

# DELAWARE.

## INDUSTRIES IN GENERAL.

**General character of the state.**—Delaware, with an area of 1,960 square miles, is, next to Rhode Island, the smallest state of the Union. Its population in 1910 was 202,322, as compared with 184,735 in 1900 and 168,493 in 1890. It ranked forty-seventh among the 49 states and territories as regards population in 1910 and forty-fifth in 1900. Though, as will be seen, its manufacturing interests are important, the state still preserves to a considerable extent its agricultural characteristics. About 82.7 per cent of its total area is returned as in farms, and of this, 68.7 per cent is reported as improved. Forty-eight per cent of the entire population of the state resided in cities and towns having a population of 2,500 inhabitants or over, as against 46.4 per cent in 1900.

The state has but one city having a population of over 10,000, Wilmington, with a population of 87,411. Eliminating this city, only 4.8 per cent of the population reside in towns of 2,500 inhabitants or over.

The density of population for the state in 1910 was 103 per square mile, the corresponding figure for 1900 being 94. The transportation facilities are excellent, as no part of the state is remote from navigable water, and its location gives it direct railroad connection with the large railway systems of the Eastern states.

**Importance and growth of manufactures.**—Though, as stated, Delaware is not preeminently a manufacturing community, at each census from 1849 to 1904 the manufactures of the state have represented about the same proportion of the total value of the production. This proportion in 1899 was four-tenths of 1 per cent; the proportion for 1909 is practically the same.

The following table gives the more important figures relative to all classes of manufactures combined for the state as returned at the censuses of 1909, 1904, and 1899, together with percentages of increase from census to census:

	NUMBER OR AMOUNT.			PER CENT OF INCREASE. <sup>1</sup>	
	1909	1904	1899	1904-1909	1899-1904
Number of establishments.....	726	631	633	15.1	—0.3
Persons engaged in manufactures.....	23,984	20,567	( <sup>2</sup> )	16.6	.....
Proprietors and firm members.....	722	641	( <sup>2</sup> )	12.6	.....
Salaried employees.....	2,024	1,451	1,189	39.5	22.0
Wage earners (average number).....	21,238	18,475	20,562	15.0	—10.1
Primary horsepower.....	52,779	49,490	40,134	6.6	23.3
Capital.....	\$60,906,000	\$50,926,000	\$38,791,000	19.6	31.3
Expenses.....	46,958,000	37,362,000	36,439,000	25.7	2.5
Services.....	12,618,000	9,787,000	9,794,000	28.9	—0.1
Salaries.....	2,322,000	1,629,000	1,337,000	42.5	21.8
Wages.....	10,296,000	8,158,000	8,457,000	26.2	—3.5
Materials.....	30,938,000	24,884,000	24,725,000	24.3	0.6
Miscellaneous.....	3,402,000	2,691,000	1,920,000	26.4	40.2
Value of products.....	52,840,000	41,160,000	41,321,000	28.4	—0.4
Value added by manufacture (value of products less cost of materials).....	21,902,000	16,276,000	16,596,000	34.6	—1.9

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

<sup>2</sup> Figures not available.

In 1909 the state of Delaware had 726 manufacturing establishments, which gave employment to an average of 23,984 persons during the year and paid out \$12,618,000 in salaries and wages. Of the persons employed, 21,238 were wage earners. These establishments turned out products to the value of \$52,840,000, to produce which materials costing \$30,938,000 were utilized. The value added by manufacture was thus \$21,902,000, which figure best represents the net wealth created by manufacturing operations during the year.

In general, this table brings out the fact that the manufacturing industries of Delaware as a whole

showed little or no development during the five-year period, 1899–1904; indeed, in some respects a decrease is indicated. On the other hand, a very considerable increase is shown for the more recent period, 1904–1909. During this period the number of establishments increased 15.1 per cent and the average number of wage earners 15 per cent, while the value of products increased 28.4 per cent and the value added by manufacture 34.6 per cent. As pointed out in the Introduction, it would be improper to infer that manufactures increased in volume during the period 1904–1909 to the extent indicated by these figures regarding values, since the in-

crease shown is certainly due, in part, to the increase that has taken place in the price of commodities.

It is a matter of interest to note that the percentages of increase shown for wages, value of products, and value added by manufacture are very much larger

than those for the number of establishments and average number of wage earners.

The relative importance and growth of the leading manufacturing industries of the state are shown in the following table:

INDUSTRY.	Number of establishments.	WAGE EARNERS.		VALUE OF PRODUCTS.		VALUE ADDED BY MANUFACTURE.		PER CENT OF INCREASE. <sup>1</sup>			
		Average number.	Per cent distribution.	Amount.	Per cent distribution.	Amount.	Per cent distribution.	Value of products.		Value added by manufacture.	
								1904-1909	1909-1904	1904-1909	1909-1904
<b>All industries:</b> .....	728	21,238	100.0	\$52,840,000	100.0	\$21,902,000	100.0	28.4	-0.4	34.6	-1.9
Leather, tanned, curried, and finished.....	16	3,045	14.3	12,079,000	22.9	3,932,000	18.0	17.8	9.0	68.0	-1.4
Foundry and machine-shop products.....	37	2,210	10.4	4,781,000	9.0	2,379,000	10.9	6.6	-7.9	6.3	2.7
Cars, steam-railroad, not including operations of railroad companies.....	3	1,679	7.9	3,628,000	6.9	1,715,000	7.8	0.8	9.9	3.4	18.5
Cars and general shop construction and repairs by steam-railroad companies.....	3	1,525	7.2	3,251,000	6.2	1,308,000	6.0	108.7	53.8	43.9	64.7
Paper and wood pulp.....	6	546	2.6	2,292,000	4.3	705,000	3.2	20.3	19.1	11.0	11.0
Canning and preserving.....	77	1,369	6.4	2,106,000	4.0	553,000	2.5	44.6	-7.8	30.1	-13.3
Shipbuilding, including boat building.....	10	1,239	5.8	1,990,000	3.8	1,009,000	4.6	11.7		13.9	
Flour-mill and gristmill products.....	65	139	0.7	1,752,000	3.3	252,000	1.2	14.0	43.6	13.5	32.1
Iron and steel, steel works and rolling mills.....	5	710	3.3	1,715,000	3.2	650,000	3.0	7.4	-49.5	-0.2	-56.9
Lumber and timber products.....	116	1,174	5.5	1,312,000	2.5	704,000	3.2	53.1	14.4	55.8	10.0
Liquors, malt.....	5	107	0.5	701,000	1.5	550,000	2.5	4.1	23.4	-5.7	18.3
Bread and other bakery products.....	62	226	1.1	750,000	1.4	302,000	1.4	14.0	35.7	22.3	11.8
Printing and publishing.....	48	288	1.4	480,000	0.9	342,000	1.6				
Hosiery and knit goods.....	4	492	2.3	449,000	0.8	167,000	0.8	51.7	-31.0	26.5	-40.0
Gas, illuminating and heating.....	5	128	0.6	364,000	0.7	255,000	1.2	19.3	52.5	36.4	25.5
Brick and tile.....	23	300	1.4	320,000	0.6	274,000	1.3	60.5	22.0	53.1	22.6
Baskets, and rattan and willow ware.....	10	420	2.0	295,000	0.6	186,000	0.8	34.1	323.1	52.5	248.6
Carriages and wagons and materials.....	25	163	0.8	290,000	0.5	166,000	0.8	1.4	-26.1	6.4	-36.8
Ice, manufactured.....	15	71	0.3	153,000	0.3	104,000	0.5	7.7	100.0	-10.3	103.5
Marble and stone work.....	7	42	0.2	86,000	0.2	51,000	0.2	-50.6		-65.5	
All other industries.....	184	5,365	25.3	13,947,000	26.4	6,292,000	28.7				

<sup>1</sup> Percentages are based on figures in Table I; a minus sign (-) denotes decrease. Where the percentages are omitted, comparable figures can not be given.

The most important industries listed in this table, where they are arranged in the order of the value of products, call for brief consideration.

*Leather, tanned, curried, and finished.*—The statistics showing number of wage earners, amount paid in wages, and value of products all indicate a considerable growth of this industry.

*Foundry and machine-shop products.*—The number of establishments engaged in this industry and the degree of their activity in any community are usually a fair index of the extent and prosperity of its manufactures. The industry was really of greater importance in the state than is indicated by the statistics, as some machine shops manufactured a distinctive product and were assigned to other classifications.

*Cars, steam-railroad, not including operations of railroad companies and Cars and general shop construction and repairs by steam-railroad companies.*—These two branches of industry are allied closely. Combined they gave employment to an average of 3,204 wage earners during the year, and their products amounted to \$6,879,000.

*Paper and wood pulp.*—The establishments which produce pulp as a final product, as well as those which manufacture paper or pulp and paper, are included under this classification.

*Canning and preserving.*—This industry depends entirely upon the agricultural and fishery products for

its raw material. It includes the canning and preserving of fruits, vegetables, fish, and oysters. Since 1850, when it was first known commercially, it has increased steadily in importance. Considering the short season during which it is carried on, the value of products, compared with that of other industries, is significant.

Measured by value added by manufacture, these industries held generally the same relative rank as when measured by value of products, though shipbuilding becomes fifth in order instead of paper and wood pulp, which, in turn, becomes sixth, while canning and preserving becomes ninth.

*Flour-mill and gristmill products and Lumber and timber products.*—While these industries do not rank among the most important industries, both are represented by a relatively large number of establishments. The mills are, as a rule, small and located in the rural districts. Owing to the comparatively simple processes involved and the extent to which these processes are carried on by machinery, the value added by manufacture is not commensurate with the gross value of products or the number of the establishments in either industry.

The table shows also the percentages of increase for these leading industries in respect to value of products and value added by manufacture. The leather industry showed a greater rate of increase from 1904 to 1909 in value added by manufacture than any

other of the specified industries, namely, 68 per cent. The steam-railroad repair shops and the canning and preserving industry also showed remarkable increases both in value of products and in value added by manufacture. There are some striking differences among the several industries specified as respects the relative increase from 1899 to 1904 and from 1904 to 1909, respectively. All but one of the specified industries showed an increase from 1904 to 1909 in value of products, and all but four an increase in value added by manufacture, while, on the other hand, a considerable proportion of the industries showed decreases in these respects from 1899 to 1904.

Persons engaged in manufacturing industries.—The following table shows the distribution of the average number of persons engaged in manufactures, the average number of wage earners being distributed by sex and age in the manner already explained. (See Introduction.)

CLASS.	PERSONS ENGAGED IN MANUFACTURES.		
	Total.	Male.	Female.
All classes.....	23,984	19,972	4,012
Proprietors and officials.....	1,338	1,356	32
Proprietors and firm members.....	722	701	21
Salaried officers of corporations.....	240	235	5
Superintendents and managers.....	426	420	6
Clerks.....	1,358	1,111	247
Wage earners (average number).....	21,238	17,505	3,733
16 years of age and over.....	20,709	17,205	3,504
Under 16 years of age.....	520	300	220

This table shows that there were 23,984 persons returned as the average number engaged in manufactures during 1909, of whom 21,238 were wage earners, the rest being about equally divided between proprietors and officials and clerks.

Corresponding figures for individual industries will be found in Table II. In considering this table it should be noted that the canning and preserving industry is a peculiarly seasonal one, so that the number employed during certain months is far greater than the average number for the entire year. During September 6,413 wage earners were employed in this industry, which was a much larger number than was employed at any time in any other industry.

The next table shows the percentage of proprietors and officials, clerks, and wage earners, respectively, in the total number of persons employed in manufactures. It covers all industries combined and 10 important industries individually.

Of the persons engaged in all manufacturing industries, 5.8 per cent were proprietors and officials, 5.7 per cent clerks, and 88.6 per cent wage earners. In the flour-mill and gristmill industry the majority of the establishments are small and the work is to a large extent done by the proprietors or their immediate representa-

tives. Therefore the proportion of persons engaged in the industry falling into the class of proprietors and officials is very much higher than for other industries or all industries combined. Similar conditions prevail to some extent in the manufacture of lumber and timber products, where the proprietors and officials form 13.4 per cent of the total persons engaged. The smallest proportion for this class is shown for the industry of cars and general shop construction and repairs by steam-railroad companies, and is due to the fact that general officials are not as a rule assigned to the supervision of this particular branch of work.

INDUSTRY.	PERSONS ENGAGED IN MANUFACTURES.			
	Total number.	Per cent of total.		
		Proprietors and officials.	Clerks.	Wage earners (average number).
All industries.....	23,984	5.8	5.7	88.6
Canning and preserving.....	1,556	8.0	3.1	88.0
Cars and general shop construction and repairs by steam-railroad companies.....	1,029	1.7	4.7	93.6
Cars, steam-railroad, not including operations of railroad companies.....	1,827	2.3	6.3	91.4
Flour-mill and gristmill products.....	244	38.5	4.5	57.0
Foundry and machine-shop products.....	2,538	4.5	8.5	87.1
Iron and steel, steel works and rolling mills.....	785	3.7	5.9	90.4
Leather, tanned, curried, and finished.....	3,241	2.0	4.1	94.0
Lumber and timber products.....	1,300	13.4	0.9	85.8
Paper and wood pulp.....	599	3.0	5.8	91.2
Shipbuilding, including boat building.....	1,411	4.2	8.0	87.8
All other industries.....	8,775	7.1	0.3	86.6

The following table shows, in percentages, for all industries combined and for some of the important industries separately, the distribution of clerks by sex and of wage earners by age periods and sex:

INDUSTRY.	CLERKS.		WAGE EARNERS (AVERAGE NUMBER).			
	Per cent.		Per cent 16 years of age and over.		Per cent under 16 years of age.	
	Male.	Female.	Male.	Female.	Male.	Female.
All industries.....	81.8	18.2	81.0	16.5	1.4	1.1
Canning and preserving.....	83.7	16.3	32.5	53.3	5.3	8.8
Cars and general shop construction and repairs by steam-railroad companies.....	100.0	.....	99.8	.....	0.2	.....
Cars, steam-railroad, not including operations of railroad companies.....	95.7	4.3	99.1	0.8	0.1	.....
Flour-mill and gristmill products.....	81.8	18.2	99.3	.....	0.7	.....
Foundry and machine-shop products.....	90.7	9.3	99.1	0.7	0.1	0.1
Iron and steel, steel works and rolling mills.....	89.1	10.9	100.0	.....	.....	.....
Leather, tanned, curried, and finished.....	79.5	20.5	75.9	23.6	0.4	0.1
Lumber and timber products.....	83.3	16.7	95.9	3.0	0.9	0.2
Paper and wood pulp.....	77.1	22.9	85.7	14.3	.....	.....
Shipbuilding, including boat building.....	83.2	16.8	99.4	.....	0.6	.....
All other industries.....	72.6	27.4	71.0	25.2	2.5	1.3

Of the clerks, 81.8 per cent were male and 18.2 per cent female. Of the wage earners, 82.4 per cent were male and 17.6 per cent female; 97.5 per cent were 16 years or over and but 2.5 per cent under 16 years.

It may be noted that the largest number of women and children are employed in canning and preserving. The average number of wage earners in that industry was 445 males and 730 females 16 years and over, and 73 males and 121 females under that age. Of the

total of 3,733 female wage earners in all industries combined, 851, or 22.8 per cent, were thus in this single industry, and of the total of 529 wage earners in all industries, under 16 years of age, 194, or 36.7 per cent, were in this industry. With this industry omitted the females over 16 in all other industries combined would be 14 per cent of the total number of wage earners, and persons of both sexes under 16 years of age, 1.7 per cent.

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

CLASS.	PERSONS ENGAGED IN MANUFACTURES.				
	1909		1904		Per cent of increase, 1904-1909.
	Number.	Per cent distribution.	Number.	Per cent distribution.	
<b>Total</b> .....	<b>23,384</b>	<b>100.0</b>	<b>20,567</b>	<b>100.0</b>	<b>16.6</b>
Proprietors and firm members.....	722	3.0	641	3.1	12.6
Salaried employees.....	2,024	8.4	1,451	7.1	39.5
Wage earners (average number).....	21,238	88.6	18,475	89.8	15.0

Comparable figures are not obtainable for 1899. The table shows a greater percentage of increase in the salaried employees than in the other two classes, but this may be due, in part, to changes in the interpretation of the line of distinction between that class and other wage earners.

The following table shows the average number of wage earners, distributed according to age periods, and in the case of those 16 years of age and over according to sex, for 1909, 1904, and 1899:

CLASS.	AVERAGE NUMBER OF WAGE EARNERS.					
	1909		1904		1899	
	Number.	Per cent distribution.	Number.	Per cent distribution.	Number.	Per cent distribution.
<b>Total</b> .....	<b>21,238</b>	<b>100.0</b>	<b>18,475</b>	<b>100.0</b>	<b>20,562</b>	<b>100.0</b>
16 years of age and over..	20,709	97.5	17,826	96.5	19,726	95.9
Male.....	17,205	81.0	14,860	80.5	16,416	79.8
Female.....	3,504	16.5	2,960	16.0	3,310	16.1
Under 16 years of age....	529	2.5	649	3.5	836	4.1

This table indicates that for all industries combined there has been a decrease during the 10 years in the employment of children under 16 years of age. There has not been much change in the proportion of

male and female wage earners. In 1909 males 16 years of age and over formed 81 per cent of all wage earners, as compared with 80.5 per cent in 1904 and 79.8 per cent in 1899.

Wage earners employed, by months.—The following table gives the number of wage earners employed on the 15th of each month during the year 1909 for all industries combined, for canning and preserving, and for all other industries; it also gives the percentage which the number each month is of the greatest number employed in any one month.

The single industry of canning and preserving, which is a seasonal industry, giving employment to a large number of persons in August and September, affects greatly the totals for all industries combined. It thus not only makes the month of September the month of greatest employment, but also increases the irregularity of employment throughout the year. From 85 wage earners in this industry in May the number increased to 972 in June, and dropped to 524 in July, but in August and September, when tomatoes and corn ripen, there was a very great increase—6,413 wage earners being employed in the latter month. Outside the canning industry the number of wage earners employed underwent but little change up to and including the month of August; but thereafter the numbers increased steadily month by month to the end of the year.

MONTH.	NUMBER OF WAGE EARNERS.					
	All industries.		Canning and preserving.		All other industries.	
	Number.	Percent of maximum.	Number.	Percent of maximum.	Number.	Percent of maximum.
January.....	19,220	72.9	11	0.2	19,209	85.8
February.....	19,470	73.8	30	0.5	19,440	86.8
March.....	19,108	72.7	87	1.4	19,081	86.2
April.....	19,366	73.4	78	1.2	19,288	86.1
May.....	19,237	72.9	85	1.3	19,152	85.5
June.....	20,480	77.6	972	15.2	19,508	87.1
July.....	19,572	74.2	524	8.2	19,048	85.0
August.....	24,331	92.2	5,133	80.0	19,198	85.7
September.....	26,376	100.0	6,413	100.0	19,963	89.1
October.....	23,023	89.6	2,652	41.4	20,971	83.6
November.....	21,557	81.7	397	6.2	21,160	94.5
December.....	22,452	85.1	52	0.8	22,400	100.0

Prevailing hours of labor.—Establishments have been classified also according to the prevailing number of hours of labor of the bulk of their employees; that is to say, the wage earners of each establishment are all classified according to the prevailing hours of labor in the establishment, even though some may have to work a different number of hours. The table

Character of ownership.—The table that follows presents conditions in respect to the character of ownership, or legal organization, of manufacturing enterprises. For all industries combined comparative figures are given covering the censuses of 1909 and 1904. Com-

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

INDUSTRY AND CHARACTER OF OWNERSHIP.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.	INDUSTRY AND CHARACTER OF OWNERSHIP.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.
<b>ALL INDUSTRIES:</b>					<b>Flour-mill and gristmill products</b>				
1909.....	726	21,233	\$52,839,619	\$21,901,818	Individual.....	65	139	\$1,751,533	\$251,894
1904.....	631	18,475	41,160,276	16,276,470	Firm.....	41	65	735,176	122,081
Individual:					Firm.....	20	34	413,476	63,596
1909.....	387	2,451	6,187,017	2,236,603	Corporation.....	4	40	602,881	66,217
1904.....	339	2,448	5,517,649	2,007,177	Per cent of total.....	100.0	100.0	100.0	100.0
Firm:					Individual.....	63.1	46.8	42.0	49.5
1909.....	133	3,210	10,530,993	3,665,904	Firm.....	30.8	24.5	23.6	25.2
1904.....	132	2,583	6,720,715	1,914,846	Corporation.....	6.2	28.8	34.4	25.3
Corporation:					<b>Foundry and machine-shop products</b>				
1909.....	202	15,573	36,071,988	15,989,174	Individual.....	37	2,210	\$4,781,195	\$2,379,278
1904 <sup>1</sup> .....	160	13,444	28,921,912	12,294,447	Individual.....	12	65	96,986	58,046
Other:					Firm.....	4	57	131,897	37,023
1909.....	4	4	49,621	10,017	Corporation.....	21	2,088	4,552,312	2,224,209
1904 <sup>2</sup> .....					Per cent of total.....	100.0	100.0	100.0	100.0
Per cent of total:					Individual.....	32.4	2.9	2.0	2.4
1909.....	100.0	100.0	100.0	100.0	Firm.....	10.8	2.6	2.8	4.1
1904.....	100.0	100.0	100.0	100.0	Corporation.....	53.8	94.5	95.2	93.5
Individual:					<b>Leather, tanned, curried, and finished</b>				
1909.....	53.3	11.5	11.7	10.2	Individual.....	16	3,045	\$12,079,225	\$3,932,375
1904.....	53.7	13.3	13.4	12.7	Individual.....	3	217	980,452	290,659
Firm:					Firm.....	4	1,892	7,337,070	2,456,423
1909.....	18.3	15.1	19.9	16.7	Corporation.....	9	936	3,761,123	1,185,296
1904.....	20.9	14.0	16.3	11.8	Per cent of total.....	100.0	100.0	100.0	100.0
Corporation:					Individual.....	18.8	7.1	8.1	7.4
1909.....	27.8	73.3	68.3	73.0	Firm.....	25.0	62.1	60.7	62.5
1904 <sup>1</sup> .....	25.4	72.8	70.3	75.5	Corporation.....	56.2	30.7	31.1	30.1
Other:					<b>Lumber and timber products</b>				
1909.....	0.6	(*)	0.1	(*)	Individual.....	116	1,174	\$1,312,287	\$704,430
1904 <sup>2</sup> .....					Individual.....	76	527	486,245	289,712
<b>Canning and preserving</b>					Firm.....	30	248	278,237	170,094
Individual.....	77	1,369	\$2,105,945	\$552,449	Corporation.....	10	399	547,755	244,624
Individual.....	34	473	794,816	218,787	Per cent of total.....	100.0	100.0	100.0	100.0
Firm.....	30	500	816,099	200,023	Individual.....	65.5	44.9	37.0	41.1
Corporation.....	13	396	495,030	133,639	Firm.....	25.9	21.1	21.2	24.1
Per cent of total.....	100.0	100.0	100.0	100.0	Corporation.....	8.6	34.0	41.7	34.7
Individual.....	44.2	34.6	37.7	39.6					
Firm.....	39.0	36.5	38.8	36.2					
Corporation.....	16.9	28.9	23.5	24.2					

<sup>1</sup> Includes the group "Other," to avoid disclosure of individual operations.

<sup>2</sup> This group included with "Corporations."

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

The most important distinction shown is that between corporate and all other forms of ownership. For all industries combined, 27.8 per cent of the total number of establishments had in 1909 a corporate form of organization, as against 72.2 per cent for all other forms. The corresponding figures for 1904 were 25.4 per cent and 74.6 per cent, respectively. Five years is too short a period to reveal any pronounced change in character of ownership. For all industries combined, as measured by value of products, and value added by manufacture, corporations lost ground to a slight extent, but this was due to the change in conditions in the one industry of leather, which is the largest in the state.

Size of establishment.—The tendency for manufacturing to become concentrated in large establishments, or the reverse, is a matter of interest from the standpoint of industrial organization. In order to throw some light upon it the table on the following page groups the establishments according to the value of their products. The table also shows the average size of establishments for all industries combined and for important industries separately as measured by number of wage earners, value of products, and value

added by manufacture. The totals for all industries are shown for the last two censuses, while for certain important industries figures are given for 1909 only.

This table shows that, in 1909, of the 726 establishments only 7, or 1 per cent, had a value of product exceeding \$1,000,000. These establishments, however, notwithstanding their small number, had a total average number of wage earners of 6,994, or 32.9 per cent of the total number in all establishments; and the importance of their operations as measured by value of product was 32 per cent of the total, and by value added by manufacture 34.1 per cent of the total.

On the other hand, small establishments—that is, those having a value of products of less than \$5,000—constituted a very considerable proportion (29.3 per cent) of the total number of establishments, but the value of their products amounted to only 1.1 per cent of the total. The great bulk of the manufacturing was carried on in establishments having products valued at not less than \$100,000.

The five years from 1904 to 1909 was rather too short a period to show extensive changes, and no clear tendencies can be seen as to the relative importance of the classes.

MANUFACTURES—DELAWARE.

INDUSTRY.	Total.	ESTABLISHMENTS EMPLOYING—								
		No wage earners.	1 to 5 wage earners.	6 to 20 wage earners.	21 to 50 wage earners.	51 to 100 wage earners.	101 to 250 wage earners.	251 to 500 wage earners.	501 to 1,000 wage earners.	Over 1,000 wage earners.
NUMBER OF ESTABLISHMENTS.										
All industries.....	726	46	334	200	78	23	32	6	4	3
Canning and preserving.....	77	1	8	49	15	4				
Cars and general shop construction and repairs by steam-railroad companies.....	3			1	1					1
Cars, steam-railroad, not including operations of railroad companies.....	3						1		2	
Flour-mill and gristmill products.....	65	12	50	2	1					
Foundry and machine-shop products.....	37		12	10	4	3	5	3		
Iron and steel, steel works and rolling mills.....	5				1	1	3			1
Leather, tanned, curried, and finished.....	16			2	3	3	6		1	1
Lumber and timber products.....	116		56	51	7	1	1			
Paper and wood pulp.....	6			2		1	3			
Shipbuilding, including boat building.....	10		3	3	2			1	1	
All other industries.....	388	33	205	80	44	10	13	2		1
AVERAGE NUMBER OF WAGE EARNERS.										
All industries.....	21,238		898	2,324	2,561	1,655	4,961	1,826	2,806	4,187
Canning and preserving.....	1,369		28	626	467	248				
Cars and general shop construction and repairs by steam-railroad companies.....	1,525			19	39					1,467
Cars, steam-railroad, not including operations of railroad companies.....	1,670						137		1,642	
Flour-mill and gristmill products.....	139		93	15	31					
Foundry and machine-shop products.....	2,210		29	140	150	261	833	707		
Iron and steel, steel works and rolling mills.....	710				40	75	595			
Leather, tanned, curried, and finished.....	3,045			39	110	255	903		598	1,140
Lumber and timber products.....	1,174		181	551	224	60	158			
Paper and wood pulp.....	546			29		88	429			
Shipbuilding, including boat building.....	1,239		12	24	53			484	666	
All other industries.....	7,602		555	881	1,447	668	1,926	545		1,580
PER CENT OF AVERAGE NUMBER OF WAGE EARNERS.										
All industries.....	100.0		4.2	10.9	12.1	7.8	23.5	8.6	13.2	19.7
Canning and preserving.....	100.0		2.0	45.7	34.1	18.1				
Cars and general shop construction and repairs by steam-railroad companies.....	100.0			1.2	2.6					96.2
Cars, steam-railroad, not including operations of railroad companies.....	100.0						8.2		91.8	
Flour-mill and gristmill products.....	100.0		66.9	10.8	22.3					
Foundry and machine-shop products.....	100.0		1.3	6.3	6.8	11.8	37.7	36.1		
Iron and steel, steel works and rolling mills.....	100.0				5.6	10.6	83.8			
Leather, tanned, curried, and finished.....	100.0			1.3	3.6	8.4	29.7		19.6	37.4
Lumber and timber products.....	100.0		15.4	46.9	19.1	5.1	13.5			
Paper and wood pulp.....	100.0			5.3		16.1	78.6			
Shipbuilding, including boat building.....	100.0		1.0	1.9	4.3			39.1	53.8	
All other industries.....	100.0		7.3	11.6	19.0	8.8	25.3	7.2		20.8

Expenses.—As stated in the Introduction the census does not purport to furnish figures that can be used for determining the cost of manufacture and profits. Facts of interest can, however, be brought out concerning the relative importance of the different classes of expenses going to make up the total.

The next table shows, in percentages, the distribution of expenses among the classes indicated for all industries combined and for certain important industries separately. The figures on which the percentages are based appear in Table II.

This table shows that, for all industries combined, 65.9 per cent of the total expense was for cost of materials, 26.8 per cent for services—that is, salaries and wages—and but 7.2 per cent for other purposes.

As would be expected, these proportions vary greatly in the different industries.

INDUSTRY.	PER CENT OF TOTAL EXPENSES REPORTED.			
	Salaries.	Wages.	Materials.	Miscellaneous expenses.
All industries.....	4.9	21.9	65.9	7.2
Canning and preserving.....	2.1	14.1	80.2	3.6
Cars and general shop construction and repairs by steam-railroad companies.....	3.1	35.3	59.7	1.9
Cars, steam-railroad, not including operations of railroad companies.....	5.4	33.2	56.2	5.2
Flour-mill and gristmill products.....	0.8	3.5	92.7	2.9
Foundry and machine-shop products.....	9.2	29.0	55.8	6.0
Iron and steel, steel works and rolling mills.....	5.6	25.2	64.1	5.1
Leather, tanned, curried, and finished.....	3.3	13.0	77.3	6.4
Lumber and timber products.....	2.2	31.8	58.6	7.3
Paper and wood pulp.....	3.0	15.3	78.3	3.4
Shipbuilding, including boat building.....	9.3	35.7	50.2	4.8
All other industries.....	5.8	21.8	60.7	11.7



## SUPPLEMENTARY DATA REGARDING IMPORTANT INDUSTRIES.

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

For certain industries the Census Bureau collects, by means of special schedules, details regarding the quantity and value of materials and products which do not appear on the general schedule. Data for the quantity and value of products for three important industries in Delaware are here presented.

**Canning and preserving.**—Canning and preserving as a factory industry is of comparatively recent origin. There has been a rapid development of it in Delaware since 1869.

The year 1904 seems to have been one of unfavorable conditions in the canning industry, and there was a general falling off in volume of business. In 1909, however, the industry had more than recovered what it lost in 1904.

The largest individual product is tomatoes, comprising, in 1909, 76.2 per cent of the aggregate value of all products. The number of cases of corn packed in 1909 was less than in 1904, but all other products increased.

Of the 77 establishments embraced within this classification in 1909, tomatoes were canned by 69, peas by 10, and corn by 8. Forty-nine establishments canned tomatoes exclusively. Tomato pulp and scraps, to be subsequently converted into fertilizer, were among the products of 20 of the 69 establishments canning or preserving tomatoes.

The quantity and value of products, by classes, for 1909, 1904, and 1899, are given below.

PRODUCT.	QUANTITY (CASES).			VALUE.		
	1909	1904 <sup>1</sup>	1899 <sup>1</sup>	1909	1904 <sup>1</sup>	1899 <sup>1</sup>
Total value.....				\$2,105,945	\$1,456,185	\$1,579,263
Canned vegetables....	1,585,360	971,403	944,614	2,049,074	1,406,102	1,414,308
Corn.....	94,097	152,900	53,240	138,739	207,810	65,950
Peas.....	190,261	131,147	101,038	249,357	178,729	170,578
Pumpkins.....	3,145	600	1,000	4,546	600	990
Sweet potatoes.....	20,033	5,200		28,675	7,695	
Tomatoes.....	1,262,035	879,080	763,836	1,605,069	1,007,595	1,121,546
All other canned vegetables.....	13,989	2,476	25,500	22,638	3,773	49,244
All other products....				56,871	50,083	164,955

<sup>1</sup> Excluding one establishment, to avoid disclosure of individual operations.

Considerable quantities of canned and preserved fruits and vegetables were produced as by-products by establishments other than those classified within this industry, but as the total value of such by-products was less than \$70,000 it does not affect appreciably the aggregate value of products of canning and preserving for 1909.

As a result of the seasonal character of this industry, already referred to, the average number of wage

earners employed during the year was very much less than the number on the representative day, being only 1,369 as compared with 5,935 on a representative day.

**Flour-mill and gristmill products.**—Owing to the extensive development of large mills in the West, this industry in most Eastern states has shown little increase for several decades; and this is true of Delaware.

The following tabular statement gives the quantity and value of products for the last two census years:

PRODUCT.	QUANTITY.		VALUE.	
	1909	1904	1909	1904
Total value.....			\$1,761,533	\$1,536,604
Wheat flour:				
White.....barrels..	174,177	168,944	1,011,305	865,794
Graham.....barrels..	47		206	
Corn meal.....barrels..	70,727	192,586	219,690	225,666
Corn flour.....barrels..	6,872		20,082	
Rye flour.....barrels..	69		231	
Buckwheat flour.....pounds..	672,675	378,900	19,272	9,398
Hominy.....pounds..	525,096	3,024,700	9,837	41,848
Grits.....pounds..	1,146,139		20,449	
Feed.....tons..	12,222	10,582	356,465	233,723
Offal.....tons..	3,722	8,166	93,806	159,875
All other.....			200	100

<sup>1</sup> Includes corn flour.

<sup>2</sup> Includes grits.

**Leather, tanned, curried, and finished.**—The industry of first importance in Delaware, both according to value of products and value added by manufacture, is the tanning, currying, and finishing of leather.

The following is a statement of products reported for the industry at the last three censuses:

PRODUCT.	NUMBER.			VALUE.		
	1909	1904	1899	1909	1904	1899
Total value.....				\$12,079,225	\$10,250,842	\$9,400,504
Goatskins.....	11,005,292	10,928,313	9,363,769	10,232,463	9,102,207	8,634,800
Black.....	7,537,449	9,396,211	7,803,193	6,801,452	7,640,780	7,104,736
Colored.....	3,467,843	1,532,102	1,560,576	3,431,011	1,461,517	1,530,064
Sheepskins.....	793,508	463,404	175,272	675,988	281,754	61,021
All other leather.....				557,942	484,785	321,255
All other products.....				402,795	331,638	201,840
Work on materials for others.....				210,039	50,368	180,638

The relative increase in the production of colored goatskins in 1909 is an interesting feature of this table. There has been a considerable increase in the amount received for tanning, currying, and finishing done for establishments other than those reporting.

Fifteen of the 16 establishments reported glue and glue stock as by-products, and 13 reported hair or wool, which have been included in "All other products" in the tabular statement above.

**Laundries.**—Statistics for steam laundries are not included in the general tables. In 1909 there were 15 such establishments in the state of Delaware, 11 of

which were in Wilmington. The following statement summarizes the statistics:

Number of establishments.....	15
Persons engaged in the industry.....	233
Proprietors and firm members.....	17
Salaried employees.....	44
Wage earners (average number).....	222
Primary horsepower.....	235
Capital.....	\$103, 025
Expenses.....	149, 365
Services.....	97, 776
Materials.....	29, 633
Miscellaneous.....	21, 956
Amount received for work done.....	187, 038

The most common form of organization was the individual, with nine establishments, the firm and corporate forms having three establishments each. Three establishments had receipts for the year's business of less than \$5,000; nine receipts of \$5,000 but less than \$20,000; and three receipts of \$20,000 but less than \$100,000.

The number of wage earners employed each month and the percentage which this number represented of the greatest number employed in any month were as follows:

MONTH.	WAGE EARNERS.		MONTH.	WAGE EARNERS.	
	Number.	Percent of maximum.		Number.	Percent of maximum.
January.....	215	94.3	July.....	228	100.0
February.....	217	95.2	August.....	228	100.0
March.....	215	94.3	September.....	223	97.8
April.....	223	97.8	October.....	223	97.8
May.....	223	97.8	November.....	225	98.7
June.....	216	94.7	December.....	225	98.7

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

KIND.	Number of engines or motors.	Horsepower.
<b>Primary power, total</b> .....		<b>235</b>
Owned—Steam.....	15	215
Rented—Electric.....	10	20

The kind and amount of fuel used are shown below.

KIND.	Unit.	Quantity.
Anthracite coal.....	Tons.....	12
Bituminous coal.....	Tons.....	2, 536
Oil.....	Gallons.....	200
Coke.....	Tons.....	31
Gas.....	1,000 feet.....	1, 000

Custom sawmills and gristmills.—Statistics for custom sawmills and gristmills are not included in the general tables, but are presented below.

	Custom sawmills.	Custom gristmills.
Number of establishments.....	21	6
Persons engaged in the industry.....	93	6
Proprietors and firm members.....	26	6
Salaried employees.....		
Wage earners (average number).....	67	
Primary horsepower.....	415	145
Capital.....	\$26, 775	\$9, 400
Expenses.....	14, 817	16, 364
Services.....	11, 371	
Materials.....	845	115, 735
Miscellaneous.....	2, 601	629
Value of products.....	25, 605	119, 693

<sup>1</sup>Includes estimate of all grain ground. A similar estimate for value of lumber sawed by custom sawmills is impracticable.

## MANUFACTURES—DELAWARE.

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

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).							
STATE—All industries .....	1909	726	23,984	722	2,024	21,238	52,779	\$60,906	\$2,322	\$10,296	\$30,938	\$52,840	\$21,902
	1904	631	20,687	641	1,451	18,475	49,490	50,926	1,629	8,158	24,884	41,160	16,276
	1899	633	.....	.....	1,189	20,562	40,134	38,791	1,337	8,457	24,725	41,321	16,598
Baskets, and rattan and willow ware.....	1909	10	442	8	14	420	540	261	10	92	109	295	188
	1904	8	286	10	9	267	455	152	8	68	98	220	122
	1899	7	122	9	2	111	.....	40	1	20	17	52	35
Bread and other bakery products.....	1909	62	330	65	39	226	130	348	25	118	448	750	302
	1904	52	259	53	11	195	105	297	10	97	411	658	247
	1899	54	253	55	11	187	.....	281	6	96	264	485	221
Brick and tile.....	1909	23	352	19	33	300	334	835	34	115	55	320	274
	1904	21	246	24	13	209	470	272	13	86	26	205	179
	1899	25	251	27	9	215	342	284	9	70	22	168	146
Canning and preserving .....	1909	77	1,558	103	84	1,369	1,725	1,520	41	273	1,553	2,106	553
	1904	59	1,122	86	87	999	1,274	1,005	18	187	1,031	1,456	425
	1899	54	1,543	77	29	1,437	1,736	909	14	226	1,089	1,579	490
Carriages and wagons and materials.....	1909	25	208	29	10	163	204	433	13	81	124	200	166
	1904	25	211	32	14	165	204	335	10	85	131	286	155
	1899	26	.....	.....	18	278	.....	504	16	130	140	387	247
Cars and general shop construction and repairs by steam-railroad companies.....	1909	3	1,629	.....	104	1,275	1,336	1,635	99	1,147	1,943	3,251	1,308
	1904	5	1,430	.....	89	1,341	1,345	1,010	82	315	649	1,558	909
	1899	5	897	.....	17	880	330	751	21	529	461	1,013	554
Cars, steam-railroad, not including operations of railroad companies.....	1909	3	1,337	.....	158	1,679	3,368	3,497	185	1,131	1,913	3,628	1,715
	1904	3	1,661	.....	102	1,559	1,717	2,707	112	1,031	1,942	3,600	1,658
	1899	3	2,105	.....	73	2,032	1,623	2,429	84	1,041	1,876	3,275	1,399
Flour-mill and gristmill products.....	1909	65	244	85	19	139	3,349	672	14	57	1,500	1,752	252
	1904	47	214	65	12	137	2,827	484	8	58	1,315	1,537	222
	1899	45	.....	.....	18	120	.....	926	17	46	902	1,070	168
Foundry and machine-shop products.....	1909	37	2,538	21	307	2,210	4,270	7,401	394	1,247	2,402	4,781	2,379
	1904	33	2,630	16	286	2,328	3,635	7,163	327	1,195	2,246	4,484	2,238
	1899	31	.....	.....	187	2,471	.....	6,827	254	1,175	2,710	4,868	2,153
Gas, illuminating and heating.....	1909	5	154	1	25	128	333	3,416	27	76	109	364	255
	1904	4	118	2	40	76	105	708	32	52	118	305	187
	1899	4	88	.....	21	67	76	772	18	32	51	200	149
Hosiery and knit goods.....	1909	4	508	1	15	492	200	289	13	122	252	449	167
	1904	7	352	2	27	323	275	213	18	75	164	296	132
	1899	7	603	2	19	582	246	299	15	123	209	429	220
Ice, manufactured.....	1909	15	102	16	15	71	1,028	393	9	31	49	153	104
	1904	10	87	6	17	64	705	316	10	31	26	142	116
	1899	7	38	2	8	28	621	200	4	12	14	71	57
Iron and steel, steel works and rolling mills.....	1909	5	785	.....	75	710	4,912	2,107	92	416	1,059	1,715	656
	1904	5	1,146	.....	91	1,055	10,310	6,280	103	412	940	1,597	657
	1899	6	1,571	.....	81	1,490	4,925	4,207	133	705	1,636	3,160	1,524
Leather, tanned, curried, and finished.....	1909	16	3,241	12	184	3,045	4,417	8,249	351	1,367	8,147	12,079	3,932
	1904	20	3,046	18	192	2,836	5,377	6,646	251	1,170	7,911	10,251	2,340
	1899	20	2,043	30	156	2,457	3,040	5,179	166	1,045	7,028	9,401	2,373
Liquors, malt.....	1909	5	132	2	23	107	463	1,522	49	84	241	791	550
	1904	6	132	3	25	104	460	1,384	45	79	177	760	583
	1899	5	105	3	18	84	470	1,127	25	56	123	616	493
Lumber and timber products.....	1909	116	1,309	148	47	1,174	3,767	1,048	23	330	608	1,312	704
	1904	94	786	113	18	655	3,037	551	9	196	405	857	452
	1899	85	.....	.....	12	935	.....	622	8	219	338	749	411
Marble and stone work.....	1909	7	56	8	6	42	51	72	5	27	35	86	51
	1904	7	227	9	10	208	487	167	8	93	26	174	148
	1899	5	155	3	6	146	.....	59	4	61	10	105	95
Paper and wood pulp.....	1909	6	599	4	49	546	4,318	3,314	61	310	1,557	2,292	705
	1904	6	575	6	22	547	5,115	3,176	70	252	1,270	1,905	635
	1899	6	476	6	10	451	4,010	2,143	62	194	1,028	1,600	572
Printing and publishing.....	1909	48	406	32	86	288	305	602	67	129	138	480	342
	1904	46	359	30	62	267	184	513	47	125	103	398	285
	1899	42	.....	.....	60	334	.....	463	44	135	99	368	269
Shipbuilding, including boat building.....	1909	10	1,411	8	164	1,239	3,552	2,888	181	697	981	1,990	1,009
	1904	10	1,193	11	60	1,122	1,512	2,630	92	563	895	1,781	886
	1899	9	223	9	7	207	176	225	9	111	153	360	207
All other industries.....	1909	184	6,085	159	561	5,365	13,128	20,404	629	2,445	7,655	13,947	6,282
	1904	163	4,487	155	314	4,018	9,876	14,917	356	1,454	5,000	8,690	3,690
	1899	187	.....	.....	418	6,050	.....	10,424	427	2,431	6,555	11,365	4,810

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

MANUFACTURES—DELAWARE.

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

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salari- ed em- ploy- ees.	Wage earners (average number).							
			Expressed in thousands.										
<b>WILMINGTON—All industries.....</b>	1909	261	16,285	190	1,442	14,663	28,282	\$38,504	\$1,751	\$7,937	\$21,976	\$38,069	\$16,088
	1904	245	14,808	192	1,106	13,508	29,534	33,103	1,262	6,613	18,121	30,285	12,164
	1899	262	.....	.....	922	14,498	.....	26,490	1,057	6,697	17,876	30,537	12,711
Bread and other bakery products.....	1909	35	269	36	35	198	105	293	24	104	380	629	249
	1904	35	222	34	10	178	101	273	10	89	365	581	216
	1899	45	236	45	11	180	.....	204	6	93	248	453	205
Carriages and wagons and materials.....	1909	11	127	14	10	103	121	279	7	50	78	181	103
	1904	*14	153	19	8	126	86	240	5	63	92	205	113
	1899	*13	.....	.....	10	174	.....	355	9	89	91	252	161
Cars and general shop construction and repairs by steam-railroad companies.	1909	3	1,629	.....	104	1,525	1,835	1,635	99	1,147	1,943	3,251	1,308
	1904	3	1,399	.....	82	1,317	1,245	999	77	803	646	1,539	893
	1899	3	880	.....	15	865	.....	743	19	521	457	1,000	543
Cars, steam-railroad, not including operations of rail-road companies.	1909	3	1,837	.....	158	1,679	3,388	3,497	185	1,131	1,913	3,628	1,715
	1904	3	1,061	.....	102	1,559	1,717	2,707	112	1,021	1,942	3,600	1,658
	1899	3	2,105	.....	73	2,032	.....	2,420	84	1,041	1,876	3,275	1,399
Leather, tanned, curried, and finished.....	1909	16	3,241	12	184	3,045	4,417	8,249	351	1,367	8,147	12,079	3,932
	1904	20	3,040	18	192	2,830	5,377	6,946	251	1,176	7,911	10,251	2,340
	1899	19	2,636	20	156	2,454	.....	5,167	166	1,044	7,009	9,380	2,371
Lumber and timber products.....	1909	4	23	5	.....	18	84	36	.....	14	8	30	22
	1904	3	14	4	.....	10	37	25	.....	8	8	24	16
	1899	4	29	5	4	20	.....	125	3	13	41	71	30
Printing and publishing.....	1909	22	297	14	73	210	214	466	62	99	112	373	261
	1904	*25	269	14	57	198	150	400	44	100	86	319	233
	1899	26	.....	.....	52	273	.....	374	39	118	86	311	225
Tobacco manufactures.....	1909	16	195	16	5	174	10	46	3	55	88	234	146
	1904	16	127	17	3	107	.....	95	2	41	69	151	92
	1899	22	126	23	1	102	.....	74	1	39	37	118	81
All other industries.....	1909	150	8,677	93	373	7,711	19,107	24,003	1,020	3,970	9,307	17,664	8,357
	1904	126	7,915	86	352	7,177	20,821	21,708	761	3,202	7,012	13,615	6,603
	1899	127	.....	.....	600	8,398	.....	16,954	730	3,730	8,031	15,727	7,696

<sup>1</sup> Figures do not agree with those published in 1904, because it was necessary to revise the totals in order to include data only for those establishments located within the corporate limits of the city.

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

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

MANUFACTURES—DELAWARE.

TABLE II.—DETAIL STATEMENT FOR

INDUSTRY.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.										WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY.					Primary horse-power.
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks.		Average number.	Wage earners.		Total.	16 and over.		Under 16.				
					Male.	Female.		Number.			Male.	Female.	Male.	Female.			
								Maximum month.	Minimum month.								
1 All industries.....	726	23,984	723	666	1,111	247	21,238	Se, 26,376	Mh 19,168	(1)	(1)	(1)	(1)	(1)	52,779		
2 Artificial stone.....	3	38	2	2	1	1	33	Se 51	Ja 0	28	28				32		
3 Baskets, and rattan and willow ware...	10	442	8	11	2	1	420	Ap 556	Oc 223	433	352	71	8	2	540		
4 Bread and other bakery products.....	62	330	65	6	20	13	226	Je <sup>2</sup> 233	De 212	219	185	30	4		130		
5 Brick and tile.....	23	352	19	17	12	4	300	Au 425	Fe 133	365	351	2	12		334		
6 Butter, cheese, and condensed milk.....	10	74	30	6	1	5	32	Se 35	My <sup>2</sup> 30	33	33				204		
7 Canning and preserving.....	77	1,556	103	35	41	8	1,369	Se 6,413	Ja 11	5,935	1,031	3,163	315	526	1,725		
8 Carriages and wagons and materials.....	25	208	29	9	5	2	163	My <sup>2</sup> 178	De 146	146	144	1	1		204		
9 Cars and general shop construction and repairs by steam-railroad companies.	3	1,629		27	77		1,525	Ne 1,728	Au 1,386	1,697	1,694		3		1,835		
10 Cars and general shop construction and repairs by street-railroad companies.	3	34		1	1		32	Ja <sup>3</sup> 32	Jy <sup>3</sup> 32	32	32				25		
11 Cars, steam-railroad, not including operations of railroad companies.	3	1,837		42	111	5	1,679	De 2,245	Au 1,237	2,240	2,220	19	1		3,388		
12 Clothing, men's, including shirts.....	12	395	14	14	4	5	358	De 457	Au 280	452	42	408		2	124		
13 Confectionery.....	5	91	2	3	1	5	80	De 104	Jo 69	104	27	74	3		40		
14 Copper, tin, and sheet-iron products.....	10	113	10	7	4	2	90	My 131	Ja 71	107	64	39	4		56		
15 Electrical machinery, apparatus, and supplies.	4	183	3	7	11		162	My 210	Au 115	227	145		82		450		
16 Flour-mill and gristmill products.....	65	244	86	8	9	2	139	Oc 142	Ja <sup>2</sup> 136	143	142		1		3,349		
17 Foundry and machine-shop products...	37	2,538	21	92	195	20	2,210	Ja 2,624	My 2,008	2,643	2,619	19	3	2	4,270		
18 Gas, illuminating and heating.....	5	154	1	8	12	5	128	Au 156	Ja <sup>2</sup> 117	123	123				333		
19 Hosiery and knit goods.....	4	503	1	9	3	3	492	My 525	Fe 458	526	39	366	17	54	200		
20 Ice, manufactured.....	15	102	16	9	6		71	Je 142	Ja 32	70	70				1,028		
21 Iron and steel, steel works and rolling mills.	5	785		29	41	5	710	De 909	Mh 559	909	909				4,912		
22 Leather goods.....	4	66	2	6	11	3	44	Oc 51	Ap 39	40	49				30		
23 Leather, tanned, curried, and finished.	16	3,241	12	52	105	27	3,045	De 3,458	Ja 2,840	3,460	2,626	816	13	5	4,417		
24 Liquors, malt.....	5	132	2	11	12		107	Je <sup>2</sup> 113	Ja 100	107	107				463		
25 Lumber and timber products.....	116	1,369	148	35	10	2	1,174	Fe 1,338	Jy 968	1,540	1,477	46	14	3	3,767		
26 Marble and stone work.....	7	56	8	1	3	2	42	My 47	Mh 36	42	42				61		
27 Paint and varnish.....	4	72	2	8	5		57	Fe 73	Se <sup>2</sup> 53	71	71				328		
28 Paper and wood pulp.....	6	599	4	14	27	8	546	Mh 567	Je <sup>2</sup> 530	559	479	80			4,313		
29 Patent medicines and compounds and druggists' preparations.	7	57	4	3	11	8	31	Je 34	Ja 26	34	18	16			32		
30 Printing and publishing.....	48	406	32	22	46	18	288	Ap 307	Fe 279	315	218	76	19	2	305		
31 Pulp goods.....	4	409		16	14	20	359	De 450	Ja 296	450	439		11		1,087		
32 Shipbuilding, including boat building.	10	1,411	8	51	94	19	1,239	De 1,541	Au 990	1,560	1,551		9		3,582		
33 Silk and silk goods, including throwsters.	3	229		6	4	1	218	Mh 246	Oc 188	193	18	154	6	15	205		
34 Slaughtering and meat packing.....	9	123	8	6	26	1	82	Ja <sup>2</sup> 88	Au 75	84	83	1			212		
35 Tobacco manufactures.....	19	293	18	6	19	5	245	De 264	Ja 234	266	124	133	1	8	655		
36 All other industries <sup>4</sup> .....	87	3,908	64	87	168	47	3,542								9,648		

<sup>1</sup> No figures given for reasons explained in the Introduction.  
<sup>2</sup> Same number reported for one or more other months.  
<sup>3</sup> Same number reported throughout the year.  
<sup>4</sup> All other industries embrace—

Automobiles, including bodies and parts.....	1	Brass and bronze products.....	1	Cutlery and tools, not elsewhere specified.....	2
Awnings, tents, and sails.....	1	Brooms.....	1	Dentists' materials.....	2
Axle grease.....	1	Charcoal.....	2	Dyeing and finishing textiles.....	1
Bags paper.....	1	Coffee and spice, roasting and grinding.....	2	Electroplating.....	1
Belting and hose, leather.....	2	Cooperage and wooden goods, not elsewhere specified.....	2	Explosives.....	10
Belting and hose, woven and rubber.....	1	.....	2	Fertilizers.....	1
Boots and shoes, including cut stock and findings.....	1	Cordage and twine and jute and linen goods.....	1	Firearms and ammunition.....	1
Boxes, fancy and paper.....	1	Cordials and sirups.....	1	Fire extinguishers, chemical.....	1
		Cotton goods, including cotton small wares.....	1	Food preparations.....	3

MANUFACTURES—DELAWARE.

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THE STATE, BY INDUSTRIES: 1909.

Capital.	EXPENSES.										Value of products.	Value added by manufacture.
	Total.	Services.			Materials.		Miscellaneous.					
		Officials.	Clerks.	Wage earners.	Fuel and rent of power.	Other.	Rent of factory.	Taxes, including internal revenue.	Contract work.	Other.		
1 \$60,905,671	\$46,958,478	\$1,310,320	\$1,012,009	\$10,295,596	\$1,138,779	\$29,799,022	\$161,444	\$286,759	\$95,087	\$2,869,462	\$52,839,619	\$21,901,818
2 61,161	54,166	3,900	624	13,876	432	32,080	1,800	163	.....	1,276	57,367	24,855
3 260,585	243,463	8,704	852	92,262	40	100,342	185	617	5,946	25,515	294,808	185,426
4 348,050	346,748	7,488	17,893	118,218	16,565	431,689	5,062	2,492	.....	46,741	749,679	301,425
5 835,148	280,751	21,039	13,233	116,480	39,484	15,167	1,360	1,003	34,029	38,956	329,454	274,803
6 207,699	240,437	3,900	1,800	14,081	3,523	207,635	.....	452	.....	8,439	203,691	52,533
7 1,520,082	1,937,437	26,098	15,008	273,394	21,042	1,532,454	2,427	2,291	362	64,361	2,105,945	552,440
8 432,651	234,136	9,366	3,102	81,387	3,472	120,585	3,077	2,236	.....	9,951	290,113	166,056
9 1,635,094	3,251,201	38,922	60,491	1,146,791	58,917	1,883,655	.....	10,481	.....	51,944	3,251,201	1,308,629
10 16,702	44,286	1,140	600	20,692	418	21,036	.....	50	.....	350	44,286	22,832
11 3,496,582	3,407,013	87,896	96,813	1,130,742	44,049	1,868,493	.....	11,054	285	167,081	3,628,093	1,714,951
12 255,310	381,573	15,705	8,088	77,814	3,821	241,746	1,593	400	17,519	14,887	431,508	185,941
13 67,337	130,076	4,500	4,160	31,476	2,825	81,351	3,010	184	.....	2,570	142,796	58,620
14 185,777	124,363	8,509	3,393	31,293	1,513	63,757	1,976	235	.....	13,687	127,711	62,441
15 764,402	442,339	12,450	5,384	88,603	17,453	275,723	1,500	1,140	.....	40,086	606,651	313,475
16 672,051	1,018,218	6,667	7,048	57,159	13,582	1,486,057	18,695	2,218	240	31,552	1,751,533	251,894
17 7,401,065	4,302,124	221,822	171,987	1,247,164	118,871	2,283,046	4,226	17,382	18	237,608	4,781,195	2,379,278
18 3,415,823	273,934	15,920	11,200	70,214	71,636	37,295	.....	7,271	112	54,286	303,769	254,538
19 288,941	427,438	10,803	1,821	122,212	4,152	277,948	.....	760	.....	9,742	448,937	166,887
20 892,846	100,227	6,370	2,966	31,486	32,981	16,502	.....	1,506	147	8,269	153,138	103,655
21 2,107,004	1,651,545	59,247	32,580	415,880	112,535	946,460	.....	2,623	.....	82,220	1,715,341	650,346
22 181,888	162,589	6,772	7,703	21,841	883	107,548	480	726	.....	16,636	175,477	67,046
23 8,249,477	10,538,470	203,708	146,866	1,367,350	73,430	8,073,420	6,200	14,247	.....	653,249	12,079,225	3,932,375
24 1,621,937	667,377	34,873	14,422	84,270	18,071	222,862	.....	125,879	.....	157,000	790,919	649,986
25 1,048,225	1,036,510	16,405	6,289	329,799	1,752	606,105	2,409	3,354	9,876	60,521	1,312,287	704,430
26 72,277	72,438	1,300	3,552	26,980	684	34,614	840	251	2,000	2,217	86,250	50,952
27 260,369	202,963	9,426	2,467	32,870	17,484	181,898	900	318	.....	7,660	245,445	96,123
28 3,313,559	2,027,287	27,186	34,021	309,591	155,160	1,432,013	.....	6,462	.....	62,854	2,291,728	704,555
29 489,050	78,049	7,250	16,568	11,484	425	32,319	3,164	215	.....	6,639	91,105	58,301
30 601,024	389,178	33,539	33,660	128,641	7,581	129,071	7,947	2,156	2,219	43,464	480,464	342,012
31 1,564,318	936,468	39,982	24,947	174,599	21,253	559,272	480	3,752	.....	112,183	1,031,974	451,449
32 2,887,565	1,953,836	103,119	78,198	697,477	41,318	939,335	590	12,365	.....	81,434	1,990,240	1,009,587
33 175,692	242,568	4,836	2,050	64,223	3,848	147,673	1,550	296	15,229	2,863	255,434	103,913
34 288,932	1,352,564	7,994	17,100	52,736	5,628	1,225,538	480	1,660	3,172	38,256	1,371,853	140,087
35 6,404,036	1,009,732	27,143	30,251	91,433	9,720	749,443	4,009	25,488	.....	72,239	1,048,638	289,409
36 9,482,602	6,506,984	216,341	135,057	1,715,078	213,625	3,475,050	80,147	25,027	3,933	642,726	8,051,314	4,302,639

<sup>4</sup> All other industries embrace—Continued.

Furnishing goods, men's.....	1	Jewelry.....	1	Paper goods, not elsewhere specified.....	2
Furniture and refrigerators.....	2	Kaolin and ground earths.....	1	Smelting and refining, not from the ore.....	1
Glass, cutting, staining, and ornamenting.....	1	Mattresses and spring beds.....	2	Steam packing.....	1
Glue.....	1	Mineral and soda waters.....	10	Upholstering materials.....	2
Grease and tallow.....	4	Models and patterns, not including paper patterns.....	2	Wall paper.....	2
Hats and caps other than felt, straw, and wool.....	2	Musical instruments, pianos and organs and materials.....	1	Wirework, including wire rope and cable.....	1
Hats, fur-felt.....	1	Oil, not elsewhere specified.....	2	Wood, turned and carved.....	1
Instruments, professional and scientific.....	1			Woolen, worsted, and felt goods, and wool hats.....	2
Iron and steel forgings.....	1				

MANUFACTURES—DELAWARE.

