....	1,739	<i>1,634</i>	1,776	1,780	1,814	1,829	1,801	1,785	1,705	1,726	1,701	1,681	1,636	89.3
Gas, illuminating and heating.....	1,038	880	878	<i>869</i>	1,052	1,236	1,170	1,144	1,162	1,105	1,054	995	911	70.3
Hosiery and knit goods.....	2,088	<i>1,974</i>	2,052	2,150	2,118	2,075	2,146	2,057	2,110	2,114	2,111	2,058	2,091	91.8
Liquors, malt.....	2,052	1,934	<i>1,892</i>	1,914	1,960	2,046	2,315	2,370	2,304	2,081	1,994	1,907	1,907	79.8
Lumber and timber products.....	20,947	20,295	29,647	25,851	20,479	19,302	18,251	17,588	16,981	<i>16,181</i>	18,698	19,263	19,848	54.5
Marble and stone work.....	1,579	<i>1,029</i>	1,163	1,329	1,539	1,702	1,798	1,828	1,837	1,839	1,706	1,605	1,493	56.0
Paper and wood pulp.....	1,345	1,389	1,467	1,437	1,413	1,366	1,306	1,303	1,261	1,284	1,336	1,317	<i>1,261</i>	86.0
Printing and publishing.....	6,134	6,077	6,110	6,141	6,161	6,147	6,175	6,115	6,130	6,179	6,117	6,126	6,130	98.3
Slaughtering and meat packing.....	2,587	2,977	2,836	2,661	2,478	2,223	2,444	2,494	2,271	2,291	2,416	2,921	3,032	73.3
Tobacco manufactures.....	1,261	1,263	1,264	1,258	1,250	<i>1,241</i>	1,241	1,254	1,277	1,275	1,267	1,274	1,268	97.2
All other industries.....	15,851	14,824	15,505	15,627	15,847	16,002	16,197	16,236	16,814	17,002	16,317	15,271	<i>14,570</i>	85.7
Total for cities ¹	58,256	58,000	59,360	58,961	<i>58,173</i>	<i>58,604</i>	<i>59,097</i>	<i>58,900</i>	<i>58,507</i>	<i>58,340</i>	<i>57,486</i>	<i>57,040</i>	<i>56,604</i>	95.4
DULUTH.....	5,538	7,084	7,059	6,666	5,205	4,768	4,688	4,718	4,692	4,719	4,977	5,747	6,133	66.2
HIBBING.....	65	71	71	67	64	63	64	66	66	61	63	64	62	85.9
MANKATO.....	755	<i>631</i>	640	703	807	846	829	837	834	798	744	694	697	74.6
MINNEAPOLIS.....	28,295	26,950	27,663	27,587	28,158	28,688	29,211	29,013	29,479	29,448	28,582	27,651	27,110	91.4
ST. CLOUD.....	1,429	<i>1,320</i>	1,335	1,343	1,393	1,448	1,485	1,513	1,455	1,480	1,463	1,452	1,461	87.2
ST. PAUL.....	19,483	19,090	19,782	19,764	19,761	19,934	19,932	19,890	19,319	19,355	19,231	19,049	18,689	93.8
STILLWATER.....	621	778	781	770	736	772	742	702	487	423	417	421	423	53.4
WINGONA.....	2,070	2,076	2,029	2,061	2,049	2,085	2,146	2,163	2,175	2,056	2,009	<i>1,962</i>	2,029	90.2

¹ Excludes Virginia, to avoid disclosure of individual operations.

In 1914 the average number of wage earners in all industries combined was 92,834 as compared with 84,767 in 1909, but a comparison of the selected industries covered by the table shows a wide diversity of increase and decrease in the number employed. Flour-mill and gristmill products, the largest manufacturing industry in the state, shows an increase of 219 in the average number of wage earners but less fluctuation in monthly employment in the later year

than in the earlier, the percentage which the minimum number formed of the maximum in 1914 being 95.6, as compared with 87 in 1909. On the other hand, the lumber and timber industry, for which there appears a slight increase in average number of wage earners during the five-year period 1909-1914, showed a much greater fluctuation in 1914 than in 1909, the percentages which the minimum formed of the maximum number being 54.5 and 83, respec-

tively. Bread and other bakery products, flour-mill and gristmill products, printing and publishing, and the tobacco industry showed the most constant employment of wage earners. The leading cities, Minneapolis, St. Paul, and Winona, show stability of employment, the percentage which the number reported for the minimum month of employment formed of the maximum, being 91.4, 93.8, and 90.2, respectively. The greatest fluctuation in the employment of wage earners was reported in Stillwater, where the proportion that the minimum number formed of the maximum was 53.4 per cent.

Prevailing hours of labor.—In Table 11 the average number of wage earners reported for 1914 and 1909, for all industries combined and for selected industries throughout the state have been classified according to number of hours of labor per week prevailing in the establishments in which they were employed. A similar classification is given for 1914 only, for all industries combined in each city having more than 10,000 inhabitants for which separate statistics can be given. The number employed in each establishment is classified as a total even though a few employees worked a greater or less number of hours.

INDUSTRY AND CITY.	Census year.	AVERAGE NUMBER OF WAGE EARNERS.								
		Total.	In establishments where the prevailing hours of labor per week were—							
			48 and under.	Between 48 and 54.	54	Between 54 and 60.	60	Between 60 and 72.	72	Over 72.
All industries.....	1914	92,834	14,041	8,499	18,116	13,753	35,563	1,744	934	184
	1909	84,767	7,745	6,452	12,754	14,206	40,103	1,680	1,269	538
Agricultural implements.....	1914	872	1	.....	9	179	683	.....	.....	.....
	1909	1,014	1	.....	8	39	268	.....	.....	.....
Boots and shoes.....	1914	2,012	39	.....	432	779	762	.....	.....	.....
	1909	2,664	.....	.....	8	1,732	920	.....	.....	.....
Bread and other bakery products.....	1914	2,169	232	74	983	75	776	23	5	1
	1909	1,696	121	4	202	26	1,255	76	10	2
Brick, tile, pottery, and other clay products.....	1914	1,446	283	11	182	8	975	7	.....	.....
	1909	1,450	182	.....	40	17	1,210	1	.....	.....
Butter and cheese.....	1914	1,458	235	20	309	10	809	54	16	5
	1909	1,184	245	4	114	40	692	43	42	4
Carriages and wagons and materials.....	1914	854	12	27	164	411	240	.....	.....	.....
	1909	868	3	25	36	182	622	.....	.....	.....
Cars and general shop construction and repairs by steam-railroad companies.....	1914	10,551	2,031	1,746	2,257	3,049	1,067	401	.....	.....
	1909	8,232	336	1,484	4,014	.....	2,159	239	.....	.....
Clothing, men's, including shirts.....	1914	2,468	738	1,035	528	136	31	.....	.....	.....
	1909	2,156	149	272	642	1,040	53	.....	.....	.....
Confectionery.....	1914	843	22	36	435	297	53	.....	.....	.....
	1909	715	4	4	47	159	501	.....	.....	.....
Copper, tin, and sheet-iron products.....	1914	1,087	473	24	146	287	157	.....	.....	.....
	1909	1,081	463	118	143	268	89	.....	.....	.....
Flour-mill and gristmill products.....	1914	4,564	1,458	.....	904	18	1,646	355	181	2
	1909	4,345	353	3	1,300	907	1,207	343	232	.....
Foundry and machine-shop products.....	1914	7,051	200	389	1,126	3,747	1,547	42	.....	.....
	1909	6,002	32	57	856	3,398	1,639	.....	.....	.....
Fur goods.....	1914	838	23	472	340	3	.....	.....	.....	.....
	1909	1,056	146	610	254	2	44	.....	.....	.....
Furniture and refrigerators.....	1914	1,739	14	9	423	442	851	.....	.....	.....
	1909	1,695	10	16	356	77	1,236	.....	.....	.....
Gas, illuminating and heating.....	1914	1,038	13	.....	18	633	43	287	17	27
	1909	848	15	.....	4	.....	9	7	813	.....
Hosiery and knit goods.....	1914	2,088	35	32	2,021	48	138	.....	.....	.....
	1909	1,052	.....	.....	48	866	.....	.....	.....	.....
Liquors, malt.....	1914	2,052	1,057	3	645	.....	347	.....	.....	.....
	1909	1,653	617	.....	438	206	392	.....	.....	.....
Lumber and timber products.....	1914	20,947	28	425	1,668	706	17,770	343	7	.....
	1909	20,704	133	.....	226	442	19,574	324	5	.....
Marble and stone work.....	1914	1,578	971	14	184	197	213	.....	.....	.....
	1909	1,738	714	.....	149	326	549	.....	.....	.....
Paper and wood pulp.....	1914	1,345	.....	.....	.....	900	77	448	445	26
	1909	607	.....	.....	.....	.....	.....	.....	.....	.....
Printing and publishing.....	1914	6,134	3,442	1,639	795	64	172	22	.....	.....
	1909	5,641	1,905	2,106	863	395	210	162	.....	.....
Slaughtering and meat packing.....	1914	2,587	1	15	13	9	2,549	.....	.....	.....
	1909	1,921	1	13	22	2	1,881	2	.....	.....
Tobacco manufactures.....	1914	1,261	925	210	78	2	46	.....	.....	.....
	1909	1,613	1,173	290	39	34	77	.....	.....	.....
All other industries.....	1914	15,851	1,808	2,318	4,476	2,701	3,926	210	263	149
	1909	14,832	1,142	1,442	2,947	4,048	4,581	35	111	526
Total for cities ¹	1914	58,256	12,267	7,777	14,361	10,688	11,676	837	545	105
DULUTH.....	1914	5,538	464	308	1,364	797	2,264	183	83	75
HIBBING.....	1914	65	42	.....	5	.....	18	.....	.....	.....
MANKATO.....	1914	755	55	24	239	9	397	27	4	.....
MINNEAPOLIS.....	1914	28,295	6,403	1,612	9,013	5,464	5,559	195	244	5
St. Cloud.....	1914	1,429	486	96	95	49	678	10	15	.....
St. Paul.....	1914	19,483	4,592	5,230	2,980	3,667	2,406	422	182	4
STILLWATER.....	1914	621	60	4	46	.....	290	.....	17	.....
WINONA.....	1914	2,070	165	508	619	498	264	.....	.....	21

¹ Excludes Virginia, to avoid disclosure of individual operations.

The figures in the preceding table, for the state as a whole and for most of the individual industries, emphasize the tendency toward a shortening of the working day. The entire increase of 8,067 in the number of wage earners occurred in establishments in which the prevailing hours of labor were 54 or less per week. Four of the five groups of establishments operating more than 54 hours per week show a decrease in the number of wage earners employed. In 1909, 43,610, or more than one-half of the total average number of the total wage earners in all industries combined were employed in establishments where the prevailing hours of labor were 60 or more per week, while but 38,425, or more than two-fifths, were so employed in 1914. On the other hand, the number of wage earners in establishments whose working hours were less than 60 per week increased from 41,157 in 1909 to 54,409 in 1914. Establishments operating on the 10-hour a day basis employed the largest number of wage earners in 1914, as in 1909. The lumber industry contributed almost one-half of the employees in this group at both censuses.

Among the separate industries, men's clothing shows the most pronounced decrease in hours of labor. In 1909, 49.3 per cent of the wage earners in this industry were employed in establishments where the hours of

labor were 54 or less per week, while in 1914 the proportion thus employed had increased to 93.2 per cent. In the hosiery and knit goods industry in 1909 only 4.6 per cent of the wage earners were employed in establishments reporting their prevailing hours of labor as 54 or less per week, but in 1914 all of the wage earners in this industry were employed in establishments where such hours prevailed. Foundry and machine-shop products, lumber and timber products, and printing and publishing also show decreased hours of employment.

Of the 58,256 wage earners in the cities for which separate statistics can be given in 1914, 45,093, or more than three-fourths, were in establishments where the prevailing hours were less than 60 per week, while only 13,163 were in establishments in which the hours were 60 or more per week. In Minneapolis the greatest number of wage earners were employed in establishments operating 54 hours per week, while in St. Paul the greatest number were employed from 48 to 54 hours.

Location of establishments.—Table 12 shows, for 1914, 1909, and 1899, the extent to which the manufactures in Minnesota were centralized in the cities having more than 10,000 inhabitants in 1914 for which separate statistics can be given.

Table 12	Census year.	Aggregate.	CITIES HAVING A POPULATION OF 10,000 OR OVER.								DISTRICTS OUTSIDE OF CITIES HAVING A POPULATION OF 10,000 OR OVER. ¹		
			Total.		10,000 to 25,000.		25,000 to 100,000.		100,000 and over.		Number or amount.	Per cent aggregate.	
			Number or amount.	Per cent of aggregate.	Number or amount.	Per cent of aggregate.	Number or amount.	Per cent of aggregate.	Number or amount.	Per cent of aggregate.			
Number of places.....	1914		8		5		1		2				
	1910		7		4		1		2				
	1900		6		3		1		2				
Population ²	1914	2,213,919	734,276	33.2	64,718	2.9	89,331	4.0	580,232	26.2	1,479,643	66.8	
	1910	2,075,708	644,364	31.0	49,746	2.4	78,466	3.8	516,152	24.9	1,431,344	68.9	
	1900	1,751,394	461,383	26.3	42,631	2.4	52,969	3.0	365,783	20.9	1,290,011	73.9	
Number of establishments.....	1914	5,974	2,622	43.9	293	4.9	243	4.1	2,086	34.9	3,352	56.1	
	1909	5,561	2,284	41.1	269	4.8	194	3.5	1,821	32.7	3,277	58.9	
	1899	4,096	1,603	39.1	151	3.7	126	3.1	1,326	32.4	2,493	60.9	
Average number of wage earners.....	1914	92,834	58,256	62.8	4,040	5.3	5,538	6.0	47,778	51.5	34,578	37.2	
	1909	84,767	56,537	66.7	4,153	4.9	6,083	7.2	46,301	54.6	28,230	33.3	
	1899	64,557	39,611	61.4	3,314	5.1	3,658	5.7	32,639	50.6	24,946	38.6	
Value of products.....	1914	\$493,354,136	\$299,741,311	60.8	\$23,475,663	4.8	\$19,729,283	4.0	\$256,536,365	52.0	\$193,612,825	39.2	
	1909	469,419,621	261,431,912	63.9	19,907,144	4.9	17,180,063	4.2	224,394,705	54.8	147,937,709	36.1	
	1899	223,602,922	141,976,434	63.5	9,701,844	4.3	7,810,737	3.5	124,463,853	55.6	81,716,488	36.5	
Value added by manufacture.....	1914	156,504,922	105,343,602	67.3	7,614,121	4.9	8,211,614	5.2	89,517,867	57.2	51,161,320	32.7	
	1909	127,797,334	89,296,852	69.9	6,858,783	5.4	8,336,133	6.5	74,101,936	58.0	38,500,482	30.1	
	1899	73,393,645	47,089,324	64.2	3,295,974	4.5	4,151,749	5.7	39,641,601	54.0	26,304,321	35.8	

¹ Includes Virginia, to avoid disclosure of individual operations.

² Census estimate of population for 1914.

Table 12 shows that the increase in the manufactures of the state was general and extended to both the urban and rural districts. During the 15 years covered by the table the increase in the value of products for the urban districts, represented by the cities of 10,000 inhabitants or over amounted to \$157,764,877, or 111.1 per cent, while that of the rural

districts amounted to \$111,896,337, or 136.9 per cent. The relative importance of the manufactures, as measured by the value of products for the districts outside the cities, has increased, while that of the cities has decreased. On the other hand, the per cent that the establishments, wage earners, and value added by manufacture, of the establishments in the districts

outside of cities, has decreased, while the relative importance of the manufactures of the cities, as measured by these items, has increased. Comparisons for the cities or for the districts outside are affected by the increase in the population of cities. The population of Hibbing in 1909 and 1899 and that of St. Cloud and Virginia in 1899, was less than 10,000, and the statistics for these cities, therefore, were included with those for the outside districts. Virginia had more than 10,000 inhabitants in 1909 and in 1914, but for the later date statistics are included in the outside districts in order to avoid disclosure of individual operations and at the earlier date are in the same group for comparative purposes.

The eight cities, which contained a third of the estimated population of the state in 1914, reported about two-thirds of the total value of products and of the total average number of wage earners. The corresponding proportions for 1909 differed only slightly from those shown in 1914.

The relative importance in manufactures of the cities having more than 10,000 inhabitants for which separate statistics can be given, as measured by average number of wage earners and by value of products in 1914, 1909, and 1904, is shown in Table 13. The cities are listed in the order of their importance as shown by value of products. Those for which comparative figures are not shown for 1909 and 1904 had less than 10,000 inhabitants in those years.

CITY.	AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.		
	1914	1909	1904	1914	1909	1904
Minneapolis.....	28,295	26,962	21,671	\$187,854,159	\$165,404,680	\$121,162,416
St. Paul.....	19,483	19,339	14,363	68,682,206	58,900,025	38,318,704
Duluth.....	5,538	6,083	3,987	19,729,283	17,180,063	10,139,009
Winona.....	2,070	2,032	1,953	14,304,780	11,199,622	7,850,236
Mankato.....	755	807	724	4,344,114	3,722,736	3,422,117
St. Cloud.....	1,429	626	.....	2,695,492	2,209,063	.....
Stillwater.....	621	688	955	1,876,877	2,685,729	2,784,113
Hibbing.....	65	.....	.....	254,400	.....	.....

The manufactures of Minneapolis, St. Paul, Duluth, Winona, and Mankato, show an increase in value while those for Stillwater decreased, for each of the five-year periods 1904-1909 and 1909-1914.

For the period 1909-1914 Duluth and Mankato show a decrease in average number of wage earners, notwithstanding an increase in value of products.

Minneapolis, the largest city in the state, is also its most important industrial center. Ranked by value of products, it was fourteenth among the cities of the United States in 1909 and 1914, and fifteenth in 1904. During the decade the value of its manufactures increased \$66,691,743, or 55 per cent, and in 1914 represented 38.1 per cent of the total for the state. The value of the output of the flour-mills and grist-mills of the city constituted 57.4 per cent of the total for the industry in the state, and nearly half of the

total value of all manufactured products reported for the city. Of the total value of the flour-mill and gristmill products of continental United States in 1914, this city contributed 9.7 per cent. Other important industries of Minneapolis, in the order of their importance as measured by value of products, are foundries and machine shops, the linseed oil and lumber industries, printing and publishing, and the manufacture of bags. More than four-fifths of the linseed oil produced in the state, as measured by value, is manufactured in Minneapolis. The extensive milling operations account for the large production of bags.

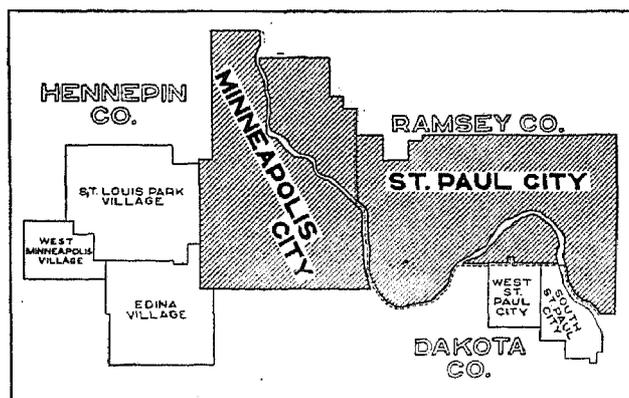
St. Paul, the second city in the state in both population and manufactures, shows an increase of 79.2 per cent in value of products during the decade. The chief industries are printing and publishing and foundries and machine shops, although the breweries, the manufacture of butter, fur goods, boots and shoes, and steam-railroad repair shops, are also important.

The leading industry of Duluth is the manufacture of lumber, the value of its products constituting about one-fifth of the total manufactures reported for the city. Other important industries are foundries and machine shops, breweries, and printing and publishing.

Flour milling and gristmilling and the manufacture of patent medicines and compounds and druggists' preparations constitute the most important industries of Winona.

Mankato and St. Cloud owe their industrial development to the flour-mill industry, and Stillwater to the production of boots and shoes. The leading industry in Virginia was lumber, and in Hibbing, bakery products.

Metropolitan district of Minneapolis-St. Paul.—The Minneapolis-St. Paul metropolitan district embraces 96,459 acres, of which 65,457 acres represent the area of Minneapolis and St. Paul, and 31,002 acres the area of the outside territory. The accompanying outline map shows the boundaries of the district.



The estimated population of Minneapolis in 1914 was 343,466, that of St. Paul 236,766 and that of the outside territory 15,365, the total for the district being 595,597. The district comprises, in addition to the

cities of Minneapolis and St. Paul, the villages of Edina, West Minneapolis, and St. Louis Park, in Hennepin County, and the cities of South St. Paul and West St. Paul in Dakota County.

Summary for the district.—Table 14 is a summary for 1914 of the statistics of manufacturing industries, with

a statement of the estimated population in 1914 of the Minneapolis-St. Paul district, of the cities of Minneapolis and St. Paul, and of the remainder of the district; the percentages which the figures for Minneapolis and St. Paul represent separately of the total for the district being shown for each item.

	MINNEAPOLIS-ST. PAUL METROPOLITAN DISTRICT: 1914.				PER CENT OF TOTAL FOR DISTRICT.	
	The district.	Minneapolis.	St. Paul.	District exclusive of Minneapolis and St. Paul.	Minneapolis.	St. Paul.
Population.....	595,597	343,466	236,766	15,365	57.7	39.8
Number of establishments.....	2,116	1,349	737	30	63.8	34.8
Persons engaged.....	64,632	36,459	24,680	3,493	56.4	38.2
Proprietors and firm members.....	1,867	1,217	628	22	65.2	33.6
Salaried employees.....	12,068	6,947	4,669	552	57.6	37.9
Wage earners (average number).....	50,697	28,295	19,483	2,919	55.8	38.4
Primary horsepower.....	154,451	109,040	38,886	6,525	70.6	25.2
Capital.....	\$206,599,072	\$115,591,908	\$76,789,920	\$14,217,244	55.9	37.2
Salaries and wages.....	49,545,769	28,481,977	18,155,358	2,908,436	57.5	36.6
Salaries.....	15,632,595	9,587,328	5,359,705	885,562	62.4	34.9
Wages.....	33,913,174	18,894,649	12,795,651	2,222,874	55.7	37.7
Paid for contract work.....	1,534,494	984,635	547,021	2,838	64.2	35.6
Rent and taxes.....	4,955,145	2,753,103	2,087,643	114,399	55.6	42.1
Cost of materials.....	199,383,335	131,199,445	85,819,053	32,364,837	65.8	18.0
Value of products.....	295,292,581	187,854,159	68,682,206	38,756,216	63.6	23.3
Value added by manufacture (value of products less cost of materials).....	95,909,246	56,654,714	32,863,153	6,391,379	59.1	34.3

¹ Estimated population July 1, 1914.

In 1914 the metropolitan district had 2,116 manufacturing establishments, which gave employment to 64,632 persons during the year and paid out \$49,545,769 in salaries and wages. Of the persons employed, 50,697 were wage earners. These establishments manufactured products to the value of \$295,292,581, to produce which materials were used costing \$199,383,335. The value added by manufacture was thus \$95,909,246.

Comparison with earlier censuses.—Table 15 gives statistics for the district for 1914, 1909, and 1904. Percentages of increase are shown for the territory in-

cluded in the metropolitan district for the decade and for each five-year period.

The relative increase in all the items for which comparative figures are given in the table was smaller during the more recent five-year period 1909-1914 than during the period 1904-1909. For the decade, the relative increase was much greater in number of salaried employees and salaries than for any other items. The average number of wage earners increased 36.9 per cent during this period, while the amount paid for wages increased 77.1 per cent, and the value of products 82.5 per cent.

	MINNEAPOLIS-ST. PAUL METROPOLITAN DISTRICT.			PER CENT OF INCREASE.		
	1914	1909	1904	1904-1914	1909-1914	1904-1909
Population.....	¹ 595,597	² 526,256	³ 473,762	25.7	13.2	11.1
Number of establishments.....	2,116	1,844	1,506	40.5	14.8	22.4
Persons engaged.....	64,632	59,920	44,297	45.9	7.9	35.3
Proprietors and firm members.....	1,867	1,674	1,423	31.2	11.5	17.6
Salaried employees.....	12,068	9,978	5,830	107.0	20.9	71.1
Wage earners (average number).....	50,697	48,268	37,044	36.9	5.0	30.3
Primary horsepower.....	154,451	119,219	90,111	71.4	29.6	32.3
Capital.....	\$206,599,072	\$160,628,205	\$108,209,964	90.9	28.6	48.4
Salaries and wages.....	49,545,769	38,596,508	25,142,703	97.1	28.4	53.5
Salaries.....	15,632,595	10,871,801	5,994,418	160.8	43.8	81.4
Wages.....	33,913,174	27,724,707	19,148,285	77.1	22.3	44.8
Cost of materials.....	199,383,335	166,823,348	109,364,757	82.3	19.5	52.5
Value of products.....	295,292,581	244,339,598	161,803,453	82.5	20.9	51.0
Value added by manufacture (value of products less cost of materials).....	95,909,246	77,516,250	52,438,696	82.9	23.7	47.8

¹ Estimated population July 1, 1914.

² Apr. 15, 1910.

³ State census, June 1, 1905.

Comparative summary, by industries.—Table 16 gives statistics for 1914 and 1909 for selected industries of the district having products of \$2,000,000 or more.

There were 272 more establishments in the district in 1914 than in 1909, but the number of wage earners increased only 5 per cent and the value of products 20.9 per cent. The greatest relative gain in value of

products during this period was in the manufacture of butter, 70.1 per cent.

Of the industries shown in Table 16, foundries and machine shops and gas plants were the only ones which operated to any extent in the part of the district which is outside the corporate limits of Minneapolis and St. Paul.

Table 16

MINNEAPOLIS-ST. PAUL METROPOLITAN DISTRICT: 1914 AND 1909.

INDUSTRY.	Census year.	Number of establishments.	Persons engaged in industry.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employes.	Wage earners (average number).							
All industries.....	1914 1909	2,116 1,844	64,632 59,920	1,867 1,674	12,068 9,978	50,697 48,268	154,451 119,219	\$206,599,072 160,628,295	\$15,632,595 10,871,861	\$33,913,174 27,724,707	\$199,333,335 159,823,348	\$295,292,581 244,329,593	\$95,909,245 77,515,250
Bread and other bakery products.	1914 1909	196 169	2,325 1,663	194 185	499 214	1,632 1,264	1,973 800	5,451,435 4,138,935	470,783 229,472	970,026 734,641	3,584,908 2,779,482	6,504,292 4,973,477	2,919,294 2,193,995
Butter.....	1914 1909	15 13	276 151	4 10	98 64	174 77	898 859	985,827 379,707	104,355 41,614	131,808 56,072	4,342,019 2,529,913	4,753,108 2,794,501	411,089 264,688
Cars and general shop construction and repairs by steam-railroad companies.	1914 1909	12 10	6,536 5,251	-----	328 269	6,208 4,982	6,974 5,195	10,938,246 8,281,634	358,070 274,391	4,303,075 3,440,205	3,654,985 4,183,112	8,365,404 7,049,019	4,710,419 3,765,904
Clothing, men's, including shirts.	1914 1909	32 30	2,264 1,906	25 37	316 179	1,923 1,590	481 331	2,226,591 1,783,787	302,739 194,565	789,433 567,982	2,841,873 2,255,321	4,464,229 3,528,281	1,622,356 1,272,960
Copper, tin, and sheet-iron products.	1914 1909	96 78	1,051 1,121	101 71	128 136	822 914	441 424	2,875,691 2,570,297	137,274 138,272	536,040 545,411	1,161,370 1,074,716	2,377,523 2,220,929	1,216,153 1,146,213
Flour-mill and gristmill products.	1914 1909	119 113	4,220 3,594	10 6	1,630 1,309	2,580 2,279	61,884 50,698	25,557,517 19,869,105	2,233,303 1,295,351	2,025,660 1,530,425	73,078,503 75,669,593	85,132,444 78,669,808	12,053,941 7,717,112
Food preparations, not elsewhere specified.	1914 1909	20 25	541 505	14 21	136 104	391 380	1,089 710	1,594,400 1,390,247	284,850 207,598	232,838 191,183	2,874,018 2,442,235	4,739,118 3,723,829	1,865,100 1,281,591
Foundry and machine-shop products.	1914 1909	214 144	6,653 5,758	166 94	1,091 880	5,396 4,784	11,636 7,032	19,081,754 13,208,513	1,608,950 993,031	4,056,324 3,082,677	7,773,624 5,796,604	16,602,184 12,394,257	8,828,560 6,607,653
Fur goods.....	1914 1909	29 31	1,133 1,219	28 34	303 190	802 995	345 272	3,168,177 2,122,833	329,751 218,632	532,051 541,092	2,609,637 2,123,248	4,074,641 3,620,482	1,465,004 1,497,234
Furniture and refrigerators.....	1914 1909	44 42	1,409 1,451	37 35	182 152	1,190 1,264	2,848 1,877	3,203,214 2,865,578	270,102 181,191	820,677 734,299	1,304,970 1,512,522	3,209,067 2,940,490	1,904,097 1,427,938
Gas, illuminating and heating....	1914 1909	7 4	1,129 879	-----	230 131	899 748	4,371 1,103	15,576,822 12,141,317	285,286 140,805	565,930 237,772	1,447,627 645,732	3,604,958 2,491,300	2,157,331 1,845,598
Lumber and timber products.....	1914 1909	58 51	3,673 5,990	30 30	359 311	3,284 5,649	10,443 14,628	10,873,745 13,235,052	520,941 506,919	2,172,073 3,189,933	5,462,702 6,961,606	10,454,134 12,394,257	4,991,432 6,225,287
Patent medicines and compounds and druggists' preparations.	1914 1909	78 77	719 799	61 62	298 443	360 294	471 417	954,582 2,138,966	234,906 236,470	174,794 122,082	697,673 614,867	2,167,124 2,119,126	1,469,451 1,504,259
Printing and publishing.....	1914 1909	359 329	6,916 6,258	285 374	2,248 2,044	4,383 3,840	4,738 3,963	10,528,422 9,934,239	2,663,521 1,934,392	3,114,654 2,509,831	4,493,036 3,215,188	15,768,146 12,298,881	11,275,110 9,083,693
All other industries.....	1914 1909	937 828	25,787 23,375	912 715	4,222 3,552	20,653 19,108	45,850 31,004	93,584,649 66,598,088	5,829,764 4,279,122	13,487,791 10,241,655	54,066,399 59,746,194	123,076,299 91,428,259	39,019,909 31,682,155

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

The principal industry of the district is the manufacture of flour which, with the exception of two establishments in St. Paul, was confined to Minneapolis. Other important industries of the district were foundries and machine shops, printing and publishing, the lumber industry, and steam-railroad repair shops. In addition to the industries shown in Table 16, there were three having products valued at more than \$2,000,000, namely, boots and shoes; coffee, roasting and grinding; and malt liquors.

Character of ownership.—Table 17 presents statistics in respect to character of ownership, or legal organization, of manufacturing enterprises. For all industries combined, comparative figures are given for 1914, 1909, and 1904; for selected industries, statistics for 1914 and 1909 are shown; and for individual cities, the figures are for all industries combined and relate only to 1914. In order to avoid

disclosing the operations of individual establishments, it is necessary to omit several important industries from this table.

The marked tendency toward the corporate form of ownership in the state is shown by the increasing proportion of the total average number of wage earners and value of products reported by corporations at each successive census. While this class reported but 24.8 per cent of the total number of establishments in the state, it is credited with 83.6 per cent of the total value of products and 81.3 per cent of the total average number of wage earners for all classes of establishments. The manufacture of fur goods and the butter and cheese industry, which includes numerous creameries operated by cooperative associations, are the two industries in which the largest proportion of the total value of products is reported by establishments other than those under corporate ownership.

Table 17

INDUSTRY AND CITY.	Cen- sus year.	NUMBER OF ESTABLISHMENTS OWNED BY—			AVERAGE NUMBER OF WAGE OWNERS.									VALUE OF PRODUCTS.								
		Indi- viduals.	Cor- porations.	All oth- ers.	Total.	In establishments owned by—			Per cent of total.			Total.	Of establishments owned by—			Per cent of total.						
						Indi- viduals.	Cor- porations.	All oth- ers.	Indi- viduals.	Cor- porations.	All oth- ers.		Indi- viduals.	Cor- porations.	All oth- ers.	Indi- viduals.	Cor- porations.	All oth- ers.				
All industries.....	1914	2,825	1,482	1,667	92,834	8,502	75,505	8,827	9.2	81.3	9.5	\$493,354,136	\$31,330,735	\$412,386,480	\$49,636,921	6.4	83.6	10.1				
	1909	2,654	1,326	1,581	84,767	9,123	67,475	8,169	10.8	79.6	9.6	409,419,621	37,022,048	330,924,567	41,473,006	9.0	80.8	10.1				
	1904	2,325	922	1,509	69,636	9,559	49,889	10,158	13.8	71.0	14.0	307,858,073	35,236,563	234,013,794	38,617,716	11.4	76.0	12.5				
Bread and other bakery products.	1914	340	40	57	2,169	738	1,263	168	34.0	58.2	7.7	8,724,162	2,966,004	5,076,418	681,740	34.0	58.2	7.8				
	1909	331	19	53	1,690	637	801	208	40.5	47.2	12.3	6,785,083	2,766,373	3,189,787	828,923	40.8	47.0	12.2				
Butter and cheese.....	1914	128	48	633	1,452	157	356	945	10.8	24.4	64.8	33,746,396	3,269,926	8,453,162	22,023,308	9.7	25.0	65.3				
	1909	150	46	588	1,184	192	165	827	16.2	13.9	69.9	25,287,462	4,592,276	3,957,931	16,737,255	18.2	15.7	66.2				
Cars and general shop construction and repairs by steam-railroad companies.	1914		38		10,551		10,551		100.0			14,594,018		14,594,018		100.0						
	1909		28		8,232		8,232		100.0			12,630,653		12,630,653		100.0						
Clothing, men's, including shirts.	1914	14	23	8	2,468	161	1,824	483	6.5	73.9	19.6	5,616,322	279,832	4,562,546	773,944	5.0	81.2	13.8				
	1909	6	21	14	2,156	67	1,486	603	3.1	68.9	28.0	4,458,919	181,661	2,865,042	1,412,216	4.1	64.2	31.7				
Flour-mill and gristmill products.	1914	105	105	76	4,564	282	3,984	298	6.2	87.3	6.5	148,243,708	5,999,856	134,861,980	7,381,872	4.0	91.0	5.0				
	1909	127	123	72	4,345	392	3,707	246	9.0	85.3	5.7	139,136,129	10,384,644	121,296,305	7,455,180	7.5	87.2	5.4				
Foundry and machine-shop products.	1914	158	150	101	7,051	498	5,395	1,158	7.1	76.5	16.4	21,405,023	1,144,480	17,887,742	2,372,801	5.3	83.6	11.1				
	1909	72	122	63	6,002	456	4,776	770	7.6	79.6	12.8	15,608,716	1,153,588	12,550,448	1,904,680	7.4	80.4	12.2				
Fur goods.....	1914	21	9	6	838	102	147	589	12.2	17.5	70.3	4,207,468	344,222	692,714	3,170,532	8.2	16.5	75.4				
	1909	29	7	6	1,056	200	507	349	18.9	48.0	33.0	3,775,970	858,322	1,757,912	1,159,236	22.7	46.6	30.7				
Liquors, malt.....	1914	21	36	8	2,052	86	1,915	51	4.2	93.3	2.5	14,266,296	387,630	13,639,040	238,726	2.7	95.6	1.7				
	1909	21	34	10	1,653	75	1,526	52	4.5	92.3	3.1	10,568,452	290,799	10,069,982	207,671	2.8	95.3	2.0				
Lumber and timber products.	1914	220	135	98	20,947	1,381	18,157	1,409	6.6	86.7	6.7	44,674,948	2,707,087	40,111,826	1,856,035	6.1	89.8	4.1				
	1909	265	128	132	20,704	1,431	18,220	1,053	6.9	88.0	5.1	42,352,507	2,396,899	38,163,207	1,792,401	5.7	90.1	4.2				
Malt.....	1914		9		168		168		100.0			5,636,696		5,636,696		100.0						
	1909		9		138		138		100.0			4,314,805		4,314,805		100.0						
Oil, linseed.....	1914		6		400		400		100.0			12,356,906		12,356,906		100.0						
	1909		6		374		374		100.0			11,036,916		11,036,916		100.0						
Printing and publishing..	1914	611	210	172	6,134	1,196	4,413	525	19.5	71.9	8.6	20,186,594	3,011,354	15,806,087	1,369,153	14.9	78.3	6.8				
	1909	584	175	191	5,641	1,297	3,742	602	23.0	66.3	10.7	15,982,212	2,852,132	11,646,607	1,483,473	17.8	72.9	9.3				
Slaughtering and meat packing.	1914	11	9	9	2,587	47	2,459	81	1.8	95.1	3.1	47,710,059	614,397	45,642,481	1,453,181	1.3	95.7	3.0				
	1909	12	11	7	1,921	37	1,824	60	1.9	95.0	3.1	25,753,697	431,504	24,680,830	641,363	1.7	95.8	2.5				
Total for cities ¹	1914	1,162	952	508	58,256	4,437	48,686	5,133	7.6	83.6	8.8	290,741,311	14,188,800	267,978,043	17,574,468	4.7	89.4	5.9				
DULUTH.....	1914	102	101	40	5,538	419	4,704	325	7.6	86.6	5.9	19,720,283	1,301,926	17,012,231	1,415,126	6.6	86.2	7.2				
HIBBING.....	1914	15	2	10	65	46	219	2	70.8	28.2	254,400	183,478	270,922	279,922	72.1	76.7	27.9					
MAKATO.....	1914	34	16	14	755	202	354	169	26.8	50.9	22.4	4,344,114	479,308	3,333,364	531,442	11.0	76.7	12.2				
MINNEAPOLIS.....	1914	585	511	253	28,295	2,019	24,544	1,732	7.1	86.7	6.1	187,854,159	5,810,546	175,237,770	6,805,843	3.1	93.3	3.6				
ST. CLOUD.....	1914	37	20	20	1,429	157	919	353	11.0	64.3	24.7	2,695,492	659,459	1,511,583	494,450	25.6	56.1	18.3				
ST. PAUL.....	1914	333	254	150	19,483	1,348	15,677	2,458	6.9	80.5	12.6	68,682,206	4,888,220	55,842,893	7,951,093	7.1	81.3	11.6				
STILLWATER.....	1914	19	10	5	621	78	522	21	12.6	84.1	3.4	1,876,877	237,299	1,589,486	50,092	12.6	84.7	2.7				
WINONA.....	1914	37	38	16	2,070	168	1,846	56	8.1	89.2	2.7	14,304,780	598,564	13,450,716	255,500	4.2	94.0	1.8				

¹ Excludes Virginia, to avoid disclosure of individual operations.