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

INDUSTRY.	Number of establishments	PERSONS ENGAGED IN INDUSTRY.										WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY.				Primary-horsepower.
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks.		Wage earners (average number).			Total.	16 and over.		Under 16.			
					Male.	Female.	Total.	16 and over.			Under 16.	Male.	Female.	Male.	Female.	
								Male.	Female.							
1 All industries.....	261	16,295	190	414	844	184	14,663	12,463	2,006	194	16,650	14,204	2,232	118	96	29,282
2 Bread and other bakery products.....	36	269	36	4	19	12	198	137	28	3	190	160	27	3	.....	106
3 Carriages and wagons and materials.....	11	127	14	5	4	1	103	102	1	.....	90	89	1	.....	.....	121
4 Cars and general shop construction and repairs by steam-railroad companies.....	3	1,629	.....	27	77	.....	1,525	1,522	.....	3	1,697	1,694	.....	3	.....	1,835
5 Cars, steam-railroad, not including operations of railroad companies.....	3	1,837	.....	42	111	5	1,679	1,664	14	1	2,240	2,220	19	1	.....	3,388
6 Leather, tanned, curried, and finished.....	16	3,241	12	52	105	27	3,045	2,311	719	15	3,460	2,626	816	13	5	4,417
7 Lumber and timber products.....	4	23	5	.....	.....	.....	18	18	.....	.....	21	21	.....	.....	.....	84
8 Printing and publishing.....	22	297	14	17	43	13	210	147	51	12	238	167	58	13	.....	214
9 Tobacco manufactures.....	16	195	16	2	3	.....	174	37	128	9	179	38	132	1	8	10
10 All other industries <sup>1</sup> .....	160	8,677	93	265	482	126	7,711	6,495	1,065	151	8,535	7,189	1,179	84	83	19,107

<sup>1</sup> All other industries embrace: Artificial stone, 2; automobiles, including bodies and parts, 1; awnings, tents, and sails, 1; axle grease, 1; bags, paper, 1; belting and hose, leather, 2; belting and hose, woven and rubber, 1; boots and shoes, including cut stock and findings, 1; boxes, fancy and paper, 1; brick and tile, 3; brooms, 1; canning and preserving, 2; cars and general shop construction and repairs by street-railroad companies, 2; clothing, men's, including shirts, 1; coffee and spice, roasting and grinding, 2; confectionery, 5; copper, tin, and sheet-iron products, 4; cordage and twine and jute and linen goods, 1; cordials and sirups, 1; cotton goods, including cotton small wares, 1; cutlery and tools, not elsewhere specified, 2; dentists' materials, 1; dyeing and finishing textiles, 1; electrical machinery, apparatus, and supplies, 1; electroplating, 1; fertilizers, 1; firearms and ammunition, 1; fire extinguishers, chemical, 1; flour-mill and gristmill products, 1; food preparations, 2; foundry and machine-shop products, 27;

MANUFACTURES—DELAWARE.

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

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

WILMINGTON.

	Capital.	EXPENSES.										Value of products.	Value added by manufacture.
		Total.	Services.			Materials.		Miscellaneous.					
			Officials.	Clerks.	Wage earners.	Fuel and rent of power.	Other.	Rent of factory.	Taxes, including internal revenue.	Contract work.	Other.		
1	\$38,503,922	\$34,081,071	\$975,145	\$775,726	\$7,936,617	\$780,112	\$21,196,188	\$99,954	\$249,933	\$54,012	\$2,013,384	\$38,069,383	\$16,093,063
2	292,836	553,625	6,448	17,399	104,424	13,219	366,605	4,040	2,135	.....	39,265	629,134	249,220
3	279,228	145,136	4,950	2,434	50,405	1,420	70,616	3,525	1,878	.....	3,908	180,802	102,766
4	1,635,094	3,251,201	38,922	60,491	1,146,701	58,917	1,883,655	.....	10,481	.....	51,944	3,251,201	1,808,629
5	3,496,582	3,407,013	87,896	96,813	1,130,742	44,649	1,868,493	.....	11,054	285	167,081	3,628,093	1,714,951
6	8,249,477	10,538,470	203,708	140,866	1,367,350	73,430	8,073,420	6,200	14,247	.....	653,249	12,079,225	8,932,375
7	35,880	23,907	.....	.....	13,636	857	6,896	960	481	.....	1,077	30,142	22,389
8	465,899	316,598	30,337	31,275	98,567	5,636	106,651	6,305	1,846	1,019	34,902	373,313	261,026
9	46,388	174,765	2,300	1,177	54,658	882	87,289	3,911	22,444	.....	2,104	234,219	146,048
10	24,002,538	15,670,356	600,584	419,271	3,970,044	681,102	8,726,473	74,953	185,367	52,708	1,059,854	17,693,254	8,355,679

furniture and refrigerators, 2; gas, illuminating and heating, 1; glass, cutting, staining, and ornamenting, 1; grease and tallow, 2; hats and caps, other than felt, straw, and wool, 2; hats, fur-felt, 1; hosiery and knit goods, 3; ice, manufactured, 3; iron and steel, steel works and rolling mills, 1; iron and steel forgings, 1; jewelry, 1; leather goods, 3; liquors, malt, 4; marble and stone work, 4; mattresses and spring beds, 2; mineral and soda waters, 8; models and patterns, not including paper patterns, 2; musical instruments, pianos and organs and materials, 1; oil, not elsewhere specified, 2; paint and varnish, 1; paper and wood pulp, 2; paper goods, not elsewhere specified, 1; patent medicines and compounds and druggists' preparations, 7; pulp goods, 2; shipbuilding, including boat building, 4; silk and silk goods, including throwsters, 2; slaughtering and meat packing, 8; smelting and refining, not from the ore, 1; steam packing, 1; upholstering materials, 2; wall paper, 1; wood, turned and carved, 1.

# DISTRICT OF COLUMBIA.

## INDUSTRIES IN GENERAL.

**General character.**—The District of Columbia, which is coextensive with the city of Washington, contains 60 square miles. Its population in 1910 was 331,069, as compared with 278,718 in 1900 and 230,392 in 1890. It ranked forty-third among the states and territories in regard to population in 1910 and forty-first in 1900.

**Importance and growth of manufactures.**—Although Washington is not essentially a manufacturing city, the number and importance of its industries have been increasing steadily. The manufacturing operations

carried on in the District by the Federal Government are of considerable importance, but as they are conducted under conditions which in many respects differ from those prevailing in establishments operated under private ownership, statistics for them are presented separately.

The following table gives the more important figures relative to all classes of manufactures combined for the District as returned at the censuses of 1909, 1904, and 1899, together with percentages of increase from census to census:

	NUMBER OR AMOUNT.			PER CENT OF INCREASE. <sup>1</sup>	
	1909	1904	1899	1904-1909	1899-1904
Number of establishments.....	518	482	491	7.5	-1.8
Persons engaged in manufactures.....	9,758	7,778	( <sup>2</sup> )	25.5	.....
Proprietors and firm members.....	475	473	( <sup>2</sup> )	0.4	.....
Salaried employees.....	1,576	1,006	957	56.7	5.1
Wage earners (average number).....	7,707	6,299	6,155	22.4	2.3
Primary horsepower.....	16,563	12,592	10,255	31.5	22.8
Capital.....	\$30,553,000	\$20,200,000	\$17,960,000	51.3	12.5
Expenses.....	20,476,000	15,322,000	13,311,000	33.6	15.1
Services.....	6,835,000	4,865,000	3,895,000	40.5	24.9
Salaries.....	1,846,000	1,207,000	872,000	52.9	38.4
Wages.....	4,989,000	3,658,000	3,023,000	36.4	21.0
Materials.....	10,246,000	7,732,000	7,475,000	32.5	3.4
Miscellaneous.....	3,395,000	2,725,000	1,941,000	24.6	40.4
Value of products.....	25,289,000	18,359,000	16,426,000	37.7	11.8
Value added by manufacture (value of products less cost of materials).....	15,043,000	10,627,000	8,951,000	41.6	18.7

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

<sup>2</sup> Figures not available.

Exclusive of the establishments operated by the Federal Government in 1909, the District of Columbia had 518 manufacturing establishments, which gave employment to an average of 9,758 persons during the year, and paid out \$6,835,000 in salaries and wages. Of the persons employed, 7,707 were wage earners. These establishments turned out products to the value of \$25,289,000, to produce which materials costing \$10,246,000 were utilized. The value added by manufacture was thus \$15,043,000, which figure best represents the net wealth created by manufacturing operations during the year.

In general, this table brings out the fact that the manufacturing industries of the District show a much greater increase for the period 1904-1909 than for the period 1899-1904. During the more recent period the number of establishments increased 7.5 per cent and the average number of wage earners 22.4, while the value of products increased 37.7 per cent and the value added by manufacture 41.6. As pointed out in the Introduction, it would be improper to infer that manufactures increased in volume during the period 1904-1909 to the extent indicated by these figures regarding values, since the increase shown is

certainly due, in part, to the increase that has taken place in the price of commodities.

It is a matter of interest to note that the percentages of increase shown for wages, value of products, and value added by manufacture are very much larger than those for the number of establishments and average number of wage earners.

The relative importance and growth of the leading manufacturing industries of the District are shown in the next table.

The most important industries listed in the table, in which they are arranged in the order of the value of products, call for brief consideration.

**Printing and publishing.**—The establishments classified under this head include those printing newspapers, books, and periodicals, job printing offices, establishments engaged in bookbinding and blank-book making, and lithographing and engraving establishments. The statistics show that there has been a constant and satisfactory increase in the industry.

**Bread and other bakery products.**—As measured by value of products and value added by manufacture, this industry, common to all cities, has shown, in the District, practically the same rate of increase during the two periods covered by the table.

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*Liquors, malt.*—Four establishments were reported for the industry in 1904 and five in 1909. Measured both by value of products and by value added by manufacture, this industry decreased during the period 1899–1904, but increased substantially from 1904 to 1909.

*Foundry and machine-shop products.*—In any community the number of establishments engaged in this industry and the degree of their activity are usually

a fair index of the extent and prosperity of its manufactures. In the District, however, the industry was really of greater importance than is indicated by the statistics, as some machine shops manufactured a special product and were assigned to other classifications.

Measured by value added by manufacture, the four leading industries held the same relative rank as when measured by value of products.

INDUSTRY.	Number of establishments.	WAGE EARNERS.		VALUE OF PRODUCTS.		VALUE ADDED BY MANUFACTURE.		PER CENT OF INCREASE. <sup>1</sup>			
		Average number.	Per cent distribution.	Amount.	Per cent distribution.	Amount.	Per cent distribution.	Value of products.		Value added by manufacture.	
								1904-1909	1899-1904	1904-1909	1899-1904
All industries.....	518	7,707	100.0	25,289,000	100.0	15,043,000	100.0	37.7	11.8	41.6	18.7
Printing and publishing.....	156	1,565	20.3	4,899,000	19.4	3,805,000	25.3	23.8	40.9	13.3	46.7
Bread and other bakery products.....	71	975	12.7	3,590,000	14.2	1,388,000	9.2	34.2	37.9	20.8	29.3
Liquors, malt.....	5	248	3.2	1,805,000	7.1	1,380,000	9.2	54.7	-12.9	65.9	-21.0
Foundry and machine-shop products.....	23	509	6.6	1,175,000	4.6	709,000	4.7	165.2	-53.4	154.1	-49.7
Lumber and timber products.....	10	309	4.0	609,000	2.4	355,000	2.4	55.4	18.4	43.1	40.1
Marble and stone work.....	15	265	3.4	549,000	2.2	299,000	2.0	-23.3	4.9	-19.6	-2.1
Flour-mill and gristmill products.....	7	38	0.5	506,000	2.0	74,000	0.5				
All other industries.....	231	3,798	49.3	12,156,000	48.1	7,033,000	46.8				

<sup>1</sup> Percentages are based on figures in Table I; a minus sign (—) denotes decrease. Where the percentages are omitted, comparable figures can not be given.

This table shows also the percentages of increase for the leading industries in respect to value of products and value added by manufacture. There are some striking differences among the several industries specified in regard to the relative increase from 1899 to 1904 and from 1904 to 1909. Two industries show a decrease in value of products and three in value added by manufacture from 1899 to 1904. Only one, however, the flour-mill and gristmill industry, shows a decrease from 1904 to 1909.

In addition to the seven industries presented separately there were nine other industries which had a value of products in 1909 in excess of \$300,000. They are included in the group of "All other industries," because in some instances if they were shown separately the operations of individual establishments would be disclosed; in others, the returns do not present properly the true condition of the industry, it being more or less interwoven with one or more industries of similar character; and for others, comparable statistics for the different census years can not be presented on account of changes in classification. The nine industries omitted from this table are: Baking powders and yeast; cars and general shop construction and repairs by steam-railroad companies; coffee and spice, roasting and grinding; copper, tin, and sheet-iron products; gas, illuminating and heating; ice, manufactured; iron and steel, steel works and rolling mills; patent medicines and compounds and druggists' preparations; and slaughtering and meat packing. Of these industries, comparative figures for four—copper, tin, and sheet-iron products; ice, manufactured; patent medicines and compounds and

druggists' preparations; and slaughtering and meat packing—will be found in Table I, and in Table II totals for 1909 for gas, illuminating and heating.

*Persons engaged in manufacturing industries.*—The following table shows the distribution of the average number of persons engaged in manufactures, the average number of wage earners being distributed by sex and age in the manner already explained. (See Introduction.)

CLASS.	PERSONS ENGAGED IN MANUFACTURES.		
	Total.	Male.	Female.
All classes.....	9,758	8,598	1,160
Proprietors and officials.....	899	866	33
Proprietors and firm members.....	475	455	20
Salaried officers of corporation.....	170	164	6
Superintendents and managers.....	254	247	7
Clerks.....	1,152	853	299
Wage earners (average number).....	7,707	6,879	828
16 years of age and over.....	7,688	6,801	827
Under 16 years of age.....	19	18	1

This table shows that there were 9,758 persons returned as the average number engaged in manufactures during 1909, of whom 7,707 were wage earners, 899 proprietors and officials, and 1,152 clerks. Corresponding figures for individual industries will be found in Table II.

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

INDUSTRY.	PERSONS ENGAGED IN MANUFACTURES.			
	Total number.	Per cent of total.		
		Proprietors and officials.	Clerks.	Wage earners (average number).
All industries.....	9,758	9.2	11.8	79.0
Printing and publishing.....	2,411	12.0	23.1	64.9
Bread and other bakery products.....	1,152	8.4	9.1	82.4
Slaughtering and meat packing.....	214	6.5	30.4	63.1
Liquors, malt.....	287	3.1	10.5	86.4
Foundry and machine-shop products.....	578	7.3	4.7	88.1
Lumber and timber products.....	359	4.4	4.4	91.2
Marble and stone work.....	299	10.0	1.3	83.6
Flour-mill and gristmill products.....	50	22.0	2.0	78.0
All other industries.....	4,397	8.8	7.8	83.3

Of the persons engaged in all manufacturing industries, 9.2 per cent were officials, 11.8 per cent clerks, and 79 per cent wage earners. A number of the printing and publishing establishments are small, the work to a large extent being done by proprietors, and five of the seven flour mills and gristmills are operated under individual or firm form of ownership. Therefore the proportion of persons engaged in these industries falling into the class of proprietors and officials is higher than that for other industries or for all industries combined. The smallest proportion for this class is for the malt-liquor industry, due to the fact that four of the five establishments reported are operated by corporations.

The following table shows, for all industries combined and for some of the important industries separately, the average number of wage earners; their percentage distribution by age periods, and for those 16 years of age and over by sex.

INDUSTRY.	WAGE EARNERS.			
	Average number.	Per cent of total.		
		16 years of age and over.	Under 16 years of age.	
		Male.	Female.	
All industries.....	7,707	89.0	10.7	0.2
Printing and publishing.....	1,505	81.4	18.1	0.4
Bread and other bakery products.....	975	93.9	6.1	
Slaughtering and meat packing.....	135	100.0		
Liquors, malt.....	248	100.0		
Foundry and machine-shop products.....	509	99.8	0.2	
Lumber and timber products.....	309	99.7		0.3
Marble and stone work.....	265	100.0		
Flour-mill and gristmill products.....	38	100.0		
All other industries.....	3,663	86.5	13.2	0.3

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

Clerks are not shown in this table; of the 1,152 clerks employed in all industries, 853, or 74 per cent, were male and 299, or 26 per cent, female. Of the wage earners, 89.3 per cent were male and 10.7 per cent female; 99.8 per cent were 16 years of age or over, and but two-tenths of 1 per cent under 16 years.

It may be noted that the largest number of women are employed in printing and publishing. Of the average number of wage earners in that industry 1,281 were males and 284 females. Thus, of the 828 female wage earners in all industries combined, 284, or 34.3 per cent, were employed in this single industry. Of the 19 persons under 16 years of age reported as employed in the manufactures of the District, 7 were reported in this industry.

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

CLASS.	PERSONS ENGAGED IN MANUFACTURES.				
	1909		1904		Per cent of increase, 1904-1909.
	Amount.	Per cent distribution.	Amount.	Per cent distribution.	
Total.....	9,758	100.0	7,778	100.0	25.5
Proprietors and firm members.....	475	4.9	473	6.1	0.4
Salaried employees.....	1,576	16.2	1,006	12.9	56.7
Wage earners (average number).....	7,707	79.0	6,299	81.0	22.4

Comparable figures are not obtainable for 1899. The table shows a greater percentage of increase in the salaried employees than in the other two classes, but this may be due, in part, to changes in the interpretation of the line of distinction between that class and other wage earners.

The following table shows the average number of wage earners, distributed according to age periods, and in the case of those 16 years of age and over according to sex, for 1909, 1904, and 1899:

CLASS.	AVERAGE NUMBER OF WAGE EARNERS.					
	1909		1904		1899	
	Number.	Per cent distribution.	Number.	Per cent distribution.	Number.	Per cent distribution.
Total.....	7,707	100.0	6,299	100.0	6,155	100.0
16 years of age and over..	7,638	99.8	6,225	98.8	6,082	98.8
Male.....	6,861	89.0	5,614	89.1	5,360	87.1
Female.....	827	10.7	611	9.7	722	11.7
Under 16 years of age....	19	0.2	74	1.2	73	1.2

This table indicates that for all industries combined there has been a great decrease during the last 5 years in the employment of children under 16 years of age. There has, on the other hand, been little change in the proportion of male and female wage earners. In 1909 males 16 years of age and over formed 89 per cent of all wage earners, as compared with 89.1 per cent in 1904 and 87.1 per cent in 1899.

Wage earners employed, by months.—The following table gives the number of wage earners employed on the 15th of each month during the year 1909 for all industries combined; it also gives the percentage which the number reported for each month is of the greatest number employed in any one month.

MONTH.	WAGE EARNERS.		MONTH.	WAGE EARNERS.	
	Number.	Per cent of maximum.		Number.	Per cent of maximum.
January.....	7,421	93.4	July.....	7,785	97.9
February.....	7,445	93.7	August.....	7,752	97.5
March.....	7,535	94.8	September.....	7,840	98.6
April.....	7,610	95.8	October.....	7,949	100.0
May.....	7,774	97.8	November.....	7,861	98.9
June.....	7,761	97.6	December.....	7,783	97.5

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There are no important seasonal industries in the District. The table shows but little variation in the numbers reported for any of the months of the year. The greatest number, 7,949, is shown for October, and the smallest number, 7,421, for January, the minimum number thus representing 93.4 per cent of the maximum.

Prevailing hours of labor.—Establishments have been classified also according to the prevailing number

of hours of labor of the bulk of their employees; that is to say, the wage earners of each establishment are all classified according to the prevailing hours of labor in the establishment, even though some may have to work a different number of hours. The table that follows shows the result of this classification. It is based on the average number of wage earners employed during the year.

INDUSTRY.	AVERAGE NUMBER OF WAGE EARNERS IN ESTABLISHMENTS GROUPED ACCORDING TO PREVAILING HOURS OF WORK PER WEEK.								
	Total.	48 and under.	Between 48 and 54.	54.	Between 54 and 60.	60.	Between 60 and 72.	72.	Over 72.
All industries.....	7,707	2,944	782	1,558	254	1,117	949	45	58
Bread and other bakery products.....	975	120	19	782	10	26	10	8	.....
Flour-mill and gristmill products.....	38	.....	.....	.....	.....	5	20	4	.....
Foundry and machine-shop products.....	509	330	80	99	.....	.....	.....	.....	.....
Liquors, malt.....	248	128	38	82	.....	.....	.....	.....	.....
Lumber and timber products.....	309	309	.....	.....	.....	.....	.....	.....	.....
Marble and stone work.....	265	168	.....	97	.....	.....	.....	.....	.....
Printing and publishing.....	1,565	1,250	161	61	83	.....	1	.....	.....
Slaughtering and meat packing.....	135	9	.....	.....	.....	126	.....	.....	.....
All other industries.....	3,663	621	484	437	161	960	909	33	58

It is evident from the figures that the great majority of wage earners employed in the manufacturing industries of the District of Columbia were in establishments where the prevailing hours of labor did not exceed 54 a week.

Of the total number of wage earners, 38.2 per cent were employed in establishments running 48 hours a week or less and 30.4 per cent in establishments running more than 48 hours, but not over 54 hours a week,

while 31.4 per cent were in establishments operating more than 9 hours a day.

Character of ownership.—The table that follows has for its purpose the presentation of conditions in respect to the character of ownership, or legal organization, of manufacturing enterprises. For all industries combined comparative figures are given covering the censuses of 1909 and 1904. Comparative data for 1899 are not available.

INDUSTRY AND CHARACTER OF OWNERSHIP.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.	INDUSTRY AND CHARACTER OF OWNERSHIP.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.
<b>ALL INDUSTRIES:</b>					<b>Foundry and machine-shop products, 1909.....</b>	<b>23</b>	<b>509</b>	<b>\$1,175,085</b>	<b>\$708,713</b>
1909.....	518	7,707	\$25,289,136	\$15,042,602	Individual.....	14	369	790,915	471,566
1904.....	482	6,299	18,359,159	10,627,188	Firm.....	6	116	324,188	183,721
Individual:					Corporation.....	3	24	59,982	53,426
1909.....	303	2,419	5,847,661	3,321,471	Per cent of total.....	100.0	100.0	100.0	100.0
1904.....	298	2,139	4,440,861	2,554,434	Individual.....	60.9	72.5	67.3	66.5
Firm:					Firm.....	26.1	22.8	27.6	25.9
1909.....	75	747	2,412,752	1,182,142	Corporation.....	13.0	4.7	5.1	7.5
1904.....	77	961	3,536,031	1,174,134	<b>Marble and stone work, 1909.....</b>	<b>15</b>	<b>265</b>	<b>\$548,535</b>	<b>\$298,693</b>
Corporation:					Individual.....	6	54	169,450	93,361
1909.....	122	4,459	16,544,835	10,117,800	Firm.....	5	44	68,806	50,107
1904.....	91	3,160	10,150,928	6,697,240	Corporation.....	4	167	310,279	152,225
Other:					Per cent of total.....	100.0	100.0	100.0	100.0
1909.....	18	82	483,888	421,089	Individual.....	40.0	20.4	30.9	32.3
1904.....	16	39	231,339	201,380	Firm.....	33.3	16.6	12.5	16.8
Per cent of total:					Corporation.....	26.7	63.0	56.6	51.0
1909.....	100.0	100.0	100.0	100.0	<b>Printing and publishing, 1909.....</b>	<b>156</b>	<b>1,565</b>	<b>\$4,899,492</b>	<b>\$3,804,610</b>
1904.....	100.0	100.0	100.0	100.0	Individual.....	81	447	805,107	649,235
Individual:					Firm.....	18	98	215,341	183,525
1909.....	58.5	31.4	23.1	22.1	Corporation.....	39	938	3,335,150	2,550,761
1904.....	61.8	34.0	24.2	24.0	Other.....	18	82	483,888	421,089
Firm:					Per cent of total.....	100.0	100.0	100.0	100.0
1909.....	14.5	9.7	9.5	7.9	Individual.....	51.9	28.0	17.7	17.1
1904.....	16.0	15.3	19.3	11.0	Firm.....	11.5	6.3	4.4	4.8
Corporation:					Corporation.....	25.0	59.9	68.1	67.0
1909.....	23.6	57.9	65.4	67.8	Other.....	11.5	5.2	9.9	11.1
1904.....	18.9	50.2	55.3	63.0	<b>Bread and other bakery products, 1909.....</b>	<b>71</b>	<b>975</b>	<b>\$3,589,554</b>	<b>\$1,387,826</b>
Other:					Individual.....	56	353	1,253,407	533,400
1909.....	3.5	1.1	1.9	2.8	Firm.....	9	239	1,042,150	394,783
1904.....	3.3	0.6	1.3	1.9	Corporation.....	6	353	1,293,997	459,643
Per cent of total:					Per cent of total.....	100.0	100.0	100.0	100.0
1909.....	78.9	39.3	35.8	35.4	Individual.....	73.9	39.3	35.8	35.4
1904.....	12.7	24.5	28.0	28.4	Firm.....	12.7	24.5	28.0	28.4
Corporation.....	8.4	36.2	35.2	33.1	Corporation.....	8.4	36.2	35.2	33.1

Figures for 1909 only are presented for several important industries. In order to avoid disclosing the operations of individual concerns, it is necessary to

omit several important industries from this and other tables. The most important distinction shown is that between corporate and all other forms of ownership.

For all industries combined, 23.6 per cent of the total number of establishments had in 1909 a corporate form of organization, as against 76.5 per cent for all other forms. The corresponding figures for 1904 were 18.9 per cent and 81.1 per cent, respectively. Five years is too short a period to reveal any pronounced change in character of ownership. For all industries combined, as measured by value of products and value added by manufacture, firms lost ground to a considerable extent, while corporate ownership shows large increases.

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

This table shows that, in 1909, of the 518 establishments, only 49, or 9.5 per cent, had a value of products exceeding \$100,000, and 3 of these had products exceeding \$1,000,000 each. These 49 establishments, however, notwithstanding their small number, had a total average number of wage earners of 4,089, or 53.1 per cent, of the total number in all establishments, and the importance of their operations, as measured by value of products, was 67.5 per cent of the total, and by value added by manufacture 66.9 per cent.

On the other hand, small establishments—that is, those having a value of products of less than \$5,000—constituted a very considerable proportion (28.4 per cent) of the total number of establishments, but the value of their products amounted to only 1.5 per cent of the total. The great bulk of the manufacturing was carried on in establishments having a product valued at not less than \$100,000. The five years from 1904 to 1909 was rather too short a period to show extensive changes. The group of establishments reporting a value of products of less than \$5,000 shows a decrease in every item between 1904 and 1909. The table indicates, therefore, that the relative importance of the smaller establishments has decreased, while that of the large establishments has increased.

The fact that the average value of products per establishment increased from \$38,090 to \$48,821 and the value added by manufacture from \$22,048 to \$29,040 can scarcely be taken as an indication of a tendency toward concentration. The increased values shown may be, and probably are, due wholly or in part to the increase that has taken place in the prices of commodities. The average number of wage earners per establishment shows an increase from 13 in 1904 to 15 in 1909.

INDUSTRY AND VALUE OF PRODUCTS.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.
<b>ALL INDUSTRIES:</b>				
1909.....	518	7,707	\$25,289,136	\$15,042,803
1904.....	482	6,299	18,359,159	10,627,188
<b>Less than \$5,000:</b>				
1909.....	147	182	383,463	204,245
1904.....	160	229	386,384	268,173
<b>\$5,000 and less than \$20,000:</b>				
1909.....	187	950	2,020,003	1,294,810
1904.....	171	999	1,792,704	1,171,748
<b>\$20,000 and less than \$100,000:</b>				
1909.....	135	2,480	5,818,241	3,418,883
1904.....	114	2,565	4,750,770	2,962,817
<b>\$100,000 and less than \$1,000,000:</b>				
1909.....	46	3,028	12,053,695	7,114,346
1904.....	37	2,509	11,423,301	6,224,460
<b>\$1,000,000 and over:</b>				
1909.....	3	1,061	5,012,734	2,950,318
1904.....				
<b>Per cent of total:</b>				
1909.....	100.0	100.0	100.0	100.0
1904.....	100.0	100.0	100.0	100.0
<b>Less than \$5,000:</b>				
1909.....	28.4	2.4	1.5	1.8
1904.....	33.2	3.6	2.1	2.5
<b>\$5,000 and less than \$20,000:</b>				
1909.....	36.1	12.4	8.0	8.6
1904.....	35.5	15.8	9.8	11.0
<b>\$20,000 and less than \$100,000:</b>				
1909.....	26.1	32.2	23.0	22.7
1904.....	23.7	40.7	25.9	27.9
<b>\$100,000 and less than \$1,000,000:</b>				
1909.....	8.9	39.3	47.7	47.3
1904.....	7.7	39.8	62.2	58.6
<b>\$1,000,000 and over:</b>				
1909.....	0.6	13.8	19.8	19.6
1904.....				
<b>Average per establishment:</b>				
1909.....		15	\$48,821	\$29,040
1904.....		13	38,090	22,048
<b>Bread and other bakery products, 1909.....</b>	71	975	\$3,589,554	\$1,387,826
Less than \$5,000.....	23	14	65,107	30,722
\$5,000 and less than \$20,000.....	28	90	316,850	135,993
\$20,000 and less than \$100,000.....	12	199	539,009	230,090
\$100,000 and less than \$1,000,000.....	8	672	2,607,922	1,001,021
<b>Per cent of total.....</b>	100.0	100.0	100.0	100.0
Less than \$5,000.....	32.4	1.4	1.8	2.2
\$5,000 and less than \$20,000.....	30.4	0.2	8.8	9.8
\$20,000 and less than \$100,000.....	16.9	20.4	15.0	15.9
\$100,000 and less than \$1,000,000.....	11.3	68.9	74.3	72.1
<b>Average per establishment.....</b>		14	\$50,557	\$19,547
<b>Foundry and machine-shop products, 1909.....</b>	23	509	\$1,175,085	\$708,713
\$5,000 and less than \$20,000.....	11	81	119,870	89,888
\$20,000 and less than \$100,000.....	8	180	340,215	240,057
\$100,000 and less than \$1,000,000.....	4	248	715,000	377,868
<b>Per cent of total.....</b>	100.0	100.0	100.0	100.0
\$5,000 and less than \$20,000.....	47.8	15.9	10.2	12.7
\$20,000 and less than \$100,000.....	34.8	35.4	29.0	34.0
\$100,000 and less than \$1,000,000.....	17.4	48.7	60.8	53.3
<b>Average per establishment.....</b>		22	\$51,091	\$30,814
<b>Marble and stone work, 1909.....</b>	15	265	\$548,535	\$298,693
\$5,000 and less than \$20,000.....	7	45	72,708	46,441
\$20,000 and less than \$100,000.....	8	220	475,827	252,252
<b>Per cent of total.....</b>	100.0	100.0	100.0	100.0
\$5,000 and less than \$20,000.....	46.7	17.0	13.3	15.5
\$20,000 and less than \$100,000.....	53.3	83.0	86.7	84.5
<b>Average per establishment.....</b>		18	\$36,569	\$19,913
<b>Printing and publishing, 1909.....</b>	156	1,565	\$4,899,492	\$3,804,610
Less than \$5,000.....	57	78	144,135	115,512
\$5,000 and less than \$20,000.....	57	284	570,308	460,889
\$20,000 and less than \$100,000.....	32	510	1,268,105	993,798
\$100,000 and less than \$1,000,000.....	10	693	2,910,854	2,234,411
<b>Per cent of total.....</b>	100.0	100.0	100.0	100.0
Less than \$5,000.....	36.5	5.0	2.9	3.0
\$5,000 and less than \$20,000.....	36.5	18.1	11.8	12.1
\$20,000 and less than \$100,000.....	20.5	32.6	25.9	26.1
\$100,000 and less than \$1,000,000.....	6.4	44.3	59.4	58.7
<b>Average per establishment.....</b>		10	\$31,407	\$24,389

<sup>1</sup> Includes the group "\$1,000,000 and over."  
<sup>2</sup> Includes the group "\$100,000 and less than \$1,000,000."  
<sup>3</sup> Includes the group "Less than \$5,000."

In some respects, and especially from the standpoint of conditions under which persons engaged in manufactures work, the best classification of establishments to bring out the feature of size is a classification according to the number of wage earners employed. The next table shows such a classification for all in-

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dustries combined and for eight important industries separately, and gives not only the number of establishments falling into each group but also the average number of wage earners employed.

INDUSTRY.	Total.	ESTABLISHMENTS EMPLOYING—								
		No wage earners.	1 to 5 wage earners.	6 to 20 wage earners.	21 to 50 wage earners.	51 to 100 wage earners.	101 to 250 wage earners.	251 to 500 wage earners.	501 to 1,000 wage earners.	Over 1,000 wage earners.
NUMBER OF ESTABLISHMENTS.										
All industries.....	518	75	223	128	58	25	6	2	1	
Bread and other bakery products.....	71	16	32	11	7	2	3			
Flour-mill and gristmill products.....	7	1	5		1					
Foundry and machine-shop products.....	23		6	9	5	3				
Liquors, malt.....	5	1			3		1			
Lumber and timber products.....	10		2	2	3	3				
Marble and stone work.....	15		4	8	2	1				
Printing and publishing.....	156	40	63	31	14	7	1			
Slaughtering and meat packing.....	5		1	1	3					
All other industries.....	226	17	110	66	20	9	1	2	1	
AVERAGE NUMBER OF WAGE EARNERS.										
All industries.....	7,707	572	1,365	1,915	1,750	785	762	558		
Bread and other bakery products.....	975	82	104	239	156	394				
Flour-mill and gristmill products.....	38	13		25						
Foundry and machine-shop products.....	509	21	103	167	213					
Liquors, malt.....	248			120		128				
Lumber and timber products.....	309	9	26	87	187					
Marble and stone work.....	265	16	90	67	92					
Printing and publishing.....	1,565	147	316	453	510	139				
Slaughtering and meat packing.....	135	2	9	124						
All other industries.....	3,663	282	712	633	592	124	762	558		
PER CENT OF AVERAGE NUMBER OF WAGE EARNERS.										
All industries.....	100.0	7.4	17.7	24.8	22.7	10.2	9.9	7.2		
Bread and other bakery products.....	100.0	8.4	10.7	24.5	16.0	40.4				
Flour-mill and gristmill products.....	100.0	34.2		65.8						
Foundry and machine-shop products.....	100.0	4.1	21.2	32.8	41.8					
Liquors, malt.....	100.0			48.4		51.6				
Lumber and timber products.....	100.0	2.9	8.4	28.2	60.5					
Marble and stone work.....	100.0	6.0	34.0	25.3	34.7					
Printing and publishing.....	100.0	9.4	20.2	28.9	32.6	8.9				
Slaughtering and meat packing.....	100.0	1.5	6.7	91.9						
All other industries.....	100.0	7.7	19.4	17.3	16.2	3.4	20.8	15.2		

This table shows classes in considerable detail. Consolidating these classes to a certain extent, it will be seen that 82.2 per cent of the establishments employed no wage earners at all or under 21 persons each. The most numerous single group consists of the 223 establishments employing less than 6 wage earners, and the next of the 128 establishments employing from 6 to 20 wage earners. There were but 3 establishments that employed over 250 wage earners, and 1 of these employed over 500.

The per cent distribution of the number of establishments is not shown in this table; of the 518 establishments reported for all industries, 14.5 per cent employed no wage earners; 43.1 per cent employed under 6 wage earners; 24.7 per cent, from 6 to 20 wage earners, leaving but 17.8 per cent for all of the remaining groups.

Of the total number of wage earners, 27.3 per cent were in establishments employing over 100 wage earners. The single group having the largest number of employees was the group employing from 21 to 50 wage earners. This group employed 1,915 wage earners, or 24.8 per cent of the total.

Expenses.—As stated in the Introduction, the census does not purport to furnish figures that can be used for determining the cost of manufacture and profits. Facts of interest can, however, be brought out concerning the relative importance of the different classes of expenses going to make up the total.

The following table shows, in percentages, the distribution of expenses among the classes indicated for all industries combined and for certain important industries separately. The figures on which the percentages are based appear in Table II.

INDUSTRY.	PER CENT OF TOTAL EXPENSES REPORTED.			
	Salaries.	Wages.	Materials.	Miscellaneous expenses.
All industries.....	9.0	24.4	50.0	16.6
Bread and other bakery products.....	3.2	21.5	67.5	7.7
Flour-mill and gristmill products.....	1.4	3.4	93.6	1.6
Foundry and machine-shop products.....	4.9	35.9	53.9	5.4
Liquors, malt.....	6.9	14.4	30.3	48.5
Lumber and timber products.....	4.2	38.9	52.3	4.6
Marble and stone work.....	4.4	38.0	53.6	3.4
Printing and publishing.....	21.7	28.3	28.2	21.8
Slaughtering and meat packing.....	4.1	5.0	82.0	8.9
All other industries.....	8.1	28.0	46.5	17.4

This table shows that, for all industries combined, 50 per cent of the total expenses were incurred for materials, 33.4 per cent for services—that is, salaries and wages—and but 16.6 per cent for other purposes. As would be expected, these proportions vary greatly in the different industries.

**Engines and power.**—The following table shows for all industries combined the number of engines or other motors, according to their character, employed in generating power (including electric motors operated by purchased current) and their total horsepower at the censuses of 1909, 1904, and 1899. It also shows separately the number and horsepower of electric motors, including those operated by current generated in the manufacturing establishments.

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.			PER CENT DISTRIBUTION OF HORSEPOWER.		
	1909	1904	1899 <sup>1</sup>	1909	1904	1899 <sup>1</sup>	1909	1904	1899
Primary power, total.	940	228	298	16,563	12,592	10,255	100.0	100.0	100.0
Owned.....	278	228	208	14,060	11,588	9,484	84.9	92.0	92.5
Steam engines.	217	180	241	12,169	10,513	8,630	73.5	83.5	84.2
Gas and oil engines.....	55	42	52	1,073	311	338	6.5	2.5	3.3
Water wheels.....	6	6	5	775	710	309	4.7	5.6	3.0
Other.....				43	54	147	0.3	0.4	1.4
Rented.....	662	(2)	(2)	2,503	1,004	771	15.1	8.0	7.5
Electric motors.	662	(2)	(2)	2,433	996	100	14.7	7.9	1.0
Other.....				70	8	671	0.4	0.1	6.5
Electric motors.....	887	82	29	4,527	1,701	348	100.0	100.0	100.0
Run by current generated by establishment.	225	82	29	2,094	765	248	46.3	43.4	71.3
Run by rented power.....	662	(2)	(2)	2,433	996	100	53.7	56.6	28.7

<sup>1</sup>Includes the neighborhood industries and hand trades, omitted in 1904 and 1909.  
<sup>2</sup>Not reported.

The table indicates a general increase from 1899 to 1909 in the primary power generated by steam and gas and oil engines and by water wheels, with the exception of a slight decrease in the amount generated by gas and oil engines between 1899 and 1904. Steam is still the predominant power, and although it furnished but 73.5 per cent of the total power in 1909, as compared with 84.2 per cent in 1899, the actual horsepower increased during this period from 8,630 to 12,169, or 41 per cent. The figures also show that the practice of renting power is on the increase, 15.1 per cent of the total power being rented in 1909, as against 8 per cent in 1904 and 7.5 per cent in 1899. The use of electric motors for the purpose of applying the power generated within the establishments is also shown to be increasing rapidly, the horsepower of such motors having increased from 248 in 1899 to 765 in 1904 and 2,094 in 1909.

**Fuel.**—Closely related to the question of kind of power employed is that of the fuel used in generating

this power, or otherwise as material in the manufacturing processes. The following table shows the quantity of each kind of fuel used in 1909:

INDUSTRY.	Anthracite coal (tons).	Bituminous coal (tons).	Coke (tons).	Wood (cords).	Oil, including gasoline (barrels).	Gas (1,000 feet).
All industries.....	11,163	176,333	20,587	2,029	195,744	22,275
Bread and other bakery products.....	3,362	4,165	500	1,078	6	1,456
Flour-mill and gristmill products.....		703				192
Foundry and machine-shop products.....	65	1,535	708	10	13	1,446
Liquors, malt.....		15,954			4	220
Lumber and timber products.....	18	578				1,611
Marble and stone work.....	19	5				
Printing and publishing.....	566	2,105			3	7,094
Slaughtering and meat-packing.....		4,875		364	7	25
All other industries.....	7,133	140,408	19,370	568	195,711	10,231

NOTE.—In addition, there were 45 tons of other varieties of fuel reported.

**Laundries.**—Statistics for steam laundries are not included in the general tables. For 1909 there were 17 such establishments in the District of Columbia. The following statement summarizes the statistics:

Number of establishments.....	17
Persons engaged in the industry.....	1,096
Proprietors and firm members.....	13
Salaried employees.....	90
Wage earners (average number).....	993
Primary horsepower.....	998
Capital.....	\$699,007
Expenses:	
Services.....	\$419,285
Materials.....	126,256
Miscellaneous.....	140,516
Amount received for work done.....	795,999

The most common form of organization was the individual, with eight establishments, the firm and corporate forms having two and seven establishments, respectively. Six establishments had receipts for the year's business of less than \$20,000; nine, \$20,000 but less than \$100,000; while two establishments reported receipts of more than \$100,000.

The number of persons employed each month and the percentage which this number represented of the greatest number employed in any month were as follows:

MONTH.	WAGE EARNERS.		MONTH.	WAGE EARNERS.	
	Number.	Per cent of maximum.		Number.	Per cent of maximum.
January.....	1,020	95.4	July.....	927	86.7
February.....	1,009	94.4	August.....	916	85.7
March.....	1,013	94.8	September.....	935	87.5
April.....	1,017	95.1	October.....	1,001	93.6
May.....	1,013	94.8	November.....	1,027	96.1
June.....	965	90.3	December.....	1,009	100.0

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The kinds of primary power, number of engines or motors, and horsepower for 1909 were as follows:

KIND.	Number of engines or motors.	Horsepower.
Total primary power.....		998
Owned—Steam.....	18	928
Rented:		
Electric.....	3	32
Other.....	40	40
Electric motors run by current generated by establishments....	70	222

The kind and amount of fuel used for all establishments reporting are shown in the following tabular statement:

KIND.	Unit.	Quantity.
Anthracite coal.....	Tons.....	1,500
Bituminous coal.....	Tons.....	7,003
Coke.....	Tons.....	901
Oil.....	Barrels (50 gallons)...	4
Gas.....	1,000 feet.....	1,288

ESTABLISHMENTS OPERATED BY FEDERAL GOVERNMENT.

A large proportion of the wage earners of the District of Columbia are employed by the Federal Government in operations similar to those carried on in manufacturing establishments conducted under private ownership. These operations, however, are carried on for the exclusive benefit of the Government, and as the products are not manufactured for sale and therefore have no commercial value, no value of products is shown. In order to avoid confusion the statistics for the Government establishments are presented separately from those for other establishments.

As shown by the following statement, which is exclusive of a number of manufacturing industries of minor importance common to most large governmental departments, there was little change in the extent of the

manufactures carried on in connection with the operations of the Federal Government during 1909 as compared with 1904. There were reports from 11 establishments at each census, and the average number of employees increased only 196. The capital reported represented almost exclusively the value placed on the land, buildings, and materials. If, however, cash and other items similar to those reported for the establishments operated under private ownership had been included, it is estimated that it would about equal the \$30,552,623 reported as capital by such establishments. In 1909 the average number of wage earners, 10,657, was 325 less than the number reported for 1904, but exceeded by 2,950 the number reported for the establishments conducted under private ownership in 1909.

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.			Capital.	EXPENSES.				
			Total.	Officials and clerks.	Wage earners (average number).		Total.	Salaries.	Wages.	Cost of materials, including fuel and rent of power.	Miscellaneous expenses.
All industries.....	1909	11	11,666	1,009	10,657	\$28,479,599	\$15,704,242	\$1,016,745	\$10,663,040	\$3,807,626	\$216,831
	1904	11	11,470	488	10,982	24,567,764	15,079,361	643,113	9,740,261	4,502,090	193,897
Engraving and printing <sup>1</sup> .....	1909	4	4,190	311	3,879	3,107,610	4,680,161	352,547	3,593,419	708,217	25,978
	1904	4	3,206	183	3,023	2,409,100	3,409,517	238,871	2,601,896	621,372	37,378
Instruments, professional and scientific (Smithsonian Institution).	1909	1	1	.....	1	3,500	1,605	.....	1,260	310	125
	1904	1	1	.....	1	2,650	1,079	.....	1,080	599	.....
Naval Gun Factory (United States Navy Yard)...	1909	1	3,141	297	2,844	19,192,224	4,623,758	203,317	2,893,670	1,480,676	46,095
	1904	1	3,396	107	3,289	16,449,905	5,331,459	107,966	2,639,184	2,569,334	14,975
Government printing <sup>2</sup> .....	1909	3	4,155	390	3,765	6,102,938	6,211,747	440,042	4,042,467	1,587,786	132,452
	1904	4	4,572	190	4,382	5,679,074	6,010,516	287,910	4,330,998	1,250,626	134,976
Other industries <sup>3</sup> .....	1909	2	179	11	168	73,327	186,881	11,839	132,224	30,637	12,181
	1904	1	295	8	287	27,325	236,190	8,360	167,103	54,150	6,568

<sup>1</sup> Includes the Bureau of Engraving and Printing and establishments operated in the Geodetic Survey, the Geological Survey, and the Department of State.

<sup>2</sup> Includes the Government Printing Office and establishments operated in the Weather Bureau and the War Department.

<sup>3</sup> Includes two reports from the Post Office Department in 1909, one for the mail-bag repair shop, and one for the mail-lock shop. In 1904 both of these shops were included in one report, but since then the operations of the lock shop have been increased and separated from those of the bag-repair shop.

There is a marked stability in the number of wage earners employed in the governmental establishments during the year. The greatest number, 11,030, was reported for January, and the smallest, 10,115, for September, a difference of 915, or 9.1 per cent. During the months of July, August, and September fewer wage earners were employed than during any

other period of the year, as will be seen from the following statement:

January.....	11,030	July.....	10,258
February.....	11,027	August.....	10,416
March.....	10,998	September.....	10,115
April.....	10,852	October.....	10,681
May.....	10,631	November.....	10,591
June.....	10,517	December.....	10,775

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

KIND.	Number of engines or motors.	Horsepower.
Primary power, total.....		5,902
Owned:		
Steam.....	28	5,746
Gas.....	1	10
Electric.....	148	146
Electric motors run by current generated by establishments..	1,972	10,729

The kind and amount of fuel used are shown in the following statement:

KIND.	Unit.	Quantity.
Anthracite coal.....	Tons.....	46,259
Bituminous coal.....	Tons.....	7,731
Coke.....	Tons.....	715
Wood.....	Cords.....	135
Oil.....	Barrels.....	9,553
Gas.....	1,000 feet.....	33,377

In the following table is given a comparative summary for the District, by selected industries, in 1909, 1904, and 1899:

TABLE I.—COMPARATIVE SUMMARY FOR DISTRICT OF COLUMBIA, BY SELECTED INDUSTRIES: 1909, 1904, AND 1899.

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horsepower.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).							
DISTRICT—All industries.....	1909	518	9,758	475	1,576	7,707	16,563	\$30,553	\$1,846	\$4,989	\$10,245	\$25,989	\$15,043
	1904	482	7,778	473	1,066	6,299	12,592	20,200	1,207	3,658	7,732	18,359	10,627
	1899	491	.....	.....	987	6,155	10,255	17,960	872	3,023	7,475	16,428	8,951
Bread and other bakery products.....	1909	71	1,183	79	129	975	911	1,713	105	702	2,202	3,590	1,388
	1904	77	895	84	40	771	431	1,507	33	492	1,581	2,076	1,005
	1899	80	.....	.....	138	588	.....	945	107	306	1,093	1,940	847
Carriages and wagons and materials.....	1909	6	75	10	6	59	27	134	4	40	47	128	81
	1904	6	50	6	1	52	57	50	2	25	22	75	53
	1899	5	.....	.....	1	42	.....	42	1	19	17	54	37
Confectionery.....	1909	15	157	18	11	128	15	74	7	62	152	284	132
	1904	13	145	17	10	118	20	131	5	42	118	258	140
	1899	12	.....	.....	20	132	.....	106	16	41	161	279	118
Copper, tin, and sheet-iron products.....	1909	17	184	16	16	152	6	112	11	108	160	340	180
	1904	12	183	14	21	148	43	134	10	100	71	228	157
	1899	12	.....	.....	11	161	.....	115	12	94	95	261	156
Flour-mill and gristmill products.....	1909	7	50	7	5	38	556	504	7	16	432	506	74
	1904	7	77	11	5	61	462	193	8	30	563	660	92
	1899	8	.....	.....	18	84	606	197	13	31	535	629	94
Foundry and machine-shop products.....	1909	23	578	27	42	500	571	1,089	42	310	466	1,175	709
	1904	15	337	22	22	293	267	391	22	156	194	443	279
	1899	17	.....	.....	24	375	.....	1,624	29	203	390	951	555
Ice, manufactured.....	1909	7	122	2	27	93	2,683	1,485	27	78	90	350	260
	1904	6	108	1	13	94	2,770	700	12	46	71	261	190
	1899	4	101	2	16	83	1,460	630	14	41	61	183	122
Liquors, malt.....	1909	5	287	1	38	248	3,571	3,049	96	201	425	1,805	1,360
	1904	4	249	.....	39	210	1,695	3,167	93	173	335	1,167	832
	1899	4	228	2	35	191	1,772	2,299	59	141	287	1,340	1,053
Lumber and timber products.....	1909	10	339	12	18	309	501	385	20	189	254	609	355
	1904	6	295	6	18	271	460	273	17	159	144	392	248
	1899	5	.....	.....	15	212	.....	180	12	98	154	331	177
Marble and stone work.....	1909	15	200	17	17	265	72	317	20	180	250	549	299
	1904	17	109	10	4	95	70	234	5	64	54	166	112
	1899	17	.....	.....	1	90	.....	174	1	47	61	160	99
Patent medicines and compounds and druggists' preparations.....	1909	17	103	11	14	78	50	155	18	36	57	384	327
	1904	16	74	4	11	50	45	68	16	23	35	264	229
	1899	16	.....	.....	44	23	.....	112	16	8	31	233	202
Printing and publishing.....	1909	156	2,411	122	724	1,565	1,703	3,807	844	1,101	1,095	4,899	3,804
	1904	145	1,787	120	516	1,151	980	3,111	585	730	601	3,958	3,357
	1899	148	1,897	155	341	1,401	.....	3,163	324	791	525	2,840	2,321
Slaughtering and meat packing.....	1909	5	214	2	77	135	345	1,937	73	90	1,470	1,890	420
	1904	13	107	1	13	93	108	280	19	69	69	615	140
	1899	16	129	7	31	91	.....	206	16	43	981	1,131	150
Tobacco manufactures.....	1909	21	85	21	1	63	3	97	1	32	45	109	64
	1904	25	87	25	2	60	.....	77	1	30	33	98	65
	1899	28	.....	.....	.....	58	.....	45	.....	28	42	108	66
All other industries.....	1909	143	3,671	130	451	3,090	5,549	16,595	571	1,844	3,101	8,671	5,570
	1904	150	3,266	152	291	2,823	5,172	9,884	373	1,513	3,460	7,093	3,638
	1899	149	.....	.....	253	2,624	.....	8,122	257	1,132	3,036	6,900	2,954

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

MANUFACTURES—DISTRICT OF COLUMBIA.

TABLE II.—DETAIL STATEMENT FOR DISTRICT

INDUSTRY.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.										WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY.					Primary horse-power.
		Total.	Proprietors and firm members.	Salaries officers, superintendents, and managers.	Clerks.		Average number.	Wage earners.		Total.	16 and over.		Under 16.				
					Male.	Female.		Number.			Male.	Female.	Male.	Female.			
								Maximum month.	Minimum month.								
1 All industries.....	518	9,758	475	424	853	299	7,707	Oc 7,949	Ja 7,421	(1)	(1)	(1)	(1)	(1)	16,563		
2 Boxes, fancy and paper.....	3	99	2	5	1	3	88	No 120	My 77	113	24	87			34		
3 Brass and bronze products.....	3	10	4				6	Jy 9	Oc 4	9	9			2	10		
4 Bread and other bakery products.....	71	1,183	79	21	82	26	975	Je 997	Ja 946	1,002	941	61			911		
5 Brick and tile.....	5	210	5	4	4	2	195	Jy 249	Ja 89	171	171				911		
6 Carriages and wagons and materials.....	6	75	10	4	1	1	59	Se 71	Fe 47	52	52				27		
7 Confectionery.....	15	157	18		4	7	128	Da 135	Ja 125	132	60	72			15		
8 Copper, tin, and sheet-iron products.....	17	184	15	7	6	3	152	Se 172	Ja 132	165	163		2		6		
9 Electroplating.....	3	11	5				6	No 10	Ap 4	7	6	1			6		
10 Flour-mill and gristmill products.....	7	50	7	4	1		38	Oc 44	Ja 33	44	44				556		
11 Foundry and machine-shop products.....	23	578	27	15	22	5	509	Se 550	Fe 443	518	517	1			571		
12 Fur goods.....	6	52	5	1	1	5	40	De 29	Jy 34	49	22	26	1		2		
13 Furniture and refrigerators.....	6	47	7				39	De 46	Ap 32	46	46				58		
14 Gas, illuminating and heating.....	3	667		18	24	9	616	My 647	Au 572	636	636				1,320		
15 Hand stamps and stencils and brands.....	3	39	1	7	1	8	22	Ja 22	De 22	22	18	1	3		8		
16 Ice, manufactured.....	7	122	2	10	15	2	93	Jy 111	Fe 75	79	79				2,683		
17 Jewelry.....	6	33	6	4		1	22	No 26	Ja 11	26	25		1		5		
18 Liquors, malt.....	5	287	1	8	30		248	Jy 274	Ja 230	240	240				3,571		
19 Lumber and timber products.....	10	339	12	3	14	1	309	Oc 333	Mh 287	308	307		1		501		
20 Marble and stone work.....	15	299	17	13	2	2	265	Se 326	Fe 221	263	263				72		
21 Mattresses and spring beds.....	7	73	10	2	4		57	De 64	Je 54	64	51	13			50		
22 Models and patterns, not including paper patterns.....	6	23	6		1		16	Se 17	Ja 14	16	15	1			12		
23 Patent medicines and compounds and druggists' preparations.....	17	103	11	12	2		78	Mh 87	Jy 68	84	31	52	1		50		
24 Pottery, terra-cotta and fire-clay products.....	4	57	4	4			49	Ap 57	Oc 42	48	48				200		
25 Printing and publishing.....	156	2,411	122	157	423	134	1,565	Mh 1,614	Au 1,478	1,000	1,303	290	7		1,703		
26 Slaughtering and meat packing.....	5	214	2	12	56	9	135	Oc 159	Ja 123	135	138				345		
27 Tobacco manufactures.....	21	85	21	1			63	De 79	Ja 53	79	59	18	2		3		
28 All other industries.....	88	2,350	75	102	158	81	1,934								2,934		

1 No figures given for reasons explained in the Introduction.  
 2 Same number reported for one or more other months.  
 3 Same number reported throughout the year.  
 4 All other industries embrace—

Artificial stone.....	3	Cars and general shop construction and repairs by street-railroad companies.....	2	Flags, banners, regalia, society badges, and emblems.....	1
Awnings, tents, and sails.....	3	Chemicals.....	1	Flavoring extracts.....	1
Baking powders and yeast.....	1	China decorating.....	2	Food preparations.....	4
Baskets, and rattan and willow ware.....	1	Clothing, men's, including shirts.....	2	Gas and electric fixtures and lamps and reflectors.....	1
Brooms.....	2	Coffee and spice, roasting and grinding.....	4	Glass, cutting, staining, and ornamenting.....	1
Canning and preserving.....	2	Dentists' materials.....	1	Glue.....	1
Carpets, rag.....	1	Electrical machinery, apparatus, and supplies.....	2	Grease and tallow.....	1
Cars and general shop construction and repairs by steam-railroad companies.....	2	Fancy articles, not elsewhere specified.....	2	Hats and caps, other than felt, straw, and wool.....	2

MANUFACTURES—DISTRICT OF COLUMBIA.

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OF COLUMBIA, BY INDUSTRIES: 1909.