² Includes the group "corporations."

Size of establishments.—The tendency for manufacturing to become concentrated in large establishments, is indicated by the statistics given in the following table.

Table 18

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
	1914	1909	1904	1914	1909	1904	1914	1909	1904	1914	1909	1904
All classes.....	5,974	5,561	4,756	92,834	84,767	69,636	\$493,354,136	\$409,419,621	\$307,858,073	\$156,504,922	\$127,797,334	\$97,304,124
Less than \$5,000.....	2,046	1,969	1,715	2,108	2,194	1,968	5,094,063	4,663,743	4,189,070	3,358,140	3,080,907	2,756,313
\$5,000 to \$20,000.....	1,894	1,743	1,646	7,238	6,767	6,397	19,742,774	18,742,069	17,401,201	10,370,932	9,419,792	8,251,465
\$20,000 to \$100,000.....	1,476	1,347	992	15,170	14,180	13,258	63,585,461	56,703,495	42,029,326	23,117,977	20,745,523	17,299,268
\$100,000 to \$1,000,000.....	486	437	364	38,311	37,726	34,455	144,677,126	130,802,555	111,696,067	56,613,265	51,618,590	45,194,100
\$1,000,000 and over.....	72	65	39	30,007	23,900	13,558	260,254,712	198,507,729	132,541,419	63,044,608	42,929,522	23,802,978
PER CENT DISTRIBUTION.												
All classes.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than \$5,000.....	34.2	35.4	36.1	2.3	2.6	2.8	1.0	1.1	1.4	2.1	2.4	2.8
\$5,000 to \$20,000.....	31.7	31.3	34.6	7.8	8.0	9.2	4.0	4.6	5.7	6.6	7.4	8.5
\$20,000 to \$100,000.....	24.7	24.2	20.9	16.3	16.7	19.0	12.9	13.8	13.6	14.8	16.2	17.8
\$100,000 to \$1,000,000.....	8.1	7.9	7.7	41.3	44.5	49.5	29.3	31.9	36.3	36.2	40.4	46.4
\$1,000,000 and over.....	1.2	1.2	0.8	32.3	28.2	19.5	52.8	48.5	43.1	40.3	33.6	21.5

In 1914, 558 establishments, or 9.3 per cent of the total number in the state, each reported products exceeding \$100,000 in value, as compared with 502, or 9.1 per cent of the total, in 1909, and 403, or 8.5 per

cent, in 1904. In 1914 these establishments reported 68,318 as the average number of wage earners, or 73.6 per cent of the total for the state, 82.1 per cent of the total value of products, and 76.5 per cent of the total value added by manufacture. The small establishments, those having products valued at less than \$5,000 in 1914, represented 34.2 per cent of the total number of establishments but reported only 1 per cent

of the total value of products, 2.1 per cent of value added by manufacture, and 2.3 per cent of the average number of wage earners.

Table 19 gives, for 1914 and 1909, for 10 of the more important industries, a classification of establishments, wage earners, value of products, and value added by manufacture, similar to that presented in Table 18 for all industries combined.

INDUSTRY AND VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.				AVERAGE NUMBER OF WAGE EARNERS.				VALUE OF PRODUCTS.				VALUE ADDED BY MANUFACTURE.			
	1914		1909		1914		1909		1914		1909		1914		1909	
	Per cent distribution.		Per cent distribution.		Per cent distribution.		Per cent distribution.		Per cent distribution.		Per cent distribution.		Per cent distribution.		Per cent distribution.	
	1914	1909	1914	1909	1914	1909	1914	1909	1914	1909	1914	1909	1914	1909	1914	1909
BREAD AND OTHER BAKERY PRODUCTS.....	443	403	100.0	100.0	2,169	1,696	100.0	100.0	\$8,724,162	\$6,785,083	100.0	100.0	\$3,929,774	\$2,981,063	100.0	100.0
Less than \$5,000.....	172	188	38.8	46.6	118	122	5.4	7.2	522,307	498,617	6.0	7.3	257,057	232,135	6.5	7.8
\$5,000 to \$20,000.....	212	166	47.9	41.2	553	388	25.5	22.9	2,068,581	1,546,967	23.7	22.8	937,096	692,205	23.8	23.2
\$20,000 to \$100,000.....	47	39	10.6	9.7	427	341	19.7	20.1	1,769,884	1,344,947	20.3	19.8	723,030	566,481	18.4	19.0
\$100,000 and over.....	12	10	2.7	2.5	1,071	845	49.4	49.8	4,363,390	3,394,552	50.0	50.0	2,012,585	1,490,262	51.2	50.0
BUTTER AND CHEESE.....	807	784	100.0	100.0	1,458	1,184	100.0	100.0	33,746,396	25,287,462	100.0	100.0	2,977,283	2,579,989	100.0	100.0
Less than \$5,000.....	33	41	4.1	5.2	16	20	1.1	1.7	103,430	135,307	0.3	0.5	12,161	22,668	0.4	0.9
\$5,000 to \$20,000.....	239	285	29.6	36.4	223	255	15.3	21.5	3,219,298	3,754,943	9.5	14.8	352,722	455,207	11.8	17.6
\$20,000 to \$100,000.....	497	438	61.6	55.9	833	752	57.1	63.5	20,390,762	16,301,849	60.4	64.5	1,780,084	1,541,188	59.8	59.7
\$100,000 and over ¹	38	20	4.7	2.6	386	157	26.5	13.3	10,032,926	5,095,803	29.7	20.1	832,316	560,926	28.0	21.7
CARS AND GENERAL SHOP CONSTRUCTION AND REPAIRS, BY STEAM-RAILROAD COMPANIES.....	38	28	100.0	100.0	10,551	8,232	100.0	100.0	14,594,018	12,630,653	100.0	100.0	8,266,790	6,136,887	100.0	100.0
\$5,000 to \$20,000.....	3	2	7.9	7.1	21	(*)	0.2	.....	23,361	(*)	.....	.....	14,515	(*)	0.2	.....
\$20,000 to \$100,000.....	13	8	34.2	28.6	455	386	4.3	4.7	728,611	467,872	5.0	3.7	439,736	282,302	5.3	4.6
\$100,000 to \$1,000,000.....	19	14	50.0	50.0	6,250	4,087	59.2	49.6	7,992,304	5,998,845	54.8	47.5	4,763,030	3,210,118	57.6	52.3
\$1,000,000 and over.....	3	4	7.9	14.3	3,825	3,759	36.3	45.7	5,849,742	6,163,936	40.1	48.8	3,049,509	2,644,467	36.0	43.1
CLOTHING, MEN'S, INCLUDING SHIRTS.....	45	41	100.0	100.0	2,468	2,156	100.0	100.0	5,616,322	4,458,919	100.0	100.0	1,975,894	1,645,242	100.0	100.0
Less than \$5,000.....	4	3	8.9	7.3	8	23	0.3	1.1	10,960	10,372	0.2	0.2	8,579	10,159	0.4	0.6
\$5,000 to \$20,000.....	11	7	24.4	17.1	142	111	5.8	5.1	111,587	71,934	2.0	1.6	77,485	63,577	3.9	3.3
\$20,000 to \$100,000.....	19	21	42.2	51.2	659	417	26.7	19.3	1,383,617	1,021,488	24.6	22.9	582,377	388,274	29.5	23.6
\$100,000 and over.....	11	10	24.4	24.4	1,659	1,605	67.2	74.4	4,110,158	3,365,126	73.2	75.2	1,307,453	1,163,232	66.2	72.5
FLOUR-MILL AND GRISTMILL PRODUCTS.....	286	322	100.0	100.0	4,564	4,345	100.0	100.0	148,243,708	139,136,120	100.0	100.0	20,929,137	14,918,812	100.0	100.0
Less than \$5,000.....	17	4	5.9	1.2	8	3	0.2	0.1	49,388	8,486	(*)	(*)	14,198	2,091	0.1	(*)
\$5,000 to \$20,000.....	55	60	19.2	18.6	59	53	1.3	1.2	689,228	732,336	0.5	0.5	138,387	119,467	0.7	0.8
\$20,000 to \$100,000.....	131	172	45.8	53.4	347	409	7.6	9.4	6,074,304	8,114,747	4.1	5.8	1,033,926	1,230,390	4.9	8.2
\$100,000 to \$1,000,000.....	58	62	20.3	19.3	648	727	14.2	16.7	18,594,583	21,611,152	12.5	15.5	2,310,184	2,471,175	11.0	16.6
\$1,000,000 and over.....	25	24	8.7	7.5	3,502	3,153	76.7	72.6	122,839,205	108,669,408	82.9	78.1	17,432,442	11,094,789	83.3	74.4
FOUNDRY AND MACHINE-SHOP PRODUCTS.....	409	247	100.0	100.0	7,051	6,002	100.0	100.0	21,405,023	15,608,716	100.0	100.0	11,470,566	8,423,791	100.0	100.0
Less than \$5,000.....	147	55	35.9	22.3	207	66	2.9	1.1	407,401	140,567	1.9	0.9	306,084	96,116	2.7	1.1
\$5,000 to \$20,000.....	146	87	35.7	35.2	712	439	10.1	7.3	1,491,967	921,380	7.0	5.9	997,102	696,687	8.7	7.1
\$20,000 to \$100,000.....	79	74	19.3	30.0	1,400	1,296	19.9	21.6	3,561,744	3,304,431	16.4	21.2	1,933,217	1,908,377	16.9	22.7
\$100,000 and over.....	37	31	9.0	12.6	4,726	4,201	67.0	70.0	16,009,911	11,242,338	74.8	72.0	8,234,163	5,822,611	71.8	69.1
FUR GOODS.....	36	42	100.0	100.0	838	1,056	100.0	100.0	4,207,468	3,775,970	100.0	100.0	1,530,828	1,562,998	100.0	100.0
Less than \$5,000.....	10	12	27.8	28.6	7	15	0.8	1.4	24,991	32,347	0.6	0.9	19,023	23,246	1.2	1.5
\$5,000 to \$20,000.....	8	13	22.2	31.0	35	68	4.2	6.4	94,457	137,162	2.2	3.6	43,125	82,860	2.8	5.3
\$20,000 to \$100,000.....	12	10	33.3	23.8	178	121	21.2	11.5	489,682	487,164	11.6	12.9	270,084	201,683	17.6	12.9
\$100,000 and over.....	6	7	16.7	16.7	618	852	73.7	80.7	3,598,338	3,110,297	85.5	82.6	1,198,596	1,255,209	78.3	80.3
LIQUORS, MALT.....	65	65	100.0	100.0	2,052	1,653	100.0	100.0	14,268,296	10,568,452	100.0	100.0	10,963,095	8,225,745	100.0	100.0
Less than \$5,000.....	4	7	6.2	10.8	5	8	0.2	0.5	16,250	25,144	0.1	0.2	9,245	16,680	0.1	0.2
\$5,000 to \$20,000.....	18	19	27.7	29.2	48	60	2.3	3.6	178,722	233,570	1.3	2.2	107,828	151,011	1.0	1.9
\$20,000 to \$100,000.....	24	23	36.9	35.4	233	203	11.4	12.3	1,166,831	1,055,214	8.2	10.0	769,291	748,299	7.0	9.1
\$100,000 to \$1,000,000.....	15	13	23.1	20.0	545	446	26.6	27.0	3,935,527	3,284,700	27.6	31.1	2,949,906	2,602,525	26.8	31.6
\$1,000,000 and over.....	4	3	6.2	4.6	1,221	936	59.5	56.6	8,968,916	5,060,764	52.9	56.5	7,135,825	4,704,430	65.1	57.2
LUMBER AND TIMBER PRODUCTS.....	453	525	100.0	100.0	20,947	20,704	100.0	100.0	44,674,948	42,352,507	100.0	100.0	21,848,154	21,487,278	100.0	100.0
Less than \$5,000.....	193	284	42.6	54.1	326	411	1.6	2.0	390,115	540,971	0.9	1.3	271,821	379,309	1.2	1.8
\$5,000 to \$20,000.....	107	117	23.6	22.3	904	663	4.3	3.2	1,079,039	1,178,289	2.4	2.8	733,142	702,675	3.4	3.3
\$20,000 to \$100,000.....	78	54	17.2	10.3	1,833	1,464	8.9	7.1	3,461,107	2,541,944	7.7	6.0	1,826,695	1,343,786	8.4	6.3
\$100,000 to \$1,000,000.....	66	62	14.6	11.8	8,388	11,059	40.0	53.4	19,853,505	22,724,546	44.4	53.7	9,335,788	11,787,696	42.7	54.9
\$1,000,000 and over.....	9	8	2.0	1.5	9,469	7,107	45.2	34.3	19,891,182	15,357,757	44.5	36.3	9,680,708	7,274,322	44.3	33.9
PRINTING AND PUBLISHING.....	994	950	100.0	100.0	6,134	5,641	100.0	100.0	20,189,594	15,982,212	100.0	100.0	14,626,901	11,886,107	100.0	100.0
Less than \$5,000.....	500	579	56.3	60.9	574	710	9.4	12.6	1,381,765	1,400,279	6.8	8.8	1,106,450	1,119,353	7.6	9.4
\$5,000 to \$20,000.....	293	249	29.5	26.2	1,055	1,127	17.2	20.0	2,751,472	2,361,608	13.6	14.8	2,195,351	1,850,231	15.0	15.6
\$20,000 to \$100,000.....	111	96	11.2	10.1	1,599	1,496	26.1	26.5	4,449,568	3,933,500	22.0	24.6	3,225,694	2,799,021	22.0	23.5
\$100,000 to \$1,000,000.....	25	26	2.5	2.7	1,500	2,308	24.6	40.9	5,250,639	8,286,825	26.0	51.9	3,746,269	6,117,497	25.6	51.5
\$1,000,000 and over.....	5	.....	0.5	.....	1,406	.....	22.9	.....	6,353,152	.....	31.5	.....	4,352,937	.....	29.8	.....

¹Includes the group "\$1,000,000 and over."
²Includes the group "less than \$5,000."

³Included in the group "\$20,000 to \$100,000."
⁴Less than one-tenth of 1 per cent.

Six of the industries given in the above table show a decrease during the five-year period in the proportion of establishments having products less than \$5,000 in value, and seven in the proportion of the average number of wage earners employed. The class having products valued at \$100,000 and over shows increases in value of products for all industries. Fur goods and lumber and timber products are the only industries showing decreases in average number of wage earners and value added by manufacture, the decreases in the latter being only 1.7 per cent in average number of wage earners and 2 per cent in value added by manufacture. Eight industries show an increase in number of establishments of this class.

Table 20 presents, for 1914, for all industries combined in each of the cities, except Virginia, having more than 10,000 inhabitants, statistics similar to those given in Table 18 for the state as a whole.

CITY AND VALUE OF PRODUCT.	Number of establishments.	WAGE EARNERS.		VALUE OF PRODUCTS.		VALUE ADDED BY MANUFACTURE.	
		Average number.	Per cent of total.	Amount.	Per cent of total.	Amount.	Per cent of total.
DULUTH.....	243	5,538	100.0	\$19,729,283	100.0	\$8,211,614	100.0
Less than \$5,000.....	71	69	1.2	176,336	0.9	117,152	1.4
\$5,000 to \$20,000.....	70	317	5.7	730,407	3.7	455,414	5.5
\$20,000 to \$100,000.....	59	1,048	18.9	2,913,592	14.8	1,367,340	16.7
\$100,000 and over ¹	43	4,104	74.1	15,908,948	80.6	6,271,708	76.4
HIBBING.....	27	65	100.0	254,400	100.0	141,983	100.0
Less than \$5,000.....	11	7	10.8	32,600	12.8	20,227	14.2
\$5,000 to \$20,000.....	13	36	55.4	122,100	48.0	72,098	50.8
\$20,000 to \$100,000.....	3	22	33.8	99,700	39.2	49,658	35.0
MANKATO.....	64	755	100.0	4,344,114	100.0	1,127,323	100.0
Less than \$5,000.....	17	13	1.7	40,620	0.9	26,997	2.4
\$5,000 to \$20,000.....	22	114	15.1	229,157	5.3	125,617	11.1
\$20,000 to \$100,000.....	19	340	45.0	967,537	22.3	451,838	40.1
\$100,000 and over ²	6	288	38.1	3,106,800	71.5	522,871	46.4
MINNEAPOLIS.....	1,349	28,295	100.0	187,854,159	100.0	56,654,714	100.0
Less than \$5,000.....	411	386	1.4	1,099,690	0.6	713,872	1.3
\$5,000 to \$20,000.....	461	1,811	6.4	4,702,999	2.5	2,983,425	5.3
\$20,000 to \$100,000.....	309	4,515	16.0	13,227,298	7.0	7,376,522	13.0
\$100,000 to \$1,000,000.....	144	10,641	37.6	43,213,869	23.0	19,310,212	34.1
\$1,000,000 and over.....	24	10,942	38.7	125,640,303	66.9	26,270,683	46.4
St. CLOUD.....	77	1,429	100.0	2,695,492	100.0	1,407,477	100.0
Less than \$5,000.....	20	38	2.7	49,756	1.8	36,742	2.6
\$5,000 to \$20,000.....	26	158	11.1	269,641	10.0	184,321	13.1
\$20,000 to \$100,000.....	28	528	36.9	1,060,945	39.4	697,902	49.6
\$100,000 to \$1,000,000.....	3	705	49.3	1,315,150	48.8	488,512	34.7
St. PAUL.....	737	19,483	100.0	68,682,206	100.0	32,863,153	100.0
Less than \$5,000.....	104	152	0.8	469,780	0.7	327,865	1.0
\$5,000 to \$20,000.....	237	926	4.8	2,422,904	3.5	1,530,952	4.7
\$20,000 to \$100,000.....	185	3,042	15.6	8,247,212	12.0	4,246,047	12.9
\$100,000 to \$1,000,000.....	108	11,226	57.6	35,555,233	51.8	15,828,477	48.2
\$1,000,000 and over.....	13	4,137	21.2	21,987,077	32.0	10,929,812	33.3
STILLWATER.....	34	621	100.0	1,876,877	100.0	670,615	100.0
Less than \$5,000.....	12	16	2.6	36,158	1.9	25,006	3.7
\$5,000 to \$20,000.....	10	31	5.0	86,476	4.6	52,700	7.9
\$20,000 to \$100,000.....	8	95	15.8	388,513	20.7	230,463	37.3
\$100,000 to \$1,000,000.....	4	476	76.6	1,365,730	72.8	342,378	51.1
WINONA.....	91	2,070	100.0	14,304,780	100.0	4,266,723	100.0
Less than \$5,000.....	27	28	1.4	73,396	0.5	45,699	1.1
\$5,000 to \$20,000.....	19	84	4.1	197,999	1.4	95,900	2.2
\$20,000 to \$100,000.....	26	413	19.9	1,402,522	9.8	650,829	15.3
\$100,000 to \$1,000,000.....	15	1,152	55.7	3,449,853	24.1	1,623,586	38.1
\$1,000,000 and over.....	4	393	19.0	9,181,010	64.2	1,850,629	43.4

¹ Includes two establishments of \$1,000,000 and over.

² Includes one establishment of \$1,000,000 and over.

In the totals for Duluth, Mankato, Minneapolis, St. Cloud, St. Paul, Stillwater, and Winona, the same general condition is found as prevails for all industries combined in the state, namely, a preponderance as to value of products for establishments in the group of \$100,000 and over. In Hibbing, however, the greatest value of products, 48 per cent, appears for the group \$5,000 to \$20,000. Each of the cities shows a considerable proportion of the total number of establishments as having products valued at less than \$20,000, but, with the exception of Hibbing, the combined value of products in this class was relatively small. Of the total number of such establishments for the three leading cities, those in Duluth represented 58 per cent, in Minneapolis 64.6 per cent, and St. Paul 58.9 per cent, whereas the value of their products formed only 4.6 per cent, 3.1 per cent, and 4.2 per cent, respectively, of the total value of products for that class.

Table 21 shows the size of establishments in 1914 as measured by the number of wage earners employed, for all industries combined, for 23 of the most important industries, and for each of the cities (except Virginia) having more than 10,000 inhabitants. Table 22 presents, for 1914, percentages based on the figures in Table 21, and for 1909 similar percentages for all industries combined and for individual industries in the state as a whole.

Of the 5,974 establishments reported for all industries combined, 729, or 12.2 per cent, employed no wage earners. These are small establishments in which the work is done by proprietors or firm members. In some cases they employ a few wage earners for short periods, but the number is so small and the period so short that in computing the average number, as described in the "Explanation of terms," no wage earners could be shown. Printing and publishing reported 246 and tobacco manufactures 108 of these small establishments.

Of the remaining groups those employing 50 or less wage earners constituted 82.6 per cent of all establishments, but gave employment to only 30.8 per cent of the total wage earners. The groups of establishments having more than 50 wage earners represented only 5.2 per cent of the total number of establishments in the state, but gave employment to 64,192 wage earners, or 69.1 per cent of the total. In the steam-railroad repair shops, in the manufacture of boots and shoes, lumber and timber products, paper and wood pulp, and in the slaughtering and meat-packing industry, the majority of wage earners were in establishments giving employment to more than 100 wage earners. In Minneapolis 58 per cent of the total number of wage earners in all industries were in such establishments and in St. Paul, 64 per cent.

Table 21

INDUSTRY AND CITY.	TOTAL.		ESTABLISHMENTS EMPLOYING—							
	Estab-lish-ments.	Wage earners (average number).	No wage earners.	1 to 5 wage earners.		6 to 20 wage earners.		21 to 50 wage earners.		
			Estab-lish-ments.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	
All industries.....	5,974	92,834	729	3,604	7,246	1,015	11,158	318	10,238	
Agricultural implements.....	17	572	1	9	22	4	53	1	44	
Boots and shoes.....	14	2,012				3	38	1	25	
Bread and other bakery products.....	443	2,169	77	303	611	52	487	3	95	
Brick, tile, pottery, and other clay products.....	65	1,446		17	48	32	304	10	307	
Butter and cheese.....	807	1,458	36	744	1,089	24	241	2	67	
Carriages and wagons and materials.....	129	854	22	84	189	14	137	4	133	
Cars and general shop construction and repairs by steam-railroad companies.....	38	10,551		1	5	3	32	12	422	
Clothing, men's, including shirts.....	45	2,408	1	8	23	11	152	15	479	
Confectionery.....	78	843	7	42	103	19	206	5	143	
Copper, tin, and sheet-iron products.....	143	1,087	11	94	235	28	295	6	143	
Flour-mill and gristmill products.....	286	4,554	28	178	403	50	535	18	595	
Foundry and machine-shop products.....	409	7,051	20	229	521	106	1,121	29	960	
Fur goods.....	36	838	3	14	31	12	150	5	155	
Furniture and refrigerators.....	61	1,739	3	14	37	18	245	18	610	
Gas, illuminating and heating.....	47	1,038	3	33	50	9	130			
Hosiery and knit goods.....	13	2,088	1	3	4	5	76	1	33	
Liquors, malt.....	65	2,052	1	27	80	22	266	9	275	
Lumber and timber products.....	453	20,947	17	221	445	107	1,245	36	1,167	
Marble and stone work.....	127	1,579	14	70	134	24	233	11	304	
Paper and wood pulp.....	8	1,345		1	1					
Printing and publishing.....	994	6,134	246	573	1,216	128	1,354	28	952	
Slaughtering and meat packing.....	29	2,587	1	14	29	8	78	2	72	
Tobacco manufactures.....	324	1,281	108	166	330	42	416	6	165	
All other industries.....	1,343	15,851	129	759	1,640	294	3,233	96	3,091	
Total for cities ¹	2,622	58,256	351	1,205	2,900	619	6,954	227	7,302	
DULUTH.....	243	5,538	25	108	254	56	608	21	710	
HIBBING.....	27	65	5	19	36	3	29			
MANKATO.....	64	755	7	30	76	17	185	7	291	
MINNEAPOLIS.....	1,349	23,295	188	643	1,506	319	3,587	105	3,363	
St. CLOUD.....	77	1,429	6	33	95	27	348	7	193	
St. PAUL.....	737	19,483	111	310	785	173	1,947	72	2,309	
STILLWATER.....	34	621	1	22	47	6	70	1	28	
WINONA.....	91	2,070	8	40	101	18	200	14	408	

Table 21—Continued.

INDUSTRY AND CITY.	ESTABLISHMENTS EMPLOYING—									
	51 to 100 wage earners.		101 to 250 wage earners.		251 to 500 wage earners.		501 to 1,000 wage earners.		Over 1,000 wage earners.	
	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.
All industries.....	151	11,115	98	15,079	31	11,239	21	14,568	7	12,190
Agricultural implements.....			1	150			1	603		
Boots and shoes.....	1	57	7	1,061	2	831				
Bread and other bakery products.....	5	327	1	127	2	522				
Brick, tile, pottery, and other clay products.....	2	162	4	535						
Butter and cheese.....	1	61								
Carriages and wagons and materials.....	4	280	1	106						
Cars and general shop construction and repairs by steam-railroad companies.....	6	437	3	288	5	2,119	5	3,423	3	3,825
Clothing, men's, including shirts.....	3	254	5	893	2	667				
Confectionery.....	4	276	1	115						
Copper, tin, and sheet-iron products.....	3	200	1	214						
Flour-mill and gristmill products.....	7	508	2	297	1	452	2	1,773		
Foundry and machine-shop products.....	12	936	9	1,275	2	802	2	1,436		
Fur goods.....	1	187	1	335						
Furniture and refrigerators.....	6	497	2	350						
Gas, illuminating and heating.....			1	250			1	608		
Hosiery and knit goods.....	1	88	1	174					1	1,713
Liquors, malt.....	1	89	2	210	2	579	1	553		
Lumber and timber products.....	34	2,527	22	3,305	7	2,444	7	4,900	2	4,823
Marble and stone work.....	6	350	1	176	1	292				
Paper and wood pulp.....	3	266	2	346	2	732				
Printing and publishing.....	11	754	7	1,306			1	552		
Slaughtering and meat packing.....	1	72	1	108	1	399			1	1,829
Tobacco manufactures.....			2	350						
All other industries.....	40	2,936	21	3,256	3	1,065	1	630		
Total for cities ¹	113	8,415	69	11,167	20	6,951	15	10,362	3	4,205
DULUTH.....	24	1,768	7	1,094	1	293	1	811		
HIBBING.....										
MANKATO.....	3	203								
MINNEAPOLIS.....	46	3,439	30	4,864	9	2,958	6	4,393	3	4,205
St. CLOUD.....	3	190					1	603		
St. PAUL.....	27	1,975	28	4,598	9	3,314	7	4,555		
STILLWATER.....	2	172	2	304						
WINONA.....	8	668	2	307	1	356				

¹ Excludes Virginia, to avoid disclosure of individual operations.

INDUSTRY AND CITY.	Cen- sus year.	PER CENT OF TOTAL AVERAGE NUMBER OF WAGE EARNERS IN ESTABLISHMENTS EMPLOYING SPECIFIED NUMBER.								INDUSTRY AND CITY.	Cen- sus year.	PER CENT OF TOTAL AVERAGE NUMBER OF WAGE EARNERS IN ESTABLISHMENTS EMPLOYING SPECIFIED NUMBER.									
		1 to 5	6 to 20	21 to 50	51 to 100	101 to 250	251 to 500	501 to 1,000	Over 1,000			1 to 5	6 to 20	21 to 50	51 to 100	101 to 250	251 to 500	501 to 1,000	Over 1,000		
		All industries.....	1914 1909	7.8 8.2	12.0 11.4	11.0 11.4	12.0 12.4	16.2 17.9	12.1 13.5			15.7 16.4	13.1 8.9	Gas, illuminating and heating..	1914 1909	4.8 6.2	12.5 6.4	24.1 27.7
Agricultural implements.....	1914 1909	2.5 0.7	6.1 9.3	5.0 .....	.....	17.2 .....	.....	69.2 .....	.....	Hosiery and knit goods.....	1914 1909	0.2 0.5	3.6 3.4	1.6 8.3	4.2	8.3 25.2	.....	.....	.....	82.0 62.6	.....
Boots and shoes.....	1914 1909	.....	1.9 0.6	1.2 2.9	2.8 15.1	52.7 9.0	41.3 48.6	23.5 .....	.....	Liquors, malt.....	1914 1909	3.9 5.0	13.0 16.6	13.4 7.6	4.3 14.2	10.2 24.2	28.2	26.9 32.4	.....	.....	.....
Bread and other bakery products	1914 1909	28.2 28.7	22.4 22.5	4.4 9.4	15.1 6.8	5.9 17.8	24.1 14.8	.....	.....	Lumber and timber products...	1914 1909	2.1 3.3	5.9 3.1	5.6 4.5	12.1 10.3	15.8 20.0	11.7 11.7	23.8 23.1	23.0 24.0	.....	.....
Brick, tile, pottery, and other clay products.	1914 1909	3.3 5.1	27.2 32.1	21.2 24.4	11.2 18.0	37.0 20.3	.....	.....	.....	Marble and stone work.....	1914 1909	8.5 7.2	18.6 17.5	19.3 27.6	24.1 16.3	11.1 31.3	18.5.....	.....	.....	.....	.....
Butter and cheese.....	1914 1909	74.7 85.9	16.5 9.4	4.6 4.7	4.2 .....	.....	.....	.....	.....	Paper and wood pulp.....	1914 1909	0.1 .....	.....	4.8 8.9	.....	19.8 33.8	25.7 52.6	54.4.....	.....	.....	.....
Carriages and wagons and ma- terials.	1914 1909	22.1 23.0	16.0 15.3	15.6 23.2	33.8 25.5	12.4 13.0	.....	.....	.....	Printing and publishing.....	1914 1909	19.8 22.5	22.1 21.2	15.5 20.7	12.3 13.7	21.3 12.7	.....	.....	9.0 9.2	.....	.....
Cars and general shop construc- tion and repairs by steam- railroad companies.	1914 1909	(1) 0.1	0.3 0.2	4.0 2.0	4.1 4.7	2.7 7.1	20.1 32.8	32.4 37.5	36.3 15.5	Slaughtering and meat packing.	1914 1909	1.1 2.7	3.0 2.3	2.8 8.6	2.8 3.1	4.2	15.4 15.8	.....	70.7 67.5	.....	.....
Clothing, men's, including shirts	1914 1909	0.9 0.7	6.2 10.9	19.4 13.0	10.3 17.0	36.2 23.1	27.0 35.2	.....	.....	Tobacco manufactures.....	1914 1909	26.2 26.3	33.0 20.5	13.1 23.8	.....	27.8 4.6	.....	.....	.....	.....	.....
Confectionery.....	1914 1909	12.2 8.3	24.4 7.8	17.0 38.6	32.7 27.4	13.6 17.9	.....	.....	.....	All other industries.....	1914 1909	10.3 9.3	20.4 22.0	19.5 15.7	18.5 17.7	20.5 22.0	6.7 9.9	4.0 3.4	.....	.....	.....
Copper, tin, and sheet-iron products.	1914 1909	21.6 16.4	27.1 32.3	13.2 22.8	18.4 8.5	19.7 20.1	.....	.....	.....	Total for cities ²	1914	5.0	11.9	12.5	14.4	19.2	11.9	17.8	7.2	.....	.....
Flour-mill and gristmill prod- ucts.	1914 1909	8.8 11.3	11.7 11.7	13.1 12.0	11.1 10.8	6.5 9.1	9.9 11.1	38.8 34.0	.....	DULUTH.....	1914	4.6	11.0	12.8	31.9	19.8	5.3	14.6	.....	.....	.....
Foundry and machine-shop products.	1914 1909	7.4 4.7	15.9 13.2	13.6 13.7	13.3 17.3	13.1 21.4	11.4 9.8	20.4 19.8	.....	HIBBING.....	1914	55.4	44.6	.....	.....	.....	.....	.....	.....	.....	.....
Fur goods.....	1914 1909	3.7 2.6	15.5 13.6	18.5 16.2	.....	22.3 27.1	40.0 40.5	.....	.....	MINNEAPOLIS.....	1914	5.3	12.6	11.9	12.2	17.2	10.4	15.5	14.9	.....	.....
Furniture and refrigerators.....	1914 1909	2.1 2.8	14.1 12.4	35.1 33.5	28.6 18.2	20.1 33.0	.....	.....	.....	ST. CLOUD.....	1914	6.6	24.4	13.5	13.3	.....	.....	42.2	.....	.....
										ST. PAUL.....	1914	4.0	10.0	11.8	10.1	23.6	17.0	23.4	.....	.....
										SHILLWATER.....	1914	7.6	11.3	4.5	27.7	49.0	.....	.....	.....	.....
										WINONA.....	1914	4.9	9.7	19.7	32.3	14.8	18.6	.....	.....	.....

¹ Less than one-tenth of 1 per cent.² Excludes Virginia, to avoid disclosure of individual operations.

Engines and power.—Table 23 shows, for 1914, 1909, and 1904, for all industries combined, the number and horsepower of engines or motors employed in generating power (including electric motors operated by

purchased current). It also shows separately the number and horsepower of electric motors operated by current generated in the establishments reporting.

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.					
	1914	1909	1904	Amount.			Per cent distribution.		
				1914	1909	1904	1914	1909	1904
Primary power, total.....	13,463	8,679	3,265	358,737	297,670	220,934	100.0	100.0	100.0
Owned.....	3,462	3,792	3,265	286,939	266,546	211,070	80.0	89.5	95.5
Steam engines and turbines ¹	2,190	2,544	2,378	206,144	199,802	168,115	57.5	67.1	78.1
Internal-combustion engines.....	959	877	629	7,454	7,174	4,710	2.1	2.4	2.1
Water wheels, turbines, and motors.....	313	371	258	73,341	59,570	38,245	20.4	20.0	17.3
Rented.....	10,001	4,887	(²)	71,798	31,124	9,864	20.0	10.5	4.5
Electric.....	10,001	4,887	(²)	71,224	30,297	8,594	19.8	10.2	3.9
Other.....	.....	.....	.....	574	827	1,270	0.2	0.3	0.6
Electric.....	12,778	6,791	.....	121,018	52,212	14,427	100.0	100.0	100.0
Rented.....	10,001	4,887	(²)	71,224	30,297	8,594	58.9	58.0	59.6
Generated by establishments reporting.....	2,777	1,904	635	49,794	21,915	5,833	41.1	42.0	40.4

¹ Figures for horsepower include for 1909 and 1904 the amounts reported under the head of "other" owned power.² Not reported.

This table shows an increase in primary power amounting to 61,067 horsepower, or 20.5 per cent, from 1909 to 1914, due, in part, to the increase in rented power. The use of rented power, almost

wholly electric, has greatly increased since 1904, when 9,864 horsepower of this character, representing 4.5 per cent of the total primary power, was reported. In 1909 the amount of such power had increased to

31,124 horsepower, or 10.5 per cent of the total, and in 1914 to 71,798 horsepower, or 20 per cent of the total. The increase in the use of electric motors run by current generated within the same establishment has kept pace with that in rented power. For all classes of owned power there was a decided increase.

Fuel.—Closely related to the kind of power employed in manufactures is that of the fuel consumed

in generating this power or otherwise used in manufacturing processes.

Table 24 gives, for 1914, the quantity of each kind of fuel used, for which data were obtained, for all industries combined and for certain selected industries in the state as a whole, and for all industries combined in each city for which separate statistics can be given.

INDUSTRY AND CITY.	COAL.				Gas (1,000 cubic feet).	INDUSTRY AND CITY.	COAL.				Gas (1,000 cubic feet).
	An-thra-cite (tons, 2,240 lbs.).	Bitu-minous (tons, 2,000 lbs.).	Coke (tons, 2,000 lbs.).	Oil, in-cluding gaso-line (bar-rels).			An-thra-cite (tons, 2,240 lbs.).	Bitu-minous (tons, 2,000 lbs.).	Coke (tons, 2,000 lbs.).	Oil, in-cluding gaso-line (bar-rels).	
All industries.....	42,659	1,400,702	101,018	303,768	84,463	Hosiery and knit goods.....	11	5,308			457
Agricultural implements.....	8	5,707	1,407	369	40	Limbs.....		7,605			
Artificial stone products.....	33	3,692	51	455		Liquors, malt.....	3,017	59,594	67		408
Automobiles, including bodies and parts.....	52	6,276	4	207	662	Lumber and timber products.....	365	20,156		774	
Boots and shoes.....	915	3,380		3	535	Malt.....	6,517	28,053		424	
Boxes and cartons, paper.....	8	1,077	3		1,136	Marble and stone work.....	49	9,262	30	368	
Brass, bronze, and copper products.....	15	128	1,889	600		Mattresses and spring beds.....	170	1,572	171		184
Bread and other bakery products.....	4,442	12,085	4,224	2,377	9,932	Millinery and lace goods.....	13	2,194			117
Brick, tile, pottery and other clay products.....	588	111,618	252	2,783		Oil, linseed.....	3,520	23,452			
Butter and cheese.....	1,277	40,905	497	1,326	60	Paint and varnish.....	13	2,729	68	2	825
Canning and preserving.....	24	2,803	39	30		Paper and wood pulp.....		97,829			
Carriages and wagons and materials.....	130	6,332	320	2,109		Patent medicines and compounds.....	196	3,276	12	49	97
Cars and general shop construction and repairs by steam-railroad companies.....	600	195,523	1,975	9,760	1,941	Printing and publishing.....	2,459	8,679	208	836	25,211
Coffee, roasting and grinding.....	224	1,954		7	5,990	Slaughtering and meat packing.....	3	70,836		62	3,306
Confectionery.....	308	3,943	656	4	6,180	All other industries.....	10,827	224,297	42,158	4,796	9,223
Cooperage and wooden goods.....	164	3,215	150	19		Total for cities ¹	33,563	845,903	91,320	281,276	77,992
Copper, tin, and sheet-iron products.....	412	2,234	78	109	3,547	DULUTH.....	12,197	188,207	43,474	3,274	12,319
Flour-mill and gristmill products.....	3,017	249,002	54	1,601		HILBING.....		206			100
Food preparations, not elsewhere specified.....	1,034	3,016		2	3,319	MANEATO.....	155	22,275	71	107	723
Foundry and machine-shop products.....	1,238	38,722	20,141	6,647	6,275	MINNEAPOLIS.....	14,608	362,891	10,085	166,670	42,895
Furniture and refrigerators.....	925	13,661		572		ST. CLOUD.....	181	10,116	866	72	300
Gas, illuminating and heating.....	90	130,552	26,564	267,451	5,018	ST. PAUL.....	5,034	207,371	35,242	110,721	19,087
						SILLWATER.....	88	4,582	672	31	184
						WINONA.....	1,250	50,255	909	501	2,879

¹ Excludes Virginia, to avoid disclosure of individual operations.

SPECIAL STATISTICS.

For certain industries the Census Bureau collects, by means of special schedules, details regarding the quantities and cost of materials, the quantity and value of products, and other information for securing which no provision is made on the general schedule. Certain data of this character for four important industries in Minnesota are here presented. Statistics for power laundries are also given.

Flour-mill and gristmill products.—There were 286 establishments reporting flour-mill and gristmill products in 1914, as compared with 322 establishments in 1909. Of the number reporting in 1914, 240 manufactured wheat flour to some extent. There were 34 establishments each of which reported the production of 100,000 barrels or more, making an aggregate of 24,762,693 barrels. Of the total output of wheat flour in the United States, Minnesota produced 23.3 per cent in 1914 and 21.7 per cent of the total value, as compared with 21.5 and 20.8 per cent, respectively, in 1909. The following table gives the quantity and value of products for the last three census years:

	1914	1909	1904
Total value.....	\$148,243,708	\$130,136,129	\$122,059,123
Wheat flour:			
Barrels.....	27,132,155	22,737,404	23,871,227
Value.....	\$117,988,654	\$114,185,351	\$103,401,447
Rye flour:			
Barrels.....	579,645	229,651	132,671
Value.....	\$1,991,445	\$936,066	\$543,505
Buckwheat flour:			
Pounds.....	1,653,928	990,387	2,247,420
Value.....	\$63,006	\$33,047	\$62,513
Barley meal:			
Pounds.....		432,600	160,000
Value.....		\$5,496	\$3,200
Corn meal and corn flour:			
Barrels.....	53,845	66,705	66,018
Value.....	\$185,008	\$204,863	\$154,243
Hominy and grits:			
Pounds.....	1,483,329	14,234,660	
Value.....	\$16,393	\$210,022	
Oatmeal:			
Pounds.....	150,272		
Value.....	\$1,762		
Bran and middlings:			
Tons.....	1,051,260		
Value.....	\$22,390,532		
Feed and offal:			
Tons.....	219,263	1,080,833	1,131,742
Value.....	\$5,517,795	\$23,112,813	\$17,689,148
Breakfast foods:			
Pounds.....	59,421		
Value.....	\$1,967		
All other cereal products, value.....	\$41,860	\$276,914	
All other products, value.....	\$45,286	\$171,557	\$265,067

Measured by value of products, wheat flour constituted 79.6 per cent of the total value of all products reported for the mills of the state in 1914, 82.1 per cent in 1909, and 84.7 per cent in 1904. The quantity of wheat flour manufactured increased 19.3 per cent, rye flour 152.4 per cent, and buckwheat flour 97.3 per cent during the period from 1909 to 1914, while the quantity of hominy and grits produced decreased 89.6 per cent and corn meal 19.3 per cent.

In 1914 the mills of the state were equipped with 4,021 stands of rolls, 89 runs of stone, and 177 attrition mills. Eleven establishments manufactured their own barrels and three made sacks.

Slaughtering and meat packing.—The statistics given in Table 26 represent only wholesale slaughtering and meat packing. The table shows, for 1914, 1909, and 1904, the quantity and value of the principal products. The total of "all other products" includes pickled beef, cured, canned sausage, meat puddings, scrapple, head cheese, compound lard, and lard substitutes, oleo and other oil, tallow, soap stock, oleo stearin, oleomargarine, hoofs and horns, soap, sausage casings, and goat, kid, and pig skins.

Table 26	1914	1909	1904
Total value.....	\$47,535,803	\$25,608,934	\$17,526,707
Fresh meat:			
Beef—			
Pounds.....	76,992,124	59,276,669	55,358,469
Value.....	\$7,714,340	\$3,187,527	\$2,850,777
Veal—			
Pounds.....	6,987,360	5,765,536	2,120,934
Value.....	\$375,264	\$386,210	\$132,450
Mutton and lamb—			
Pounds.....	8,511,931	5,655,124	8,283,313
Value.....	\$853,878	\$480,143	\$526,449
Pork—			
Pounds.....	110,312,690	45,709,115	43,542,306
Value.....	\$11,808,814	\$4,336,448	\$3,204,733
Edible offal and all other fresh meat—			
Pounds.....	6,539,309	727,938	794,420
Value.....	\$534,357	\$113,628	\$72,200
Pork, pickled, and other cured:			
Pounds.....	115,033,007	82,480,987	71,741,762
Value.....	\$16,430,999	\$9,253,591	\$6,169,220
Sausage:			
Pounds.....	8,845,380	7,632,698	8,151,961
Value.....	\$1,114,112	\$696,017	\$696,695
Lard:			
Pounds.....	40,311,585	21,429,517	26,435,556
Value.....	\$4,263,173	\$2,581,501	\$1,933,587
Fertilizers and fertilizer materials:			
Tons.....	7,610	12,075	7,543
Value.....	\$223,358	\$314,660	\$154,867
Hides and pelts:			
Cattle—			
Number.....	166,903		
Pounds.....	9,453,992		
Value.....	\$1,624,345		
Calf—			
Number.....	51,221	160,948	125,784
Pounds.....	573,867	7,240,972	6,587,904
Value.....	\$118,622	\$887,185	\$654,461
Sheep—			
Number.....	196,066	132,574	188,791
Value.....	\$202,227	\$146,473	\$187,802
All other products, value.....	\$1,767,314	\$3,225,551	\$953,466

In 1914 there were 166,903 beeves slaughtered by the wholesale slaughtering and meat-packing estab-

lishments of the state, an increase of 41,051, or 32.6 per cent, over the number for 1909. The number of all other animals slaughtered increased from 1,252,890 to 1,837,785, or 46.7 per cent.

Butter and cheese.—The following table gives the production of butter and cheese in 1914, 1909, and 1904:

Table 27	1914	1909	1904
Total value.....	\$33,746,396	\$25,287,462	\$12,871,129
Butter:			
Pounds.....	111,107,208	88,842,846	62,122,554
Value.....	\$30,903,702	\$24,581,058	\$12,297,169
Packed solid—			
Pounds.....	94,775,407	81,104,848	58,542,838
Value.....	\$26,170,426	\$22,359,427	\$11,543,845
Prints or rolls—			
Pounds.....	16,331,955	7,737,998	3,579,716
Value.....	\$4,733,276	\$2,221,631	\$747,324
Cream sold:			
Pounds.....	3,401,449	1,338,833	1,345,769
Value.....	\$293,897	\$146,867	\$93,703
Cheese:			
Pounds.....	4,016,570	2,735,883	3,090,955
Value.....	\$496,215	\$374,716	\$307,117
Full cream—			
Pounds.....	3,350,598	2,695,883	2,965,984
Value.....	\$472,850	\$371,516	\$294,339
Part cream—			
Pounds.....	665,972	40,000	
Value.....	\$23,365	\$3,200	
Other kinds—			
Pounds.....	(1)		124,071
Value.....	(1)		\$12,778
All other butter, cheese, and condensed-milk factory products, value ²	\$1,616,396	\$55,253	\$134,012
All other products, value.....	\$436,186	\$129,568	\$30,128

¹ Included in part-cream cheese.

² Includes whey, casein, skimmed milk sold, and buttermilk.

There was an increase of 48,984,654 pounds, or 78.9 per cent, in the quantity and \$18,606,533, or 151.3 per cent, in the value of the butter manufactured in the factories of the state during the decade ending with 1914. Of the total quantity of butter manufactured in 1914, 85.3 per cent was packed solid and 14.7 per cent was put up in prints or rolls. The percentage of increase shown for "prints or rolls," 356.2, is due to the demand during recent years for butter put up in packages or cartons. The figures for this period show a continued reduction in the amount of milk used as material and a corresponding increase in the quantity of cream.

The quantity of cheese produced in 1914 was 4,016,570 pounds, valued at \$496,215, an increase of 29.9 per cent and 61.6 per cent, respectively, over 1904.

The manufacture of condensed milk was not reported at the census of 1909. Statistics for the one establishment returned in 1914, are included in the group "all other industries," in order to avoid the disclosure of individual operations.

Printing and publishing.—The number and aggregate circulation per issue of the various classes of publications in Minnesota in 1914, 1909, and 1904 are shown in Table 28.

For the five-year period from 1909 to 1914 the total number of publications increased by 8, and the aggregate circulation per issue increased 1,156,913, or 36.4 per cent. There was an increase in the circulation of all issues, except those included in "all other classes," which consists of 10 semimonthly, 2 bimonthly, and 3 quarterly publications, and 1 semiannual.

PERIOD OF ISSUE.	NUMBER OF PUBLICATIONS.			AGGREGATE CIRCULATION PER ISSUE.		
	1914	1909	1904	1914	1909	1904
Total.....	766	758	798	4,333,613	3,176,700	3,106,399
Daily.....	51	42	51	655,070	478,252	460,811
Sunday.....	7	7	10	369,912	237,205	190,304
Semiweekly.....	7	8	7	117,374	37,062	63,396
Weekly.....	620	614	634	1,790,818	1,269,856	1,151,145
Monthly.....	65	68	71	1,122,249	824,955	956,698
All other classes.....	16	19	25	278,190	331,370	284,047

The circulation of the daily papers increased 178,818, or 37.5 per cent, from 1909 to 1914. The weekly circulation, which increased to 1,790,818 copies per issue, constituted 41.3 per cent of the aggregate average circulation of all publications in 1914. Monthly publications show an increase in circulation during the later semidecade from 824,955 to 1,122,249, a gain of 297,294, or 36 per cent.

Table 29 gives the number and circulation of the publications printed in foreign languages for 1914 and 1909.

PERIOD OF ISSUE.	Census year.	TOTAL.		ENGLISH.		IN FOREIGN LANGUAGES.	
		Number.	Aggregate circulation per issue.	Number.	Aggregate circulation per issue.	Number.	Aggregate circulation per issue.
Total.....	1914	766	4,333,613	691	3,756,218	75	577,395
	1909	758	3,176,700	685	2,635,711	73	540,989
Daily and Sunday.....	1914	58	1,024,982	51	953,519	7	71,463
	1909	49	713,457	46	688,752	3	24,705
Weekly.....	1914	627	1,908,192	581	1,552,262	246	355,930
	1909	622	1,306,018	578	945,129	244	361,789
Monthly.....	1914	65	1,122,249	49	1,045,037	16	77,212
	1909	68	824,955	51	747,955	17	77,000
All other classes.....	1914	16	278,190	10	205,400	6	72,790
	1909	19	331,370	10	253,875	9	77,495

¹ Includes 7 semiweekly papers. ² Includes 1 semiweekly.
³ Includes 8 semiweekly papers.

Of the 766 publications of all kinds in 1914, 75 were printed in foreign languages, as compared with 73 in 1909. Of these, 45 were in Scandinavian, 15 in German, 4 in Finnish, 3 each in Norwegian-and-English and German-and-English, and 1 each in French, Polish, Slovenian, Yiddish, and English-and-Swedish. The Scandinavian publications had the largest circulation of those printed in foreign languages; in 1914 this class reported a circulation of 327,732, a gain of 16,521, or 5.3 per cent, over 1909.

German publications rank second, with a circulation of 190,913, which is a slight decrease from the circulation reported for 1909. The total circulation of newspapers and periodicals printed in foreign languages was 577,395 in 1914, as compared with 540,989 in 1909, a gain of 36,406, or 6.7 per cent.

Laundries.—Statistics for power laundries are not included in the general tables or in the totals for manufacturing industries. Table 30, however, summarizes these statistics for Minnesota for 1914 and 1909.

	POWER LAUNDRIES.		
	Number or amount.		Per cent of increase, 1909-1914.
	1914	1909	
Number of establishments.....	188	158	19.0
Persons engaged.....	4,024	3,338	20.6
Proprietors and firm members.....	203	187	8.6
Salaried employees.....	327	235	39.1
Wage earners (average number).....	3,494	2,916	19.8
Primary horsepower.....	4,264	2,919	46.1
Capital.....	\$2,708,038	\$1,821,191	48.7
Salaries and wages.....	1,972,943	1,343,174	46.9
Salaries.....	332,555	210,323	58.1
Wages.....	1,640,388	1,132,851	44.8
Paid for contract work.....	17,361	3,058	467.7
Rent and taxes (including internal revenue).....	147,110	95,253	54.4
Cost of materials.....	855,443	514,354	63.3
Amount received for work done.....	4,100,464	2,855,738	43.6

In both 1914 and 1909 Minnesota ranked eleventh among the states in amount received for work done and in number of persons engaged in the industry. Of the 188 laundries reported for the state in 1914, 104 were operated by individuals and 39 by corporations.

Table 31 shows for 1914 and 1909 the number of wage earners employed in the laundries on the 15th day of each month, or the nearest representative day, and the percentage which this number represents of the greatest number employed in any month of the same year.

MONTH.	WAGE EARNERS.			
	Number.		Per cent of maximum.	
	1914	1909	1914	1909
January.....	3,395	2,715	93.9	87.3
February.....	3,371	2,725	93.3	87.6
March.....	3,405	2,729	94.2	87.7
April.....	3,464	2,816	95.8	90.5
May.....	3,505	2,896	97.0	93.1
June.....	3,580	2,996	99.0	96.3
July.....	3,615	3,101	100.0	99.7
August.....	3,595	3,111	99.4	100.0
September.....	3,574	3,085	98.9	99.2
October.....	3,510	2,956	97.1	95.0
November.....	3,474	2,925	96.1	94.0
December.....	3,444	2,939	95.3	94.5

Table 32 gives statistics as to kinds and amounts of power used in the laundries of the state in 1914 and 1909, together with the percentages of increase for the five-year period.

Table 32

POWER.	NUMBER OF ENGINES OR MOTORS.		HORSEPOWER.		
	1914	1909	Amount.		Per cent of increase, ¹ 1909-1914.
			1914	1909	
Primary power, total.....	340	204	4,264	2,919	46.1
Owned.....	123	123	3,322	2,610	27.3
Steam ²	118	115	3,230	2,530	27.7
Internal combustion.....	5	13	92	80	.....
Rented.....	217	76	942	309	204.9
Electric.....	217	76	942	304	209.9
Other.....	.....	.....	.....	5	.....
Electric—Generated in establishments reporting.....	289	.....	864	.....	.....

¹ Per cent not shown where base is less than 100.
² Figures for horsepower include for 1909 the amounts reported under the head of "other" owned power.

Table 33 shows the kinds and quantities of fuel used in the laundries, as reported at the censuses of 1914 and 1909, with the percentages of increase or decrease.

Table 33

KIND.	Unit.	QUANTITY.		Per cent of increase, ¹ 1909-1914.
		1914	1909	
Anthracite coal.....	Tons, 2,240 lbs.....	2,148	2,287	-6.1
Bituminous coal.....	Tons, 2,000 lbs.....	40,549	28,131	44.1
Coke.....	Tons, 2,000 lbs.....	12	252	-95.2
Oil.....	Barrels.....	295	424	-30.4
Gas.....	1,000 cubic feet.....	6,786	16,832	-59.7

¹ A minus sign (-) denotes decrease.

GENERAL TABLES.

Table 34 gives, for 1914, 1909, and 1904, the number of establishments, average number of wage earners, primary horsepower, wages, cost of materials, and value of products, for selected industries in the state and in cities having 50,000 inhabitants or more; and for the cities having from 10,000 to 50,000 inhabitants, similar data for all industries combined.

Table 35 presents, for 1914, in the state as a whole and in cities with 50,000 inhabitants or more, statistics in detail for each industry that can be shown without the disclosure of individual operations; and for the cities having from 10,000 to 50,000 inhabitants, for all industries combined.

TABLE 34.—COMPARATIVE SUMMARY FOR 1914, 1909, AND 1904.

INDUSTRY AND CITY.	Census year.	Number of establishments.	Wage earners (average number).	Primary horse power.	Wages.	Cost of materials.	Value of products.	INDUSTRY AND CITY.	Census year.	Number of establishments.	Wage earners (average number).	Primary horse power.	Wages.	Cost of materials.	Value of products.
THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES.															
All industries.....	1914	5,974	92,834	358,737	\$58,507	\$336,849	\$493,354	Canning and preserving...	1914	435	436	1,055	\$140	\$896	\$1,234
	1909	5,561	84,767	297,670	47,471	281,622	409,420		1909	32	415	692	135	895	1,343
	1904	4,756	69,636	220,934	35,843	210,554	307,853		1904	31	263	540	89	435	778
Agricultural implements..	1914	17	872	2,489	707	1,474	3,813	Carrriages and wagons and materials.	1914	129	854	2,004	568	1,030	2,206
	1909	17	1,014	1,468	632	1,090	3,014		1909	134	868	1,637	529	983	2,175
	1904	21	1,176	2,527	637	1,090	2,885		1904	141	923	1,825	454	867	1,808
Artificial stone products..	1914	191	738	1,129	474	675	1,618	Cars and general shop construction and repairs by steam-railroad companies.	1914	38	10,551	15,678	7,544	6,327	14,594
	1909	123	653	596	380	379	1,090		1909	28	8,232	10,680	5,556	6,494	12,631
	1904	32	265	77	151	137	384		1904	24	5,767	4,597	3,300	3,716	7,380
Automobiles, including bodies and parts.	1914	24	486	446	335	635	1,230	Clothing, men's, including shirts.	1914	45	2,468	590	990	3,640	5,616
	1909	11	130	331	75	253	429		1909	41	2,156	421	722	2,814	4,459
	1904	.....	.....	.....	.....	.....	.....		1904	30	1,496	315	469	1,599	2,635
Awnings, tents, and sails..	1914	17	110	53	63	251	444	Clothing, women's.....	1914	8	94	23	45	93	209
	1909	15	110	37	54	226	395		1909	11	203	26	110	110	305
	1904	14	100	35	44	163	284		1904	10	343	83	95	141	317
Boots and shoes.....	1914	14	2,012	1,159	1,121	3,980	5,918	Coffee, roasting and grinding.	1914	11	313	924	155	3,819	4,729
	1909	18	2,664	1,411	1,290	4,935	7,568		1909	12	342	550	123	2,353	2,997
	1904	17	1,714	883	719	2,632	4,170		1904	13	188	557	66	1,373	1,816
Boxes and cartons, paper.	1914	13	650	625	325	550	1,322	Confectionery.....	1914	78	843	866	356	1,729	3,039
	1909	11	595	453	236	451	1,023		1909	39	715	505	241	1,370	2,345
	1904	6	320	87	119	223	456		1904	27	646	417	202	919	1,674
Brass, bronze, and copper products.	1914	9	99	154	68	242	359	Cooperage and wooden goods, not elsewhere specified.	1914	28	787	2,377	499	1,277	2,227
	1909	7	33	37	22	91	139		1909	32	850	1,765	444	1,423	2,187
	1904	.....	.....	.....	.....	.....	.....		1904	32	739	932	374	1,204	1,914
Bread and other bakery products.	1914	443	2,169	2,289	1,308	4,794	8,724	Copper, tin, and sheet-iron products.	1914	6143	1,087	611	720	1,665	3,398
	1909	403	1,696	955	972	3,804	6,785		1909	114	1,081	507	649	1,347	2,765
	1904	272	1,347	762	670	2,658	4,620		1904	72	830	473	446	849	1,851
Brick, tile, pottery, and other clay products.	1914	65	1,446	8,452	917	868	2,583	Dairymen's, poultrymen's, and apiarists' supplies.	1914	7	61	228	36	91	219
	1909	86	1,450	7,144	786	607	2,221		1909	3	46	80	22	48	117
	1904	105	1,306	4,904	652	455	1,790	Electrical machinery, apparatus, and supplies.	1914	17	236	393	161	348	749
Brooms.....	1914	19	99	59	61	137	266		1909	13	187	205	101	220	526
	1909	19	91	43	60	139	270		1904	15	170	140	103	187	424
	1904	.....	.....	.....	.....	.....	.....	Flour-mill and gristmill products.	1914	286	4,564	100,638	3,407	127,315	148,244
Butter and cheese.....	1914	807	1,458	12,865	1,167	30,769	33,746		1909	322	4,345	93,849	2,782	124,217	139,136
	1909	784	1,184	11,874	820	22,707	25,287		1904	363	4,481	86,093	2,651	109,061	122,059
	1904	771	1,041	11,511	634	11,140	12,871								

¹ The figures can not be shown without disclosing individual operations.
² Includes "sand-lime brick."
³ Not reported separately.
⁴ Includes "pickles, preserves, and sauces."
⁵ Excludes statistics for one establishment, to avoid disclosure of individual operations.
⁶ Includes "stamped and enameled ware" and "tinware, not elsewhere specified."

MANUFACTURES—MINNESOTA.

TABLE 34.—COMPARATIVE SUMMARY FOR 1914, 1909, AND 1904—Continued.

INDUSTRY AND CITY.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earn- ers (aver- age num- ber).	Primary horse power.	Wages.	Cost of ma- terials.	Value of prod- ucts.	INDUSTRY AND CITY.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earn- ers (aver- age num- ber).	Primary horse power.	Wages.	Cost of ma- terials.	Value of prod- ucts.
THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.															
Food preparations, not elsewhere specified.	1914	27	426	1,369	\$249	\$3,049	\$4,979	Mineral and soda waters..	1914	128	309	472	\$201	\$527	\$1,266
	1909	30	405	1,272	205	2,824	4,207		1909	114	246	282	140	318	868
	1904	16	271	337	109	925	1,591		1904	86	188	205	90	179	572
Foundry and machine-shop products.	1914	1,409	7,051	15,692	5,193	9,934	21,405	Musical instruments, pianos and organs.	1914	4	108	249	79	159	315
	1909	247	6,002	9,966	3,904	7,185	15,609		1909	5	143	163	100	126	294
	1904	188	4,022	6,735	2,416	4,415	9,509		1904	3	23	26	16	28	65
Fur goods.....	1914	36	838	372	549	2,677	4,207	Oil, linseed.....	1914	6	400	4,467	326	11,279	12,357
	1909	42	1,056	288	560	2,213	3,776		1909	6	374	3,821	250	9,685	11,037
	1904	35	1,236	165	497	2,012	3,379		1904	5	358	2,075	204	6,089	7,018
Furnishing goods, men's..	1914	2	142	37	42	327	456	Optical goods.....	1914	8	54	19	38	75	219
	1909	10	182	54	49	251	420		1909	6	25	8	15	21	82
	1904	4	53	11	13	90	135		1904	4	22	12	13	32	79
Furniture and refrigerators.	1914	61	1,739	4,212	1,123	1,758	4,215	Paint and varnish.....	1914	15	144	1,065	98	1,081	1,694
	1909	57	1,695	2,782	930	1,900	3,759		1909	514	164	429	101	889	1,489
	1904	54	1,551	2,396	724	1,107	2,716		1904	5	78	222	37	454	709
Gas, illuminating and heating.	1914	47	1,038	4,670	646	1,681	4,159	Paper and wood pulp.....	1914	8	1,345	53,259	983	3,245	5,573
	1909	42	848	3,538	292	820	2,874		1909	9	607	23,440	361	1,438	2,385
	1904	16	575	1,238	268	624	2,033		1904	4	396	7,153	234	677	1,146
Glass, cutting, staining, and ornamenting.	1914	15	153	71	89	95	283	Paper goods, not elsewhere specified.	1914	7	112	55	52	105	240
	1909	10	131	24	84	82	237		1909	8	87	47	27	143	252
	1904	6	99	22	52	48	137		1904	4	12	4	5	3	13
Grease and tallow, not including lubricating greases.	1914	11	39	209	30	130	208	Patent medicines and compounds and druggists' preparations.	1914	8	613	945	285	2,341	4,879
	1909	8	29	287	25	104	178		1909	101	475	741	188	1,690	4,412
	1904	9	26	142	16	94	143		1904	77	344	545	136	1,340	3,136
Hats and caps, other than felt, straw, or wool.	1914	9	127	31	53	160	241	Photo-engraving.....	1914	11	234	84	227	91	606
	1909	7	58	8	30	51	113		1909	9	168	45	157	39	350
	1904	7	76	9	32	67	115		1904	7	102	25	66	23	145
Hosiery and knit goods...	1914	13	2,088	2,149	892	2,526	4,665	Printing and publishing..	1914	9	6,134	7,101	4,259	5,590	20,187
	1909	10	1,052	853	348	1,080	2,243		1909	950	5,641	5,765	3,507	4,096	15,982
	1904	10	615	316	190	626	1,203		1904	919	4,613	3,958	2,633	2,787	11,564
Jewelry.....	1914	25	154	51	115	103	308	Shipbuilding, including boat building.	1914	30	125	352	89	157	317
	1909	17	119	46	82	87	255		1909	33	209	419	139	158	377
	1904	9	75	21	47	53	161		1904	28	224	302	133	102	342
Leather goods.....	1914	9	750	460	489	1,683	2,806	Signs and advertising novelties.	1914	28	233	84	158	287	593
	1909	42	870	418	448	1,686	2,821		1909	22	116	25	86	96	313
	1904	35	672	327	344	1,115	1,951		1904	22	116	25	86	96	313
Lime.....	1914	5	223	328	127	139	342	Slaughtering and meat packing.	1914	10	2,587	5,260	1,817	41,736	47,710
	1909	8	203	319	101	143	311		1909	30	1,921	4,579	1,129	22,156	25,754
	1904	8	128	120	76	128	289		1904	29	1,376	1,669	785	16,104	17,589
Liquors, malt.....	1914	65	2,052	9,201	1,750	3,303	14,266	Soap.....	1914	6	46	185	24	463	614
	1909	65	1,653	6,912	954	2,343	10,568		1909	6	63	148	28	332	405
	1904	76	1,035	6,079	670	1,739	6,178		1904	5	50	90	18	234	349
Lumber and timber products.	1914	4,453	20,947	60,060	10,855	22,827	41,675	Stoves and furnaces, not including gas and oil stoves.	1914	9	169	212	115	113	316
	1909	525	20,704	67,539	10,918	20,865	42,353		1909	10	185	113	121	245	600
	1904	332	20,471	57,575	10,309	17,798	42,033		1904	10	109	98	59	102	304
Malt.....	1914	9	168	4,428	167	4,463	5,637	Tobacco manufactures....	1914	324	1,261	32	699	1,128	2,572
	1909	9	138	3,567	110	3,531	4,315		1909	339	1,613	37	832	1,256	3,365
	1904	7	69	1,160	51	897	1,198		1904	352	1,780	20	837	1,098	3,205
Marble and stone work....	1914	127	1,579	7,050	1,159	1,211	3,121	Woolen goods.....	1914	16	448	1,266	229	850	1,298
	1909	112	1,738	5,422	1,029	1,045	2,965		1909	16	277	642	123	429	699
	1904	53	827	1,743	509	341	1,245		1904	16	343	941	129	463	791
Mattresses and spring beds	1914	13	440	1,262	268	906	1,595	All other industries.....	1914	374	5,812	16,749	3,631	17,535	27,258
	1909	15	453	1,192	248	810	1,508		1909	343	5,559	16,910	2,918	13,895	22,015
	1904	8	192	192	93	297	581		1904	333	4,465	9,243	2,144	10,594	16,058
Millinery and lace goods..	1914	9	308	116	34	648	945								
	1909	8	498	12	152	598	931								
	1904														

1 Includes "automobile repairing;" "engines, steam, gas, and water;" "gas machines and gas and water meters;" "hardware;" "plumbers' supplies;" "steam fittings and steam and hot-water heating apparatus;" and "structural ironwork."
 2 Includes "suspenders, garters, and elastic woven goods."
 3 Includes "saddlery and harness" and "trunks and valises."
 4 Includes also "boxes, wooden packing;" "lumber, planing-mill products, not including planing mills connected with sawmills;" "pulp wood;" and "window and door screens and weather strips."
 5 The figures can not be shown without disclosing individual operations.
 6 Excludes statistics for two establishments, to avoid disclosure of individual operations.
 7 Includes "envelopes."
 8 Includes "perfumery and cosmetics."
 9 Includes "bookbinding and blank-book making;" "engraving, steel and copper plate, including plate printing;" and lithographing."
 10 Includes "sausage, not made in slaughtering and meat-packing establishments."

MANUFACTURES—MINNESOTA.

TABLE 34.—COMPARATIVE SUMMARY FOR 1914, 1909, AND 1904—Continued.

INDUSTRY AND CITY.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (aver- age num- ber).	Primary horse power.	Expressed in thousands.			INDUSTRY AND CITY.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earners (aver- age num- ber).	Primary horse power.	Expressed in thousands.		
					Wages.	Cost of ma- terials.	Value of prod- ucts.						Wages.	Cost of ma- terials.	Value of prod- ucts.
CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES.															
DULUTH —All in- dustries.	1914	243	5,538	14,914	\$3,365	\$11,518	\$19,729	Clothing, men's, includ- ing shirts.	1914	21	795	160	\$341	\$1,125	\$1,732
	1909	194	6,083	17,561	3,593	8,844	17,180		1909	17	806	127	257	985	1,611
	1904	163	3,987	.....	2,186	4,634	10,139		1904	7 10	377	.....	125	616	890
Bread and other bakery products.	1914	18	111	93	64	260	478	Confectionery.....	1914	33	338	252	156	710	1,178
	1909	13	59	21	34	189	312		1909	12	328	162	112	651	1,072
	1904	12	56	.....	35	105	184		1904	8	260	.....	82	396	737
Clothing, men's, includ- ing shirts.	1914	5	238	47	90	520	690	Flour-mill and gristmill products.	1914	19	2,580	61,884	2,026	73,079	85,132
	1909	4	166	43	59	268	450		1909	13	2,279	50,598	1,530	70,953	78,670
	1904	1 4	74	.....	18	99	136		1904	12	2,227	.....	1,404	56,358	62,754
Confectionery.....	1914	10	81	51	34	187	347	Foundry and machine- shop products.	1914	150	3,558	5,125	2,749	5,662	12,017
	1909	8	65	22	29	108	219		1909	95	2,696	3,405	1,754	3,389	7,241
	1904	.....	.....	.....	.....	.....	.....		1904	1 70	1,869	.....	1,210	2,470	5,034
Copper, tin, and sheet- iron work.	1914	11	134	84	98	164	407	Fur goods.....	1914	19	127	39	85	285	566
	1909	6	54	5	42	58	144		1909	17	128	30	73	283	511
	1904	4	61	.....	36	60	139		1904	13	174	.....	75	230	492
Foundry and machine- shop products.	1914	15	491	1,767	352	794	1,641	Furniture.....	1914	27	703	1,197	465	731	1,653
	1909	13	479	1,399	338	609	1,375		1909	23	806	1,073	447	818	1,651
	1904	8	302	.....	186	349	703		1904	19	710	.....	326	491	1,238
Leather goods.....	1914	10	86	104	61	231	330	Gas and electric fixtures..	1914	10	43	31	37	94	187
	1909	6	140	70	82	449	640		1909	7	27	22	16	30	75
	1904	1 4	101	.....	61	124	221		1904	4	17	.....	6	17	34
Lumber and timber products.	1914	19	2,092	4,887	965	2,523	4,139	Hats and caps, other than felt, straw, and wool.	1914	5	21	11	12	38	54
	1909	14	3,074	7,350	1,692	2,636	5,562		1909	4	30	3	15	23	55
	1904	17	2,053	.....	1,051	1,389	3,806		1904	3	20	.....	9	11	27
Printing and publishing..	1914	38	350	454	313	303	1,114	Jewelry.....	1914	10	92	33	66	168	168
	1909	35	377	439	281	256	983		1909	8	76	31	48	55	156
	1904	30	208	.....	120	139	593		1904	5	49	.....	29	35	97
Tobacco manufactures....	1914	20	45	.....	26	43	124	Leather goods.....	1914	29	208	78	148	501	788
	1909	15	84	.....	51	68	180		1909	14	260	98	147	503	923
	1904	1 15	127	.....	98	98	319		1904	1 12	169	.....	92	296	498
All other industries.....	1914	97	1,910	7,427	1,362	6,493	10,459	Liquors, malt.....	1914	4	437	1,791	412	790	3,434
	1909	80	1,585	8,212	985	4,203	7,315		1909	4	322	1,426	128	514	2,171
	1904	69	1,005	.....	581	2,271	4,038		1904	5	251	.....	163	427	1,186
MINNEAPOLIS —All industries.															
	1914	1,349	23,295	109,040	18,895	131,199	187,854	Marble and stone work...	1914	10	353	965	257	399	796
	1909	1,102	26,962	89,247	15,038	119,993	165,405		1909	10	279	352	209	273	555
	1904	876	21,671	.....	11,418	88,882	121,162		1904	1 5	63	.....	52	66	130
Artificial limbs.....	1914	5	65	50	42	31	163	Models and patterns, not including paper pat- terns.	1914	7	30	37	21	10	48
	1909	6	38	30	31	21	162		1909	5	28	30	19	8	42
	1904	7 3	24	.....	15	16	107		1904	7	28	.....	16	8	40
Artificial stone products..	1914	51	192	219	144	194	447	Photo-engraving.....	1914	6	139	53	137	56	384
	1909	28	176	141	103	83	261		1909	5	104	22	93	25	204
	1904	9	105	.....	53	46	110		1904	4	71	.....	52	11	105
Bread and other bakery products.	1914	129	1,255	1,464	671	2,621	4,917	Printing and publishing..	1914	230	2,027	2,447	1,475	2,124	7,896
	1909	100	897	560	481	2,036	3,605		1909	216	1,755	2,180	1,162	1,693	6,478
	1904	70	732	.....	349	1,466	2,513		1904	185	1,501	.....	902	1,117	4,760
Butter.....	1914	8	62	382	35	1,330	1,524	Stereotyping and electro- typing.	1914	4	38	109	29	23	64
	1909	7	27	324	17	612	675		1909	3	30	56	21	13	52
	1904	12	22	.....	15	110	150		1904	3	49	.....	29	20	130
Carriages and wagons and materials.	1914	23	156	269	108	201	442	Tobacco manufactures....	1914	44	174	4	113	179	445
	1909	23	211	257	142	236	566		1909	45	314	16	168	254	666
	1904	1 23	171	.....	94	143	322		1904	1 48	377	.....	184	224	646
Cars, and general shop construction, and re- pairs by steam-railroad companies.	1914	5	3,140	2,798	2,148	2,142	4,549	All other industries.....	1914	500	11,762	29,642	7,218	38,822	59,272
	1909	3	2,576	1,674	1,803	2,338	4,309		1909	437	12,866	26,630	6,802	34,197	53,694
	1904	4	1,634	.....	953	982	2,027		1904	342	10,671	.....	5,183	23,326	37,156

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

² Figures can not be shown without disclosing individual operations.

³ Includes "steam fittings and steam and hot-water heating apparatus."

⁴ Includes "saddlery and harness" and "trunks and valises."

⁵ Includes "boxes, wooden packing," and "lumber, planing-mill products, not including planing mills connected with sawmills."

⁶ Includes "bookbinding and blank-book making."

⁷ Excludes statistics for two establishments, to avoid disclosure of individual operations.

⁸ Includes "automobile repairing," "engines, steam, gas, and water;" "steam fittings and steam and hot-water heating apparatus;" and "structural ironwork."

⁹ Includes "bookbinding and blank-book making;" "engraving, steel and copper plate, including plate printing;" and "lithographing."

MANUFACTURES—MINNESOTA.

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TABLE 34.—COMPARATIVE SUMMARY FOR 1914, 1909, AND 1904—Continued.

INDUSTRY AND CITY.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earn- ers (aver- age num- ber).	Primary horse power.	Wages.	Cost of ma- terials.	Value of prod- ucts.	INDUSTRY AND CITY.	Cen- sus year.	Num- ber of estab- lish- ments.	Wage earn- ers (aver- age num- ber).	Primary horse power.	Wages.	Cost of ma- terials.	Value of prod- ucts.
					Expressed in thousands.								Expressed in thousands.		

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

ST. PAUL—All in- dustries.	1914	737	19,483	33,886	\$12,796	\$35,819	\$68,682	Furniture and refrigera- tors.	1914	17	487	1,051	\$355	\$574	\$1,557
	1909	719	19,339	29,204	10,952	30,300	58,990		1909	19	455	804	288	695	1,289
	1904	614	14,363	.....	7,211	19,488	38,319		1904	17	354	.....	213	318	727
Artificial stone products.	1914	18	154	78	106	93	288	Leather goods.....	1914	22	229	200	149	467	849
	1909	20	194	64	121	86	288		1909	9	272	214	141	502	797
	1904	6	106	.....	67	52	166		1904	9	302	.....	160	616	1,052
Boots and shoes.....	1914	4	1,055	673	657	2,036	3,045	Liquors, malt.....	1914	3	910	2,611	826	1,233	6,133
	1909	5	1,617	697	830	2,676	4,265		1909	3	748	1,964	500	940	4,910
	1904	4	1,041	.....	456	1,277	2,187		1904	4	354	.....	242	664	2,596
Boxes, cigar.....	1914	3	29	15	16	40	80	Lumber and timber prod- ucts.	1914	19	747	2,447	438	1,324	2,291
	1909	3	32	15	11	24	52		1909	17	654	2,804	352	1,034	1,679
	1904	3	37	.....	12	24	50		1904	13	717	.....	332	945	1,582
Bread and other bakery products.	1914	64	372	503	294	951	1,561	Marble and stone work...	1914	13	190	797	173	296	561
	1909	69	367	240	253	743	1,368		1909	10	216	519	178	287	619
	1904	41	294	.....	157	610	1,019		1904	5	93	.....	72	108	226
Butter.....	1914	7	112	516	97	3,012	3,229	Mattresses and spring beds.	1914	4	112	108	58	246	399
	1909	6	50	535	39	1,918	2,120		1909	7	95	113	59	251	417
	1904	14	49	.....	31	471	562		1904	3	50	.....	27	51	153
Cars and general shop con- struction and repairs by steam-railroad compa- nies.	1914	7	3,068	4,176	2,155	1,513	3,816	Paint and varnish.....	1914	6	58	322	30	417	706
	1909	7	2,406	3,521	1,577	1,846	3,640		1909	6	48	243	24	371	607
	1904	3	1,825	.....	1,004	1,231	2,345		1904	3	46	.....	23	204	347
Clothing, men's, includ- ing shirts.	1914	11	1,128	321	448	1,716	2,732	Patent medicines and compounds and drug- gists' preparations.	1914	28	88	235	46	215	633
	1909	13	884	204	311	1,270	1,917		1909	25	99	158	45	212	723
	1904	8	894	.....	278	763	1,366		1904	24	85	.....	32	122	508
Confectionery.....	1914	11	182	118	74	348	567	Tobacco manufactures....	1914	53	520	15	269	432	1,111
	1909	9	170	157	59	334	537		1909	64	590	11	312	468	1,336
	1904	10	205	.....	65	221	446		1904	63	632	.....	275	375	1,153
Foundry and machine- shop products.	1914	61	1,766	6,406	1,250	2,082	4,474	All other industries.....	1914	376	7,601	17,388	4,902	16,499	31,141
	1909	45	2,118	3,474	1,284	2,352	5,033		1909	368	7,457	10,225	4,099	12,451	24,275
	1904	30	1,214	.....	726	1,171	2,729		1904	351	5,062	.....	2,638	8,558	16,304
Fur goods.....	1914	10	675	306	447	2,325	3,509								
	1909	14	867	242	469	1,840	3,110								
	1904	13	1,003	.....	401	1,711	2,791								

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

MANKATO.....	1914	64	755	2,618	\$434	\$3,217	\$4,344	STILLWATER.....	1914	34	621	1,012	\$295	\$1,206	\$1,877
	1909	63	807	3,654	346	2,728	3,723		1909	38	688	1,952	359	1,648	2,686
	1904	54	724	.....	303	2,529	3,422		1904	36	955	.....	454	1,485	2,784
St. CLOUD.....	1914	77	1,429	3,724	804	1,288	2,695	WINONA.....	1914	91	2,070	6,438	1,152	10,038	14,305
	1909	69	626	3,362	355	1,342	2,299		1909	99	2,032	8,628	1,024	7,330	11,200
									1904	86	1,953	.....	894	5,274	7,850

¹ Excludes statistics for one establishment, to avoid disclosure of individual operations.
² Excludes statistics for two establishments, to avoid disclosure of individual operations.
³ Includes "automobile repairing;" "engines, steam, gas, and water;" "hardware;" "plumbers' supplies;" "steam fittings and steam and hot-water heating apparatus;" and "structural ironwork."
⁴ Includes "saddlery and harness" and "trunks and valises."
⁵ Includes "boxes, wooden packing" and "lumber, planing-mill products, not including planing mills connected with sawmills."
⁶ Includes "perfumery and cosmetics."