Capital.	EXPENSES.										Value of products.	Value added by manufacture.
	Total.	Services.			Materials.		Miscellaneous.					
		Officials.	Clerks.	Wage earners.	Fuel and rent of power.	Other.	Rent of factory.	Taxes, including internal revenue.	Contract work.	Other.		
1 \$30,552,623	\$20,476,661	\$935,138	\$910,465	\$4,989,449	\$1,070,228	\$9,176,306	\$329,055	\$568,663	\$304,326	\$2,298,031	\$25,289,136	\$15,042,602
2 43,811	63,342	4,004	1,900	24,289	1,375	25,170	2,140	50	100	4,248	68,300	41,749
3 5,465	14,570	.....	.....	5,270	498	8,259	354	35	.....	154	15,150	6,363
4 1,718,326	3,250,674	31,170	74,052	702,256	54,112	2,147,616	22,749	9,655	1,000	217,064	3,589,554	1,397,825
5 252,181	163,957	5,036	3,652	78,800	38,249	17,541	550	1,603	.....	18,526	181,519	125,729
6 133,720	95,120	2,882	1,084	40,331	924	46,079	1,820	523	.....	1,477	128,107	81,104
7 74,472	233,897	.....	7,246	62,358	3,801	148,360	12,530	301	.....	4,205	283,701	131,540
8 112,413	286,388	6,134	4,529	107,780	1,339	159,053	3,731	409	.....	3,347	340,133	179,741
9 3,775	5,212	.....	.....	2,791	494	850	1,013	19	.....	45	11,100	9,756
10 503,511	461,079	5,725	900	15,513	5,292	426,465	2,070	986	.....	3,523	565,680	73,923
11 1,089,113	865,347	20,710	21,424	310,329	17,966	440,006	11,667	4,880	17,718	12,241	1,175,085	708,713
12 96,250	112,052	1,000	3,312	23,513	450	65,765	7,580	513	.....	4,905	163,965	97,741
13 21,116	49,900	.....	504	25,427	1,049	18,439	3,370	136	.....	909	69,756	50,268
14 9,732,069	1,769,559	82,300	50,920	389,442	612,016	16,170	.....	145,538	.....	473,158	2,305,340	1,677,148
15 64,845	59,873	8,476	4,290	8,120	736	34,028	2,460	238	.....	625	79,050	43,386
16 1,485,295	249,825	17,000	9,712	75,320	57,122	33,375	1,600	4,249	.....	49,357	349,547	259,050
17 12,773	35,235	5,020	520	12,366	552	14,219	2,174	71	.....	313	49,269	34,498
18 3,048,757	1,403,138	51,700	44,471	201,462	40,515	375,447	300	322,316	.....	357,927	1,804,791	1,379,829
19 385,216	486,116	3,920	16,515	189,295	4,010	249,119	8,208	3,015	.....	11,119	600,438	355,400
20 317,337	466,148	17,695	2,775	179,895	1,820	248,022	5,349	1,090	3,777	5,718	548,535	298,693
21 29,896	121,422	2,700	2,592	31,308	1,036	72,373	4,493	190	.....	0,730	144,203	70,794
22 31,718	19,854	.....	480	12,555	636	4,168	928	202	75	810	38,218	33,414
23 155,380	200,055	17,024	1,020	35,719	306	56,909	8,070	725	1,376	73,906	384,463	327,248
24 48,738	37,831	3,900	.....	20,127	6,188	2,200	1,260	373	100	3,683	44,425	39,037
25 3,806,714	3,889,093	308,129	446,082	1,101,048	48,853	1,046,020	87,708	24,810	252,716	483,718	4,899,492	3,804,610
26 1,036,701	1,793,169	26,300	46,436	90,478	17,985	1,451,723	1,200	1,710	16,637	140,700	1,889,575	419,867
27 97,071	92,990	1,300	.....	32,116	847	43,847	2,430	9,062	.....	2,497	109,322	64,628
28 6,250,969	4,236,806	222,917	165,910	1,203,525	142,730	2,015,162	32,689	20,992	10,827	413,036	5,501,418	3,343,517

4 All other industries embrace—Continued.

Instruments, professional and scientific.....	3	Optical goods.....	2	Shipbuilding including boat building.....	2
Iron and steel, steel works and rolling mills.....	1	Paint and varnish.....	1	Soap.....	1
Leather goods.....	2	Paper and wood pulp.....	1	Stereotyping and electrotyping.....	1
Lime.....	1	Paper goods, not elsewhere specified.....	2	Surgical appliances and artificial limbs.....	2
Liquors, distilled.....	2	Paving materials.....	2	Type founding and printing materials.....	2
Millinery and lace goods.....	1	Peanuts, grading, roasting, cleaning, and shelling.....	2	Vinegar and cider.....	1
Mineral and soda waters.....	9	Photo-engraving.....	2	Window shades and fixtures.....	1
Mirrors.....	1	Rubber goods, not elsewhere specified.....	1	Wirework, including wire rope and cabl.....	2

# FLORIDA.

## INDUSTRIES IN GENERAL.

**General character of the state.**—Florida, with a gross area of 58,666 square miles, of which 3,805 represent water surface, ranks twenty-first in size among the states and territories of continental United States. Its population in 1910 was 752,619, as compared with 528,542 in 1900 and 391,422 in 1890. It ranked thirty-third in population among the 49 states and territories both in 1910 and in 1900. The density of population for the entire state in 1910 was 13.7 persons per square mile, as compared with 9.6 in 1900.

Jacksonville, with a population of 57,699, was the only city in the state having over 50,000 inhabitants. There were 3 cities—Key West, Pensacola, and Tampa—each of which had a population of over 10,000 but less than 50,000. There are 19 cities and towns having between 2,500 and 10,000 inhabitants each. Only 29.1 per cent of the entire population of the state resided in incorporated cities and towns each having a population of 2,500 or over, as against 20.3 per cent in 1900.

A number of navigable streams and the extensive coast line of the state afford the manufacturing interests cheap transportation. All four of the cities having over 10,000 inhabitants have extensive docking facilities.

Railroad transportation in the state is good, except in the Everglades region of southern Florida.

**Importance and growth of manufactures.**—Although Florida is not primarily a manufacturing state, its manufactures have shown a steady growth during the last 60 years. In 1849, when the manufacturing establishments in the state numbered 103, with a value of products of \$668,335, employment was given to an average of 991 wage earners, representing 1.1 per cent of the total population of the state. In 1909 there were 2,159 establishments giving employment to an average of 57,473 wage earners, or 7.6 per cent of the total population. During this period the gross value of products per capita of the entire population of the state increased from \$8 to \$97.

From 1849 to 1909 the proportion which the manufactures of the state represent of the total value of products of manufacturing industries in the United States increased more than fourfold. This proportion was less than one-tenth of 1 per cent in 1849 and nearly four-tenths of 1 per cent in 1909.

The following table gives the most important figures relative to all classes of manufactures combined for the state as returned at the censuses of 1909, 1904, and 1899, together with the percentages of increase from census to census:

	NUMBER OR AMOUNT.			PER CENT OF INCREASE.	
	1909	1904	1899	1904-1909	1899-1904
Number of establishments.....	2, 159	1, 413	1, 275	52. 8	10. 8
Persons engaged in manufactures.....	64, 810	46, 985	(1)	37. 9	-----
Proprietors and firm members.....	2, 712	1, 769	(1)	53. 3	-----
Salari ed employees.....	4, 625	3, 125	1, 781	48. 0	75. 5
Wage earners (average number).....	57, 473	42, 091	35, 471	36. 5	18. 7
Primary horsepower.....	89, 816	43, 413	36, 356	106. 9	19. 4
Capital.....	\$65, 291, 000	\$32, 972, 000	\$25, 682, 000	98. 0	28. 4
Expenses.....	63, 218, 000	40, 577, 000	27, 241, 000	55. 8	49. 0
Services.....	27, 937, 000	18, 437, 000	12, 216, 000	51. 5	50. 9
Salaries.....	4, 955, 000	2, 670, 000	1, 300, 000	85. 6	105. 4
Wages.....	22, 982, 000	15, 767, 000	10, 916, 000	45. 8	44. 4
Materials.....	26, 128, 000	16, 532, 000	12, 847, 000	58. 0	28. 7
Miscellaneous.....	9, 153, 000	5, 608, 000	2, 178, 000	63. 2	157. 5
Value of products.....	72, 890, 000	50, 298, 000	34, 184, 000	44. 9	47. 1
Value added by manufacture (value of products less cost of materials).....	46, 762, 000	33, 766, 000	21, 337, 000	38. 5	58. 2

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

In 1909 the state of Florida had 2,159 manufacturing establishments, which gave employment to an average of 64,810 persons during the year and paid out \$27,937,000 in salaries and wages. Of the persons employed, 57,473 were wage earners. These establishments turned out products to the value of \$72,890,000, to produce which materials costing \$26,128,000 were used. The value added by manufacture was thus

\$46,762,000, which figure, as explained in the Introduction, best represents the net wealth created by manufacturing operations during the year.

In general, this table shows that there was a substantial development in the manufacturing industries of Florida during each of the intercensal periods, no decrease being shown in any item for either period. For the five-year period 1904-1909 greater percent-

## MANUFACTURES—FLORIDA.

ages of increase are shown for the number of establishments, average number of wage earners, and total wages paid than for the period 1899-1904. On the other hand, smaller percentages of increase are shown for the value of products and value added by manufacture. It is interesting to note that while the average number of wage earners increased only 36.5 per cent during the period 1904-1909, the amount paid in wages increased 45.8 per cent. During the same period the number of establishments increased 52.8 per cent, while the value of products and the value added by manufacture increased 44.9 per cent and 38.5 per cent.

There are two United States Government establishments in the state, the statistics for which are not included in any tables shown in this report. Both are naval stations doing general repair work. One, located at Pensacola, employed in 1909 an average of 229 wage earners and turned out products valued at \$240,814. The other, located at Key West, gave employment to 72 wage earners and reported a value of products of \$218,502. (See Introduction.)

The relative importance and growth of the leading manufacturing industries of the state are shown in the following table:

INDUSTRY.	Number of establishments.	WAGE EARNERS.		VALUE OF PRODUCTS.		VALUE ADDED BY MANUFACTURE.		PER CENT OF INCREASE. <sup>1</sup>			
		Average number.	Per cent distribution.	Amount.	Per cent distribution.	Amount.	Per cent distribution.	Value of products.		Value added by manufacture.	
								1904-1909	1899-1904	1904-1909	1899-1904
All industries.....	2,159	57,473	100.0	\$72,890,000	100.0	\$46,762,000	100.0	44.9	47.1	38.5	58.2
Tobacco manufactures.....	229	12,280	21.4	21,575,000	29.6	12,890,000	27.6	28.7	56.1	26.8	69.1
Lumber and timber products.....	515	19,227	33.5	20,863,000	28.6	14,624,000	31.3	60.8	12.0	62.6	28.6
Turpentine and rosin.....	593	18,143	31.6	11,938,000	16.4	9,969,000	21.3	20.6	53.0	8.6	74.9
Fertilizers.....	12	589	1.0	3,878,000	5.3	1,003,000	2.1	143.9	218.0	278.5	58.8
Printing and publishing.....	174	905	1.6	1,806,000	2.6	1,432,000	3.1	63.8	38.9	64.8	94.0
Cars and general shop construction and repairs by steam-railroad companies.....	12	1,763	3.0	1,743,000	2.4	1,142,000	2.4	50.8	4.0	86.6	15.0
Bread and other bakery products.....	113	405	0.7	1,292,000	1.8	532,000	1.1	72.7	146.1	60.2	114.2
Ice, manufactured.....	70	461	0.8	1,207,000	1.7	823,000	1.8	76.5	59.8	60.4	71.6
Foundry and machine-shop products.....	36	508	0.9	837,000	1.1	506,000	1.1				
Shipbuilding, including boat building.....	52	482	0.8	697,000	1.0	404,000	1.0				
Gas, illuminating and heating.....	12	210	0.4	585,000	0.8	403,000	0.9	80.3	84.7	73.0	80.6
Boxes, cigar.....	3	370	0.6	504,000	0.7	272,000	0.6	93.1	93.3	56.3	112.2
Carriages and wagons and materials.....	39	230	0.4	453,000	0.6	243,000	0.5				
Brick and tile.....	29	439	0.8	379,000	0.5	206,000	0.6	59.9	75.6	54.7	68.6
Cooperage and wooden goods, not elsewhere specified.....	10	133	0.2	333,000	0.5	116,000	0.2	27.1	48.0	16.0	23.5
Artificial stone.....	32	124	0.2	215,000	0.3	122,000	0.3	117.2		110.3	
Canning and preserving.....	18	188	0.3	213,000	0.3	133,000	0.3	29.1	51.4	32.2	28.1
Patent medicines and compounds and druggists' preparations.....	13	27	(*)	185,000	0.3	106,000	0.2	-56.9		-15.9	
Flour-mill and gristmill products.....	6	11	(*)	164,000	0.2	25,000	0.1	19.7	7.0		13.6
Wood distillation, not including turpentine and rosin.....	7	82	0.1	138,000	0.2	83,000	0.2	62.4		53.7	
Copper, tin, and sheet-iron products.....	8	52	0.1	105,000	0.1	62,000	0.1	-45.3		-48.8	
Confectionery.....	4	31	0.1	83,000	0.1	36,000	0.1	-30.8	275.0	-52.0	294.7
All other industries.....	172	823	1.4	3,637,000	5.0	1,510,000	3.2				

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

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

A few industries predominate greatly in importance, and, as will be seen from Table II, there is on the whole little diversity in the manufacturing activities of the state. Combined, the three leading industries—tobacco manufacturing, lumber and timber, and the turpentine and rosin industries—gave employment in 1909 to an average of 49,650 wage earners, or 86.4 per cent of the total average number reported for all industries in the state. These three industries combined reported a value of products of \$54,376,000, or 74.6 per cent of the total for the state, and a value added by manufacture of \$37,483,000, or 80.2 per cent of the total. The most important industries listed in the table given above, in which they are arranged in the order of the value of products, call for brief consideration.

*Tobacco manufactures.*—This industry is confined practically in Florida to the manufacture of cigars and cigarettes, and in 1904, when this branch of tobacco manufactures was shown separately, Florida held third place in value of products among the states. It is the leading industry of the state when measured by value of products. Proximity to the tobacco-producing islands of the West Indies is chiefly responsible for the extent of the industry. The 229 establishments reported in 1909 gave employment to an average of 12,280 wage earners and manufactured products valued at \$21,575,000, representing 29.6 per cent of the total value of the manufactured products of the state. In 1909, of the total value of the manufactured products of the city of Key West, 93.7 per cent represents the value of tobacco manufactures, while the corresponding percentage for Tampa is 82.7.

*Lumber and timber products.*—This classification includes the operations of logging plants, sawmills, planing mills, and establishments manufacturing

wooden packing boxes. In respect to average number of wage earners and value added by manufacture, this industry, employing an average of 19,227 wage earners and reporting a value of \$14,624,000 as added by manufacturing processes, ranked first in the state in 1909. In value of products it was second, with \$20,863,000.

*Turpentine and rosin.*—Florida reported 47.2 per cent of the total value of the turpentine and rosin produced in the United States in 1909 and 41.4 per cent in 1904, occupying first place among the states in this industry in both years. This industry was third in importance among the industries of the state in 1909 when measured by value of products, employing an average of 18,143 wage earners and reporting products valued at \$11,938,000. The number of establishments is relatively large, as compared with other industries in the state.

*Fertilizers.*—This industry has attained its greatest development in the South Atlantic states, due principally to the existence there of phosphate mines and of the cottonseed-oil mills. In Florida the industry, with 12 establishments, gave employment to an average of 589 wage earners in 1909, and products were reported valued at \$3,878,000.

*Printing and publishing.*—This industry in Florida includes book and job printing, and the printing and publishing of newspapers and periodicals. In 1909 it was fifth in importance among the manufacturing industries of the state when measured by value of products, reporting 174 establishments, which gave employment to an average of 905 wage earners and had products valued at \$1,866,000.

When measured by value added by manufacture instead of by value of products, the lumber industry displaces the tobacco industry from first place. The turpentine and rosin industry holds the same relative rank as when measured by value of products. Printing and publishing and railroad repair shops become fourth and fifth, respectively, and the fertilizer industry, which was fourth when measured by value of products, drops to sixth place.

In addition to the 22 industries presented separately in the table, there were 7 other industries which had a value of products in 1909 in excess of \$250,000. They are included under "All other industries," because in some cases the operations of individual establishments would be disclosed if they were shown separately, while in others the returns do not present properly the true condition of the industry, for the reason that it is more or less interwoven with one or more industries of similar character. These industries are: Coffee and spice, roasting and grinding; food preparations; liquors, distilled; liquors, malt; mineral and soda waters; oil, cottonseed, and cake; and slaughtering and meat packing. Statistics for 1909, for liquors, distilled, and slaughtering and meat packing, however, are presented in Table II.

This table shows also the percentages of increase for these leading industries in respect to value of products and value added by manufacture where these statistics are comparable. The fertilizer industry reported greater rates of increase from 1904 to 1909 both in value of products and in value added by manufacture than any other industry shown separately in the table, the respective figures being 143.9 per cent and 278.5 per cent. Among the other important industries marked increases were also shown; the lumber and timber industry, printing and publishing, the bakeries, and the manufactured-ice industry increasing more than 60 per cent both in value of products and in value added by manufacture.

Only three of the industries shown separately—patent medicines and compounds and druggists' preparations; copper, tin, and sheet-iron products; and confectionery—all of minor importance, reported decreases in value of products and in value added by manufacture.

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

CLASS.	PERSONS ENGAGED IN MANUFACTURES.		
	Total.	Male.	Female.
All classes.....	64,810	61,500	3,310
Proprietors and officials.....	4,614	4,641	73
Proprietors and firm members.....	2,712	2,652	60
Salaried officers of corporations.....	469	462	7
Superintendents and managers.....	1,433	1,427	6
Clerks.....	2,723	2,539	184
Wage earners (average number).....	57,473	54,420	3,053
16 years of age and over.....	56,532	53,520	3,012
Under 16 years of age.....	941	900	41

The average number of persons engaged in manufactures during 1909 was 64,810, of whom 57,473 were wage earners. Of the remainder, 4,614 were proprietors and officials and 2,723 were clerks. Corresponding figures for individual industries will be found in Table II.

The next table shows, for 1909, the percentage of proprietors and officials, clerks, and wage earners, respectively, among the total number of persons employed in manufactures. It covers all industries combined and 10 important industries individually.

Of the total number of persons engaged in all manufacturing industries, 7.1 per cent were proprietors and officials, 4.2 per cent clerks, and 88.7 per cent wage earners. The highest percentage of proprietors and officials shown for any individual industry, 27, is for the bakeries, which are usually very small establishments. The corresponding percentage for establish-

ments engaged in the manufacture of ice, where the processes are simple and require relatively little labor, is 22.6, and for those engaged in printing and publishing, where most of the establishments are small, it is 19. The railroad repair shops show the smallest percentage of proprietors and officials, this being due partly to the fact that the establishments in the industry were under corporate ownership, and so reported no proprietors; and partly to the fact that the higher officials of the railroad companies, who exercise general supervision over them, are not as a rule assigned to this particular branch of the work.

INDUSTRY.	PERSONS ENGAGED IN MANUFACTURES.			
	Total number.	Per cent of total.		
		Proprietors and officials.	Clerks.	Wage earners (average number).
All industries.....	64,810	7.1	4.2	88.7
Bread and other bakery products.....	535	27.0	3.8	69.2
Brick and tile.....	501	9.6	2.8	87.6
Cars and general shop construction and repairs by steam-railroad companies.....	1,862	2.7	3.2	94.1
Foundry and machine-shop products.....	592	10.6	3.5	85.8
Ice, manufactured.....	634	22.6	4.7	72.7
Lumber and timber products.....	20,893	5.4	2.6	92.0
Printing and publishing.....	1,308	19.0	11.8	69.2
Shipbuilding, including boat building.....	563	14.1	1.1	84.9
Tobacco manufactures.....	13,434	3.8	4.7	91.4
Turpentine and rosin.....	20,687	7.6	4.6	87.7
All other industries.....	3,745	15.9	7.5	76.0

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

INDUSTRY.	WAGE EARNERS.			
	Average number. <sup>1</sup>	Per cent of total.		
		16 years of age and over.		Under 16 years of age.
Male.	Female.			
All industries.....	57,473	93.1	5.2	1.6
Bread and other bakery products.....	405	83.7	11.1	5.2
Brick and tile.....	439	94.1		5.9
Cars and general shop construction and repairs by steam-railroad companies.....	1,753	99.6	0.1	0.3
Foundry and machine-shop products.....	508	99.8		0.2
Ice, manufactured.....	461	100.0		
Lumber and timber products.....	19,227	98.4	0.2	1.3
Printing and publishing.....	905	81.8	14.7	3.5
Shipbuilding, including boat building.....	482	99.8		0.2
Tobacco manufactures.....	12,280	78.2	20.1	1.8
Turpentine and rosin.....	18,143	98.2	0.1	1.7
All other industries.....	2,870	86.8	10.6	2.6

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

For all industries combined, 93.1 per cent of the average number of wage earners were males 16 years

of age and over; 5.2 per cent, females 16 years of age and over; and 1.6 per cent, persons under the age of 16. More than four-fifths of the total average number of female wage earners 16 years of age and over were employed in the manufacture of cigars and cigarettes. Printing and publishing is another industry in which women formed a considerable percentage of all the wage earners, namely, 14.7 per cent. The brick and tile and the bakery industries show the largest percentages of wage earners under 16 years of age, 5.9 and 5.2, respectively.

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

CLASS.	PERSONS ENGAGED IN MANUFACTURES.				
	1909		1904		Per cent of increase, 1904-1909.
	Number.	Per cent distribution.	Number.	Per cent distribution.	
Total.....	64,810	100.0	46,985	100.0	37.9
Proprietors and firm members.....	2,712	4.2	1,769	3.8	53.3
Salaried employees.....	4,625	7.1	3,125	6.7	48.0
Wage earners (average number)....	57,473	88.7	42,091	89.6	36.5

Comparable figures are not obtainable for 1899. The table shows a greater percentage of increase in the proprietors and firm members than in the other two classes. This increase is due to the increased number of small establishments shown in 1909. The group of proprietors and firm members and that of salaried employees both show increases in 1909 over 1904 in their proportions of the total number of persons engaged in manufactures.

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

CLASS.	AVERAGE NUMBER OF WAGE EARNERS.					
	1909		1904		1899	
	Number.	Per cent distribution.	Number.	Per cent distribution.	Number.	Per cent distribution.
Total.....	57,473	100.0	42,091	100.0	35,471	100.0
16 years of age and over.....	56,532	98.4	41,754	99.2	35,143	99.1
Male.....	53,520	93.1	39,656	94.2	33,026	94.8
Female.....	3,012	5.2	2,098	5.0	1,517	4.3
Under 16 years of age.....	941	1.6	337	0.8	328	0.9

This table indicates that for all industries combined there has been a marked increase during the 10 years

in the employment of children under 16 years of age, although during the first half of the decade the proportion of children among the total number employed decreased slightly. Only slight changes have taken place in the proportions of adult male and female wage earners, although the actual number of women employed nearly doubled during the decade. In 1909 males 16 years of age and over formed 93.1 per cent of all wage earners, as compared with 94.2 per cent in 1904 and 94.8 per cent in 1899.

**Wage earners employed, by months.**—The table in the next column gives the number of wage earners employed on the 15th of each month during the year 1909 for all industries combined, and gives also the percentage which the number reported for each month is of the greatest number reported for any month. In Table II, page 208, are shown for practically all of the important industries in the state the largest number and also the smallest number of wage earners reported for any month. The figures are for the 15th day, or the nearest representative day, of the month.

There are no seasonal industries of importance in Florida which give employment to a large number of persons at certain periods of the year. On the contrary, all of the more important industries show but little fluctuation in the number of wage earners employed. Canning and preserving; the manufacture of fertilizers; shipbuilding, including boat build-

ing; and wood distillation are more or less seasonal industries in the state, but they do not employ sufficiently large numbers of wage earners to influence greatly the stability of employment for all industries combined. For all industries combined, 56,016 wage earners were reported in January, the month of minimum employment, and 60,661 in November, the month of maximum employment.

MONTH.	WAGE EARNERS.		MONTH.	WAGE EARNERS.	
	Number.	Per cent of maximum.		Number.	Per cent of maximum.
January.....	56,016	92.3	July.....	56,182	92.6
February.....	56,414	93.0	August.....	59,276	92.8
March.....	56,596	93.3	September.....	58,035	95.7
April.....	56,371	92.9	October.....	59,487	98.1
May.....	56,853	93.7	November.....	60,661	100.0
June.....	56,195	92.6	December.....	60,587	99.9

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

INDUSTRY.	AVERAGE NUMBER OF WAGE EARNERS IN ESTABLISHMENTS GROUPED ACCORDING TO PREVAILING HOURS OF WORK PER WEEK.								
	Total.	48 and under.	Between 48 and 54.	54.	Between 54 and 60.	60.	Between 60 and 72.	72.	Over 72.
All industries.....	57,473	13,214	4,379	6,467	1,505	22,766	8,568	316	258
Artificial stone.....	124	7		103		14			
Boxes, cigar.....	370			370					
Bread and other bakery products.....	405	30		22	8	237	69	21	18
Brick and tile.....	439		29		89	239	82		
Canning and preserving.....	188	84		4		100			
Carriages and wagons and materials.....	230	23	52		20	53			
Cars and general shop construction and repairs by steam-railroad companies.....	1,753	350	346	405		307	225		
Cooperage and wooden goods, not elsewhere specified.....	133	10		11		112			
Copper, tin, and sheet-iron products.....	52	36		1		15			
Fertilizers.....	589				12	502	15		
Foundry and machine-shop products.....	508	50	71	144	23	220			
Gas, illuminating and heating.....	210			115	7	4	56		28
Ice, manufactured.....	461	13	3	18	36	69	25	37	210
Lumber and timber products.....	19,227	238	969	440	730	0,307	7,418	95	
Printing and publishing.....	905	408	39	314	93	43	7	1	
Shipbuilding, including boat building.....	482	23	6	164		289			
Tobacco manufactures.....	12,280	3,406	832	3,243	337	3,062	426	9	
Turpentine and rosin.....	18,143	8,344	1,983	635	147	6,859	149	26	
Wood distillation, not including turpentine and rosin.....	32			3		17	46	10	
All other industries.....	892	132	19	323	3	297	50	61	2

It is evident from these figures that for the wage earners employed in the manufacturing industries of Florida there was considerable diversity in the prevailing hours of labor. Of the total number employed, 53.5 per cent were in establishments where the prevailing hours were from 54 to 60 per week; 30.6 per cent, in establishments where they were less than 54 per week; and 15.9 per cent, in establishments where they were more than 60 per week. Two industries are largely responsible for this somewhat unusual distribution.

The lumber industry, in which 39.1 per cent of the total number of wage earners were reported from establishments where the prevailing hours were more than 60 per week, reports 82.2 per cent of the average number of wage earners in the state working where these hours prevail. In the turpentine and rosin industry 46 per cent of the total number were employed in establishments where the prevailing hours were 48 or less per week, and 10.9 per cent where they were between 48 and 54 per week. This industry gave

employment to 58.7 per cent of the average number of wage earners in the state working less than 54 hours per week.

**Location of establishments.**—The next table shows the extent to which the manufactures of Florida are centralized in cities of 10,000 population or over. (See Introduction.) The population in 1900 was used as the basis in making the classification for 1904, as well as for 1899, and the classification for 1909 was made on the basis of the population in 1910.

ITEM.	Year.	Total.	LOCATION OF ESTABLISHMENTS.		PER CENT OF TOTAL.	
			In cities with population of 10,000 and over.	Outside districts.	In cities with population of 10,000 and over.	Outside districts.
Population.....	1910	752,619	138,408	614,211	18.4	81.6
	1900	528,542	79,129	449,413	15.0	85.0
Number of establishments.	1909	2,159	445	1,714	20.6	79.4
	1904	1,413	378	1,035	26.8	73.2
	1899	1,275	229	1,046	18.0	82.0
Average number of wage earners.	1909	57,473	14,376	43,097	25.0	75.0
	1904	42,091	12,163	29,928	28.9	71.1
	1899	35,471	7,544	27,927	21.3	78.7
Value of products..	1909	\$72,880,659	\$30,303,322	\$42,577,337	41.6	58.4
	1904	50,298,290	22,795,162	27,503,128	45.3	54.7
	1899	34,183,509	13,022,947	21,160,562	38.1	61.9
Value added by manufacture.	1909	46,781,380	16,334,944	30,446,436	34.9	65.1
	1904	33,765,851	12,828,374	20,937,477	38.0	62.0
	1899	21,336,322	7,116,431	14,219,891	33.4	66.6

In 1909, with only 18.4 per cent of the total population of the state, the cities having over 10,000 inhabitants reported 41.6 per cent of the total value of manufactured products and 25 per cent of the total average number of wage earners engaged in manufacturing. The table shows that during the decade the manufactures of the cities made a more rapid growth in every respect than did those of the districts outside the cities. Although the relative importance of the manufactures outside of cities of 10,000 inhabitants was less in 1909 than it was in 1899, this group reported for the later year 79.4 per cent of the total number of establishments, 75 per cent of the average number of wage earners, and 58.4 per cent of the total value of products. The large percentages of the total shown for the industries located outside of cities of 10,000 inhabitants or over are the result, in part, of the development of such rural industries as lumbering, the production of turpentine and rosin, and canning and preserving.

The population, for 1910 and 1900, of the four cities which had 10,000 inhabitants or over in 1910, is given in the following statement:

CITY.	1910	1900
Jacksonville.....	57,699	28,429
Tampa.....	37,782	15,839
Pensacola.....	22,982	17,747
Key West.....	19,945	17,114

The relative importance in manufactures of each of the four cities having a population of 10,000 or over in 1910 is shown in the following table, in which the value of products and average number of wage earners are shown separately for 1909, 1904, and 1899:

CITY.	AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.		
	1909	1904	1899	1909	1904	1899
Tampa.....	8,996	5,831	3,919	\$17,653,021	\$11,264,123	\$7,082,693
Jacksonville.....	1,988	2,650	1,238	6,722,276	5,340,264	1,798,607
Key West.....	2,431	2,466	1,809	3,065,364	4,254,024	3,088,225
Pensacola.....	961	1,208	578	1,962,661	1,936,751	1,053,422

From 1899 to 1904 each city showed large increases in value of products and average number of wage earners. During the five-year period 1904-1909, however, the percentages of increase were either greatly reduced or changed to absolute decreases, except in the case of Tampa, for which city both the percentages of increase in question were larger for the later five-year period. Key West showed decreases from 1904 to 1909 in the value of its products and in the average number of wage earners, while Jacksonville and Pensacola showed decreases in the average number of wage earners.

Tampa, although ranking second in population, is easily first when measured either by the average number of wage earners or by value of products. The leading industry in this city is the manufacture of cigars and cigarettes, the value of which amounted to \$14,557,329 in 1909. In Key West also the manufacture of cigars and cigarettes is the leading industry, with a value of products of \$3,716,740. In Jacksonville the leading industry, when measured by value of products, is the manufacture of fertilizers, the value of products in 1909, \$2,511,356, forming 37.4 per cent of the total value of all products reported for that city. Pensacola, which has no single industry which contributes any great proportion of its total value of products, except lumber manufactures (25.4 per cent), shows, upon the whole, a considerable diversity of manufacturing industries.

**Character of ownership.**—The table that follows has for its purpose the presentation of conditions in respect to the character of ownership, or legal organization, of manufacturing enterprises. For all industries combined comparative figures are given covering the censuses of 1909 and 1904. Comparative data for 1899 are not available. Figures for 1909 only are presented for several important industries individually. In order to avoid disclosing the operations of individual concerns it is necessary to omit several important industries from this table and the one following.

The most important distinction shown is that between corporate and all other forms of ownership. For all industries combined, 23.2 per cent of the total number of establishments were under corporate ownership, as against 76.7 per cent under all other forms in

1909. The corresponding figures for 1904 were 21.8 per cent and 78.2 per cent, respectively. In respect to value of products, the corresponding proportions are reversed. In 1909 the establishments operated by corporations reported 62.9 per cent of the total value of products, as against 37.2 per cent for those under all other forms of ownership, while in 1904 the corresponding figures were 54.2 per cent and 45.8 per cent, respec-

tively. The greatest decrease in relative importance from 1904 to 1909 is shown for establishments operated by firms, which represented 32.4 per cent of the total number of establishments in 1909, as compared with 35.1 per cent in 1904. Seven-tenths of the value of products in the tobacco and lumber industries was reported by corporations, while over one-half of the value of turpentine and rosin was reported by firms.

INDUSTRY AND CHARACTER OF OWNERSHIP.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.	INDUSTRY AND CHARACTER OF OWNERSHIP.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.
<b>ALL INDUSTRIES:</b>									
1909.....	2,159	57,473	\$72,889,659	\$46,761,380	<b>Lumber and timber products, 1909.....</b>	<b>515</b>	<b>19,327</b>	<b>\$20,868,018</b>	<b>\$14,623,571</b>
1904.....	1,413	42,091	50,298,290	33,765,851	Individual.....	252	2,849	3,400,787	2,201,973
Individual:					Firm.....	139	2,560	2,830,584	2,059,137
1909.....	951	9,520	10,807,500	7,127,405	Corporation.....	124	13,812	14,595,045	10,272,401
1904.....	600	8,308	8,612,316	6,201,308	Per cent of total.....	100.0	100.0	100.0	100.0
Firm:					Individual.....	48.0	14.8	16.3	15.7
1909.....	700	10,349	16,223,927	11,457,492	Firm.....	27.0	13.3	13.7	14.1
1904.....	496	14,761	14,446,208	10,916,140	Corporation.....	24.1	71.8	70.0	70.2
Corporation:					<b>Printing and publishing, 1909.....</b>	<b>174</b>	<b>905</b>	<b>\$1,865,848</b>	<b>\$1,431,639</b>
1909.....	501	31,580	45,815,852	28,145,223	Individual.....	109	273	476,367	374,391
1904 <sup>1</sup> .....	308	19,024	27,239,766	16,648,315	Firm.....	20	69	103,628	77,218
Other:					Corporation.....	41	500	1,271,895	907,278
1909.....	7	15	42,380	31,200	Other.....	4	6	14,048	12,752
1904 <sup>2</sup> .....					Per cent of total.....	100.0	100.0	100.0	100.0
Per cent of total:					Individual.....	62.8	30.2	25.6	26.2
1909.....	100.0	100.0	100.0	100.0	Firm.....	11.5	7.3	5.6	5.4
1904.....	100.0	100.0	100.0	100.0	Corporation.....	23.8	61.0	68.2	67.6
Individual:					Other.....	2.3	0.7	0.8	0.9
1909.....	44.0	16.0	14.8	15.2	<b>Tobacco manufactures, 1909.....</b>	<b>229</b>	<b>12,280</b>	<b>\$21,575,021</b>	<b>12,889,763</b>
1904.....	43.1	19.7	17.1	18.4	Individual.....	115	805	1,231,991	731,876
Firm:					Firm.....	59	3,210	5,235,957	3,100,487
1909.....	32.4	28.4	22.3	24.5	Corporation.....	55	8,199	15,107,103	8,997,400
1904.....	35.1	35.1	28.7	32.3	Per cent of total.....	100.0	100.0	100.0	100.0
Corporation:					Individual.....	50.2	7.0	5.7	5.7
1909.....	23.2	55.0	62.0	60.2	Firm.....	25.8	26.2	24.3	24.5
1904 <sup>1</sup> .....	21.8	45.2	54.2	49.3	Corporation.....	24.0	66.8	70.0	69.8
Other:					<b>Turpentine and rosin, 1909.....</b>	<b>593</b>	<b>18,143</b>	<b>\$11,937,518</b>	<b>\$9,968,450</b>
1909.....	0.3	( <sup>3</sup> )	0.1	0.1	Individual.....	161	4,255	2,057,523	2,218,034
1904 <sup>2</sup> .....					Firm.....	342	9,892	6,451,526	5,304,630
<b>Ice, manufactured, 1909.....</b>	<b>70</b>	<b>461</b>	<b>\$1,206,874</b>	<b>\$822,834</b>	Corporation.....	90	3,996	2,828,469	2,385,786
Individual.....	18	87	180,276	138,808	Per cent of total.....	100.0	100.0	100.0	100.0
Firm.....	11	73	149,667	104,833	Individual.....	27.2	23.5	22.3	22.2
Corporation.....	41	301	876,931	579,193	Firm.....	57.7	54.5	54.0	53.8
Per cent of total.....	100.0	100.0	100.0	100.0	Corporation.....	15.2	22.0	23.7	23.9
Individual.....	25.7	18.9	14.9	16.9					
Firm.....	15.7	15.8	12.4	12.7					
Corporation.....	58.6	65.3	72.7	70.4					

<sup>1</sup> Includes the group "Other," to avoid disclosure of individual operations.

<sup>2</sup> Includes the group "Corporation."

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

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

This table shows that, in 1909, of the 2,159 establishments only 138, or 6.4 per cent, had a value of products of \$100,000. The 138 establishments, however, employed an average of 26,080 wage earners, or 45.4 per cent of the total number in all establishments, and reported 55.9 per cent of the total

value of products and 52 per cent of the total value added by manufacture.

On the other hand, the very small establishments—that is, those having a value of products of less than \$5,000—constituted a considerable proportion (28.9 per cent) of the total number of establishments, but the value of their products amounted to only 2.1 per cent of the total.

It will be seen from the next table that during the five years from 1904 to 1909 there were decreases in the relative importance measured by value of products of the two groups made up of establishments having products valued at \$20,000 but less than \$100,000 and \$100,000 but less than \$1,000,000, and increases in the two groups made up of the smaller establishments. In 1904 there was no establishment with products exceeding \$1,000,000 in value, while in 1909 there were four such establishments, representing two-tenths of 1 per cent of the total number of establishments, and reporting 6.1 per cent of the total value of products.

## MANUFACTURES—FLORIDA.

INDUSTRY AND VALUE OF PRODUCTS.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.	INDUSTRY AND VALUE OF PRODUCTS.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.
<b>ALL INDUSTRIES:</b>					<b>Lumber and timber products,</b>				
1909.....	2,159	57,473	\$72,889,659	\$46,761,380	1909.....	515	19,227	\$20,863,016	\$14,623,571
1904.....	1,413	42,091	50,298,290	33,765,651	Less than \$5,000.....	147	532	388,844	306,540
Less than \$5,000:					\$5,000 and less than \$20,000.....	175	1,871	1,874,809	1,389,981
1909.....	623	1,387	1,547,102	1,062,701	\$20,000 and less than \$100,000.....	137	5,366	6,202,209	4,195,896
1904.....	388	656	905,782	619,408	\$100,000 and less than \$1,000,000 <sup>2</sup> .....	56	11,458	12,337,064	8,731,154
\$5,000 and less than \$20,000:					Per cent of total.....	100.0	100.0	100.0	100.0
1909.....	871	11,393	9,818,056	7,255,477	Less than \$5,000.....	28.5	2.8	1.9	2.1
1904.....	460	6,375	5,387,987	4,130,772	\$5,000 and less than \$20,000.....	34.0	9.7	9.0	9.5
\$20,000 and less than \$100,000:					\$20,000 and less than \$100,000.....	26.6	27.9	30.0	28.7
1909.....	527	18,613	20,734,942	14,123,526	\$100,000 and less than \$1,000,000 <sup>2</sup> .....	10.9	59.6	59.1	59.7
1904.....	456	18,105	16,819,502	12,853,615	Average per establishment.....		37	\$40,511	\$28,395
\$100,000 and less than \$1,000,000:					<b>Printing and publishing, 1909.</b>	174	905	\$1,865,848	\$1,431,639
1909.....	134	23,500	36,332,890	21,366,589	Less than \$5,000.....	111	152	267,013	210,855
1904.....	100	16,955	27,185,419	16,162,056	\$5,000 and less than \$20,000.....	46	222	404,120	318,097
\$1,000,000 and over:					\$20,000 and less than \$100,000.....	13	234	442,518	335,503
1909.....	4	2,571	4,456,669	2,950,084	\$100,000 and less than \$1,000,000.....	5	297	752,183	561,179
1904.....					Per cent of total.....	100.0	100.0	100.0	100.0
Per cent of total:					Less than \$5,000.....	63.8	16.8	14.3	15.1
1909.....	100.0	100.0	100.0	100.0	\$5,000 and less than \$20,000.....	25.9	24.5	21.7	22.2
1904.....	100.0	100.0	100.0	100.0	\$20,000 and less than \$100,000.....	7.5	25.9	23.7	23.4
Less than \$5,000:					\$100,000 and less than \$1,000,000.....	2.9	32.8	40.3	39.2
1909.....	28.9	2.4	2.1	2.3	Average per establishment.....		5	\$10,723	\$8,228
1904.....	27.5	1.6	1.8	1.8	<b>Tobacco manufactures, 1909.</b>	229	12,280	\$21,575,021	\$12,869,763
\$5,000 and less than \$20,000:					Less than \$5,000.....	105	176	215,259	133,582
1909.....	40.3	19.8	13.5	15.5	\$5,000 and less than \$20,000.....	41	385	482,019	304,711
1904.....	33.2	15.1	10.7	12.2	\$20,000 and less than \$100,000.....	39	1,279	1,005,255	1,118,404
\$20,000 and less than \$100,000:					\$100,000 and less than \$1,000,000 <sup>2</sup> .....	44	10,440	13,971,488	11,393,066
1909.....	24.4	32.4	28.4	30.2	Per cent of total.....	100.0	100.0	100.0	100.0
1904.....	32.3	43.0	33.4	38.1	Less than \$5,000.....	45.9	1.4	1.0	1.0
\$100,000 and less than \$1,000,000:					\$5,000 and less than \$20,000.....	17.9	3.1	2.2	2.4
1909.....	6.2	40.9	49.8	45.7	\$20,000 and less than \$100,000.....	17.0	10.4	8.8	8.7
1904.....	7.1	40.3	54.0	47.9	\$100,000 and less than \$1,000,000 <sup>2</sup> .....	19.2	85.0	87.9	87.9
\$1,000,000 and over:					Average per establishment.....		54	\$94,214	\$56,287
1909.....	0.2	4.5	6.1	6.3	<b>Turpentine and rosin, 1909.</b>	593	18,143	\$11,937,518	\$9,968,450
1904.....					Less than \$5,000.....	30	210	100,402	77,207
Average per establishment:					\$5,000 and less than \$20,000.....	346	7,588	4,364,670	3,610,670
1909.....		27	\$33,761	\$21,659	\$20,000 and less than \$100,000.....	214	9,772	6,983,683	5,886,871
1904.....		30	35,597	23,897	\$100,000 and less than \$1,000,000 <sup>2</sup> .....	3	573	488,763	384,702
<b>Ice, manufactured, 1909.</b>	70	461	\$1,206,874	\$822,834	Per cent of total.....	100.0	100.0	100.0	100.0
Less than \$5,000.....	13	23	40,610	25,575	Less than \$5,000.....	5.1	1.2	0.8	0.8
\$5,000 and less than \$20,000.....	40	188	420,504	310,057	\$5,000 and less than \$20,000.....	58.3	41.8	36.0	36.3
\$20,000 and less than \$100,000 <sup>2</sup> .....	17	250	745,760	486,602	\$20,000 and less than \$100,000.....	36.1	53.9	58.5	56.1
Per cent of total.....	100.0	100.0	100.0	100.0	\$100,000 and less than \$1,000,000.....	0.5	3.2	4.1	3.9
Less than \$5,000.....	18.6	5.0	3.4	3.1	Average per establishment.....		31	\$20,131	\$16,810
\$5,000 and less than \$20,000.....	57.1	40.8	34.8	37.8	<b>Lumber and timber products,</b>				
\$20,000 and less than \$100,000 <sup>2</sup> .....	24.3	54.2	61.8	59.1	1909.....	515	19,227	\$20,863,016	\$14,623,571
Average per establishment.....		7	\$17,241	\$11,755	Less than \$5,000.....	147	532	388,844	306,540

<sup>1</sup> None reported.<sup>2</sup> Includes the group "\$100,000 and less than \$1,000,000."<sup>3</sup> Includes the group "\$1,000,000 and over."

From 1904 to 1909 the average number of wage earners per establishment decreased from 30 to 27; the average value of products from \$35,597 to \$33,761, a decrease of \$1,836; and the average value added by manufacture from \$23,897 to \$21,659, a decrease of \$2,238. In only two of the five industries shown separately in the table, the tobacco manufacturing industry and the lumber industry, is the bulk of the product manufactured in large establishments—that is, those having a value of product of \$100,000 or over.

In some respects, and especially from the standpoint of conditions under which persons engaged in manufactures work, the best classification of establishments to bring out the feature of size is a classification according to the number of wage earners employed. The next table shows, for 1909, such a classification for all industries combined and for 10 important industries individually, and gives not only the number of establishments falling into each group, but also the average number of wage earners employed.

The per cent distribution of the number of establishments is not shown in the table. Of the 2,159 establishments reported for all industries, 5.2 per cent employed no wage earners; 35.8 per cent employed from 1 to 5; 28.4 per cent, from 6 to 20; and 19.7 per cent, from 21 to 50. There were 35 establishments that employed over 250 wage earners, and 8 of these,

3 lumber and timber establishments and 5 cigar factories, employed over 500 each.

Of the total number of wage earners, 45.2 per cent were in establishments employing over 100 wage earners. The single group having the largest number of employees was the group of establishments employing from 21 to 50 wage earners. This group employed 13,670 wage earners, or 23.8 per cent of the total. The group comprising the establishments employing from 101 to 250 wage earners ranked second in respect to the number of wage earners employed, with 12,111, or 21.1 per cent of the total. In the turpentine and rosin industry, which had an average of 31 wage earners per establishment, 50.3 per cent of the establishments employed from 21 to 50 wage earners each, these establishments reporting 53.2 per cent of the total average number of wage earners for the industry. In the railroad repair shops 97.7 per cent of the total average number of wage earners were employed in establishments reporting over 100 wage earners, while 80.9 per cent of the total average number employed in the tobacco factories and 61.2 per cent of those employed in the lumber establishments were reported for this class of establishments. In the bakeries 79.3 per cent of all the wage earners were employed in establishments employing less than 21 wage earners, and in the manufactured-ice industry 76.6 per cent were in such establishments.

INDUSTRY.	ESTABLISHMENTS EMPLOYING—									
	Total.	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.
NUMBER OF ESTABLISHMENTS.										
All industries.....	2,159	112	774	618	426	121	78	27	8	
Bread and other bakery products.....	113	14	79	18	1	1				
Brick and tile.....	29		10	13	4	2				
Cars and general shop construction and repairs by steam-railroad companies.....	12		3	3			2	4		
Foundry and machine-shop products.....	36	2	17	8	7	2				
Ice, manufactured.....	70		47	10	4					
Lumber and timber products.....	515	3	152	203	68	35	40	11	3	
Printing and publishing.....	174	29	112	23	7	3				
Shipbuilding, including boat building.....	52	5	34	10	2		1			
Tobacco manufactures.....	220	22	89	50	18	13	21	11	5	
Turpentine and rosin.....	593	10	18	198	298	57	12			
All other industries.....	336	27	213	68	17	8	2	1		
AVERAGE NUMBER OF WAGE EARNERS.										
All industries.....	57,473	1,963	7,768	13,670	8,074	12,111	8,934	4,935		
Bread and other bakery products.....	405	153	168	30	54					
Brick and tile.....	439	27	157	128	127					
Cars and general shop construction and repairs by steam-railroad companies.....	1,753	19	30		402	1,311				
Foundry and machine-shop products.....	508	53	80	208	167					
Ice, manufactured.....	401	151	202	108						
Lumber and timber products.....	19,227	448	2,397	2,167	2,452	5,972	3,758	2,033		
Printing and publishing.....	905	248	230	192	235					
Shipbuilding, including boat building.....	432	79	90	72		232				
Tobacco manufactures.....	12,230	188	613	634	907	3,431	3,605	2,902		
Turpentine and rosin.....	18,143	67	3,047	9,644	3,603	1,782				
All other industries.....	2,870	539	763	437	529	292	200			
PER CENT OF AVERAGE NUMBER OF WAGE EARNERS.										
All industries.....	100.0	3.4	13.5	33.8	14.0	21.1	15.5	8.6		
Bread and other bakery products.....	100.0	37.8	41.5	7.4	13.3					
Brick and tile.....	100.0	6.2	35.8	29.2	28.0					
Cars and general shop construction and repairs by steam-railroad companies.....	100.0	0.6	1.7		22.9	74.8				
Foundry and machine-shop products.....	100.0	10.4	15.7	40.9	32.9					
Ice, manufactured.....	100.0	32.8	43.8	23.4						
Lumber and timber products.....	100.0	2.3	12.5	11.3	12.8	31.1	19.5	10.6		
Printing and publishing.....	100.0	27.4	25.4	21.2	26.0					
Shipbuilding, including boat building.....	100.0	16.4	20.5	14.9		48.1				
Tobacco manufactures.....	100.0	1.5	5.0	5.2	7.4	27.9	29.4	23.6		
Turpentine and rosin.....	100.0	0.4	16.8	53.2	19.9	9.8				
All other industries.....	100.0	18.8	26.6	17.0	18.4	10.2	9.1			

Expenses.—As stated in the Introduction, the census does not purport to furnish figures that can be used for determining the cost of manufacture and profits. Facts of interest can, however, be brought out concerning the relative importance of the different classes of expenses which make up the total.

The following table shows, in percentages, for 1909, the distribution of expenses among the classes indicated for all industries combined and for certain important industries separately. The figures on which the percentages are based appear in Table II.

INDUSTRY.	PER CENT OF TOTAL EXPENSES REPORTED.			
	Salaries.	Wages.	Materials.	Miscellaneous expenses.
All industries.....	7.8	36.4	41.3	14.5
Bread and other bakery products.....	2.9	18.7	70.6	7.8
Brick and tile.....	11.9	42.2	34.3	11.6
Cars and general shop construction and repairs by steam-railroad companies.....	6.8	58.4	34.5	0.3
Foundry and machine-shop products.....	7.7	39.6	45.7	7.0
Ice, manufactured.....	16.0	25.0	43.0	15.9
Lumber and timber products.....	7.0	41.9	34.7	16.5
Printing and publishing.....	17.0	36.7	30.1	16.3
Shipbuilding, including boat building.....	5.8	47.6	33.3	8.3
Tobacco manufactures.....	7.1	35.7	43.2	14.0
Turpentine and rosin.....	10.8	47.3	21.6	20.2
All other industries.....	6.7	13.7	69.5	10.1

This table shows that, for all industries combined, 41.3 per cent of the total expense was incurred for materials, 44.2 per cent for services—that is, salaries and wages—and but 14.5 per cent for other purposes. As would be expected, these proportions vary greatly in the different industries.

Engines and power.—The next table shows, for all industries combined, the number of engines or other motors, according to their character, employed in generating power (including electric motors operated by purchased current), and their total horsepower at the censuses of 1909, 1904, and 1899. It also shows separately the number and horsepower of electric motors, including those operated by current generated in the manufacturing establishments.

The table indicates a large general increase in the primary power generated, every form of which, except that developed by water motors, which is negligible in amount, showing marked increases for the five-year period 1904-1909. The number of steam engines and their horsepower more than doubled during this period, while during the earlier period the number of engines actually decreased and their horsepower increased at a much lower rate than during the later

period. The more general use of gas engines is shown, the number of such engines reported being 250 in 1909, as compared with 59 in 1904 and 34 in 1899. The figures also show that the practice of renting power is on the increase, 3.8 per cent of the total power being rented in 1909, as against 2.3 per cent in 1904 and four-tenths of 1 per cent in 1899.

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.			PER CENT DISTRIBUTION OF HORSEPOWER.		
	1909	1904	1899 <sup>1</sup>	1909	1904	1899 <sup>1</sup>	1909	1904	1899
<b>Primary power, total.....</b>	<b>2,445</b>	<b>771</b>	<b>898</b>	<b>89,816</b>	<b>48,413</b>	<b>36,356</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Owned.....	2,044	771	893	86,376	42,413	36,194	96.2	97.7	99.6
Steam.....	1,783	702	848	84,508	41,975	35,044	94.1	96.7	96.4
Gas.....	250	59	34	1,497	320	173	1.7	0.7	0.5
Water wheels.....	10	6	11	168	107	116	0.2	0.2	0.3
Water motors.....	1	4	(*)	3	11	(*)	(*)	(*)	(*)
Other.....				200		861	0.2		2.4
Rented.....	401	(*)	(*)	3,440	1,000	162	3.8	2.3	0.4
Electric.....	401	(*)	(*)	3,353	1,000	162	3.7	2.3	0.4
Other.....				87			0.1		
<b>Electric motors</b>	<b>579</b>	<b>45</b>	<b>8</b>	<b>7,563</b>	<b>2,960</b>	<b>302</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Run by current generated by establishments.....	178	45	8	4,210	1,960	140	55.7	66.2	46.4
Run by rented power.....	401	(*)	(*)	3,353	1,000	162	44.3	33.8	53.6

<sup>1</sup> Includes the neighborhood industries and hand trades, omitted in 1904 and 1909.  
\* Not reported.      \* Less than one-tenth of 1 per cent.

The table shows that the use of electric motors for the purpose of applying the power generated within the establishments is also becoming more general, the horsepower of such motors having increased from 140 in 1899 to 1,960 in 1904 and 4,210 in 1909.

Fuel.—Closely related to the question of kind of power employed is that of the fuel used in generating this power, or otherwise as material in the manufacturing processes.

The following table shows the quantity of each kind of fuel used in 1909, for all industries and for certain selected industries:

INDUSTRY.	An-thra-cite coal (tons).	Bitu-minous coal (tons).	Coke (tons).	Wood (cords).	Oil, in-cluding gasoline (bar-rels).	Gas (1,000 feet).
<b>All industries.....</b>	<b>6,582</b>	<b>64,623</b>	<b>4,999</b>	<b>180,197</b>	<b>49,333</b>	<b>37,291</b>
Bread and other bakery products.....	341	334	2	5,166	34	417
Brick and tile.....	80	3,028		30,233	11	
Cars and general shop construction and repairs by steam-rail-road companies.....	18	9,297	1	5,554	6	
Fertilizers.....	290	4,956		702		
Foundry and machine-shop products.....	32	663	1,719	1,747	306	200
Ice, manufactured.....	1,050	33,450		51,133	22	
Lumber and timber products.....		701		1,757	2,085	
Printing and publishing.....	231	46		27	405	2,421
Shipbuilding, including boat building.....	3	1,014	27	300	202	
Tobacco manufactures.....	11	1		90		29,100
Turpentine and rosin.....			250	59,854	237	
All other industries.....	4,526	11,124	3,000	23,689	45,935	5,183

NOTE.—In addition, there were 125 tons of other varieties of fuel reported.

### SUPPLEMENTARY DATA REGARDING IMPORTANT INDUSTRIES.

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

For certain industries the Census Bureau collects, by means of special schedules, details regarding the quantity and value of materials and products which do not appear on the general schedule. Certain data of this character for four important industries in Florida are here presented.

Lumber and timber products.—The following table shows the quantity of rough lumber, lath, and shingles produced by the sawmills of the state in 1909 and 1899:

PRODUCT.		1909	1899
Rough lumber.....	M feet b. m.....	1,201,734	790,373
Lath.....	thousands.....	55,741	21,761
Shingles.....	thousands.....	283,206	177,123

This statement shows the decided growth of this industry in the state during the decade, the production of rough lumber increasing 52 per cent, that of shingles 59.9 per cent, and that of lath 156.2 per cent. In 1909, of the total cut of rough lumber of 1,201,734 M feet board measure, the softwoods constituted 1,196,912 M feet. Of the softwoods cut, 1,110,840 M feet board measure, were yellow pine and 84,811 M feet were cypress. Florida ranked second in the production of cypress in 1909. The hardwood cut amounted to only 4,822 M feet board measure, most of which was oak, yellow poplar, and hickory.

Turpentine and rosin.—The table which follows shows the quantity and value of the turpentine and rosin produced in 1909 and 1904.

PRODUCT.	1909	1904
<b>Total value.....</b>	<b>\$11,937,518</b>	<b>\$9,901,905</b>
Turpentine:		
Gallons.....	13,809,785	12,872,869
Value.....	\$5,847,478	\$6,425,826
Rosin:		
Barrels (280 pounds).....	1,555,749	1,445,902
Value.....	\$6,057,524	\$3,447,418
Dross and other products.....	\$32,516	\$28,661

From 1904 to 1909, notwithstanding an increase of 936,916 gallons in the quantity of turpentine produced, the value decreased \$578,348. During the same period there was an increase of 109,847 barrels in the quantity of rosin, with an increase in value of \$2,610,106. In 1909 the crops worked under the box system numbered 8,809, while 1,114 were reported under the cup system. The greatest number worked under the box system was on trees which had already been worked three years or more, while the greatest number worked under the cup system was on first-year trees.

Fertilizers.—Although more phosphate rock was mined in 1909 in Florida than in all other states combined, when measured by value of products, the state ranked eleventh in the production of fertilizers. The next table shows the quantities and values of products for 1909, 1904, and 1899.

PRODUCT.	1909	1904	1899
Total value.....	\$3,878,296	\$1,590,371	\$500,239
Superphosphates from minerals, bones, etc.:			
Tons.....	37,787	12,800	9,304
Value.....	\$293,315	\$194,000	\$93,940
Ammoniated fertilizers:			
Tons.....	10,946		
Value.....	\$205,538		
Concentrated phosphates:			
Tons.....	8,783	( <sup>1</sup> )	
Value.....	\$99,987	( <sup>1</sup> )	
Complete fertilizers:			
Tons.....	87,376	53,559	15,435
Value.....	\$2,072,108	\$1,330,271	\$377,635
Other fertilizers:			
Tons.....	10,900	5,233	1,315
Value.....	\$321,934	\$65,500	\$25,167
Sulphuric acid:			
Tons.....	8,527		90
Value.....	\$38,373		\$023
Chemicals, not elsewhere specified.....	\$176,509		
All other products.....	\$70,532	\$600	\$2,974

<sup>1</sup> Included with other fertilizers.

This table shows marked increases throughout. Complete fertilizers, representing about two-thirds of the total value of products shown, increased in quantity 247 per cent from 1899 to 1904 and 63.1 per cent during the following five years. Superphosphates increased in quantity 36.3 per cent during the earlier period and 195.2 per cent during the later period, while the corresponding percentages for "Other fertilizers" were 297.9 and 109.4, respectively.

Printing and publishing.—The following statement shows the number of publications and their aggregate circulation, by period of issue, for the three most recent census years:

PERIOD OF ISSUE.	NUMBER OF PUBLICATIONS.			AGGREGATE CIRCULATION PER ISSUE.		
	1909	1904	1899	1909	1904	1899
Total.....	160	154	108	283,992	233,214	112,302
Daily.....	19	20	11	80,300	54,875	27,907
Sunday.....	6	5	11	43,539	30,390	( <sup>1</sup> )
Semiweekly.....	3	3	2	10,300	8,500	6,000
Weekly.....	127	117	76	137,818	112,124	66,295
Monthly.....	5	9	8	7,035	17,325	12,100

<sup>1</sup> Included in circulation of dailies. <sup>2</sup> Includes one triweekly publication.

In 1909, as compared with 1904, a decrease is shown of 1 daily and 4 monthlies, but an increase of 10 weeklies and 1 Sunday. Each class, except monthlies, showed steady increases in circulation for the 10-year period. All of the publications were printed in the English language, except 1 daily and 2 weeklies in Spanish, 1 weekly in German, and 1 weekly in Italian.

Laundries.—Statistics for steam laundries are not included in the general tables or in the totals for manufacturing industries. There were 28 such establishments in the state, 6 in Jacksonville, 4 in Tampa, 3 in Pensacola, and 1 in Key West.

Thirteen of the 28 establishments were under individual ownership, 8 under corporate ownership, and 7 under firm ownership. Nine establishments had receipts for the year's business of less than \$5,000; 11, receipts of \$5,000 but less than \$20,000; and 8, receipts of \$20,000 but less than \$100,000.

The first statement in the next column summarizes the statistics.