MANUFACTURES—MINNESOTA.

TABLE 35.—DETAIL STATEMENT FOR THE STATE AND FOR CITIES OF 50,000 INHABITANTS

INDUSTRY AND CITY.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.							WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY.					Capital.	
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			Total.	16 and over.		Under 16.		
					Male.	Female.	Average number.	Number, 15th day of—			Male.	Female.	Male.		Female.
								Maximum month.	Minimum month.						

THE STATE—ALL INDUSTRIES COMBINED AND SPECIFIED INDUSTRIES.

	5,974	115,600	5,233	4,309	10,163	3,151	82,834	Fe 100,110	De 88,995	(*)	(*)	(*)	(*)	(*)	\$354,434,177
1 All industries.....															
2 Agricultural implements.....	17	1,165	10	41	205	37	872	Mh 1,104	No 414	936	936				7,501,038
3 Artificial limbs.....	8	116	8	2	20	16	70	My 71	De 69	69	60	8	1		77,385
4 Artificial stone products.....	191	1,036	220	47	28	3	738	Je 947	Ja 494	921	920	1			1,305,833
5 Automobile bodies and parts.....	13	179	20	11	3	4	141	De 157	Ja 127	152	151	1			186,943
6 Automobiles.....	11	417	10	18	32	12	345	Je 431	De 297	344	344				1,483,630
7 Automobile repairing.....	160	697	190	19	13	19	456			472	470	1	1		831,319
8 Repair work.....	144	674	187	17	12	19	439	Jy 471	Ja 366	456	455		1		810,819
9 Vulcanizing tires.....	6	23	3	2	1		17	Jy 20	Ja 13	16	15	1			11,500
10 Awnings, tents, and sails.....	17	160	20	7	14	9	110	Je 171	Ja 72	100	46	54			322,550
11 Babbitt metal, typemetal, and solder.	3	14	1	5	2		6	De 7	Je 5	7	7				29,462
12 Baskets, and rattan and willow ware.	3	9	4				5	Mh 6	No 3	7	7				3,800
13 Bookbinding and blank-book making.	19	221	17	11	5	7	181	De 186	Ja 172	190	95	92	2	1	222,554
14 Boots and shoes.....	14	2,284	1	40	165	66	2,012	Fe 2,268	Se 1,751	2,033	1,446	574	6	7	6,102,974
15 Boxes, cigar.....	7	81	8	2	1	3	67	Au 73	Ja 61	70	23	45		2	75,823
16 Boxes and cartons, paper.....	13	748	7	28	39	24	650	Fe 739	Jy 573	658	288	364	6		1,264,387
17 Boxes, wooden packing.....	25	832	21	24	14	5	768	My 833	No 658	703	701		2		1,202,712
18 Brass, bronze, and copper products.....	9	122	8	6	9		99	Ap 112	De 78	98	98				179,304
19 Bread and other bakery products.....	443	3,236	468	71	305	223	2,169	Se 2,250	Ja 2,073	2,254	1,627	611	16		6,499,710
20 Brick and tile, terra-cotta, and fire-clay products.	61	1,364	56	55	34	4	1,215			1,704	1,704				4,266,414
21 Building brick and architectural and fireproofing terra-cotta.	54	1,048	53	46	24	1	924	Jy 1,664	Ja 350	1,391	1,391				2,862,845
22 Sewer pipe and drain tile.....	7	316	3	9	10	3	291	Jy 337	Fe 212	313	313				1,403,569
23 Brooms.....	19	141	26	3	12	1	99	Mh 105	De 94	98	95	3			112,579
24 Brushes, not including toilet brushes.	5	69	5	1	9	1	53	Mh 58	Jy 45	53	48	5			124,047
25 Butter.....	773	2,152	205	221	228	72	1,426	Je 1,554	Fe 1,302	1,469	1,434	31	3	1	5,774,145
26 Canning, vegetables.....	22	359	8	27	5	2	317	Se 1,173	Ja 8	1,279	767	498	11	3	650,333
27 Carpets, rag.....	13	69	12	3	6	2	46	Je 54	Ja 30	47	41	6			49,565
28 Carriage and wagon materials.....	6	23	5	1	1		16	De 17	Ap 15	17	13	4			39,252
29 Carriages, wagons, and repairs.....	123	1,065	141	31	36	19	838			825	824	1			2,869,759
30 Carriages and wagons.....	103	1,012	113	31	36	19	813	Fe 906	No 710	795	794	1			2,810,109
31 Repair work only.....	20	53	28				25	De 27	Ja 24	30	30				59,650
32 Cars and general shop construction and repairs by electric-railroad companies.	8	478		23	20		435	De 481	Jy 396	430	430				1,763,472
33 Cars and general shop construction and repairs by steam-railroad companies.	38	11,096		248	266	31	10,551	Mh 11,005	De 10,100	10,372	10,366	2	4		18,693,984
34 Cheese.....	34	54	17	4	1		32	Je 43	Ja 17	38	38				114,400
35 Cleansing and polishing preparations.	6	23	4	2	2		14	De 18	Se 10	18	6	12			7,913
36 Clothing, men's.....	32	2,505	30	36	275	45	2,119			1,975	382	1,593			2,364,520
37 Regular factories, men's and youth's.	27	2,442	24	36	275	45	2,062	My 2,239	No 1,834	1,917	363	1,554			2,362,044
38 Contract work, men's and youth's	5	63	6				57	Jy 58	Ja 55	58	19	39			2,476
39 Clothing, women's.....	8	117	5	6	8	4	94	Oc 101	Mh 85	94	24	69	1		101,785
40 Coffee, roasting and grinding.....	11	431	5	29	65	19	313	Je 337	No 283	305	135	170			1,530,697
41 Confectionery and ice cream.....	102	1,380	107	61	177	57	978			1,127	459	667		1	1,958,074
42 Confectionery.....	78	1,182	81	48	163	47	843	De 1,000	Jy 717	991	331	659		1	1,584,676
43 Ice cream.....	24	198	26	13	14	10	135	Jy 192	Fe 101	136	128	8			373,493
44 Cooperage.....	24	944	128	26	18	6	766			808	792	16			1,397,351
45 Hogsheads and barrels.....	15	420	124	12	3	1	280	Jy 296	Fe 265	286	286				428,351
46 All other.....	9	524	4	14	15	5	486	Oc 534	Jy 442	522	506	16			969,001
47 Copper, tin, and sheet-iron work.....	138	1,150	145	50	72	28	855	Jy 948	Fe 749	847	847				1,679,377
48 Dairy-men's, poultry-men's, and apiarists' supplies.	7	88	3	10	5	9	61	Mh 97	Oc 31	50	50				292,187
49 Dental goods.....	6	28	4	1	1	4	18	(*) 18	(*) 18	18	16	2			24,604
50 Druggists' preparations.....	4	29	6	4	2		17	Se 18	De 16	16	11	5			76,422
51 Electrical machinery, apparatus, and supplies.	17	317	9	29	28	15	236	De 263	Ja 210	233	219	13	1		393,911
52 Electroplating.....	10	69	12	4		1	52	Ja 60	Jy 49	52	52				51,123
53 Engines, steam, gas, and water.....	17	678	5	36	97	32	508	Se 575	No 479	507	506	1			4,856,554
54 Engraving, steel and copper plate, including plate printing.	6	43	7		1	1	34	Au 85	De 33	33	17	15	1		20,106
55 Envelopes.....	3	123	2	6	6	7	102	My 107	De 96	102	24	78			168,855
56 Fancy articles, not elsewhere specified.	5	74	1	7	6	4	58	Oc 71	Ja 29	66	8	58			46,378
57 Flags and banners.....	4	28	4			1	23	No 36	Ja 5	30	6	24			4,780
58 Flax and hemp, dressed.....	4	21	3	3	2		13	Fe 27	De 9	45	45				38,906
59 Flour-mill and gristmill products.....	286	7,399	266	404	1,761	404	4,564	Fe 4,673	Jy 4,466	4,723	4,630	93			46,411,297

1 Owned power only.

2 Includes rented power, other than electric.

3 No figures given for reasons stated under "Explanation of terms."

OR MORE, BY INDUSTRIES, AND FOR CITIES OF 10,000 TO 50,000 INHABITANTS: 1914.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.				
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.				Electric horsepower generated in establishments reporting.
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, including internal revenue and corporation income.	Principal materials.	Fuel and rent of power.			Total.	Steam engines. ¹	Internal-combustion engines. ²	Water wheels and motors. ¹		Electric (rented).

THE STATE—ALL INDUSTRIES COMBINED AND SPECIFIED INDUSTRIES.

\$9,216,623	\$12,887,547	\$58,507,013	\$2,600,106	\$2,423,552	\$4,957,580	\$328,841,250	\$8,007,964	\$493,354,136	\$156,504,922	358,737	206,144	8,028	73,341	71,224	49,794	1
116,963	275,604	707,478	13,216	2,113	28,744	1,441,839	31,671	3,812,728	2,339,218	2,489	415	29		2,045	427	2
1,980	29,022	45,948		10,762	315	32,055	1,750	176,114	142,309	52				52		3
60,891	23,355	473,677	16,137	4,671	10,857	647,428	27,246	1,617,746	943,072	1,129	290	463		376		4
21,000	4,674	105,488	4,307	16,534	1,592	97,753	6,209	328,748	225,786	78				78		5
49,525	47,689	229,317		13,486	4,627	522,498	9,530	901,690	369,562	368	160	23		185		6
19,660	14,403	367,082	5,600	63,652	7,654	341,195	29,657	1,076,221	705,369	695	48	157		490	5	7
18,160	14,103	355,634	5,500	61,290	7,223	299,539	27,928	1,007,489	680,022	670	48	157		465	5	8
1,500	300	11,448		2,362	81	41,656	1,729	68,732	25,347	25				25		9
10,018	22,088	62,805	318	9,038	2,513	248,904	2,094	444,251	193,253	53				53		10
5,356	750	3,873		1,330	136	65,021	513	81,041	15,507	7				7		11
		3,340		60	32	1,705	157	7,910	6,048	3				3		12
18,439	5,614	101,717		12,213	1,422	83,831	2,296	304,072	217,945	76				76		13
114,556	267,049	1,121,155		51,652	29,450	3,940,560	39,832	5,918,031	1,937,639	1,159	315			844	240	14
2,672	3,880	31,803		3,791	263	66,270	1,267	142,979	75,442	40				40		15
62,828	54,794	325,068		13,968	9,825	529,970	19,908	1,321,846	771,968	625	66			559		16
51,311	14,959	428,040	200	7,664	9,614	1,125,506	13,495	1,788,391	649,390	2,669	1,600	50		919	385	17
11,698	5,540	67,513	381	5,600	1,111	329,862	12,106	358,643	115,675	154				154		18
125,621	410,885	1,307,708	2,316	143,535	47,350	4,593,682	200,706	8,724,162	3,929,774	2,289	1,147	12	1	1,129	932	19
96,943	49,119	764,458	497	13,599	21,280	297,137	451,958	2,151,727	1,402,632	7,664	6,211	303		1,150	110	20
84,347	31,900	578,102	323	12,549	13,466	202,021	325,991	1,511,955	983,943	5,155	3,752	301		1,102	85	21
12,596	17,219	186,356	174	1,050	7,814	95,116	125,967	639,772	418,689	2,509	2,459	2		43	25	22
2,460	9,832	60,849		568	1,046	135,182	1,769	266,993	120,042	59	5	11	2	41		23
780	15,164	32,604	100	3,815	488	171,576	1,158	244,176	71,442	29				29		24
179,520	121,198	1,140,617	39,035	50,146	37,024	30,072,956	288,246	33,294,003	2,932,801	12,514	10,172	898	11	1,433	210	25
25,201	3,280	75,941	1,360	5,212	2,425	310,495	11,786	527,399	205,118	947	752	75		120		26
2,680	4,938	22,379	1,422	2,741	283	4,443	2,197	57,337	50,697	93		26		67		27
1,800	547	11,266		940	172	19,392	763	42,245	22,090	25		10		15		28
55,108	48,191	556,452	125	19,744	19,972	971,557	38,224	2,163,363	1,153,552	1,979	1,189	246		544	138	29
55,108	48,191	556,452	125	19,744	19,972	971,557	38,224	2,163,363	1,153,552	1,979	1,189	246		544	138	29
		20,343		3,040	460	16,973	1,527	62,007	43,507	95		52		43		31
40,946	18,376	433,767		26,122	347,222		19,592	862,575	495,761	1,266				1,266		32
373,738	259,825	7,544,270	5,364	37,833	5,784,609	542,619	14,594,018	8,286,790	15,678	10,333	502	40		4,803	7,010	33
1,335	500	26,340	65	1,142	462	401,562	6,349	452,393	44,482	351	351					34
2,600	1,750	6,165		596	51	32,782	167	53,950	21,001	8				8		35
80,077	228,254	844,951	17,013	59,363	15,757	3,105,394	18,533	4,738,607	1,614,680	422	76			346	62	36
80,077	228,254	844,951	17,013	57,983	15,718	3,103,608	18,000	4,699,921	1,571,313	415	76			339	62	37
		28,860		1,380	39	1,786	533	42,686	40,367	7				7		38
11,380	11,143	45,300		6,298	657	92,126	1,294	209,009	115,589	23				23		39
91,088	108,696	155,205	602	33,172	15,461	3,793,651	25,042	4,728,582	909,889	924	275			649	108	40
118,951	268,921	440,810	3,360	60,009	13,404	2,196,659	47,748	3,876,914	1,632,507	1,363	582	26		755	50	41
101,427	249,166	355,759	3,060	54,432	11,089	1,693,451	35,912	3,039,435	1,310,072	866	495	10		361	50	42
17,524	19,755	85,051	300	5,577	2,315	503,208	11,836	887,479	322,435	497	87	16		394		43
38,667	20,827	486,963	9,671	12,344	1,224,614	18,552	2,166,209	923,043	2,331	2,301	20			110	11	44
12,647	3,224	291,543	6,071	5,047	561,441	11,574	962,109	389,094	495	407	20			83		45
26,020	17,603	285,420	3,500	7,297	663,173	6,978	1,204,100	533,949	1,836	1,794	20			22	11	46
94,273	65,155	592,299	19,488	81,090	13,406	1,299,923	16,333	2,707,982	1,391,726	1,673	108	59		306	80	47
15,800	7,154	36,289		2,124	1,064	87,450	3,416	218,512	127,646	228	100	34		94		48
3,600	3,390	9,748		1,802	78	261,868	631	294,429	31,930	21				21		49
11,180	4,880	14,454		1,060	413	119,360	270	170,245	50,615	1				1		50
56,837	35,584	161,329	6,540	7,796	1,416	340,859	6,982	748,948	401,107	393		24		369		51
4,767	806	38,079	533	5,548	232	12,207	5,415	90,840	73,218	133				133		52
76,932	126,943	334,123	16,102	8,045	14,109	621,533	36,520	1,950,239	1,292,186	1,603	125	76		1,402	15	53
	1,600	20,622	700	5,310	93	9,652	228	59,456	49,576	16				16		54
5,660	11,081	46,758		3,372	518	79,761	1,386	186,897	105,760	43				43		55
14,475	9,008	23,088	4,177	3,120	292	42,836	437	119,112	75,839	10				10		56
	245	11,713		1,209		22,343	91	42,106	19,672	4				4		57
1,300	500	6,589		248		12,638	878	29,198	15,682	240	215	25				58
1,083,233	2,433,846	3,406,631	12,835	614,662	313,638	126,084,794	1,229,777	148,243,708	20,929,137	100,638	56,876	1,564	36,036	6,162	21,048	59

¹ Same number reported for one or more other months.

² Same number reported throughout the year.

TABLE 35.—DETAIL STATEMENT FOR THE STATE AND FOR CITIES OF 50,000 INHABITANTS

INDUSTRY AND CITY.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.								WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY.				Capital.	
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			Total.	16 and over.		Under 16.		
					Male.	Female.	Average number.	Number, 15th day of—			Male.	Female.	Male.		Female.
								Maximum month.	Minimum month.						

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

1	Food preparations, not elsewhere specified.	27	640	18	40	121	35	426					467	210	256	1	\$1,761,319
2	Breadstuff preparations, cereals, and table food.	11	327	3	21	56	22	225	Oc	252	Ap	207	252	63	189		850,866
3	Macaroni, vermicelli, and noodles.	5	117	4	7	9	2	95	No	111	Jy	81	93	40	52	1	202,902
4	All other, including prepared food for animal and fowl consumption.	11	196	11	12	56	11	106	Se	148	Ja	80	122	107	15		707,551
5	Foundry and machine-shop products.	205	4,539	172	241	387	116	3,623					3,513	3,498	11	4	13,739,123
6	Boiler shops.	4	307	1	9	22	4	271	Jy	334	Fe	203	257	257			835,537
7	Foundries.	18	1,113	16	27	74	3	993	Jy ^a	1,061	De	894	932	932			2,141,294
8	Machine shops.	183	3,119	155	205	291	109	2,359	Ap	2,627	No	2,016	2,324	2,309	11	4	10,762,292
9	Fur goods.	36 ^a	1,184	34	44	224	44	838	No	970	Ja	760	910	343	567		3,315,699
10	Furniture.	58	1,751	44	78	129	27	1,473					1,461	1,440	15	6	3,199,110
11	Wood, including rattan and willow.	39	1,381	21	64	107	22	1,167	Ap	1,212	Ja	1,072	1,156	1,136	14	6	2,753,611
12	Store and office fixtures.	19	370	23	14	22	5	306	Ap	342	De	256	305	304	1		445,499
13	Furs, dressed.	6	72	4	2	4	2	60	De	67	Au	57	67	59	8		84,362
14	Gas and electric fixtures.	15	161	9	16	20	5	111					114	103	11		182,576
15	Electric fixtures.	9	119	6	10	15	5	83	Oc ^a	87	Fe	78	87	87			123,187
16	Gas fixtures and miscellaneous.	6	42	3	6	5		28	Oc	32	Fe	26	27	16	11		59,389
17	Gas, illuminating, and heating.	47	1,339	1	54	207	39	1,038	My	1,236	Mh	369	984	984			17,932,037
18	Glass, cutting, staining, and ornamenting.	15	186	9	12	6	6	153	Se	161	De	143	150	144	6		166,055
19	Gloves and mittens, leather.	5	14	4	2			8	No	13	Mh	6	10	3	7		8,801
20	Glucose and starch.	7	26	4	8			14	No	56	Ja ^a	0	62	62			113,769
21	Grease and tallow, not including lubricating greases.	11	61	13	1	5	3	39					40	40			149,810
22	Tallow.	7	45	9		5	3	28	Se	29	Ap	27	28	28			127,016
23	Soap stock and miscellaneous products.	4	16	4	1			11	De	12	Fe	8	12	12			22,794
24	Hand stamps.	7	53	8	3	4	4	34	Oc	36	Je	33	35	33	2		31,199
25	Hats and caps, other than felt, straw, and wool.	9	146	13	3	1	2	127	Je	144	Ja	104	142	49	93		65,423
26	Hosiery and knit goods.	13	2,275	10	31	52	94	2,083	Mh	2,150	Ja	1,974	2,105	306	1,799		3,733,156
27	House furnishing goods, not elsewhere specified.	5	41	5	1	2	2	31	Au ^a	32	Fe	29	31	19	12		40,725
28	Jewelry.	25	206	29	13	2	8	154	De	161	Je	149	158	147	7	4	123,349
29	Lime.	5	247	6	5	9	4	223	Jy	276	Ja	144	201	201			513,335
30	Liquors, malt.	65	2,842	38	184	511	57	2,052	Jy	2,370	Fe	1,892	2,009	2,004	5		23,993,778
31	Lithographing.	4	105		8	18	3	76	No	80	Ja ^a	73	77	61	16		239,442
32	Looking-glass and picture frames.	15	80	15	8	13	3	41	De	47	My	38	42	41	1		123,206
33	Lumber and timber products.	318	17,859	354	225	445	21	16,814	Fe	25,615	Se	11,833	19,926	19,915	11		33,587,782
34	Lumber, planing-mill products, not including planing mills connected with sawmills.	100	3,625	69	151	225	43	3,137	Jy	3,423	Ja	2,725	3,131	3,113	7	11	7,643,508
35	Malt.	9	219		23	27	1	168	Ja ^a	178	Au	151	177	177			4,687,205
36	Marble and stone work.	127	1,909	168	56	87	19	1,579					1,734	1,734			3,143,068
37	Marble and stone work, other than slate.	119	1,527	162	48	71	17	1,229	Se	1,448	Ja	761	1,380	1,380			2,599,905
38	Roofing and other slate products.	8	382	6	8	16	2	350	Au	435	Ja	268	354	354			548,163
39	Mattresses and spring beds.	13	565	10	33	60	22	440	Se	474	De	394	398	347	51		1,462,747
40	Millinery and lace goods.	9	325	4	9	1	3	308	Se	503	De	133	329	33	296		529,761
41	Mineral and soda waters.	123	543	151	28	39	16	309	Jy ^a	385	Ja	248	313	299	14		1,061,537
42	Mirrors, framed and unframed.	3	27	4	3	4	2	14	Jy	16	Ja ^a	13	15	15			16,937
43	Models and patterns, not including paper patterns.	13	131	15	7	3	6	100	My	113	Se	88	102	102	3		111,176
44	Musical instruments and materials, not specified.	4	13	3	4	2		4	Mh	5	Ap	3	5	5			11,622
45	Oil, linseed.	6	462		23	33	6	400	No	516	Jy	285	485	485			9,065,597
46	Optical goods.	8	80	5	7	9		54	No ^a	56	My ^a	52	52	37	14	1	60,575
47	Paints.	11	222	2	17	65	14	124	My	138	Au	110	117	92	25		1,150,783
48	Paper and wood pulp.	3	1,417	2	25	36	9	1,345	Fe	1,467	Au ^a	1,261	1,262	1,229	33		16,540,268
49	Paper goods, not elsewhere specified.	8	17	4	2	1		10	De ^a	11	Au ^a	9	11	7	4		47,139
50	Patent medicines and compounds.	84	950	72	63	138	146	561	Fe	640	No	480	543	235	307	1	5,257,685
51	Paving materials.	7	206		12	8	2	184	My	308	De	104	183	183			552,168
52	Perfumery and cosmetics.	11	71	5	12	6	13	35	Se	36	Ja	32	38	15	23		85,596
53	Photo-engraving.	11	330	8	26	36	26	234	Ap	257	Se	222	239	201	28		257,049
54	Pickles, preserves, and sauces.	13	159	12	7	18	3	119					103	60	34		523,531
55	Preserves.	3	8	1		1		6	Se	8	Ap	4	8	4	4		20,704
56	Pickles and sauces.	16	151	11	7	17	3	113	Se	173	Ap	81	95	65	30		507,857

¹ Owned power only.

² Includes rented power, other than electric.

MANUFACTURES—MINNESOTA.

OR MORE, BY INDUSTRIES, AND FOR CITIES OF 10,000 TO 50,000 INHABITANTS: 1914—Continued.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.				
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.				Electric horsepower generated in establishments reporting.
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, including internal revenue and corporation income.	Principal materials.	Fuel and rent of power.			Total.	Steam engines. ¹	Internal-combustion engines. ²	Water wheels and motors. ¹		Electric (rented).

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

\$172,947	\$167,906	\$248,565	\$700	\$15,797	\$36,068	\$3,014,406	\$34,953	\$4,978,745	\$1,929,388	1,369	500	33	33	803	106	1
124,927	66,377	136,283	200	9,660	16,837	1,732,945	8,316	3,037,189	1,295,928	402	290	-----	33	79	95	2
17,700	11,718	44,337	500	3,522	1,733	173,101	5,696	313,478	134,681	215	110	33	-----	72	8	3
30,320	89,811	67,945	-----	2,615	17,498	1,108,360	20,941	1,628,078	498,777	752	100	-----	-----	652	3	4
486,658	437,071	2,724,521	33,850	73,188	98,231	4,376,698	282,843	10,549,183	5,880,644	10,664	3,939	471	7	6,247	306	5
31,640	16,470	172,530	8,395	330	6,156	250,947	12,788	667,590	403,655	648	330	50	-----	268	69	6
87,067	67,109	738,845	100	15,700	20,922	1,401,575	129,104	2,943,991	1,413,312	2,035	660	14	-----	1,361	-----	7
367,951	353,492	1,813,146	25,355	57,158	69,153	2,724,174	140,951	6,937,802	4,072,677	7,981	2,949	407	7	4,618	327	8
122,382	216,224	549,304	881	97,315	21,605	2,665,417	11,223	4,207,468	1,530,828	372	-----	10	-----	362	-----	9
149,844	112,551	102,091	18,454	39,292	22,351	1,286,764	51,329	3,240,244	1,892,151	2,915	1,353	345	-----	1,217	48	10
116,406	99,675	700,479	4,555	28,691	19,388	1,066,564	39,936	2,402,198	1,385,698	2,368	1,353	345	-----	670	48	11
33,438	12,876	220,612	13,899	10,601	2,983	230,200	11,393	748,046	506,453	547	-----	-----	-----	547	-----	12
2,400	3,971	39,514	-----	10,089	371	38,257	6,075	117,452	73,120	335	200	-----	-----	135	-----	13
21,781	17,379	76,755	50	13,448	1,342	161,919	2,715	341,280	170,655	104	-----	2	-----	102	-----	14
12,181	13,429	56,182	50	8,388	755	116,160	2,433	248,138	129,595	95	-----	-----	-----	95	-----	15
9,600	3,950	20,573	-----	5,060	587	45,759	282	95,101	47,060	9	-----	-----	-----	7	-----	16
124,352	204,965	646,370	1,347	175	235,033	395,705	1,285,565	4,158,606	2,477,336	4,670	4,147	339	-----	184	108	17
15,846	8,719	89,080	140	6,748	1,125	91,496	3,516	283,075	188,063	71	-----	-----	-----	71	-----	18
1,340	-----	2,895	-----	927	6	5,828	142	12,051	6,081	5	-----	-----	-----	5	-----	19
1,227	-----	8,735	-----	120	719	57,275	4,406	85,705	24,024	292	287	-----	-----	-----	-----	20
2,300	7,580	29,962	1,750	1,834	662	118,761	11,095	207,993	78,137	209	200	5	-----	-----	20	21
-----	7,580	21,707	1,750	1,424	584	97,832	8,978	159,594	52,784	100	100	-----	-----	-----	20	22
2,300	-----	8,255	400	400	78	20,929	2,117	48,399	25,353	109	100	9	-----	-----	-----	23
4,628	4,468	24,466	1,100	4,630	292	24,495	954	88,580	63,131	15	-----	-----	-----	15	-----	24
3,900	1,560	52,589	-----	6,380	1,043	157,695	2,662	240,849	80,492	31	-----	-----	-----	31	-----	25
110,128	238,698	891,626	-----	9,778	18,343	2,502,914	23,505	4,065,325	2,138,906	2,149	1,850	27	-----	272	723	26
2,700	2,832	19,310	95	3,150	188	32,698	501	77,243	44,044	6	-----	-----	-----	6	-----	27
14,556	6,370	114,928	-----	12,017	729	100,949	2,148	307,833	204,736	51	-----	-----	-----	51	-----	28
6,560	11,520	126,793	4,083	4,500	5,300	96,565	42,412	342,490	203,513	328	260	25	-----	43	-----	29
681,481	644,754	1,749,611	7,927	125,790	2,205,324	3,011,275	201,926	14,266,296	10,963,095	9,201	7,917	19	25	1,240	975	30
18,525	19,341	58,232	-----	7,621	655	108,607	1,744	239,967	129,616	61	-----	-----	-----	61	-----	31
12,586	8,799	28,069	2,614	7,076	1,119	52,261	884	151,976	99,831	25	-----	-----	-----	25	-----	32
508,334	464,374	8,219,515	1,212,975	14,612	624,098	15,892,094	87,323	32,412,302	16,432,894	46,620	45,873	364	127	262	1,722	33
285,245	246,916	2,071,757	92,825	20,321	65,147	5,190,441	71,424	9,463,993	4,202,128	10,286	8,216	123	30	1,917	1,370	34
76,520	37,043	167,050	4,465	25	37,562	4,301,946	161,371	5,636,696	1,173,479	4,428	3,135	40	-----	1,253	1,878	35
94,895	78,140	1,159,014	12,803	15,974	21,641	1,112,652	98,481	3,121,447	1,910,314	7,050	2,193	174	740	3,943	315	36
77,300	63,245	912,134	9,043	15,250	18,682	755,353	86,182	2,384,844	1,543,309	6,163	1,996	162	740	3,265	315	37
17,595	14,895	246,880	3,760	724	2,959	357,299	12,209	736,693	367,005	887	197	12	-----	678	-----	38
53,898	104,105	267,501	-----	8,209	9,449	887,508	18,810	1,594,845	688,527	1,282	300	-----	-----	962	-----	39
11,339	1,819	34,400	-----	8,471	5,069	639,976	7,620	944,666	297,070	116	100	-----	-----	16	100	40
38,874	45,084	201,079	1,456	12,400	9,382	510,498	16,373	1,266,028	739,157	472	145	101	3	223	4	41
1,987	843	11,265	-----	2,053	64	24,603	1,554	50,309	24,152	34	-----	-----	-----	34	-----	42
11,529	6,400	81,161	49	3,894	703	29,764	2,072	135,447	103,611	72	-----	-----	-----	72	-----	43
3,000	1,500	2,225	500	1,200	105	1,475	167	21,375	19,733	12	-----	-----	-----	12	-----	44
85,011	36,577	325,592	-----	326	24,188	11,179,324	99,683	12,356,906	1,077,899	4,467	2,959	-----	-----	1,508	103	45
15,500	7,258	38,190	-----	7,804	435	73,852	1,098	218,776	143,828	19	-----	-----	-----	19	-----	46
51,215	95,485	88,802	-----	12,595	8,610	955,015	17,872	1,498,609	523,722	1,040	480	6	-----	560	-----	47
131,560	47,214	932,892	-----	125	86,260	2,777,153	467,801	5,572,537	2,327,583	53,259	10,350	-----	35,773	7,136	4,532	48
2,630	240	5,639	-----	1,540	205	23,100	266	83,500	30,134	-----	-----	2	-----	10	-----	49
162,659	176,203	254,490	1,110	28,649	45,587	2,138,993	27,268	4,583,827	2,417,566	923	254	10	-----	659	200	50
26,244	10,110	153,141	-----	925	4,083	252,650	14,605	550,676	283,421	920	555	20	-----	345	50	51
13,425	10,774	16,090	-----	5,182	559	54,198	988	124,954	69,770	21	-----	-----	-----	17	-----	52
60,026	56,933	226,827	22,309	16,370	975	85,196	5,558	605,781	515,027	84	-----	-----	4	84	-----	53
22,500	23,538	64,130	-----	2,036	2,742	479,369	4,402	756,941	273,170	108	35	12	-----	61	-----	54
935	-----	4,233	-----	1,200	22	13,635	596	26,033	11,802	21	-----	-----	-----	21	-----	55
22,500	22,603	59,897	-----	836	2,720	465,734	3,806	730,908	261,368	87	35	12	-----	40	-----	56

* Same number reported for one or more other months.

† None reported for one or more other months.

MANUFACTURES—MINNESOTA.

TABLE 35.—DETAIL STATEMENT FOR THE STATE AND FOR CITIES OF 50,000 INHABITANTS

INDUSTRY AND CITY.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.							WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY.					Capital.	
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			Total.	16 and over.		Under 16.		
					Male.	Female.	Average number.	Number, 15th day of—			Male.	Female.	Male.		Female.
								Maximum month.	Minimum month.						

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

1	Printing and publishing, book and job	258	4,105	256	235	464	249	2,901					2,890	2,053	821	15	1	\$6,122,158
2	Job printing	233	2,908	230	188	177	109	2,204	Ap	2,234	Oc	2,162	2,203	1,741	446	15	1	4,143,468
3	Book publishing and printing	13	1,055	7	39	285	136	588	Je	601	De	554	586	229	357			1,802,327
4	Lithotype work and typesetting	12	142	10	8	2	4	109	Ap	120	De	94	101	83	18			176,363
5	Printing and publishing, newspapers and periodicals	705	5,338	687	290	965	454	2,942					2,996	2,496	445	54	1	8,426,504
6	Printing and publishing	23	1,611	11	66	490	189	855	De	886	Au	836	870	825	30	15		2,514,948
7	Printing, publishing, and job printing	582	3,402	627	166	350	172	2,087	De	2,122	Ja	2,052	2,126	1,671	415	39	1	5,613,066
8	Publishing without printing	100	325	49	58	125	93											298,400
9	Printing materials	3	15	4	1	1	2	9	(9)	9	(9)	9	9	9				29,652
10	Refrigerators	3	312		13	31	2	266	Fe	313	Au	216	256	256				1,416,995
11	Saddlery and harness	76	705	71	37	54	13	530	Ap	572	Au	483	550	518	31	1		1,555,797
12	Sausage	10	38	14	1	1	1	22	(9)	22	(9)	22	22	22				26,023
13	Shipbuilding	30	169	36	3	2	3	125					128	128				223,150
14	New vessels	3	49	4		1	1	43	My	52	Au	34	48	48				69,867
15	Repair work	3	10	4				6	Je	10	De	2	7	7				13,650
16	Small boats	24	110	23	3	1	2	76	My	102	Oc	43	73	73				139,633
17	Shirts	13	411	4	24	26	8	349	Mh	387	No	326	330	156	171		3	485,699
18	Signs and advertising novelties	28	320	25	23	27	7	238					241	150	91			314,062
19	Electric signs	3	35	1	5	4	1	24	Sa	33	Ja	16	24	21	3			53,467
20	Other signs	22	132	23	8	3	3	95	Ap	105	Jy	85	91	91				109,503
21	Advertising novelties	3	153	1	10	20	3	119	De	169	Ja	97	126	38	88			151,092
22	Slaughtering and meat packing	19	3,069	18	34	407	45	2,565	De	3,010	My	2,201	2,517	2,455	62			9,087,755
23	Soap	6	91	7	6	28	4	46	Mh	49	De	40	46	35	11			339,031
24	Statuary and art goods	4	17	4		2		11	My	12	Ja	9	11	11				11,818
25	Steam fittings and steam and hot-water heating apparatus	14	395	8	24	46	48	269					263	257	6			1,308,876
26	Radiators and cast-iron boilers	6	195	1	9	27	9	149	Jy	170	Ja	126	156	150	6			373,643
27	All other	8	200	7	15	19	39	120	Ap	133	De	101	107	107				935,223
28	Steam packing	5	227	1	14	29	9	174	Ja	224	De	111	174	164	10			1,135,551
29	Stereotyping and electrotyping	7	97	5	9	8	5	70	Fe	74	Jy	64	71	71				152,174
30	Stoves and hot-air furnaces	9	200	9	11	5	6	169					166	166				295,319
31	Stoves and ranges	5	184	2	11	5	6	160	Se	184	Ja	76	156	156				290,314
32	Hot-air furnaces	4	16	7				9	Oc	10	Au	8	10	10				15,005
33	Structural ironwork, not made in steel works or rolling mills	18	2,353	12	64	183	36	2,098	Au	2,565	Mh	1,539	2,006	2,004	2			5,035,860
34	Tobacco, chewing and smoking	8	10	10														1,834
35	Tobacco, cigars	316	1,749	347	35	81	25	1,261	Au	1,277	My	1,241	1,290	898	383	9		1,446,748
36	Tools, machinists' and miscellaneous	6	23	10				13	Jy	14	De	11	14	14				52,284
37	Upholstering materials, not elsewhere specified	5	44	4	5	1		34	De	39	Fe	29	44	44				142,174
38	Varnishes	4	45	2	7	13	3	20	My	21	De	18	18	16	2			227,872
39	Window shades and fixtures	6	33	10	2	3	2	16	Se	18	De	13	15	13	2			70,017
40	Wirework, woven-wire fencing	7	45	8	3		1	33	Je	57	De	21	31	31				50,195
41	Wooden goods not elsewhere specified	4	31	3	3	2	2	21	No	24	Ap	15	23	22	1			40,301
42	Woolen goods	16	498	11	21	15	3	448	Mh	471	De	420	436	236	199	1		1,634,262
43	All other industries*	193	6,588	119	289	814	210	5,156										26,948,825

* Owned power only.

* Includes rented power, other than electric.