Number of establishments.....	28
Persons engaged in the industry.....	638
Proprietors and firm members.....	28
Salaried employees.....	39
Wage earners (average number).....	571
Primary horsepower.....	528

Capital.....	\$461,038
Expenses.....	371,750
Services.....	232,639
Materials.....	77,221
Miscellaneous.....	61,890
Amount received for work done.....	474,088

The number of wage earners employed each month and the per cent which this number represented of the greatest number employed in any month were as follows:

MONTH.	WAGE EARNERS.		MONTH.	WAGE EARNERS.	
	Number.	Per cent of maximum.		Number.	Per cent of maximum.
January.....	500	87.5	July.....	548	84.7
February.....	505	87.3	August.....	553	85.5
March.....	578	89.3	September.....	555	85.8
April.....	562	89.0	October.....	570	88.1
May.....	550	85.0	November.....	620	95.8
June.....	542	83.8	December.....	647	100.0

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

KIND.	Number of engines or motors.	Horse-power.
<b>Primary power, total.....</b>		<b>528</b>
Owned.....	25	473
Steam.....	23	467
Gas.....	2	6
Rented.....	0	0
Electric.....	3	43
Other.....		0

The kind and amount of fuel used are shown in the following statement:

KIND.	Unit.	Quantity.
Bituminous coal.....	Tons.....	1,265
Wood.....	Cords.....	7,826
Oil.....	Barrels.....	244
Gas.....	1,000 feet.....	1,417

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

	Custom sawmills.	Custom gristmills.
Number of establishments.....	5	88
Persons engaged in the industry.....	24	144
Proprietors and firm members.....	10	127
Salaried employees.....	1	2
Wage earners (average number).....	13	15
Primary horsepower.....	155	1,930
Capital.....	\$7,028	\$98,047
Expenses.....	4,229	244,672
Services.....	3,524	4,417
Materials.....	252	1,237,351
Miscellaneous.....	453	2,904
Value of products.....	6,817	1,273,928

<sup>1</sup> Includes estimate of all grain ground. A similar estimate for value of lumber sawed by custom sawmills is impracticable.

## MANUFACTURES—FLORIDA.

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

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employes.	Wage earners (average number).							
Expressed in thousands.													
STATE—All industries.....	1909	2,159	64,810	2,712	4,625	57,473	89,816	\$65,291	\$4,955	\$22,982	\$26,128	\$72,890	\$46,762
	1904	1,413	46,985	1,769	3,125	42,091	43,413	32,972	2,670	15,767	16,532	50,298	33,766
	1899	1,275	.....	.....	1,781	35,471	36,356	25,682	1,300	10,916	12,847	34,184	21,337
Artificial stone.....	1909	32	173	38	11	124	44	167	13	57	93	215	122
	1904	10	64	8	9	47	5	70	8	23	41	99	58
Boxes, cigar.....	1909	3	399	3	26	370	461	333	34	175	232	504	272
	1904	4	244	6	9	229	452	90	10	88	87	261	174
	1899	3	133	2	8	123	.....	41	5	38	53	135	82
Bread and other bakery products.....	1909	113	585	139	41	405	666	594	32	201	760	1,292	532
	1904	85	396	107	5	284	42	223	3	124	416	748	332
	1899	39	202	43	6	153	.....	102	2	49	140	304	155
Brick and tile.....	1909	29	501	21	41	439	2,288	778	39	138	113	379	266
	1904	14	459	15	19	425	903	342	17	109	65	237	172
	1899	17	288	19	11	258	488	196	10	66	33	135	102
Canning and preserving.....	1909	18	221	18	15	188	70	231	11	51	80	213	133
	1904	10	216	12	20	184	56	105	8	28	92	165	73
	1899	9	.....	.....	8	153	.....	84	7	33	52	109	57
Carriages and wagons and materials.....	1909	39	309	51	28	230	354	427	29	136	210	453	243
	1904	31	247	42	9	196	169	222	6	102	124	344	220
	1899	31	.....	.....	3	131	.....	131	2	56	91	198	107
Cars and general shop construction and repairs by steam-railroad companies.	1909	12	1,862	.....	109	1,753	1,035	1,251	118	1,018	601	1,743	1,142
	1904	6	1,156	.....	45	1,111	545	440	45	561	544	1,156	612
	1899	13	991	.....	33	958	433	414	27	480	580	1,112	532
Confectionery.....	1909	4	41	1	9	31	17	23	8	11	47	83	36
	1904	5	41	4	14	23	.....	79	14	9	45	120	75
	1899	3	.....	.....	3	13	.....	13	2	5	13	32	19
Cooperage and wooden goods, not elsewhere specified.	1909	10	153	6	14	133	360	195	18	48	217	333	116
	1904	7	155	7	14	134	170	134	12	43	162	262	100
	1899	10	.....	.....	4	56	.....	68	4	21	96	177	81
Copper, tin, and sheet-iron products.....	1909	8	72	10	10	52	30	89	12	30	43	105	62
	1904	9	113	14	5	94	1	57	3	47	71	192	121
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fertilizers.....	1909	12	710	.....	121	589	1,710	3,758	160	218	2,875	3,878	1,003
	1904	8	304	1	61	242	555	899	63	70	1,325	1,590	265
	1899	7	150	4	29	117	.....	733	27	40	331	500	169
Flour-mill and gristmill products.....	1909	6	21	5	5	11	141	61	6	5	139	164	25
	1904	7	24	8	3	13	167	78	3	6	112	137	25
	1899	6	.....	.....	4	10	.....	64	4	4	106	128	22
Foundry and machine-shop products.....	1909	36	592	33	51	508	725	1,213	56	287	331	637	506
	1904	13	314	14	36	264	342	417	37	138	211	499	288
	1899	20	262	26	22	214	.....	282	19	101	88	321	233
Gas, illuminating and heating.....	1909	12	273	.....	63	210	746	3,551	70	113	182	585	403
	1904	11	129	.....	34	95	522	1,348	26	35	81	314	233
	1899	11	75	.....	28	47	.....	1,156	16	24	41	170	129
Ice, manufactured.....	1909	70	634	61	112	461	8,585	2,459	143	224	384	1,207	823
	1904	47	405	41	69	295	2,943	1,300	60	151	171	684	513
	1899	33	285	24	24	237	2,971	726	21	96	129	428	299
Lumber and timber products.....	1909	515	20,893	589	1,086	19,227	65,097	27,670	1,253	7,551	6,239	20,863	14,624
	1904	242	12,578	253	655	11,070	33,527	12,940	709	4,229	3,977	12,972	8,905
	1899	388	.....	441	10,300	27,901	.....	9,009	365	3,229	4,583	11,578	6,995
Patent medicines and compounds and druggists' preparations.	1909	13	63	10	26	27	4	115	21	9	79	135	106
	1904	9	55	5	24	26	.....	182	22	5	303	429	120
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Printing and publishing.....	1909	174	1,308	163	240	905	794	1,633	245	529	434	1,866	1,432
	1904	155	872	156	173	543	382	1,414	173	271	270	1,139	869
	1899	100	582	113	63	406	.....	530	56	180	155	603	448
Shipbuilding, including boat building.....	1909	52	568	65	21	482	873	1,032	36	289	233	697	464
	1904	13	111	14	5	92	52	64	5	40	37	115	73
	1899	15	159	15	3	141	.....	149	3	74	111	255	144
Tobacco manufactures.....	1909	229	13,434	269	885	12,280	109	11,164	1,434	7,169	8,685	21,575	12,890
	1904	208	10,687	284	746	9,657	23	7,384	765	5,577	6,598	16,794	10,168
	1899	127	.....	266	266	6,370	.....	5,337	356	3,160	4,724	10,736	6,012
Turpentine and rosin.....	1909	593	20,687	1,051	1,493	18,143	1,916	5,511	987	4,316	1,069	11,938	9,969
	1904	406	17,282	668	1,073	15,541	349	2,939	574	3,714	725	9,902	9,177
	1899	366	16,373	552	748	15,073	350	5,527	306	3,049	1,223	6,470	5,247
Wood distillation, not including turpentine and rosin.	1909	7	102	2	19	82	738	264	12	32	55	138	83
	1904	4	44	2	8	34	135	114	10	14	31	85	54
All other industries.....	1909	172	1,209	186	200	823	3,053	2,722	218	375	2,127	3,637	1,510
	1904	104	1,089	108	89	892	2,303	2,071	97	378	1,046	2,084	1,038
	1899	77	.....	.....	77	711	.....	1,111	68	205	289	793	594

<sup>1</sup> Excluding statistics for one establishment, to avoid disclosure of individual operations.  
<sup>2</sup> Figures can not be shown without disclosing individual operations.

MANUFACTURES—FLORIDA.

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

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

INDUSTRY AND CITY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaries employed.	Wage earners (average number).							
Expressed in thousands.													
JACKSONVILLE—All industries.....	1909 1904 1899	114 125 74	2,455 3,046	80 122	387 274 112	1,988 2,650 1,238	5,165	\$7,068 4,837 1,858	\$455 302 101	\$988 1,073 498	\$3,997 2,789 806	\$6,722 5,340 1,799	\$2,725 2,551 993
Artificial stone.....	1909 1904	3 4	45 30	1 4	4 3	40 23	12	32 19	5 2	17 12	18 16	49 42	31 26
Bread and other bakery products.....	1909 1904 1899	9 14 8	144 128 61	9 20 9	13 3 1	122 105 51	75	117 72 25	16 3 1	55 45 15	176 117 39	309 221 73	133 104 34
Carriages and wagons and materials.....	1909 1904 1899	4 4 3	81 61 39	6 7 3	8 1	67 54 35	34	52 43 24	9 1	42 26 16	35 32 14	100 73 46	65 41 34
Fertilizers.....	1909 1904 1899	4 3	457 134		72 32	385 102	855	1,842 407	82 34	131 37	1,935 1,003	2,511 1,164	576 161
Lumber and timber products.....	1909 1904 1899	8 14 6	216 1,164 471	8 19 4	28 40 16	180 1,114 452	865	302 1,592 700	25 55 16	82 408 193	225 404 331	382 1,080 650	157 676 319
Patent medicines and compounds and druggists' preparations.	1909 1904 1899	7 6	30 50	4 3	14 23	12 24		53 177	8 22	5 5	18 300	73 397	55 97
Printing and publishing.....	1909 1904 1899	23 21 15	377 251 204	20 20 13	107 80 30	250 151 155	252	456 743 137	104 90 35	163 83 79	146 98 73	630 379 251	490 231 178
Tobacco manufactures.....	1909 1904 1899	14 14 9	157 163 46	14 17 10	9 7 2	134 130 34		97 33 20	11 7 1	73 64 12	115 54 0	264 199 36	149 145 27
All other industries.....	1909 1904 1899	37 45 33	948 1,065	18 41	132 86 57	798 938 511	3,072	4,117 1,661 902	105 89 47	420 303 183	1,320 765 340	2,308 1,785 741	1,069 1,020 401

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

Key West.....	1909 1904 1899	56 73 53	2,693 2,787	72 103	190 218 60	2,431 2,466 1,809	295	\$1,911 1,512 1,735	\$257 229 82	\$1,397 1,325 1,074	\$1,043 1,806 1,231	\$3,965 4,254 3,088	\$2,322 2,448 1,857
Pensacola.....	1909 1904 1899	60 39 32	1,142 1,354	59 28	122 120 39	961 1,206 678	1,438	2,164 2,147 1,158	131 132 34	473 470 246	955 820 502	1,903 1,937 1,053	1,008 1,117 551
Tampa.....	1909 1904 1899	215 141 70	9,970 6,523	250 161	724 531 179	8,996 5,831 3,910	2,658	11,610 6,014 3,821	1,219 545 238	5,375 3,578 1,601	7,373 4,551 3,366	17,653 11,204 7,033	10,280 6,713 3,717

1 Figures can not be shown without disclosing individual operations.

TABLE II.—DETAIL STATEMENT FOR

INDUSTRY.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.										WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY.					Primary horse-power.
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks.		Wage earners.			Total.	16 and over.		Under 16.				
					Male.	Female.	Average number.	Number.			Male.	Female.	Male.	Female.			
								Maximum month.	Minimum month.								
1 All industries.....	2,159	64,810	2,712	1,902	2,539	184	57,473	No 60,661	Ja 56,016	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	89,816		
2 Artificial stone.....	32	173	38	9	2		124	De 158	Au 94	161	161				44		
3 Boxes, cigar.....	3	399	3	15	10	1	370	Oc <sup>2</sup> 384	Fe 353	375	203	159	8	5	461		
4 Bread and other bakery products.....	113	535	139	19	15	7	405	De 429	Je 382	433	363	48	21	1	686		
5 Brick and tile.....	28	501	21	27	14		439	Ap 489	Fe 373	558	525		33		2,288		
6 Canning and preserving.....	18	221	18	7	7	1	188	De 311	Au 30	491	234	223	18	16	70		
7 Carriages and wagons and materials.....	39	309	51	15	11	2	230	Je 243	De 214	238	230		8		354		
8 Cars and general shop construction and repairs by steam-railroad companies.	12	1,862	50	50	56	3	1,753	Ja 1,886	Au 1,643	1,768	1,701	1	6		1,035		
9 Cars and general shop construction and repairs by street-railroad companies.	6	62		5	1	1	55	Ja 59	Je <sup>2</sup> 53	53	53				63		
10 Confectionery.....	4	41	1	6	2	1	31	De <sup>2</sup> 32	My <sup>2</sup> 30	32	12	14	6		17		
11 Cooperage and wooden goods, not elsewhere specified.	10	153	6	9	4	1	133	Jy 175	Ja 90	103	102		1		360		
12 Copper, tin, and sheet-iron products.....	8	72	10	7	2	1	52	Oc 58	Mh 48	61	60	1			30		
13 Fertilizers.....	12	710		40	67	14	589	Fe 820	Jy 471	591	583	2	6		1,710		
14 Flour-mill and gristmill products.....	6	21	5	3	2		11	No <sup>2</sup> 12	My <sup>2</sup> 11	12	12				141		
15 Foundry and machine-shop products.....	36	592	33	30	15	6	508	No 542	Jy 482	530	529		1		725		
16 Gas, illuminating and heating.....	12	273		26	32	5	210	De 239	Ap 181	240	240				746		
17 Ice, manufactured.....	70	634	61	82	29	1	461	Ap <sup>2</sup> 482	Ja 426	480	480				8,585		
18 Leather goods.....	3	14	4	1		1	8	Ja <sup>2</sup> 8	Jy <sup>2</sup> 8	8	7		1				
19 Liquors, distilled.....	4	37	3	7	2		25	No <sup>2</sup> 34	Mh <sup>2</sup> 8	34	34				310		
20 Lumber and timber products.....	515	20,893	580	549	509	28	19,227	De 20,651	Jy 18,222	21,666	21,328	60	273	15	65,097		
21 Marble and stone work.....	10	66	15	4	3	2	42	Jy 44	Ja <sup>2</sup> 40	43	43						
22 Patent medicines and compounds and druggists' preparations.	13	63	10	8	12	6	27	De <sup>2</sup> 31	Mh <sup>2</sup> 25	31	11	19		1	4		
23 Printing and publishing.....	174	1,308	163	85	120	35	905	De 994	Ap 853	1,007	823	148	32	4	784		
24 Shipbuilding, including boat building.....	52	568	65	15	5	1	482	Oc 597	Mh 376	525	524				873		
25 Slaughtering and meat packing.....	11	59	19	4	4		32	Mh 34	De 28	40	40						
26 Tobacco manufactures.....	229	13,434	269	243	588	49	12,280	No 13,811	Ja 11,497	13,887	10,855	2,785	243	4	109		
27 Turpentine and rosin.....	593	20,687	1,051	531	960	2	18,143	Jy 18,456	Fe 17,556	18,750	18,412	22	309	7	1,916		
28 Wood distillation, not including turpentine and rosin.	7	102	2	11	7		82	De 137	My <sup>2</sup> 48	137	137				738		
29 All other industries <sup>4</sup> .....	138	971	145	89	60	16	661								2,680		

<sup>1</sup> No figures given for reasons explained in the Introduction.  
<sup>2</sup> Same number reported for one or more other months.  
<sup>3</sup> Same number reported for entire year.  
<sup>4</sup> All other industries embrace—

Agricultural implements.....	2	Brass and bronze products.....	1	Dyestuffs and extracts.....	1
Artificial flowers and feathers and plumes.....	1	Brooms.....	2	Fancy articles, not elsewhere specified.....	1
Awnings, tents, and sails.....	3	Brushes.....	1	Food preparations.....	5
Bags, other than paper.....	1	Chemicals.....	1	Furniture and refrigerators.....	4
Baking powders and yeast.....	1	Coffee and spice, roasting and grinding.....	13	Gas and electric fixtures and lamps and reflectors..	1

MANUFACTURES—FLORIDA.

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THE STATE, BY INDUSTRIES: 1909.

Capital.	EXPENSES.										Value of products.	Value added by manufacture.
	Total.	Services.			Materials.		Miscellaneous.					
		Officials.	Clerks.	Wage earners.	Fuel and rent of power.	Other.	Rent of factory.	Taxes, including internal revenue.	Contract work.	Other.		
1 \$65,290,643	\$63,217,979	\$2,695,863	\$2,259,004	\$22,981,573	\$723,587	\$25,404,692	\$221,248	\$1,771,766	\$1,316,755	\$5,843,492	\$72,889,659	\$46,761,380
2 166,915	172,397	10,250	2,312	56,907	924	92,240	1,378	840	252	7,288	214,518	121,348
3 332,899	459,134	21,404	12,144	174,638	5,888	225,678	1,500	1,220	.....	16,662	504,317	272,751
4 593,917	1,075,979	17,984	13,625	200,966	23,977	735,639	17,966	4,594	.....	61,228	1,291,849	532,233
5 778,382	328,093	30,147	8,851	138,389	83,334	29,205	995	2,562	27	34,583	379,021	266,482
6 231,213	149,076	6,252	4,750	50,873	2,882	76,893	1,373	716	.....	5,337	213,920	133,545
7 426,610	406,988	18,348	11,140	135,965	5,068	205,207	10,680	3,365	.....	17,200	452,599	242,324
8 1,250,714	1,742,579	68,276	49,438	1,018,260	35,231	555,610	600	3,060	.....	2,098	1,742,579	1,141,738
9 65,231	67,825	4,060	1,980	30,459	329	28,885	.....	1,047	.....	1,065	67,825	38,611
10 23,460	74,047	4,792	3,050	10,588	1,206	45,377	1,884	118	.....	7,032	83,310	36,727
11 195,413	305,714	14,651	2,940	47,721	3,417	213,226	7,798	494	.....	15,467	332,768	116,125
12 88,509	94,805	10,013	1,555	30,149	743	42,650	820	500	.....	8,270	104,535	61,136
13 3,758,094	3,526,475	87,159	72,923	217,947	28,672	2,545,945	5,160	24,287	.....	244,382	3,878,296	1,003,679
14 61,102	153,658	3,940	1,020	5,050	2,149	137,279	381	627	.....	2,312	164,013	24,500
15 1,213,321	723,698	41,601	13,942	286,754	19,194	311,817	7,108	7,641	.....	35,641	837,411	506,400
16 3,550,624	418,380	40,435	29,761	113,207	118,990	63,420	.....	15,368	3,000	34,193	585,398	402,692
17 2,459,103	892,995	116,061	26,280	223,645	236,634	147,406	2,190	17,530	7,555	114,704	1,206,874	822,834
18 17,199	25,589	1,200	650	4,841	65	16,000	1,920	133	.....	780	20,747	13,682
19 80,330	230,414	7,150	540	11,372	3,028	44,427	.....	165,057	.....	4,840	251,498	204,043
20 27,670,429	18,006,347	808,214	444,512	7,551,369	28,291	6,211,154	11,790	262,135	694,313	1,094,569	20,863,016	14,623,571
21 62,301	81,833	4,550	3,540	30,266	4	35,484	2,072	303	1,000	4,524	111,088	75,000
22 115,476	130,843	11,184	9,778	0,312	85	78,740	2,689	409	.....	24,556	184,549	105,724
23 1,682,771	1,442,744	131,184	113,663	528,909	25,700	408,509	30,484	9,920	31,282	154,087	1,885,848	1,431,639
24 1,031,502	607,685	30,500	5,015	289,467	9,241	223,316	2,553	5,153	118	42,322	696,644	464,037
25 101,512	434,476	8,160	1,950	20,193	482	391,370	996	885	.....	10,440	467,084	75,232
26 11,163,718	20,098,128	611,948	822,061	7,169,309	3,154	8,682,104	78,495	1,072,055	312	1,658,690	21,575,021	12,889,763
27 5,510,987	9,116,757	450,638	536,260	4,316,348	3,472	1,905,596	1,950	120,342	578,666	1,134,455	11,937,518	9,968,450
28 263,925	132,372	9,732	1,780	32,402	10,208	44,507	.....	1,312	.....	32,371	138,146	83,371
29 2,394,866	2,306,948	125,130	62,638	276,260	71,150	1,530,990	19,406	40,817	200	174,268	2,710,862	1,102,713

<sup>4</sup> All other industries embrace—Continued.

Glucose and starch.....	2	Mattresses and spring beds.....	2	Statuary and art goods.....	1
Hand stamps and stencils and brands.....	1	Mineral and soda waters.....	74	Stereotyping and electrotyping.....	1
Kaolin and ground earths.....	1	Oil, cottonseed, and cake.....	5	Vinegar and cider.....	1
Lime.....	3	Paint and varnish.....	2	Wood, turned and carved.....	5
Liquors, malt.....	1	Photo-engraving.....	1		

MANUFACTURES—FLORIDA.

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

INDUSTRY AND CITY.	Number of establishments	PERSONS ENGAGED IN INDUSTRY.									WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY.					Primary horse-power.
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks.		Wage earners (average number).			Total.	16 and over.		Under 16.			
					Male.	Female.	Total.	16 and over.			Under 16.	Male.	Female.	Male.	Female.	
								Male.	Female.							
1 All industries .....	114	2,455	80	138	197	52	1,988	1,836	128	24	2,126	1,958	141	23	4	5,166
2 Artificial stone .....	3	45	1	4	.....	.....	40	40	.....	.....	41	41	.....	.....	.....	12
3 Bread and other bakery products .....	9	144	9	4	8	1	122	87	34	1	121	86	34	1	.....	75
4 Carriages and wagons and materials .....	4	81	6	3	5	.....	67	67	.....	.....	69	69	.....	.....	.....	34
5 Fertilizers .....	4	457	.....	20	41	11	385	383	2	.....	370	368	2	.....	.....	855
6 Lumber and timber products .....	8	216	8	11	16	1	180	177	.....	3	220	217	.....	3	.....	865
7 Patent medicines and compounds and druggists' preparations.	7	30	4	5	5	4	12	6	5	1	15	7	7	.....	1	.....
8 Printing and publishing .....	28	377	20	20	68	19	250	215	33	2	288	256	39	1	2	252
9 Tobacco manufactures .....	14	157	14	6	3	.....	134	101	23	10	156	118	26	11	1	.....
10 All other industries <sup>1</sup> .....	37	948	18	65	51	16	798	760	31	7	836	796	33	7	.....	3,072

<sup>1</sup> All other industries embrace: Bags, other than paper, 1; baking powders and yeast, 1; brooms, 1; canning and preserving, 1; cars and general shop construction and repairs by street-railroad companies, 1; coffee and spice, roasting and grinding, 1; confectionery, 2; cooperage and wooden goods, not elsewhere specified, 1; copper, tin, and sheet-iron products, 1; food preparations, 2; foundry and machine-shop products, 2; furniture and refrigerators, 1; gas, illuminating and heating, 2; hand stamps and

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

1 KEY WEST .....	56	2,093	72	61	122	7	2,431	1,906	508	17	2,743	2,150	574	19	.....	295
2 PENSACOLA .....	60	1,142	59	61	49	12	961	914	26	21	1,025	975	28	22	.....	1,438
3 TAMPA .....	215	9,970	250	226	443	55	8,996	7,188	1,592	216	10,149	8,104	1,798	244	3	2,658

MANUFACTURES—FLORIDA.

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

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

JACKSONVILLE.

	Capital.	EXPENSES.									Value of products.	Value added by manufacture.	
		Total.	Services.			Materials.		Miscellaneous.					
			Officials.	Clerks.	Wage earners.	Fuel and rent of power.	Other.	Rent of factory.	Taxes, including internal revenue.	Contract work.			Other.
1	\$7,067,892	\$6,006,166	\$251,598	\$203,808	\$687,650	\$135,305	\$3,862,028	\$52,774	\$104,200	\$21,624	\$387,170	\$6,722,276	\$2,724,943
2	31,827	42,671	4,740	.....	16,718	165	17,605	720	226	252	2,185	48,884	31,054
3	117,113	272,903	6,920	8,550	54,605	4,502	171,442	1,116	1,076	.....	24,272	309,198	132,954
4	51,610	96,463	4,536	4,756	42,179	1,484	33,530	6,900	333	.....	2,745	106,131	65,117
5	1,841,653	2,271,272	41,864	40,396	130,923	13,305	1,921,170	3,900	16,095	.....	103,524	2,511,356	576,761
6	302,331	353,848	11,665	13,439	82,379	1,050	223,609	3,436	421	.....	17,849	382,399	157,740
7	52,824	42,800	3,484	4,113	5,318	25	17,749	1,020	77	.....	11,005	72,816	55,042
8	455,536	533,097	39,594	64,475	162,901	6,853	139,399	15,363	1,611	21,372	81,430	635,703	489,451
9	97,341	235,087	7,698	2,900	72,753	56	115,097	2,860	14,644	.....	18,950	264,117	148,964
10	4,117,357	2,158,025	131,097	65,050	419,689	107,475	1,222,367	17,450	69,726	.....	125,162	2,397,672	1,067,830

stencils and brands, 1; ice, manufactured, 2; leather goods, 1; liquors, distilled, 1; marble and stone work, 2; mattresses and spring beds, 2; mineral and soda waters, 4; oil, cottonseed, and cake, 1; paint and varnish, 1; photo-engraving, 1; shipbuilding, including boat building, 2; statuary and art goods, 1; stereotyping and electrotyping, 1.

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

1	\$1,910,748	\$3,790,915	\$139,007	\$117,524	\$1,396,519	\$24,131	\$1,619,233	\$19,200	\$186,291	\$200	\$288,810	\$3,965,394	\$2,322,000
2	2,163,922	1,744,303	91,823	39,121	472,517	40,905	913,873	17,181	21,701	34,717	112,405	1,963,651	1,008,883
3	11,610,421	16,281,003	534,183	634,664	5,374,516	94,191	7,278,712	77,783	765,198	7,320	1,464,430	17,653,021	10,230,118

# GEORGIA.

## INDUSTRIES IN GENERAL.

General character of the state.—Georgia, with a gross area of 59,265 square miles, of which 540 represent water surface, is the twentieth state of the Union in point of size. The state had a population of 2,609,121 in 1910, as compared with 2,216,331 in 1900 and 1,837,353 in 1890. It ranked tenth among the 49 states and territories of continental United States as regards population in 1910 and eleventh in 1900. The density of population for the entire state was 44.4 per square mile, the corresponding figure for 1900 being 37.7. Twenty and six-tenths per cent of the entire population of the state resided in incorporated cities and towns having a population of 2,500 inhabitants or over, as against 15.6 per cent in 1900.

Atlanta, with a population of 154,839, and Savannah, with 65,064, were the only cities in the state having a population of over 50,000. There were, however, seven other cities having a population of over 10,000. These cities, named in order of their population, were Augusta, Macon, Columbus, Athens, Waycross, Rome, and Brunswick. Apart from these nine cities, only 6.3 per cent of the population resided in incorporated places of 2,500 or over.

The superior transportation facilities of the state account in part for its rapid industrial growth during the past 50 years. It is traversed by the important railway systems of the South, from which numerous feeders afford easy access to all parts of the state, and it possesses also the advantages of excellent water communication. On the east the Savannah River is navigable as far as Augusta for light-draft vessels, and on the west the Chattahoochee River as far as Columbus, while other streams, such as the Ocmulgee, Altamaha, and Oconee Rivers, are navigable for considerable distances. Savannah is one of the most important seaports of the South, while Brunswick has an excellent harbor and is of growing commercial importance.

Importance and growth of manufactures.—Though Georgia is an agricultural rather than a manufacturing state, it has been for the past 60 years one of the leading and most progressive industrial states of the South. In 1849 the total value of the manufactured products of the state, including the products of neighborhood and hand industries, amounted to only \$7,082,000, while in 1899, exclusive of the value of the products of the neighborhood and hand industries, it was \$94,532,000, or more than thirteen times as great as 50 years previous. The increase during the past decade has been even more remarkable. The value of products of the factory industries of the state had

by 1909 increased to \$202,863,000, a gain of 114.6 per cent, which was far in excess of that in the population of the state. In 1849 an average of 8,368 wage earners, representing nine-tenths of 1 per cent of the total population, were employed in manufacturing industries, while in 1909 an average of 104,588 wage earners, or 4 per cent of the total population, were so engaged. During this period the gross value of products per capita of the total population of the state increased from \$8 to \$78. From 1849 to 1909, however, the proportion which the manufactures of the state represented of the total value of the products of manufacturing industries in the United States increased very little. This proportion was seven-tenths of 1 per cent in 1849, eight-tenths of 1 per cent in 1899, and 1 per cent in 1909. The relative rank of the state in respect to the value of its manufactures has also undergone little change during this period, being twenty-second in 1849 and twenty-fourth both in 1899 and 1909.

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

In 1909 the state of Georgia had 4,792 manufacturing establishments, which gave employment to an average of 118,036 persons during the year and paid out \$43,867,000 in salaries and wages. Of the persons employed, 104,588 were wage earners. These establishments turned out products to the value of \$202,863,000, to produce which materials costing \$116,970,000 were used. The value added by manufacture was thus \$85,893,000, which figure, as explained in the Introduction, best represents the net wealth created by manufacturing operations during the year.

In general, this table brings out the fact that the manufacturing industries of Georgia as a whole showed great development during the 10-year period 1899-1909. Except in the number of establishments and average number of wage earners, the development during the more recent period, 1904-1909, was not as great relatively as during the earlier period, 1899-1904, although the actual increases were more nearly the same. During the later period the number of establishments increased 48.9 per cent and the average number of wage earners 12.8 per cent, while the value of products increased 34.3 per cent and the value added by manufacture 27.4 per cent. As pointed out in the Introduction, it would be improper to infer that

## MANUFACTURES—GEORGIA.

manufactures increased in volume to the full extent indicated by these figures regarding values, since the increase shown is certainly due, in part, to the increase that has taken place in the price of commodities.

More than half of the large increase in number of establishments from 1904 to 1909 was due to the increase in the number of establishments reported for the lumber industry.

	NUMBER OR AMOUNT.			PER CENT OF INCREASE.	
	1909	1904	1899	1904-1909	1899-1904
Number of establishments.....	4,792	3,219	3,015	48.9	6.8
Persons engaged in manufactures.....	118,036	102,365	(1)	15.3	.....
Proprietors and firm members.....	5,141	3,512	(1)	46.4	.....
Salaried employees.....	8,307	6,104	3,815	36.1	60.0
Wage earners (average number).....	104,588	92,749	83,336	12.8	11.3
Primary horsepower.....	298,241	220,419	136,499	35.3	61.5
Capital.....	\$202,778,000	\$135,211,000	\$79,303,000	50.0	70.5
Expenses.....	176,165,000	129,151,000	78,069,000	36.4	65.4
Services.....	43,867,000	33,320,000	23,162,000	31.7	43.9
Salaries.....	9,062,000	5,927,000	3,204,000	52.9	85.0
Wages.....	34,805,000	27,393,000	19,958,000	27.1	37.2
Materials.....	116,970,000	83,625,000	49,856,000	39.9	69.4
Miscellaneous.....	15,328,000	12,206,000	5,551,000	25.6	119.9
Value of products.....	202,863,000	151,040,000	94,532,000	34.3	59.8
Value added by manufacture (value of products less cost of materials).....	85,893,000	67,415,000	45,176,000	27.4	49.2

1 Figures not available.

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

It should be borne in mind, in considering this table,

that the value of products in some of the industries involves a certain amount of duplication due to the use of the product of one establishment in the industry as material for another establishment.

INDUSTRY.	Number of establishments.	WAGE EARNERS.		VALUE OF PRODUCTS.		VALUE ADDED BY MANUFACTURE.		PER CENT OF INCREASE. <sup>1</sup>			
		Average number.	Per cent distribution.	Amount.	Per cent distribution.	Amount.	Per cent distribution.	Value of products.		Value added by manufacture.	
								1904-1909	1899-1904	1904-1909	1899-1904
All industries.....	4,792	104,588	100.0	\$202,863,000	100.0	\$85,893,000	100.0	34.3	59.8	27.4	49.2
Cotton goods, including cotton small wares.....	116	27,803	26.6	45,037,000	23.7	15,988,000	18.6	36.6	90.6	41.0	54.4
Lumber and timber products.....	1,826	22,257	21.3	24,632,000	12.1	16,127,000	18.8	13.8	21.4	7.6	32.1
Oil, cottonseed, and cake.....	142	2,888	2.8	23,641,000	11.7	4,201,000	4.9	74.6	67.9	84.4	24.1
Fertilizers.....	110	2,770	2.6	16,800,000	8.3	5,856,000	6.8	77.6	181.0	99.6	188.5
Flour-mill and gristmill products.....	105	886	0.4	8,000,000	3.9	1,271,000	1.5	-2.2	53.6	39.1	4.0
Turpentine and rosin.....	592	12,787	12.2	6,930,000	3.4	5,679,000	6.6	-10.0	-5.0	-13.3	12.6
Cars and general shop construction and repairs by steam-railroad companies.....	34	6,269	6.0	6,535,000	3.2	3,571,000	4.2	36.9	55.9	31.4	51.9
Printing and publishing.....	442	2,395	2.3	6,400,000	3.2	4,812,000	5.6	60.8	67.2	63.1	66.0
Foundry and machine-shop products.....	107	2,892	2.8	5,808,000	2.9	3,146,000	3.7	10.3	47.5	-2.1	63.5
Hosiery and knit goods.....	22	2,743	2.6	3,233,000	1.6	1,361,000	1.6	39.0	89.0	49.7	91.8
Marble and stone work.....	104	2,099	2.0	2,648,000	1.3	1,855,000	2.2	10.0	183.6	4.1	219.9
Carriages and wagons and materials.....	83	1,059	1.0	2,560,000	1.3	1,193,000	1.4	11.2	74.9	10.4	38.1
Confectionery.....	23	648	0.6	2,172,000	1.1	740,000	0.9	38.3	88.7	23.1	92.0
Leather goods.....	34	683	0.7	2,086,000	1.0	754,000	0.9	0.7	61.9	0.9	68.2
Furniture and refrigerators.....	42	1,406	1.3	2,060,000	1.0	1,177,000	1.4	-2.6	66.1	-3.0	60.4
Clothing, men's, including shirts.....	22	1,242	1.2	1,934,000	0.9	766,000	0.9	30.5	32.2	38.5	19.2
Brick and tile.....	75	1,901	1.8	1,711,000	0.8	1,177,000	1.4	28.0	27.0	21.1	23.2
Bread and other bakery products.....	110	491	0.5	1,532,000	0.8	600,000	0.7	63.8	56.4	60.0	22.1
Gas, illuminating and heating.....	15	459	0.4	1,425,000	0.7	1,057,000	1.2	34.3	60.5	37.3	48.4
Patent medicines and compounds and druggists' preparations.....	50	210	0.2	1,421,000	0.7	979,000	1.1	-7.8	34.4	-19.9	84.9
Leather, tanned, curried, and finished.....	10	396	0.3	1,374,000	0.7	323,000	0.4	-42.3	100.5	-34.7	90.4
Copper, tin, and sheet-iron products.....	25	619	0.6	1,326,000	0.7	619,000	0.7	.....	.....	.....	.....
Liquors, malt.....	4	212	0.2	1,207,000	0.6	791,000	0.9	-6.0	32.0	-19.1	40.3
Ice, manufactured.....	61	494	0.5	1,163,000	0.6	888,000	1.0	35.5	87.7	35.0	99.4
Boxes, fancy and paper.....	8	399	0.3	1,140,000	0.6	354,000	0.4	516.2	51.6	261.2	2.1
Agricultural implements.....	17	552	0.5	1,117,000	0.5	534,000	0.6	7.4	40.9	21.9	46.0
Mattresses and spring beds.....	20	810	0.3	949,000	0.5	437,000	0.5	39.4	196.1	67.4	214.5
Woolen, worsted, and felt goods, and wool hats.....	7	660	0.6	871,000	0.4	428,000	0.5	32.8	33.6	84.5	10.0
Cooperage and wooden goods, not elsewhere specified.....	14	344	0.3	777,000	0.4	307,000	0.4	23.1	-6.9	46.9	-26.9
Pottery, terra-cotta, and fire-clay products.....	27	592	0.6	614,000	0.3	461,000	0.5	27.9	133.0	37.2	104.9
Slaughtering and meat packing.....	8	90	0.1	509,000	0.2	107,000	0.1	58.6	-45.7	4.9	-4.7
Tobacco manufactures.....	50	360	0.3	506,000	0.2	310,000	0.4	70.9	136.8	80.2	132.4
All other industries.....	487	6,352	6.1	21,736,000	10.7	8,024,000	9.3	.....	.....	.....	.....

<sup>1</sup> Percentages are based on figures in Table I; a minus sign (-) denotes decrease. Where the percentages are omitted, comparable figures can not be given.

In addition to the 32 industries presented separately, there are 6 other industries, each of which had a value of products in 1909 in excess of \$500,000. They are included under the head of "All other industries" in the table because in some cases the operations of individual establishments would be disclosed if they were shown separately; in others, the returns do not present properly the true condition of the industry for the reason that it is more or less interwoven with one or more industries of similar character; and for others, comparable statistics for the different census years can not be presented, because the data for prior censuses are not available. These industries are: Bags, other than paper; cordials and sirups; food preparations; iron and steel, steel works and rolling mills; mineral and soda waters; and waste. The 1909 statistics, however, for the manufacture of bags, other than paper, are presented in Table II.

Although a few industries predominate greatly in importance, it will be seen from Table II that there is considerable diversity in the manufacturing activities of the state. The most important industries listed in the table given above, in which they are arranged in order of the value of products, call for brief consideration.

*Textiles.*—The combined value of the textile manufactures, including cotton goods, hosiery and knit goods, and woolen and worsted goods, amounted to \$52,141,000, or 25.7 per cent of the total value of all manufactured products of the state in 1909. Two cordage and twine mills, one silk mill engaged in throwing raw silk into organzine and tram, and one establishment making shoddy were reported, but the statistics can not be shown separately without disclosing the operations of individual establishments. The textile industries of Georgia are confined almost entirely to the cotton-goods branch, which was first in importance among the individual industries of the state, with a value of products in 1909 almost double that of the lumber and timber industry, which ranked next. For a number of years Georgia has produced next to the largest cotton crop of any state, but it ranks only fifth among the states in the value of its cotton manufactures. It is interesting to note that while the percentage of increase in value of products from 1899 to 1904 was greater than that in value added by manufacture, from 1904 to 1909 the increase in the value added by manufacture was the greater. This variation was due partly to the rise in the price of raw cotton during the earlier five-year period. Only one establishment included under this classification was reported as engaged primarily in the manufacture of cotton small wares.

Closely allied to the cotton industry in this state is the manufacture of hosiery and knit goods, which are made almost entirely of cotton materials. Although the value of products of this industry is small when

compared with that of the cotton-goods industry in 1909, it increased 89 per cent from 1899 to 1904 and 39 per cent from 1904 to 1909.

The establishments included under the classification "Woolen, worsted, and felt goods, and wool hats" were engaged primarily in the manufacture of woolen goods, which is a comparatively unimportant industry in this state.

*Lumber and timber products.*—This industry, which is among the oldest manufacturing industries of the state, embraces establishments engaged in logging and also sawmills, planing mills, and wooden packing-box factories. It does not include statistics of mills engaged exclusively in custom sawing for local consumption. The number of establishments reported in 1909 was more than three times as great as the number engaged in any other branch of manufacture in the state.

*Oil, cottonseed, and cake.*—The statistics presented include those for all establishments engaged primarily in extracting oil from the seed or in refining crude cottonseed oil. This industry, which is dependent upon the cotton crop for its raw materials, was not important among the manufactures of the state until after 1890, but since that date its growth has been rapid. The total value of the products increased \$15,577,000, or 193.2 per cent, during the decade 1899-1909.

*Fertilizers.*—All establishments engaged primarily in the manufacture of superphosphates from minerals, bones, etc., ammoniated fertilizers, concentrated phosphate, complete fertilizers, soda products, and other fertilizers are included in this classification. A number of other establishments, chiefly those engaged in the manufacture of cottonseed oil and cake, produce fertilizers as by-products, therefore the figures here given do not fully represent the extent of the fertilizer industry in the state. Georgia contributed about one-sixth of the total value of products of the industry in the United States as reported in 1904 and in 1909. The increased production of fertilizers in the state, the value of which was about five times as great in 1909 as in 1899, was due to several causes, among which were the greater demand for fertilizers, the rapid increase in the manufacture of cottonseed oil in the state, and the increase in the amount of phosphate rock mined in adjoining states.

*Flour-mill and gristmill products.*—This classification includes statistics for all mills grinding wheat, rye, or buckwheat flour, or corn meal, hominy, grits, or feed. It does not, however, include statistics for factories making fancy cereals or other food preparations as a chief product, or for mills doing custom grinding exclusively.

*Turpentine and rosin.*—The presence of extensive pine forests has made this industry one of importance in the state and has also made Georgia one of the lead-

ing states in the production of turpentine and rosin. The decreases shown for this industry are due in part to a depletion of the forests in certain localities of the state and in part to the unsatisfactory prices for turpentine, which tended to discourage its manufacture in 1909.

When measured by value added by manufacture instead of by value of products, a considerable change occurs in the rank of the first six industries in the preceding table. The lumber and timber industry displaces the cotton-goods industry from first place, and the fertilizer industry becomes third in order instead of the cottonseed-oil and cake, which drops to sixth place. The turpentine and rosin industry becomes fourth, while the flour-mill and gristmill industry drops to eleventh place. These changes are due more or less to the fact that in certain industries the manufacturing processes are simpler and carried on to a greater extent by machinery than in others, and for this reason the value added by manufacture is not commensurate with the gross value of products.

This table also shows the percentages of increase in value added by manufacture as well as in value of products for these leading industries where the statistics are comparable. The manufacture of fancy and paper boxes showed a greater rate of increase from 1904 to 1909 in both items than any other of the industries shown separately in the table, namely, 261.2 per cent in value added by manufacture and 516.2 per cent in value of products.

There are some striking differences among the several industries shown separately as regards increases and decreases from 1899 to 1904 and from 1904 to 1909. Six of the industries for which a separate presentation is made show a decrease from 1904 to 1909 in value of products, while five of these industries and one other show a decrease in value added by manufacture. Three industries show a decrease in value of products from 1899 to 1904, and two a decrease in value added by manufacture.

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

The average number of persons engaged in manufactures during 1909 was 118,036, of whom 104,588 were wage earners. Of the remainder, 8,793 were proprietors and officials, and 4,655 were clerks. Corresponding figures for individual industries will be found in Table II.

CLASS.	PERSONS ENGAGED IN MANUFACTURES.		
	Total.	Male.	Female.
All classes.....	118,036	100,245	17,791
Proprietors and officials.....	8,793	8,655	138
Proprietors and firm members.....	5,141	5,026	115
Salaries officers of corporations.....	1,385	1,372	13
Superintendents and managers.....	2,267	2,257	10
Clerks.....	4,655	3,953	702
Wage earners (average number).....	104,588	87,637	16,951
16 years of age and over.....	98,547	83,998	14,549
Under 16 years of age.....	6,041	3,639	2,402

The next table shows, for 1909, the percentage of proprietors and officials, clerks, and wage earners, respectively, among the total number of persons employed in manufactures. It covers all industries combined and 12 important industries individually.

INDUSTRY.	PERSONS ENGAGED IN MANUFACTURES.			
	Total number.	Per cent of total.		
		Proprietors and officials.	Clerks.	Wage earners (average number).
All industries.....	118,036	7.4	3.9	88.6
Carriages and wagons and materials.....	1,252	10.4	5.0	84.6
Cars and general shop construction and repairs by steam-railroad companies.....	6,643	1.6	4.1	94.4
Cotton goods, including cotton small wares	28,495	1.4	1.1	97.6
Fertilizers.....	3,373	7.9	10.0	82.1
Flour-mill and gristmill products.....	3,630	29.2	9.5	61.3
Foundry and machine-shop products.....	3,603	7.7	6.3	86.0
Hosiery and knit goods.....	2,830	1.9	2.8	95.2
Lumber and timber products.....	25,491	11.0	1.7	87.3
Marble and stone work.....	2,391	8.0	4.2	87.8
Oil, cottonseed, and cake.....	3,609	10.4	9.6	80.0
Printing and publishing.....	3,840	18.4	19.4	62.2
Turpentine and rosin.....	14,253	9.4	0.9	89.7
All other industries.....	21,807	9.1	7.2	83.6

Of the total number of persons engaged in all manufacturing industries, 7.4 per cent were proprietors and officials, 3.9 per cent clerks, and 88.6 per cent wage earners. The highest percentage of proprietors and officials shown for any individual industry, 29.2, is in the flour-mill and gristmill industry. In this industry and also in printing and publishing, the majority of the establishments are small and the work is to a large extent done by the proprietors or their immediate representatives, so that the proportion of persons engaged in these industries falling into the class of proprietors and officials is very much higher than for most other industries or for all industries combined. Similar conditions prevail in the lumber industry, but on account of a larger average number of wage earners to an individual establishment it shows a smaller proportion of proprietors and officials than either of the two industries mentioned, although as a matter of fact it has by far the largest number of proprietors and firm members reported for any industry.

The smallest proportions of proprietors and officials are shown for the cotton-goods industry and for steam-railroad repair shops. This condition results from the large number of wage earners to an establishment.

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

INDUSTRY.	WAGE EARNERS.			
	Average number. <sup>1</sup>	Per cent of total.		Under 16 years of age.
		Male.	Female.	
All industries.....	104,588	80.3	13.9	5.8
Carriages and wagons and materials.....	1,050	95.6	0.3	3.1
Cars and general shop construction and repairs by steam-railroad companies.....	6,200	99.5	0.5	( <sup>2</sup> )
Cotton goods, including cotton small wares.....	27,803	52.6	32.4	15.0
Fertilizers.....	2,770	98.7	0.1	1.2
Flour-mill and gristmill products.....	386	98.4	.....	1.6
Foundry and machine-shop products.....	2,802	98.9	( <sup>2</sup> )	1.1
Hosiery and knit goods.....	2,743	28.8	55.1	16.1
Lumber and timber products.....	22,257	98.6	0.4	1.1
Marble and stone work.....	2,009	97.4	.....	2.6
Oil, cottonseed, and cake.....	2,888	99.7	0.1	0.2
Printing and publishing.....	2,305	77.9	15.9	6.2
Turpentine and rosin.....	12,787	98.5	.....	1.5
All other industries.....	18,240	76.0	19.4	3.7

<sup>1</sup> For method of estimating the distribution, by sex and age periods, of the average number in all industries combined, see Introduction.  
<sup>2</sup> Less than one-tenth of 1 per cent.

For all industries combined, 80.3 per cent of the average number of wage earners were males 16 years of age and over; 13.9 per cent, females 16 years of age and over; and 5.8 per cent, children under the age of 16. The larger part of the total number of female wage earners are employed in the cotton-goods industry, in which nearly one-third of the wage earners are women 16 years of age and over. In the hosiery and knit-goods industry the proportion of women is over one-half. These two industries also include the larger part of the total number of wage earners under 16 years of age.

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

Comparable figures are not obtainable for 1899. The table shows a greater percentage of increase in proprietors and firm members than in the other two classes.

CLASS.	PERSONS ENGAGED IN MANUFACTURES.				
	1909		1904		Per cent of increase, 1904-1909.
	Number.	Percent distribution.	Number.	Percent distribution.	
Total.....	118,036	100.0	102,365	100.0	15.3*
Proprietors and firm members.....	5,141	4.4	3,512	3.4	46.4
Salaried employees.....	8,307	7.0	6,104	6.0	36.1
Wage earners (average number).....	104,688	88.6	92,740	90.6	12.8

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

CLASS.	AVERAGE NUMBER OF WAGE EARNERS.					
	1909		1904		1899	
	Number.	Percent distribution.	Number.	Percent distribution.	Number.	Percent distribution.
Total.....	104,588	100.0	92,749	100.0	83,338	100.0
16 years of age and over..	68,547	64.2	35,454	38.1	77,110	92.5
Male.....	83,008	80.3	72,814	78.5	67,039	80.4
Female.....	14,540	13.9	12,640	13.6	10,071	12.1
Under 16 years of age...	6,041	5.8	7,295	7.9	6,228	7.5

This table indicates that for all industries combined there has not been much change in the proportion of male and female wage earners. There has been a small decrease during the 10 years in the employment of children under 16 years of age. In 1909 males 16 years of age and over formed 80.3 per cent of all wage earners, as compared with 78.5 per cent in 1904 and 80.4 per cent in 1899.

**Wage earners employed, by months.**—The next table gives the number of wage earners employed on the 15th of each month during the year 1909 for all industries combined, for the brick and tile, fertilizer, and cottonseed-oil and cake industries, and for all other industries combined; it also gives the percentage which the number reported for each month is of the greatest number reported for any month. In Table II, page 234, are shown, for practically all of the important industries in the state, the largest number, and the smallest number, of employees reported for any month. The figures are those for the 15th day, or the nearest representative day, of the month.

The variation from month to month in the number of wage earners employed in all industries combined was not great. The highest number, 109,839, was reported for December, and the lowest, 98,622, for May.

Of the three industries shown separately in the table, the manufacture of fertilizers and the cottonseed-oil industry show the greatest variations. As comparatively little work is done during the summer months in the cottonseed-oil industry, the largest number of wage earners were employed from September to

March. In the manufacture of fertilizers the bulk of the work is done in the first four months of the year; in the brick and tile industry, in the summer months. Exclusive of the three industries shown separately, the manufactures of the state show a steady increase from May to December in the number of employees.

MONTH.	WAGE EARNERS.									
	All industries.		Brick and tile.		Fertilizers.		Oil, cottonseed, and cake.		All other industries.	
	Number.	Per cent of maximum.	Number.	Per cent of maximum.	Number.	Per cent of maximum.	Number.	Per cent of maximum.	Number.	Per cent of maximum.
January.....	103,477	94.2	1,337	60.9	3,006	43.9	4,424	91.7	94,710	93.6
February.....	107,544	97.9	1,385	63.1	5,619	82.0	4,269	88.5	96,271	95.1
March.....	108,271	98.6	1,770	80.6	6,851	100.0	3,400	70.7	96,241	95.1
April.....	102,881	93.7	2,125	96.8	3,697	54.0	1,994	41.3	95,065	94.0
May.....	98,622	89.8	2,196	100.0	2,003	29.2	1,129	23.4	93,294	92.2
June.....	99,445	90.5	2,196	100.0	1,392	20.3	686	14.2	95,171	94.1
July.....	99,518	90.6	2,130	97.0	1,366	19.9	688	14.3	95,334	94.2
August.....	102,577	93.4	2,163	98.5	1,402	20.5	871	18.1	98,141	97.0
September.....	106,093	96.5	2,110	96.1	1,679	24.5	3,131	64.9	99,113	98.0
October.....	107,837	98.2	1,971	89.8	1,904	27.8	4,642	96.2	99,320	98.2
November.....	109,012	99.2	1,836	83.6	2,076	30.3	4,584	95.0	100,616	98.3
December.....	109,830	100.0	1,593	72.5	2,240	32.7	4,823	100.0	101,183	100.0

Prevailing hours of labor.—In the following table wage earners have been classified according to the hours of labor prevailing in the establishments in which they are employed. In making this classification the average number of wage earners employed

during the year is used, and the number employed in each establishment is classified as a total, according to the hours prevailing in that establishment, even though a few employees work a greater or less number of hours.

INDUSTRY.	AVERAGE NUMBER OF WAGE EARNERS IN ESTABLISHMENTS GROUPED ACCORDING TO PREVAILING HOURS OF WORK PER WEEK.								
	Total.	48 and under.	Between 48 and 54.	54.	Between 54 and 60.	60.	Between 60 and 72.	72.	Over 72.
All industries.....	104,588	7,075	2,948	6,709	7,552	51,424	23,507	3,949	1,424
Agricultural implements.....	552		3		106	443			
Boxes, fancy and paper.....	309				171	138			
Bread and other bakery products.....	491	17		9	65	240	80	34	46
Brick and tile.....	1,901	61	160		167	1,446	53		14
Carriages and wagons and materials.....	1,059	50		14	142	847	3	3	
Cars and general shop construction and repairs by steam-railroad companies.....	6,269		412	4,440	318	1,082	9		8
Clothing, men's, including shirts.....	1,242	724	18	129	248	123			
Confectionery.....	648	35	2	6	406	196		3	
Cooperage and wooden goods, not elsewhere specified.....	344	15	9		81	239			
Copper, tin, and sheet-iron products.....	619	16	64	139	15	376	9		
Cotton goods, including cotton small wares.....	27,803	304	105		519	10,868	15,913	94	
Fertilizers.....	2,770	4	7	7	159	2,146	87	108	252
Flour-mill and gristmill products.....	386	25			71	80	210		
Foundry and machine-shop products.....	2,892	6	308	40	796	1,743			
Furniture and refrigerators.....	1,406		112	128	174	992			
Gas, illuminating and heating.....	459			2	5			36	416
Hosiery and knit goods.....	2,743				1,120	658	965		
Ice, manufactured.....	494					58	34	66	336
Leather goods.....	683			33	159	488	3		
Leather, tanned, curried, and finished.....	306					306			
Liquors, malt.....	212			67	107		38		
Lumber and timber products.....	22,257	865	732	144	875	14,722	4,437	452	30
Marble and stone work.....	2,099	952	125	148	130	744			
Mattresses and spring beds.....	310	18		3	202	87			
Oil, cottonseed, and cake.....	2,888			6		338	359	2,146	39
Patent medicines and compounds and druggists' preparations.....	210	88	16	11	14	81			
Pottery, terra-cotta, and fire-clay products.....	592	3			87	270	232		
Printing and publishing.....	2,395	793	226	604	302	390		1	19
Slaughtering and meat packing.....	90	3		15		24	31	17	
Tobacco manufactures.....	360	28	12	39	70	206	5		
Turpentine and resin.....	12,787	2,764	428	139	109	9,082	241	74	
Woolen, worsted, and felt goods, and wool hats.....	660				15	306	339		
All other industries.....	8,352	305	209	526	990	2,764	689	705	264

It is evident from these figures that for the great majority of wage earners employed in the manufacturing industries of Georgia the prevailing hours of labor range from 60 to 72 a week. Twenty-three and two-tenths per cent of all wage earners were employed in establishments where the prevailing hours were less than 60 a week, and only 1.4 per cent in establishments where they were more than 72 a week.

It will be noted that among the more important in-

dustries the prevailing hours of labor for the lumber and the turpentine and rosin industries are mainly 60 per week, while in the cotton-goods industry the majority of the wage earners work between 60 and 72 hours per week. In the steam-railroad repair shops the prevailing hours were mainly 54 per week.

**Location of establishments.**—The following table shows the extent to which the manufactures of Georgia are centralized in cities of 10,000 population and over. (See Introduction.)

ITEM.	Year.	Aggregate.	CITIES HAVING A POPULATION OF 10,000 AND OVER.								DISTRICTS OUTSIDE OF CITIES HAVING A POPULATION OF 10,000 AND OVER.	
			Total.		10,000 to 25,000.		25,000 to 100,000.		100,000 and over.		Number or amount.	Percent of total.
			Number or amount.	Percent of total.	Number or amount.	Percent of total.	Number or amount.	Percent of total.	Number or amount.	Percent of total.		
Population.....	1910	2,600,121	373,841	14.3	72,233	2.8	140,769	5.0	154,839	5.9	2,235,280	85.7
	1900	2,216,331	234,688	10.6	51,131	2.3	183,557	8.3			1,981,643	89.4
Number of establishments.....	1909	4,792	943	19.7	172	3.6	238	6.0	483	10.1	3,849	80.3
	1899	3,015	509	16.9	151	6.0	358	11.9			2,600	83.1
Average number of wage earners....	1909	104,588	31,983	30.6	8,152	7.8	11,529	11.0	12,302	11.8	72,605	69.4
	1899	83,336	23,471	28.2	7,693	9.2	15,778	18.9			59,865	71.8
Value of products.....	1909	\$202,863,262	\$75,334,309	37.1	\$14,403,331	7.1	\$27,892,970	13.7	\$33,038,002	16.3	\$127,528,953	62.9
	1899	94,592,368	37,344,230	39.5	11,191,072	11.8	26,153,168	27.7			57,133,138	60.5
Value added by manufacture.....	1909	85,893,498	33,256,700	38.7	5,564,072	6.5	11,072,943	12.9	18,619,685	19.3	52,636,798	61.3
	1899	45,176,072	16,425,644	36.4	4,669,365	10.3	11,756,279	26.0			28,750,428	63.6

In 1909 establishments located outside of cities having 10,000 inhabitants or over reported 62.9 per cent of the total value of manufactured products for the state and employed 69.4 per cent of the total average number of wage earners. The figures indicate that while very little relative change took place during the 10 years, yet on the whole the industries of the districts outside have increased somewhat more rapidly in respect to value of products than the industries located in cities of 10,000 and over. This is due largely to the fact that three of the largest and most important industries of Georgia—the manufacture of cotton goods, the lumber, and the fertilizer industries—are, to a large extent, conducted outside of cities having a population of 10,000 or over, and a fourth, the turpentine and rosin industry, wholly outside of such cities, and that all these industries, except the turpentine and rosin industry, show considerable development during the decade.

The increase in the population of different cities has affected the grouping in the table. In 1900 Macon was in the group composed of cities of less than 25,000 inhabitants, but by 1910 its population had increased sufficiently to bring it into the group of cities having from 25,000 to 100,000 inhabitants. Atlanta also has increased in population since 1900, passing the 100,000 limit, so that it is no longer included in the group made up of cities having from 25,000 to 100,000 inhabitants. In 1900 Rome and Waycross had less than 10,000 inhabitants, and so

are not included in the presentation of cities for 1899. This fact makes the relative gains in value of products shown for the districts outside of cities even more conspicuous.

The population for 1910 and 1900 of the nine cities which had 10,000 inhabitants or over in 1910 is given in the following table:

CITY.	1910	1900
Atlanta.....	154,839	89,872
Savannah.....	65,064	54,244
Augusta.....	41,040	39,441
Macon.....	40,665	23,272
Columbus.....	20,554	17,614
Athens.....	14,913	10,245
Waycross.....	14,485	5,919
Rome.....	12,099	7,291
Brunswick.....	10,182	9,081

The relative importance in manufactures of each of the nine cities having a population of 10,000 or over in 1910 is shown in the following table:

CITY.	AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.		
	1909	1904	1899	1909	1904	1899
Atlanta.....	12,302	11,891	7,966	\$33,038,002	\$25,745,650	\$14,418,834
Macon.....	3,720	3,661	2,994	10,702,918	7,297,347	5,451,900
Augusta.....	5,073	4,839	5,563	10,466,407	8,829,305	7,984,824
Columbus.....	4,661	4,434	4,110	8,561,998	7,079,702	5,061,485
Savannah.....	2,727	3,230	2,249	6,733,651	6,340,004	3,750,000
Athens.....	962	599	589	2,111,516	1,158,205	677,687
Rome.....	1,014	(1)	(1)	1,864,257	(1)	(1)
Waycross.....	1,130	(1)	(1)	1,203,393	(1)	(1)
Brunswick.....	385	254	351	672,187	408,723	703,848

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

Every city for which comparative figures are given shows an increase in value of products from 1904 to 1909, and also with the exception of Brunswick, from 1899 to 1904. Atlanta, the first city in population and in manufactures, had in 1909 a value of products 129.1 per cent in excess of the value reported for 1899. There is a great diversity in the manufacturing industries of this city. Printing and publishing is the principal industry and its growth has been rapid, as is shown in Table I. In addition to the industries presented separately in that table for Atlanta, the cotton-goods, flour-mill and gristmill, steam-railroad repair shop, cordial and sirup, and fancy and paper box industries are important, each reporting products in 1909 exceeding \$1,000,000 in value, but the statistics for these industries can not be shown separately without disclosing the operations of individual concerns. There were 27 other industries represented in the city, each of which had a value of products exceeding \$100,000, but which are omitted from Table I for the reason given above or for other reasons similar to those given in explanation of the failure to show certain important industries separately in the table on page 214 for the state.