* All other industries embrace—	Charcoal, not including production in lumber and wood distillation industries	1	Drug grinding	1	Hair work	1	
Bags, other than paper	3	Chemicals	2	Dyeing and finishing textiles	2	Hardware	2
Baking powders and yeast	3	Coffins, burial cases, and undertakers' goods	6	Enameling	1	Hats, straw	1
Belting, leather	3	Coke, not including gas-house coke	1	Engraving and diesinking	2	Hats, wool-felt	1
Blacking, stains, and dressings	1	Condensed milk and milk products, other than butter and cheese	1	Engraving, wood	1	Horseshoes, not made in steel works or rolling mills	2
Bluing	1	Corriage and twine	1	Explosives	1	Ice, manufactured	2
Boot and shoe cut stock	1	Cordials and flavoring sirups	1	Fertilizers	1	Ink, printing	1
Butter, reworking	1	Corsets	4	Flavoring goods, men's	3	Ink, writing	2
Buttons	3	Cutlery and edge tools	3	Gas machines and gas and water meters	2	Iron and steel, blast furnaces	1
Carriages and sleds, children's	2			Gold and silver, reducing and refining, not from the ore	1	Iron and steel, steel works and rolling mills	1
Cars, steam-railroad, not including operations of railroad companies	1					Iron and steel, doors and shutters	2
Cement	2						

MANUFACTURES—MINNESOTA.

OR MORE, BY INDUSTRIES, AND FOR CITIES OF 10,000 TO 50,000 INHABITANTS: 1914—Continued.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.				
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.				Electric horsepower generated in establishments reporting.
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, including internal revenue and corporation income.	Principal materials.	Fuel and rent of power.			Total.	Steam engines. ¹	Internal-combustion engines. ²	Water wheels and motors. ¹		Electric (rented).

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

\$503,351	\$595,279	\$1,989,911	\$426,082	\$180,822	\$47,018	\$2,039,822	\$71,138	\$7,652,223	\$5,541,263	2,650	195	6	2,449	29	1
384,245	230,037	1,511,084	225,153	168,844	25,205	1,765,765	59,121	5,535,381	3,710,495	2,302	195	6	2,101	29	2
106,456	361,967	395,249	200,929	6,444	21,173	261,781	7,653	1,947,704	1,678,330	322			322		3
12,650	3,225	33,578		5,534	640	12,276	4,364	169,078	152,438	26			26		4
601,717	1,353,985	2,088,182	511,509	183,580	71,646	3,125,569	116,806	11,927,678	8,685,303	4,298	170	695	3,433	1	5
192,792	720,051	677,724	82,622	50,122	28,090	1,008,197	26,575	4,146,344	3,111,572	1,347		26	1,321		6
305,601	491,306	1,410,458		108,413	41,854	1,983,986	90,008	6,638,478	4,564,484	2,951	170	669	2,112	1	7
103,324	147,628		343,096	25,045	1,702	133,386	223	1,142,856	1,009,247						8
8,740	1,093	7,347		2,404	440	10,634	794	43,618	32,190	10	4		6		9
49,300	40,856	202,248			9,341	385,553	23,993	975,253	565,707	1,297	1,255		412	786	10
50,066	70,913	373,708	36	36,085	19,838	1,449,575	15,632	2,241,379	776,172	362	50	1	311	1	11
1,560	200	18,030		1,650	225	142,376	2,313	174,256	29,567	71	5		66		12
4,500	3,099	89,323	1,700	1,399	1,829	153,530	3,964	317,111	159,617	352	122	186	44		13
	1,680	34,819		700	700	62,362	2,070	116,518	52,086	158	100	58			14
		4,165		87	87	4,477	35	12,300	7,788	-14		14			15
4,500	1,419	50,339	1,700	1,324	1,042	86,691	1,859	188,293	99,743	180	22	114	44		16
31,649	31,338	145,108	12,512	12,872	3,355	513,197	3,304	877,715	361,214	168	112		56	24	17
38,696	23,485	157,662	19,442	19,442	1,300	283,302	3,640	592,525	305,583	84		5	79		18
7,348	4,457	18,838	1,024	3,590	423	13,076	430	48,703	35,197	6		5	1		19
13,400	4,180	76,563	300	10,172	534	74,855	2,035	226,400	149,510	47			47		20
17,950	14,848	62,211	5,690	5,690	343	195,371	1,175	317,422	120,876	31			31		21
88,228	430,640	1,798,973	2,358	7,360	72,157	41,385,268	206,227	47,635,802	5,944,308	5,189	4,322	16	851	1,421	22
10,330	33,513	23,968		2,533	2,674	455,599	7,126	614,028	151,303	185	170		15	5	23
	3,000	7,896		694	80	7,452	311	23,130	15,367				238		24
76,795	334,381	189,934		4,140	6,348	418,982	10,721	1,185,992	756,289	268		30			25
18,180	19,090	100,408		700	3,286	116,286	8,152	294,137	169,699	208					26
67,615	315,291	89,528		3,440	3,062	302,696	2,569	891,855	586,590	60		30	178		27
28,168	35,332	113,919	129	920	5,653	322,966	30,681	752,521	398,874	1,250	450		800	32	28
15,569	10,298	61,603	378	6,840	1,722	60,784	4,087	175,037	110,166	203		2	201		29
17,072	6,885	115,354		2,820	1,011	105,694	7,218	316,335	203,423	212			212		30
17,072	6,885	100,791		2,400	914	97,810	6,732	296,835	192,293	197			197		31
		5,563		420	97	7,884	486	19,600	11,130	15			15		32
160,643	222,068	1,409,716	15,155	1,794	27,608	3,602,751	60,542	6,305,596	2,642,303	2,213	1,205	17	991	1,675	33
				632	4,009	7,013	35	16,034	8,986	1			1		34
65,310	89,116	699,126	2,409	43,652	214,714	1,111,178	10,243	2,856,459	1,735,038	31		10	21		35
					232	5,971	1,198	33,051	25,882	23					36
6,931	800	30,602		2,060	945	55,260	2,667	111,792	53,865	497	372	9	14		37
					425	1,461	1,312	185,353	96,891	19			19		38
12,685	27,063	9,078		1,760	68	52,204	286	86,648	34,158	9			9		39
1,377	4,786	11,631													
3,525	200	17,176	1,500	960	557	31,695	739	77,483	45,049	23			23		40
3,250	1,173	11,953		2,009	126	32,741	628	60,565	27,196	46	6		40		41
47,142	18,623	229,222	1,118	3,140	8,865	823,789	25,722	1,297,654	448,143	1,266	441	46	270	613	42
603,398	908,048	3,103,599	21,249	99,050	153,935	15,326,815	1,053,507	25,092,267	8,709,945	12,655	8,405	235	4,015	1,770	43

¹ Same number reported throughout the year.

² Same number reported for one or more other months.

Iron and steel forgings.....	2	Musical instruments, organs.....	1	Safes and vaults.....	2	Theatrical scenery.....	1
Labels and tags.....	2	Musical instruments, pianos.....	3	Sand and emery paper.....	1	Tinware.....	4
Lamps and reflectors.....	1	Oakum.....	1	Sand-lime brick.....	3	Toys and games.....	1
Lapidary work.....	1	Oil, not elsewhere specified.....	3	Show cases.....	4	Trunks and valises.....	4
Lead, bar, pipe, and sheet.....	1	Photographic apparatus.....	1	Soda-water apparatus.....	2	Type founding.....	17
Leather goods, not elsewhere specified.....	2	Photographic materials.....	1	Sporting and athletic goods.....	1	Vault lights and ventilators.....	2
Leather, tanned, carried, and finished.....	4	Plumbers' supplies, not elsewhere specified.....	2	Stamped and enameled ware.....	1	Washing machines and clothes wringers.....	2
Linen goods.....	2	Pottery.....	1	Stationery goods, not elsewhere specified.....	4	Window and door screens and weatherstrips.....	5
Lubricating greases.....	2	Printing and publishing, music.....	2	Sugar, beet.....	1	Wood preserving.....	1
Matches.....	1	Pulp wood.....	5	Surgical appliances.....	2	Wood, turned and carved.....	1
Mats and matting, from cocoa fiber and grass.....	1	Regalia and society badges and emblems.....	2	Suspenders, garters, and elastic woven goods.....	3	Wool pulling.....	1
Motorcycles, bicycles, and parts.....	3	Roofing materials.....	7				
Mucilage and paste.....	3						

MANUFACTURES—MINNESOTA.

TABLE 35.—DETAIL STATEMENT FOR THE STATE AND FOR CITIES OF 50,000 INHABITANTS

INDUSTRY AND CITY.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.								WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY.				Capital.	
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			Total.	16 and over.		Under 16.		
					Male.	Female.	Average number.	Number, 15th day of—			Male.	Female.	Male.		Female.
								Maximum month.	Minimum month.						

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

1	DULUTH—All industries.....	243	6,778	184	259	652	145	5,538	Ja	7,084	Je	4,688	6,005	5,374	622	8	1	\$19,617,399
2	Artificial stone products.....	3	11	5	.....	.....	.....	6	Oc ^a	10	Ja	0	10	10	.....	.....	.....	7,950
3	Bread and other bakery products.....	18	168	18	6	24	9	111	No	117	Mh	106	115	79	36	.....	.....	253,100
4	Carriages and wagons.....	4	29	4	2	1	1	21	Je	25	Ja	15	22	22	.....	.....	.....	65,688
5	Clothing, men's, including shirts.....	5	292	1	9	36	8	238	Ap	326	No	143	148	34	114	.....	.....	217,029
6	Confectionery.....	10	141	11	5	32	12	81	Oc	93	Je	75	76	27	49	.....	.....	205,789
7	Copper, tin, and sheet-iron work.....	11	161	8	9	7	3	134	Jy	165	De	104	143	143	.....	.....	.....	255,952
8	Foundry and machine-shop products.....	15	599	11	26	63	8	491	Jy	576	De	391	409	409	.....	.....	.....	2,311,258
9	Furniture, wood, including store and office fixtures.....	5	60	4	2	4	1	49	Mh	77	De ^a	31	31	31	.....	.....	.....	97,315
10	Jewelry.....	5	22	6	.....	.....	2	14	Mh ^a	15	Jy ^a	13	14	14	.....	.....	.....	11,215
11	Lumber and timber products.....	9	1,751	2	26	55	.....	1,668	Ja	3,217	Je	780	2,353	2,353	.....	.....	.....	3,730,801
12	Lumber, planing-mill products, not including planing mills connected with sawmills.....	10	481	2	19	32	4	424	Se	468	De	377	380	379	1	.....	.....	1,138,830
13	Mineral and soda waters.....	4	19	5	1	.....	.....	13	Jy ^a	17	De ^a	11	11	11	.....	.....	.....	32,688
14	Printing and publishing, job work, bookbinding and blank-book making.....	25	254	25	23	15	9	182	Ja	192	De	168	168	182	34	2	.....	457,988
15	Printing and publishing, newspapers and periodicals.....	13	298	7	19	83	21	168	.....	.....	.....	.....	165	156	7	2	.....	456,858
16	Printing and publishing and job printing.....	8	280	4	18	73	17	168	Au	181	Ja	159	165	156	7	2	.....	454,778
17	Publishing without printing.....	5	18	3	1	10	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,080
18	Saddlery and harness.....	8	113	5	9	16	3	80	Fe ^a	93	Oc	61	74	68	6	.....	.....	369,052
19	Tobacco, cigars.....	20	76	21	1	4	5	45	Jy	49	Mh ^a	42	49	41	7	.....	.....	58,199
20	All other industries*.....	78	2,303	49	102	280	59	1,813	.....	.....	.....	.....	1,837	1,465	368	4	.....	9,947,787

* All other industries embrace—	Brooms.....	1	Chemicals.....	1	Food preparations, not elsewhere specified.....	2
Artificial limbs.....	Butter.....	1	Coffee, roasting and grinding.....	2	Fur goods.....	2
Awnings, tents, and sails.....	Carpets, rag.....	2	Coffins, burial cases, and undertakers' goods.....	1	Gas and electric fixtures.....	2
Baking powders and yeast.....	Cars and general shop construction and repairs by electric-railroad companies.....	2	Coke, not including gas-house coke.....	1	Glass, cutting, staining, and ornamenting.....	1
Boots and shoes.....	Cars and general shop construction and repairs by steam-railroad companies.....	2	Cooperage.....	1	Gloves and mittens, leather.....	2
Boxes, cigars.....	.....	.....	Flour-mill and gristmill products.....	2	.....	.....
Boxes and cartons, paper.....	.....	.....	.....	.....	.....	.....
Brass, bronze, and copper products.....	.....	.....	.....	.....	.....	.....

21	MINNEAPOLIS—All industries.	1,349	36,459	1,217	1,499	3,997	1,451	28,295	Au	29,479	Ja	26,950	28,335	22,823	5,478	31	3	\$113,591,908
22	Agricultural implements.....	4	94	.....	6	15	6	67	Fe	91	Je	48	63	63	.....	.....	.....	496,706
23	Artificial limbs.....	5	106	6	1	20	14	65	My ^a	66	De ^a	64	64	55	8	1	.....	69,702
24	Artificial-stone products.....	51	262	51	11	6	2	192	Ap	217	De	144	244	244	.....	.....	.....	308,973
25	Automobiles.....	54	323	10	10	25	9	279	Je	367	De	232	279	270	.....	.....	.....	1,258,916
26	Automobile repairing.....	6	294	55	7	7	3	222	.....	.....	.....	.....	229	227	1	1	.....	345,566
27	Repair work.....	48	272	52	5	6	3	206	Jy	218	Ja	186	213	212	1	1	.....	334,066
28	Vulcanizing tires.....	6	22	3	2	1	.....	16	Au	20	Ja ^a	13	16	15	1	.....	.....	11,500
29	Babbitt metal, type metal, and solder.....	3	14	1	5	2	.....	6	De	7	Je	5	7	7	.....	.....	.....	29,462
30	Bookbinding and blank-book making.....	8	96	6	6	3	5	76	Je	80	Ja ^a	68	78	53	25	.....	.....	116,675
31	Boxes and cartons, paper.....	4	329	2	13	9	11	294	Fe	366	De	255	294	111	178	5	.....	403,224
32	Boxes, wooden packing.....	9	271	6	11	6	4	244	Je	285	Oc	208	216	216	.....	.....	.....	496,134
33	Bread and other bakery products.....	129	1,743	126	40	217	105	1,255	Se	1,321	Ja	1,196	1,293	847	442	4	.....	4,308,989
34	Brick and tile, terra-cotta, and fire-clay products.....	6	64	3	7	.....	.....	54	Au	121	Ja ^a	3	108	108	.....	.....	.....	140,614
35	Brooms, from broom corn.....	6	59	10	1	7	.....	41	My	43	Ja ^a	40	40	40	.....	.....	.....	40,203
36	Butter.....	8	104	2	14	14	12	62	Jy	76	Ja	51	59	52	7	.....	.....	490,290
37	Carpets, rag.....	6	37	7	1	3	1	26	Oc	30	Ja ^a	19	27	24	3	.....	.....	37,715
38	Carriage and wagon materials.....	3	14	2	.....	.....	.....	11	De	12	Ja	8	12	9	3	.....	.....	20,765
39	Carriages and wagons.....	20	181	22	7	4	3	145	Au	158	Oc	125	140	140	.....	.....	.....	371,224
40	Cars and general shop construction and repairs by steam-railroad companies.....	5	3,342	.....	84	100	18	3,140	No	3,197	Ja	3,087	3,126	3,126	.....	.....	.....	4,179,873
41	Clothing, men's, men's and youths', including contract work.....	15	759	13	13	51	3	679	My	729	No	645	674	132	542	.....	.....	708,025
42	Coffee, roasting and grinding.....	5	127	5	11	23	10	78	Se	88	Oc	69 ^a	79	38	41	.....	.....	657,659
43	Confectionery and ice cream.....	38	575	37	27	76	24	411	.....	.....	.....	.....	523	223	300	.....	.....	785,351
44	Confectionery.....	33	480	34	18	71	19	338	De	452	Jy	242	453	155	298	.....	.....	592,295
45	Ice cream.....	5	95	3	9	5	5	73	Jy	110	De	52	70	68	2	.....	.....	193,056
46	Cooperage.....	11	576	116	15	13	3	429	Mh	460	Se	369	451	444	7	.....	.....	772,585
47	Copper, tin, and sheet-iron work.....	67	507	72	22	33	15	365	Se	404	Ja	319	363	363	.....	.....	.....	785,052
48	Electrical machinery, apparatus, and supplies.....	10	228	6	16	24	14	168	Se	176	Ja	155	159	145	13	1	.....	203,246
49	Electroplating.....	7	51	8	3	.....	1	39	Ja	42	Mh	37	38	38	.....	.....	.....	33,223
50	Engines, steam, gas, and water.....	6	244	2	13	60	13	156	Fe	185	My	106	135	135	.....	.....	.....	2,493,499
51	Flour-mill and gristmill products.....	19	4,220	10	168	1,197	265	2,580	Fe	2,660	Oc ^a	2,521	2,644	2,561	83	.....	.....	25,557,517

¹ Owned power only.

² Includes rented power, other than electric.

MANUFACTURES—MINNESOTA.

OR MORE, BY INDUSTRIES, AND FOR CITIES OF 10,000 TO 50,000 INHABITANTS: 1914—Continued.

EXPENSES.							Value of products.	Value added by manufacture.	POWER.					
Salaries and wages.			For contract work.	Rent and taxes.		For materials.			Primary horsepower.				Electric horse-power generated in establishments reporting.	
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, including internal revenue and corporation income.	Principal materials.			Fuel and rent of power.	Total.	Steam engines. ¹	Internal-combustion engines. ²		Water wheels and motors. ¹	Electric (rented).

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

\$636,337	\$752,310	\$3,364,802	\$154,201	\$154,209	\$430,602	\$10,571,177	\$946,492	\$19,729,233	\$8,211,614	14,914	9,392	39	5,483	686	1
11,220	24,377	3,920	45	5,145	33	1,650	40	6,150	4,454	8	3	5	5	2	2
2,280	1,668	63,785	5,145	3,840	1,480	246,805	12,732	477,796	218,259	93	93	93	93	3	3
10,388	17,388	18,191	3,840	90,377	100	37,417	1,097	70,068	31,554	49	49	49	49	4	4
13,200	52,061	90,377	100	9,216	317	519,085	763	689,975	170,127	47	47	47	47	5	5
		34,352	3,060	11,819	1,374	183,874	3,577	346,634	159,183	51	51	51	51	6	6
20,080	9,756	98,334	250	4,033	2,341	160,919	2,827	406,907	243,161	84	84	84	76	7	7
63,280	94,138	352,273	8,395	4,389	11,485	762,364	31,792	1,641,390	847,234	1,767	510	16	1,241	8	8
3,637	4,735	35,262	1,100	226	226	42,678	1,828	102,737	58,231	152	152	152	152	9	9
	904	12,080	1,439	54	8,380	186	28,609	20,043	7	7	7	7	7	10	10
69,588	48,991	686,087	43,053	10,865	78,824	1,484,239	240	2,644,945	1,180,466	3,295	3,295	3,295	817	23	11
33,498	32,106	278,416	6,140	13,088	1,029,324	9,398	1,493,696	454,974	1,592	1,592	1,592	1,592	15	12	12
1,200	8,748	1,296	243	15,527	392	47,785	31,866	7	7	7	7	7	7	13	13
37,757	17,377	110,419	10,894	18,633	1,686	116,533	4,998	420,601	308,070	224	110	114	25	14	14
43,935	75,399	202,491	70,932	9,544	3,095	177,009	4,585	684,867	503,273	230	230	230	230	15	15
42,935	68,419	202,491	53,229	7,744	3,093	177,009	4,585	652,074	470,480	230	230	230	230	16	16
1,000	6,980	17,703	1,800	2	32,793	32,793	32,793	32,793	32,793	32,793	32,793	32,793	32,793	17	17
12,756	18,810	56,309	7,802	1,433	226,200	2,500	313,173	84,473	102	102	102	102	102	18	18
1,200	3,859	26,100	1,550	2,927	8,301	42,931	441	124,891	81,019	102	102	102	102	19	19
312,318	350,741	1,287,658	15,967	56,476	306,522	5,516,242	869,090	10,220,559	3,835,227	7,206	4,702	12	2,492	542	20

Grease and tallow, not including lubricating greases.....	1	Iron and steel, blast furnaces.....	1	Models and patterns, not including paper patterns.....	1	Show cases.....	1
Hats and caps, other than felt, straw, and wool.....	1	Lime.....	1	Optical goods.....	2	Signs and advertising novelties.....	1
Horseshoes, not made in steel works or rolling mills.....	1	Linen goods.....	2	Paints.....	2	Slaughtering and meat packing.....	1
Hosiery and knit goods.....	3	Liquors, malt.....	4	Patent medicines and compounds.....	5	Stoves and hot-air furnaces, except gas and oil stoves.....	1
Ice cream.....	2	Looking-glass and picture frames.....	1	Roofing materials.....	1	Trunks and valises.....	2
		Marble and stone work.....	3	Shipbuilding, wooden, including boat building.....	3	Woolen goods.....	1
		Matches.....	1				
		Mattresses and spring beds.....	2				

\$3,766,645	\$5,820,653	\$18,894,649	\$984,635	\$1,253,833	\$1,499,270	\$128,768,488	\$2,430,957	\$187,854,159	\$56,654,714	109,010	57,037	1,161	20,481	21,361	23,311	21
8,795	16,804	39,951	2,685	420	2,150	42,130	2,718	176,666	131,818	178	165	13	13	13	15	22
780	28,525	41,900	9,618	272	1,690	29,094	1,690	162,509	131,725	50	50	50	50	24	24	24
15,789	6,973	144,314	1,824	1,685	3,440	187,541	6,058	446,678	253,079	219	40	111	68	25	25	25
35,675	42,264	183,768	12,695	2,958	433,409	5,480	709,238	270,349	268	100	11	361	168	26	26	26
11,000	5,852	185,781	3,840	35,623	2,725	177,332	15,777	546,023	352,014	312	11	301	27	27	27	27
9,500	5,552	174,333	3,840	33,261	2,694	135,676	14,048	477,291	327,567	287	11	27	27	27	27	27
1,500	300	11,448	2,362	31	41,656	1,729	68,782	25,847	25,847	25	25	25	25	28	28	28
5,356	750	3,873	1,330	136	65,021	513	81,041	15,507	15,507	7	7	7	7	29	29	29
11,708	3,904	49,634	6,765	977	49,358	1,246	169,344	118,740	47	47	47	47	47	30	30	30
26,852	18,652	144,456	5,028	4,431	221,354	5,939	490,499	263,206	176	66	66	66	66	31	31	31
32,821	8,124	140,976	6,384	4,147	452,242	4,177	632,767	176,848	945	650	50	245	375	32	32	32
79,788	308,615	671,025	1,076	73,862	28,205	2,527,440	94,031	4,017,245	2,295,774	1,464	741	723	678	33	33	33
8,812	29,403	2,149	857	2,982	20,213	84,628	61,433	498	410	8	80	80	80	34	34	34
960	3,360	27,890	300	648	56,648	739	111,207	53,820	17	17	17	17	17	35	35	35
23,500	9,024	34,659	5,030	1,595	1,317,309	13,173	1,523,805	193,323	382	221	23	101	70	36	36	36
2,288	11,942	1,422	1,601	200	1,453	1,205	27,390	24,732	63	23	30	37	37	37	37	37
1,800	8,207	700	85	14,459	435	28,640	13,746	14	14	14	14	14	14	38	38	38
13,465	4,807	100,151	4,732	2,906	180,819	5,518	413,163	226,826	255	160	7	88	88	39	39	39
118,722	91,835	2,148,126	5,014	33,355	1,995,164	147,263	4,549,448	2,407,021	2,798	2,473	310	15	2,620	40	40	40
28,515	46,708	298,884	250	23,886	5,770	995,160	7,156	1,396,049	393,733	133	133	133	133	41	41	41
43,048	65,145	39,840	52	8,782	5,009	1,619,096	8,876	2,037,634	409,752	256	50	206	206	42	42	42
63,517	117,728	198,735	29,099	5,236	932,597	21,333	1,610,903	656,973	605	230	10	365	365	43	43	43
47,900	107,872	155,584	25,709	4,085	698,011	13,520	1,176,442	466,911	252	155	10	87	87	44	44	44
15,817	9,856	43,151	3,990	1,151	236,588	7,813	434,461	190,062	353	75	278	278	278	45	45	45
20,907	14,256	285,194	8,342	765,005	13,761	1,390,310	611,644	1,028	1,002	26	26	26	26	46	46	46
45,926	27,480	261,643	16,269	17,678	5,515	527,026	6,240	1,092,367	559,101	180	28	33	119	47	47	47
43,640	33,889	108,539	5,790	6,125	1,008	249,672	4,950	558,452	303,930	302	302	302	302	48	48	48
3,207	806	28,725	533	4,167	176	9,853	3,823	67,340	53,664	93	93	93	93	49	49	49
33,142	69,421	114,561	6,102	1,740	5,826	226,437	13,549	933,104	693,118	549	56	493	493	50	50	50
606,861	1,626,442	2,025,660	464,606	109,272	72,502,223	576,280	85,132,444	12,053,941	61,884	29,275	15	29,069	3,525	18,929	51	51

¹ Same number reported for one or more other months.

² None reported for one or more other months.

MANUFACTURES—MINNESOTA.

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OR MORE, BY INDUSTRIES, AND FOR CITIES OF 10,000 TO 50,000 INHABITANTS: 1914—Continued.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.				
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.				Electric horsepower generated in establishments reporting.
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, including internal revenue and corporation income.	Principal materials.	Fuel and rent of power.			Total.	Steam engines. ¹	Internal-combustion engines. ²	Water wheels and motors. ¹		Electric (rented).

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

\$133,060	\$57,879	\$188,110	\$700	\$11,325	\$20,216	\$2,258,632	\$26,939	\$3,803,480	\$1,517,909	956	225	33	33	665	93	1
214,388	121,362	1,003,209	8,276	43,424	25,361	1,398,344	65,784	3,780,260	2,316,132	2,200	365	222		1,613	89	2
201,888	117,170	893,608	8,176	38,644	24,103	1,355,017	55,939	3,518,293	2,136,737	2,076	340	208		1,528	69	3
12,500	4,192	109,601	100	4,750	1,253	72,727	9,845	261,967	179,395	124	25	14		85		4
20,832	17,659	85,008		26,483	1,470	282,107	2,518	565,811	281,186	39				39		5
78,118	57,199	465,347	3,855	26,234	11,392	707,408	23,676	1,652,565	921,281	1,107	755	65		377	48	6
69,752	54,008	375,589	3,855	21,233	9,782	620,897	19,686	1,403,745	763,162	1,033	755	65		213	48	7
8,366	3,191	89,758		5,001	1,610	86,511	4,190	248,820	158,119	164				164		8
12,631	6,375	36,751		9,380	723	93,546	823	187,146	92,777	31		2		29		9
12,036	5,575	55,356		3,980	749	37,409	1,551	150,465	111,505	32				32		10
1,248	408	6,076	100	2,100	37	5,896	368	23,007	16,743	5				5		11
900	240	11,795		1,940	334	37,160	607	54,330	16,563	11				11		12
100,311	234,205	835,918		1,830	13,051	2,278,156	21,596	4,341,216	2,041,464	1,978	1,850	27		101	723	13
11,200	3,992	65,704		6,678	398	50,921	1,156	167,661	115,584	33				33		14
153,499	165,944	412,490		658,515	731,232	59,913	59,913	3,434,245	2,644,000	1,791	1,674			117	607	15
12,886	8,799	25,812		5,960	1,053	45,681	872	137,333	90,800	25				25		16
133,720	127,119	1,050,965	92,525	9,539	26,649	2,219,872	30,979	4,460,655	2,210,104	4,101	3,770	12		319	325	17
39,620	18,199	97,397	4,465	25	16,897	2,123,756	92,323	2,868,730	652,651	2,640	1,460			1,180	609	18
19,120	14,475	256,913	3,182	2,442	2,374	385,156	13,598	795,855	397,101	965	272			676		19
37,770	78,506	194,328		2,050	7,897	595,996	13,927	1,112,565	502,642	1,105	300	17		805		20
1,539	960	4,409		1,708		13,063	173	51,599	38,363	4				4		21
12,300	5,428	46,143		3,633	1,243	67,208	2,528	166,942	97,206	36		8		28		22
5,979		21,199		2,160	235	9,405	1,068	47,989	37,516	37				37		23
15,500	7,258	36,350		7,180	377	62,732	953	106,508	132,823	14				14		24
32,705	68,008	57,597		3,835	5,460	621,526	14,935	949,780	313,319	742	300	6		436		25
55,612	92,863	110,146	489	16,186	7,359	339,610	9,101	1,315,274	966,563	222	129	10		83	200	26
13,425	8,824	11,600		4,496	273	37,643	764	94,254	55,847	14				10		27
30,011	45,426	136,792	22,309	9,590	663	53,395	2,934	383,726	327,397	53			4	53		28
20,100	15,931	44,525		920	1,862	331,539	2,618	536,693	202,536	57				22		29
201,760	121,246	730,288	69,292	90,674	10,905	840,075	26,968	2,701,501	1,834,458	1,043	35			1,041		30
184,010	96,925	647,421	45,701	82,550	10,373	798,691	24,441	2,440,566	1,617,434	992		2		990		31
9,600	22,032	27,405	23,591	4,524	356	33,919	757	154,754	120,048	35				35		32
8,150	2,289	55,462		3,600	176	7,435	1,770	106,181	96,976	16				16		33
299,436	724,442	610,223	276,257	60,129	28,878	1,058,647	28,393	4,728,223	3,641,278	1,283	150			1,133		34
95,100	366,610	274,864	18,542	29,184	14,907	489,661	9,598	2,006,206	1,507,037	591				591		5
104,816	258,773	344,359	47,543	15,266	12,848	483,978	18,685	2,039,429	1,536,766	692	150			542		6
69,520	99,059		210,172	15,679	1,123	85,008	110	682,593	597,475							37
6,504	4,173	108,196	36	9,663	2,253	414,323	2,461	602,207	185,423	46				46		38
16,800	23,728	47,324	3,870	5,510	665	122,160	946	336,427	213,321	27				27		39
15,948	13,567	106,781	1,324	12,763	948	162,716	1,748	354,224	189,760	42				37		40
7,348	4,457	18,888	1,024	3,590	423	13,076	430	45,703	35,197	6		5		1		41
8,600	9,110	87,893	300	9,173	525	149,640	1,318	305,521	164,563	36				36		42
1,300	1,404	3,096		673	92	18,500	706	43,700	24,494							43
	3,000	7,896		694	80	7,452	311	25,130	15,367	25	25					44
61,215	327,984	115,795		3,080	5,197	343,976	5,205	991,120	641,939	120				120		45
6,564	4,016	29,125	89	2,640	1,486	20,115	2,853	63,938	40,970	109				109		46
142,083	205,501	1,320,387	6,696	1,050	24,767	3,365,638	49,756	5,766,029	2,350,635	1,944	1,120	15		809	1,675	47
25,500	19,814	112,781		7,554	34,098	178,335	1,033	444,567	265,199	4				4		48
11,855	6,404	39,798	3,500	5,838	877	53,311	1,271	185,767	101,185	32				30		49
554,584	619,058	3,001,592	442,833	126,462	254,200	21,785,233	936,549	31,046,338	8,324,556	13,364	8,936	101	375	3,952	1,270	50

* Same number reported for one or more other months.

Ice, manufactured.....	1	Musical instruments and materials, not elsewhere specified.....	3	Sausage.....	3	Varnishes.....	1
Ink, writing.....	1	Oil, linseed.....	3	Shipbuilding, wooden, including boat building.....	1	Vault lights and ventilators.....	1
Iron and steel, steel works and rolling mills.....	1	Oil, not elsewhere specified.....	3	Show cases.....	2	Window and doorscreens and weather strips.....	3
Iron and steel, doors and shutters.....	2	Paper and wood pulp.....	1	Slaughtering and meat packing.....	1	Window shades and fixtures.....	4
Iron and steel forgings, not made in steel works or rolling mills.....	2	Paving materials.....	3	Soda-water apparatus.....	1	Wirework.....	4
Labels and tags.....	2	Photographic materials.....	1	Stamped and enameled ware.....	1	Wood preserving.....	1
Lapidary work.....	1	Printing and publishing, music.....	2	Suspenders and garters, and elastic woven goods.....	1	Wood, turned and carved.....	1
Lithography.....	3	Printing materials.....	2	Theatrical scenery.....	1	Wooden goods, not elsewhere specified.....	2
Lubricating greases.....	1	Regalia and society badges and emblems.....	1	Tinware, not elsewhere specified.....	2	Wool pulling.....	1
Lumber and timber products.....	1	Roofing materials.....	4	Tools, not elsewhere specified.....	1	Woolen goods.....	1
Mirrors, framed and unframed.....	2	Safes and vaults.....	1	Type founding.....	1		
Mucilage and paste.....	2	Sand-lime brick.....	1	Upholstering materials.....	1		

MANUFACTURES—MINNESOTA.

TABLE 35.—DETAIL STATEMENT FOR THE STATE AND FOR CITIES OF 50,000 INHABITANTS

INDUSTRY AND CITY.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.							WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY.					Capital.	
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			Total.	16 and over.		Under 16.		
					Male.	Female.	Average number.	Number, 15th day of—			Male.	Female.	Male.		Female.
								Maximum month.	Minimum month.						

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

1	ST. PAUL—All industries.....	737	24,680	628	945	2,744	880	19,483	My	19,934	De	18,689	19,509	15,360	4,112	32	5	\$76,789,920
2	Artificial stone products.....	18	188	17	9	8	8	154	Je	222	De	81	152	152				107,805
2	Automobile repairing.....	19	114	20	7	3	10	74	Oc	85	Ja	59	73	73				28,558
4	Awnings, tents, and sails.....	6	64	6	1	3	3	41	My	65	Ja	24	40	19	21			55,028
5	Bags, other than paper.....	3	7	4				3	Se	6	My	2	3	3				4,762
6	Bookbinding and blank-book making.....	5	98	4	4	2	2	86	De	89	Au	84	89	28	58	2	1	54,819
7	Boots and shoes.....	4	1,125		10	30	30	1,055	De	1,360	Ja	761	1,073	762	306	2	3	3,250,406
8	Boxes, cigar.....	3	36	5	1		1	29	Fe	30	No	23	30	11	19			28,558
9	Boxes and cartons, paper.....	4	353	3	10	28	12	300	Oc	337	Jy	249	307	157	149	1		798,288
10	Boxes, wooden packing.....	4	138	4	3			131	Fe	152	Oc	110	131	131				183,154
11	Bread and other bakery products.....	64	572	64	17	57	62	372	No	390	Ja	351	392	342	47	3		1,134,536
12	Butter.....	7	172	2	14	21	23	112	Je	131	Fe	94	118	108	10			495,537
13	Carriages, wagons, and repairs.....	14	362	16	14	18	6	308					315	315				945,239
14	Carriages and wagons.....	11	348	11	14	18	6	299	Mh	342	De	266	303	303				942,139
15	Repair work only.....	3	14	5				9	De	12	Ja	8	12	12				3,100
16	Cars and general shop construction and repairs by steam-railroad companies.....	7	3,194		43	76	7	3,068	Mh	3,284	Au	2,727	2,884	2,882	2			6,786,373
17	Clothing, men's, including shirts.....	11	1,354	11	15	170	30	1,128	Ja	1,231	No	1,024	1,080	292	788			1,412,783
18	Confectionery.....	11	243	7	11	36	7	182	De	212	Je	161	210	69	141			283,479
19	Copper, tin, and sheet-iron work.....	23	277	23	9	18	7	220	Ja	257	De	170	203	203				331,048
20	Engines, steam, gas, and water.....	3	108		8	12	5	83	Se	124	My	67	98	98				872,283
21	Food preparations, not elsewhere specified.....	5	143	4	8	41	4	86	Oc	107	Ja	70	86	53	33			439,652
22	Foundry and machine-shop products.....	30	1,571	27	51	167	28	1,298					1,307	1,307				5,176,595
23	Boiler and machine shops.....	25	859	22	37	110	27	663	Ja	838	No	513	708	708				3,509,397
24	Foundries.....	5	712	5	14	57	1	635	Jy	700	De	573	599	599				1,667,198
25	Fur goods.....	10	966	11	34	217	29	675	De	758	Ja	614	722	268	454			2,494,098
26	Furniture and refrigerators.....	17	582	13	27	48	7	437	Jy	548	Ja	416	498	492	6			1,718,918
27	Furs, dressed.....	3	37	3		1		33	De	37	Oc	30	37	37				44,922
28	Gas, illuminating and heating.....	3	360		15	59	14	272	My	330	Fe	227	230	230				6,091,692
29	Hand stamps.....	4	37	2	2	4	3	26	De	27	Se	25	27	25	2			21,800
30	Jewelry.....	7	46	8	3		1	34	(¹)	34	(¹)	34	34	34				39,030
31	Lumber, planing-mill products, not including planing mills connected with sawmills.....	15	735	6	33	66	14	616	Au	698	Ja	560	628	628				1,517,246
32	Marble and stone work.....	13	233	10	12	15	6	190	Oc	236	Ja	74	190	190				450,591
33	Mattresses and spring beds.....	4	150		18	14	6	112	Se	131	Ja	92	100	92	8			316,693
34	Millinery and lace goods, trimmed hats and hat frames.....	6	305		7	1	2	295	Se	488	De	115	317	29	288			503,737
35	Mineral and soda waters.....	7	98	5	8	25	3	57	Jy	71	Ja	45	59	59				312,408
36	Patent medicines and compounds.....	24	167	29	18	20	29	71	Oc	74	Mh	69	71	41	30			316,803
37	Photo-engraving.....	5	133	2	13	15	9	94	De	96	Ja	89	97	80	17			104,010
38	Printing and publishing, book and job.....	78	2,207	77	97	337	181	1,515					1,499	978	517	4		3,558,704
39	Job printing, including book publishing and printing.....	73	2,181	71	95	337	180	1,498	Ap	1,519	De	1,452	1,482	965	513	4		3,522,585
40	Linotype work and typesetting.....	3	26	6	2		1	17	My	18	De	16	17	13	4			36,119
41	Printing and publishing, newspapers and periodicals.....	44	1,295	25	59	318	158	735					761	667	75	19		1,291,026
42	Printing and publishing.....	7	804	3	20	245	100	436	De	462	Au	428	446	426	6	14		518,198
43	Printing and publishing and job printing.....	12	403	8	18	45	33	299	De	315	Jy	275	315	241	69	5		662,414
44	Publishing without printing.....	25	88	14	21	28	25											110,414
45	Saddlery and harness.....	16	245	14	15	27	6	183	Ap	196	Jy	169	188	165	22	1		479,441
46	Sausage.....	5	20	7			1	12	(¹)	12	(¹)	12	12	12				16,400
47	Signs, other than electric, and advertising novelties.....	8	103	7	13	9	4	70	Mh	77	Jy	60	70	56	14			143,967
48	Slaughtering and meat packing.....	5	165	4	8	20	4	120	Ja	140	Oc	120	131	131				774,914
49	Stereotyping and electrotyping.....	3	47	3	4	5	2	33	Fe	36	De	32	32	32				70,473
50	Structural ironwork, not made in steel works or rolling mills.....	5	229	3	10	11	5	200	Jy	231	Mh	182	219	219				295,320
51	Tobacco manufactures.....	53	650	56	12	48	14	520	Au	534	Je	506	511	305	206			581,604
62	All other industries *.....	163	5,761	126	302	794	145	4,394					4,485	3,585	899		1	33,201,470

* Owned power only.