Macon, Augusta, and Columbus, although smaller cities than Savannah, each exceeded that city in the total value of manufactured products. In each of these cities, with the exception of Macon, the manufacture of cotton goods and of cottonseed oil and cake were the predominating industries, together contributing about one-half of the total value of products reported for both Augusta and Columbus. Both of these industries are important in Macon, but they are outranked in that city by the manufacture of food preparations. Columbus has, in addition to the industries mentioned, extensive flour-mill and gristmill interests.

Savannah is more of a trading center than a manufacturing city, being the most important seaport of the state. Through this city a large part of the manufactured products of the state are exported or sent to other parts of the country. While there is a diversity in its manufacturing interests, none of its industries reach \$1,000,000 in value of products, and only three—steam-railroad repair shops, the manu-

facture of fertilizers, and printing and publishing—report products exceeding \$500,000 in value.

The leading manufactures of Athens are the production of cotton goods and of cottonseed products; those of Rome, the cottonseed-oil and the lumber industries; those of Waycross, steam-railroad repair shops and the construction of steam-railroad cars, by other than railroad companies; and those of Brunswick, tobacco manufactures and the lumber industry.

**Character of ownership.**—The table that follows has for its purpose the presentation of conditions in respect to the character of ownership, or legal organization, of manufacturing enterprises. For all industries combined comparative figures are given covering the censuses of 1909 and 1904. Comparative data for 1899 are not available. Figures for 1909 only are presented for several important industries individually. In order to avoid disclosing the operations of individual concerns it is necessary to omit several important industries from this table and the one following.

The most important distinction shown is that between corporate and all other forms of ownership. For all industries combined, 26.1 per cent of the total number of establishments were in 1909 under corporate ownership, as against 73.9 per cent under all other forms. The corresponding figures for 1904 were 28.9 per cent and 71.1 per cent, respectively. The value of products for establishments under corporate ownership constituted about four-fifths of the total for the state in 1909, as compared with about three-fourths in 1904, indicating a considerable gain. As a general rule, the larger establishments were operated by corporations.

The form of ownership prevailing in the different industries varies considerably. In each industry shown separately in the table, except in the manufacture of turpentine and rosin, a far greater value of products was shown for establishments under corporate ownership than for those under any other form. Measured by number of establishments, however, the individual form of ownership was the most common form in 5 of the 10 industries shown separately in the table, the corporate in 4 and the firm in 1—the turpentine and rosin industry. The largest proportions of establishments under corporate ownership are found in the cottonseed-oil and cotton-goods industries.

INDUSTRY AND CHARACTER OF OWNERSHIP.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.	INDUSTRY AND CHARACTER OF OWNERSHIP.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.
<b>ALL INDUSTRIES:</b>					<b>Flour-mill and gristmill products, 1909—Continued.</b>				
1909.....	4,792	104,588	\$202,863,262	\$85,893,498	Per cent of total.....	100.0	100.0	100.0	100.0
1904.....	3,219	82,749	151,040,455	67,416,951	Individual.....	42.9	15.0	9.5	7.4
Individual:					Firm.....	30.2	18.1	11.4	7.4
1909.....	2,292	10,627	19,355,313	11,840,005	Corporation.....	21.0	68.9	79.1	85.2
1904.....	1,401	15,073	17,808,471	10,883,771	<b>Foundry and machine-shop products, 1909</b>				
Firm:					Individual.....	107	2,892	\$5,808,152	\$3,146,493
1909.....	1,230	15,785	18,328,108	10,862,880	Firm.....	33	224	437,139	274,075
1904.....	834	14,998	18,260,682	10,806,009	Firm.....	22	200	419,583	297,111
Corporation:					Corporation.....	52	2,450	4,961,430	2,574,307
1909.....	1,252	72,207	165,057,980	63,105,154	Per cent of total.....	100.0	100.0	100.0	100.0
1904.....	931	62,077	114,976,572	45,722,830	Individual.....	30.8	7.7	7.5	8.7
Other:					Firm.....	20.0	7.2	7.2	9.4
1909.....	18	69	121,891	85,459	Corporation.....	48.0	85.0	85.2	81.8
1904.....	3	1	4,730	4,341	<b>Lumber and timber products, 1909</b>				
Per cent of total:					Individual.....	1,826	22,257	\$24,632,093	\$16,127,490
1909.....	100.0	100.0	100.0	100.0	Individual.....	1,144	6,730	6,370,663	4,016,432
1904.....	100.0	100.0	100.0	100.0	Firm.....	509	5,008	5,422,801	3,813,779
Individual:					Corporation.....	173	10,519	12,838,629	7,097,270
1909.....	47.8	15.8	9.5	13.8	Per cent of total.....	100.0	100.0	100.0	100.0
1904.....	43.5	16.9	11.8	16.1	Individual.....	62.0	30.2	25.0	28.9
Firm:					Firm.....	27.9	22.5	22.0	28.6
1909.....	25.7	15.1	9.0	12.6	Corporation.....	9.5	47.3	52.1	47.7
1904.....	27.5	18.2	12.1	16.0	<b>Marble and stone work, 1909</b>				
Corporation:					Individual.....	104	2,099	\$2,648,218	\$1,854,818
1909.....	26.1	99.0	81.4	73.5	Individual.....	50	409	574,771	399,584
1904.....	28.9	66.9	76.1	67.8	Firm.....	28	601	628,610	511,135
Other:					Corporation.....	26	1,089	1,444,831	944,099
1909.....	0.4	0.1	0.1	0.1	Per cent of total.....	100.0	100.0	100.0	100.0
1904.....	0.1	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	Individual.....	48.1	19.5	21.7	21.5
<b>Carriages and wagons and materials, 1909</b>					Firm.....	20.9	28.6	23.7	27.6
Individual.....	83	1,059	\$2,560,031	\$1,192,020	Corporation.....	25.0	51.9	54.6	50.0
Individual.....	45	201	476,012	284,983	<b>Oil, cottonseed, and cake, 1909</b>				
Firm.....	17	130	290,763	150,007	Individual.....	142	2,888	\$23,640,779	\$4,200,827
Corporation.....	21	629	1,793,256	748,039	Individual.....	0	48	178,514	36,201
Per cent of total.....	100.0	100.0	100.0	100.0	Corporation.....	130	2,840	23,462,265	4,164,626
Individual.....	54.2	27.5	18.6	23.0	Per cent of total.....	100.0	100.0	100.0	100.0
Firm.....	20.5	13.1	11.4	13.4	Individual.....	4.2	1.7	0.8	0.9
Corporation.....	25.3	60.4	70.0	62.7	Firm.....	95.8	98.3	99.2	99.1
<b>Cotton goods, including cotton small wares, 1909</b>					Corporation.....				
Individual.....	116	27,803	\$48,036,817	\$16,988,078	Per cent of total.....	100.0	100.0	100.0	100.0
Individual.....	8	834	1,863,939	881,803	Individual.....	6.9	3.2	3.9	3.6
Corporation.....	108	26,919	46,172,878	15,406,215	Firm.....	93.1	96.8	96.1	96.4
Per cent of total.....	100.0	100.0	100.0	100.0	<b>Printing and publishing, 1909</b>				
Individual.....	6.9	3.2	3.9	3.6	Individual.....	442	2,395	\$3,400,241	\$4,812,466
Corporation.....	93.1	96.8	96.1	96.4	Individual.....	235	520	982,051	757,817
<b>Fertilizers, 1909</b>					Firm.....	73	275	551,848	376,323
Individual.....	110	2,770	\$16,800,301	\$5,856,150	Corporation.....	123	1,549	4,791,009	3,616,262
Individual.....	11	36	284,545	50,008	Other.....	11	42	73,833	62,004
Firm.....	21	262	1,370,817	504,563	Per cent of total.....	100.0	100.0	100.0	100.0
Corporation.....	78	2,472	15,138,939	5,301,519	Individual.....	53.2	22.1	15.4	15.7
Per cent of total.....	100.0	100.0	100.0	100.0	Firm.....	19.5	11.5	8.5	7.8
Individual.....	10.0	1.3	1.7	0.9	Corporation.....	27.8	64.7	74.9	75.1
Firm.....	19.1	0.5	8.2	8.6	Other.....	2.5	1.8	1.2	1.3
Corporation.....	70.9	89.2	90.1	90.5	<b>Turpentine and rosin, 1909</b>				
<b>Flour-mill and gristmill products, 1909</b>					Individual.....	592	12,787	\$8,938,957	\$5,879,314
Individual.....	105	386	\$7,999,912	\$1,271,375	Individual.....	261	5,092	2,792,941	2,275,014
Individual.....	45	58	769,325	94,074	Firm.....	300	6,973	3,704,182	3,099,271
Firm.....	38	62	614,468	94,261	Corporation.....	25	722	381,834	307,020
Corporation.....	22	266	6,326,119	1,083,040	Per cent of total.....	100.0	100.0	100.0	100.0
					Individual.....	44.1	39.8	40.2	40.0
					Firm.....	51.7	54.5	54.2	54.6
					Corporation.....	4.2	5.0	5.5	5.4

<sup>1</sup> Less than one-tenth of 1 per cent.  
<sup>2</sup> Includes the group "Firm," to avoid disclosure of individual operations.  
<sup>3</sup> Includes the group "Individual," to avoid disclosure of individual operations.

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

In 1909, of the 4,792 establishments in the state only 18, or four-tenths of 1 per cent, had a value of products exceeding \$1,000,000 each. These establishments, however, notwithstanding their small number, gave employment to an average of 10,928 wage earners, or 10.4 per cent of the total number in all establishments, and reported 16.8 per cent of the total value of products and 11.7 per cent of the total value added by manufacture.

On the other hand, the very small establishments—that is, those having a value of products of less than \$5,000—constituted a very considerable proportion (40 per cent) of the total number of establishments, but the

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value of their products amounted to only 2.1 per cent of the total. The great bulk of the manufacturing was carried on in establishments having products valued at not less than \$100,000.

INDUSTRY AND VALUE OF PRODUCTS.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.	INDUSTRY AND VALUE OF PRODUCTS.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.
<b>ALL INDUSTRIES:</b>					<b>Flour-mill and gristmill products, 1909—Continued.</b>				
1909.....	4,792	104,588	\$202,863,262	\$85,893,498	Per cent of total.....	100.0	100.0	100.0	100.0
1904.....	3,219	92,749	151,040,465	67,415,951	Less than \$5,000.....	24.8	6.2	1.0	1.1
Less than \$5,000:					\$5,000 and less than \$20,000.....	32.4	11.9	5.3	4.7
1909.....	1,918	5,303	4,356,414	3,100,327	\$20,000 and less than \$100,000.....	26.7	14.5	12.2	10.2
1904.....	941	2,290	2,385,888	1,761,109	\$100,000 and less than \$1,000,000 <sup>2</sup> .....	16.2	67.4	81.4	84.1
\$5,000 and less than \$20,000:					Average per establishment.....	4		\$78,190	\$12,108
1909.....	1,624	17,719	10,813,566	11,583,613	<b>Foundry and machine-shop products, 1909.....</b>	107	2,892	\$5,808,152	\$3,146,493
1904.....	1,158	13,208	12,675,263	8,748,189	Less than \$5,000.....	25	41	60,306	42,349
\$20,000 and less than \$100,000:					\$5,000 and less than \$20,000.....	34	200	368,298	230,618
1909.....	799	20,431	34,954,524	17,613,878	\$20,000 and less than \$100,000.....	31	718	1,385,449	826,983
1904.....	768	23,492	32,479,382	17,761,551	\$100,000 and less than \$1,000,000.....	17	1,933	3,996,099	2,046,548
\$100,000 and less than \$1,000,000:					Per cent of total.....	100.0	100.0	100.0	100.0
1909.....	433	50,207	112,684,678	43,839,772	Less than \$5,000.....	23.4	1.4	1.0	1.3
1904.....	342	45,988	82,835,728	34,009,584	\$5,000 and less than \$20,000.....	31.8	6.9	6.3	7.3
\$1,000,000 and over:					\$20,000 and less than \$100,000.....	29.0	24.8	23.9	26.3
1909.....	18	10,928	34,054,085	10,055,908	\$100,000 and less than \$1,000,000.....	15.9	66.8	468.8	65.0
1904.....	10	7,762	20,664,194	5,135,518	Average per establishment.....	27		\$5,282	\$20,406
Per cent of total:					<b>Lumber and timber products, 1909.....</b>	1,826	22,257	\$24,632,093	\$16,127,490
1909.....	100.0	100.0	100.0	100.0	Less than \$5,000.....	1,086	3,200	2,261,753	1,665,269
1904.....	100.0	100.0	100.0	100.0	\$5,000 and less than \$20,000.....	501	4,057	4,823,341	3,551,444
Less than \$5,000:					\$20,000 and less than \$100,000.....	182	6,183	7,462,812	4,654,648
1909.....	40.0	5.1	2.1	3.6	\$100,000 and less than \$1,000,000.....	57	7,857	10,084,187	6,256,781
1904.....	29.2	2.5	1.6	2.6	Per cent of total.....	100.0	100.0	100.0	100.0
\$5,000 and less than \$20,000:					Less than \$5,000.....	59.5	14.6	9.2	10.3
1909.....	33.9	16.9	8.3	13.5	\$5,000 and less than \$20,000.....	27.4	22.3	19.6	22.0
1904.....	36.0	14.2	8.4	13.0	\$20,000 and less than \$100,000.....	10.0	27.8	30.3	28.9
\$20,000 and less than \$100,000:					\$100,000 and less than \$1,000,000.....	3.1	35.3	40.9	38.8
1909.....	16.7	19.5	17.2	20.5	Average per establishment.....	12		\$13,490	\$8,832
1904.....	23.9	25.3	21.5	26.3	<b>Marble and stone work, 1909.....</b>	104	2,099	\$2,648,218	\$1,854,818
\$100,000 and less than \$1,000,000:					Less than \$5,000.....	22	66	77,869	50,837
1909.....	9.0	48.0	55.5	50.7	\$5,000 and less than \$20,000.....	53	362	590,211	390,947
1904.....	10.6	49.6	54.8	50.4	\$20,000 and less than \$100,000.....	23	892	937,006	741,539
\$1,000,000 and over:					\$100,000 and less than \$1,000,000.....	6	779	1,078,132	671,495
1909.....	0.4	10.4	16.8	11.7	Per cent of total.....	100.0	100.0	100.0	100.0
1904.....	0.3	8.4	13.7	7.6	Less than \$5,000.....	21.2	3.1	2.9	2.7
Average per establishment:					\$5,000 and less than \$20,000.....	51.0	17.2	21.2	21.1
1909.....		22	\$42,334	\$17,924	\$20,000 and less than \$100,000.....	22.1	42.5	35.4	40.0
1904.....		29	46,922	20,943	\$100,000 and less than \$1,000,000.....	5.8	37.1	40.5	36.2
<b>Carriages and wagons and materials, 1909.....</b>	83	1,059	\$2,560,031	\$1,192,629	Average per establishment.....	20		\$25,464	\$17,835
Less than \$5,000.....	20	35	56,537	35,856	<b>Oil, cottonseed, and cake, 1909.....</b>	142	2,888	\$23,640,779	\$4,200,827
\$5,000 and less than \$20,000.....	38	226	330,904	200,911	\$5,000 and less than \$20,000.....	5	20	69,982	12,696
\$20,000 and less than \$100,000.....	17	342	758,489	399,095	\$20,000 and less than \$100,000.....	74	837	4,492,812	1,026,309
\$100,000 and less than \$1,000,000.....	8	456	1,414,041	555,867	\$100,000 and less than \$1,000,000 <sup>2</sup> .....	63	2,031	19,077,985	3,162,822
Per cent of total.....	100.0	100.0	100.0	100.0	Per cent of total.....	100.0	100.0	100.0	100.0
Less than \$5,000.....	24.1	3.3	2.2	3.0	\$5,000 and less than \$20,000.....	3.5	0.7	0.3	0.3
\$5,000 and less than \$20,000.....	45.8	21.3	12.9	16.8	\$20,000 and less than \$100,000.....	52.1	29.0	19.0	24.4
\$20,000 and less than \$100,000.....	20.5	32.3	29.6	33.5	\$100,000 and less than \$1,000,000 <sup>3</sup> .....	44.4	70.3	80.7	75.3
\$100,000 and less than \$1,000,000.....	9.6	43.1	55.2	46.6	Average per establishment.....	20		\$166,484	\$29,683
Average per establishment.....	13		\$30,844	\$14,369	<b>Printing and publishing, 1909.....</b>	442	2,395	\$6,400,241	\$4,812,466
<b>Cotton goods, including cotton small wares, 1909.....</b>	116	27,803	\$48,036,817	\$15,988,078	Less than \$5,000.....	274	405	624,302	498,837
\$20,000 and less than \$100,000 <sup>1</sup> .....	12	504	632,517	198,331	\$5,000 and less than \$20,000.....	116	534	1,108,837	892,067
\$100,000 and less than \$1,000,000.....	95	18,860	31,821,398	10,453,428	\$20,000 and less than \$100,000.....	41	704	1,808,670	1,328,892
\$1,000,000 and over.....	9	8,439	15,582,902	5,336,319	\$100,000 and less than \$1,000,000.....	11	752	2,858,432	2,092,670
Per cent of total.....	100.0	100.0	100.0	100.0	Per cent of total.....	100.0	100.0	100.0	100.0
\$20,000 and less than \$100,000 <sup>1</sup> .....	10.3	1.8	1.3	1.2	Less than \$5,000.....	62.0	16.9	9.8	10.4
\$100,000 and less than \$1,000,000.....	81.9	67.8	66.2	65.4	\$5,000 and less than \$20,000.....	26.2	22.3	17.3	18.5
\$1,000,000 and over.....	7.8	30.4	32.4	33.4	\$20,000 and less than \$100,000.....	9.3	29.4	28.3	27.6
Average per establishment.....	240		\$414,110	\$137,828	\$100,000 and less than \$1,000,000.....	2.5	31.4	44.7	43.5
<b>Fertilizers, 1909.....</b>	110	2,770	\$16,809,301	\$5,856,150	Average per establishment.....	5		\$14,480	\$10,888
\$5,000 and less than \$20,000 <sup>2</sup> .....	24	56	311,921	64,280	<b>Turpentine and rosin, 1909.....</b>	592	12,787	\$6,938,957	\$5,679,314
\$20,000 and less than \$100,000.....	48	313	2,188,146	508,016	Less than \$5,000.....	107	847	358,588	289,793
\$100,000 and less than \$1,000,000 <sup>3</sup> .....	38	2,401	14,300,234	5,283,854	\$5,000 and less than \$20,000.....	416	8,696	4,604,753	3,756,659
Per cent of total.....	100.0	100.0	100.0	100.0	\$20,000 and less than \$100,000.....	69	3,244	1,976,611	1,626,862
\$5,000 and less than \$20,000 <sup>2</sup> .....	21.8	2.0	1.9	1.1	Per cent of total.....	100.0	100.0	100.0	100.0
\$20,000 and less than \$100,000.....	43.6	11.3	13.0	8.7	Less than \$5,000.....	18.1	6.6	5.2	5.1
\$100,000 and less than \$1,000,000 <sup>3</sup> .....	34.5	86.7	85.1	90.2	\$5,000 and less than \$20,000.....	70.3	68.0	66.4	66.1
Average per establishment.....	25		\$152,730	\$53,238	\$20,000 and less than \$100,000.....	11.7	25.4	28.5	28.8
<b>Flour-mill and gristmill products, 1909.....</b>	105	388	\$7,999,912	\$1,271,375	Average per establishment.....	22		\$11,721	\$9,593
Less than \$5,000.....	26	24	82,068	14,105	<b>Flour-mill and gristmill products, 1909—Continued.</b>				
\$5,000 and less than \$20,000.....	34	46	424,429	59,405	Per cent of total.....	100.0	100.0	100.0	100.0
\$20,000 and less than \$100,000.....	28	58	979,532	129,060	Less than \$5,000.....	24.8	6.2	1.0	1.1
\$100,000 and less than \$1,000,000 <sup>3</sup> .....	17	260	6,513,883	1,068,805	\$5,000 and less than \$20,000.....	32.4	11.9	5.3	4.7
					\$20,000 and less than \$100,000.....	26.7	14.5	12.2	10.2
					\$100,000 and less than \$1,000,000 <sup>2</sup> .....	16.2	67.4	81.4	84.1
					Average per establishment.....	4		\$78,190	\$12,108

<sup>1</sup> Includes the group "\$5,000 and less than \$20,000."

<sup>2</sup> Includes the group "Less than \$5,000."

<sup>3</sup> Includes the group "\$1,000,000 and over."

It will be seen from the above table that during the five years from 1904 to 1909 there was a considerable increase as measured by value of products in the relative importance of the largest establishments—those reporting products of not less than \$1,000,000 in value—and in the relative numerical importance of the smallest establishments—those reporting products of less than \$5,000 in value.

The average value of products per establishment decreased from \$46,922 in 1904 to \$42,334 in 1909, and the value added by manufacture from \$20,943 to \$17,924. The average number of wage earners per establishment also shows a decrease. These decreases were due mainly to the large increase in the relative number of small establishments reported. The table shows further that when the size of establishments is measured by the average value of products per establishment, the manufacture of cotton goods, cottonseed oil, and fertilizers is conducted chiefly in the larger establishments, while all the other industries shown

separately are conducted mainly in comparatively small establishments.

In some respects, and especially from the standpoint of conditions under which persons engaged in manufactures work, the best classification of establishments to bring out the feature of size is a classification according to the number of wage earners employed. The following table shows, for 1909, such a classification for all industries combined and for 12 important industries individually, and gives not only the number of establishments falling into each group but also the average number of wage earners employed:

INDUSTRY.	Total.	ESTABLISHMENTS EMPLOYING—								
		No wage earners.	1 to 5 wage earners.	6 to 20 wage earners.	21 to 50 wage earners.	51 to 100 wage earners.	101 to 250 wage earners.	251 to 500 wage earners.	501 to 1,000 wage earners.	Over 1,000 wage earners.
NUMBER OF ESTABLISHMENTS.										
All Industries.....	4,792	231	2,163	1,426	569	210	133	42	15	3
Carriages and wagons and materials.....	83	3	37	23	11	4				
Cars and general shop construction and repairs by steam-railroad companies.....	34		5	6	0	3	5	5	4	
Cotton goods, including cotton small wares.....	116		4	4	7	30	39	22	11	3
Fertilizers.....	110	1	49	27	14	14	5			
Flour-mill and gristmill products.....	105	14	81	8	1		1			
Foundry and machine-shop products.....	107	3	43	32	13	8	7	1		
Hosiery and knit goods.....	22			2	11	6				
Lumber and timber products.....	1,820	20	1,062	551	108	47	31	7		
Marble and stone work.....	104		49	31	13	6	5			
Oil, cottonseed, and cake.....	142		17	74	40	4	1			
Printing and publishing.....	442	104	253	61	17	5	2			
Turpentine and rosin.....	592	2	35	319	214	21	1			
All other industries.....	1,100	84	532	285	117	57	30	4		
AVERAGE NUMBER OF WAGE EARNERS.										
All Industries.....	104,588	5,543	16,821	18,099	15,331	20,223	14,225	10,501	4,045	
Carriages and wagons and materials.....	1,059	108	307	359	288					
Cars and general shop construction and repairs by steam-railroad companies.....	6,209	17	84	200	174	787	1,755	3,252		
Cotton goods, including cotton small wares.....	27,803		62	270	2,343	6,164	7,070	7,249	4,045	
Fertilizers.....	2,770	149	202	507	1,093	769				
Flour-mill and gristmill products.....	386	151	108	23		104				
Foundry and machine-shop products.....	2,832	125	375	462	506	1,084	280			
Hosiery and knit goods.....	2,743			87	752	935	609			
Lumber and timber products.....	22,267	2,646	5,917	3,379	3,614	4,028	2,073			
Marble and stone work.....	2,009	158	308	382	487	704				
Oil, cottonseed, and cake.....	2,888	79	933	1,483	259	134				
Printing and publishing.....	2,385	592	612	554	300	277				
Turpentine and rosin.....	12,787	134	4,615	6,020	1,414	104				
All other industries.....	18,240	1,834	3,138	3,776	3,931	4,483	1,478			
PER CENT OF AVERAGE NUMBER OF WAGE EARNERS.										
All Industries.....	100.0	5.3	15.9	17.3	14.7	19.3	13.6	10.0	3.9	
Carriages and wagons and materials.....	100.0	10.2	29.0	33.6	27.2					
Cars and general shop construction and repairs by steam-railroad companies.....	100.0	0.3	1.3	3.2	2.8	12.6	28.0	51.0		
Cotton goods, including cotton small wares.....	100.0		0.2	1.0	8.4	22.2	27.6	26.1	14.5	
Fertilizers.....	100.0	5.4	9.5	18.3	39.5	27.4				
Flour-mill and gristmill products.....	100.0	39.1	28.0	6.0		26.9				
Foundry and machine-shop products.....	100.0	4.3	13.0	16.0	19.0	37.5	9.7			
Hosiery and knit goods.....	100.0			3.2	27.4	34.1	35.3			
Lumber and timber products.....	100.0	11.0	26.6	15.2	16.2	20.8	9.3			
Marble and stone work.....	100.0	7.5	14.7	18.2	23.2	36.4				
Oil, cottonseed, and cake.....	100.0	2.7	32.3	51.4	9.0	4.0				
Printing and publishing.....	100.0	24.7	25.6	23.1	15.0	11.0				
Turpentine and rosin.....	100.0	1.0	35.3	51.8	11.1	0.8				
All other industries.....	100.0	7.6	17.2	20.7	21.8	24.0	8.1			

Of the 4,792 establishments reported for all industries, 4.8 per cent employed no wage earners; 45.1 per cent, from 1 to 5; 29.8 per cent, 6 to 20; and 11.9 per cent, 21 to 50. The most numerous single group consists of the 2,163 establishments employing from 1 to 5 wage earners, and the next of the 1,426 establishments employing from 6 to 20 wage earners.

There were 60 establishments that employed over 250 wage earners, of which 36 were cotton mills and 9 were steam-railroad repair shops.

Of the total number of wage earners, 27.5 per cent were in establishments employing over 250 wage earners each. The single group having the largest number of employees was the group comprising the establish-

ments employing from 101 to 250 wage earners. This group employed 20,223 wage earners, or 19.3 per cent of the total. The individual industries listed in this table but not in the preceding one, namely, steam-railroad repair shops and the manufacture of hosiery and knit goods, are both industries in which comparatively large establishments do most of the business, as appears from the classification according to the number of wage earners.

**Expenses.**—As stated in the Introduction, the census does not purport to furnish figures that can be used for determining the cost of manufacture and profits. Facts of interest can, however, be brought out concerning the relative importance of the different classes of expenses which make up the total.

The following table shows, in percentages, for 1909, the distribution of expenses among the classes indicated for all industries combined and for certain important industries separately. The figures on which the percentages are based appear in Table II.

INDUSTRY.	PER CENT OF TOTAL EXPENSES REPORTED.			
	Salaries.	Wages.	Materials.	Miscellaneous expenses.
All industries.....	5.1	19.8	66.4	8.7
Carriages and wagons and materials.....	5.9	22.6	63.2	8.3
Cars and general shop construction and repairs by steam-railroad companies.....	5.9	48.4	45.4	0.4
Cotton goods, including cotton small wares.....	2.3	17.7	73.5	6.5
Fertilizers.....	5.0	6.5	77.7	10.8
Flour-mill and gristmill products.....	1.8	2.0	93.6	2.6
Foundry and machine-shop products.....	10.2	28.0	51.3	10.5
Hosiery and knit goods.....	5.2	24.2	62.9	7.7
Lumber and timber products.....	5.3	38.6	44.9	11.2
Marble and stone work.....	8.0	46.1	36.6	9.3
Oil, cottonseed, and cake.....	3.0	3.8	88.4	4.7
Printing and publishing.....	18.9	25.0	29.5	26.6
Turpentine and resin.....	5.7	57.1	24.5	12.7
All other industries.....	7.1	16.6	65.7	10.7

This table shows that, for all industries combined, 66.4 per cent of the total expenses were incurred for materials, 24.9 per cent for services—that is, salaries and wages—and but 8.7 per cent for other purposes. As would be expected, these proportions vary greatly in the different industries.

**Engines and power.**—The next table shows, for all industries combined, the number of engines or other motors, according to their character, employed in generating power (including electric motors operated by purchased current), and their total horsepower at the censuses of 1909, 1904, and 1899. It also shows separately the number and horsepower of electric motors, including those operated by current generated in the manufacturing establishments.

The table indicates that the total amount of primary power more than doubled during the decade 1899-1909. The increase was largely in power generated by steam engines, although every class of power shows a gain for the 10 years. The more general use of gas engines is shown, the number of such engines being 418, with an indicated capacity of 3,380 horsepower, in

1909, as against 118 engines, with 632 horsepower, in 1904, and 45 engines, with 365 horsepower, in 1899. The figures also show that the practice of renting electric power is increasing rapidly, 8 per cent of the total power being of this character in 1909, as against but 2.9 per cent in 1904, and 1.2 per cent in 1899. A still more marked increase is shown in the use of electric motors for the purpose of applying the power generated within the establishment, the horsepower of such motors having increased from 1,030 in 1899 to 9,092 in 1904 and 20,374 in 1909.

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.			PER CENT DISTRIBUTION OF HORSEPOWER.		
	1909	1904	1899	1909	1904	1899	1909	1904	1899
Primary power, total.....	6,323	2,839	2,481	298,241	220,419	136,499	100.0	100.0	100.0
Owned.....	4,660	2,839	2,481	272,928	212,057	134,559	91.6	90.5	98.6
Steam.....	4,011	2,519	2,187	240,264	183,809	110,972	80.6	83.2	81.3
Gas.....	418	118	45	3,380	632	365	1.1	0.3	0.3
Water wheels.....	221	186	240	28,288	28,242	22,729	9.5	12.8	16.7
Water motors.....	10	16	( <sup>2</sup> )	460	62	( <sup>2</sup> )	0.2	( <sup>3</sup> )	( <sup>2</sup> )
Other.....				536	352	493	0.2	0.2	0.4
Rented.....	1,663	( <sup>2</sup> )	( <sup>2</sup> )	25,313	7,762	1,940	8.5	3.5	1.4
Electric.....	1,663	( <sup>2</sup> )	( <sup>2</sup> )	23,890	6,464	1,668	8.0	2.9	1.2
Other.....				1,423	1,298	272	0.5	0.6	0.2
Electric motors	2,492	284	45	44,264	15,556	2,698	100.0	100.0	100.0
Run by current generated by establishment.....	829	284	45	20,374	9,092	1,030	46.0	58.4	38.2
Run by rented power.....	1,663	( <sup>2</sup> )	( <sup>2</sup> )	23,890	6,464	1,668	54.0	41.6	61.8

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

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

INDUSTRY.	An-thra-cite coal (tons).	Bitumi-nous coal (tons).	Coke (tons).	Wood (cords).	Oil, including gaso-line (bar-rels).	Gas (1,000 feet).
All industries.....	10,782	1,804,445	34,628	251,917	53,722	40,568
Brick and tile.....	600	140,736	1,009	42,649	97	.....
Carriages and wagons and materials.....	70	3,927	16	.....	287	44
Cars and general shop construction and repairs by steam-railroad companies.....	.....	58,961	214	464	26	.....
Cotton goods, including cotton small wares.....	6	356,218	2,500	19,033	587	.....
Fertilizers.....	.....	43,977	25	4,333	377	848
Flour-mill and gristmill products, Foundry and machine-shop products.....	.....	13,037	.....	4,044	272	.....
Gas, illuminating and heating.....	90	17,074	11,047	6,439	607	999
Hosiery and knit goods.....	1,917	83,718	.....	.....	46,106	.....
Ice, manufactured.....	232	23,537	26	895	.....	.....
Lumber and timber products.....	1,598	52,372	.....	23,954	35	.....
Marble and stone work.....	122	9,551	60	3,859	712	120
Oil, cottonseed, and cake.....	4,591	29,535	.....	70	224	.....
Printing and publishing.....	105	121,576	.....	65,401	45	.....
Turpentine and resin.....	.....	2,037	31	140	697	4,574
All other industries.....	1,433	347,239	19,060	41,381	3,602	33,933

NOTE.—In addition, there were 12,200 tons of other varieties of fuel reported.

SUPPLEMENTARY DATA REGARDING IMPORTANT INDUSTRIES.

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

For certain industries the Census Bureau collects, by means of special schedules, details regarding the quantity and value of materials and products and the number and kinds of machines used in manufactures which do not appear on the general schedule. Certain data of this character for eight important industries in Georgia are here presented.

**Textiles.**—The progress of the textile industries is indicated by the increase in the number of spindles, looms, and knitting machines. The following table shows the number of these machines used in the combined industries and in each of the three branches during 1909, 1904, and 1899:

MACHINE.	Cen- sus.	Total.	Cotton goods, including cotton small wares.	Woolen, worsted, and felt goods, and wool hats.	Hosiery and knit goods.
Producing spindles.....	1909	1,704,111	1,751,547	24,772	17,702
	1904	1,344,880	1,318,673	19,064	6,352
	1899	1,228,353	817,345	11,008	.....
Looms.....	1909	36,034	35,358	670	.....
	1904	31,767	31,221	546	.....
	1899	19,901	19,398	503	.....
Knitting machines.....	1909	3,530	.....	.....	3,530
	1904	1,677	.....	.....	1,677
	1899	1,078	.....	.....	1,078

The increases from 1904 to 1909 in the total number of the three principal kinds of machines used during the three census years were as follows: 449,222, or 33.4 per cent, in producing spindles; 4,267, or 13.4 per cent, in looms; and 1,853, or 110.5 per cent, in knitting machines. During the preceding five years, 1899-1904, the gains in spindles and looms were considerably more pronounced, but the increase in knitting machines was much less. In addition to the number of spindles shown for the three industries presented separately in the table, there were 17,136 reported in 1909 by the one establishment engaged in the manufacture of silk and silk goods and 2,700 for the two establishments which produced cordage and twine.

For the five-year period from 1904 to 1909 the number of producing spindles in the cotton mills increased 432,974, or 32.8 per cent; in the knitting mills, 11,440, or 180.1 per cent; and in the woolen mills, 4,808, or 24.1 per cent. The gains shown in the number of looms were not so large in proportion as the increases shown for spindles in the cotton mills and in the woolen mills. The number of knitting machines used in 1909 was more than double the number reported for 1904 and over three times that shown for 1899.

Of the six branches of the textile industries represented in the state, detailed statistics regarding materials and products can be given only for the cotton-goods and the hosiery and knit-goods industries. Such data for the other four branches would disclose the operations of individual establishments.

Cotton goods, including cotton small wares.—The conditions for the growth of this industry have been favorable because of the proximity of the factories to the supply of raw cotton and an abundance of labor. While there is no direct connection between the cotton crop and the amount consumed in the mills, it is of interest to know that in 1909 the total crop of cotton in Georgia amounted to 885,389,000 pounds, or over three times the quantity of raw cotton used in the cotton factories of the state.

The following is a statement of the quantity and cost of the principal materials used in the manufacture of cotton goods, and the quantity and value of the chief products as reported for 1909, 1904, and 1899:

MATERIAL OR PRODUCT.	1909	1904 <sup>1</sup>	1899 <sup>1</sup>
<b>Materials used, total cost.....</b>	<b>\$32,048,739</b>	<b>\$23,832,297</b>	<b>\$11,113,356</b>
<b>Cotton:</b>			
Pounds.....	250,820,180	197,849,593	145,095,324
Cost.....	\$27,884,458	\$21,132,744	\$9,092,464
<b>Cotton yarn, purchased:</b>			
Pounds.....	429,093	595,493	70,026
Cost.....	\$84,782	\$117,755	\$10,775
<b>Cotton waste, purchased:</b>			
Pounds.....	8,201,342	3,037,157	48,041
Cost.....	\$310,055	\$202,291	\$1,940
<b>Starch.....</b>	<b>\$107,828</b>	<b>\$121,784</b>	<b>\$65,060</b>
<b>Chemicals and dyestuffs.....</b>	<b>\$251,230</b>	<b>\$276,817</b>	<b>\$225,971</b>
<b>Fuel and rent of power.....</b>	<b>\$1,020,210</b>	<b>\$674,825</b>	<b>\$818,057</b>
<b>All other materials.....</b>	<b>\$2,330,161</b>	<b>\$1,300,131</b>	<b>\$707,583</b>
<b>Products, total value.....</b>	<b>\$48,036,817</b>	<b>\$35,174,248</b>	<b>\$18,457,645</b>
<b>Plain cloths for printing and converting:</b>			
Square yards.....	48,080,835	20,086,228	6,218,595
Value.....	\$1,085,182	\$1,145,505	\$214,237
<b>Brown or bleached sheetings and shirtings:</b>			
Square yards.....	214,520,588	202,934,687	131,739,917
Value.....	\$11,442,365	\$10,135,067	\$5,127,400
<b>Fancy woven fabrics:</b>			
Square yards.....	12,440,094	5,076,261	905,038
Value.....	\$343,803	\$303,200	\$142,887
<b>Ginghams:</b>			
Square yards.....	7,002,038	(?)	25,302,954
Value.....	\$480,840	(?)	\$1,117,529
<b>Duck:</b>			
Square yards.....	40,484,021	30,420,272	31,073,022
Value.....	\$6,040,330	\$3,609,472	\$2,148,546
<b>Drills:</b>			
Square yards.....	64,075,402	41,727,888	36,378,866
Value.....	\$4,378,103	\$2,809,195	\$1,801,580
<b>Ticks, denims, and stripes:</b>			
Square yards.....	35,210,027	33,766,527	16,971,764
Value.....	\$2,685,817	\$3,049,931	\$1,048,395
<b>Cottonades:</b>			
Square yards.....	11,051,565	13,316,815	4,173,815
Value.....	\$1,209,678	\$1,078,754	\$399,553
<b>Napped fabrics:</b>			
Square yards.....	20,472,758	6,797,117	6,044,140
Value.....	\$1,700,757	\$591,435	\$265,900
<b>Cotton towels and toweling:</b>			
Square yards.....	12,264,380	4,057,247	(?)
Value.....	\$1,374,772	\$697,064	(?)
<b>Yarns for sale:</b>			
Pounds.....	61,956,708	45,356,889	35,748,094
Value.....	\$11,971,488	\$8,620,720	\$4,882,437
<b>Twine:</b>			
Pounds.....	4,590,792	430,206	636,769
Value.....	\$830,522	\$72,614	\$74,394
<b>Cotton waste for sale:</b>			
Pounds.....	19,084,027	16,162,249	15,310,595
Value.....	\$510,183	\$457,184	\$280,614
<b>All other products.....</b>	<b>\$2,382,617</b>	<b>\$2,484,101</b>	<b>\$953,008</b>

<sup>1</sup> Does not include one establishment manufacturing cotton small wares.  
<sup>2</sup> Figures can not be shown without disclosing individual operations.  
<sup>3</sup> Not reported separately.

Raw cotton represented about seven-eighths of the total cost of all materials used during each of the three census years. The quantity of this material increased 53,470,537 pounds, or 27.1 per cent, from 1904 to 1909 and 51,654,269 pounds, or 35.5 per cent, from 1899 to 1904, while the gains in cost were \$6,751,714, or 31.9

per cent, and \$11,440,280, or 118 per cent, for the respective five-year periods. The disproportionate increases from 1899 to 1904 in the quantity and cost of raw cotton were due to the decided increase in price during the five years. The fact that the quantity of yarns purchased for use in 1909 was less than that reported for 1904 indicates that yarns are being manufactured to an increasing extent within the establishment in which they are used.

Brown or bleached sheetings and shirtings, and yarns for sale were the most important products, each contributing about one-fourth of the total value. The value of the former class represented 27.8 per cent of the total value of products in 1899, 28.8 per cent in 1904, and 23.8 per cent in 1909, while that of yarns constituted 26.5 per cent of the total in 1899, 24.5 per cent in 1904, and 24.9 per cent in 1909. Duck and drills combined represented nearly one-half of the value of the remaining products in 1909. From 1904 to 1909 the largest absolute gain in quantity was 22,347,514 square yards for drills, and the largest increase in value was \$3,350,768 for yarns. The most noteworthy relative increases, however, are shown for the quantity and the value of twine. Cotton towels and toweling, napped fabrics, and fancy woven fabrics also show decided relative gains in both items during the same period. The only class of products showing a decrease in both quantity and value during the decade is gingham, which shows a falling off of 18,300,316 square yards, or 72.3 per cent, in quantity and of \$636,683, or 57 per cent, in value. The partly manufactured products—yarns for sale, twine and cotton waste for sale—to a limited extent represent a duplication, because, although they are the products of one set of mills, they become the materials of other establishments within the industry.

**Hosiery and knit goods.**—The following statement shows the quantity and cost of the principal materials used, and the quantity and value of the different products, as reported at the last three censuses:

MATERIAL OR PRODUCT.	1909	1904	1899
<b>Materials used, total cost</b> .....	\$1,872,436	\$1,417,411	\$757,430
<b>Cotton:</b>			
Pounds.....	4,043,536	( <sup>1</sup> )	.....
Cost.....	\$456,956	( <sup>1</sup> )	.....
<b>Cotton yarns, purchased:</b>			
Pounds.....	4,886,428	6,606,954	3,707,218
Cost.....	\$978,805	\$1,127,123	\$624,311
<b>Chemicals and dyestuffs</b> .....	\$64,558	\$48,290	\$12,063
<b>Fuel and rent of power</b> .....	\$61,757	\$31,510	\$10,894
<b>All other materials</b> .....	\$310,360	\$210,488	\$110,102
<b>Products, total value</b> .....	\$3,232,623	\$2,325,854	\$1,230,801
<b>Cotton half hose:</b>			
Dozens.....	2,500,095	1,278,107	794,345
Value.....	\$1,370,926	\$780,390	\$430,610
<b>Cotton hose:</b>			
Dozens.....	1,226,235	602,388	400,427
Value.....	\$1,018,086	\$456,155	\$321,058
<b>Cotton shirts and drawers:</b>			
Dozens.....	314,893	425,000	205,165
Value.....	\$373,020	\$503,112	\$432,329
<b>All other products</b> .....	\$270,591	\$257,197	\$40,804

<sup>1</sup> Included under "All other materials," to avoid disclosure of individual operations.

Raw cotton as a material was not reported at any census prior to that of 1904, indicating that at the preceding censuses the establishments engaged in this industry purchased the cotton yarn which they used. In 1904, although most of the yarn used was purchased, some of it was manufactured in the mills, as is indicated by the fact that some raw cotton was used in that year. Since then the practice of making the yarn in the mills has increased largely, accompanied by a corresponding decrease in the amount of cotton yarn purchased.

Half hose and hose together contributed 73.9 per cent of the total value of products in this industry for the state in 1909, shirts and drawers forming a minor product and showing decreases in quantity and value since 1904. Large percentages of increase in both the quantity and value of cotton hose and of half hose are shown for each five-year period, and with the exception of the value of half hose, by far the greatest gains were from 1904 to 1909. The greatest absolute increases in both quantity and value during the decade as a whole were reported for half hose, which furnished 42.4 per cent of the total value of products for the industry in 1909.

**Lumber and timber products.**—Although Georgia cut a slightly greater amount of lumber in 1909 than in 1899, the rate of increase was considerably less than that shown for any other Southern state, and it dropped from seventh place among the states of the Union in the production of lumber in 1899 to fifteenth in 1909. The following is a statement of the quantities of the principal products reported for the saw-mills at the censuses of 1909 and 1899:

PRODUCT.	QUANTITY.	
	1909	1899
Rough lumber.....M feet b. m..	1,342,240	1,311,917
Lath.....thousands..	58,704	31,496
Shingles.....thousands..	443,200	243,797

The production of rough lumber increased 2.3 per cent from 1899 to 1909; that of lath, 86.4 per cent; and that of shingles, 81.8 per cent. Of the total output of 1,342,249 M feet board measure, in 1909, 1,194,987 M feet, or 89 per cent, was yellow pine. Hardwoods formed but 6.2 per cent of the total production, the principal varieties being oak and yellow poplar.

**Oil, cottonseed, and cake.**—The table following shows the quantity of cotton seed crushed and the quantity of the different crude products for each of the last three census years.

The statistics in this table include the figures for all establishments which crushed any seed during the year, regardless of the extent to which these establishments were engaged in other lines of manufac-

ture. Furthermore, the crude products reported represent the total products derived from crushed cotton seed, whether sold as such or used as intermediate products in further processes of manufacture, such as the refining of oil and the manufacture of fertilizer or feed.

MATERIAL OR PRODUCT.	QUANTITY.		
	1909	1904	1899
Cotton seed, crushed..... tons..	594,070	308,999	271,833
Crude products, manufactured:			
Oil..... gallons..	26,181,493	15,284,303	10,606,693
Meal and cake..... tons..	261,717	151,011	91,637
Hulls..... tons..	188,270	131,521	132,344
Linters..... pounds..	20,040,114	13,281,489	6,398,830

The quantity of cotton seed crushed more than doubled in Georgia between 1899 and 1909. The average crush per mill has fallen off during the decade as a whole, but has increased since 1904, being 5,909 tons in 1899, 3,075 tons in 1904, and 4,097 tons in 1909. Of the 145 mills reported in 1909 as crushing seed, 13 crushed less than 1,000 tons of seed during the census year; 35 crushed 1,000 but less than 2,000 tons; 55 crushed 2,000 but less than 5,000 tons; 27 crushed 5,000 but less than 10,000 tons; 14 crushed 10,000 but less than 20,000 tons; and 1 crushed over 20,000 tons.

The advance of the industry in economical operation is reflected in the fact that the production of oil from the same quantity of seed has increased from census to census. Thirty-nine gallons of crude oil were obtained from 1 ton of seed in 1899, whereas this amount had risen to 42 gallons in 1904, and to 44 gallons in 1909. In 1899 the weight of meal and cake was over three-tenths of the seed crushed; in 1904 and 1909 it was about four-tenths of the weight of the seed. The amount of linters increased from 24 pounds to the ton in 1899 to 36 in 1904 and 44 in 1909. Hulls alone show a relative decrease, falling off from nearly five-tenths of the total weight of the seed crushed in 1899 to about three-tenths in 1909.

**Fertilizers.**—This industry in the state is related closely to the cottonseed-oil industry. Of the 110 establishments engaged primarily in the manufacture of fertilizers, practically all used some cottonseed meal as an ammoniate. The next table shows in detail the quantity and value of the different products for the years 1909, 1904, and 1899.

The table does not include fertilizers to the value of \$1,453,338 made in 55 establishments engaged primarily in the manufacture of cottonseed oil and cake. This value represented 73,315 tons of fertilizers, distributed as follows: 64,600 tons complete fertilizers; 5,300 tons ammoniated fertilizers; 195 tons superphosphates from minerals, bones, etc.; and 3,220 tons other fertilizers.

PRODUCT.	1909	1904	1899
Total value.....	\$16,800,301	\$9,461,415	\$3,367,353
Superphosphates from minerals, bones, etc.:			
Tons.....	106,885	130,762	131,503
Value.....	\$2,334,293	\$1,390,437	\$1,075,581
Ammoniated fertilizers:			
Tons.....	102,573	217,085	14,003
Value.....	\$2,071,728	\$3,629,488	\$229,271
Concentrated phosphate:			
Tons.....	20,709	(1)	(1)
Value.....	\$212,342	(1)	(1)
Complete fertilizers:			
Tons.....	492,532	206,280	101,219
Value.....	\$10,000,140	\$3,588,613	\$1,563,653
Other fertilizers:			
Tons.....	75,438	75,123	26,605
Value.....	\$1,229,775	\$634,298	\$371,799
Sulphuric acid produced for sale:			
Tons.....	49,794		856
Value.....	\$293,521		\$5,436
All other products.....	\$568,490	\$218,579	\$121,613

† Figures not available.

The total quantity of all kinds of fertilizers shown in the above table was three and one-half times, and the value about five times, as great in 1909 as in 1899. Complete fertilizers constituted the chief product in 1909, representing more than one-half of the total quantity and about three-fifths of the total value. In 1904 the ammoniated fertilizers held first place both in the quantity and value of the product, while in 1899 superphosphates from minerals, bones, etc., were first in quantity and complete fertilizers first in value.

**Flour-mill and gristmill products.**—The following tabular statement gives the quantity and value of products for the last three census years:

PRODUCT.	1909	1904	1899
Total value.....	\$7,999,312	\$8,178,926	\$5,323,788
Wheat flour:			
White—			
Barrels.....	414,604	671,654	596,020
Value.....	\$2,031,398	\$3,746,081	\$2,622,708
Graham—			
Barrels.....	526	155	
Value.....	\$3,240	\$785	
Corn meal and corn flour:			
Barrels.....	1,369,971	1,217,141	884,211
Value.....	\$4,006,704	\$3,193,011	\$2,099,918
Rye flour:			
Barrels.....	00	35	180
Value.....	\$305	\$170	\$889
Hominy and grits:			
Pounds.....	1,800	300,000	5,280
Value.....	\$54	\$5,000	\$110
Feed:			
Tons.....	10,761	23,210	18,000
Value.....	\$305,864	\$601,137	\$324,890
Offal:			
Tons.....	16,509	25,081	13,468
Value.....	\$397,168	\$500,382	\$253,861
All other products.....	\$82,059	\$65,710	\$21,404

Corn meal and corn flour, which constituted 57.6 per cent of the total value of all products in 1909, compared with 39 per cent in 1904, shows an increase of 152,830 barrels, or 12.6 per cent, in quantity and of \$1,416,703, or 44.4 per cent, in value during the five years. This gain in value, however, was not sufficient to overcome the decreases shown for all of the other classes of products, with the exception of two—Graham flour and rye flour—which increased. The

largest decreases are shown for white flour, 256,960 barrels, or 38.3 per cent, in quantity and \$1,115,283, or 29.8 per cent, in value.

**Turpentine and rosin.**—This, like the lumber industry, is dependent upon the forests of the state for its raw materials. The quantity and value of products for the census years 1909, 1904, and 1899 are shown in the following tabular statement:

PRODUCT.	1909	1904	1899
Total value.....	\$8,938,957	\$7,705,643	\$8,110,468
Spirits of turpentine:			
Gallons.....	8,056,752	9,542,316	115,595,341
Value.....	\$3,550,965	\$4,795,331	\$0,024,054
Rosin:			
Barrels.....	904,103	1,104,968	11,612,564
Value.....	\$3,371,676	\$2,901,583	\$2,055,550
Dross and other products.....	\$10,316	\$3,720	\$30,864

<sup>1</sup> Spirits of turpentine was reported in barrels of 51 gallons, and rosin in barrels of 475 pounds in the 1899 census. In this report turpentine is reported in gallons and rosin in barrels of 280 pounds.

The importance of the turpentine industry has decreased considerably since 1899, owing to the rapid depletion of the longleaf-pine forests of the state and the clearing of the land for agricultural purposes. In 1909 the production of spirits of turpentine was 15.6 per cent less than in 1904 and 48.3 per cent less than in 1899, while the output of rosin shows a decrease of 18.2 per cent in 1909 as compared with 1904, and of 43.9 per cent as compared with 1899.

The working unit in turpentine operations is called a crop, which consists of 10,500 boxes or cups. In 1909 there were 6,178 crops worked in the state, of which 1,146 were from virgin trees, 1,283 from yearling or second-year trees, 1,621 from third-year trees, and 2,128 from older trees. A rapidly increasing proportion of the trees in Georgia are being worked by the new cup system.

**Printing and publishing.**—The printing and publishing industry as a whole in Georgia not only shows a considerable growth during the last 10 years, as measured by the financial statistics, but the number of publications and the aggregate circulation have increased substantially during each of the two five-year periods, as shown by the following table:

PERIOD OF ISSUE.	NUMBER OF PUBLICATIONS.			AGGREGATE CIRCULATION PER ISSUE.		
	1909	1904	1899	1909	1904	1899
Total.....	357	318	278	1,626,562	924,545	549,493
Daily.....	27	26	27	215,660	178,904	102,872
Sunday.....	13	14	13	172,039	143,052	( <sup>1</sup> )
Semiweekly and triweekly	17	11	9	285,629	81,613	33,941
Weekly.....	246	233	205	423,897	371,274	331,905
Monthly.....	51	29	17	386,337	120,927	67,425
All other classes.....	3	5	7	143,000	23,775	13,350

<sup>1</sup> Included in circulation of dailies.

There was an increase of 79 in the number of publications of all kinds during the 10-year period, and of 196 per cent in their circulation. While the number

of daily papers was the same in 1909 as in 1899, the circulation more than doubled. During the more recent five-year period the circulation of the Sunday newspapers increased 20.3 per cent. The greatest relative increase in circulation reported for any class was in those included under the head of "All other classes," which was more than ten times as great in 1909 as in 1899. There was an increase of 20 per cent in the number of weekly publications, and of 27.7 per cent in their circulation during the same period. The number of monthly publications in 1909 was three times, and their circulation more than five times, as great as in 1899. All of the publications were in the English language, with the exception of three weeklies, one of which was in German, one in German and English, and one in Hebrew.

**Laundries.**—Statistics for steam laundries are not included in the general tables, or in the totals for manufacturing industries. There were 42 such establishments in the state of Georgia, 10 of which were in Atlanta, 4 in Savannah, and 3 in Macon.

The following statement summarizes the statistics:

Number of establishments.....	42
Persons engaged in the industry.....	1,525
Proprietors and firm members.....	37
Salaried employees.....	156
Wage earners (average number).....	1,332
Primary horsepower.....	1,180
Capital.....	\$654,756
Expenses.....	832,036
Services.....	516,075
Materials.....	191,654
Miscellaneous.....	124,307
Amount received for work done.....	1,006,724

Of the 42 establishments reported, 17 were operated by corporations, 15 by individuals, and 10 by firms. Seven establishments had receipts of less than \$5,000 for the year's business; 22, receipts of \$5,000 but less than \$20,000; 12, receipts of \$20,000 but less than \$100,000; and 1, receipts of \$100,000 but less than \$1,000,000.

The number of wage earners employed each month and the percentage which this number represented of the greatest number employed in any month were as follows:

MONTH.	WAGE EARNERS.		MONTH.	WAGE EARNERS.	
	Number.	Per cent of maximum.		Number.	Per cent of maximum.
January.....	1,292	94.5	July.....	1,366	99.0
February.....	1,285	94.0	August.....	1,367	100.0
March.....	1,303	95.3	September.....	1,366	99.9
April.....	1,318	96.4	October.....	1,351	98.8
May.....	1,325	96.9	November.....	1,342	98.2
June.....	1,342	98.2	December.....	1,323	96.8

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

KIND.	Number of engines or motors.	Horse-power.
Primary power, total.....		1,180
Owned—Steam.....	40	1,101
Rented.....		79
Electric.....	12	76
Other.....		3

The kind and amount of fuel used are shown in the following statement:

KIND.	Unit.	Quantity.
Anthracite coal.....	Tons.....	310
Bituminous coal.....	Tons.....	12,279
Oil.....	Barrels.....	212
Coke.....	Tons.....	204
Gas.....	1,000 feet.....	1,695

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

	Custom sawmills.	Custom gristmills.
Number of establishments.....	92	677
Persons engaged in the industry.....	300	1,354
Proprietors and firm members.....	143	877
Salaried employees.....	2	8
Wage earners (average number).....	215	469
Primary horsepower.....	1,771	13,774
Capital.....	\$68,122	\$1,212,407
Expenses.....	49,077	2,342,154
Services.....	39,000	80,031
Materials.....	2,749	12,233,093
Miscellaneous.....	7,808	28,430
Value of products.....	109,319	12,617,845

<sup>1</sup> Includes estimate of all grain ground. A similar estimate for value of lumber sawed by custom sawmills is impracticable.