² Includes rented power, other than electric.

*All other industries embrace—	Carriage and wagon materials.....	1	Dental goods.....	1	Gold and silver, reducing and refining, not from the ore.....	1
Agricultural implements.....	Cars and general shop construction and repairs by electric-railroad companies.....	4	Druggists' preparations.....	1	Hair work.....	1
Artificial limbs.....	Cleaning and polishing preparations.....	2	Electroplating.....	5	Hosiery and knit goods.....	1
Automobile bodies and parts.....	Clothing, women's.....	2	Engraving and diesinking.....	2	Hardware.....	1
Automobiles.....	Coffee, roasting and grinding.....	1	Engraving, wood.....	1	Hats and caps, other than felt, straw, and wool.....	2
Baskets, and rattan and willow ware.....	Coffins, burial cases, and undertakers' goods.....	4	Envelopes.....	1	Hats, wool-felt.....	1
Boat and shoe cut stock.....	Confectionery (ice cream).....	1	Fancy articles, not elsewhere specified.....	1	Ink, printing.....	1
Brass, bronze, and copper products.....	Cooperage.....	1	Flags and banners.....	1	Lead, bar, pipe, and sheet.....	1
Brick and tile, terra-cotta, and fire-clay products.....	Corsets.....	3	Flour-mill and gristmill products.....	2	Leather goods, not elsewhere specified.....	1
Brooms.....	Cutlery and edge tools.....	1	Gas and electric fixtures.....	2	Liquors, malt.....	3
Brushes.....		1	Glass, cutting, staining, and ornamenting.....	5	Lithographing.....	1
Buttons.....		1			Looking-glass and picture frames.....	2
Carpets, rag.....		2				

MANUFACTURES—MINNESOTA.

OR MORE, BY INDUSTRIES, AND FOR CITIES OF 10,000 TO 50,000 INHABITANTS: 1914—Continued.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.				
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.				Electric horsepower generated in establishments reporting.
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, including internal revenue and corporation income.	Principal materials.	Fuel and rent of power.			Total.	Steam engines. ¹	Internal-combustion engines. ²	Water wheels and motors. ¹		Electric (rented).

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

\$2,099,390	\$3,260,315	\$12,795,651	\$547,021	\$650,499	\$1,437,144	\$34,388,089	\$1,430,964	\$68,682,206	\$32,863,153	38,886	23,441	434	.....	15,011	5,941	1
16,806	6,733	106,866	6,330	1,778	1,565	88,883	3,847	287,659	194,929	78	.....	26	.....	52	.....	2
2,480	4,347	56,612	662	10,032	408	27,309	2,957	131,352	101,056	61	.....	.....	.....	61	.....	3
2,000	3,758	22,149	818	4,290	108	59,347	653	113,768	53,768	13	.....	.....	.....	13	.....	4
.....	.....	1,796	.....	372	26	4,647	243	11,621	6,726	3	.....	.....	.....	3	.....	5
6,056	1,720	38,640	.....	4,330	248	25,363	753	95,078	68,962	20	.....	.....	.....	20	.....	6
38,729	73,896	657,195	.....	31,372	16,922	2,016,089	19,900	3,044,813	1,008,824	673	215	.....	.....	458	133	7
910	900	15,595	.....	1,390	199	39,394	729	79,965	39,842	15	.....	.....	.....	15	.....	8
29,560	34,518	165,271	.....	6,660	5,130	271,118	12,874	765,779	481,797	376	.....	.....	.....	376	.....	9
4,220	.....	73,239	.....	990	1,833	115,092	1,736	243,528	123,700	405	345	.....	.....	60	10	10
24,973	57,147	294,498	.....	20,583	8,787	908,155	42,908	1,560,878	609,815	503	400	.....	.....	103	248	11
30,010	41,821	97,149	250	19,455	2,610	2,993,711	17,826	3,229,303	217,766	516	255	.....	.....	261	.....	12
20,982	19,288	198,599	.....	6,780	6,292	356,958	11,743	710,718	348,017	516	562	.....	.....	171	.....	13
20,982	19,288	190,531	.....	5,120	6,183	352,833	11,424	699,143	334,886	717	562	.....	.....	155	.....	14
.....	.....	8,018	.....	1,600	16	4,123	319	17,575	13,131	16	.....	.....	.....	16	.....	15
69,302	78,211	2,154,949	.....	.....	110	1,367,896	144,662	3,815,956	2,303,398	4,176	3,216	120	.....	840	3,003	16
42,879	144,109	448,225	16,763	28,340	10,325	1,707,207	9,244	2,731,753	1,015,302	321	188	.....	.....	133	86	17
16,527	51,632	73,617	.....	9,314	1,422	341,735	0,123	566,975	219,117	118	65	.....	.....	53	50	18
.....	.....	14,467	.....	4,980	2,947	273,166	4,104	586,895	309,625	119	80	2	.....	37	80	19
16,688	25,087	58,963	.....	5,305	3,471	133,971	10,515	235,953	141,467	675	.....	.....	.....	675	.....	20
14,170	25,087	44,728	.....	1,260	15,244	582,576	5,871	935,638	347,191	133	50	.....	.....	83	3	21
23,120	69,791	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
128,429	174,341	933,783	12,027	10,337	39,565	1,467,500	129,814	3,896,738	1,799,424	5,219	2,645	13	.....	2,561	.....	22
71,253	122,092	437,915	12,027	9,437	22,525	377,574	35,032	1,244,783	812,177	3,573	2,020	13	.....	1,530	.....	23
57,076	52,249	495,878	.....	900	17,041	1,069,926	94,782	2,151,955	987,247	1,656	625	.....	.....	1,031	.....	24
97,650	193,610	447,043	500	65,740	19,318	2,317,373	7,639	3,508,830	1,183,818	306	.....	.....	.....	306	.....	25
82,709	52,076	355,330	13,899	11,358	11,015	542,392	31,294	1,556,502	982,816	1,651	1,375	.....	.....	276	736	26
.....	676	23,461	.....	8,250	217	19,187	4,139	60,903	43,577	240	175	.....	.....	65	.....	27
82,725	58,503	176,230	.....	117,354	51,155	51,155	436,899	1,307,965	810,881	3,021	2,750	185	.....	86	.....	28
3,880	4,000	18,300	1,000	2,530	255	18,539	586	65,573	46,388	10	.....	.....	.....	10	.....	29
2,856	600	28,847	.....	3,305	219	35,689	624	91,132	54,819	7	.....	.....	.....	7	6	30
62,800	60,535	364,355	.....	2,688	11,957	1,192,512	14,326	2,047,531	840,663	2,042	1,740	.....	.....	302	680	31
25,672	20,783	172,657	614	6,328	2,439	279,993	16,492	560,989	264,504	797	95	19	.....	683	.....	32
10,328	25,599	58,150	.....	1,357	1,529	241,525	4,062	393,926	153,339	108	.....	.....	.....	108	.....	33
9,800	859	29,991	.....	6,703	5,099	626,913	7,447	893,067	258,707	112	100	.....	.....	12	100	34
15,460	27,916	46,262	.....	2,340	3,310	152,015	2,791	377,437	222,631	163	100	11	.....	52	.....	35
18,497	35,475	37,062	621	9,618	3,444	177,202	2,786	568,851	388,863	227	125	.....	.....	102	.....	36
30,015	11,507	90,035	.....	6,750	312	31,801	2,624	222,055	187,630	31	.....	.....	.....	31	.....	37
235,028	442,203	1,072,461	344,558	61,455	32,549	983,532	33,059	4,197,190	3,175,599	1,250	85	.....	.....	1,165	2	38
231,648	441,267	1,050,867	344,558	60,305	32,348	987,569	32,426	4,108,216	3,148,221	1,246	85	.....	.....	1,161	2	39
3,380	936	15,594	.....	1,150	201	963	633	28,974	27,378	4	.....	.....	.....	4	.....	40
183,527	465,122	512,390	121,251	40,479	13,627	1,284,247	27,117	3,533,232	2,221,808	997	.....	16	.....	981	.....	41
59,832	305,101	309,026	12,820	19,491	10,181	437,329	12,790	1,715,332	1,265,213	605	.....	.....	.....	580	.....	42
41,588	120,248	203,314	8,705	13,452	2,907	799,251	14,252	1,415,806	602,303	392	.....	16	.....	392	.....	43
32,167	39,773	.....	99,726	7,536	539	47,667	75	402,094	354,352	.....	.....	.....	.....	.....	.....	44
23,986	37,040	121,398	.....	13,310	12,886	415,530	6,940	739,646	317,167	162	50	.....	.....	112	.....	45
.....	200	9,535	.....	660	127	77,330	1,335	92,783	14,148	42	.....	.....	.....	42	.....	46
22,750	9,918	45,781	.....	5,113	350	117,511	1,855	222,301	102,935	42	.....	.....	.....	42	.....	47
19,200	32,424	87,409	.....	3,180	2,218	1,869,577	7,938	2,165,695	288,180	793	295	.....	.....	498	.....	48
9,005	6,282	32,478	289	4,200	236	40,660	1,234	111,099	69,196	94	.....	2	.....	92	.....	49
18,560	16,255	140,944	8,024	600	2,260	199,981	8,225	404,018	255,812	220	75	.....	.....	151	.....	50
26,700	53,991	269,354	165	15,096	81,948	428,973	2,786	1,111,095	679,336	15	.....	.....	.....	15	.....	51
719,821	903,918	3,070,588	19,150	210,938	997,792	10,499,197	382,269	21,775,986	10,897,529	12,393	8,455	40	.....	3,898	804	52

* Same number reported for one or more other months.

* Same number reported throughout the year.

Lubricating greases.....	1	Paints.....	3	Shipbuilding, wooden, including boat building.....	2	Surgical appliances.....	2
Mats and matting, from cocoa fiber and grass.....	1	Paper and wood pulp.....	3	Show cases.....	1	Suspenders, garters, and elastic women goods.....	2
Mirrors, framed and unframed.....	1	Paper goods, not elsewhere specified.....	2	Soap.....	1	Tinware, not elsewhere specified.....	2
Models and patterns, not including paper patterns.....	5	Paving materials.....	1	Soda-water apparatus.....	1	Tools, not elsewhere specified.....	3
Motorcycles, bicycles, and parts.....	3	Perfumery and cosmetics.....	3	Sporting and athletic goods.....	1	Toys and games.....	1
Mucilage and paste.....	1	Pickles, preserves, and sauces.....	3	Stationery goods, not elsewhere specified.....	2	Trunks and valises.....	5
Musical instruments and materials, not specified.....	1	Plumbers' supplies, not elsewhere specified.....	1	Steam fittings and steam and hot-water heating apparatus.....	2	Upholstering materials, not elsewhere specified.....	1
Musical instruments, pianos.....	1	Printing materials.....	1	Steam packing.....	3	Varnishes.....	3
Oil, linsed.....	2	Regalia and society badges and emblems.....	1	Stoves and hot-air furnaces, except gas and oil stoves.....	3	Window shades and fixtures.....	2
Oil, not elsewhere specified.....	1	Roofing materials.....	2			Wirework.....	3
		Sand and emery paper and cloth.....	1			Wooden goods, not elsewhere specified.....	2

MANUFACTURES—MINNESOTA.

TABLE 35.—DETAIL STATEMENT FOR THE STATE AND FOR CITIES OF 50,000 INHABITANTS

INDUSTRY AND CITY.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.								WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY.				Capital.	
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			Total.	16 and over.		Under 16.		
					Male.	Female.	Average number.	Number, 15th day of—			Male.	Female.	Male.		Female.
								Maximum month.	Minimum month.						

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

1	HIBBING.....	27	110	36	1	5	3	65	Ja ⁴	71	Se	61	62	53	9	.....	.....	\$101,479
2	MANKATO.....	64	1,012	63	55	88	51	755	My	846	Ja	631	764	645	119	.....	.....	2,777,118
3	ST. CLOUD.....	77	1,626	98	39	45	15	1,429	Jy	1,513	Ja	1,320	1,482	1,369	112	1	.....	1,928,351
4	STILLWATER.....	34	789	30	33	92	13	621	Fe	781	Oc	417	757	588	155	11	3	2,569,043
5	WINONA.....	91	2,554	69	128	209	78	2,070	Au	2,175	No	1,962	2,131	1,687	435	4	5	12,013,466

* Owned power only.

* Includes rented power, other than electric.

MANUFACTURES—MINNESOTA.

OR MORE, BY INDUSTRIES, AND FOR CITIES OF 10,000 TO 50,000 INHABITANTS: 1914—Continued.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.				
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.				Electric horse-power generated in establishments reporting.
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, including internal revenue and corporation income.	Principal materials.	Fuel and rent of power.			Total.	Steam engines. ¹	Internal combustion engines. ²	Water wheels and motors. ¹		Electric (rented).

CITIES OF 10,000 TO 50,000 INHABITANTS²—ALL INDUSTRIES COMBINED.

\$1,200	\$8,540	\$53,822	.....	\$7,220	\$3,016	\$109,095	\$3,322	\$254,400	\$141,983	28	.....	.....	.....	28	1
98,399	117,753	434,110	8746	14,758	28,404	3,121,257	95,534	4,344,114	1,127,323	2,618	2,094	27	.....	497	110
66,775	56,259	884,482	4,542	9,604	30,952	1,215,396	72,619	2,695,492	1,407,477	3,724	1,143	111	640	1,830	85
46,786	62,502	294,800	8,742	6,049	27,306	1,173,457	32,805	1,876,877	670,615	1,012	568	64	24	356	201
310,083	277,126	1,162,241	5,723	20,387	142,411	9,811,448	226,609	14,304,780	4,266,723	6,438	4,144	.....	65	2,229	1,124

¹ Excludes Virginia, to avoid disclosure of individual operations.

² Same number reported for one or more other months.

MISSISSIPPI.

By JOHN L. KUHN.

GENERAL STATISTICS.

General character of the state.—Mississippi was admitted to the Union as a state in 1817. With a gross area of 46,865 square miles, of which 46,362 represent land surface, it ranks thirty-first in size among the states. Its inhabitants in 1900 numbered 1,551,270, and in 1910, 1,797,114; and its estimated population in 1914 was 1,902,000. In total population Mississippi ranked twenty-first in 1910; and in density of population it ranked twenty-sixth, with 38.8 inhabitants per square mile, the corresponding number in 1900 being 33.5.

The urban population in 1910—that is, the population residing in incorporated places having 2,500 inhabitants or more—was 207,311, or 11.5 per cent of the total, as against 7.7 per cent in 1900. There were in the state in 1914 eight cities, each having a population estimated at more than 10,000—Columbus, Greenville, Hattiesburg, Jackson, Laurel, Meridian, Natchez, and Vicksburg. These cities, whose aggregate population in that year formed 6.8 per cent of the estimated population of Mississippi, reported 23.4 per cent of the value of the state's manufactured products.

The steam-railway mileage in 1914 was 4,441, and the electric-railway mileage in 1912 was 109. The

Mississippi River, which forms the western boundary, and a number of ports on the Gulf of Mexico together constitute a factor of great importance in the transportation system of the state.

Mississippi is preeminently an agricultural state. The total value of all farm crops grown in 1909 was \$147,315,621, the leading ones being cotton (including cotton seed), \$96,353,433, and corn, \$26,030,376. The state's production of cotton from the crop of 1914 was 1,245,535 equivalent 500-pound bales, or 7.7 per cent of the total yield in the United States.

Importance and growth of manufactures.—In 1914, measured by the value of products of its manufacturing industries—\$79,550,095—Mississippi ranked thirty-ninth among the states and, with an average of 46,702 wage earners engaged in such industries, the state ranked thirty-first in this respect. In 1909 the state ranked thirty-fourth in value of products and thirty-first in average number of wage earners.

Table 1 summarizes the more important data relative to all classes of manufactures combined, in the state, for the censuses of 1914, 1909, 1904, and 1899, and gives percentages of increase from census to census.

Table 1	MANUFACTURING INDUSTRIES.				PER CENT OF INCREASE. ¹		
	1914	1909	1904	1899	1909-1914	1904-1909	1899-1904
Number of establishments.....	2,209	2,598	1,520	1,294	-15.0	70.9	17.5
Persons engaged.....	52,277	56,761	42,966	(?)	-7.9	32.1	.....
Proprietors and firm members.....	2,386	2,974	1,588	(?)	-19.8	87.3	.....
Salaried employees.....	3,189	3,403	2,688	1,260	-6.3	26.6	113.3
Wage earners (average number).....	46,702	50,384	38,690	26,799	-7.3	30.2	44.4
Primary horsepower.....	186,434	206,222	110,338	65,738	-9.6	86.9	67.8
Capital.....	\$81,005,484	\$72,393,485	\$50,256,309	\$22,712,186	11.9	44.0	121.3
Salaries and wages.....	23,007,760	22,421,367	17,417,380	9,602,544	2.6	28.7	93.5
Salaries.....	3,831,133	3,653,644	2,598,346	1,092,937	4.8	40.6	137.7
Wages.....	19,176,627	18,767,723	14,819,034	7,909,607	2.2	26.6	87.4
Paid for contract work.....	2,075,852	2,591,240	1,150,796	(?)	-19.9	125.2	.....
Rent and taxes (including internal revenue).....	1,320,197	804,930	454,506	(?)	64.0	.....	.....
Cost of materials.....	41,340,122	36,925,582	25,800,885	16,548,029	12.0	43.1	56.0
Value of products.....	79,550,095	80,555,410	57,451,445	33,718,517	-1.2	40.2	70.4
Value added by manufacture (value of products less cost of materials).....	38,209,973	43,629,828	31,650,560	17,173,488	-12.4	37.8	84.3

¹ A minus sign (-) denotes decrease.

² Figures not available.

³ Exclusive of internal revenue.

Each of the items in this table shows an increase from 1899 to 1904, 1904 to 1909, and from 1904 to 1914. The percentages of decrease shown from 1909 to 1914 in the several items do not in every case reflect a proportionate decrease in the manufacturing activities of the state. In number of establishments the decrease is 15 per cent, which is due primarily to the fact that at the census of 1909 a large number of reports were secured from small lumber mills. Mills

engaged exclusively in custom sawing for consumption in the immediate neighborhood should not be included in the census, but it is not always possible to conduct the enumeration in regard to these establishments on uniform lines at different censuses. This condition, together with the fact that new labor-saving machinery has been installed, as indicated by the increase in capital, accounts for the decrease in the number of employees.

Table 2 shows the relative importance of the leading manufacturing industries in 1914, and gives percentages of increase for the three five-year periods from 1899 to 1914.

Separate statistics are presented for 21 industries, or industry groups, for each of which products valued at more than \$125,000 were reported for 1914. These industries include 1 with products exceeding \$35,000,000, 1 with products between \$15,000,000 and \$20,000,000, 9 between \$1,000,000 and \$5,000,000, and 10 with products valued at less than \$1,000,000.

In addition to the industries presented separately in the table, there were four others in the state which reported products in 1914 in excess of some of those shown in the table. These industries, which are included under the head of "all other industries" to avoid disclosing the operations of individual establishments, are as follows: Cars, steam-railroad, not including operations of railroad companies; clothing, men's; hosiery and knit goods; and paper and wood pulp.

INDUSTRY.	CENSUS OF 1914.								PER CENT OF INCREASE. ¹								
	Number of establishments.	Wage earners.		Value of products.		Value added by manufacture.		Wage earners (average number).			Value of products.			Value added by manufacture.			
		Average number.	Per cent distribution.	Amount.	Per cent distribution.	Amount.	Per cent distribution.	1909-1914	1904-1909	1899-1904	1909-1914	1904-1909	1899-1904	1909-1914	1904-1909	1899-1904	
																	Per cent distribution.
All industries.....	2,209	46,702	100.0	\$79,550,095	100.0	\$38,209,973	100.0	-7.3	30.2	44.4	-1.2	40.2	70.4	-12.4	37.8	84.3	
Lumber and timber products.....	1,296	29,040	63.5	38,537,743	48.4	23,681,893	62.0	-11.2	48.9	43.2	-9.9	63.6	57.0	-17.2	49.2	94.7	
Oil, cottonseed, and cake.....	67	2,336	5.0	17,699,651	22.1	3,162,023	8.3	-6.7	0.2	64.3	10.2	26.8	88.4	-10.7	50.9	45.7	
Cars and general shop construction and repairs by steam-railroad companies.....	15	3,278	7.0	3,082,100	4.6	2,189,199	5.7	27.4	-3.1	72.9	13.9	12.0	116.8	20.8	16.5	79.2	
Cotton goods.....	11	1,989	4.3	2,789,007	3.5	977,007	2.5	-24.8	22.4	29.0	-10.1	25.9	67.2	-7.9	30.2	15.3	
Fertilizers.....	11	379	0.8	2,059,786	2.6	454,801	1.2	-15.6	29.0	.....	-3.1	96.4	119.5	-38.5	228.9	49.0
Turpentine and rosin.....	61	3,275	7.0	1,997,139	2.5	1,416,960	3.7	27.3	-2.3	15.1	35.4	-37.7	33.5	25.9	-42.9	83.6	
Canning and preserving.....	18	1,052	2.3	1,654,772	2.1	777,577	2.0	24.2	11.9	16.5	100.8	-45.3	66.0	145.8	-33.3	64.0	
Wood preserving.....	4	241	0.5	1,478,528	1.9	417,511	1.1	-8.4	.....	.....	12.5	.....	.....	37.0	.....	.....
Printing and publishing.....	219	663	1.4	1,266,730	1.6	953,031	2.4	-9.9	34.1	8.7	-3.1	42.8	26.7	-5.5	39.8	25.2	
Mineral and soda waters.....	80	308	0.7	1,066,364	1.3	500,247	1.3	61.2	63.2	.....	89.9	90.2	383.6	52.6	66.8	378.0
Ice, manufactured.....	58	476	1.0	1,045,940	1.3	719,037	1.9	39.6	24.4	77.9	20.8	43.6	120.1	10.0	42.6	119.1	
Bread and other bakery products.....	83	306	0.7	919,007	1.2	404,681	1.0	7.4	78.1	.....	4.7	76.0	195.3	11.6	52.1	197.5
Foundry and machine-shop products.....	43	423	0.9	699,444	0.9	437,042	1.1	-27.4	13.0	51.3	-35.8	18.3	87.8	-29.1	9.2	93.8	
Brick and tile, terra-cotta, and fire-clay products.....	38	551	1.2	512,777	0.6	325,234	0.9	.....	.....	.....	.....	.....	.....	.....	.....	.....
Carriages and wagons and materials.....	23	210	0.4	479,436	0.6	255,947	0.7	-42.5	14.8	39.5	-25.4	30.0	63.6	-30.5	31.0	64.3	
Flour-mill and gristmill products.....	17	48	0.1	410,332	0.5	66,054	0.2	.....	.....	.....	168.0	39.1	-73.3	207.6	40.0	-69.4
Gas, illuminating and heating.....	8	113	0.2	291,959	0.4	181,314	0.5	11.9	.....	.....	14.1	104.8	52.4	6.8	97.7	32.3
Food preparations, not elsewhere specified.....	5	19	(²)	201,376	0.3	35,692	0.1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Copper, tin, and sheet-iron work.....	18	82	0.2	190,945	0.2	100,490	0.3	.....	.....	.....	-9.5	.....	.....	-15.8	.....	.....
Marble and stone work.....	13	58	0.1	149,404	0.2	72,856	0.2	.....	.....	.....	-15.3	.....	.....	-25.3	.....	.....
Saddlery and harness.....	10	24	(²)	146,914	0.2	48,770	0.1	.....	.....	.....	.....	.....	.....	.....	.....	.....
All other industries.....	111	1,231	2.6	2,370,741	3.0	1,032,577	2.7	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹ Percentages are based on figures in Table 30; a minus sign (-) denotes decrease. Percentages are omitted when base is less than 100, or when comparable figures can not be given.

² Less than one-tenth of 1 per cent.

The industries in this table are arranged in the order of their importance as shown by value of products, but the arrangement would vary considerably if based on average number of wage earners or value added by manufacture. Lumber and timber products and carriages and wagons and materials ranked alike in all three respects. Oil, cotton seed, and cake, second in value of products and value added by manufacture, was fourth in average number of wage earners. Cars and general shop construction and repairs by steam-railroad companies, third in value of products and value added by manufacture, was second in average number of wage earners. Cotton goods, fourth in value of products, was fifth in average number of wage earners and value added by manufacture. Fertilizers, fifth in value of products, was eleventh in average number of wage earners and tenth in value added by manufacture.

In rank according to value of products there were few changes among the important industries in 1914 as compared with 1909. Of the industries shown in the table, lumber and timber products, oil, cottonseed, and cake; cars and general shop construction and repairs by steam-railroad companies; cotton goods; fertilizers; and turpentine and rosin held the same rank in value of products at both censuses. For the remainder of the industries slight changes are noticeable from census to census.

Lumber and timber products.—This industry, as shown in the table, embracing not only logging operations and sawmills, but also wooden-box factories, is by far the most important industry in Mississippi, not only as to value of products, but also in number of wage earners employed.

During the five-year period 1909-1914 there was a slight decrease in the total value of products from

\$42,792,844 to \$38,537,743, or 9.9 per cent. The number of establishments decreased from 1,647 to 1,296, or 21.3 per cent; the average number of wage earners, from 33,397 to 29,640, or 11.2 per cent; and the value added by manufacture, from \$28,586,246 to \$23,681,893, or 17.2 per cent.

Oil, cottonseed, and cake.—Second in importance in the state, this industry, which includes all establishments engaged primarily in extracting oil from cotton seed or in refining the oil, shows a fair increase in value of products in 1914 as compared with 1909, but a falling off in number of establishments, wage earners, and value added by manufacture.

The value of products advanced from \$15,965,543 to \$17,599,651, or 10.2 per cent, while the number of establishments decreased from 87 to 67, or 23 per cent; the average number of wage earners, from 2,503 to 2,336, or 6.7 per cent; and the value added by manufacture from \$3,796,872 to \$3,162,023, or 16.7 per cent.

Cars and general shop construction and repairs by steam-railroad companies.—This industry is third in importance in this state, and the value of products, which is equivalent to the cost of repairs to rolling stock and equipment, increased from \$3,233,288 in 1909 to \$3,682,100 in 1914, or 13.9 per cent; the number of establishments increased by 5; the average number of wage earners, by 706, or 27.4 per cent; the value added by manufacture, \$377,443, or 20.8 per cent.

Cotton goods.—The number of establishments reporting in 1914 was smaller by 3 than the number in 1909 and there were decreases in other respects, as shown by the statistics given in the table.

Fertilizers.—This industry, ranking fifth in value of products, includes only establishments engaged primarily in the manufacture of fertilizers. A number of cottonseed-oil mills produce fertilizers as by-products, and therefore the statistics for the independent establishments do not fully represent the statistics for the industry. There was a slight decrease in value of products in 1914 as compared with 1909, but compared with 1904 there was an increase of 90.3 per cent.

Turpentine and rosin.—Although there was a slight decrease in the number of establishments reported for this industry in 1914 as compared with 1909, there were decided increases in other respects. The average number of wage earners advanced from 2,573 to 3,275, or 27.3 per cent, and the value of products from \$1,474,629 to \$1,997,139, or 35.4 per cent.

Canning and preserving.—This classification covers the canning and preserving of fruits, vegetables, fish, and oysters, and the manufacture of pickles and sauces. Considering the short season during which this industry is active, the value of its products compared with other industries is very large, and it shows a marked increase during the five-year period 1909-1914.

Persons engaged in manufacturing industries.—Table 3 shows, for 1914 and 1909, the number of persons engaged in manufactures, distributed by sex, the average number of wage earners being distributed also by age. The sex and age classification of the average number of wage earners in this and other tables is an estimate obtained by the method described in the "Explanation of terms."

CLASS.	Census year.	PERSONS ENGAGED IN MANUFACTURING INDUSTRIES.				
		Total.	Male.	Female.	Per cent of total.	
					Male.	Female.
All classes.....	1914 1909	52,277 56,761	50,010 54,037	2,267 2,704	95.7 95.2	4.3 4.8
Proprietors and officials.....	1914 1909	3,806 4,665	3,755 4,603	51 62	98.7 98.7	1.3 1.3
Proprietors and firm members..	1914 1909	2,386 2,974	2,340 2,915	46 59	98.1 98.1	1.9 1.9
Salaried officers of corporations..	1914 1909	376 305	373 302	3 3	99.2 99.0	0.8 1.0
Superintendents and managers..	1914 1909	1,044 1,383	1,042 1,383	2 3	99.8 99.8	0.2 0.2
Clerks and other subordinate salaried employees.	1914 1909	1,769 1,712	1,576 1,556	193 156	89.1 90.9	10.9 9.1
Wage earners (average number).....	1914 1909	46,702 50,384	44,679 47,895	2,023 2,486	95.7 95.1	4.3 4.9
16 years of age and over.....	1914 1909	46,069 49,326	44,165 47,287	1,904 2,039	95.9 95.9	4.1 4.1
Under 16 years of age.....	1914 1909	633 1,058	514 611	119 447	81.2 57.8	18.8 42.2

In 1914 the number of persons engaged in manufactures was 52,277, of whom 46,702, or nearly nine-tenths, were wage earners, 3,806 were proprietors and officials, and 1,769 were clerks and other subordinate salaried employees. Of the wage earners 16 years of age and over, 44,165 were males and 1,904, or less than one-twentieth, were females. Figures for the sex and age distribution of wage earners for individual industries will be found in Table 31.

Table 4 gives, for the several classes of persons engaged in manufactures, the percentages of increase from 1909 to 1914 and the per cent distribution at the two censuses.

This table shows decreases for the five-year period in each of the several classes of employees, with the exception of salaried officers of corporations and clerks and other subordinate salaried employees.

The largest percentage of decrease is found in the average number of wage earners under 16 years of age, the decrease for females being 73.4 per cent, and the total for both sexes, 40.2 per cent. Of the total number of persons engaged in manufacturing industries, wage earners 16 years of age and over formed 88.1 per cent in 1914, and 86.9 per cent in 1909. The average number of female wage earners under 16 years of age was only 5.2 per cent of the total number in 1914, as against 16.5 per cent in 1909.

Table 4

CLASS.	PERSONS ENGAGED IN MANUFACTURING INDUSTRIES.								
	Per cent of increase, ¹ 1909-1914.			Per cent distribution.					
	Total.	Male.	Female.	Total.		Male.		Female.	
				1914	1909	1914	1909	1914	1909
All classes.....	-7.9	-7.5	-16.2	100.0	100.0	100.0	100.0	100.0	100.0
Proprietors and officials.....	-18.4	-18.4		7.3	8.2	7.5	8.5	2.2	2.3
Proprietors and firm members.....	-19.3	-19.3		4.6	5.2	4.7	5.4	2.0	2.1
Salaried officers of corporations.....	23.3	23.5		0.7	0.5	0.7	0.6	0.1	0.1
Superintendents and managers.....	-24.7	-24.7		2.0	2.4	2.1	2.6	0.1	0.1
Clerks and other subordinate salaried employees.....	3.3	1.3	23.7	3.4	3.0	3.2	2.9	8.5	5.8
Wage earners (average number).....	-7.3	-6.7	-18.6	89.3	88.8	89.3	88.6	89.2	91.9
16 years of age and over.....	-6.6	-6.6	-6.6	88.1	86.9	88.3	87.5	84.0	75.4
Under 16 years of age.....	-40.2	-15.9	-73.4	1.2	1.9	1.0	1.1	5.2	16.5

¹ A minus sign (-) denotes decrease; percentages are omitted when base is less than 100.

In order to compare the distribution of persons engaged in manufactures in 1914 with that shown at the census of 1904, it is necessary to use the classification employed at the earlier census. (See "Explanation of terms.") Table 5 makes this comparison according to occupational status.

Table 5

CLASS.	PERSONS ENGAGED IN MANUFACTURING INDUSTRIES.							
	Number.			Per cent distribution.			Per cent of increase. ¹	
	1914	1909	1904	1914	1909	1904	1909-1914	1904-1909
Total.....	52,277	56,761	42,966	100.0	100.0	100.0	-7.9	32.1
Proprietors and firm members.....	2,386	2,974	1,588	4.6	5.2	3.7	-19.8	87.3
Salaried employees.....	3,189	3,403	2,688	6.1	6.0	6.3	-6.3	26.6
Wage earners (average).....	46,702	50,384	38,690	89.3	88.8	90.0	-7.3	30.2

¹ A minus sign (-) denotes decrease.

Each of the classes as well as the total for all classes combined shows increases for the five-year period 1904-1909 and decreases for the five-year period 1909-1914. The class of proprietors and firm members shows the largest per cent of increase for the earlier period and the largest per cent of decrease for the later period. Salaried employees show the least fluctuation for each period.

The average number of wage earners employed and their per cent distribution as males 16 years of age and over, females 16 years of age and over, and children under 16 years of age is given in Table 6 for 1914, 1909, and 1904.

The table also shows, for some of the important industries separately, a similar distribution of wage earners for 1914 and 1909.

For all industries combined the proportion of male wage earners 16 years of age and over has been greater at each successive census, while the proportion of children under 16 has decreased. The proportion of females 16 years of age and over shows a decrease from 1904 to 1909, but a slight increase from 1909 to 1914. The per cent of total for males 16 years of age and over

and for females of the same age period increased from 93.9 per cent to 94.6 per cent and from 4 per cent to 4.1 per cent, respectively, while during the same period the proportion for children under 16 decreased from 2.1 per cent to 1.3 per cent.

Table 6

INDUSTRY.	Census year.	WAGE EARNERS.			
		Average number. ¹	Per cent of total.		
			16 years of age and over.		Under 16 years of age.
			Male.	Female.	
All industries.....	1914 1909 1904	46,702 50,384 38,690	94.6 93.9 91.4	4.1 4.0 5.3	1.3 2.1 3.3
Bread and other bakery products.....	1914 1909	306 285	93.4 90.2	2.5 4.9	4.1 21.6
Canning and preserving.....	1914 1909	1,052 847	37.3 40.1	56.6 38.3	6.1 21.6
Cars and general shop construction and repairs by steam-railroad companies.....	1914 1909	3,278 2,572	99.4 99.9	0.6 0.1	..........
Cotton goods.....	1914 1909	1,989 2,045	50.2 38.0	40.3 41.7	9.5 20.3
Fertilizers.....	1914 1909	379 449	100.0 100.0	..........	..........
Foundry and machine-shop products.....	1914 1909	423 583	99.2 100.0	0.5	0.3
Ice, manufactured.....	1914 1909	476 341	96.2 94.7	..... .....	3.8 5.3
Lumber and timber products.....	1914 1909	29,640 33,397	99.5 99.6	0.1 (²)	0.4 0.4
Mineral and soda waters.....	1914 1909	308 191	94.1 92.7	2.3 2.1	3.6 5.2
Oil, cottonseed, and cake.....	1914 1909	2,336 2,503	99.5 99.6	0.2 0.4	0.3
Printing and publishing.....	1914 1909	663 736	75.4 81.7	10.3 13.3	14.3 5.0
Turpentine and rosin.....	1914 1909	3,275 2,573	98.1 97.7	0.6 0.6	1.3 1.7
All other industries.....	1914 1909	2,577 3,262	84.1 83.0	13.2 14.0	2.7 3.0

¹ For method of estimating the distribution, by sex and age periods, of the average number for all industries combined, see "Explanation of terms."

² Less than one-tenth of 1 per cent.

Of the 12 industries for which separate figures are given in this table, 5 show increases from 1909 to 1914 in the proportion of males and 5 show increases in the proportion of females, while 3 show an increase

in the proportion of children under 16 years of age. In the canning and preserving industry for 1914, as compared with 1909, there was an increase in the proportion of women and a corresponding decrease in the proportion of children. Cotton goods, also, shows a large reduction in the proportion of children employed in 1914, as compared with 1909.

Table 7 shows the average number and the per cent distribution of wage earners employed in each of the eight cities having more than 10,000 inhabitants, classified according to age periods, and in the case of those 16 years of age and over, according to sex, for 1914, 1909, and 1904.

SEX AND AGE.	AVERAGE NUMBER OF WAGE EARNERS IN—							
	Columbus.	Greenville.	Hattiesburg.	Jackson.	Laurel.	Meridian.	Natchez.	Vicksburg.
Total:								
1914	521	671	587	943	2,129	1,974	297	1,009
1909			648	1,772		1,524	428	1,202
1904						1,846	316	1,031
16 years of age and over:								
Male—								
1914	455	667	560	895	1,868	1,722	294	947
1909			645	1,740		1,366	333	1,172
1904						1,274	296	1,002
Female—								
1914	49	1	4	23	173	204	16	54
1909			3	15		120	72	17
1904						47	9	7
Under 16 years of age:								
1914	17	3	23	25	88	48	17	8
1909				117		38	23	13
1904						25	11	22
Per cent of total:								
16 years of age and over—								
Male—								
1914	87.3	99.4	95.4	94.9	87.7	87.2	88.9	93.9
1909			99.5	95.9		89.6	77.8	97.5
1904						94.6	93.7	97.2
Female—								
1914	9.4	0.1	0.7	2.4	8.1	10.3	5.4	5.4
1909			0.5	1.9		7.9	16.8	1.4
1904						3.5	2.8	0.7
Under 16 years of age:								
1914	3.3	0.4	3.9	2.7	4.1	2.4	5.7	0.8
1909				2.2		2.5	5.4	1.1
1904						1.9	3.5	2.1

¹ Figures do not agree with those published, because it was necessary to revise them in order to include data only for those establishments located within the corporate limits of the city.

For Columbus, Greenville, and Laurel figures are not available except for 1914, and for Hattiesburg and Jackson none are available for 1904. The cities of Jackson and Meridian show increases during the five-year periods compared, for each of the three classes; Meridian alone of those reporting shows an increase for the ten-year period 1904-1914. For these two cities there was a decrease during the periods compared in the proportion of males 16 years of age and over and a corresponding increase in the proportion of each of the other two classes, with the exception of children under 16 years of age in Meridian for the period 1909-1914.

Natchez and Vicksburg each shows a substantial increase in the total number of wage earners and in the males 16 years of age and over for the five-year

period 1904-1909 but a decrease in both classes for the subsequent five-year period.

Wage earners employed, by months.—The following table gives, for all industries combined, the total number of wage earners employed on the 15th of each month, or the nearest representative day, for 1914 and 1909, and the average number employed during each month in 1904, together with the percentage which the number reported for each month forms of the greatest number reported for any month.

MONTH.	WAGE EARNERS IN MANUFACTURING INDUSTRIES.					
	Number. ¹			Per cent of maximum.		
	1914	1909	1904	1914	1909	1904
January	48,368	49,148	38,301	100.0	87.1	92.6
February	47,519	49,511	37,796	98.3	87.7	91.4
March	47,810	49,839	39,154	98.9	88.3	94.7
April	47,290	47,851	39,604	97.8	84.8	95.8
May	45,296	45,178	38,011	93.7	80.1	91.9
June	45,007	45,198	37,334	93.2	80.1	90.3
July	46,143	47,237	36,748	95.4	83.7	88.9
August	47,304	50,341	36,725	97.8	89.2	88.8
September	48,010	53,195	38,323	99.3	94.3	92.7
October	47,774	53,387	41,348	98.8	98.1	99.9
November	45,881	56,436	41,333	94.9	100.0	100.0
December	43,937	55,285	39,583	90.8	98.0	95.7

¹ The figures for 1914 and 1909 represent the number employed on the 15th of each month, or the nearest representative day; those for 1904, the average number employed during the month.

For 1904 and 1909 the last three months of the year show the greatest activity in the combined industries of the state, the maximum number of wage earners appearing for November in both years. The year 1914 shows the least fluctuation in the number of wage earners employed and also shows a different season of activity, the maximum month being January, whereas in 1904 and 1909 the employment of wage earners was comparatively small for this month. The greatest difference between the maximum and minimum months in any one of the three census years was 11,258 in 1909.

Table 9 gives the total average number of wage earners employed during 1914, together with the total number employed on the 15th of each month, or the nearest representative day, for the combined industries of the state, for a number of selected industries, and for the total industries of each of the eight cities having more than 10,000 inhabitants.

Of the selected industries canning and preserving shows the greatest degree of fluctuation, the number of wage earners in June being but 6.9 per cent of the number in October. The least fluctuation is shown for turpentine and rosin for which the proportion the minimum formed of the maximum was 93.9 per cent. Of the eight cities, Greenville shows the greatest fluctuation, the proportion that the minimum formed of the maximum being 61.3 per cent. The most constant employment of wage earners appears for Meridian, where the proportion is 90.2 per cent.

Table 9

WAGE EARNERS: 1914.
[Month of maximum employment for each industry is indicated by boldface figures and that of minimum by *italics*.]

INDUSTRY AND CITY.	Average number employed during year.	Number employed on 15th day of the month or nearest representative day.												Per cent minimum is of maximum.
		Jan-uary.	Feb-ruary.	March.	April.	May.	June.	July.	August.	Sep-tember.	Octo-ber.	Novem-ber.	Decem-ber.	
All industries.....	46,702	48,363	47,519	47,810	47,290	45,296	45,097	46,143	47,304	48,010	47,774	45,881	<i>43,987</i>	90.8
Bread and other bakery products.....	306	301	301	304	304	305	307	300	<i>300</i>	311	325	306	308	92.3
Canning and preserving.....	1,052	1,061	1,077	1,214	1,194	309	<i>124</i>	239	1,311	1,542	1,799	1,495	1,259	6.9
Cars and general shop construction and repairs by steam-railroad companies.....	3,278	3,508	3,394	3,426	3,389	3,154	3,234	3,253	3,364	3,330	3,282	3,157	<i>2,845</i>	81.1
Cotton goods.....	1,989	2,048	2,053	2,015	2,031	2,026	1,996	1,926	<i>1,902</i>	1,945	2,006	1,936	1,984	92.6
Ice, manufactured.....	476	<i>255</i>	261	299	474	619	732	708	694	613	446	337	274	34.8
Lumber and timber products.....	29,640	29,770	29,498	30,112	30,365	30,206	30,197	31,147	31,310	30,657	28,629	27,505	<i>26,284</i>	83.9
Oil, cottonseed, and cake.....	2,336	3,794	3,231	2,605	1,491	860	<i>764</i>	778	835	2,020	3,862	3,938	3,964	19.0
Turpentine and rosin.....	3,275	<i>3,165</i>	3,189	3,246	3,302	3,312	3,362	3,372	3,351	3,310	3,275	3,216	3,200	93.9
All other industries.....	4,350	4,461	4,515	4,689	4,740	4,505	4,391	4,420	4,237	4,282	4,150	3,991	<i>3,819</i>	80.6
Total for cities.....	8,131	8,526	8,087	8,385	8,107	7,893	7,795	7,881	<i>7,732</i>	8,225	8,554	8,287	8,050	91.0
COLUMBUS.....	521	547	558	489	539	519	<i>475</i>	477	525	523	530	527	543	85.1
GREENVILLE.....	671	683	622	802	651	621	562	604	<i>514</i>	624	718	813	838	61.3
HATTIESBURG.....	587	637	636	628	608	573	564	583	538	582	591	578	<i>566</i>	82.6
JACKSON.....	943	1,027	996	1,035	908	819	842	863	866	921	1,085	997	957	75.5
LAUREL.....	2,129	2,272	<i>1,909</i>	2,095	2,208	2,126	2,150	2,161	2,131	2,209	2,205	2,091	1,991	84.0
MERIDIAN.....	1,974	2,037	2,068	2,019	1,997	2,021	1,995	1,976	1,929	1,907	1,976	<i>1,863</i>	1,902	90.2
NATCHEZ.....	297	324	304	297	305	304	<i>268</i>	257	263	292	311	318	333	79.9
VICKSBURG.....	1,009	999	996	1,020	891	910	951	960	1,016	1,167	1,138	1,100	960	76.3

Prevailing hours of labor.—In Table 10 the average number of wage earners reported for 1914 and 1909, for all industries combined and for selected industries throughout the state, have been classified according to number of hours of labor per week prevailing in the establishments in which they were employed. A

similar classification is given, for 1914 only, for all industries combined in each city having more than 10,000 inhabitants. The number employed in each establishment is classified as a total, even though a few employees worked a greater or a smaller number of hours.

Table 10

INDUSTRY AND CITY.	Census year.	AVERAGE NUMBER OF WAGE EARNERS.								
		Total.	In establishments where the prevailing hours of labor per week were—							
			48 and under.	Between 48 and 54.	54.	Between 54 and 60.	60.	Between 60 and 72.	72.	Over 72.
All industries.....	1914	46,702	3,345	2,291	4,369	1,573	32,149	1,190	1,647	138
	1909	50,384	2,794	982	2,924	1,555	22,957	16,810	1,998	364
Bread and other bakery products.....	1914	306	4	4	5	38	135	98	10	12
	1909	285	12	.....	14	8	93	36	28	94
Canning and preserving.....	1914	1,052	496	.....	88	45	423	.....	.....	.....
	1909	847	11	.....	125	32	581	98	.....	.....
Cars and general shop construction and repairs by steam-railroad companies.....	1914	3,278	.....	948	2,296	.....	34	.....	.....	.....
	1909	2,572	.....	522	1,577	.....	436	37	.....	.....
Cotton goods.....	1914	1,989	.....	.....	65	.....	1,924	.....	.....	.....
	1909	2,645	.....	.....	.....	.....	1,434	1,093	.....	.....
Ice, manufactured.....	1914	476	25	.....	5	21	106	211	36	72
	1909	341	.....	.....	.....	.....	30	37	84	181
Lumber and timber products.....	1914	29,640	475	837	899	1,113	25,895	421	.....	.....
	1909	33,397	487	311	496	1,241	16,323	14,477	62	.....
Oil, cotton seed, and cake.....	1914	2,336	.....	26	43	173	334	178	1,573	9
	1909	2,503	.....	.....	.....	.....	50	632	1,788	33
Turpentine and rosin.....	1914	3,275	1,404	405	0	50	1,240	77	.....	.....
	1909	2,573	1,830	24	.....	.....	621	98	.....	.....
All other industries.....	1914	4,350	851	71	959	133	2,058	205	28	45
	1909	5,221	454	125	712	156	3,380	302	36	56
Total for cities.....	1914	8,131	385	166	2,079	276	4,378	329	460	58
COLUMBUS.....	1914	521	1	22	160	6	267	10	55	.....
GREENVILLE.....	1914	671	7	.....	17	14	466	21	146	.....
HATTIESBURG.....	1914	587	36	3	241	6	171	120	10	.....
JACKSON.....	1914	943	90	109	252	129	158	105	100	.....
LAUREL.....	1914	2,129	44	6	11	.....	2,052	16	.....	.....
MERIDIAN.....	1914	1,974	107	26	703	57	1,027	14	18	22
NATCHEZ.....	1914	297	35	.....	27	51	96	19	44	25
VICKSBURG.....	1914	1,009	65	.....	668	13	141	24	87	11

The figures in this table, for the state as a whole and for most of the selected industries, emphasize the tendency toward a shortening of the working day of wage earners. In 1909, 19,172, or nearly two-fifths of the total average number of wage earners for all industries combined, were employed in establishments where the prevailing hours of labor were more than 60 per week, while but 2,975, or only about one-sixteenth, were so employed in 1914. On the other hand, the number of wage earners in establishments where the prevailing hours were 60 or under per week, increased from 31,212 in 1909 to 43,727 in 1914, forming 61.9 per cent and 93.6 per cent, respectively, of the total number in the state. For the state as a whole, there was a marked increase during the five-year period in the proportion of wage earners in the class employed 60 hours per week, and the greatest decrease is shown in the class employed between 60 and 72 hours.

Among the separate industries, lumber and timber shows the most pronounced decrease in hours of labor. In 1909, 43.5 per cent of the wage earners in this industry were employed in establishments where the hours of labor were more than 60 per week, but in 1914 the proportion had decreased to 1.4 per cent.

In the cottonseed oil and cake industry in 1909, there were no establishments reporting their prevailing hours of labor as less than 60 per week, but in 1914, 10.4 per cent of the wage earners in this industry were employed in establishments where such hours prevailed.

For cars and general shop construction and repairs by steam-railroad companies, in 1909 the proportion of the wage earners employed where the prevailing hours were 60 or more amounted to 18.4 per cent as against 1 per cent in 1914.

Of the combined total average number of wage earners, 8,131, for the eight cities in 1914, 7,284, or 89.6 per cent, were employed in establishments where the prevailing hours were 60 and under per week, while only 847, or 10.4 per cent, were in establishments where the hours were more than 60 per week. In the city of Laurel, where lumber and timber is by far the most important industry, 2,052, or 96.4 per cent, of its wage earners were reported in the 60-hour class.

Location of establishments.—Table 11 shows, for 1914, 1909, and 1899, the extent to which the manufactures in Mississippi were centralized in the cities having more than 10,000 inhabitants.

	Census year.	Aggregate.	CITIES HAVING A POPULATION OF 10,000 OR OVER.						DISTRICTS OUTSIDE OF CITIES HAVING A POPULATION OF 10,000 OR OVER.	
			Total.		10,000 to 25,000.		25,000 to 100,000.		Number or amount.	Per cent of aggregate.
			Number or amount.	Per cent of aggregate.	Number or amount.	Per cent of aggregate.	Number or amount.	Per cent of aggregate.		
Number of places.....	1914 1910 1900		8 5 3		7 5 3		1			
Population ¹	1914 1910 1900	1,901,882 1,797,114 1,551,270	128,858 88,885 41,094	6.8 4.9 2.6	101,851 88,885 41,094	5.4 4.9 2.6	27,007	1.4	1,773,024 1,708,229 1,510,176	93.2 95.1 97.4
Number of establishments.....	1914 1909 1899	2,209 2,598 1,294	274 291 82	12.4 7.7 6.3	225 201 82	10.2 7.7 6.3	49	2.2	1,935 2,297 1,212	87.6 92.3 93.7
Average number of wage earners.....	1914 1909 1899	46,702 50,384 26,799	8,131 4,574 2,469	17.4 9.1 9.2	7,188 4,574 2,469	15.4 9.1 9.2	943	2.0	38,571 45,810 24,330	82.6 90.9 90.8
Value of products.....	1914 1909 1899	\$79,550,095 80,555,410 33,718,517	\$18,622,566 11,791,611 4,407,113	23.4 14.6 13.1	\$14,997,498 11,791,611 4,407,113	18.8 14.6 13.1	\$3,625,068	4.6	\$60,927,529 68,763,799 29,311,404	76.6 85.4 86.9
Value added by manufacture.....	1914 1909 1899	38,209,973 43,029,828 17,175,488	7,647,337 5,003,122 1,995,613	20.0 11.5 11.6	6,536,269 5,003,122 1,995,613	17.1 11.5 11.6	1,111,038	2.9	30,562,636 38,026,706 15,179,875	80.0 88.5 88.4

¹ Census estimate of population for 1914.

In accepting the statistics in this table it must be remembered that some of the cities—Columbus, Greenville, and Laurel—that had a population of 10,000 and over at the census of 1914 were included with those for the outside districts at prior censuses. The table shows, however, that for 1914 the cities, which represented 6.8 per cent of the estimated population of the state, reported 23.4 per cent of the total value of products and 17.4 per cent of the total average number of wage earners.

The relative importance in manufactures of each of the eight cities having more than 10,000 inhabitants, as measured by average number of wage earners and by value of products, in 1914, 1909, and 1904, is shown in Table 12. The cities are listed in the order of their

importance as shown by value of products. Those for which comparative figures are not shown for 1909 and 1904 had less than 10,000 inhabitants in those years.

The manufacturing industries of Meridian show an increase in both value of products and average number of wage earners for each of the 5-year periods 1904-1909 and 1909-1914. For Jackson and Hattiesburg statistics are available for 1909 and 1914 only. In the former city there was an increase in each item, while in the latter there were decreases. Vicksburg and Natchez each show increases in value of products and also in average number of wage earners for the five-year period 1904-1909, but decreases in these items during the period 1909-1914.

CITY.	AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.		
	1914	1909	1904	1914	1909	1904
Meridian.....	1,974	1,524	1,346	\$4,738,763	\$4,237,476	\$3,267,600
Jackson.....	943	1,772	.....	3,625,068	1,2,969,812	.....
Laurel.....	2,129	.....	.....	3,372,292	.....	.....
Greenville.....	671	.....	.....	1,935,153	.....	.....
Vicksburg.....	1,009	1,202	1,031	1,672,907	2,229,344	1,887,024
Columbus.....	521	.....	.....	1,248,543	.....	.....
Hattiesburg.....	587	648	.....	1,133,927	1,250,892	.....
Natchez.....	297	428	316	895,913	1,114,087	819,729

¹ Figures do not agree with those published, because it was necessary to revise them in order to include data only for those establishments located within the corporate limits of the city.

Laurel, although not having a sufficient population to be reported separately at prior censuses, in 1914 ranked first in average number of wage earners and third in value of products. Lumber and timber is the principal industry in this city, forming more than two-thirds of the total value of products.

In each of the cities of Meridian, Jackson, Greenville, Columbus, and Natchez the principal industry is cottonseed oil and cake.

The principal industries in Vicksburg are cars and general shop construction and repairs by steam-railroad companies and cottonseed oil and cake.

In Hattiesburg, fertilizers and cars and general shop construction and repairs by steam-railroad companies were the two leading industries for 1914.

It will be noted that in the ranking of all the cities, except Natchez, the number of wage earners varies from their ranking in value of products.

Character of ownership.—Table 13 presents statistics concerning character of ownership, or legal organization, of manufacturing enterprises. For all industries combined, comparative figures are given for 1914, 1909, and 1904; for selected industries, statistics for 1914 and 1909 are shown; and for individual cities the figures are for all industries combined and relate only to 1914. In order to avoid disclosing the operations of individual establishments, it is necessary to omit several important industries from this table.

INDUSTRY AND CITY.	Census year.	AVERAGE NUMBER OF WAGE EARNERS.									VALUE OF PRODUCTS.								
		NUMBER OF ESTABLISHMENTS OWNED BY—			Total.	In establishments owned by—			Per cent of total.			Total.	Of establishments owned by—			Per cent of total.			
		Individuals.	Corporations.	All others.		Individuals.	Corporations.	All others.	Individuals.	Corporations.	All others.		Individuals.	Corporations.	All others.	Individuals.	Corporations.	All others.	
All industries.....	1914	1,180	493	536	46,702	7,248	34,909	4,551	15.5	74.7	9.8	\$79,550,095	\$9,514,036	\$62,981,047	\$7,055,012	12.0	79.2	8.9	
	1909	1,353	555	690	50,384	9,779	33,467	7,138	19.4	66.4	14.2	80,555,410	11,674,333	58,719,954	10,161,123	14.5	72.9	12.6	
	1904	672	447	401	38,690	5,094	27,085	5,911	14.7	70.0	15.3	57,451,445	7,597,544	42,169,202	7,684,609	13.2	73.4	13.4	
Bread and other bakery products.	1914	66	2	15	306	208	.....	98	68.0	.....	32.0	919,007	647,090	.....	1,271,917	70.4	.....	29.6
	1909	55	2	22	285	171	.....	114	60.0	.....	40.0	878,353	530,244	.....	1,348,109	60.4	.....	39.6
Cars and general shop construction and repairs by steam-railroad companies.	1914	.....	15	.....	3,278	.....	3,278	.....	100.0	.....	.....	3,682,100	.....	3,682,100	.....	100.0	.....	.....
	1909	.....	10	.....	2,572	.....	2,572	.....	100.0	.....	.....	3,233,288	.....	3,233,288	.....	100.0	.....	.....
Cotton goods.....	1914	.....	11	.....	1,989	.....	1,989	.....	100.0	.....	.....	2,789,007	.....	2,789,007	.....	100.0	.....	.....
	1909	.....	14	.....	2,645	.....	2,645	.....	100.0	.....	.....	3,102,398	.....	3,102,398	.....	100.0	.....	.....
Ice, manufactured.....	1914	16	35	7	476	80	314	73	18.7	66.0	15.3	1,045,940	212,641	707,043	126,256	20.3	67.6	12.1	
	1909	8	36	7	341	38	265	38	11.1	77.7	11.1	866,858	90,778	708,203	67,377	10.5	81.7	7.8	
Lumber and timber products.	1914	738	179	879	20,640	5,475	20,650	3,515	18.5	69.7	11.9	38,537,743	6,016,804	27,871,491	4,649,448	15.6	72.3	12.1	
	1909	920	220	607	33,397	7,803	19,982	5,612	23.4	59.8	16.8	42,792,844	8,413,371	26,888,920	7,540,553	19.7	62.7	17.6	
Oil, cottonseed, and cake.	1914	1	61	5	2,336	.....	2,207	2,129	.....	94.5	5.5	17,599,651	.....	16,991,585	2,608,066	.....	96.5	3.5
	1909	1	81	5	2,503	.....	2,304	2,139	.....	94.4	5.6	15,965,643	.....	15,331,818	2,633,725	.....	96.0	4.0
Turpentine and rosin.....	1914	16	30	15	3,275	233	2,770	272	7.1	84.6	8.3	1,997,139	155,842	1,552,057	289,240	7.8	77.7	14.5	
	1909	15	27	22	2,573	242	1,943	388	9.4	75.5	15.1	1,474,629	159,349	1,003,691	251,589	10.8	72.1	17.1	
Total for cities.....	1914	94	124	56	8,131	616	6,971	544	7.6	85.7	6.7	18,622,566	1,400,018	15,926,569	1,295,979	7.5	85.5	7.0	
COLUMBUS.....	1914	11	10	6	521	83	412	26	15.9	79.1	5.0	1,248,543	159,572	1,036,937	52,034	12.8	83.0	4.2	
GREENVILLE.....	1914	9	11	5	671	53	516	102	7.9	76.9	15.2	1,935,153	97,014	1,579,039	259,100	5.0	81.6	13.4	
HATTIESBURG.....	1914	14	14	7	587	47	483	57	8.0	82.3	9.7	1,133,927	110,400	870,219	153,308	9.7	76.7	13.5	
JACKSON.....	1914	13	26	10	943	92	797	54	9.8	84.5	5.7	3,625,068	203,079	3,243,517	178,472	5.6	89.5	4.9	
LAUREL.....	1914	7	15	4	2,129	54	2,067	8	2.5	97.1	0.4	3,372,292	73,539	3,264,033	34,720	2.2	96.8	1.0	
MERIDIAN.....	1914	15	24	12	1,974	148	1,716	110	7.5	86.9	5.6	4,738,763	298,549	4,110,618	329,596	6.3	86.7	7.0	
NATCHEZ.....	1914	12	9	3	297	73	130	94	24.6	43.8	31.6	895,913	247,571	480,592	167,750	27.6	53.6	18.7	
VICKSBURG.....	1914	13	15	9	1,009	66	850	93	6.5	84.3	9.2	1,672,907	210,291	1,341,614	120,999	12.6	80.2	7.2	

¹ Includes the group "corporations."

² Includes the group "individuals."

This table shows for all industries combined, an increase during the decade, in the number of establishments throughout the state under each form of ownership. A decrease, however, is shown for the 1914 figures when compared with those for 1909, there being 389 fewer establishments at the later

census. The decrease in number of establishments does not reflect the decrease in manufacturing activities, for while the decrease in establishments amounted to 15 per cent, for value of products it amounted only to 1.2 per cent; and corporations, showing a decrease of 62 establishments, for value of products show an

increase of more than four million dollars. Although of the three classes of ownership, corporations show the smallest proportion of establishments, in value of products and average number of wage earners they largely predominate. In 1914, although only 22.3 per cent of the total number of establishments in the state were under corporate ownership, this class reported 79.2 per cent of the total value of products and 74.7 per cent of the total average number of wage earners. In 1909 and 1904 the corresponding proportions were only slightly less.

With the exception of bread and other bakery prod-

ucts, in each of the seven industries for which separate statistics are given, the value of products and also the average number of wage earners for corporate ownership is greater than for the other two groups combined. For each of the cities, in respect to value of products, this condition also prevails. In Laurel this is very pronounced, the value of products for corporations being 96.8 per cent of the total.

Size of establishments.—The tendency for manufacturing to become concentrated in large establishments, or the reverse, is indicated by the statistics given in Table 14.

Table 14

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
	1914	1909	1904	1914	1909	1904	1914	1909	1904	1914	1909	1904
All classes.....	2,209	2,598	1,520	46,702	50,384	38,600	\$79,550,095	\$80,555,410	\$57,451,445	\$38,209,973	\$43,620,823	\$31,650,560
Less than \$5,000.....	1,083	1,156	466	2,600	3,260	1,045	2,321,838	2,573,206	1,172,486	1,655,479	1,918,351	871,560
\$5,000 to \$20,000.....	617	785	519	5,156	6,838	4,351	6,294,551	8,089,215	5,551,093	4,069,108	5,717,616	3,872,381
\$20,000 to \$100,000.....	320	457	383	8,779	12,679	11,458	13,739,910	19,633,830	16,350,354	7,815,467	12,336,122	10,256,820
\$100,000 and over ¹	189	190	152	30,167	27,607	21,836	57,193,796	50,259,159	34,377,512	24,660,919	23,657,739	16,649,799
PER CENT DISTRIBUTION.												
All classes.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than \$5,000.....	49.0	44.5	30.7	5.6	6.5	2.7	2.9	3.2	2.0	4.3	4.4	2.8
\$5,000 to \$20,000.....	27.9	30.2	34.1	11.0	13.6	11.2	7.9	10.0	9.7	10.6	13.1	12.2
\$20,000 to \$100,000.....	14.5	15.0	25.2	18.8	25.2	29.6	17.3	24.4	28.5	20.5	28.3	32.4
\$100,000 and over ¹	8.6	7.3	10.0	64.6	54.8	56.4	71.9	62.4	59.8	64.6	54.2	52.6

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

For 1914, 189 establishments, or 8.6 per cent of the total number in the state, each reported products exceeding \$100,000 in value, as compared with 190, or 7.3 per cent of the total, in 1909, and 152, or 10 per cent, in 1904. In 1914 these establishments reported an average of 30,167 wage earners, or 64.6 per cent of the total for the state, 71.9 per cent of the total value of products, and 64.6 per cent of the total value added by manufacture. In the same year the small establishments—those having products of less than \$5,000 in value—representing 49 per cent of the total number

of establishments, reported only 2.9 per cent of the total value of products. For the establishments having products valued at \$100,000 and over, the proportion of the total shows an increase in value of products at each successive census, from 59.8 per cent in 1904 to 62.4 per cent in 1909 and 71.9 per cent in 1914.

Table 15 gives, for 1914 and 1909, for four of the more important industries, a classification of establishments, wage earners, value of products, and value added by manufacture, similar to that presented in Table 14 for all industries combined.

Table 15

INDUSTRY AND VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.		AVERAGE NUMBER OF WAGE EARNERS.				VALUE OF PRODUCTS.				VALUE ADDED BY MANUFACTURE.			
	1914	1909	1914	1909	Per cent distribution.		1914	1909	Per cent distribution.		1914	1909	Per cent distribution.	
					1914	1909			1914	1909			1914	1909
COTTON GOODS.....	11	14	1,989	2,645	100.0	100.0	\$2,789,007	\$3,102,398	100.0	100.0	\$977,007	\$1,060,248	100.0	100.0
Less than \$100,000.....	3	13	175	1,127	8.8	4.8	210,591	1,158,036	7.6	5.1	78,391	1,65,954	8.0	6.2
\$100,000 to \$1,000,000.....	8	11	1,814	2,518	91.2	95.2	2,578,416	2,944,362	92.4	94.9	898,616	994,294	92.0	93.8
LUMBER AND TIMBER PRODUCTS.....	1,296	1,617	29,640	33,397	100.0	100.0	38,537,743	42,792,844	100.0	100.0	23,681,893	28,586,246	100.0	100.0
Less than \$5,000.....	719	805	2,060	2,610	7.0	7.8	1,437,869	1,698,245	3.7	4.0	1,066,797	1,319,164	4.5	4.6
\$5,000 to \$20,000.....	326	455	3,276	4,644	11.1	13.9	3,281,682	4,766,790	8.5	11.1	2,268,295	3,614,496	9.6	12.6
\$20,000 to \$100,000.....	166	299	5,231	8,460	17.6	25.3	7,250,250	12,495,579	18.8	29.2	4,470,090	8,679,012	18.9	30.4
\$100,000 and over ¹	85	88	19,073	17,683	64.3	52.9	26,567,942	23,832,230	68.9	55.7	15,876,711	14,973,574	67.0	52.4
OIL, COTTONSEED, AND CAKE.....	67	87	2,336	2,503	100.0	100.0	17,599,651	15,965,543	100.0	100.0	3,162,023	3,796,872	100.0	100.0
Less than \$100,000 ²	8	25	75	315	3.2	12.6	331,922	1,504,538	1.9	9.4	65,375	319,425	2.1	8.4
\$100,000 to \$1,000,000.....	59	62	2,261	2,188	96.8	87.4	17,267,729	14,461,005	98.1	90.6	3,096,648	3,477,447	97.9	91.6
TURPENTINE AND ROSIN.....	61	64	3,275	2,573	100.0	100.0	1,997,139	1,474,629	100.0	100.0	1,416,960	1,125,520	100.0	100.0
Less than \$5,000.....	8	13	14	47	0.4	1.8	23,521	42,164	1.2	2.9	14,138	24,135	1.0	2.1
\$5,000 to \$20,000.....	28	32	371	526	11.3	20.4	318,178	372,174	15.9	25.2	217,120	284,156	15.3	25.2
\$20,000 to \$100,000.....	21	16	1,200	889	36.7	34.6	917,733	552,123	46.0	37.4	672,776	461,729	47.5	41.0
\$100,000 to \$1,000,000.....	4	3	1,690	1,111	51.6	43.2	737,707	508,168	36.9	34.5	512,926	355,506	39.2	31.6

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

² Includes the group "\$5,000 to \$20,000."

MANUFACTURES—MISSISSIPPI.

As in the totals for all industries combined, this table shows for 1914, as compared with 1909, that for each of the four industries, except cotton goods, there was an increase in the average number of wage earners and value of products for the establishments having products valued at \$100,000 and over, and for lumber

and timber products and turpentine and rosin there was also an increase in value added by manufacture.

Table 16 presents, for 1914, for all industries combined in each of the eight cities having more than 10,000 inhabitants, statistics similar to those given in Table 14 for the state as a whole.

CITY AND VALUE OF PRODUCTS.	Number of establishments.	WAGE EARNERS.		VALUE OF PRODUCTS.		VALUE ADDED BY MANUFACTURE.		CITY AND VALUE OF PRODUCTS.	Number of establishments.	WAGE EARNERS.		VALUE OF PRODUCTS.		VALUE ADDED BY MANUFACTURE.	
		Average number.	Per cent of total.	Amount.	Per cent of total.	Amount.	Per cent of total.			Average number.	Per cent of total.	Amount.	Per cent of total.	Amount.	Per cent of total.
COLUMBUS.....	27	521	100.0	\$1,248,543	100.0	\$501,848	100.0	LAUREL.....	26	2,129	100.0	3,372,292	100.0	1,659,160	100.0
Less than \$5,000.....	7	15	2.9	21,200	1.7	13,993	2.8	Less than \$5,000.....	5	8	0.4	16,154	0.5	10,340	0.6
\$5,000 to \$20,000.....	12	57	10.9	105,258	8.4	61,447	12.2	\$5,000 to \$20,000.....	11	83	3.9	119,343	3.5	66,871	4.0
\$20,000 to \$100,000.....	3	65	12.5	130,200	10.4	67,373	13.4	\$20,000 to \$100,000.....	5	99	4.6	221,928	6.6	166,109	10.0
\$100,000 to \$1,000,000.....	5	384	73.7	991,885	79.4	359,035	71.5	\$100,000 to \$1,000,000.....	5	1,939	91.1	3,014,867	89.4	1,415,840	85.3
GREENVILLE.....	25	671	100.0	1,935,153	100.0	757,757	100.0	MERIDIAN.....	51	1,974	100.0	4,738,763	100.0	2,019,034	100.0
Less than \$20,000.....	12	59	8.8	96,026	5.0	66,770	8.8	Less than \$5,000.....	3	3	0.2	8,300	0.2	4,485	0.2
\$20,000 to \$100,000.....	8	104	15.5	339,457	17.5	183,798	24.3	\$5,000 to \$20,000.....	18	136	6.9	214,049	4.5	122,474	6.1
\$100,000 to \$1,000,000.....	5	508	75.7	1,499,671	77.5	507,189	66.9	\$20,000 to \$100,000.....	20	469	23.8	924,880	19.5	486,776	24.1
HATTIESBURG.....	35	587	100.0	1,133,927	100.0	467,610	100.0	\$100,000 to \$1,000,000.....	10	1,366	69.2	3,591,534	75.8	1,405,299	69.6
Less than \$5,000.....	13	22	3.7	36,806	3.2	22,928	4.9	NATCHEZ.....	24	297	100.0	895,913	100.0	290,180	100.0
\$5,000 to \$20,000.....	8	64	10.9	106,374	9.4	56,644	12.1	Less than \$5,000.....	5	12	4.0	9,573	1.1	6,498	2.2
\$20,000 and over.....	14	501	85.3	990,687	87.4	388,038	83.0	\$5,000 to \$20,000.....	8	52	17.5	102,679	11.6	54,988	18.9
JACKSON.....	49	943	100.0	3,625,068	100.0	1,111,068	100.0	\$20,000 and over.....	11	233	78.5	783,661	87.5	228,694	78.8
Less than \$5,000.....	9	7	0.7	14,189	0.4	12,387	1.1	VICKSBURG.....	37	1,009	100.0	1,672,907	100.0	840,680	100.0
\$5,000 to \$20,000.....	17	138	14.6	234,666	6.5	138,040	12.5	Less than \$5,000.....	12	41	4.1	29,211	1.7	20,976	2.5
\$20,000 to \$100,000.....	16	333	35.3	736,835	20.3	399,021	36.0	\$5,000 to \$20,000.....	10	65	6.4	120,162	7.2	76,696	9.1
\$100,000 to \$1,000,000.....	7	465	49.3	2,639,378	72.8	560,420	50.4	\$20,000 and over.....	15	903	89.5	1,523,534	91.1	743,008	88.4

¹Includes the group "less than \$5,000."

²Includes the group "\$100,000 to \$1,000,000."

In Columbus, Greenville, Jackson, Laurel, and Meridian the same general condition is found as prevails for all industries combined in the state, namely, a preponderance as to value of products for establishments in the group of \$100,000 and over. Each of the cities shows a considerable proportion of the total number of establishments as having products valued at less than \$20,000, but

their combined value of products was relatively small.

Table 17 shows the size of establishments in 1914 as measured by the number of wage earners employed. The figures given are for all industries combined, for eight of the more important industries, and for each of the eight cities, having more than 10,000 inhabitants.

INDUSTRY AND CITY.	TOTAL.		ESTABLISHMENTS EMPLOYING—							
	Estab-lish-ments.	Wage earn-ers (average number).	No wage earners.	1 to 5 wage earners.		6 to 20 wage earners.		21 to 50 wage earners.		
				Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	
All industries.....	2,209	46,702	82	1,234	3,082	526	5,769	195	6,312	
Bread and other bakery products.....	33	306	15	50	126	18	180	5	142	
Canning and preserving.....	18	1,032	1	5	5	5	70	3	98	
Cars and general shop construction and repairs by steam-railroad companies.....	15	3,278	.....	.....	.....	4	32	1	49
Cotton goods.....	11	1,989	.....	.....	.....	.....	.....	.....	.....
Ice, manufactured.....	58	476	.....	34	113	18	214	6	149
Lumber and timber products.....	1,296	29,640	5	732	1,873	357	3,816	92	2,892	
Oil, cottonseed, and cake.....	67	2,336	.....	2	10	15	223	40	1,409
Turpentine and rosin.....	61	3,275	2	21	59	9	138	16	647	
All other industries.....	600	4,350	60	394	896	100	1,096	32	926	
Total for cities.....	274	8,131	13	104	296	91	1,062	37	1,149	
COLUMBUS.....	27	521	1	15	45	5	63	3	100	
GREENVILLE.....	25	671	1	9	27	8	82	5	191	
HATTIESBURG.....	35	587	1	17	42	11	122	3	101	
JACKSON.....	49	943	6	14	30	16	198	8	231	
LAUREL.....	26	2,129	.....	11	27	7	61	3	102
MERIDIAN.....	51	1,974	.....	14	39	20	248	9	249
NATCHEZ.....	24	297	.....	11	36	10	120	2	67
VICKSBURG.....	37	1,009	4	13	41	14	168	4	108	

Table 17—Continued.

INDUSTRY AND CITY.	ESTABLISHMENTS EMPLOYING—									
	51 to 100 wage earners.		101 to 250 wage earners.		251 to 500 wage earners.		501 to 1,000 wage earners.		Over 1,000 wage earners.	
	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.	Estab-lish-ments.	Wage earners.
All industries.....	81	5,661	58	9,776	21	7,716	11	6,835	1	1,551
Bread and other bakery products.....	3	232	4	603						
Canning and preserving.....	1	95	3	508			4	2,545		
Cars and general shop construction and repairs by steam-railroad companies.....	2	127	6	1,021	2	702				
Cotton goods.....										
Ice, manufactured.....	49	3,456	37	6,327	17	6,174	6	3,551	1	1,551
Lumber and timber products.....	10	694								
Oil, cottonseed, and cake.....	7	454	3	488	2	750	1	739		
Turpentine and rosin.....	9	603	5	829						
All other industries.....										
Total for cities.....	14	1,000	8	1,245	3	998	4	2,381		
COLUMBUS.....	1	55	2	258						
GREENVILLE.....	1	62			1	309				
HATTESBURG.....	2	149	1	173						
JACKSON.....	4	300	1	175						
LAUREL.....	1	65			2	689	2	1,185		
MERIDIAN.....	3	208	4	639			1	591		
NATCHEZ.....	1	74								
VICKSBURG.....	1	87					1	605		

Table 18 presents, for 1914, percentages based on the figures in Table 17, and for 1909, similar percentages for all industries combined and for individual industries in the state as a whole.

INDUSTRY AND CITY.	Cen-sus year.	PER CENT OF TOTAL AVERAGE NUMBER OF WAGE EARNERS IN ESTABLISHMENTS EMPLOYING SPECIFIED NUMBER.							
		1 to 5	6 to 20	21 to 50	51 to 100	101 to 250	251 to 500	501 to 1,000	Over 1,000
		All industries.....	1914 1909	6.6 7.1	12.4 17.6	13.5 18.1	12.1 11.3	20.9 16.8	16.5 16.0	14.6 10.9	3.3 2.2
Bread and other bakery products.....	1914 1909	41.2 49.1	58.8 50.9						
Canning and preserving.....	1914 1909	0.5 0.5	6.7 2.4	13.5 6.7	22.0 28.2	57.3 28.7			
Cars and general shop construction and repairs by steam-railroad companies.....	1914 1909		1.0 0.3	3.0 1.1	2.9 6.8	15.5 15.4		77.6 42.8	
Cotton goods.....	1914 1909			2.5 0.3	6.4 8.2	51.3 46.4	39.8 45.0		
Ice, manufactured.....	1914 1909	23.7 34.0	45.0 57.2	31.3 8.8					
Lumber and timber products.....	1914 1909	6.3 7.0	12.9 18.2	9.8 16.9	11.7 11.4	21.3 16.6	20.8 15.4	12.0 11.1	5.2 3.3
Oil, cottonseed, and cake.....	1914 1909	0.4 1.0	9.5 16.5	60.3 64.2	29.7 18.3				
Turpentine and rosin.....	1914 1909	1.8 0.5	4.2 14.6	19.8 23.0	13.9 6.4	14.9 20.3	22.9 9.8	22.6 25.5	
All other industries.....	1914 1909	20.6 18.5	25.2 31.0	21.3 22.5	13.9 12.3	19.0 10.0			
Total for cities.....	1914	3.6	13.1	14.1	12.3	15.3	12.3	29.3	
COLUMBUS.....	1914	8.6	12.1	19.2	10.6	49.5			
GREENVILLE.....	1914	4.0	12.2	28.5	9.2	46.1			
HATTESBURG.....	1914	7.2	20.8	17.2	25.4	29.5			
JACKSON.....	1914	4.1	21.0	24.5	31.8	18.6			
LAUREL.....	1914	1.3	2.9	4.8	3.0	32.4	55.6		
MERIDIAN.....	1914	2.0	12.6	12.6	10.5	32.4	29.9		
NATCHEZ.....	1914	12.1	40.4	22.6	24.9				
VICKSBURG.....	1914	4.1	16.6	10.7	8.6				

There were 82 establishments for which no wage earners are shown. In these establishments all the work is done by the proprietors or members of their families, firm members, or persons classed as salaried

employees. For some of them the number of wage earners employed was so small and the term of employment so short that in computing the average, as described in the "Explanation of terms," the number was less than one person and the establishment was classed as one having no wage earners. The small establishments—those employing from 1 to 20 wage earners—formed 79.7 per cent of the total for the state, but gave employment to only 19 per cent of the total wage earners reported. The groups of establishments having more than 100 wage earners, although representing only 4.1 per cent of the total number of establishments in the state, gave employment to 55.4 per cent of the total wage earners.