## MANUFACTURES—GEORGIA.

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

INDUSTRY.	Census.	Number of estab-lishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of mate-rials.	Value of prod-ucts.	Value added by manu-fac-ture.
			Total.	Pro-rietors and firm mem-bers.	Sala-ried em-ploy-ees.	Wage earn-ers (aver-age num-ber).							
<b>STATE—All industries.....</b>	1909 1904 1899	4,792 3,219 3,015	118,036 102,385 102,385	5,141 3,512 3,512	8,307 6,104 3,815	104,588 92,749 83,386	298,241 220,419 136,499	\$202,778 135,212 79,303	\$9,062 5,923 3,204	\$34,805 27,392 19,958	\$116,970 83,625 49,356	\$202,893 151,040 94,532	\$85,893 67,415 45,176
Agricultural implements.....	1909 1904 1899	17 16 10	614 635 393	20 10 10	42 35 23	552 584 360	1,307 939 409	1,410 792 455	60 44 31	190 171 100	583 602 438	1,117 1,040 738	534 438 300
Boxes, fancy and paper.....	1909 1904 1899	8 4 3	367 195 139	1 4 4	57 23 12	309 172 123	208 36 .....	659 114 72	100 20 14	93 36 29	786 87 26	1,140 185 122	354 98 96
Bread and other bakery products.....	1909 1904 1899	110 82 62	706 508 326	115 90 64	100 22 21	491 396 241	227 52 27	525 312 233	64 17 14	213 138 82	932 580 291	1,532 935 598	600 375 307
Brick and tile.....	1909 1904 1899	75 59 70	2,085 1,622 1,837	73 77 77	111 99 59	1,901 1,446 1,701	7,476 5,479 3,120	2,771 1,814 1,045	132 92 46	547 350 347	534 305 204	1,711 1,337 1,053	1,177 972 789
Carriages and wagons and materials.....	1909 1904 1899	83 75 104	1,252 1,293 .....	81 91 .....	112 87 39	1,059 1,115 808	1,353 1,110 .....	2,220 1,509 825	128 97 31	489 426 257	1,367 1,222 534	2,560 2,303 1,317	1,193 1,081 783
Cars and general shop construction and repairs by steam-railroad companies.	1909 1904 1899	34 28 32	6,043 5,000 3,272	..... ..... .....	374 223 97	6,269 4,777 3,175	6,879 2,141 1,237	4,271 2,102 1,409	386 225 98	3,162 2,416 1,002	2,964 2,058 1,273	6,535 4,775 3,062	3,571 2,717 1,789
Clothing, men's, including shirts.....	1909 1904 1899	22 14 18	1,354 1,095 1,350	17 11 31	95 62 43	1,242 1,022 1,276	290 168 154	1,006 548 514	110 53 37	341 265 231	1,168 929 657	1,934 1,432 1,121	766 563 464
Confectionery.....	1909 1904 1899	23 16 15	878 738 .....	18 14 .....	212 135 71	648 589 402	533 392 .....	902 656 438	164 112 62	225 156 105	1,432 869 519	2,172 1,570 832	740 601 313
Cooperage and wooden goods, not elsewhere specified.	1909 1904 1899	14 16 23	376 300 451	11 3 21	21 29 22	344 268 408	647 496 .....	294 259 270	21 31 22	114 89 90	470 422 392	777 631 678	307 209 286
Copper, tin, and sheet-iron products.....	1909 1904 1899	25 11 7	718 213 .....	23 10 .....	76 17 27	619 186 202	409 16 .....	2,808 86 414	83 15 22	292 88 63	707 152 495	1,326 325 634	619 143 139
Cotton goods, including cotton small wares.....	1909 1904 1899	116 103 67	28,495 24,701 18,625	12 13 10	680 553 332	27,803 24,130 18,283	92,979 77,435 39,307	64,651 42,350 24,158	1,005 726 431	7,721 5,813 3,567	32,049 23,832 11,113	48,037 35,174 18,458	15,988 11,342 7,945
Fertilizers.....	1909 1904 1899	110 57 41	3,373 2,442 1,279	71 40 39	532 210 114	2,770 2,192 1,126	10,488 6,531 3,823	24,233 11,158 6,664	699 260 147	921 551 295	10,944 6,527 2,350	16,800 9,461 3,367	5,856 2,934 1,017
Flour-mill and gristmill products.....	1909 1904 1899	105 114 94	630 712 .....	137 146 .....	107 102 71	386 464 447	9,052 8,341 .....	2,749 1,896 1,338	129 96 55	144 146 133	6,729 7,205 4,445	8,000 8,179 5,324	1,271 914 879
Foundry and machine-shop products.....	1909 1904 1899	107 84 91	3,363 3,457 .....	83 74 .....	338 271 177	2,892 3,112 2,416	5,244 3,779 .....	7,993 5,260 3,419	528 309 199	1,452 1,298 931	2,602 2,052 1,605	5,808 5,204 3,569	3,146 3,212 1,964
Furniture and refrigerators.....	1909 1904 1899	42 32 21	1,569 1,979 1,456	28 24 17	135 127 85	1,406 1,828 1,354	2,610 2,410 1,565	2,080 1,904 1,196	169 149 91	508 504 359	833 902 517	2,060 2,115 1,273	1,177 1,213 756
Gas, illuminating and heating.....	1909 1904 1899	15 12 12	604 570 346	..... ..... .....	145 88 75	459 482 271	689 587 307	7,075 5,832 4,269	123 74 56	206 164 92	368 291 142	1,425 1,061 661	1,057 770 519
Hosiery and knit goods.....	1909 1904 1899	22 21 16	2,880 2,027 1,254	3 4 40	134 88 1,208	2,743 1,935 1,208	2,948 2,095 557	3,270 1,947 929	155 93 39	719 396 201	1,872 1,417 757	3,233 2,326 1,231	1,361 909 474
Ice, manufactured.....	1909 1904 1899	61 48 32	651 522 313	27 18 14	130 105 48	494 399 251	3,125 5,353 3,555	3,360 1,705 975	133 76 43	210 142 86	200 200 127	1,163 858 457	888 658 330
Leather goods.....	1909 1904 1899	34 29 24	829 1,119 .....	35 34 .....	111 64 52	683 1,021 674	685 327 .....	1,426 1,011 427	128 58 38	252 330 162	1,332 1,325 836	2,086 2,072 1,280	754 747 444
Leather, tanned, curried, and finished.....	1909 1904 1899	10 29 36	327 595 474	4 38 38	17 24 26	306 533 410	1,228 1,161 673	1,267 2,406 1,434	23 154 20	99 154 92	1,051 1,887 928	1,374 2,382 1,188	323 495 260

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

MANUFACTURES—GEORGIA.

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

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

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufac-ture.
			Total.	Proprietors and firm members.	Salari-ed employ-ees.	Wage earners (average number).							
STATE—Continued.													
Liquors, malt.....	1909	4	247	.....	35	212	068	\$1,790	\$74	\$120	\$410	\$1,207	\$701
	1904	5	357	.....	1	319	1,063	1,574	65	141	306	1,284	978
	1899	5	337	.....	37	300	1,360	1,328	65	128	276	973	607
Lumber and timber products.....	1909	1,826	25,401	2,271	063	22,257	83,464	23,337	997	7,305	8,505	24,632	10,127
	1904	949	21,877	1,212	081	19,684	56,431	15,309	091	6,324	6,066	21,648	14,982
	1899	1,010	.....	.....	625	19,628	47,456	9,807	452	4,688	6,497	17,839	11,342
Marble and stone work.....	1909	104	2,361	111	181	2,099	3,370	2,117	174	098	703	2,048	1,855
	1904	50	2,201	60	133	2,018	2,883	2,024	114	823	626	2,408	1,782
	1899	31	.....	.....	37	748	.....	625	36	315	262	849	557
Mattresses and spring beds.....	1909	20	388	15	63	310	405	539	84	120	512	949	437
	1904	9	265	3	30	226	167	264	44	67	420	681	261
	1899	5	.....	.....	21	66	.....	109	22	29	147	230	83
Oil, cottonseed, and cake.....	1909	142	3,609	11	710	2,888	29,510	12,720	667	840	19,440	23,041	4,201
	1904	112	2,810	11	498	2,307	20,850	11,627	472	608	11,202	13,540	2,278
	1899	43	1,793	7	195	1,591	9,810	4,099	187	354	6,220	8,064	1,835
Patent medicines and compounds and druggists' preparations.....	1909	50	376	33	133	210	84	557	126	81	442	1,421	979
	1904	34	327	18	141	168	126	758	137	63	319	1,541	1,222
	1899	10	.....	.....	33	177	.....	494	30	44	486	1,147	661
Pottery, terra-cotta, and fire-clay products.....	1909	27	659	21	46	592	1,540	932	58	234	163	614	461
	1904	21	648	10	37	692	2,055	891	48	160	144	430	330
	1899	21	329	23	21	285	416	267	18	67	42	206	164
Printing and publishing.....	1909	442	3,849	422	1,032	2,395	2,008	4,732	1,018	1,344	1,588	6,400	4,812
	1904	359	2,954	333	505	2,066	1,264	3,770	440	964	1,030	3,980	2,950
	1899	1287	2,406	300	245	1,861	977	2,488	219	693	614	2,381	1,767
Slaughtering and meat packing.....	1909	8	113	9	14	90	232	168	9	34	402	509	107
	1904	6	84	4	4	76	321	228	1	29	219	321	102
	1899	7	146	8	34	104	.....	110	20	32	484	591	107
Tobacco manufactures.....	1909	50	435	62	23	360	10	122	18	109	106	506	310
	1904	37	328	45	28	255	32	393	18	81	124	299	172
	1899	34	149	30	7	100	.....	50	3	36	51	125	74
Turpentine and rosin.....	1909	592	14,253	1,063	463	12,787	1,407	2,990	293	2,931	1,200	6,939	5,679
	1904	432	13,070	707	627	11,736	302	2,374	315	3,041	1,156	7,706	6,550
	1899	524	20,777	815	793	10,199	422	3,785	320	5,773	2,293	8,110	5,817
Woolen, worsted, and felt goods, and wool hats.....	1909	7	692	4	28	660	1,437	1,415	36	175	443	871	428
	1904	8	608	4	17	647	1,181	815	22	129	424	656	232
	1899	14	676	1	13	661	715	455	17	67	280	491	211
All other industries.....	1909	487	7,819	430	1,037	6,352	20,289	16,330	1,163	2,541	13,712	21,786	8,024
	1904	347	7,047	352	691	6,004	14,336	10,722	717	1,798	7,835	13,024	5,189
	1899	237	.....	.....	344	3,575	.....	5,130	319	870	3,956	6,563	2,607

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

ATLANTA—All industries.....	1909	483	15,091	367	2,422	12,302	22,768	\$30,878	\$2,711	\$5,436	\$16,418	\$33,038	\$16,690
	1904	294	13,417	223	1,303	11,891	.....	21,631	1,361	4,435	13,441	25,748	12,305
	1899	196	.....	.....	692	7,966	.....	14,603	759	2,597	7,443	14,419	6,976
Artificial stone.....	1909	9	180	7	16	157	25	72	17	61	61	160	105
	1904	3	28	3	5	20	.....	20	2	12	15	37	22
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bread and other bakery products.....	1909	20	272	10	60	193	113	182	47	93	438	690	252
	1904	14	175	14	11	150	.....	90	12	53	248	391	143
	1899	13	118	13	9	96	.....	80	10	29	99	248	149
Carriages and wagons and materials.....	1909	11	202	12	19	171	85	204	23	97	222	383	161
	1904	5	149	5	11	133	.....	101	13	67	150	280	136
	1899	6	96	7	7	82	.....	52	5	31	32	112	80
Clothing, men's, including shirts.....	1909	8	744	6	48	690	119	517	75	218	601	1,020	419
	1904	6	664	5	31	628	.....	315	28	107	530	873	343
	1899	7	828	16	11	801	.....	220	13	156	389	671	282
Confectionery.....	1909	12	753	8	180	665	520	701	145	198	1,282	1,924	636
	1904	8	559	9	94	447	.....	514	82	118	642	1,079	437
	1899	6	306	0	38	259	.....	334	34	63	254	451	197
Copper, tin, and sheet-iron products.....	1909	12	458	10	51	397	102	1,893	54	188	433	817	384
	1904	6	387	4	21	362	.....	1,270	38	124	362	579	217
	1899	3	197	8	27	162	.....	307	22	37	391	487	96

<sup>1</sup> Excluding statistics for two establishments, to avoid disclosure of individual operations.

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

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

## MANUFACTURES—GEORGIA.

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

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

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaries employed.	Wage earners (average number).							
Expressed in thousands.													
<b>ATLANTA—Continued.</b>													
Foundry and machine-shop products.....	1909	25	662	17	91	554	1,084	\$1,020	\$125	\$310	\$594	\$1,234	\$640
	1904	22	1,053	10	94	949	.....	1,881	100	433	740	1,818	1,078
	1899	19	688	10	59	619	.....	1,209	74	291	454	1,050	596
Furniture and refrigerators.....	1909	19	632	15	66	551	1,110	915	87	226	363	899	536
	1904	8	391	3	29	359	.....	513	39	125	222	457	235
	1899	3	310	1	15	294	.....	495	22	96	148	373	225
Leather goods.....	1909	10	102	7	28	67	61	117	26	35	101	202	101
	1904	7	154	8	21	125	.....	114	21	50	125	290	165
	1899	6	.....	.....	13	80	.....	65	13	34	98	208	110
Lumber and timber products.....	1909	19	1,162	13	115	1,034	2,699	1,588	150	395	1,230	2,043	813
	1904	11	1,006	8	81	917	.....	898	99	313	843	1,555	712
	1899	12	693	8	47	638	.....	502	61	215	801	1,247	446
Marble and stone work.....	1909	15	197	23	19	155	95	75	17	109	77	245	168
	1904	9	152	8	16	128	.....	107	11	73	87	203	119
	1899	6	.....	.....	1	81	.....	23	1	60	42	126	84
Mattresses and spring beds.....	1909	10	284	7	46	231	201	483	70	100	404	768	364
	1904	5	232	1	32	199	.....	246	41	61	397	628	231
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Paint and varnish.....	1909	4	46	4	14	28	68	143	13	14	150	177	27
	1904	3	33	1	13	19	.....	107	13	8	98	164	66
	1899	5	38	3	12	23	.....	101	9	10	112	182	70
Patent medicines and compounds and druggists' preparations.	1909	35	315	22	118	175	78	505	114	66	364	1,205	841
	1904	15	190	3	36	101	.....	419	72	39	184	1,150	966
	1899	10	163	8	27	128	.....	430	25	32	441	1,008	567
Printing and publishing.....	1909	110	1,781	85	678	1,018	903	2,420	707	640	951	3,836	2,885
	1904	65	1,243	57	227	959	.....	2,051	211	506	638	2,184	1,540
	1899	35	727	30	105	592	.....	1,309	118	288	307	1,081	774
All other industries.....	1909	157	7,301	112	873	6,316	15,349	19,443	1,041	2,691	9,141	17,429	8,288
	1904	107	7,010	84	531	6,395	.....	12,985	579	2,286	8,160	14,040	5,889
	1899	65	4,448	16	321	4,111	.....	9,410	352	1,265	3,875	7,175	3,300
<b>SAVANNAH—All industries.....</b>													
Bread and other bakery products.....	1909	137	3,196	121	348	2,727	6,403	\$9,334	\$382	\$1,222	\$3,348	\$6,734	\$3,386
	1904	122	3,699	130	339	3,230	.....	8,000	357	1,320	3,254	6,340	3,086
	1899	82	.....	.....	197	2,249	.....	3,755	204	979	1,807	3,750	1,943
Confectionery.....	1909	25	145	20	21	98	45	122	7	42	170	280	110
	1904	24	137	25	8	104	.....	85	4	40	142	253	111
	1899	16	.....	.....	2	49	.....	39	1	27	90	156	66
Copper, tin, and sheet-iron products.....	1909	4	34	4	3	27	18	41	2	9	46	90	44
	1904	4	111	5	22	84	.....	50	13	17	105	187	82
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Foundry and machine-shop products.....	1909	5	179	5	19	155	241	866	19	60	206	380	174
	1904	3	37	5	1	31	.....	22	1	15	21	60	39
	1899	3	.....	.....	38	.....	.....	105	.....	25	98	138	40
Lumber and timber products.....	1909	6	285	7	23	255	488	715	30	137	105	442	337
	1904	5	290	18	17	255	.....	441	21	125	115	338	223
	1899	6	.....	.....	8	230	.....	276	11	98	90	276	186
Patent medicines and compounds and druggists' preparations.	1909	8	263	8	30	225	1,140	409	26	90	167	382	215
	1904	8	309	10	36	273	.....	462	36	89	202	391	189
	1899	5	.....	.....	23	273	.....	454	23	86	160	327	167
Printing and publishing.....	1909	4	26	1	9	16	5	26	8	5	52	133	81
	1904	6	63	4	28	31	.....	250	43	11	82	208	126
	1899	3	.....	.....	2	21	.....	31	1	5	20	75	49
Tobacco manufactures.....	1909	24	398	26	85	287	183	573	84	169	188	658	470
	1904	24	280	26	66	188	.....	443	71	115	93	449	356
	1899	9	.....	.....	50	232	.....	248	87	116	96	320	233
All other industries.....	1909	6	79	4	3	72	2	15	3	21	42	78	36
	1904	7	179	6	20	153	.....	342	13	37	69	148	79
	1899	7	.....	.....	14	.....	.....	8	.....	5	6	10	13
All other industries.....	1909	55	1,787	40	155	1,592	4,281	6,567	200	680	2,372	4,291	1,919
	1904	41	2,293	31	141	2,121	.....	5,905	155	871	2,425	4,306	1,881
	1899	33	.....	.....	107	1,392	.....	2,594	131	617	1,241	2,430	1,189

1 Figures can not be shown without disclosing individual operations.

MANUFACTURES—GEORGIA.

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

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

CITY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horsepower.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaries employees.	Wages earners (average number).							
Expressed in thousands.													
Athens.....	1909	37	1,104	41	101	902	2,209	\$1,921	\$104	\$204	\$1,329	\$2,112	\$783
	1904	28	590	23	58	509	.....	946	49	140	753	1,159	405
	1899	27	.....	.....	20	.....	589	.....	671	16	109	414	678
Augusta.....	1909	71	5,442	45	324	5,073	13,324	11,066	412	1,741	6,002	10,456	3,854
	1904	64	5,189	59	201	4,839	.....	8,101	304	1,294	5,053	8,829	2,876
	1899	80	.....	.....	105	5,563	.....	7,987	220	1,325	5,140	7,984	2,833
Brunswick.....	1909	23	450	11	54	385	712	452	50	101	258	672	414
	1904	29	306	27	25	254	.....	287	22	103	187	407	220
	1899	25	.....	.....	15	351	.....	270	14	180	399	703	304
Columbus.....	1909	55	4,944	26	257	4,661	14,741	7,097	320	1,081	5,562	8,552	2,990
	1904	52	4,702	25	243	4,434	.....	5,874	272	1,305	4,284	7,080	2,796
	1899	58	.....	.....	102	4,110	.....	4,710	159	1,010	2,956	5,061	2,105
Macon.....	1909	80	4,150	51	370	3,729	8,372	8,476	421	1,433	6,869	10,703	3,834
	1904	61	4,000	41	208	3,661	.....	6,750	357	1,201	4,116	7,297	3,181
	1899	66	.....	.....	208	2,904	.....	4,009	231	864	3,151	5,452	2,801
Rome.....	1909	30	1,129	15	109	1,014	2,205	1,551	110	320	1,078	1,804	786
	1904	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Waycross.....	1909	21	1,219	18	70	1,130	2,095	868	65	469	612	1,203	591
	1904	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

1 Figures not available.

TABLE II.—DETAIL STATEMENT FOR

INDUSTRY.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.										WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY.					Primary horse-power.
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks.		Wage earners.				Total.	16 and over.		Under 16.			
					Male.	Female.	Average number.	Number.		Male.		Female.	Male.	Female.			
								Maximum month.	Minimum month.								
1 All industries.....	4,792	118,036	5,141	3,852	3,953	702	104,538	De 109,839	My 98,622	(1)	(1)	(1)	(1)	(1)	298,241		
2 Agricultural implements.....	17	614	20	18	20	4	552	De 774	Je 286	768	740	2	26	.....	1,307		
3 Artificial stone.....	36	324	39	15	7	.....	263	Se 334	Ja 185	319	319	.....	.....	.....	45		
4 Bags, other than paper.....	5	223	3	8	7	3	202	Au 217	Ja 169	209	83	75	20	31	523		
5 Boxes, fancy and paper.....	8	367	1	19	31	7	309	Oc 349	Au 275	341	129	136	12	14	268		
6 Bread and other bakery products.....	110	706	115	13	36	51	491	De 506	Je 481	509	434	43	28	4	227		
7 Brick and tile.....	75	2,085	73	82	26	3	1,901	Je 2,196	Ja 1,837	2,169	2,116	2	51	.....	7,476		
8 Brooms.....	11	118	10	3	3	1	101	No 117	Jy 81	99	96	.....	.....	.....	47		
9 Brushes.....	3	15	4	1	.....	.....	10	De 12	Je 7	12	7	5	.....	.....	11		
10 Butter, cheese, and condensed milk.....	4	6	1	.....	.....	.....	4	De 5	Je 4	5	5	.....	.....	.....	45		
11 Canning and preserving.....	26	479	27	15	9	.....	428	Jy 1,251	My 7	1,046	651	810	90	95	318		
12 Carriages and wagons and materials.....	83	1,252	81	49	59	4	1,059	De 1,228	Ja 953	1,228	1,186	4	38	.....	1,353		
13 Cars and general shop construction and repairs by steam-railroad companies.....	34	6,043	.....	103	258	13	6,269	De 6,718	Ja 5,348	6,706	6,073	32	1	.....	6,879		
14 Cars and general shop construction and repairs by street-railroad companies.....	7	145	.....	2	1	.....	142	Jy 155	Ja 135	141	141	.....	.....	.....	342		
15 Chemicals.....	4	75	2	7	9	4	53	Oc 57	Jy 47	55	48	7	.....	.....	200		
16 Clothing, men's, including shirts.....	22	1,354	17	41	44	10	1,242	Je 1,318	De 1,075	1,283	164	1,093	8	18	290		
17 Clothing, women's.....	4	145	5	8	8	4	120	De 131	Se 106	131	16	114	.....	1	21		
18 Coffins, burial cases, and undertakers' goods.....	6	206	2	10	26	2	166	De 175	Jy 152	175	166	9	.....	.....	435		
19 Confectionery.....	23	878	18	34	151	27	648	De 852	Fe 554	852	372	443	25	12	583		
20 Cooperage and wooden goods, not elsewhere specified.....	14	376	11	15	5	1	344	Oc 351	Ja 284	382	375	.....	7	.....	647		
21 Copper, tin, and sheet-iron products.....	25	718	23	26	40	10	619	De 767	Ap 502	767	722	44	1	.....	409		
22 Cotton goods, including cotton small wares.....	116	28,495	12	375	252	53	27,803	No 28,218	Jy 26,990	28,495	14,993	9,219	2,333	1,050	92,979		
23 Fertilizers.....	110	3,373	71	195	310	27	2,770	Mh 6,851	Jy 1,366	3,070	3,030	4	30	.....	10,488		
24 Flags, banners, regalia, society badges, and emblems.....	3	25	4	1	2	2	16	Ap 29	Au 9	14	4	10	.....	.....	3		
25 Flour-mill and gristmill products.....	105	630	137	47	54	6	386	Se 443	Fe 358	409	403	.....	6	.....	9,052		
26 Foundry and machine-shop products.....	107	3,363	83	176	186	26	2,892	De 3,101	Ja 2,657	3,116	3,080	1	35	.....	5,244		
27 Furnishing goods, men's.....	3	153	.....	14	28	2	109	Au 137	Ja 74	130	8	122	.....	.....	22		
28 Furniture and refrigerators.....	42	1,569	28	72	46	17	1,405	De 1,693	Jy 1,204	1,614	1,502	32	78	2	2,610		
29 Gas, illuminating and heating.....	15	604	.....	36	91	18	459	Oc 482	Ja 443	464	464	.....	.....	.....	689		
30 Hand stamps and stencils and brands.....	6	28	5	4	1	3	15	Jy 16	No 14	15	14	.....	1	.....	1		
31 Hosiery and knit goods.....	22	2,880	3	53	64	17	2,743	De 2,897	Ja 2,026	2,897	834	1,596	193	274	2,948		
32 Ice, manufactured.....	61	651	27	87	42	1	494	Jy 678	Ja 320	561	547	.....	14	.....	8,125		
33 Leather goods.....	34	829	35	40	61	10	683	De 893	Ap 606	815	652	117	31	15	685		
34 Leather, tanned, curried, and finished.....	10	327	4	12	4	1	306	Ja 359	De 267	277	277	.....	.....	.....	1,228		
35 Lime.....	5	70	4	2	.....	.....	64	No 78	Ja 49	78	76	.....	2	.....	150		
36 Liquors, malt.....	4	247	.....	17	17	1	212	Jy 223	Ja 200	215	215	.....	.....	.....	968		
37 Lumber and timber products.....	1,826	25,491	2,271	537	391	35	22,257	De 24,410	Je 20,623	27,631	27,232	99	295	5	83,464		
38 Marble and stone work.....	104	2,391	111	80	88	13	2,099	Au 2,202	My 1,730	2,242	2,184	.....	58	.....	3,370		
39 Mattresses and spring beds.....	20	383	15	27	28	8	310	De 371	Je 271	370	319	45	6	.....	465		
40 Millinery and lace goods.....	5	127	2	7	9	4	105	Fe 177	Je 61	127	23	104	.....	.....	10		
41 Oil, cottonseed, and cake.....	142	3,609	11	365	337	8	2,888	De 4,823	Je 686	4,726	4,711	3	12	.....	29,510		
42 Optical goods.....	6	45	6	4	5	2	23	De 29	Je 28	29	25	4	.....	.....	240		
43 Paint and varnish.....	7	56	5	6	9	1	35	Oc 37	Je 33	35	82	2	1	.....	95		
44 Patent medicines and compounds and druggists' preparations.....	50	376	33	27	80	26	210	Fe 231	Au 176	221	100	119	2	.....	84		
45 Photo-engraving.....	3	53	1	6	11	1	34	De 34	Jy 34	34	33	.....	1	.....	38		
46 Pottery, terra-cotta, and fire-clay products.....	27	659	21	20	13	8	592	Oc 629	Ap 537	640	632	.....	8	.....	1,540		
47 Printing and publishing.....	442	3,849	422	255	547	200	2,395	De 2,483	Je 2,343	2,510	1,955	400	133	22	2,008		
48 Show cases.....	4	264	2	16	15	.....	231	Se 252	My 211	242	242	.....	.....	.....	333		
49 Slaughtering and meat packing.....	8	113	9	3	8	3	90	Mh 101	Au 79	95	95	.....	.....	.....	262		
50 Stoves and furnaces, including gas and oil stoves.....	6	350	1	14	16	4	315	Oc 337	Jy 292	320	324	.....	2	.....	322		
51 Tobacco manufactures.....	50	435	52	18	5	.....	360	No 396	Ja 324	405	267	124	10	4	10		
52 Turpentine and rosin.....	592	14,253	1,003	337	126	.....	12,787	My 13,016	Ja 12,283	13,120	12,923	.....	107	.....	1,407		
53 Wood distillation, not including turpentine and rosin.....	4	77	2	5	7	.....	63	De 66	Jy 36	66	66	.....	.....	.....	570		
54 Woolen, worsted, and felt goods, and wool hats.....	7	692	4	17	7	4	660	Oc 699	My 639	672	347	257	44	24	1,437		
55 All other industries.....	329	4,835	305	277	348	57	3,848	.....	.....	.....	.....	.....	.....	.....	16,518		

1 No figures given for reasons explained in the Introduction.  
 2 Same number reported for one or more other months.  
 3 Same number reported for entire year.  
 4 All other industries embrace—

Artists' materials.....	2	Charcoal.....	14	Gas and electric fixtures and lamps and reflectors.....	1
Automobiles, including bodies and parts.....	1	Coffee and spice, roasting and grinding.....	5	Glass.....	1
Awnings, tents, and sails.....	4	Coke.....	1	Glass, cutting, staining, and ornamenting.....	4
Baskets, and rattan and willow ware.....	1	Cordage and twine and jute and linen goods.....	2	Grease and tallow.....	1
Belting and hose, leather.....	1	Cordials and sirups.....	4	Hats and caps, other than felt, straw, and wool.....	1
Blacking and cleansing and polishing preparations.....	2	Corsets.....	1	Hats, straw.....	1
Boots and shoes, including cut stock and findings.....	3	Cutlery and tools, not elsewhere specified.....	1	House-furnishing goods, not elsewhere specified.....	3
Brass and bronze products.....	2	Dyestuffs and extracts.....	3	Iron and steel, blast furnaces.....	2
Card cutting and designing.....	1	Electrical machinery, apparatus, and supplies.....	2	Iron and steel, steel works and rolling mills.....	1
Cars, steam-railroad, not including operations of railroad companies.....	3	Electroplating.....	1	Iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills.....	1
Cement.....	3	Flavoring extracts.....	5		
		Food preparations.....	9		

MANUFACTURES—GEORGIA.

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THE STATE, BY INDUSTRIES: 1909.

Capital.	EXPENSES.										Value of products.	Value added by manufacture.
	Total.	Services.			Materials.		Miscellaneous.					
		Officials.	Clerks.	Wage earners.	Fuel and rent of power.	Other.	Rent of factory.	Taxes, including internal revenue.	Contract work.	Other.		
1 \$202,777,665	\$176,164,569	\$5,312,492	\$3,749,115	\$34,804,818	\$4,302,189	\$112,607,575	\$533,268	\$1,448,577	\$757,805	\$12,588,730	\$202,883,262	\$85,893,496
2 1,410,466	915,718	38,600	21,475	190,304	21,132	561,756	794	9,844	6,090	65,014	1,116,700	533,763
3 172,813	256,690	15,923	5,640	98,856	610	115,284	3,545	1,375	.....	15,454	205,775	170,881
4 421,447	555,437	14,180	6,015	50,384	6,061	469,773	.....	2,852	.....	14,672	604,366	137,932
5 659,082	1,057,379	47,016	52,141	92,520	4,521	781,244	.....	3,405	.....	66,700	1,139,935	354,170
6 525,062	1,308,388	22,364	41,960	213,005	25,922	906,304	34,443	6,741	.....	87,643	1,531,978	599,752
7 2,771,068	1,395,535	111,089	21,014	549,907	480,961	53,152	3,837	11,871	1,500	165,444	1,711,096	1,176,983
8 146,525	170,364	4,225	1,020	32,201	937	120,798	2,750	772	.....	6,645	220,924	93,139
9 11,230	21,966	1,200	.....	8,545	159	9,810	360	122	1,000	770	19,339	9,370
10 27,951	20,623	480	.....	1,245	397	18,052	.....	173	.....	306	23,171	4,752
11 141,377	280,181	9,496	6,452	56,375	2,587	195,762	1,305	1,120	60	7,028	321,287	122,938
12 2,219,991	2,162,620	75,734	51,807	480,036	21,365	1,346,037	21,960	10,705	30	139,886	2,500,081	1,192,629
13 4,270,090	6,535,019	143,059	242,240	3,161,522	96,079	2,808,112	.....	7,007	.....	10,100	6,535,035	3,570,844
14 295,047	201,096	4,500	720	62,611	1,587	125,326	10	2,790	450	3,096	201,374	74,461
15 378,568	190,030	16,700	11,852	24,342	7,383	52,502	5,731	2,812	.....	68,618	245,725	185,750
16 1,005,786	1,719,114	58,550	51,836	341,498	9,518	1,153,250	12,040	3,770	34,500	48,210	1,933,650	705,861
17 71,052	130,073	11,400	8,550	32,615	1,103	63,340	3,000	455	.....	11,010	152,225	87,782
18 445,797	297,930	15,244	26,284	57,383	1,040	110,455	.....	3,402	.....	44,438	345,491	224,366
19 901,725	1,999,334	62,150	101,685	224,837	30,334	1,402,002	23,659	8,542	2,280	143,845	2,171,737	739,401
20 293,521	654,530	19,205	2,155	114,405	4,810	404,837	1,542	1,915	.....	45,014	776,900	307,197
21 2,808,115	1,245,792	38,073	44,456	261,709	11,704	695,472	10,750	4,620	500	148,448	1,325,769	618,533
22 64,050,706	43,621,500	754,733	260,398	7,721,245	1,020,210	31,028,523	2,736	394,083	107,290	2,342,276	48,036,817	15,988,078
23 24,232,757	14,090,036	349,745	348,812	920,513	177,905	10,700,246	24,704	104,683	2,894	1,394,474	16,800,301	5,856,150
24 20,350	31,230	1,040	1,848	5,780	138	18,200	900	220	.....	40,754	20,350	22,416
25 2,749,465	7,189,438	75,457	53,523	143,801	50,059	6,071,878	5,012	22,880	100	100,038	7,999,912	1,271,375
26 7,992,524	5,188,302	299,933	227,834	1,452,038	118,008	2,642,751	15,725	47,652	5,114	478,347	5,805,152	3,140,493
27 256,336	355,077	26,200	30,234	35,030	1,212	238,987	4,850	907	.....	17,657	331,101	90,992
28 2,080,375	1,747,423	120,020	48,713	508,415	23,111	859,770	25,025	12,063	34,285	114,821	2,060,185	1,177,304
29 7,074,534	881,169	40,000	70,002	205,023	310,552	57,175	.....	75,000	5,215	105,023	1,425,271	1,057,644
30 22,490	32,453	4,180	1,396	9,859	132	11,253	2,224	290	1,025	2,694	40,373	28,988
31 3,269,652	2,975,327	81,512	73,578	718,931	61,757	1,810,079	.....	15,428	.....	215,442	3,232,623	1,800,187
32 3,360,459	788,070	166,317	20,857	209,872	203,489	71,011	3,977	31,083	2,475	130,389	1,162,630	887,536
33 1,426,439	1,867,081	61,374	60,414	251,770	10,084	1,821,427	15,108	7,500	.....	132,378	2,086,199	753,785
34 1,266,963	1,243,306	20,038	7,535	98,704	20,492	1,030,951	.....	3,079	.....	61,907	1,374,070	322,627
35 95,442	43,770	4,425	.....	23,072	7,097	8,057	600	255	.....	204	50,146	34,922
36 1,789,889	997,448	47,040	26,067	120,327	54,029	361,287	.....	156,431	.....	230,407	1,200,817	790,901
37 23,337,198	18,029,154	678,394	318,717	7,304,567	62,927	8,441,070	31,389	152,220	200,836	1,735,428	24,632,093	16,127,490
38 2,117,492	2,107,125	105,058	68,725	998,058	69,702	726,098	9,245	11,719	2,360	177,900	2,645,218	1,854,518
39 638,813	829,997	42,701	41,519	129,077	9,489	502,070	15,054	4,394	.....	85,687	948,700	437,132
40 70,599	156,503	7,014	6,391	35,927	947	94,101	2,488	150	.....	5,816	175,512	80,704
41 12,720,146	21,979,055	432,808	234,107	849,433	620,941	18,819,011	12,000	98,175	14,721	901,464	23,040,779	4,200,827
42 41,081	91,604	5,430	5,002	19,332	920	51,958	4,050	425	.....	4,547	123,887	71,009
43 175,711	220,953	7,960	6,975	16,115	2,455	170,027	3,540	792	.....	13,089	221,508	40,026
44 556,943	1,149,238	47,035	78,656	81,265	2,058	439,539	9,829	5,174	300	485,822	1,420,870	979,273
45 47,028	61,877	8,010	8,317	25,541	3,172	10,979	1,344	98	.....	3,519	73,282	59,134
46 932,299	502,410	29,792	28,010	233,748	85,271	66,874	304	4,222	550	62,639	613,898	460,728
47 4,732,337	5,382,220	462,973	554,568	1,343,791	64,318	1,523,457	108,190	35,990	314,167	974,757	6,400,241	4,812,466
48 429,727	487,117	23,234	18,471	118,494	7,142	257,550	2,000	1,000	.....	58,311	464,780	200,079
49 188,150	468,038	2,100	7,357	84,110	15,528	585,987	4,044	1,799	884	10,319	599,346	107,831
50 413,580	372,915	25,309	15,232	166,010	11,722	108,919	900	3,038	.....	37,789	473,637	352,996
51 122,118	448,179	15,920	2,150	169,098	340	105,647	5,550	46,207	.....	13,297	505,929	309,942
52 2,689,971	5,134,671	229,038	63,603	2,080,808	700	1,258,943	.....	34,976	.....	618,603	6,938,957	5,679,314
53 356,392	179,585	13,425	4,150	34,374	643	113,170	.....	1,204	.....	12,119	209,214	95,401
54 1,415,021	708,904	20,075	6,100	175,221	18,559	424,173	.....	3,586	5,472	46,178	870,520	427,788
55 12,295,956	14,750,804	433,322	341,089	1,627,287	539,498	10,754,489	86,360	79,083	13,651	884,125	17,103,060	5,818,673

All other industries embrace—Continued.

Jewelry.....	3	Penicils, lead.....	1	Steam packing.....	1
Kaolin and ground earths.....	2	Rice, cleaning and polishing.....	2	Stereotyping and electrotyping.....	1
Labels and tags.....	2	Roofing materials.....	2	Surgical appliances and artificial limbs.....	2
Liquors, distilled.....	1	Safes and vaults.....	1	Type founding and printing materials.....	2
Locomotives, not made by railroad companies.....	1	Saws.....	1	Umbrellas and canes.....	2
Looking-glass and picture frames.....	4	Shipbuilding, including boat building.....	2	Upholstering materials.....	6
Mineral and soda waters.....	170	Shoddy.....	1	Vinegar and cider.....	2
Models and patterns, not including paper patterns.....	1	Silk and silk goods, including throwsters.....	1	Wall plaster.....	1
Musical instruments and materials, not specified.....	1	Soap.....	3	Waste.....	2
Oil, not elsewhere specified.....	3	Sporting and athletic goods.....	1	Wirework, including wire rope and cable.....	1
Paper and wood pulp.....	1	Stationery goods, not elsewhere specified.....	2	Wood preserving.....	1
Paving materials.....	1	Statuary and art goods.....	2	Wood, turned and carved.....	5

MANUFACTURES—GEORGIA.

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

ATLANTA.

INDUSTRY AND CITY.	Number of establishments	PERSONS ENGAGED IN INDUSTRY.										WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY.					Primary horse-power.
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks.		Wage earners (average number).			Total.	16 and over.		Under 16.				
					Male.	Female.	Total.	Male.	Female.		Under 16.	Male.	Female.	Male.	Female.		
1 All industries .....	483	15,091	367	703	1,365	354	12,302	8,792	2,905	605	13,348	9,558	3,144	411	235	22,768	
2 Artificial stone .....	9	180	7	10	6	157	157	157	157	157	176	176				25	
3 Bread and other bakery products .....	20	272	19	10	24	26	193	158	24	11	203	166	25	8	4	113	
4 Carriages and wagons and materials .....	11	292	12	8	11	171	168			3	190	187		3		85	
5 Clothing, men's, including shirts .....	8	744	6	19	27	2	690	89	594	10	695	87	598	2	8	119	
6 Confectionery .....	12	753	8	27	132	21	565	216	323	26	767	293	439	23	12	520	
7 Copper, tin, and sheet-iron products .....	12	458	10	16	29	6	397	330	17		530	507	23			162	
8 Foundry and machine-shop products .....	25	662	17	42	42	7	554	546		8	582	574		8		1,084	
9 Furniture and refrigerators .....	19	632	15	33	24	9	551	516	12	23	637	597	14	26		1,116	
10 Leather goods .....	10	102	7	14	13	1	87				88	86				61	
11 Lumber and timber products .....	19	1,162	13	48	60	7	1,034	674	19	41	1,087	1,024	20	33	5	2,699	
12 Marble and stone work .....	16	197	23	11	8		155	154		1	177	176		1		95	
13 Mattresses and spring beds .....	10	234	7	18	22	6	231	200	26	5	275	238	31	6		291	
14 Paint and varnish .....	4	46	4	4	9	2	28	25	2	1	27	24	2	1		68	
15 Patent medicines and compounds and druggists' preparations .....	35	315	22	24	69	25	175	78	95	2	186	83	101	2		78	
16 Printing and publishing .....	116	1,781	85	153	377	148	1,018	741	214	63	1,055	768	222	48	17	903	
17 All other industries <sup>1</sup> .....	157	7,301	112	266	512	95	6,316	4,326	1,579	411	6,075	4,672	1,669	245	189	15,349	

<sup>1</sup> All other industries embrace: Automobiles, including bodies and parts, 1; awnings, tents, and sails, 2; baskets, and rattan and willow ware, 1; belting and hose, leather, 1; blacking and cleansing and polishing preparations, 1; boots and shoes, including cut stock and findings, 3; boxes, fancy and paper, 6; brass and bronze products, 2; brick and tile, 1; brooms, 2; brushes, 1; card cutting and designing, 1; cars and general shop construction and repairs by steam-railroad companies, 3; cars, steam railroad, not including operations of railroad companies, 1; chemicals, 2; clothing, women's, 4; coffee and spice, roasting and grinding, 3; coffins, burial cases, and undertakers' goods, 2; cooperage and wooden goods, not elsewhere specified, 1; cordials and sirups, 4; corsets, 1; cotton goods, including cotton small wares, 2; cutlery and tools, not elsewhere specified, 1; electrical machinery, apparatus, and supplies, 2; electroplating, 1; fertilizers, 1; flags, banners, regalia, society badges, and emblems, 3; flavoring extracts, 4; flour-mill and gristmill products, 1; food preparations, 2; furnishing goods, men's, 3; gas and electric fixtures and lamps and reflectors, 1; gas, illuminating and heating, 3; glass, cutting, staining, and ornamenting, 4; hand stamps and stencils and brands, 4; hats and caps, other than felt, straw, and wool, 1; hats, straw, 2;

SAVANNAH.

1 All industries .....	137	3,186	121	108	179	61	2,727	2,393	295	39	2,813	2,468	305	40		6,403.
2 Bread and other bakery products .....	25	145	26			21	98	94		4	98	94		4		45.
3 Confectionery .....	4	34	4			3	27	27			27	27				18
4 Copper, tin, and sheet-iron products .....	5	179	5	5	10	4	155	136	19		171	150	21			241
5 Foundry and machine-shop products .....	6	285	7	8	15		255	252		3	281	278		3		488
6 Lumber and timber products .....	8	263	8	10	16	4	225	205		20	238	217		21		1,140
7 Patent medicines and compounds and druggists' preparations .....	4	26	1	1	7	1	16	6	10		16	6	10			5
8 Printing and publishing .....	24	398	26	17	53	15	287	228	55	4	302	240	58	4		183
9 Tobacco manufactures .....	6	79	4	3			72	11	61		77	12	65			2
10 All other industries <sup>1</sup> .....	55	1,787	40	64	78	13	1,592	1,434	150	8	1,603	1,444	151	8		4,281

<sup>1</sup> All other industries embrace: Awnings, tents, and sails, 1; bags, other than paper, 1; blacking and cleansing and polishing preparations, 1; brooms, 3; carriages and wagons and materials, 5; cars and general shop construction and repairs by steam-railroad companies, 1; cars and general shop construction and repairs by street-railroad companies, 1; chemicals, 1; clothing, men's, including shirts, 2; coffee and spice, roasting and grinding, 1; cooperage and wooden goods, not elsewhere specified, 2; cotton goods, including cotton small wares, 1; fertilizers, 2; flavoring extracts, 1; food preparations, 1; gas, illuminating and heating, 1; hand stamps and stencils and brands, 1; ice, manufactured,

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

1 ATHENS .....	37	1,104	41	52	42	7	962	609	267	86	997	681	277	44	45	2,209
2 AUGUSTA .....	71	5,442	45	124	166	34	5,073	3,495	1,375	203	5,130	3,529	1,385	105	101	13,324
3 BRUNSWICK .....	23	450	11	27	23	4	385	287	55	43	455	339	65	27	24	712
4 COLUMBUS .....	55	4,944	26	109	129	19	4,661	3,142	1,179	340	4,905	3,307	1,240	195	163	14,741
5 MACON .....	80	4,150	51	117	216	37	3,729	3,080	474	175	4,119	3,400	524	130	65	8,872
6 ROME .....	36	1,129	15	53	37	10	1,014	755	192	67	1,184	882	224	52	26	2,265
7 WAYCROSS .....	21	1,219	13	25	49	2	1,130	1,127	2	1	1,327	1,324	2	1		2,995

MANUFACTURES—GEORGIA.

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

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

ATLANTA.

	Capital.	EXPENSES.									Value of products.	Value added by manufacture.	
		Total.	Services.			Materials.		Miscellaneous.					
			Officials.	Clerks.	Wage earners.	Fuel and rent of power.	Other.	Rent of factory.	Taxes, including internal revenue.	Contract work.			Other.
1	\$30,877,899	\$28,577,522	\$1,279,631	\$1,431,658	\$5,436,184	\$572,064	\$15,848,253	\$280,771	\$250,020	\$303,905	\$3,177,036	\$33,038,002	\$16,619,685
2	72,235	152,899	11,756	5,140	60,680	800	60,616	2,426	456	-----	11,316	166,348	105,432
3	181,950	629,183	10,100	28,155	93,656	10,461	427,130	16,366	1,501	-----	32,794	689,604	252,013
4	204,553	369,814	14,974	7,842	96,736	3,340	219,181	6,272	2,010	-----	16,450	383,077	160,556
5	516,786	933,411	34,800	30,848	212,770	5,310	595,749	8,270	2,040	-----	34,615	1,019,468	418,404
6	700,782	1,787,294	53,950	91,155	198,097	25,761	1,262,048	18,636	6,563	-----	131,624	1,924,288	639,429
7	1,893,153	778,866	21,593	32,127	187,728	5,077	427,990	4,323	3,487	-----	96,041	816,568	383,496
8	1,619,630	1,168,495	65,347	60,233	300,811	21,216	573,081	6,510	8,838	1,054	122,390	1,284,260	639,063
9	915,154	761,775	60,616	20,069	225,750	10,296	352,408	25,020	4,547	1,298	55,162	899,280	530,876
10	116,855	186,250	10,396	6,615	35,225	921	100,053	10,040	789	-----	12,550	202,152	101,178
11	1,588,523	1,882,111	84,497	65,266	395,494	4,948	1,224,828	5,290	10,274	-----	91,544	2,043,236	813,400
12	75,018	214,110	12,006	4,440	109,038	1,243	75,406	3,693	1,776	1,345	4,263	244,929	168,280
13	482,713	663,941	33,264	36,786	100,005	7,260	396,964	12,284	3,060	-----	74,312	767,977	303,753
14	142,583	187,916	5,960	6,975	13,831	2,018	148,082	3,240	649	-----	7,161	177,148	27,048
15	504,742	1,009,763	43,655	70,135	65,794	1,941	382,283	7,310	4,330	300	454,009	1,205,456	841,232
16	2,419,850	3,435,929	286,604	420,482	640,298	27,434	923,593	55,319	15,007	292,637	774,555	3,835,673	2,884,646
17	19,443,372	14,418,956	514,243	526,700	2,661,292	444,508	8,696,841	94,937	184,633	7,271	1,258,441	17,428,568	8,287,219

hosiery and knit goods, 1; house-furnishing goods, not elsewhere specified, 3; ice, manufactured, 3; jewelry, 3; labels and tags, 1; liquors, malt, 1; looking-glass and picture frames, 3; millinery and lace goods, 5; mineral and soda waters, 12; models and patterns, not including paper patterns, 1; musical instruments and materials, not specified, 1; oil, cottonseed, and cake, 1; optical goods, 3; paving materials, 1; pencils, lead, 1; photo-engraving, 2; pottery, terra-cotta, and fire-clay products, 1; safes and vaults, 1; shoddy, 1; show cases, 1; slaughtering and meat packing, 5; soap, 1; sporting and athletic goods, 1; stationery goods, not elsewhere specified, 2; statuary and art goods, 1; steam packing, 1; stereotyping and electrotyping, 1; stoves and furnaces, including gas and oil stoves, 2; surgical appliances and artificial limbs, 1; tobacco manufactures, 3; type founding and printing materials, 2; umbrellas and canes, 2; upholstering materials, 1; vinegar and cider, 1; wall plaster, 1; wire work, including wire rope and cable, 2; woolen, worsted, and felt goods, and wool hats, 1.

SAVANNAH.

1	\$9,333,513	\$5,561,555	\$201,528	\$180,176	\$1,221,992	\$158,046	\$3,189,807	\$51,231	\$86,875	\$43,893	\$427,405	\$6,733,651	\$3,385,106
2	122,284	236,732	-----	6,499	42,185	5,242	164,850	3,316	2,350	-----	11,790	280,330	110,238
3	41,354	93,815	-----	2,150	8,956	2,006	44,365	2,133	491	-----	3,624	89,610	43,140
4	865,589	348,468	7,300	11,729	69,262	6,140	199,428	3,693	795	-----	50,150	379,712	174,144
5	714,880	305,982	18,040	11,532	136,464	19,063	94,872	6,600	5,110	-----	29,271	442,180	337,221
6	409,330	305,535	12,650	10,725	90,162	3,000	164,481	4,900	3,020	300	9,797	381,684	214,203
7	25,799	92,250	1,500	6,483	5,085	72	52,027	1,104	672	-----	25,247	133,405	81,306
8	572,384	495,110	41,930	42,028	169,183	8,996	179,870	8,263	3,250	6,280	35,010	657,625	469,659
9	14,980	75,717	3,340	-----	20,572	185	41,492	1,260	8,013	-----	885	78,126	36,470
10	6,566,913	3,637,946	110,708	83,030	690,123	123,424	2,248,462	25,492	69,173	30,813	260,731	4,290,673	1,918,797

4; leather goods, 1; liquors, malt, 1; marble and stone work, 4; mattresses and spring beds, 2; mineral and soda waters, 7; oil, not elsewhere specified, 3; optical goods, 1; paint and varnish, 1; photo-engraving, 1; rice, cleaning and polishing 1; statuary and art goods, 1; wood distillation, not including turpentine and rosin, 1; wood, turned and carved, 1.

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

1	\$1,920,545	\$1,870,161	\$70,715	\$33,465	\$204,209	\$40,254	\$1,282,072	\$4,634	\$13,300	\$40	\$124,482	\$2,111,516	\$782,200
2	11,065,679	9,515,607	242,728	169,024	1,741,432	182,327	6,419,756	21,539	133,661	3,268	601,772	10,456,407	3,854,324
3	451,657	545,918	30,770	19,644	190,954	8,072	250,274	4,204	22,666	200	19,134	672,167	413,821
4	7,997,480	8,102,787	191,207	129,182	1,631,364	162,512	5,399,747	13,660	72,923	5,200	496,972	8,551,998	2,989,739
5	8,475,617	9,424,640	221,270	200,066	1,433,004	209,719	6,669,776	32,632	92,476	10,070	565,743	10,702,918	3,833,423
6	1,551,232	1,626,945	77,254	32,502	319,793	37,113	1,040,403	5,757	14,946	26,333	72,539	1,864,257	786,741
7	868,480	1,170,693	26,310	33,253	468,597	15,323	596,580	1,247	5,513	250	18,631	1,203,393	591,481

# IDAHO.

## INDUSTRIES IN GENERAL.

General character of the state.—Idaho, containing 84,290 square miles of land area, is the tenth state of the Union in size. Its population in 1910 was 325,594, compared with 161,772 in 1900 and 88,548 in 1890. It ranked forty-fifth among the 49 states and territories as regards population in 1910 and forty-sixth in 1900.

The state has but one city having a population of over 10,000, Boise, which had 17,358 inhabitants in 1910. The density of population for the state was 3.9 per square mile, the corresponding figure for 1900 being 1.9. Railways traverse the northern and southern portions of the state, but the greater part of the

central portion is without railway facilities, while the rapid currents and shallow waters of the rivers make water transportation impracticable.

Importance and growth of manufactures.—Idaho was admitted to the Union as a state in 1890, and since that date its development in manufacturing has more than kept pace with its growth in population.

The following table gives the more important figures relative to all classes of manufactures combined for the state as returned at the censuses of 1909, 1904, and 1899, together with percentages of increase from census to census:

	NUMBER OR AMOUNT.			PER CENT OF INCREASE.	
	1909	1904	1899	1904-1909	1899-1904
Number of establishments.....	725	364	287	99.2	26.8
Persons engaged in industry.....	9,909	3,791	(1)	161.4	.....
Proprietors and firm members.....	831	371	(1)	124.0	.....
Salaried employees.....	858	359	92	139.0	290.2
Wage earners (average number).....	8,220	3,061	1,552	168.5	97.2
Primary horsepower.....	42,804	16,987	5,649	152.0	200.7
Capital.....	\$32,477,000	\$9,689,000	\$2,130,000	235.2	354.9
Expenses.....	18,891,000	7,619,000	2,465,000	147.9	209.1
Services.....	6,482,000	2,438,000	884,000	165.9	175.8
Salaries.....	984,000	379,000	66,000	159.6	474.2
Wages.....	5,498,000	2,059,000	818,000	167.0	151.7
Materials.....	9,920,000	4,069,000	1,430,000	143.8	182.8
Miscellaneous.....	2,489,000	1,112,000	142,000	123.8	683.1
Value of products.....	22,400,000	8,769,000	3,001,000	155.4	192.2
Value added by manufacture (value of products less cost of materials).....	12,480,000	4,700,000	1,562,000	165.5	200.9

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

In 1909 the state of Idaho had 725 manufacturing establishments, which gave employment to an average of 9,909 persons during the year and paid out \$6,482,000 in salaries and wages. Of the persons employed, 8,220 were reported as wage earners. These establishments turned out products to the value of \$22,400,000, to produce which materials costing \$9,920,000 were utilized. The value added by manufacture was thus \$12,480,000, which figure, as explained in the Introduction, best represents the net wealth created by manufacturing operations during the year.

In general, this table brings out the fact that the manufacturing industries of Idaho as a whole showed an unusually large percentage of increase during each of the five-year periods 1899-1904 and 1904-1909. During the period 1904-1909 the number of establishments increased 99.2 per cent and the average number of wage earners 168.5 per cent, while the value of products increased 155.4 per cent and the

value added by manufacture 165.5 per cent. The increase is due primarily to the increase in lumber and timber products. As pointed out in the Introduction, it would be improper to infer that manufactures have increased in volume during the period 1904-1909 to the extent indicated by the figures regarding values, since the increase shown is certainly due, in part, to the increase that has taken place in the price of commodities.

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

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

The most important industries listed in this table, in which they are arranged in the order of value of products, are briefly considered.

INDUSTRY.	Number of establishments.	WAGE EARNERS.		VALUE OF PRODUCTS.		VALUE ADDED BY MANUFACTURE.		PER CENT OF INCREASE. <sup>1</sup>			
		Average number.	Per cent distribution.	Amount.	Per cent distribution.	Amount.	Per cent distribution.	Value of products.		Value added by manufacture.	
								1904-1909	1899-1904	1904-1909	1899-1904
All industries .....	725	8,220	100.0	\$22,400,000	100.0	\$12,480,000	100.0	155.4	192.2	165.5	209.9
Lumber and timber products .....	256	5,212	63.4	10,689,000	47.7	7,344,000	58.8	240.2	232.5	228.4	264.2
Flour-mill and gristmill products .....	57	125	1.5	2,480,000	11.1	455,000	3.6	56.6	115.8	69.1	66.0
Cars and general shop construction and repairs by steam-railroad companies .....	5	849	10.3	1,368,000	6.1	707,000	5.7	49.5	74.4	20.2	89.7
Printing and publishing .....	132	468	5.7	1,148,000	5.1	905,000	7.3	.....	.....	.....	.....
Butter, cheese, and condensed milk .....	18	118	1.4	884,000	3.9	209,000	1.6	414.0	48.3	463.9	16.1
Liquors, malt .....	11	74	0.9	698,000	3.1	464,000	3.7	130.4	304.0	102.6	308.9
Brick and tile .....	36	286	3.5	444,000	2.0	335,000	2.7	292.9	156.8	289.5	138.9
All other industries .....	210	1,088	13.2	4,691,000	20.9	2,067,000	16.6	.....	.....	.....	.....

<sup>1</sup> Percentages are based on figures in Table I. Where the percentages are omitted, comparable figures can not be given.

*Lumber and timber products.*—The statistics showing number of wage earners, amount paid in wages, and value of products all indicate a very large growth for this industry. At each of the three censuses for which the figures are shown in Table I it may be seen that lumber formed a considerable proportion of the total value of all manufactures for the state. The exact proportions at the three censuses were as follows: In 1899, 31.5 per cent; in 1904, 35.8 per cent; and in 1909, 47.7 per cent. These figures show a steady increase in the relative importance of this industry, as compared with the total manufactures in the state.

*Flour-mill and gristmill products.*—Although the totals for this industry show an increase of 56.6 per cent in value of products from 1904 to 1909, this was only about one-half the rate of gain for the period 1899-1904. The value of the flour-mill and gristmill products formed a smaller relative proportion of the total for all industries at each succeeding census, as follows: In 1899, 24.5 per cent; in 1904, 18.1 per cent; and in 1909, 11.1 per cent. Owing to the comparatively simple processes involved and the extent to which they are carried on by machinery, the value added by manufacture is not commensurate with the gross value of products or the number of establishments.

*Cars and general shop construction and repairs by steam-railroad companies.*—This industry is peculiar among the manufacturing industries of the country. It represents the work done in the car shops of steam-railroad companies, and practically is confined to repairs to the rolling stock and equipment of their own roads, although to a limited extent there may be some new construction of rolling stock. The statistics are exclusive of minor repairs in roundhouses. In 1909 employment was given to an average of 849 wage earners, or 10.3 per cent of the total for the state, and the value of products, \$1,366,000, formed 6.1 per cent of the corresponding total for all industries.

*Printing and publishing.*—The establishments classified under this head for 1909 include 115 publishing newspapers and periodicals, 16 book and job offices, and 1 bookbinding establishment.

Measured by value added by manufacture, the rank of these four industries is somewhat different, though lumber and timber products is still first. Printing and publishing becomes second; cars and general shop construction and repairs by steam-railroad companies remains third; while flour-mill and gristmill products becomes fifth, and liquors, malt, takes fourth place.

This table shows also the percentages of increase for the leading industries in respect to value of products and value added by manufacture. The butter, cheese, and condensed-milk industry showed greater rates of increase from 1904 to 1909 in both value of products and value added by manufacture than any other of the specified industries, namely, 414 per cent and 463.9 per cent, respectively. The brick and tile and the lumber industries also showed remarkable increases.

In addition to the seven industries presented separately, there are seven other important industries which are included in the group of "All other industries," for reasons as follows: For beet sugar the totals can not be shown, since to do so would disclose the operations of individual establishments, while for artificial stone; confectionery; copper, tin, and sheet-iron products; gas, illuminating and heating; leather goods; and marble and stone work, although the 1909 totals will be found in Table I, comparative statistics for prior censuses are not available.

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

The average number of persons engaged in manufactures during 1909 was 9,909. Of these, 8,220 were wage earners, 1,187 proprietors and officials, and 502 clerks. Corresponding figures for separate industries will be found in Table II.

CLASS.	PERSONS ENGAGED IN MANUFACTURES.		
	Total.	Male.	Female.
All classes.....	9,909	9,048	263
Proprietors and officials.....	1,187	1,163	24
Proprietors and firm members.....	831	811	20
Salaried officers of corporations.....	108	104	4
Superintendents and managers.....	248	248	.....
Clerks.....	502	418	84
Wage earners (average number).....	8,220	8,065	155
16 years of age and over.....	8,190	8,035	155
Under 16 years of age.....	30	30	.....

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

Of the total number of persons engaged in all manufacturing industries, 12 per cent were proprietors and officials, 5.1 per cent clerks, and 83 per cent wage earners. All of the wage earners under 16 years of age were males. In the flour mills and gristmills and the creameries a large number of the establishments are small and the work is, to a great extent, done by the proprietors or their immediate representatives. Therefore the proportion of persons engaged in these industries falling into the class of proprietors and officials is very much higher than for other industries or all industries combined. The smallest proportion for this class is shown for repair shops operated by steam-railroad companies, and is due to the fact that corporations which operate these establishments report no proprietors, in addition to which general officials are not, as a rule, assigned to the supervision of this particular branch of work.

INDUSTRY.	PERSONS ENGAGED IN MANUFACTURES.			
	Total number.	Per cent of total.		
		Proprietors and officials.	Clerks.	Wage earners (average number).
All industries.....	9,909	12.0	5.1	83.0
Brick and tile.....	347	15.8	1.7	82.4
Butter, cheese, and condensed milk.....	150	14.5	11.3	74.2
Cars and general shop construction and repairs by steam-railroad companies.....	870	0.6	1.8	97.4
Flour-mill and gristmill products.....	242	42.1	6.2	51.7
Liquors, malt.....	111	16.2	17.1	66.7
Lumber and timber products.....	5,004	8.0	3.7	88.3
Printing and publishing.....	758	26.0	11.3	61.7
All other industries.....	1,518	20.4	8.0	71.7

The following table shows, in percentages, for all industries combined, the distribution of the average number of wage earners by age periods and sex, calculated in the manner described in the Introduction. It also shows, for some of the important industries separately, the percentage distribution, by age periods and sex, of wage earners as reported for December 15, or the nearest representative day. As a means of judging the importance of the several industries the average total number employed for the year is also given in each case. Of the 8,220 wage earners, 98.1 per cent were males and 1.9 per cent females; 99.6 per

cent were 16 years of age or over, and but four-tenths of 1 per cent were children under the age of 16.

INDUSTRY.	WAGE EARNERS.			
	Average number. <sup>1</sup>	Per cent of total.		
		16 years of age and over.	Male.	Female.
All industries.....	8,220	97.7	1.9	0.4
Brick and tile.....	286	97.9	0.3	1.7
Butter, cheese, and condensed milk.....	118	95.8	4.2	.....
Cars and general shop construction and repairs by steam-railroad companies.....	849	100.0	.....	.....
Flour-mill and gristmill products.....	125	100.0	.....	.....
Liquors, malt.....	74	98.0	1.4	.....
Lumber and timber products.....	5,212	99.0	0.3	0.1
Printing and publishing.....	408	85.3	11.1	3.6
All other industries.....	1,089	92.0	7.4	0.1

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

The largest number of women and children were employed in the printing and publishing industry. The average number of wage earners in that industry was 399 males and 52 females 16 years of age and over and 17 males under that age.

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

CLASS.	PERSONS ENGAGED IN MANUFACTURES.				
	1909		1904		Per cent of increase, 1904-1909.
	Number.	Per cent distribution.	Number.	Per cent distribution.	
Total.....	9,909	100.0	8,791	100.0	161.4
Proprietors and firm members.....	831	8.4	371	9.8	124.0
Salaried employees.....	858	8.7	359	9.5	139.0
Wage earners (average number).....	8,220	83.0	3,061	80.7	168.5

Comparable figures are not obtainable for 1899. The table shows a greater percentage of increase in the wage earners than in either of the other two classes, due chiefly to the great increase in the number of wage earners in the lumber industry.

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

CLASS.	AVERAGE NUMBER OF WAGE EARNERS.					
	1909		1904		1899	
	Number.	Per cent distribution.	Number.	Per cent distribution.	Number.	Per cent distribution.
Total.....	8,220	100.0	3,061	100.0	1,552	100.0
16 years of age and over.....	8,190	99.6	3,021	98.7	1,530	98.6
Male.....	8,035	97.7	2,931	95.8	1,498	96.5
Female.....	155	1.9	90	2.9	32	2.1
Under 16 years of age.....	30	0.4	40	1.3	22	1.4

This table indicates that for all industries combined during the 10 years there has been an increase in the number of women and children employed, but the numbers are small and the percentages which they form of all wage earners have decreased.

**Wage earners employed, by months.**—The following table gives the number of wage earners employed on the 15th of each month during the year 1909, for all

industries combined, for the lumber industry, and for all other industries combined; it gives also the percentage which the number reported for each month is of the greatest number reported for any month. In Table II, page 246, are shown, for each industry in the state, the largest and the smallest number of employees reported for any month. The numbers relate to the 15th day, or the nearest representative day, of that month.

MONTH.	NUMBER OF WAGE EARNERS.									
	All industries.		Lumber and timber products.						All other industries.	
			Total.		In mills.		In logging operations.			
	Number.	Per cent of maximum.	Number.	Per cent of maximum.	Number.	Per cent of maximum.	Number.	Per cent of maximum.	Number.	Per cent of maximum.
January.....	6,145	64.5	3,477	57.6	1,587	41.3	1,890	71.2	2,668	76.4
February.....	6,033	63.3	3,669	59.1	1,773	46.1	1,786	67.7	2,464	70.6
March.....	7,270	76.3	4,634	76.8	2,511	65.3	2,123	80.0	2,636	75.5
April.....	8,279	86.9	5,389	89.3	3,357	87.3	2,032	76.6	2,890	82.8
May.....	8,664	91.0	5,781	95.8	3,822	99.4	1,959	73.8	2,883	82.6
June.....	8,929	93.7	5,873	97.3	3,845	100.0	2,028	76.4	3,056	87.5
July.....	8,939	93.8	5,718	94.8	3,762	97.8	1,956	73.7	3,221	92.3
August.....	8,696	91.3	5,584	92.5	3,693	96.0	1,891	71.3	3,112	89.1
September.....	8,690	91.2	5,575	92.4	3,499	91.0	2,076	78.3	3,115	89.2
October.....	9,525	100.0	6,034	100.0	3,665	95.3	2,369	89.3	3,491	100.0
November.....	8,971	94.2	5,550	92.0	3,042	79.1	2,508	94.5	3,421	98.0
December.....	8,507	89.3	5,373	89.0	2,720	70.7	2,653	100.0	3,134	89.8

While the lumber industry in Idaho is carried on throughout the year, yet on account of climatic conditions it is to a certain extent a seasonal industry, giving employment to a larger number of persons during the summer months than during the winter. From 3,477 wage earners employed in this industry in January the number increased steadily until June, when it reached 5,873. It decreased during July, August, and September, but in October increased to 6,034, the largest number employed during any one month. Exclusive of the lumber industry, the number of wage earners varied from a minimum of 2,464 in February to a maximum of 3,491 in October.

**Prevailing hours of labor.**—In the following table wage earners have been classified according to the hours

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

It is evident from the figures that for the majority of wage earners employed in the manufacturing industries of Idaho the prevailing hours of labor were 60 a week, 24.1 per cent of the total being employed in establishments where they worked less than that number of hours, and only 10 per cent being employed in establishments where they worked longer hours.

INDUSTRY.	AVERAGE NUMBER OF WAGE EARNERS IN ESTABLISHMENTS GROUPED ACCORDING TO PREVAILING HOURS OF WORK PER WEEK.								
	Total.	48 and under.	Between 48 and 54.	54.	Between 54 and 60.	60.	Between 60 and 72.	72.	Over 72.
All industries.....	8,220	637	70	1,195	79	5,419	355	63	402
Brick and tile.....	286	36		110		140			
Butter, cheese, and condensed milk.....	113	4		1		8	100		5
Cars and general shop construction and repairs by steam-railroad companies.....	849			718		2	129		
Flour-mill and gristmill products.....	125	6			2	78	26	18	
Liquors, malt.....	74	43		1	17	13			
Lumber and timber products.....	5,212	31	26	111		4,965	69	10	
Printing and publishing.....	468	309	38	102		16	3		
All other industries.....	1,088	208	6	152	60	202	28	35	397

**Location of establishments.**—The next table shows a comparison of the totals for all industries in the city of Boise and the remainder of the state for 1909. (See Introduction.) The population of the city was less than 10,000 at prior censuses, and therefore compar-

able data are not available. The figures indicate that 6.9 per cent of the establishments of the state, 5 per cent of the average number of wage earners, and 7.4 per cent of the value of products were reported from this city.

ITEM.	Total.	LOCATION OF ESTABLISHMENTS.		PER CENT OF TOTAL.	
		Boise.	Outside districts.	Boise.	Outside districts.
Population <sup>1</sup> .....	325,594	17,358	308,236	5.3	94.7
Number of establishments.....	725	50	675	6.9	93.1
Average number of wage earners.....	8,220	411	7,809	5.0	95.0
Value of products.....	\$22,399,360	\$1,060,497	\$20,730,363	7.4	92.6
Value added by manufacture.....	\$12,470,843	\$765,909	\$11,713,034	6.1	93.9

<sup>1</sup> Population figures are for 1910.

**Character of ownership.**—The table that follows has for its purpose the presentation of conditions in respect to the character of ownership, or legal organization, of manufacturing enterprises. For all industries combined comparative figures are given covering the censuses of 1909 and 1904. Comparative data for 1899

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

The most important distinction shown is that between corporate and all other forms of ownership. For all industries combined, 27.6 per cent of the total number of establishments were in 1909 under corporate ownership, as against 72.4 per cent under all other forms. The corresponding figures for 1904 were 28.8 per cent and 71.2 per cent, respectively. For all industries combined, as measured by value of products and value added by manufacture, corporations gained ground, but the percentage of establishments operated under this form of ownership was slightly less in 1909 than in 1904.

INDUSTRY AND CHARACTER OF OWNERSHIP.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.	INDUSTRY AND CHARACTER OF OWNERSHIP.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.
<b>ALL INDUSTRIES:</b>					<b>Flour-mill and gristmill products, 1909.</b>				
1909.....	725	8,220	\$22,399,800	\$12,470,843	Individual.....	57	125	\$2,470,719	\$455,121
1904.....	364	3,061	8,768,743	4,700,220	Firm.....	18	32	483,402	95,718
Individual:					Corporation.....	15	18	334,508	80,400
1909.....	350	1,237	3,567,130	1,940,755	Per cent of total.....	100.0	100.0	100.0	100.0
1904.....	170	487	1,393,488	771,595	Individual.....	31.6	25.6	19.5	21.0
Firm:					Firm.....	20.3	14.4	13.5	19.0
1909.....	172	577	1,807,026	1,031,807	Corporation.....	42.1	60.0	67.0	60.0
1904.....	85	434	1,202,462	688,717	<b>Lumber and timber products, 1909.</b>				
Corporation:					Individual.....	256	5,212	\$10,889,310	\$7,344,532
1909.....	200	6,401	16,982,034	9,480,060	Firm.....	113	705	1,314,217	615,168
1904.....	105	2,130	6,136,137	3,225,730	Corporation.....	71	306	524,015	377,888
Other:					Per cent of total.....	100.0	100.0	100.0	100.0
1909.....	3	5	43,671	9,165	Individual.....	44.1	13.5	12.3	12.5
1904.....	4	10	36,659	14,293	Firm.....	27.7	5.9	4.9	5.1
Per cent of total:					Corporation.....	28.1	80.6	82.8	82.4
1909.....	100.0	100.0	100.0	100.0	<b>Printing and publishing, 1909.</b>				
1904.....	100.0	100.0	100.0	100.0	Individual.....	132	468	\$1,145,033	\$905,129
Individual:					Firm.....	67	134	328,680	264,997
1909.....	48.3	15.0	15.9	15.6	Corporation.....	32	84	206,893	160,765
1904.....	46.7	15.9	15.9	16.4	Per cent of total.....	100.0	100.0	100.0	100.0
Firm:					Individual.....	50.8	28.6	28.6	29.3
1909.....	23.7	7.0	8.1	8.3	Firm.....	24.2	17.9	18.0	17.8
1904.....	23.4	14.2	13.7	14.7	Corporation.....	25.0	53.4	53.4	53.0
Corporation:									
1909.....	27.6	77.9	75.8	76.0					
1904.....	28.8	69.6	70.0	68.6					
Other:									
1909.....	0.4	0.1	0.2	0.1					
1904.....	1.1	0.3	0.4	0.3					

<sup>1</sup> Includes the group "Other," to avoid disclosure of individual operations.

Of the three separate industries given in the table, lumber and timber products show the largest proportion for corporations in average number of wage earners, value of products, and value added by manufacture, while for number of establishments the largest proportion for corporations is shown by flour mills and gristmills.

**Size of establishment.**—The tendency for manufacturing to become concentrated in large establishments, or the reverse, is a matter of interest from the standpoint of industrial organization. In order to throw some light upon it, the table which follows groups the establishments according to the value of their products. The table also shows the average size of establishments for all industries combined and for important industries separately, as measured by number of wage earners, value of prod-

ucts, and value added by manufacture. The totals for all industries are shown for the last two censuses, while for certain important industries figures are given for 1909 only.

This table shows that, in 1909, of the 725 establishments only 36, or 5 per cent, had a value of products exceeding \$100,000. These establishments, however, notwithstanding their comparatively small number, had an average of 4,931 wage earners, or 60 per cent of the total number in all establishments; and the importance of their operations measured by value of products was 58.1 per cent of the total, and by value added by manufacture 59.5 per cent of the total.

On the other hand, small establishments—that is, those having a value of products of less than \$5,000—constituted a considerable proportion (38.5 per cent)

of the total number of establishments, but the value of their products amounted to only 3.3 per cent of the total. About one-fourth of the total value of products was reported by establishments whose products were between \$20,000 and \$100,000 in value.

During the period 1904-1909 there was a slight decrease in the percentage of establishments having products valued at less than \$5,000 and in those having products valued at \$20,000 but less than \$100,000. The percentage for each of the other groups shows a correspondingly slight increase.

The five years from 1904 to 1909 was rather too short a period to show extensive changes, although it is evident that the proportional importance of the

small establishments has decreased and that of the large establishments increased.

The fact that the average value of products increased from \$24,090, to \$30,896, and the value added by manufacture from \$12,913 to \$17,214, can scarcely be taken as in itself indicating a tendency toward concentration. The increased values shown may be, and probably are, due in part to the increase that has taken place in the prices of commodities. The average number of wage earners per establishment increased by three. The table shows further that when the size of establishments is measured by value of products the largest establishments in the three industries specified are found in the lumber industry.

INDUSTRY AND VALUE OF PRODUCTS.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.	INDUSTRY AND VALUE OF PRODUCTS.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.
<b>ALL INDUSTRIES:</b>					<b>Flour-mill and gristmill products, 1909</b>				
1909.....	725	3,220	\$22,399,560	\$12,479,843	Less than \$5,000.....	57	125	\$2,479,719	\$455,121
1904.....	364	3,061	8,768,743	4,700,220	\$5,000 and less than \$20,000.....	5	1	20,714	4,687
Less than \$5,000:					\$20,000 and less than \$100,000.....	19	27	255,655	63,097
1909.....	279	354	743,265	523,258	\$100,000 and less than \$1,000,000.....	28	72	1,484,880	283,255
1904.....	146	182	365,075	252,544	Average per establishment.....	5	25	718,464	104,082
\$5,000 and less than \$20,000:					Per cent of total.....	100.0	100.0	100.0	100.0
1909.....	231	1,184	2,854,751	1,756,615	Less than \$5,000.....	8.8	0.8	0.8	1.0
1904.....	129	546	1,204,213	739,508	\$5,000 and less than \$20,000.....	33.3	21.6	10.3	13.9
\$20,000 and less than \$100,000:					\$20,000 and less than \$100,000.....	49.1	57.6	59.9	62.2
1909.....	129	1,751	5,785,475	2,771,134	\$100,000 and less than \$1,000,000.....	8.8	20.0	29.0	22.0
1904.....	74	1,043	3,470,002	1,766,756	Average per establishment.....		2	\$43,504	\$7,985
\$100,000 and less than \$1,000,000:					<b>Lumber and timber products, 1909</b>				
1909 <sup>1</sup> .....	36	4,931	13,016,399	7,428,836	Less than \$5,000.....	256	5,212	\$10,689,310	\$7,344,532
1904.....	15	1,290	3,669,453	1,941,412	\$5,000 and less than \$20,000.....	106	183	277,081	214,799
Per cent of total:					\$20,000 and less than \$100,000.....	87	609	838,551	533,507
1909.....	100.0	100.0	100.0	100.0	\$100,000 and less than \$1,000,000 <sup>2</sup> .....	46	1,026	2,061,227	1,378,125
1904.....	100.0	100.0	100.0	100.0	Average per establishment.....	17	3,489	7,522,461	5,163,011
Less than \$5,000:					Per cent of total.....	100.0	100.0	100.0	100.0
1909.....	38.5	4.3	3.3	4.2	Less than \$5,000.....	41.4	3.6	2.6	2.9
1904.....	40.1	5.9	4.2	5.4	\$5,000 and less than \$20,000.....	34.0	9.8	7.8	8.0
\$5,000 and less than \$20,000:					\$20,000 and less than \$100,000.....	18.0	19.7	19.2	18.8
1909.....	38.8	14.4	12.7	14.1	\$100,000 and less than \$1,000,000 <sup>1</sup> .....	6.6	66.9	70.4	70.3
1904.....	35.4	17.8	14.4	15.7	Average per establishment.....		20	\$41,765	\$28,690
\$20,000 and less than \$100,000:					<b>Printing and publishing, 1909</b>				
1909.....	17.8	21.3	25.8	22.2	1909.....	132	468	\$1,148,033	\$905,129
1904.....	20.3	34.1	39.0	37.6	Less than \$5,000.....	73	79	130,412	154,282
\$100,000 and less than \$1,000,000:					\$5,000 and less than \$20,000.....	50	217	499,726	394,280
1909.....	5.0	60.0	58.1	59.5	\$20,000 and less than \$100,000 <sup>2</sup> .....	9	172	448,895	356,597
1904.....	4.1	42.1	41.8	41.3	Per cent of total.....	100.0	100.0	100.0	100.0
Average per establishment:					Less than \$5,000.....	55.3	16.9	17.4	17.0
1909.....		11	\$30,896	\$17,214	\$5,000 and less than \$20,000.....	37.9	46.4	43.5	43.6
1904.....		8	24,090	12,913	\$20,000 and less than \$100,000 <sup>2</sup> .....	6.8	36.8	39.1	39.4
					Average per establishment.....		4	\$8,697	\$6,857

<sup>1</sup> Includes the group "\$1,000,000 and over."

<sup>2</sup> Includes the group "\$100,000 and less than \$1,000,000."

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

The per cent distribution of the number of establishments is not shown in this table; of the 725 establishments reported for all industries, 92.8 per

cent employed under 21 persons each or no wage earners at all. The most numerous single group consists of the 494 establishments employing from 1 to 5 wage earners, the next being the group employing from 6 to 20 wage earners, with 123 establishments. There were 11 establishments employing over 100 wage earners each, of which 3 employed over 500 each.

Of the total average number of wage earners, 41 per cent were in establishments employing over 250 wage earners. The single group having the largest number of employees was the group employing from 501 to 1,000 wage earners. This group employed 2,418 wage earners, or 29.4 per cent of the total.

INDUSTRY.	Total.	ESTABLISHMENTS EMPLOYING—								
		No wage earners.	1 to 5 wage earners.	6 to 20 wage earners.	21 to 50 wage earners.	51 to 100 wage earners.	101 to 250 wage earners.	251 to 500 wage earners.	501 to 1,000 wage earners.	Over 1,000 wage earners.
NUMBER OF ESTABLISHMENTS.										
All industries.....	725	56	494	123	28	13	5	3	3	
Brick and tile.....	30	1	19	13	3					
Butter, cheese, and condensed milk.....	18	2	14	1		1				
Cars and general shop construction and repairs by steam-railroad companies.....	5		2			2			1	
Flour-mill and gristmill products.....	57	3	52	2						
Liquors, malt.....	11		6		5					
Lumber and timber products.....	256	4	161	66	10	3		3	2	
Printing and publishing.....	132	13	95	16	2	1				
All other industries.....	210	28	145	30	4	1	2			
AVERAGE NUMBER OF WAGE EARNERS.										
All industries.....	8,220	1,098	1,304	939	857	661	953	2,418		
Brick and tile.....	280	45	148	93						
Butter, cheese, and condensed milk.....	118	29	9		80					
Cars and general shop construction and repairs by steam-railroad companies.....	849	5			126			718		
Flour-mill and gristmill products.....	125	112	13							
Liquors, malt.....	74	12	62							
Lumber and timber products.....	5,212	394	937	605	497	366	953	1,700		
Printing and publishing.....	468	215	138	57	53					
All other industries.....	1,088	286	297	114	96	295				
PER CENT OF AVERAGE NUMBER OF WAGE EARNERS.										
All industries.....	100.0	13.4	15.9	11.3	10.4	8.0	11.6	29.4		
Brick and tile.....	100.0	15.7	51.7	32.5						
Butter, cheese, and condensed milk.....	100.0	24.0	7.0		67.8					
Cars and general shop construction and repairs by steam-railroad companies.....	100.0	0.0			14.8			84.6		
Flour-mill and gristmill products.....	100.0	89.6	10.4							
Liquors, malt.....	100.0	16.2	83.8							
Lumber and timber products.....	100.0	7.6	12.2	12.8	9.5	7.0	18.3	32.6		
Printing and publishing.....	100.0	45.9	29.5	12.2	12.4					
All other industries.....	100.0	26.3	27.3	10.5	8.8	27.1				

Expenses.—As stated in the Introduction, the census does not purport to furnish figures that can be used for determining the cost of manufacture and profits. Facts of interest can, however, be brought out concerning the relative importance of the different classes of expenses going to make up the total.

The following table shows, in percentages, the distribution of expenses among the classes indicated for all industries combined and for certain important industries separately. The figures on which the percentages are based appear in Table II.

INDUSTRY.	PER CENT OF TOTAL EXPENSES REPORTED.			
	Salaries.	Wages.	Materials.	Miscellaneous expenses.
All industries.....	5.2	29.1	52.5	13.3
Flour-mill and gristmill products.....	2.1	4.1	90.7	3.1
Lumber and timber products.....	5.2	33.2	37.8	18.8
Printing and publishing.....	16.1	43.1	28.1	12.8
All other industries.....	4.9	23.8	62.1	9.3

This table shows that, for all industries combined, 52.5 per cent of the total expenses were incurred for materials, 34.3 per cent for services—that is, salaries

and wages—and but 13.1 per cent for other purposes. As would be expected, these proportions vary greatly in the different industries.

Engines and power.—The next table shows for all industries combined the number of engines or other motors, according to their character, employed in generating power (including electric motors operated by purchased current), and their total horsepower at the censuses of 1909, 1904, and 1899. It also shows separately the number and horsepower of electric motors, including those operated by current generated in the manufacturing establishments.

From 1904 to 1909 the large percentage of increase in the amount of primary horsepower used is in proportion to the growth of manufacturing industries in the state—86.5 per cent of the actual increase being due to the increase in the amount of power used in the lumber industry alone. The largest actual increase was in steam power, which in 1909 represented 93.1 per cent of the owned primary power and 83 per cent of all primary power both owned and rented. The largest percentage of increase was for rented electrical power, which class also shows 15.5 per cent of the total actual increase in primary horsepower from 1904 to 1909.

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.			PER CENT DISTRIBUTION OF HORSEPOWER.		
	1909	1904	1899 <sup>1</sup>	1909	1904	1899 <sup>1</sup>	1909	1904	1899
<b>Primary power, total.</b>	<b>937</b>	<b>268</b>	<b>204</b>	<b>42,804</b>	<b>16,887</b>	<b>5,649</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Owned.....	540	208	204	38,178	16,350	5,643	89.2	96.2	99.9
Steam.....	437	212	141	35,529	15,145	4,010	83.0	89.2	71.0
Gas.....	53	27	6	242	127	28	0.6	0.7	0.5
Water wheels.....	47	23	57	2,408	1,000	1,005	5.6	6.2	28.4
Water motors.....	3	6	(*)	4	18	(*)	(*)	0.1	(*)
Rented.....	397	(*)	(*)	4,620	637	6	10.8	3.8	0.1
Electric motors.....	397	(*)	(*)	4,606	537	6	10.8	3.2	0.1
Other.....				20	100		(*)	0.6	
<b>Electric motors.</b>	<b>608</b>	<b>71</b>		<b>8,400</b>	<b>1,702</b>	<b>6</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Run by current generated by establishment.....	211	71		3,803	1,165		45.2	68.4	
Run by rented power.....	397	(*)	(*)	4,606	537	6	54.8	31.6	100.0

<sup>1</sup> Includes the neighborhood industries and hand trades omitted in 1904 and 1909.  
<sup>2</sup> Not reported.

\* Less than one-tenth of 1 per cent.

Fuel.—Closely related to the question of kind of power employed is that of the fuel used in generating this power, or otherwise as material in the manufacturing processes. The following table shows the quantity of each kind of fuel used in 1909:

INDUSTRY.	Anthracite coal (tons).	Bituminous coal (tons).	Coke (tons).	Wood (cords).	Oil, including gasoline (barrels).	Gas (1,000 feet).
<b>All industries.....</b>	<b>451</b>	<b>64,590</b>	<b>3,066</b>	<b>22,325</b>	<b>2,790</b>	<b>615</b>
Brick and tile.....		8,279		13,620	4	
Cars and general shop construction and repairs by steam-railroad companies.....		11,788				
Flour-mill and gristmill products.....	4	1,911		1,389	56	
Gas, illuminating and heating.....		3,601	908		2,409	
Liquors, malt.....		4,079		1,872	4	
Printing and publishing.....	22	472		332	167	490
All other industries.....	425	34,460	2,158	5,112	150	125

NOTE.—In addition, there were 3 tons of other varieties of fuel reported.

SUPPLEMENTARY DATA REGARDING IMPORTANT INDUSTRIES.

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

For certain industries the Census Bureau collects, by means of special schedules, details regarding the quantity and value of materials and products which do not appear on the general schedule. Data for three important industries are here presented.

**Lumber and timber products.**—The lumber industry is of first importance in Idaho measured by value of products. The following is a statement of the quantity of the principal products reported for the sawmills at the censuses of 1909 and 1899:

PRODUCT.	QUANTITY.	
	1909	1899
Rough lumber.....M feet b. m. . . . .	645,800	65,303
Lath.....thousands..	86,740	3,220
Shingles.....thousands..	62,308	15,806

The annual cut of lumber has increased rapidly during recent years. The product of rough lumber in 1909 was nearly ten times as great as in 1899, that of lath was about twenty-seven times as great, and that of shingles almost four times as great. In 1909 the cut of rough lumber was practically all softwoods, but 5,446 M feet consisting of the hardwoods. Almost 40 per cent of the cut was western pine, and this with white pine, larch, and Douglas fir constituted 90.6 per cent of the total cut of rough lumber in 1909.

**Flour-mill and gristmill products.**—The following statement gives the quantity and value of products for this industry for the last two census years:

PRODUCT.	QUANTITY.		VALUE.	
	1909	1904	1909	1904
Total value.....			\$2,479,719	\$1,584,473
Wheat flour.....barrels..	389,022	309,476	1,810,581	1,225,672
White.....barrels..	379,858	308,780	1,790,895	1,222,009
Graham.....barrels..	6,164	696	28,686	3,063
Corn meal.....barrels..	180	1,800	1,016	2,400
Rye flour.....barrels..	57	76	285	310
Barley meal.....pounds..	40,000		600	
Grits.....pounds..	213,340		5,024	
Feed.....tons..	10,491	6,686	293,757	181,323
Offal.....tons..	17,182	14,150	350,376	223,798
All other products.....			8,130	907

<sup>1</sup> Includes corn flour.

As shown in the table, the principal product for this industry both in 1909 and 1904 was white flour, forming 72.2 and 77.2 per cent, respectively, of the total value of all products of the industry. For the period 1904-1909 an increase is shown for each class of products except corn meal and rye flour.

Each of the two latter classes shows a decrease, but the figures are small and of comparatively little importance.

**Printing and publishing.**—That there has been a pronounced growth in the newspaper and periodical branch of this industry in the state of Idaho is shown in the following table:

PERIOD OF ISSUE.	NUMBER OF PUBLICATIONS.			AGGREGATE CIRCULATION PER ISSUE.		
	1909	1904	1899	1909	1904	1899
Total.....	130	95	73	140,781	86,965	48,795
Daily.....	13	0	5	25,508	13,075	15,100
Sunday.....	3	3	1	13,804	7,075	(1)
Semiweekly.....	20	10	5	7,185	11,850	4,645
Weekly.....	108	74	59	91,134	51,265	36,309
All other classes.....		2	3		2,500	2,750

<sup>1</sup> Included in circulation of dailies. <sup>2</sup> Includes one triweekly publication.

All of the publications included in the above table were in the English language. During the period 1904-1909 there was no increase in the number of Sunday publications, but a large increase in the aggregate circulation is shown; daily and weekly publications show an increase both in the number of publications and in circulation, while semiweeklies and all other classes show a decrease in number of publications and in circulation.

**Laundries.**—Statistics for steam laundries are not included in the general tables. In 1909 there were 24 such establishments in the state of Idaho, 3 of which were in Boise.

The following statement summarizes the statistics:

Number of establishments.....	24
Persons engaged in the industry.....	410
Proprietors and firm members.....	31
Salaried employees.....	22
Wage earners (average number).....	357
Primary horsepower.....	489
Capital.....	\$252,110
Expenses.....	327,375
Services.....	201,836
Materials.....	94,879
Miscellaneous.....	30,660
Amount received for work done.....	394,226

The most common form of organization was the individual, with 13 establishments. There were 9 firms and 2 incorporated companies. Five establishments had receipts for the year's business of less than \$5,000; 11, receipts of \$5,000 but less than \$20,000; and 8, receipts of \$20,000 but less than \$100,000.

## MANUFACTURES—IDAHO.

The number of persons employed each month and the percentage which these numbers represented of the greatest number employed in any month were as follows:

MONTH.	WAGE EARNERS.		MONTH.	WAGE EARNERS.	
	Number.	Per cent of maximum.		Number.	Per cent of maximum.
January.....	338	90.9	July.....	356	95.7
February.....	352	94.6	August.....	372	100.0
March.....	370	99.5	September.....	367	98.7
April.....	368	98.9	October.....	364	97.8
May.....	340	91.4	November.....	352	94.6
June.....	351	94.4	December.....	361	97.0

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

KIND.	Number of engines or motors.	Horsepower.
Primary power, total.....	83	489
Owned.....	17	379
Steam.....	16	377
Gas.....	1	2
Rented—Electric.....	16	110
Electric motors.....	19	133
Run by current generated by establishment.....	3	23
Run by rented power.....	16	110

The kind and amount of fuel used are shown in the following statement:

KIND.	Unit.	Quantity.
Bituminous coal.....	Tons.....	4,680
Wood.....	Cords.....	1,498
Oil.....	Barrels.....	51
Gas.....	1,000 feet.....	718
Other.....	Tons.....	903

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

	Custom sawmills.	Custom gristmills.
Number of establishments.....	4	11
Persons engaged in the industry.....	27	17
Proprietors and firm members.....	22	14
Wage earners (average number).....	5	3
Primary horsepower.....	111	190
Capital.....	\$9,110	\$55,225
Expenses.....	3,255	104,143
Services.....	2,392	1,074
Materials.....	150	1101,516
Miscellaneous.....	713	953
Value of products.....	4,505	1118,831

<sup>1</sup> Includes estimate of all grain ground. A similar estimate for value of lumber sawed by custom sawmills is impracticable.

MANUFACTURES—IDAHO.

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

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaries employed.	Wage earners (average number).							
Expressed in thousands.													
STATE—All industries.....	1909	725	9,909	881	858	8,220	48,804	\$32,477	\$984	\$5,498	\$9,920	\$22,400	\$12,480
	1904	304	3,791	371	359	3,061	16,387	9,689	379	2,059	4,069	8,769	4,700
	1899	287	.....	.....	92	1,552	5,649	2,180	66	818	1,489	3,001	1,582
Brick and tile.....	1909	30	347	30	22	280	1,050	800	17	179	109	444	335
	1904	19	95	21	2	147	147	91	3	45	27	113	80
	1899	23	71	28	.....	43	20	40	.....	18	8	44	36
Butter, cheese, and condensed milk.....	1909	18	159	12	20	118	260	231	24	77	681	884	203
	1904	16	35	9	13	13	120	44	2	10	136	172	36
	1899	19	33	11	8	14	140	75	3	7	85	116	31
Cars and general shop construction and repairs by steam-rail-road companies.	1909	5	870	.....	21	840	755	408	25	672	650	1,366	707
	1904	8	753	.....	40	713	965	183	40	539	320	914	588
	1899	4	411	.....	12	399	107	178	13	263	214	524	310
Flour-mill and gristmill products.....	1909	57	242	58	60	125	3,595	2,088	47	91	2,025	2,480	455
	1904	28	127	22	21	84	1,063	685	19	67	1,315	1,584	299
	1899	26	.....	.....	10	68	1,522	518	14	42	572	734	192
Liquors, malt.....	1909	11	111	6	31	74	986	1,231	45	65	234	698	464
	1904	14	80	17	8	61	319	469	11	54	74	303	229
	1899	16	49	10	1	20	82	144	1	10	19	75	56
Lumber and timber products.....	1909	253	5,004	342	350	5,212	32,342	17,872	459	3,382	3,345	10,080	7,344
	1904	107	1,070	128	98	1,440	10,013	3,516	120	876	906	3,142	2,236
	1899	100	.....	.....	24	737	3,523	721	15	297	331	945	614
Printing and publishing.....	1909	132	752	100	130	468	388	1,106	139	373	243	1,148	905
	1904	101	398	96	44	258	140	488	44	178	107	549	442
	1899	99	284	77	17	190	.....	280	12	94	60	307	238
All other industries.....	1909	210	1,518	214	216	1,088	3,428	8,781	228	650	2,024	4,091	2,067
	1904	81	627	83	133	411	3,320	4,223	134	200	1,178	1,992	814
	1899	30	.....	.....	11	72	.....	169	8	48	141	256	115

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

Boise.....	1909	50	577	48	118	411	672	\$1,544	\$120	\$308	\$895	\$1,060	\$705
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! Excluding statistics for two establishments, to avoid disclosure of individual operations.

TABLE II.—DETAIL STATEMENT FOR

INDUSTRY.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.										WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY.					Primary horse-power.
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks.		Wage earners.			Total.	16 and over.		Under 16.				
					Male.	Female.	Average number.	Number.			Male.	Female.	Male.	Female.			
								Maximum month.	Minimum month.								
1 All industries.....	725	9,909	881	356	418	84	8,220	00 9,525	Fe 6,033	(1)	(1)	(1)	(1)	(1)	42,804		
2 Artificial stone.....	20	89	24	5	5	1	54	Ap 72	Ja 27	67	67				68		
3 Bread and other bakery products.....	47	159	59	1	7	9	83	Au 93	Ja 72	87	69	18			35		
4 Brick and tile.....	36	347	39	16	6		286	Jy 544	De 81	385	387	1	7		1,050		
5 Butter, cheese, and condensed milk.....	18	159	12	11	10	8	118	Au 129	Ja 103	122	117	5			260		
6 Cars and general shop construction and repairs by steam-railroad companies.....	5	570		6	15	1	849	De 932	Je 783	932	932				755		
7 Confectionery.....	6	42	8	5	3	2	24	De 34	Ja 19	34	24	10			6		
8 Copper, tin, and sheet-iron products.....	7	42	5	3	2		32	De 30	My 20	39	39				38		
9 Flour-mill and gristmill products.....	57	242	58	44	13	2	125	No 156	Jy 91	173	173				3,595		
10 Foundry and machine-shop products.....	14	99	15	5	4	1	74	Je 83	Fe 65	77	77				203		
11 Gas, illuminating and heating.....	3	45		4		2	35	Ja 57	Fe 24	32	32				27		
12 Ice, manufactured.....	4	30	1	6	3	1	19	Au 28	Ja 2	18	17	1			355		
13 Leather goods.....	20	49	21	1		1	26	No 28	Je 24	28	28				5		
14 Lime.....	7	67	5	5	1		56	Au 68	Ja 35	62	62				85		
15 Liquors, malt.....	11	111	6	12	18	1	74	Au 92	Fe 58	65	64	1			986		
16 Lumber and timber products.....	256	5,904	342	129	194	27	5,212	00 6,034	Ja 3,477	6,995	6,964	22	9		32,342		
17 Marble and stone work.....	9	65	11	5			49	Se 59	Ja 16	67	57				159		
18 Patent medicines and compounds and druggists' preparations.....	3	11		4	1		6	Fe 2	No 2	10	8	2			82		
19 Printing and publishing.....	132	758	160	44	65	21	468	De 501	Ap 2 453	505	431	56	18		388		
20 Shipbuilding, including boat building.....	3	5	4				1	Je 3	Ja 0	3	3				26		
21 Slaughtering and meat packing.....	4	56	1	4	11	1	39	Ja 2 39	Je 2 39	39	38	1			116		
22 Tobacco manufactures.....	24	103	25	1	1	1	80	No 2 84	Jy 68	87	71	15	1				
23 All other industries <sup>4</sup> .....	39	651	35	46	55	5	510								2,224		

<sup>1</sup> No figures given for reasons explained in the Introduction.  
<sup>2</sup> Same number reported for one or more other months.  
<sup>3</sup> None reported for one or more other months.  
<sup>4</sup> All other industries embrace—

Agricultural implements.....	1	Canning and preserving.....	2	Clothing, women's.....	1
Awnings, tents, and sails.....	2	Carriages and wagons and materials.....	1	Coffee and spice, roasting and grinding.....	1
Beet sugar.....	3	Cars and general shop construction and repairs by street-railroad companies.....	2	Dairymen's, poultryers', and apiarists' supplies.....	2
Brooms.....	1			Fertilizers.....	1

TABLE III.—DETAIL STATEMENT FOR CITIES OF 50,000 INHABITANTS OR MORE, BY INDUSTRIES, AND CITIES OF 10,000 TO 50,000 INHABITANTS—ALL INDUSTRIES COMBINED.

CITY.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.										WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY.					Primary horse-power.
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks.		Wage earners (average number).			Total.	16 and over.		Under 16.				
					Male.	Female.	Total.	16 and over.			Under 16.	Male.	Female.	Male.	Female.		
								Male.	Female.								
1 BOISE.....	50	577	48	34	62	22	411	372	39	432	391	41			672		

THE STATE, BY INDUSTRIES: 1909.

Capital.	EXPENSES.										Value of products.	Value added by manufacture.
	Total.	Services.			Materials.		Miscellaneous.					
		Officials.	Clerks.	Wage earners.	Fuel and rent of power.	Other.	Rent of factory.	Taxes, including internal revenue.	Contract work.	Other.		
1 \$32,476,749	\$18,890,536	\$630,567	\$458,488	\$5,497,647	\$480,848	\$9,439,169	\$77,917	\$350,218	\$736,018	\$1,324,664	\$22,396,860	\$12,479,843
2 97,978	121,523	5,600	4,552	30,744	1,430	68,752	100	353	1,200	2,700	140,443	79,252
3 183,174	299,204	1,200	0,680	57,441	12,176	203,061	10,706	1,321	50	5,879	303,894	178,057
4 800,137	332,849	13,770	3,685	178,054	88,421	20,865	115	4,720	85	22,613	443,623	334,337
5 230,910	823,980	12,840	10,600	77,400	11,158	669,433	6,857	1,037	85	34,501	884,065	203,475
6 468,328	1,366,408	9,520	15,371	671,517	27,848	631,390	.....	2,306	.....	8,457	1,366,408	707,170
7 39,483	81,730	4,912	2,392	12,120	873	55,361	3,020	75	.....	2,348	103,179	46,025
8 55,109	93,035	4,300	1,000	20,000	1,000	52,088	2,280	585	.....	2,716	111,501	58,353
9 2,037,978	2,233,268	38,079	9,300	91,021	36,366	1,088,232	955	11,258	975	57,001	2,479,719	455,121
10 276,753	179,018	6,932	6,400	70,510	8,013	80,455	540	2,020	645	2,405	228,460	139,101
11 525,651	104,738	0,115	4,007	26,590	34,874	17,663	.....	2,444	.....	13,079	113,472	61,035
12 188,597	47,174	9,000	2,245	13,953	10,031	1,611	.....	1,558	1,788	0,028	64,828	53,186
13 151,584	189,639	700	200	23,091	1,157	149,000	0,900	1,401	.....	0,031	233,765	82,708
14 273,130	65,499	0,150	950	33,734	14,070	7,135	.....	374	.....	2,186	100,308	78,203
15 1,230,676	496,112	25,200	19,586	64,878	30,952	203,162	000	73,500	1,600	76,535	697,627	463,513
16 17,872,478	8,851,316	218,432	240,805	3,381,578	12,521	3,332,257	4,730	184,681	720,205	755,947	10,689,310	7,344,532
17 75,065	101,234	4,000	.....	39,778	4,600	49,845	484	491	.....	2,130	123,053	68,702
18 25,729	25,078	4,380	567	4,308	804	7,350	120	222	.....	7,327	19,162	11,008
19 1,105,985	865,370	63,887	75,177	372,575	23,326	219,578	30,553	0,854	8,810	64,616	1,148,033	905,120
20 9,380	3,118	.....	.....	797	30	2,001	.....	47	.....	183	8,420	6,320
21 343,199	511,520	0,120	9,720	32,783	4,584	445,976	1,500	2,740	.....	8,117	531,702	81,142
22 74,753	132,451	078	1,660	46,845	475	63,093	2,182	10,298	.....	6,350	170,730	106,262
23 6,409,676	1,960,358	88,605	38,201	232,311	154,364	1,168,481	5,408	41,872	600	236,366	2,339,148	1,016,303

4 All other industries embrace—Continued.

Fur goods.....	1	Malt.....	1	Smelting and refining, lead.....	1
Glass, cutting, staining, and ornamenting.....	1	Mattresses and spring beds.....	1	Vinegar and cider.....	1
Hosiery and knit goods.....	1	Mineral and soda waters.....	12	Woolen, worsted, and felt goods, and wool hats.....	1
Jewelry.....	1	Salt.....	1		

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

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

Capital.	EXPENSES.										Value of products.	Value added by manufacture.
	Total.	Services.			Materials.		Miscellaneous.					
		Officials.	Clerks.	Wage earners.	Fuel and rent of power.	Other.	Rent of factory.	Taxes, including internal revenue.	Contract work.	Other.		
1 \$1,543,645	\$1,439,320	\$50,028	\$70,151	\$308,317	\$40,492	\$854,096	\$18,156	\$21,733	\$3,375	\$72,974	\$1,660,497	\$765,909

# ILLINOIS.

## INDUSTRIES IN GENERAL.

**General character of the state.**—Illinois, with a gross area of 56,665 square miles, of which 622 represent water surface, ranks twenty-third in size among the states of the Union. Its population in 1910 was 5,638,591, as compared with 4,821,550 in 1900 and 3,826,352 in 1890. It ranked third among the 49 states and territories as regards population both in 1910 and in 1900. The density of population for the state in 1910 was 100.6 per square mile, the corresponding figures for 1900 and 1890 being 86.1 and 68.3, respectively. Sixty-one and seven-tenths per cent of the entire population of the state in 1910 resided in incorporated places having 2,500 inhabitants or over, as compared with 54.3 per cent in 1900.

There were 32 incorporated places in the state which had a population of over 10,000 in 1910. One of these, Chicago, had 2,185,283 inhabitants; 11 others had over 25,000 but less than 100,000; and the remaining 20 had between 10,000 and 25,000. A list of these places, with the population of each in 1910 and 1900, is given on page 264. These 32 places contained 52.3 per cent of the total population of the state and were credited in 1909 with 83.1 per cent of the total value of its manufactures. Apart from these places, only 9.3 per cent of the population resided in places of 2,500 inhabitants or over.

Illinois lies wholly within the great prairie region, and, with the exception of Louisiana and Delaware, is the most level state in the Union. On account of the situation of the state, many of the trunk lines both between the East and the West and between the North and the South enter or pass through it, and thus afford excellent transportation facilities. On June 30, 1909, there were 152 railroad companies having lines within the state, and nearly every county is traversed by one or more railroads, many of them trunk lines running into Chicago or St. Louis. The state has approximately 12,000 miles of main track of steam railroads<sup>1</sup>—an average of over 21 miles for every 100 square miles of territory—and also over 2,700 miles of electric railroads. In addition to these ample railway facilities, the state has the advantages of cheap water transportation afforded by the Mississippi and its navigable tributaries, and by the Great Lakes.

**Importance and growth of manufactures.**—Illinois is the most important manufacturing state west of the

Alleghenies. In 1849 an average of 11,559 wage earners, representing 1.4 per cent of the total population, were employed in manufactures, while in 1879 an average of 144,727 wage earners, or 4.7 per cent of the total, and in 1909 an average of 465,764 wage earners, or 8.3 per cent of the total population, were so engaged. The gross value of products per capita of the total population of the state increased from \$19.42 in 1849 to \$340.38 in 1909, and the proportion which the manufactures of the state represented of the total value of the products of manufacturing industries in the United States, from 1.6 per cent in 1849 to 9.3 per cent in 1909. In the value of its manufactures Illinois ranked fifteenth in 1849 and third in 1909.

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

In 1909 the state of Illinois had 18,026 manufacturing establishments, which gave employment to an average of 561,044 persons during the year and paid out \$364,768,000 in salaries and wages. Of the persons employed, 465,764 were wage earners. These establishments turned out products to the value of \$1,919,277,000, in the manufacture of which materials costing \$1,160,927,000 were utilized. The value added by manufacture was thus \$758,350,000, which figure, as explained in the Introduction, best represents the net wealth created by manufacturing operations during the year.

The totals presented in the table do not include the statistics for an establishment operated by the Federal Government—the arsenal at Rock Island. In 1909 this plant employed an average of 1,698 wage earners, and the value of its products, which consisted of infantry, cavalry, and artillery equipment, was reported as \$3,114,338.

In general, the table brings out the fact that the manufacturing industries of Illinois as a whole developed more rapidly during the five-year period 1904–1909 than during the preceding five-year period, 1899–1904, the percentage of increase being greater for all items shown in the table except miscellaneous expenses. During the later five-year period the number of establishments increased 20.8 per cent and the average number of wage earners 22.8 per cent, while the value of products increased 36.1 per cent and the value added by manufacture 33 per cent. As

<sup>1</sup> Interstate Commerce Commission, Statistics of the Railways in the United States, 1909.

pointed out in the Introduction, it would be improper to infer that manufactures increased in volume to the full extent indicated by the figures representing

values, since the increase shown is certainly due, in part, to the increase that has taken place in the price of commodities.

	NUMBER OR AMOUNT.			PER CENT OF INCREASE.	
	1909	1904	1899	1904-1909	1899-1904
	Number of establishments.....	18,026	14,921	14,374	20.8
Persons engaged in manufactures.....	561,044	447,947	(1)	25.2	-----
Proprietors and firm members.....	17,357	13,990	(1)	24.1	-----
Salaried employees.....	77,923	54,521	40,964	42.9	33.1
Wage earners (average number).....	465,764	379,436	332,871	22.8	14.0
Primary horsepower.....	1,013,071	741,555	559,347	36.6	32.6
Capital.....	\$1,543,171,000	\$975,845,000	\$732,830,000	58.6	33.2
Expenses.....	1,733,327,000	1,281,208,000	999,151,000	35.3	28.2
Services.....	364,768,000	268,965,000	199,653,000	35.6	34.7
Salaries.....	91,449,000	60,560,000	40,549,000	51.0	49.4
Wages.....	273,319,000	208,405,000	159,104,000	31.1	31.0
Materials.....	1,160,927,000	840,057,000	681,450,000	38.2	23.3
Miscellaneous.....	207,632,000	172,186,000	118,048,000	20.6	45.9
Value of products.....	1,919,277,000	1,410,342,000	1,120,868,000	36.1	25.8
Value added by manufacture (value of products less cost of materials).....	758,350,000	570,285,000	439,418,000	33.0	29.8

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

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

It should be borne in mind, in considering this

table, that the value of products in some of the industries involves a certain amount of duplication due to the use of the products of one establishment in the industry as materials for other establishments.

INDUSTRY.	Number of establishments.	WAGE EARNERS.		VALUE OF PRODUCTS.		VALUE ADDED BY MANUFACTURE.		PER CENT OF INCREASE. <sup>1</sup>			
		Average number.	Per cent distribution.	Amount.	Per cent distribution.	Amount.	Per cent distribution.	Value of products.		Value added by manufacture.	
								1904-1909	1899-1904	1904-1909	1899-1904
<b>All industries.....</b>	<b>18,026</b>	<b>465,764</b>	<b>100.0</b>	<b>\$1,919,277,000</b>	<b>100.0</b>	<b>\$758,350,000</b>	<b>100.0</b>	<b>36.1</b>	<b>25.8</b>	<b>33.0</b>	<b>29.8</b>
Slaughtering and meat packing.....	109	26,705	5.7	389,595,000	20.3	45,619,000	6.0	22.4	10.2	21.3	-0.3
Foundry and machine-shop products.....	1,178	52,266	11.2	138,579,000	7.2	74,709,000	9.9	46.0	16.1	35.6	26.5
Clothing, men's, including shirts.....	715	36,152	7.8	89,473,000	4.7	44,245,000	5.8	57.0	43.6	52.7	42.7
Printing and publishing.....	2,608	28,644	6.1	87,247,000	4.5	62,567,000	8.3	40.1	43.8	38.2	40.9
Iron and steel, steel works and rolling mills.....	24	17,584	3.8	86,008,000	4.5	30,364,000	4.0	44.3	32.9	42.1	41.3
Agricultural implements.....	79	19,240	4.1	57,268,000	3.0	32,444,000	4.3	49.1	-8.6	57.0	-10.8
Liquors, distilled.....	9	750	0.2	55,200,000	2.9	45,991,000	6.1	2.0	41.6	-3.6	38.4
Flour-mill and gristmill products.....	461	2,404	0.5	51,111,000	2.7	5,521,000	0.7	28.1	39.6	11.3	36.4
Lumber and timber products.....	814	16,567	3.6	44,952,000	2.3	17,688,000	2.3	37.3	41.2	21.8	43.0
Iron and steel, blast furnaces.....	6	2,493	0.6	38,300,000	2.0	7,392,000	1.0	40.1	80.4	-11.2	141.6
Bread and other bakery products.....	2,099	8,611	1.8	36,118,000	1.9	14,512,000	1.9	38.1	64.7	22.3	54.4
Cars and general shop construction and repairs by steam-railroad companies.....	73	23,131	5.0	32,229,000	1.7	16,996,000	2.2	26.4	53.7	28.5	59.4
Liquors, malt.....	106	4,398	0.9	28,449,000	1.5	21,416,000	2.8	19.6	20.5	15.7	18.0
Furniture and refrigerators.....	267	13,575	2.9	27,900,000	1.5	15,399,000	2.0	24.6	43.3	21.0	45.1
Cars, steam-railroad, not including operations of railroad companies.....	28	10,945	2.3	27,001,000	1.4	11,665,000	1.5	-12.7	24.5	19.6	25.5
Electrical machinery, apparatus, and supplies.....	143	9,641	2.1	26,826,000	1.4	13,198,000	1.7	60.6	37.2	45.8	20.8
Copper, tin, and sheet-iron products.....	483	7,473	1.6	22,823,000	1.2	9,630,000	1.3	48.3	45.2	46.1	49.5
Tobacco manufactures.....	1,944	8,034	1.7	21,870,000	1.1	13,267,000	1.7	36.2	34.9	31.8	30.4
Gas, illuminating and heating.....	78	6,301	1.3	21,052,000	1.1	14,842,000	2.0	31.5	82.4	29.2	69.4
Paint and varnish.....	74	1,792	0.4	20,434,000	1.1	7,532,000	1.0	53.4	62.9	61.3	84.9
Soap.....	34	2,188	0.5	20,181,000	1.1	6,233,000	0.8	42.6	50.0	29.5	41.4
Coffee and spice, roasting and grinding.....	35	1,018	0.2	19,751,000	1.0	4,637,000	0.6	25.4	28.9	42.2	20.8
Musical instruments, pianos and organs and materials.....	68	8,777	1.9	19,176,000	1.0	10,534,000	1.4	43.9	63.4	32.9	64.0
Butter, cheese, and condensed milk.....	295	1,732	0.4	17,798,000	0.9	3,531,000	0.5	34.1	3.1	37.5	-4.2
Carriages and wagons and materials.....	325	5,852	1.3	16,831,000	0.9	7,362,000	1.0	47.7	26.5	30.2	21.4
Boots and shoes, including cut stock and findings.....	53	5,792	1.2	16,755,000	0.9	5,886,000	0.8	67.7	-4.8	64.5	7.2
Clothing, women's.....	221	6,151	1.3	16,635,000	0.9	7,421,000	1.0	35.9	25.2	25.7	24.1
Leather, tanned, curried, and finished.....	29	3,001	0.6	14,912,000	0.8	2,781,000	0.4	38.6	37.1	7.6	25.2
Patent medicines and compounds and druggists' preparations.....	359	1,869	0.4	13,114,000	0.7	8,701,000	1.1	-1.5	103.6	-12.0	118.8
Confectionery.....	140	3,799	0.8	12,798,000	0.7	5,133,000	0.7	67.4	18.3	49.0	27.6
Stoves and furnaces, including gas and oil stoves.....	71	4,499	1.0	10,287,000	0.5	6,431,000	0.8	30.8	-----	27.3	-----
Brick and tile.....	340	6,574	1.4	9,765,000	0.5	7,274,000	1.0	29.4	48.5	24.5	44.0
Smelting and refining, zinc.....	5	1,922	0.4	9,004,000	0.5	2,508,000	0.3	65.9	-7.8	64.4	4.1
Leather goods.....	168	2,949	0.6	8,948,000	0.5	3,813,000	0.5	33.3	20.0	16.3	35.6
Baking powders and yeast.....	24	657	0.1	7,632,000	0.4	4,371,000	0.6	68.1	35.7	58.7	33.8

<sup>1</sup> Percentages are based on figures in Table I; a minus sign (-) denotes decrease. Where the percentages are omitted, comparable figures can not be given.

INDUSTRY.	Number of establishments.	WAGE EARNERS.		VALUE OF PRODUCTS.		VALUE ADDED BY MANUFACTURE.		PER CENT OF INCREASE. <sup>1</sup>			
		Average number.	Per cent distribution.	Amount.	Per cent distribution.	Amount.	Per cent distribution.	Value of products.		Value added by manufacture.	
								1904-1900	1899-1904	1904-1900	1899-1904
Canning and preserving.....	118	2,383	0.5	\$7,620,000	0.4	\$2,807,000	0.4	8.2	20.1	2.9	29.0
Millinery and lace goods.....	103	3,328	0.7	7,282,000	0.4	3,485,000	0.5	47.2	135.3	36.5	140.7
Furnishing goods, men's.....	61	2,088	0.6	7,213,000	0.4	2,040,000	0.3	75.8	21.9	61.7	25.7
Automobiles, including bodies and parts.....	65	2,382	0.5	7,154,000	0.4	3,175,000	0.4	1,903.9	-52.3	1,195.9	-46.3
Clocks and watches, including cases and materials.....	19	5,665	1.2	7,045,000	0.4	5,357,000	0.7				
Brass and bronze products.....	79	1,688	0.4	0,842,000	0.4	2,094,000	0.4				
Marble and stone work.....	278	2,226	0.5	0,771,000	0.4	3,741,000	0.5	25.6	34.1	15.0	36.7
Copperage and wooden goods, not elsewhere specified.....	80	2,388	0.5	0,611,000	0.3	2,132,000	0.3	-6.7	14.7	-7.5	0.7
Boxes, fancy and paper.....	61	4,085	0.9	0,350,000	0.3	3,338,000	0.4	72.3	23.2	60.7	30.2
Hosiery and knit goods.....	43	2,913	0.6	5,947,000	0.3	2,715,000	0.4	59.4	69.2	73.5	70.3
Gas and electric fixtures and lamps and reflectors.....	78	2,090	0.4	5,797,000	0.3	3,103,000	0.4	99.6	70.2	81.4	67.0
Grease and tallow.....	36	778	0.2	5,590,000	0.3	1,525,000	0.2	129.3	20.1	60.5	143.0
Glass.....	11	3,597	0.7	5,047,000	0.3	3,500,000	0.5	-10.2	98.3	-16.9	95.4
Paper and wood pulp.....	19	1,397	0.3	4,983,000	0.3	1,884,000	0.2	104.0	70.6	83.4	62.0
Chemicals.....	19	836	0.2	4,656,000	0.2	1,760,000	0.2	103.9	9.4	89.7	2.0
Pottery, terra-cotta, and fire-clay products.....	39	3,157	0.7	4,615,000	0.2	3,489,000	0.5	41.7	51.9	36.2	61.0
Babbitt metal and solder.....	10	183	( <sup>2</sup> )	4,146,000	0.2	772,000	0.1	65.8	64.4	32.2	125.5
Cement.....	6	1,395	0.3	4,083,000	0.2	2,409,000	0.3	247.0		243.9	
Smelting and refining, not from the ore.....	11	369	0.1	3,930,000	0.2	696,000	0.1	98.9	567.6	78.5	362.9
Paper goods, not elsewhere specified.....	46	1,317	0.3	3,779,000	0.2	1,782,000	0.2	131.6	58.1	106.9	121.8
Sewing machines, cases, and attachments.....	7	1,713	0.4	3,622,000	0.2	2,512,000	0.3				
Cars and general shop construction and repairs by street-railroad companies.....	30	2,240	0.5	3,451,000	0.2	1,644,000	0.2	201.9	2.4	126.8	24.1
Mattresses and spring beds.....	86	831	0.2	2,800,000	0.1	1,226,000	0.2	35.1	28.2	35.2	5.6
Jewelry.....	67	990	0.2	2,780,000	0.1	1,516,000	0.2	58.4	9.0	58.9	19.4
Cutlery and tools, not elsewhere specified.....	80	1,393	0.3	2,758,000	0.1	1,680,000	0.2	82.0		77.5	
Corsets.....	16	1,502	0.3	2,711,000	0.1	1,516,000	0.2	119.2	23.1	124.3	24.7
Photo-engraving.....	27	1,114	0.2	2,678,000	0.1	2,144,000	0.3	90.2	28.7	93.0	22.1
Gloves and mittens, leather.....	29	1,309	0.3	2,523,000	0.1	1,045,000	0.1	40.2	-31.9	24.6	-32.9
Brooms and brushes.....	110	820	0.2	2,430,000	0.1	1,041,000	0.1	44.0	10.1	27.1	10.4
Coffins, burial cases, and undertakers' goods.....	21	732	0.2	2,200,000	0.1	1,278,000	0.2	21.0	50.3	36.2	81.4
Belting and hose, leather.....	11	233	( <sup>2</sup> )	2,188,000	0.1	803,000	0.1	107.4	-22.5	83.3	-6.4
Cotton goods, including cotton small wares.....	5	1,319	0.3	2,111,000	0.1	1,060,000	0.1	244.4		217.3	
Surgical appliances and artificial limbs.....	29	536	0.1	2,099,000	0.1	1,178,000	0.2	107.8	92.4	96.7	68.7
Fur goods.....	63	319	0.1	1,929,000	0.1	858,000	0.1	34.7	-38.6	40.0	-42.7
Ice, manufactured.....	83	804	0.2	1,928,000	0.1	1,480,000	0.2	105.1	-5.1	114.4	-15.2
Bicycles, motorcycles, and parts.....	14	910	0.2	1,777,000	0.1	804,000	0.1	53.1	-87.0	24.1	-84.3
Artificial stone.....	366	785	0.2	1,488,000	0.1	911,000	0.1	841.8		767.6	
Explosives.....	8	200	0.1	1,409,000	0.1	534,000	0.1	103.3	145.5	78.0	105.5
Wall paper.....	5	290	0.1	1,367,000	0.1	665,000	0.1	25.0	105.6	55.4	64.0
Fancy articles, not elsewhere specified.....	44	444	0.1	1,320,000	0.1	740,000	0.1	-21.1	84.4	-26.6	110.4
Woolen, worsted, and felt goods, and wool hats.....	9	490	0.1	1,314,000	0.1	541,000	0.1				
Stereotyping and electrotyping.....	21	592	0.1	1,282,000	0.1	966,000	0.1	6.4	79.0	-1.0	68.6
Type founding and printing materials.....	19	435	0.1	1,248,000	0.1	873,000	0.1	6.8	-7.1	3.1	-5.6
Blackening and cleansing and polishing preparations.....	58	230	( <sup>2</sup> )	1,239,000	0.1	601,000	0.1	86.1	30.1	118.2	-3.2
Dairymen's, poultrymen's, and apiculturists' supplies.....	20	323	0.1	1,181,000	0.1	606,000	0.1	4.4		6.3	
Mirrors.....	10	353	0.1	1,106,000	0.1	471,000	0.1	-21.4	56.4	-33.3	112.7
Hats and caps, other than felt, straw, and wool.....	38	463	0.1	1,046,000	0.1	697,000	0.1	1.9	7.9	15.5	3.8
Bags, other than paper.....	6	189	( <sup>1</sup> )	965,000	0.1	280,000	( <sup>1</sup> )	19.3	47.9	67.7	-6.2
Models and patterns, not including paper patterns.....	81	425	0.1	889,000	( <sup>2</sup> )	686,000	0.1	64.9	43.7	50.1	49.3
Show cases.....	16	380	0.1	820,000	( <sup>2</sup> )	530,000	0.1	-2.2	34.4	10.2	47.3
Photographic apparatus and materials.....	13	284	0.1	740,000	( <sup>2</sup> )	422,000	0.1	-8.8	27.1	-19.5	18.0
Electroplating.....	43	375	0.1	697,000	( <sup>2</sup> )	471,000	0.1	64.0	34.1	50.5	15.3
Lime.....	10	511	0.1	685,000	( <sup>2</sup> )	514,000	0.1	-58.0		-58.3	
Buttons.....	28	548	0.1	670,000	( <sup>2</sup> )	430,000	0.1	169.3	3.7	143.9	2.3
Flags, banners, regalia, society badges, and emblems.....	24	263	0.1	676,000	( <sup>2</sup> )	363,000	( <sup>2</sup> )	20.1	94.1	12.7	116.1
Boxes, cigar.....	18	404	0.1	664,000	( <sup>2</sup> )	347,000	( <sup>2</sup> )	15.5	22.3	7.4	29.7
Pumps, not including steam pumps.....	14	282	0.1	659,000	( <sup>2</sup> )	331,000	( <sup>2</sup> )	0.3	108.0	-16.2	240.5
Musical instruments and materials, not specified.....	30	336	0.1	629,000	( <sup>2</sup> )	451,000	0.1	-6.7	31.1	-3.4	35.0
Shipbuilding, including boat building.....	23	413	0.1	584,000	( <sup>2</sup> )	385,000	0.1				
Scales and balances.....	13	248	( <sup>2</sup> )	574,000	( <sup>2</sup> )	329,000	( <sup>2</sup> )	88.2	-1.0	58.9	-5.5
All other industries.....	1,761	41,270	8.9	223,763,000	11.7	78,773,000	10.4				

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

The foregoing table gives separate statistics for 95 industries or industry groups for which products valued at more than \$500,000 were reported in 1909. These industries include 8 with products exceeding \$50,000,000 in value, 8 with products between \$25,000,000 and \$50,000,000 in value, and 15 with products between \$10,000,000 and \$25,000,000 in value, making an aggregate of 31 industries with

products in excess of \$10,000,000 in value. The other industries shown separately comprise 17 with products between \$5,000,000 and \$10,000,000 in value, 34 with products between \$1,000,000 and \$5,000,000 in value, and 13 with products between \$500,000 and \$1,000,000 in value.