Among the cities, the highest percentage of the total number of wage earners reported by establishments employing more than 500 wage earners each is shown for Vicksburg, 60.

Engines and power.—Table 19 shows, for 1914, 1909, and 1904, for all industries combined, the number and horsepower of engines or motors employed in generating power (including electric motors operated by purchased current). It also shows separately the number and horsepower of electric motors operated by current generated in the establishments reporting.

The slight decrease in primary power amounting to 9.6 per cent from 1909 to 1914, shown in the following table, is due to the decrease in steam power. The use of rented electric power has steadily increased since 1904, when 508 horsepower of this character, representing five-tenths of 1 per cent of the total primary power, was reported. In 1909 the amount of such power had increased to 2,496 horsepower, or 1.2 per cent of the total, and in 1914 to 6,779, or 3.7 per cent. The increase in the use of electric motors run by current generated within the same establishments has almost kept pace with that in rented power.

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.					
				Amount.			Percent distribution.		
	1914	1909	1904	1914	1909	1904	1914	1909	1904
Primary power, total.....	3,249	3,251	1,534	186,434	206,222	110,338	100.0	100.0	100.0
Owned.....	2,527	2,924	1,534	179,625	203,661	109,805	96.3	98.8	99.5
Steam engines and turbines ¹	2,273	2,747	1,475	177,287	202,346	109,508	95.1	98.1	99.2
Internal-combustion engines.....	237	166	53	1,695	1,077	220	0.9	0.5	0.2
Water wheels, turbines, and motors.....	17	11	6	643	238	77	0.3	0.1	0.1
Rented.....	722	327	.....	6,809	2,561	533	3.7	1.2	0.5
Electric.....	722	327	(*)	6,779	2,496	508	3.6	1.2	0.5
Other.....	.....	.....	.....	30	65	25	(*)	(*)	(*)
Electric.....	1,016	517	50	17,351	7,627	1,367	100.0	100.0	100.0
Rented.....	722	327	(*)	6,779	2,496	508	39.1	32.7	37.2
Generated by establishments reporting.....	294	190	50	10,572	5,131	859	60.9	67.3	62.8

¹ Figures for horsepower include for 1909 and 1904 the amount reported under the head of "Other" owned power.

* Not reported.

† Less than one-tenth of 1 per cent.

Fuel.—Closely related to the subject of power employed in manufactures is that of the fuel consumed in generating this power or otherwise used in the manufacturing processes.

Table 20 shows, for 1914, the quantity of each kind of fuel used, for which data were obtained, for all industries combined and for selected industries in the state as a whole, and for all industries combined in each city.

INDUSTRY AND CITY.	COAL.					Gas (1,000 cubic feet).
	Anthracite (tons, 2,240 lbs.).	Bituminous (tons, 2,000 lbs.).	Coke (tons, 2,000 lbs.).	Oil, including gasoline (barrels).	Gas (1,000 cubic feet).	
All industries.....	1,853	476,108	6,242	12,117	3,536	
Bread and other bakery products.....	10	545	284	56	194	
Canning and preserving.....	.....	6,568	2	4	416	
Carriages and wagons and materials.....	.....	816	140	65	.....
Cars and general shop construction and repairs by steam-railroad companies.....	322	34,951	648	2,215	.....
Cotton goods.....	.....	28,680	.....	86	.....
Flour-mill and gristmill products.....	.....	200	.....	366	.....
Gas, illuminating and heating.....	.....	16,218	1,896	7,222	.....
Ice, manufactured.....	1,177	63,059	796	177	.....
Lumber and timber products.....	.....	57,513	.....	685	.....
Marble and stone work.....	.....	23	.....	38	.....
Oil, cottonseed, and cake.....	.....	163,184	1,000	.....	.....
Turpentine and rosin.....	.....	.....	.....	43	.....
All other industries.....	344	104,351	1,476	1,160	2,926	

INDUSTRY AND CITY.	COAL.					Gas (1,000 cubic feet).
	Anthracite (tons, 2,240 lbs.).	Bituminous (tons, 2,000 lbs.).	Coke (tons, 2,000 lbs.).	Oil, including gasoline (barrels).	Gas (1,000 cubic feet).	
Total for cities.....	1,045	141,145	2,729	4,661	2,787	
COLUMBUS.....	.....	9,996	52	15	9	
GREENVILLE.....	4	19,166	99	27	.....
HATTIESBURG.....	.....	4,934	200	4	.....
JACKSON.....	260	21,493	207	17	91	
LAUREL.....	.....	6,109	290	30	.....
MERIDIAN.....	464	53,251	681	109	1,607	
NATCHEZ.....	2	7,073	53	250	248	
VICKSBURG.....	315	19,123	1,147	4,209	832	

SPECIAL STATISTICS.

For certain industries the Census Bureau collects, by means of special schedules, details regarding the quantities and cost of materials, the quantities and value of products, and other information for which no provision is made on the general schedule. Certain data of this character for five important industries in Mississippi are here presented, and also statistics for power laundries.

Oil, cottonseed, and cake.—Mississippi ranked fourth among the states in cottonseed products manufactured. While there has been an increase from census to census in the total value of products, there has been an actual decrease in the quantity of seed handled, the amount in 1914 being less than in 1909 and in 1904. This condition is due to the ravages of the boll weevil, which not only reduced the yield of cotton per acre but tended to reduce the acreage as well. The following table gives the quantity of cotton seed crushed and the quantities of the several crude products obtained for the census years 1914, 1909, and 1904:

MATERIAL AND PRODUCT.	QUANTITY.		
	1914	1909	1904
Cotton seed, crushed..... tons (2,000 lbs.)..	506,190	559,357	556,396
Crude products manufactured:			
Oil..... gallons..	21,312,278	24,386,289	22,975,091
Meal and cake..... tons (2,000 lbs.)..	232,126	244,738	228,122
Hulls..... tons (2,000 lbs.)..	138,669	181,797	198,464
Linters..... pounds..	35,652,381	24,237,536	17,418,633

The statistics in this table for 1914 relate to the crushing season of 1913-14, that is, to the handling of seed from the crop of 1913. They cover the operations of all establishments which crushed cotton seed during the season, regardless of the extent to which they were engaged in other branches of industry. Furthermore, the crude products reported represent the total production derived from crushing cotton seed, whether sold as such or used as intermediate products in further processes of manufacture, such as the refining of oil and the mixing of fertilizer and feed.

The total quantity of cotton seed crushed increased from 394,678 tons in 1899 to 559,357 tons in 1909, and then decreased to 506,190 tons in 1914. Of the 69 mills reported in 1914 as crushing cotton seed, 2 crushed less than 1,000 tons each during the census year; 6 crushed 1,000 but less than 2,000 tons; 22 crushed 2,000 but less than 5,000 tons; 23 crushed 5,000 but less than 10,000 tons; 13 crushed 10,000 but less than 20,000 tons; and 3 crushed 20,000 tons and over.

The quantities of the various products obtained in 1914 per ton of seed, as received at the mill, were as follows: Crude oil, 42.1 gallons; cake and meal, 917 pounds; hulls, 548 pounds; and linters, 70 pounds. The ratios which the several products bore to the total weight of the seed when received at the mill were: Crude oil, 15.8 per cent; cake and meal, 45.9 per cent; hulls, 27.4 per cent; and linters, 3.5 per cent.

Cotton goods.—In the following table statistics are presented pertaining to materials used, products, and machinery for 1914, 1909, and 1904.

	1914	1909	1904
MATERIALS.			
Total cost.....	\$1,812,000	\$2,042,150	\$1,648,842
Cotton, domestic:			
Pounds.....	13,897,361	16,371,192	13,007,625
Cost.....	\$1,545,598	\$1,797,222	\$1,404,682
Starch, cost.....	13,385	12,769	12,772
Chemicals and dyestuffs, cost.....	34,652	31,042	39,363
Fuel and rent of power and heat, cost.....	78,261	101,557	93,388
All other materials, cost.....	140,104	99,560	99,157
PRODUCTS.			
Total value.....	\$2,789,007	\$3,102,398	\$2,462,808
Drills:			
Square yards.....	6,676,949	7,705,349	8,883,605
Value.....	\$448,493	\$437,721	\$472,705
Unbleached and bleached sheetings, shirtings, and muslins: ¹			
Square yards.....	16,137,838	26,146,744	28,041,120 (²)
Value.....	\$771,676	\$1,407,366	
Other woven goods:			
Square yards.....	20,086,423	11,744,171	
Value.....	\$1,219,702	\$933,126	
Yarns, for sale:			
Pounds.....	1,333,799	1,119,504	1,401,411
Value.....	\$258,050	\$220,920	\$273,667
Cotton waste, for sale:			
Pounds.....	1,237,201	1,018,718	868,038
Value.....	\$30,181	\$28,556	\$37,581
All other products, value.....	\$30,905	\$74,709	\$1,678,855
MACHINERY.			
Spindles (producing, not including doubling and twisting spindles), number.....	120,186	153,804	125,352
Looms, number.....	3,537	4,733	3,472

¹ The figures for these fabrics represent the combined quantities and values of those designated at prior censuses as "plain cloths for printing and converting" and "brown or bleached sheetings and shirtings."
² Value included in "all other products."

The principal material used is domestic cotton, of which 13,897,361 pounds were consumed in 1914, at a cost of \$1,545,598. The products were valued at \$2,789,007, of which 87.5 per cent represented woven goods. Yarns constituted 10.3 per cent of the total value of products.

The decline in this industry in 1914 as compared with 1909 was due largely to the ravages of the boll weevil.

Fertilizers.—The following table gives the statistics pertaining to products for 1914, 1909, and 1904:

	1914	1909	1904
Total value.....	\$2,059,786	\$2,125,029	\$1,082,387
Fertilizers:			
Tons.....	1,129,460	1,133,101	60,372
Value.....	\$1,861,845	\$1,725,256	\$933,877
Complete and ammoniated fertilizers—			
Tons.....	65,766	72,193	50,153
Value.....	\$1,349,190	\$1,167,632	\$811,394
Superphosphates, concentrated phosphates, and all others—			
Tons.....	63,703	60,908	10,219
Value.....	\$512,655	\$557,624	\$122,483
All other products, value.....	\$197,941	\$399,773	\$148,510

¹ In addition, there was produced in cottonseed-oil mills and other industries 29,794 tons of fertilizers, valued at \$521,174, in 1914, and 33,971 tons, valued at \$616,052, in 1909.

Including fertilizers made by establishments engaged primarily in the manufacture of cottonseed products and in other industries, the total production was 159,263 tons, valued at \$2,383,019, in 1914, and 167,072 tons, valued at \$2,341,308, in 1909, showing a slight decrease in quantity with a slight increase in value.

Turpentine and rosin.—The fluctuation in this industry is brought out in the following table, which gives the quantities and values of the different products for 1914, 1909, and 1904:

	1914	1909	1904
Total value.....	\$1,997,139	\$1,474,629	\$2,365,720
Spirits of turpentine:			
Gallons.....	2,385,054	1,588,786	3,160,371
Value.....	\$905,747	\$732,534	\$1,473,530
Rosin:			
Barrels (280 pounds).....	275,205	192,508	362,835
Value.....	\$1,081,040	\$739,799	\$892,028
All other products, value.....	\$10,352	\$2,496	\$162

The working unit in turpentine operations is called a crop, which consists of 10,500 boxes or cups. In 1914 there were 1,138 crops produced in the state, of which 279 were from virgin trees, 402 from the second year, 344 from the third year, and 113 from older trees. Of the total number of crops worked, 1,121 were gathered through the cup system, comprising 275 crops from virgin trees, 398 from second year, 337 from third year, and 111 from older trees.

Printing and publishing.—Table 25 shows the publications in Mississippi, by number and aggregate circulation per issue, classified according to period of issue, for the years 1914, 1909, and 1904.

PERIOD OF ISSUE.	NUMBER OF PUBLICATIONS.			AGGREGATE CIRCULATION PER ISSUE.		
	1914	1909	1904	1914	1909	1904
Total.....	218	219	207	267,319	315,731	222,028
Daily.....	17	18	14	45,792	47,492	22,250
Sunday.....	7	7	4	32,571	36,322	12,800
Semiweekly.....	17	5	4	6,236	6,000	4,050
Weekly.....	169	182	176	161,865	221,492	167,993
Monthly.....	13	5	6	18,255		7,725
All other classes.....	5	2	3	2,600	4,425	7,300

¹ Includes one triweekly.

Of the 17 daily newspapers in 1914, 12 were evening editions, with a circulation of 29,938.

For the ten-year period there was a gain of 11 in number of publications and of 45,291, or 20.4 per cent, in circulation. The daily and Sunday publications show greater increases in circulation than any of the other classes.

The returns of daily newspapers for 1914 show a net decrease of one from the number reported for 1909. The circulation of a few, reporting also in 1909, was returned at a lower figure than at the previous census, due, perhaps, to the fact that the inquiry at the census of 1914 was for the average circulation per issue during the month of December, while for the previous census it was the average for the year. The circulation of the weeklies decreased considerably. This was due in part to a similar condition—the return for 1914 was for December and not the average for the entire year. Also, some of the weeklies of 1909 were issued in 1914 at less frequent periods, thus taking them out of the class and lowering both number and circulation; one of these had a large circulation in 1909. Another weekly, also of large circulation, was not published in 1914.

Mississippi is one of the seven states in which the entire number of publications were printed in the English language.

Laundries.—Statistics for power laundries are not included in the general tables nor in the totals for all manufacturing industries. Table 26, however, summarizes these statistics for Mississippi for 1914 and 1909.

	POWER LAUNDRIES.		
	Number or amount.		Per cent of increase, ¹ 1909-1914.
	1914	1909	
Number of establishments.....	27	30	—11.7
Persons engaged.....	688	603	14.1
Proprietors and firm members.....	32	32	—
Salaried employees.....	49	42	14.7
Wage earners (average number).....	607	529	14.7
Primary horsepower.....	680	821	—17.2
Capital.....	\$347,909	\$332,302	4.7
Salaries and wages.....	207,848	201,908	32.7
Salaries.....	53,270	38,925	36.9
Wages.....	214,578	162,983	31.7
Paid for contract work.....	75	—	—
Rent and taxes.....	12,435	8,435	46.6
Cost of materials.....	122,244	80,973	51.0
Amount received for work done.....	540,209	440,579	22.6

¹ A minus sign (—) denotes decrease; percentages are omitted when base is less than 100.

In 1914 Mississippi ranked forty-first among the states both in number of establishments and in amount received for work done and thirty-ninth in number of persons engaged in the industry. Although there was a loss in the number of establishments and a decrease in horsepower, the table shows increases in all other items given. The increases in amount

received for work done and in average number of wage earners amounted to 22.6 per cent and 14.7 per cent, respectively. Establishments owned by individuals reported 48.4 per cent of the amount received for work done; those owned by corporations, 37.4 per cent; and those under other forms of ownership, 14.2 per cent.

Table 27 shows, for 1914 and 1909, the number of wage earners employed in the laundries on the 15th day of each month, or the nearest representative day, and the percentage which this number represents of the greatest number reported in any month of the same year.

MONTH.	WAGE EARNERS.			
	Number.		Per cent of maximum.	
	1914	1909	1914	1909
January.....	580	495	88.3	88.2
February.....	576	498	87.7	88.8
March.....	582	507	88.6	90.4
April.....	598	530	91.0	94.5
May.....	600	542	91.3	96.6
June.....	625	549	95.1	97.9
July.....	655	581	99.7	100.0
August.....	657	554	100.0	98.8
September.....	648	548	98.6	97.7
October.....	598	524	91.0	93.4
November.....	597	521	90.9	92.9
December.....	562	513	85.5	91.4

Table 28 gives statistics as to kinds and amounts of power used in the laundries of the state in 1914 and 1909.

POWER.	NUMBER OF ENGINES OR MOTORS.		HORSEPOWER.	
	1914	1909	1914	1909
	Primary power, total.....	42	34	680	821
Owned.....	25	29	595	765
Steam.....	24	29	583	765
Water wheels and motors.....	1	—	12	—
Rented.....	17	5	85	56
Electric.....	17	5	85	36
Other.....	—	—	—	20
Electric—generated in establishments reporting.....	6	—	23	—

Table 29 shows the kinds and quantities of fuel used in the laundries, as reported at the censuses of 1914 and 1909, with percentages of increase.

KIND.	UNIT.	QUANTITY.		Per cent of increase, ¹ 1909-1914.
		1914	1909	
Bituminous coal.....	Tons (2,000 lbs.).....	6,947	7,048	—1.4
Oil.....	Barrels.....	2,041	106	1,825.5
Gas.....	1,000 cubic feet.....	1,027	366	180.6

¹ A minus sign (—) denotes decrease.

GENERAL TABLES.

Table 30 gives, for 1914, 1909, and 1904, the number of establishments, average number of wage earners, primary horsepower, wages, cost of materials, and value of products for selected industries in the state and for the cities having from 10,000 to 50,000 inhabitants, similar data for all industries combined.

Table 31 presents, for 1914, in the state as a whole, statistics in detail for each industry that can be shown without the disclosure of the operations of individual establishments, and the statistics for all industries combined for each of the cities in the state having from 10,000 to 50,000 inhabitants.

TABLE 30.—COMPARATIVE SUMMARY FOR 1914, 1909, AND 1904.

INDUSTRY AND CITY.	Cen-sus year.	Num-ber of estab-lish-ments.	Wage earners (average num-ber).	Primary horse-power.	Wages. Cost of mate-rials. Value of prod-ucts.			INDUSTRY AND CITY.	Cen-sus year.	Num-ber of estab-lish-ments.	Wage earners (average num-ber).	Primary horse-power.	Wages. Cost of mate-rials. Value of prod-ucts.		
					Expressed in thousands.								Expressed in thousands.		
THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES.															
All industries.....	1914	2,209	46,702	186,434	\$19,177	\$41,340	\$79,550	Gas, illuminating and heating.	1914	8	113	196	\$56	\$111	\$232
	1909	2,598	50,384	206,222	18,788	36,926	80,555		1909	8	101	148	39	86	256
	1904	1,520	38,690	110,338	14,819	25,801	57,461		1904	5	55	111	24	39	125
Bread and other bakery products.	1914	83	306	184	145	514	919	Ice, manufactured.....	1914	58	476	8,489	219	327	1,046
	1909	79	285	92	128	516	878		1909	51	341	7,003	189	213	886
	1904	57	160	141	69	261	499		1904	37	274	4,171	119	145	603
Canning and preserving..	1914	118	1,052	600	229	877	1,655	Lumber and timber prod-ucts.	1914	1,296	29,640	125,371	12,413	14,856	38,538
	1909	11	847	378	97	508	824		1909	1,647	33,397	149,715	12,583	14,207	42,793
	1904	11	757	550	172	1,032	1,506		1904	1,604	22,431	68,905	9,242	7,005	26,162
Carriages and wagons and materials.	1914	23	210	1,074	101	223	479	Marble and stone work..	1914	13	58	108	31	77	149
	1909	41	365	1,350	154	274	642		1909	11	71	80	41	79	178
	1904	24	318	1,003	132	213	494		1904	9	47	34	27	50	128
Cars and general shop construction and repairs by steam-railroad companies.	1914	15	3,278	3,350	2,028	1,493	3,682	Mineral and soda waters.	1914	80	308	543	119	560	1,066
	1909	10	2,572	2,232	1,558	1,422	3,233		1909	79	191	317	72	234	561
	1904	15	2,653	1,019	1,421	1,332	2,886		1904	34	117	224	44	99	295
Copper, tin, and sheet-iron work.	1914	18	82	.....	51	90	191	Oil, cottonseed, and cake.	1914	67	2,336	25,272	850	14,438	17,600
	1909	15	119	.....	69	91	211		1909	87	2,503	24,534	833	12,169	15,966
	1904	3	5	.....	2	2	8		1904	91	2,499	20,156	732	10,070	12,587
Cotton goods.....	1914	11	1,989	5,510	580	1,812	2,789	Printing and publishing.	1914	219	663	643	371	314	1,267
	1909	14	2,645	8,045	695	2,042	3,102		1909	225	736	496	337	300	1,308
	1904	14	2,161	5,567	518	1,649	2,463		1904	211	549	265	254	195	616
Fertilizers.....	1914	11	379	2,809	155	1,605	2,060	Turpentine and rosin....	1914	61	3,275	108	669	580	1,997
	1909	10	449	1,823	141	1,385	2,125		1909	64	2,573	286	582	349	1,475
	1904	5	348	645	79	857	1,082		1904	124	2,633	300	737	394	2,366
Flour-mill and gristmill products.	1914	17	48	783	14	344	410	Wood preserving.....	1914	4	241	1,497	153	1,061	1,470
	1909	13	18	609	5	132	153		1909	3	263	1,275	112	652	1,315
	1904	9	20	422	7	95	110	All other industries.....	1914	164	1,825	8,852	762	1,790	3,232
Foundry and machine-shop products.	1914	43	423	1,095	231	262	699		1909	180	2,325	6,467	788	1,795	3,583
	1909	50	583	1,372	295	472	1,088		1904	172	3,147	5,743	980	2,007	4,303
	1904	35	516	782	260	356	920								
CITIES OF 10,000 TO 50,000 INHABITANTS—ALL INDUSTRIES COMBINED.															
HATTIESBURG.....	1914	25	587	2,964	\$292	\$666	\$1,131	NATCHEZ.....	1914	24	297	1,158	\$131	\$606	\$396
	1909	29	648	2,273	297	625	1,251		1909	27	428	1,481	169	659	1,114
	1904	24	310	.....	.....	.....	.....		1904	24	310	.....	134	503	820
JACKSON.....	1914	49	943	4,862	460	2,514	3,625	VICKSBURG.....	1914	37	1,009	1,757	534	832	1,673
	1909	44	772	3,292	366	1,852	2,960		1909	47	1,202	2,037	637	1,148	2,229
	1904	51	1,974	5,538	1,017	2,720	4,739		1904	32	1,031	.....	524	993	1,888
MERIDIAN.....	1914	54	1,524	5,361	702	2,474	4,237								
	1909	53	1,346	.....	588	2,052	3,268								

¹ Includes "canning and preserving, fish;" "canning, fruits and vegetables;" "canning and preserving, oysters;" and "pickles and sauces."

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

³ Includes "boxes, wooden packing;" and "lumber, planing-mill products, not including planing mills connected with sawmills."

⁴ Excludes statistics for two establishments, to avoid disclosure of individual operations.

⁵ Figures do not agree with those published, because it was necessary to revise them in order to include data only for those establishments located within the corporate limits of the city.

MANUFACTURES—MISSISSIPPI.

TABLE 31.—DETAIL STATEMENT FOR THE STATE, BY INDUSTRIES

INDUSTRY AND CITY.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.							WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.				Capital.	
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			16 and over.		Under 16.		
					Male.	Female.	Average number.	Number, 15th day of—		Male.	Female.	Male.		Female.
								Maximum month.	Minimum month.					
Total.	Total.	Male.	Female.	Male.	Female.	Male.	Female.							

THE STATE—ALL INDUSTRIES COMBINED AND SPECIFIED INDUSTRIES.

1	All industries	2,209	52,277	2,386	1,420	1,576 ¹	193	46,702	Ja 48,363	De 43,937	(^{2})	(^{2})	(^{2})	(^{2})	(²)	\$81,005,484
2	Agricultural implements	5	44	3	6	2	1	32	Fe 57	No 7	46	46				138,987
3	Artificial stone products	4	16	4	2			10	My 20	De 5	26	26				28,200
4	Boxes, wooden, packing	8	234	0	8			213	Ap 293	Au 93	267	228	29	10		217,396
5	Bread and other bakery products	83	426	98	10	4	8	308	Oc 325	Au 300	317	296	8	13		332,935
6	Brick and tile, terra-cotta, and fire-clay products	38	628	42	27	6	2	551			757	714	8	35		708,747
7	Building brick	34	564	41	22	5	2	404	Je 683	De 239	677	637	8	32		614,561
8	Sewer pipe and drain tile	4	64	1	5	1		57	Jy 90	Fe 10	80	77		3		89,188
9	Brooms, from broom corn	6	24	16				8	My 12	Ja 5	13	11	2			6,025
10	Canning and preserving, fish	10	319	2	14	10	2	791	Oc 1,283	My 60	1,281	463	761	28	31	489,403
11	Canning, fruits and vegetables	5	88	2	3	1		82	No 290	Fe 0	297	155	139	7	5	71,639
12	Carriage and wagon materials	8	108	4	8			96	Mh 134	Au 48	117	117				127,777
13	Carriages, wagons, and repairs	15	150	17	6	12	1	114	Ja 132	No 95	96	96				392,584
14	Cars and general shop construction and repairs by electric-railroad companies	9	52		6	2	1	43	Au 44	Jy 42	43	43				200,814
15	Cars and general shop construction and repairs by steam-railroad companies	15	3,515		74	150	13	3,278	Ja 3,608	De 2,845	2,836	2,819	17			2,016,004
16	Coffee, roasting and grinding	5	18	6	1	3		8	My 10	Ap 7	8	8				27,284
17	Confectionery and ice cream	13	93	22	5	10		56			60	45	12	3		120,216
18	Confectionery	5	57	7	2	10		38	Se 41	Mh 36	38	38	23	12	3	92,934
19	Ice cream	8	36	15	3			18	Au 29	Ja 8	22	22				27,282
20	Copper, tin, and sheet-iron work	18	107	22	1	2		82	My 91	De 74	79	78		1		87,620
21	Cotton goods	11	2,059		42	23	5	1,989	Fe 2,053	Au 1,902	2,042	1,026	822	124	70	3,837,231
22	Fertilizers	22	414	2	25	34	3	379	Mh 646	Au 192	445	445				2,922,592
23	Flour-mill and gristmill products	17	82	20	7	6	1	48	Ja 52	Au 43	53	51		2		140,232
24	Food preparations, not elsewhere specified	5	32	1	7	3	2	19	Ja 27	Oc 13	19	16	1	2		100,554
25	Foundry and machine-shop products	43	532	38	33	29	9	423	Ap 457	De 356	374	371	2	1		1,368,425
26	Furniture, wood, other than rattan and willow	5	11	6				5	De 6	Oc 3	6	5		1		27,137
27	Gas, illuminating and heating	8	162		17	25	7	113	Je 134	Ja 102	102	102				1,372,099
28	Ice, manufactured	58	623	35	94	41	7	476	Je 732	Ja 255	550	529		21		1,855,863
29	Lumber and timber products	1,240	31,352	1,541	537	716	68	28,490	Au 30,248	De 25,207	34,922	34,767	16	139		43,733,927
30	Lumber, planing-mill products, not including planing mills connected with sawmills	48	1,099	54	47	52	9	937	Ja 999	De 833	916	911		5		2,048,859
31	Marble and stone work	13	81	12	4	4	3	58	Ja 64	Mh 53	61	59	2			104,500
32	Mattresses and spring beds	7	43	9				33	Ja 38	De 24	30	24	5	1		54,704
33	Mineral and soda waters	80	459	84	33	31	3	308	Jy 374	Fe 253	308	288	7	11		625,101
34	Oil, cottonseed, and cake	67	2,775	16	220	194	9	2,336	De 3,964	Je 754	3,968	3,947	10	11		9,372,992
35	Patent medicines and compounds	6	13	5	2		1	5	Fe 7	Jy 4	6	5				25,065
36	Printing and publishing, job printing	23	143	22	7	11	3	100	De 106	Au 97	107	90	16	1		271,500
37	Printing and publishing, newspapers and periodicals	196	857	181	45	46	22	563			591	437	55	98	1	968,750
38	Printing and publishing	14	208	10	12	22	10	154	Ap 171	Oc 144	165	130	1	34		232,668
39	Printing, publishing, and job printing	171	634	168	27	21	9	409	No 424	Mh 400	426	307	54	64	1	720,519
40	Publishing without printing	11	15	3	6	3	3									15,593
41	Saddlery and harness	10	48	15	5	4		24	Fe 30	Au 20	30	25	2			77,294
42	Shipbuilding, wooden, including boat building	11	77	12				65			61	61				32,986
43	New vessels	7	61	7				54	Ja 74	Jy 37	50	50				28,985
44	Repair work	4	16	5				11	Oc 21	Se 9	11	11				3,951
45	Tobacco, cigars	3	4	3				1	(³)	(³)	1	1				1,452
46	Turpentine and rosin	61	3,506	51	90	80	1	3,275	(³)	(³)	3,262	3,200	20	42		2,273,156
47	Upholstering materials, excelsior	3	34	4	1	1		28	Se 37	Ja 25	33	31		2		21,902
48	Wood preserving	4	280		25	19	4	241	Fe 293	Au 202	243	243				1,539,598
49	Wood, turned and carved	3	49	1	2			46	Mh 61	Au 34	47	47				74,940
50	All other industries*	34	1,181	27	35	42	7	1,070								3,092,514

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

1	COLUMBUS	27	604	24	30	25	4	521	Fe 558	Je 475	549	479	52	17	1	\$983,547
2	GREENVILLE	25	746	18	24	29	4	671	De 838	Au 514	850	845	1	4		1,695,229
3	HATTIESBURG	35	677	28	22	37	3	557	Ja 637	De 526	611	583	4	24		1,677,603
4	JACKSON	49	1,120	25	51	50	21	943	Oc 1,085	My 819	1,049	996	25	28		2,608,391
5	LAUREL	26	2,272	17	49	70	7	2,129	Ja 2,272	Fe 1,909	2,077	1,787	166	66	18	4,621,129
6	MERIDIAN	51	2,253	46	87	127	19	1,974	Ja 2,066	No 1,863	1,920	1,675	198	29	18	5,352,136
7	NATCHEZ	24	379	19	25	31	7	333	Je 256		317	282	17	18		582,026
8	VICKSBURG	37	1,168	34	51	59	15	1,009	Se 1,167	Ap 891	1,031	968	55	8		1,248,930

¹ Owned power only.

² Includes rented power, other than electric.

³ No figures shown for reasons given in "Explanation of terms."

⁴ Same number reported for one or more other months.

*All other industries embrace—

Automobile repairing	2	Butter	2	Coffins, burial cases, and undertakers' goods	2
Awnings, tents, and sails	2	Canning and preserving, oysters	2	Cooperage, hogsheads and barrels	1
Baking powders	1	Cars, steam-railroad, not including operations of railroad companies	1	Cordage and twine	1
Bookbinding and blank-book making	1	Clothing, men's and youths'	1	Flavoring extracts	1
				Hosiery and knit goods	1

AND FOR CITIES OF 10,000 TO 50,000 INHABITANTS: 1914.

EXPENSES.								Value of products.	Value added by manufacture.	POWER.					Electric horse-power generated in establishments reporting.
Salaries and wages.			For contract work.	Rent and taxes.		For materials.				Primary horsepower.					
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, including internal-revenue and corporation income.	Principal materials.	Fuel and rent of power.			Total.	Steam engines. ¹	Internal-combustion engines. ²	Water wheels and motors. ¹	Electric (rented).	

THE STATE—ALL INDUSTRIES COMBINED AND SPECIFIED INDUSTRIES.

\$2,247,987	\$1,583,146	\$19,176,627	\$2,075,852	\$163,231	\$1,156,966	\$39,948,838	\$1,391,284	\$78,550,095	\$38,209,973	186,434	177,287	1,725	643	6,779	10,572	1
7,025	1,320	14,476	96	774	20,151	924	50,638	29,563	97	75	22	5	133	2		
150	2,920	66,518	540	105	3,936	970	15,250	10,344	53	20	28	5	5	3		
7,050	5,046	144,970	904	769	74,462	1,125	201,977	120,390	641	630	5	18	166	4		
16,180	6,000	198,099	400	5,345	495,353	18,973	919,007	404,681	184	2	16	3	20	5		
26,126	175,825	22,274	36	5,837	72,092	106,894	469,763	290,777	2,435	2,150	285	7	1	6		
22,406	1,200	3,707	495	95	2,901	5,656	43,014	34,457	8	8	7	4	5	7		
3,720	8,880	173,553	150	7	7,049	38	16,555	9,468	269	269	1	3	11	11		
21,070	90	16,417	6	4,276	678,087	19,464	1,814,954	616,403	269	269	4	5	11	12		
2,880	41,886	800	475	243	47,350	1,152	73,780	25,278	651	647	30	73	56	13		
9,220	59,787	150	1,380	1,077	132,504	235	217,564	84,825	423	320	56	73	56	14		
9,700	381	25,145	75	4,786	86,013	4,737	261,872	171,122	3,350	2,316	1,034	464	15			
5,005	2,028,065	12,990	1,432,529	60,072	3,682,100	2,189,199	3,350	2,316	1,034	464	15					
105,850	116,394	2,028,065	75	12,990	1,432,529	60,072	3,682,100	2,189,199	3,350	2,316	1,034	464	15			
1,000	1,505	3,650	1,480	160	74,278	812	93,694	18,604	29	4	25	16				
7,260	8,539	23,067	3,414	796	100,471	2,358	176,955	74,156	51	12	3	18				
3,060	8,530	13,988	1,020	526	46,777	1,439	31,176	33,900	15	12	3	19				
4,200	9,079	2,394	2,394	270	54,694	859	95,809	40,256	30	3	33	20				
600	1,950	50,571	249	992	90,001	454	190,945	100,490	80	11	135	21				
63,131	31,874	580,491	1,000	19,991	1,733,739	78,261	2,789,007	977,007	5,510	5,304	11	627				
41,781	61,919	155,409	2,247	27,418	1,572,527	32,458	2,059,756	454,801	2,909	1,402	50	1,357				
6,952	6,000	14,488	2,488	1,134	339,475	4,808	410,332	66,054	783	308	135	340				
9,333	4,655	4,629	1,155	979	164,085	999	201,376	35,092	100	25	75	24				
55,505	30,937	231,495	11,872	2,970	241,252	21,150	699,444	437,042	1,005	377	197	521				
	1,985	1,985	174	69	1,055	407	7,800	6,338	121	100	16	5				
18,059	19,547	55,594	5,787	13,124	31,423	79,222	291,959	181,314	196	181	60	15				
75,367	33,612	219,247	2,550	28,808	133,826	193,077	1,045,910	719,037	8,439	8,280	54	55				
1,015,013	752,847	11,948,939	1,965,304	23,103	796,674	189,577	36,506,812	22,712,761	120,335	118,795	466	498				
67,559	55,239	397,706	5,272	18,049	980,178	6,034	1,828,954	842,742	4,395	3,940	50	405				
5,320	4,740	31,216	2,414	896	917	74,518	149,404	72,886	108	10	98	31				
	850	12,619	660	500	34,717	1,104	70,003	34,272	104	6	98	32				
43,080	38,256	118,003	2,091	10,519	10,358	550,651	1,006,364	500,247	543	333	99	15				
333,732	190,155	849,845	199	14,053	131,229	14,055,071	381,657	3,182,023	25,272	24,559	143	670				
300	800	2,205	270	165	15,352	75	25,685	10,258	98	6	92	34				
12,622	12,734	71,745	311	6,852	1,992	79,430	241,876	158,727	545	207	338	36				
55,428	56,533	290,640	18,996	10,392	212,966	17,684	1,024,854	794,304	545	207	338	37				
19,918	34,567	93,779	630	4,150	2,007	55,727	296,041	234,003	143	5	138	38				
32,560	21,066	205,561	6,237	20,581	8,347	156,959	715,604	546,532	402	202	200	39				
2,950	900	12,069	600	38	280	614	13,140	12,869	121	85	2	40				
4,920	3,600	19,740	4,075	1,365	97,530	714	146,914	48,770	170	145	12	34				
	31,278	2,200	519	272	46,072	714	101,362	54,576	137	115	12	10				
	25,677	2,200	324	244	44,039	564	93,011	48,408	137	115	12	10				
	5,901	195	28	23	2,033	150	8,351	6,168	33	30	3	43				
	700	312	620	19	1,977	19	5,540	3,544	108	90	12	45				
99,880	53,145	669,323	60,438	3,870	17,898	569,403	10,776	1,997,139	1,416,960	108	90	2				
780	380	6,272	193	8,304	1,876	8,304	22,489	12,309	215	215	47	47				
56,985	24,370	152,546	9,090	9,074	1,029,124	31,893	4,738,763	2,019,034	1,497	1,475	22	255				
2,250	2,532	2,847	150	862	15,342	5	47,025	31,678	142	130	12	69				
55,974	37,588	434,109	1,622	9,536	5,870	1,013,036	92,606	1,944,506	838,864	5,245	4,525	588				

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

\$37,681	\$28,826	\$223,539	\$1,044	\$2,504	\$11,728	\$721,860	\$24,835	\$1,248,543	\$501,848	2,449	2,281	26	142	1
42,521	44,046	314,633	23,236	5,030	26,105	1,132,993	44,403	1,935,153	757,737	2,688	2,559	25	194	2
33,054	32,918	291,847	1,025	4,609	15,452	633,860	32,457	1,133,927	467,610	2,964	2,072	4	888	3
99,399	99,326	459,726	9,960	12,424	34,973	2,440,733	73,267	3,625,068	1,111,068	4,862	4,293	37	530	4
118,241	101,957	1,066,251	22,998	3,780	89,682	1,688,744	24,388	3,372,292	1,659,160	7,115	6,450	130	535	5
132,820	139,450	1,016,504	2,847	16,634	52,345	2,610,747	108,982	4,738,763	2,019,034	5,548	3,560	8	1,970	6
37,625	26,137	130,859	4,287	8,798	7,949	574,679	31,054	895,913	290,180	1,158	932	60	166	7
71,063	56,499	534,107	14,314	16,234	11,693	760,084	72,143	1,672,907	840,680	1,757	1,410	48	299	8

¹ None reported for one or more other months.

² No wage earners employed.

³ Same number reported throughout the year.

Jewelry	1	Saws	1	Sugar, cane	2
Models and patterns, not including paper patterns	2	Scales and balances	1	Toys and games	1
Paper and wood pulp	1	Shipbuilding, iron and steel repair work	1	Wood distillation, not including turpentine and rosin	2
Pickles and sauces	1	Slaughtering and meat packing	1		
Pottery, earthen and stone ware	1	Stamped ware	1		