In addition to the 95 industries presented separately in the foregoing table, there were 65 other industries

in the state which reported products in 1909 to the value of \$500,000 or over.<sup>1</sup> These industries comprised 4 with products exceeding \$10,000,000 in value, 6 with products between \$5,000,000 and \$10,000,000 in value, 40 with products between \$1,000,000 and \$5,000,000 in value, and 15 with products between \$500,000 and \$1,000,000 in value. These industries are included under the head of "All other industries" in the table, in some cases because the operations of individual establishments would be disclosed if they were shown separately; in others, because the returns do not properly present the true condition of the industry, as it is more or less interwoven with other industries; and in still others, because comparative statistics for 1904 and 1899 can not be presented without disclosing the operations of individual establishments, or on account of changes in classification. The 1909 statistics, however, for three of these industries—the manufacture of paper bags, cordage and twine and jute and linen goods, and signs and advertising novelties—are presented in Table II, page 292.

The most important industries listed in this table, in which they are arranged in the order of the value of products, call for brief consideration.

*Slaughtering and meat packing.*—This classification includes wholesale slaughtering and meat-packing establishments and those engaged in the manufacture of sausage only, but not the operations of the numerous slaughterhouses killing for the retail trade, which, in the aggregate, slaughter a large number of animals. Illinois continues to hold first place in this industry, the value of the output in 1909, \$389,595,000, forming 28.4 per cent of the total for the industry in the United States and representing an increase of 22.4 per cent as compared with 1904. In 1904 the state's proportion of the total value of products for this industry was 34.5 per cent, and in 1899, 36.6 per cent. Measured by value of products this is by far the most important

industry in Illinois, contributing a little over one-fifth of the state total for all manufacturing industries in 1909. Although greatly exceeding any other industry in the state in value of products, the industry ranked only fourth in average number of wage earners and in value added by manufacture.

*Foundry and machine-shop products.*—This industry includes all foundries and machine shops and similar establishments except those which manufacture a distinctive product covered by some other classification, such as cash registers, sewing machines, and electrical machinery and apparatus. Establishments engaged in the manufacture of bells, cast-iron and cast-steel pipe, gas machines and gas and water meters, hardware, steam fittings and heating apparatus, and structural ironwork, some of which were classified separately at previous censuses, are all included under this general heading. This industry ranks second in value of products, with 7.2 per cent of the state total for all manufacturing industries, and shows a much greater growth for the five-year period 1904–1909 than for the preceding five-year period. In 1909 it was the leading industry in the state in average number of wage earners employed, having 52,266, or 11.2 per cent of the state total.

*Clothing, men's, including shirts.*—This classification includes the making of men's and boys' ready-made clothing and of overalls, butchers' aprons, bathing suits, and gymnasium clothing, and the manufacture of all kinds of shirts—cotton, linen, flannel, etc.—as well as of shirt bosoms, and of shirt waists for men and boys. Most of the establishments engaged in this industry in Illinois are located in Chicago. The number of establishments increased from 624 in 1904 to 715 in 1909, the average number of wage earners increased from 21,355 to 36,152, or 69.3 per cent, and the value of products from \$57,002,000 to \$89,473,000, or 57 per cent.

*Printing and publishing.*—This classification includes the printing and publishing of books, newspapers and periodicals, and music, job printing, bookbinding and blank-book making, steel and copper plate engraving, and lithographing. In this industry Illinois ranks second only to New York, with a value of products in 1909 forming 11.8 per cent of the total for the United States. There were 2,608 establishments reported in 1909, as against 2,414 in 1904 and 2,150 in 1899. The figures indicate a considerable growth in the industry throughout the decade. The leading items going to make up the total value of products in 1909 were as follows: Job printing, \$28,010,000; book and pamphlet printing and publishing, \$9,399,000; subscriptions and sales of newspapers, \$8,937,000; newspaper advertising, \$13,720,000; subscriptions and sales of periodicals, \$5,722,000; periodical advertising, \$6,893,000; bookbinding and blank-book making, \$5,756,000; and electrotyping, engraving, and lithographing, \$5,456,000.

*Iron and steel, steel works and rolling mills.*—This industry embraces the manufacture of steel and the

<sup>1</sup> These industries are:

Awnings, tents, and sails.	Lead, bar, pipe, and sheet.
Bags, paper.	Looking-glass and picture frames.
Belting and hose, woven and rubber.	Malt.
Butter, reworking.	Mineral and soda waters.
Candles.	Moving pictures.
Cars, street-railroad, not including operations of railroad companies.	Oil, cottonseed, and cake.
Cash registers and calculating machines.	Oil, linseed.
Coke.	Oil, not elsewhere specified.
Cordage and twine and jute and linen goods.	Oilcloth and linoleum.
Cordials and sirups.	Oleomargarine.
Fertilizers.	Optical goods.
Firearms and ammunition.	Petroleum, refining.
Flavoring extracts.	Roofing materials.
Food preparations.	Saws.
Glass, cutting, staining, and ornamenting.	Signs and advertising novelties.
Glucose and starch.	Silk and silk goods, including throwsters.
Glue.	Smelting and refining, lead.
Gold and silver, reducing and refining, not from the ore.	Soda-water apparatus.
Hair work.	Sporting and athletic goods.
House-furnishing goods, not elsewhere specified.	Springs, steel, car and carriage.
Ink, writing.	Stationery goods, not elsewhere specified.
Instruments, professional and scientific.	Statuary and art goods.
Iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills.	Sugar and molasses.
Iron and steel, doors and shutters.	Sulphuric, nitric, and mixed acids.
Iron and steel forgings.	Tin plate and terneplate.
Iron and steel, nails and spikes, cut and wrought, including wire nails, not made in steel works or rolling mills.	Toys and games.
Iron and steel pipe, wrought.	Typewriters and supplies.
Labels and tags.	Upholstering materials.
Lard, refined, not made in slaughtering and meat-packing establishments.	Vinegar and cider.
	Windmills.
	Window shades and fixtures.
	Wire.
	Wirework, including wire rope and cable.
	Wood preserving.
	Wood, turned and carved.
	Wool scouring.

hot rolling of iron and steel. It also includes the making of forgings and castings and the manufacture of rolled iron and steel into more highly finished forms when conducted as a part of the rolling-mill operations. It does not, however, include the making of cold-rolled products, nor of forgings, castings, and other manufactures of iron and steel by establishments not equipped with steel-making furnaces or hot trains of rolls. There were 24 establishments in Illinois in 1909 coming under this classification, or one more than in 1904. In 1909 this industry ranked fifth in the state in value of products, in 1904 it was fourth, and in 1899 third. From 1904 to 1909 the value of products for Illinois increased 44.3 per cent, as compared with an increase of 46.3 per cent for the entire country for the same period. Of the total value of products for the industry in the United States, Illinois contributed 8.8 per cent in 1909 and 8.9 per cent in 1904, holding third position among the states in each year.

*Iron and steel, blast furnaces.*—These establishments include those engaged in the manufacture of pig iron from the ore. The number of establishments in this industry increased from four in 1904 to six in 1909. In value of products there was an increase of \$10,969,000, or 40.1 per cent, from 1904 to 1909, as compared with an increase of \$12,177,000, or 80.4 per cent, from 1899 to 1904. Illinois contributed \$38,300,000, or 9.8 per cent of the total value of products for all blast furnaces in the United States, in 1909, as compared with \$27,331,000, or 11.8 per cent, in 1904, and \$15,154,000, or 7.3 per cent, in 1899. At the last three censuses Illinois has ranked third among the states in this industry.

The manufacture of wire is a very important branch of the iron and steel industry in Illinois, but the statistics can not be presented separately because of the possible disclosure of individual operations. Seven establishments manufacturing wire were reported in 1909 and four in 1904.

*Agricultural implements.*—This classification includes the manufacture of various kinds of seeders and planters, implements of cultivation, harvesting implements, seed separators, etc. There was an overproduction of agricultural implements in Illinois in 1903, followed by a curtailment of manufacture in 1904. The figures for 1904, the year covered by the census, are therefore below the normal. The value of the products of the industry shows a decrease of 8.6 per cent in 1904 as compared with 1899, but in 1909 it amounted to \$57,268,000, representing an increase of 49.1 per cent as compared with 1904, and of 36.2 per cent as compared with 1899. Illinois is the leading state in this industry, reporting 39.1 per cent of the total value of products for the United States in 1909, 34.3 per cent in 1904, and 41.5 per cent in 1899.

*Liquors, distilled.*—This industry was seventh in the state in 1909 and in 1899 as measured by value of products, and sixth in 1904. In 1909, as in 1904

and 1899, Illinois ranked first in this industry in the United States, reporting products in 1909 valued at \$55,200,000, or 27 per cent of the total for the United States. Of the total value of products of this industry in the state in 1909, more than three-fourths (\$42,758,000) represents the Federal internal-revenue tax. The greater part of the distilled liquors made in Illinois was corn whisky, the state ranking high in the production of corn.

*Liquors, malt.*—During the five-year period 1904-1909 the number of breweries decreased from 116 to 106, but there was an increase of 365, or 9.1 per cent, in the average number of wage earners and of \$4,662,000, or 19.6 per cent, in the value of products.

*Flour-mill and gristmill products.*—This classification includes mills grinding wheat, rye, barley, buckwheat, or corn, but it does not include mills doing custom grinding exclusively, or factories making fancy cereals or other food preparations as a chief product. Statistics for custom gristmills, however, are presented separately on page 280. The number of establishments reporting increased from 363 in 1904 to 461 in 1909, and during the same period there was a slight increase (54) in the average number of wage earners reported, and an increase of \$11,219,000, or 28.1 per cent, in value of products.

*Lumber and timber products.*—This industry embraces logging operations, sawmills, planing mills, and establishments engaged in the manufacture of wooden packing boxes. It does not include mills engaged exclusively or chiefly in custom sawing for local consumption, statistics for which are given on page 280. Over one-half of the 814 establishments reporting were sawmills, but the greater part of the total value of products was reported by the planing mills, which include establishments making sash, doors, blinds, stairwork, moldings, and interior woodwork. From 1904 to 1909 the value of products increased \$12,211,000, or 37.3 per cent.

*Cars and general shop construction and repairs by steam-railroad companies.*—Among the manufacturing industries this one is peculiar in that it is practically confined to repairs on the rolling stock and equipment of the railroad companies operating the plants, and that except to the very limited extent that repair work is done for other companies the amount shown as value of products represents only the cost of materials added to the expenditure for salaries and wages, etc. The industry does not include minor repairs made in round-houses. From 1904 to 1909 the number of establishments decreased from 99 to 73, while the average number of wage earners increased 4,036, or 21.1 per cent, and the value of products \$6,738,000, or 26.4 per cent.

*Cars, steam-railroad, not including operations of railroad companies.*—For this industry Illinois reported in 1909 more than one-fifth of the total value of products for the United States. While the number of estab-

lishments in the state increased from 16 in 1904 to 28 in 1909, and the average number of wage earners from 9,036 to 10,945, or 21.1 per cent, the value of products decreased \$3,925,000, or 12.7 per cent. Eighteen of the car construction shops reported in 1909 were in Chicago. The products of these plants include sleeping cars, dining cars, chair cars, mail, express, and baggage cars, and refrigerator cars, as well as ordinary passenger coaches and many kinds of freight cars. In 1904 Illinois held first place in value of products for this industry in the United States, but in 1909 it stood second.

*Furniture and refrigerators.*—This industry embraces the manufacture of wood and metal furniture of all kinds, refrigerators and ice boxes, and store and office fixtures, with the exception of products, such as show cases, which are provided for by a distinct classification. This industry shows increases from 1904 to 1909 of 29 per cent in number of establishments, 9.2 per cent in average number of wage earners, and 24.6 per cent in value of products.

*Electrical machinery, apparatus, and supplies.*—The most important products of the establishments in this industry in Illinois are insulated wires and cables and telephone apparatus. From 1904 to 1909 the number of establishments increased from 104 to 143, the average number of wage earners increased 3,510, or 57.2 per cent, and the value of products \$10,126,000, or 60.6 per cent. During the preceding five-year period the number of establishments increased from 82 to 104, the number of wage earners increased 1.4 per cent, and the value of products, 37.2 per cent.

*Copper, tin, and sheet-iron products.*—This classification comprises the manufacture of all sheet-metal products of copper, tin, and sheet iron, including the preparation of copper, tin, or sheet-iron materials for building construction. Between 1904 and 1909 the number of establishments increased from 288 to 483, the average number of wage earners increased 1,828, or 32.4 per cent, and the value of products, \$7,438,000, or 48.3 per cent. In this industry Illinois held second place in the United States in 1909, with 11.4 per cent of the total value of products.

*Gas, illuminating and heating.*—The number of establishments in this industry increased from 64 in 1904 to 78 in 1909, and the total value of products increased \$5,044,000, or 31.5 per cent.

*Musical instruments, pianos and organs and materials.*—This classification covers, in general, the manufacture of pianos, organs, and piano-players, and materials used in their construction, such as piano cases, strings, keys, keyboards, pedal attachments, sounding boards, and back frames, organ reeds, pipes, and stops, and piano and organ hardware. It does not include the manufacture of band and orchestral instruments, such as horns, clarinets, flutes, drums, violins, and similar instruments, which are included under the head of "Musical instruments and materials, not specified." In 1909 there were 68 establish-

ments in the industry, as compared with 56 in 1904, and the number of wage earners increased 1,269, or 16.9 per cent, during the five-year period. The value of products shows an increase of 43.9 per cent, as against an increase of 63.4 per cent for the five-year period 1899-1904. Measured by value of products Illinois ranked second in this industry in the United States in 1909, 1904, and 1899, the value of its products forming 21.4 per cent of the total for the country in 1909, and practically 20 per cent in both 1904 and 1899.

*Butter, cheese, and condensed milk.*—The number of establishments in this industry shows a decrease of 110, or over one-fourth, from 1904 to 1909, and a decrease of 122 from 1899 to 1904. The average number of wage earners increased 17 per cent from 1899 to 1904, but in 1909 the number was practically the same as in 1904. The value of products increased only 3.1 per cent in the earlier five-year period, while in the later period it increased 34.1 per cent. The changes shown for the decade indicate the abandonment of many of the small factories and an increase in the output of the larger ones. Condensed milk is the most important of the products. The state ranked second in the value of condensed milk produced in 1909 (New York leading), seventh in the value of cheese, and eighth in the value of butter. In the total value of products for the industry the state held fifth place in 1909, as compared with fourth place in both 1904 and 1899.

*Boots and shoes, including cut stock and findings.*—Under this head are included factories making boots and shoes and those whose chief products are cut stock and findings, as well as shops specially engaged in stitching, crimping, fitting, and bottoming, or performing other special operations in connection with the manufacture of boots and shoes. The manufacture of footwear not coming strictly under the head of "Boots and shoes," such as overgaiters, moccasins, and leg-gings, is also covered by this designation. There were decreases from 1899 to 1904 in the number of establishments, average number of wage earners, and value of products, but there was a decided increase in the industry during the five-year period 1904-1909 and a net increase during the decade.

*Clothing, women's.*—In addition to the making of suits, dresses, skirts, and shirtwaists, this industry includes the manufacture of women's underwear and night robes, of infants' clothing, and of such articles as belts, dress shields, and hose supporters. From 1904 to 1909 there was an increase of 30, or 15.7 per cent, in the number of establishments in this industry; of 1,461, or 31.2 per cent, in the average number of wage earners; and of \$4,398,000, or 35.9 per cent, in the value of products.

*Patent medicines and compounds and druggists' preparations.*—Under this head are included establishments making so-called patent medicines and also some compounds that are not used for medicinal purposes, and those manufacturing capsules, extracts,

tinures, and other pharmaceuticals, and perfumery and cosmetics. There was a decrease of 1.5 per cent in the value of products of this industry, and of 12 per cent in the value added by manufacture during the five-year period 1904-1909, while during the preceding five-year period there were increases of 103.6 per cent and 118.8 per cent, respectively. Measured by value of products, the state ranked third in this industry in the United States in 1909, with 9.2 per cent of the total for the country as a whole.

*Automobiles, including bodies and parts.*—There was a remarkable growth in the manufacture of automobiles during the five-year period 1904-1909. The number of establishments increased from 12 to 65; the average number of wage earners employed, from 167 to 2,382; and the value of products, from \$357,000 to \$7,154,000.

The rank of the industries shown in the table on pages 254 and 255, on the basis of value added by manufacture is somewhat different from their rank as determined by value of products. Slaughtering and meat packing drops from first place to fourth, the men's clothing industry from third to fifth, and the steel works and rolling mills from fifth to seventh, while the foundry and machine-shop, printing and publishing, and distillery industries become first, second, and third, respectively. The manufacture of agricultural implements, the lumber industry, and the manufacture of paint and varnish are the only industries presented separately in the table which maintain the same rank in both cases, being sixth, ninth, and twentieth, respectively. In those industries in which the manufacturing processes are comparatively simple or are carried on largely by the aid of machinery, the value added by manufacture is not commensurate with the gross value of products and the rank on the basis of value added by manufacture is much lower than the rank on the basis of value of products. This is especially noticeable in the flour-mill and gristmill industry, which drops from eighth place in value of products to twenty-eighth in value added by manufacture; the blast furnaces, which drop from tenth place to twenty-second; the roasting and grinding of coffee and spice, which drops from twenty-second place to thirty-first; and the butter, cheese, and condensed-milk industry, which drops from twenty-fourth place to thirty-fifth. Of the 83 industries presented in this table for which comparative data can be given for both five-year periods, 34 show a greater rate of increase in value of products for the later than for the earlier period; 29 show a lower rate; and 10 show a decrease for the period 1904-1909, while 10 others show a decrease for the period 1899-1904.

As stated in the Introduction, each establishment, as a whole, has been assigned to a given classification according to its products of chief value, so that the figures for any given industry must not be taken either as fully covering or as representing exclusively the operations of that branch of manufacturing indi-

cated by the industry designation. Therefore, in considering the relative importance of the industries shown in the preceding table or in Table II, page 292, it should be noted that the figures for several of the industries listed fall short of being a complete presentation of the statistics for the branch of manufacturing covered by the industry designation. Some conspicuous examples of this kind in Illinois are the following industries, in each of which the value of the products reported in 1909 by establishments included under other classifications exceeded \$1,000,000: Canning and preserving, carriages and wagons and materials, chemicals, women's clothing, foundry and machine-shop products, and patent medicines and compounds and druggists' preparations.

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

CLASS.	PERSONS ENGAGED IN MANUFACTURES.		
	Total.	Male.	Female.
<b>All classes</b> .....	<b>561,044</b>	<b>465,139</b>	<b>95,905</b>
Proprietors and officials.....	33,611	32,507	1,044
Proprietors and firm members.....	17,357	16,725	632
Salaried officers of corporations.....	6,704	6,548	216
Superintendents and managers.....	9,490	9,204	196
Clerks.....	61,669	46,300	15,279
Wage earners (average number).....	465,764	386,182	79,582
10 years of age and over.....	468,847	382,661	70,156
Under 10 years of age.....	6,917	3,461	3,428

The average number of persons engaged in manufactures during 1909 was 561,044, of whom 465,764 were wage earners. Of the remainder, 33,611 were proprietors and officials and 61,669 were clerks. Corresponding figures for individual industries will be found in Table II, page 292.

The next table shows, for 1909, the percentage of proprietors and officials, clerks, and wage earners, respectively, among the total number of persons employed in manufactures. It covers all industries combined and 40 important industries individually.

Of the total number of persons engaged in all manufacturing industries, 6 per cent were proprietors and officials, 11 per cent clerks, and 83 per cent wage earners. The highest percentage of proprietors and officials shown for any individual industry, 34.3, is for the butter, cheese, and condensed-milk industry. Many of the establishments in this industry are carried on by cooperative associations, and from the information contained in the reports it was often impossible positively to distinguish such associations from partnerships. It is probable, therefore, that members of some of these cooperative associations have been

tabulated as partners. In the flour-mill and gristmill, tobacco, and bakery industries also the percentage of proprietors and officials is high. In these industries the majority of the establishments are small and the work is to a large extent done by the proprietors or their immediate representatives, so that the proportion of persons engaged in these industries falling into the class of proprietors and officials is very much higher than for most other industries or for all industries combined.

INDUSTRY.	PERSONS ENGAGED IN MANUFACTURES.			
	Total number.	Per cent of total.		
		Proprietors and officials.	Clerks.	Wage earners (average number).
<b>All industries</b> .....	<b>561,044</b>	<b>6.0</b>	<b>11.0</b>	<b>83.0</b>
Agricultural implements.....	21,511	3.0	7.5	89.4
Automobiles, including bodies and parts.....	2,804	5.8	9.2	85.0
Baking powders and yeast.....	1,133	5.2	36.8	58.0
Boots and shoes, including cut stock and findings.....	6,392	2.4	7.0	90.6
Bread and other bakery products.....	12,566	20.5	11.0	68.5
Brick and tile.....	7,347	8.5	2.0	89.5
Butter, cheese, and condensed milk.....	3,000	34.3	8.0	57.7
Canning and preserving.....	2,800	8.1	6.8	85.1
Carriages and wagons and materials.....	6,746	8.0	5.3	86.7
Cars and general shop construction and repairs by steam-railroad companies.....	24,406	1.0	3.6	94.8
Cars, steam-railroad, not including operations of railroad companies.....	11,782	1.7	5.4	92.9
Clocks and watches, including cases and materials.....	5,883	0.8	2.9	96.3
Clothing, men's, including shirts.....	41,122	3.1	9.0	87.9
Clothing, women's.....	7,279	5.6	9.9	84.5
Coffee and spice, roasting and grinding.....	1,792	5.2	37.9	56.8
Confectionery.....	4,622	4.8	13.0	82.2
Copper, tin, and sheet-iron products.....	8,897	8.8	7.2	84.0
Electrical machinery, apparatus, and supplies.....	11,854	3.6	15.1	81.3
Flour-mill and gristmill products.....	3,634	21.9	10.3	67.8
Foundry and machine-shop products.....	61,303	4.9	9.8	85.3
Furnishing goods, men's.....	3,116	3.8	9.9	86.3
Furniture and refrigerators.....	15,240	4.6	6.3	89.1
Gas, illuminating and heating.....	8,020	3.4	18.1	78.6
Iron and steel, blast furnaces.....	2,927	1.3	13.6	85.2
Iron and steel, steel works and rolling mills.....	19,437	1.5	8.0	90.5
Leather goods.....	3,569	8.0	9.3	82.6
Leather, tanned, curried, and finished.....	3,194	2.5	3.6	94.0
Liquors, distilled.....	851	3.8	8.1	88.1
Liquors, malt.....	5,361	0.8	11.2	82.0
Lumber and timber products.....	19,025	7.7	5.2	87.1
Millinery and lace goods.....	3,937	6.0	10.5	83.5
Musical instruments, pianos and organs and materials.....	9,628	2.3	6.6	91.2
Paint and varnish.....	2,906	8.1	30.2	61.7
Patent medicines and compounds and druggists' preparations.....	3,602	14.1	38.0	47.9
Printing and publishing.....	43,074	10.2	23.3	66.5
Slaughtering and meat packing.....	32,642	1.0	17.1	81.8
Smelting and refining, zinc.....	2,034	1.8	8.7	94.5
Soap.....	3,408	2.8	33.0	64.2
Stoves and furnaces, including gas and oil stoves.....	5,223	3.8	10.0	86.1
Tobacco manufactures.....	10,707	21.1	3.9	75.0
All other industries.....	115,920	6.7	10.7	82.6

On account of the large average number of wage earners per establishment in certain industries, the proportion of proprietors and officials in the industry is small. The more important industries of this class are the manufacture of clocks and watches, slaughtering and meat packing, blast furnaces, steel works and rolling mills, steam-railroad repair shops, car construction shops, and the smelting and refining of zinc.

The following table shows, for 1909, in percentages, for all industries combined, the distribution of the average number of wage earners by age periods, and of those 16 years of age and over by sex, calculated in the manner described in the Introduction. It also shows, for some of the important industries separately, a similar distribution of wage earners as reported for

December 15, or the nearest representative day. As a means of judging the importance of the several industries the average number employed for the year is also given in each case.

INDUSTRY.	WAGE EARNERS.			
	Average number. <sup>1</sup>	Per cent of total.		
		16 years of age and over.		Under 16 years of age.
		Male.	Female.	
<b>All industries</b> .....	<b>465,764</b>	<b>82.2</b>	<b>16.3</b>	<b>1.5</b>
Agricultural implements.....	19,240	98.7	1.2	0.1
Automobiles, including bodies and parts.....	2,382	98.6	1.4	.....
Baking powders and yeast.....	657	45.1	54.0	0.9
Boots and shoes, including cut stock and findings.....	5,792	61.2	33.0	5.8
Bread and other bakery products.....	8,611	79.4	19.3	1.3
Brick and tile.....	6,574	99.3	.....	0.7
Butter, cheese, and condensed milk.....	1,732	79.3	19.9	0.8
Canning and preserving.....	2,383	48.0	48.0	3.4
Carriages and wagons and materials.....	5,852	98.1	1.7	0.2
Cars and general shop construction and repairs by steam-railroad companies.....	23,131	99.8	0.2	( <sup>2</sup> )
Cars, steam-railroad, not including operations of railroad companies.....	10,945	99.0	0.4	.....
Clocks and watches, including cases and materials.....	5,605	55.0	44.4	0.6
Clothing, men's, including shirts.....	36,152	47.0	50.3	2.8
Clothing, women's.....	6,151	31.1	67.4	1.5
Coffee and spice, roasting and grinding.....	1,018	55.9	41.2	2.9
Confectionery.....	3,799	34.4	58.9	6.7
Copper, tin, and sheet-iron products.....	7,473	85.3	13.0	1.7
Electrical machinery, apparatus, and supplies.....	9,641	75.3	24.3	0.5
Flour-mill and gristmill products.....	2,464	99.3	0.6	0.1
Foundry and machine-shop products.....	52,266	97.2	2.4	0.4
Furnishing goods, men's.....	2,688	12.4	84.2	3.4
Furniture and refrigerators.....	13,575	96.4	2.3	1.3
Gas, illuminating and heating.....	6,301	100.0	.....	.....
Iron and steel, blast furnaces.....	2,493	100.0	.....	.....
Iron and steel, steel works and rolling mills.....	17,584	99.8	0.1	0.1
Leather goods.....	2,949	86.5	12.3	1.1
Leather, tanned, curried, and finished.....	3,001	99.8	0.2	.....
Liquors, distilled.....	750	94.4	5.6	.....
Liquors, malt.....	4,898	98.0	1.4	0.6
Lumber and timber products.....	16,567	98.0	0.8	1.1
Millinery and lace goods.....	3,328	18.8	75.4	5.8
Musical instruments, pianos and organs and materials.....	8,777	91.0	5.5	3.5
Paint and varnish.....	1,792	89.0	10.3	0.8
Patent medicines and compounds and druggists' preparations.....	1,869	43.2	48.7	8.1
Printing and publishing.....	28,644	74.1	23.3	2.6
Slaughtering and meat packing.....	26,705	88.8	11.0	0.1
Smelting and refining, zinc.....	1,922	99.3	.....	.....
Soap.....	2,188	69.7	24.9	5.4
Stoves and furnaces, including gas and oil stoves.....	4,499	99.2	( <sup>2</sup> )	0.8
Tobacco manufactures.....	8,034	69.1	28.9	2.0
All other industries.....	95,772	78.5	19.2	2.3

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

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

In all manufacturing industries combined, 82.2 per cent of the average number of wage earners in 1909 were males 16 years of age and over; 16.3 per cent, females 16 years of age and over; and 1.5 per cent, children under the age of 16. The men's clothing industry employed more women than any other one industry, and together with the women's clothing and men's furnishing goods industries, employed nearly one-third of the total number of female wage earners 16 years of age and over reported for the state. Other industries employing large numbers of female wage earners were printing and publishing, slaughtering and meat packing, and the manufacture of clocks and watches, millinery and lace goods, electrical machinery, tobacco products, and fancy and paper boxes. Of the industries presented in the table above, those which show the highest proportion of female wage earners 16 years of age or over

are the men's furnishing goods industry, with 84.2 per cent; the millinery and lace goods industry, with 75.4 per cent; and the women's clothing industry, with 67.4 per cent. Statistics for a number of other less important industries in which the female wage earners predominate will be found in Table II, page 292. Of the wage earners under 16 years of age, 46.9 per cent were employed in the seven industries which reported an average of over 200 such wage earners each. These industries were the men's clothing industry, with an average of 995; printing and publishing, with 739; the manufacture of fancy and paper boxes, with 410; the boot and shoe industry, with 334; the manufacture of pianos and organs, with 309; the confectionery industry, with 255; and foundries and machine shops, with 202. The proportion of children in the total number of wage earners was highest (8.1 per cent) in the manufacture of patent medicines and compounds, but the average number employed was only 151.

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

CLASS.	PERSONS ENGAGED IN MANUFACTURES.				
	1909		1904		Per cent of increase, 1904-1909.
	Number.	Percent distribution.	Number.	Percent distribution.	
Total.....	561,044	100.0	447,947	100.0	25.2
Proprietors and firm members.....	17,857	3.1	13,950	3.1	24.1
Salaried employees.....	77,923	13.9	54,521	12.2	42.9
Wage earners (average number).....	465,764	83.0	379,436	84.7	22.8

Comparable figures are not obtainable for 1899. Salaried employees show the greatest percentage of increase and constitute the only class forming a larger proportion of the total in 1909 than in 1904.

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

CLASS.	AVERAGE NUMBER OF WAGE EARNERS.					
	1909		1904		1899	
	Number.	Percent distribution.	Number.	Percent distribution.	Number.	Percent distribution.
Total.....	465,764	100.0	379,436	100.0	332,871	100.0
16 years of age and over.....	458,847	98.5	374,490	98.7	322,928	97.0
Male.....	382,691	82.2	214,091	56.4	275,008	82.6
Female.....	76,156	16.4	60,399	15.9	47,922	14.4
Under 16 years of age.....	6,917	1.5	4,946	1.3	9,943	3.0

The proportion of wage earners under 16 years of age in all manufacturing industries combined was only one-half as great in 1909 as in 1899. There was a moderate increase during the decade, however, in the proportion of female wage earners 16 years of age or over, while the proportion of males 16 years of age or over shows a slight decrease.

**Wage earners employed, by months.**—The following tabular statement gives the number of wage earners employed on the 15th of each month during the year 1909 for all industries combined; it also gives the percentage which the number reported for each month is of the greatest number reported for any month. In Table II, page 292, are shown for practically all of the important industries in the state, the largest number and the smallest number of wage earners reported for any month. The figures are for the 15th day, or the nearest representative day, of the month.

MONTH.	WAGE EARNERS.		MONTH.	WAGE EARNERS.	
	Number.	Per cent of maximum.		Number.	Per cent of maximum.
January.....	438,594	88.0	July.....	454,410	91.1
February.....	442,881	88.8	August.....	460,414	92.3
March.....	452,593	90.8	September.....	481,706	93.6
April.....	455,145	91.3	October.....	493,928	96.1
May.....	454,966	91.2	November.....	496,452	99.6
June.....	450,375	92.1	December.....	498,040	100.0

In the number of wage earners employed in all industries combined there was an almost continuous increase throughout the year. This was no doubt due to general business conditions rather than to the employment of labor in the so-called seasonal industries. The maximum number was employed in December, and the minimum number, which was 88 per cent of the maximum, in January.

There are no very important seasonal industries in Illinois, but among the industries which show a considerable fluctuation in the number of wage earners employed throughout the year may be mentioned canning and preserving, with a maximum of 6,539 wage earners in September and a minimum of 1,013, or 15.5 per cent of the maximum, in January; the glass industry, with a maximum of 4,396 in April and May and a minimum of 1,441, or 32.8 per cent of the maximum, in September; the manufacture of artificial stone, with a maximum of 1,040 in June and a minimum of 369, or 35.5 per cent of the maximum, in January; the artificial-ice industry, with a maximum of 1,134 in August and a minimum of 479, or 42.2 per cent of the maximum, in January; and the brick and tile industry, with a maximum of 8,302 in June and a minimum of 3,795, or 45.7 per cent of the maximum, in January. While these five industries show considerable variations, the total number of wage earners employed in them was too small to affect materially the variation in employment for all industries combined.

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

Of the wage earners employed in the manufacturing industries of Illinois in 1909, 69.2 per cent worked in establishments where the prevailing hours of labor ranged from 54 to 60 a week. Only 8.1 per cent

worked in establishments where the prevailing hours exceeded 60 a week, and only 22.7 per cent in establishments where they were less than 54 a week. All of the wage earners in the blast-furnace industry and nearly all of those in the cement and gas industries worked in establishments where the prevailing hours exceeded 72 a week, while nearly three-fifths of those in the steel works and rolling mills were in establishments where the prevailing hours were at least 72 a week. In the breweries, printing and publishing establishments, and tobacco factories, on the other hand, the majority of the wage earners worked 48 hours or less per week.

INDUSTRY.	AVERAGE NUMBER OF WAGE EARNERS IN ESTABLISHMENTS GROUPED ACCORDING TO PREVAILING HOURS OF WORK PER WEEK.								
	Total.	48 and under.	Between 48 and 54.	54.	Between 54 and 60.	60.	Between 60 and 72.	72.	Over 72.
All industries.....	465,764	55,055	50,781	120,236	95,908	108,090	10,222	12,369	15,083
Agricultural implements.....	19,240			386	13,684	5,077	113		
Artificial stone.....	785	125	18	178	30	425			
Automobiles, including bodies and parts.....	2,382	46	260	994	303	713	16		
Babbitt metal and solder.....	183	11	5	4	142	21			
Bags, other than paper.....	189		79	15	74	21			
Baking powders and yeast.....	657	38	11	98	416	46	48		
Belting and hose, leather.....	233	13	55	157		8			
Bicycles, motorcycles, and parts.....	910	3	3	882	15	7			
Blacking and cleansing and polishing preparations.....	236	19	40	108	56	13			
Boots and shoes, including cut stock and findings.....	5,792	6	57	673	3,956	1,100			
Boxes, cigar.....	404	9		97	108	190			
Boxes, fancy and paper.....	4,085	72	1,412	893	1,348	281	79		
Brass and bronze products.....	1,688	15	77	1,202	203	186	5		
Bread and other bakery products.....	8,611	673	609	4,243	711	1,821	376	132	46
Brick and tile.....	6,574	2,249	25	1,491	278	2,481	50		
Brooms and brushes.....	820	199	217	90	41	271		2	
Butter, cheese, and condensed milk.....	1,732	131	9	59	40	495	992	2	4
Buttons.....	548	13	140	45	169	181			
Canning and preserving.....	2,383	61	153	74	276	1,672		109	38
Carriages and wagons and materials.....	5,852	114	82	1,133	3,077	1,442		4	
Cars and general shop construction and repairs by steam-railroad companies.....	23,131	374	1,605	13,329	578	2,378	4,785		82
Cars and general shop construction and repairs by street-railroad companies.....	2,240	17		1,349		408	454		12
Cars, steam-railroad, not including operations of railroad companies.....	10,945	3	530	5,926	2,520	1,953			13
Cement.....	1,395			40					1,355
Chemicals.....	836	10		14	38	180	487	48	69
Clocks and watches, including cases and materials.....	5,665	1	4,328	634	663	39			
Clothing, men's, including shirts.....	36,152	6,043	4,503	13,619	10,400	1,587			
Clothing, women's.....	6,151	649	3,256	1,563	594	89			
Coffee and spice, roasting and grinding.....	1,018	32	198	313	390	115			
Coffins, burial cases, and undertakers' goods.....	732	20	27	237	93	355			
Confectionery.....	3,799	154	390	619	1,259	1,376	1		
Cooperage and wooden goods, not elsewhere specified.....	2,385	109	212	335	1,001	731			
Copper, tin, and sheet-iron products.....	7,473	1,506	129	1,144	3,136	1,473	85		
Corsets.....	1,502	8	491	957	46				
Cotton goods, including cotton small wares.....	1,319		887		96	336			
Cutlery and tools, not elsewhere specified.....	1,393	16	47	772	57	501			
Dairymen's, poultrymen's, and apiarists' supplies.....	323	1	36	32	155	99			
Electrical machinery, apparatus, and supplies.....	9,641	186	8,172	734	453	90			6
Electroplating.....	375	19	35	172	81	68			
Explosives.....	290	16		137		137			
Fancy articles, not elsewhere specified.....	444	83	83	120	98	60			
Flags, banners, regalia, society badges, and emblems.....	293	21	108	48		116			
Flour-mill and gristmill products.....	2,464	310	50	24	19	1,229	331	471	30
Foundry and machine-shop products.....	52,266	785	3,431	22,321	13,972	11,054	26		677
Fur goods.....	319	68	117	108	22	4			
Furnishing goods, men's.....	2,688	1,140	655	120	741	32			
Furniture and refrigerators.....	13,575	216	708	5,017	805	6,229			
Gas and electric fixtures and lamps and reflectors.....	2,090	56	445	1,322	238	19			
Gas, illuminating and heating.....	6,301	7		3	138	562	144	8	5,439
Glass.....	3,507	94	957	80		676		240	1,460
Gloves and mittens, leather.....	1,309	134	99	856	679	41			129
Grease and tallow.....	778	17	148	22		460	2		
Hats and caps, other than felt, straw, and wool.....	463	36	98	170	134	25			
Hosiery and knit goods.....	2,913	83	553	78	1,320	879			
Ice, manufactured.....	804	3		2	242	84	139	75	259
Iron and steel, blast furnaces.....	2,493								2,493
Iron and steel, steel works and rolling mills.....	17,534			2,763	1,142	3,220	247	10,074	128
Jewelry.....	990	20	309	419	231	11			
Leather goods.....	2,949	107	155	1,091	1,218	300	78		
Leather, tanned, curried, and finished.....	3,001		313	57	1,197	1,434			
Lime.....	511			116	39	309			47
Liquors, distilled.....	750	290		130		72		258	
Liquors, malt.....	4,398	3,127	40	714	310	169	7	31	

INDUSTRY.	AVERAGE NUMBER OF WAGE EARNERS IN ESTABLISHMENTS GROUPED ACCORDING TO PREVAILING HOURS OF WORK PER WEEK.								
	Total.	48 and under.	Between 48 and 54.	54.	Between 54 and 60.	60.	Between 60 and 72.	72.	Over 72.
Lumber and timber products.....	10,567	870	461	4,882	5,231	5,087	3	1	32
Marble and stone work.....	2,220	1,097	148	620	153	211	28		
Mattresses and spring beds.....	331	46	73	207	240	256			
Millinery and lace goods.....	3,328	557	1,348	688	626	109			
Mirrors.....	353		160	91	102				
Models and patterns, not including paper patterns.....	426	71	85	171	32	67			
Musical instruments and materials, not specified.....	390	5	37	240		54			
Musical instruments, pianos and organs and materials.....	8,777	121	504	4,604	842	2,046			
Paint and varnish.....	1,702	152	217	148	932	281	12		
Paper and wood pulp.....	1,397				189	446	138	624	
Paper goods, not elsewhere specified.....	1,317	122	201	310	640	38			
Patent medicines and compounds and druggists' preparations.....	1,809	509	541	605	154	99	1		
Photographic apparatus and materials.....	284	21	15	92	156				
Photo-engraving.....	1,114	778	205	56		12			
Pottery, terra-cotta, and fire-clay products.....	3,157	613	2	141	1,185	1,216			
Printing and publishing.....	28,644	18,064	4,400	3,983	1,293	629	67	122	
Pumps, not including steam pumps.....	282		7	25	71	179			
Scales and balances.....	245	1	80	23	123	15			
Sewing machines, cases, and attachments.....	1,713			663	776	274			
Shipbuilding, including boat building.....	413	39		314		60			
Show cases.....	380	3	15	140	138	90			
Slaughtering and meat packing.....	26,705	2,000	46	1,149	57	22,557	3		
Smelting and refining, zinc.....	1,922				702	698	522		
Smelting and refining, not from the ore.....	369	112		5	101	17	88		46
Soap.....	2,188	8	95	19	49	2,015		2	
Stereotyping and electrotyping.....	592	592							
Stoves and furnaces, including gas and oil stoves.....	4,409	430	53	1,107	811	2,098			
Surgical appliances and artificial limbs.....	530	36	7	478	10	5			
Tobacco manufactures.....	8,034	4,063	700	505	1,028	833	2		
Type founding and printing materials.....	438	21	71	346					
Wall paper.....	290				10	195	84		
Woolen, worsted, and felt goods, and wool hats.....	499		3	107	108	281			
All other industries.....	41,270	3,347	4,720	8,106	11,045	10,250	810	186	2,728

Location of establishments.—The following table shows the extent to which the manufactures of Illinois are centralized in incorporated places of 10,000 inhabitants or over. (See Introduction.)

Owing to the fact that the statistics for Cicero were not tabulated separately for 1899, the figures shown in the table for 1899 fall short to that extent of a complete presentation of the manufactures statistics for the incorporated places having a population of over 10,000 in 1900. In 1909, however, Cicero and

Oak Park (which was organized from part of Cicero in 1902) employed an average of only 940 wage earners in manufacturing industries, while the combined value of their manufactured products was only \$2,578,861, figures which are in each case equivalent to less than one-half of 1 per cent of the corresponding totals for 1899 for incorporated places having a population of 10,000 or over, so that the effect of the omission upon the statistics is negligible.

ITEM.	Year.	Aggregate.	CITIES, TOWNS, AND VILLAGES HAVING A POPULATION OF 10,000 AND OVER.								DISTRICTS OUTSIDE OF CITIES, TOWNS, AND VILLAGES HAVING A POPULATION OF 10,000 AND OVER.	
			Total.		10,000 to 25,000.		25,000 to 100,000.		100,000 and over.		Number or amount.	Percent of total.
			Number or amount.	Percent of total.	Number or amount.	Percent of total.	Number or amount.	Percent of total.	Number or amount.	Percent of total.		
Population.....	1910	5,038,591	2,950,963	52.3	331,285	5.9	434,395	7.7	2,185,283	38.8	2,687,628	47.7
	1900	4,821,550	2,218,030	46.0	302,885	6.3	216,570	4.5	1,698,575	35.2	2,603,520	54.0
Number of establishments.....	1909	18,026	12,525	69.5	1,079	6.0	1,700	9.9	9,656	53.6	5,501	30.5
	1899	14,374	9,695	67.4	1,080	7.5	947	6.6	7,668	53.3	4,679	32.6
Average number of wage earners.....	1909	465,764	370,741	81.5	33,446	7.2	52,318	11.2	293,977	63.1	80,023	18.5
	1899	332,871	270,322	83.9	31,372	9.4	26,769	8.0	221,191	66.4	53,549	16.1
Value of products.....	1909	\$1,919,270,594	\$1,595,135,686	83.1	\$111,509,951	5.8	\$202,364,554	10.5	\$1,281,171,181	66.8	\$324,140,908	16.9
	1899	1,120,868,308	957,089,720	85.3	50,800,800	5.3	99,349,710	8.9	797,879,141	71.2	103,778,588	14.6
Value added by manufacture..	1909	758,340,004	639,383,749	84.3	46,860,440	6.2	104,821,851	13.8	487,701,458	64.3	118,900,155	15.7
	1899	439,418,186	378,306,775	86.1	29,120,568	6.6	53,529,477	12.2	295,656,740	67.3	61,111,411	13.9

In 1909, 83.1 per cent of the total value of products was reported from incorporated places having over 10,000 inhabitants, and 81.5 per cent of the average number of wage earners were employed in such places. The figures indicate that, except in number of establishments, the manufacturing interests in the territory

outside of such incorporated places gained somewhat, on the whole, during the last decade, in their proportions of the respective totals for the state, in spite of the greater increase in population in the cities.

The make-up of the several groups shown in the table has been affected by the increase in population

of certain of the cities. There were 19 incorporated places having between 10,000 and 25,000 inhabitants in 1900, 5 of which—Decatur, Aurora, Danville, Elgin, and Bloomington—had passed the 25,000 mark in population by 1910, while 1 city—Ottawa—dropped out of the group through a decline in population. These losses were partially made up, however, by the addition in 1910 of the cities of Waukegan, Chicago Heights, Champaign, Mattoon, Lincoln, and Canton, as the result of increases in their population during the decade, while the number of places included in the group was further increased by the organization of Oak Park from part of Cicero in 1902. This group shows a decrease in its proportion of the total for every item presented in the table except value of products, for which it shows an increase from 5.3 per cent of the state total in 1899 to 5.8 per cent in 1909. The influence of the addition of the five cities named above to the group comprising the cities having between 25,000 and 100,000 inhabitants, which increased the number of cities included from 6 to 11, is reflected in the larger proportions which the group contributed to the various totals in 1909 as compared with 1899. Chicago, the only city having more than 100,000 inhabitants, shows a decrease in its proportions of the total for all items except number of establishments. Of the total number of wage earners employed in Illinois in 1909, 63.1 per cent were in Chicago, and 66.8 per cent of the total value of products was credited to this city. The corresponding figures for 1899 were 66.4 per cent and 71.2 per cent, respectively.

The following statement shows the principal statistics for 1909 and 1899 for Ottawa, which had a population in 1900 in excess of 10,000 but which fell below this figure in 1910:

	1909	1899
Population.....	9,535	10,588
Number of establishments.....	52	57
Average number of wage earners.....	1,071	1,020
Value of products.....	\$2,467,985	\$1,737,834
Value added by manufacture.....	\$1,507,682	\$980,682

In the decade 1899-1909 the value of manufactured products for Ottawa increased 42 per cent and the value added by manufacture 52.8 per cent. The leading industries in 1909 were the manufacture of glass, pottery, terra-cotta, and fire-clay products, agricultural implements, carriages and wagons, and pianos. Forty-six per cent of the total number of wage earners were employed in the first two industries named.

The population, in 1910 and 1900, of the 32 incorporated places which had 10,000 inhabitants or over in 1910, and of Ottawa, which had over 10,000 inhabitants in 1900 but less than that number in 1910, is given in the next tabular statement.

CITY, TOWN, OR VILLAGE.	1910	1900	CITY, TOWN, OR VILLAGE.	1910	1900
Chicago.....	2,185,283	1,693,575	Oak Park.....	19,444	(1)
Peoria.....	66,950	56,100	Freeport.....	17,567	13,258
East St. Louis.....	58,547	29,655	Alton.....	17,528	14,210
Springfield.....	51,878	34,159	Waukegan.....	16,099	9,426
Rockford.....	45,401	31,051	Jacksonville.....	15,326	15,078
Quincy.....	36,587	36,252	Cicero.....	14,567	10,810
Joliet.....	34,670	29,853	Cairo.....	14,548	12,566
Decatur.....	31,140	20,754	Chicago Heights.....	14,525	5,109
Aurora.....	29,807	24,147	Streator.....	14,253	14,079
Danville.....	27,871	16,354	Kankakee.....	13,986	13,593
Elgin.....	25,976	22,433	Champaign.....	12,421	9,448
Bloomington.....	25,768	23,286	La Salle.....	11,587	10,022
Evanston.....	24,978	19,259	Mattoon.....	11,456	9,622
Rock Island.....	24,335	19,493	Lincoln.....	10,892	8,962
Moline.....	24,199	17,248	Canton.....	10,453	6,564
Galesburg.....	22,069	18,607	Ottawa.....	9,535	10,588
Belleville.....	21,122	17,484			

<sup>1</sup> Not incorporated in 1900.

The relative industrial importance of each of the 32 municipalities having a population of 10,000 or over in 1910 is shown in the following table, in which the value of products and the average number of wage earners are shown separately for 1909, 1904, and 1899, so far as comparative figures can be given:

CITY, TOWN, OR VILLAGE.	AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.		
	1909	1904	1899	1909	1904	1899
Chicago.....	293,977	241,984	221,191	\$1,281,171,181	\$955,036,277	\$797,879,141
Peoria <sup>1</sup> .....	5,981	5,834	5,996	63,001,155	60,419,598	44,509,371
Joliet.....	6,383	5,792	5,792	38,816,523	32,897,120	26,131,625
Rockford.....	9,309	7,239	5,851	22,205,740	15,276,129	11,021,590
Moline.....	5,449	3,937	4,138	20,891,608	13,158,429	9,302,054
Waukegan <sup>1</sup> .....	3,090	2,265	495	19,984,082	10,994,247	732,794
East St. Louis <sup>1</sup> .....	5,252	4,505	3,106	18,227,900	10,586,320	6,241,391
Quincy.....	4,032	4,602	3,815	11,435,572	10,748,224	7,918,723
Elgin.....	6,094	4,855	4,376	11,119,070	9,349,274	6,386,243
Aurora.....	5,095	4,078	3,949	10,954,175	7,326,028	5,638,191
Chicago Heights.....	3,953	(*)	(*)	10,839,268	(*)	(*)
Alton.....	2,429	3,069	2,174	10,096,333	8,696,814	4,250,389
Decatur.....	2,699	2,340	1,920	9,767,888	8,667,302	5,133,677
Springfield.....	3,652	3,071	2,199	8,497,245	5,796,037	3,407,045
Freeport.....	2,853	1,516	1,338	7,811,277	3,109,302	2,707,915
Rock Island.....	1,764	1,703	1,885	5,880,776	5,832,907	4,621,590
La Salle.....	1,293	1,197	917	5,307,551	3,158,178	3,309,413
Bloomington.....	2,077	2,276	1,671	4,807,080	5,777,000	3,011,899
Belleville.....	1,872	1,765	1,335	4,614,098	4,856,618	2,878,394
Cairo.....	1,237	1,435	1,501	4,440,148	4,881,465	3,116,515
Evanston.....	837	738	400	3,778,298	2,550,529	830,020
Danville.....	1,744	1,854	957	3,350,596	3,904,120	1,913,762
Canton.....	1,262	(*)	(*)	2,941,625	(*)	(*)
Galesburg.....	1,465	1,447	1,070	2,919,051	2,217,772	1,450,092
Kankakee.....	1,349	1,038	877	2,743,171	2,089,143	1,648,713
Jacksonville.....	947	899	1,066	2,298,700	1,981,582	1,634,260
Streator.....	1,275	1,544	1,283	2,137,252	1,838,894	1,244,978
Cicero.....	658	(*)	(*)	1,461,164	(*)	(*)
Mattoon.....	948	1,022	682	1,434,420	1,908,781	764,463
Oak Park.....	282	(*)	(*)	1,117,697	(*)	(*)
Champaign.....	273	289	245	845,489	480,229	353,990
Lincoln.....	220	236	188	570,243	784,248	375,167

<sup>1</sup> Figures do not agree with those published in 1904, because it was necessary to revise the totals in order to include data only for those establishments located within the corporate limits of the city.

<sup>2</sup> Figures not available.

<sup>3</sup> Not incorporated in 1900.

Every city for which comparative statistics can be given, except Bloomington and Lincoln, shows an increase in value of products from 1904 to 1909, and all but La Salle an increase from 1899 to 1904. The greatest gain, 151.2 per cent, was made by Freeport, and was due largely to the increased production of carriages and wagons, windmills, and patent medicines and compounds. A gain of 81.8 per cent was made by Waukegan, mainly on account of the increased production of glucose and of steel-works and rolling-mill products. The next largest increase, 72.2 per cent,

is shown for East St. Louis, and was due principally to large increases in the output of the steam-railroad repair shops, flour mills and gristmills, chemical works, paint works, and foundries and machine shops.

Chicago, with manufactured products valued at \$1,281,171,181 and an average of 293,977 wage earners in manufacturing industries in 1909, is not only the most important manufacturing city in Illinois but ranks second only to New York City in the United States as a whole.

In fact, there were only four states besides Illinois (namely, New York, Pennsylvania, Massachusetts, and Ohio), which had a greater value of products in 1909 than the city of Chicago. The percentage of increase from 1904 to 1909 in average number of wage earners was 21.5 and in value of products, 34.1, as compared with corresponding percentages of 9.4 and 19.7, respectively, for the preceding five-year period. The rates of increase for Chicago from 1904 to 1909, however, were a little below those shown for the entire state.

The leading industries of Chicago for which statistics can be presented separately, arranged in the order of value of products, are shown in the following table, which gives the absolute and relative increase in this respect between 1904 and 1909, and also the percentage which the value of products for each industry represents of the corresponding total for the state:

INDUSTRY.	VALUE OF PRODUCTS.			
	Amount.	Per cent of total for the industry for the state.	Increase over 1904. <sup>1</sup>	
			Amount.	Per cent.
<b>All industries</b> .....	<b>\$1,281,171,000</b>	<b>66.8</b>	<b>\$320,135,000</b>	<b>34.1</b>
Slaughtering and meat packing.....	325,002,000	83.4	54,613,000	20.1
Foundry and machine-shop products.....	89,009,000	64.7	21,178,000	30.0
Clothing, men's, including shirts.....	85,296,000	95.3	30,070,000	50.1
Printing and publishing.....	74,211,000	86.1	21,178,000	30.9
Iron and steel, steel works and rolling mills.....	45,084,000	53.1	21,144,000	85.1
Lumber and timber products.....	32,709,000	72.8	12,001,000	65.1
Bread and other bakery products.....	26,908,000	74.5	6,254,000	30.3
Cars, steam-railroad, not including operations of railroad companies.....	20,892,000	77.4	-2,007,000	-12.2
Electrical machinery, apparatus, and supplies.....	20,000,000	77.0	4,377,000	26.0
Furniture and refrigerators.....	20,512,000	73.5	2,850,000	16.1
Soap.....	10,030,000	68.8	6,160,000	44.8
Coffee and spice, roasting and grinding.....	10,593,000	99.2	4,030,000	25.0
Liquors, malt.....	10,512,000	83.6	2,520,000	14.9
Paint and varnish.....	18,942,000	92.7	6,277,000	49.5
Tobacco manufactures.....	16,633,000	76.1	5,616,000	51.0
Clothing, women's.....	15,077,000	94.2	4,040,000	34.7
Cars and general shop construction and repairs by steam-railroad companies.....	15,356,000	47.7	4,187,000	37.5
Leather, tanned, curried, and finished.....	13,244,000	88.8	3,524,000	40.0
Copper, tin, and sheet-iron products.....	12,242,000	53.6	4,105,000	50.4
Musical instruments, pianos and organs and materials.....	11,487,000	59.9	2,900,000	35.3
Confectionery.....	11,222,000	87.7	4,072,000	71.3
Patent medicines and compounds and druggists' preparations.....	10,360,000	79.0	-1,582,000	-13.2

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

The great importance of the slaughtering and meat-packing industry in Chicago is apparent when it is noted that its value of products formed 25.4 per cent of the total for all manufacturing industries in the city

and 23.7 per cent of the United States total for the industry. Comparative statistics for 60 less important industries, in addition to the 22 shown in the preceding table, are presented for Chicago in Table I, page 281.

In addition to the 82 industries presented separately for Chicago in Table I, page 281, there were 49 others which, for various reasons, are included under the head of "All other industries." Some of these industries were among the most important in the city, 49 reporting products in 1909 exceeding \$1,000,000 in value.<sup>1</sup> Of these, 4 reported products valued at \$10,000,000 or over; 7 reported products between \$5,000,000 and \$10,000,000 in value; and 38 reported products between \$1,000,000 and \$5,000,000 in value.

Peoria, the second city of the state in respect to manufactures, had products in 1909 valued at \$63,061,155, an increase of 4.4 per cent over the figure for 1904. Though the total value of its manufactured products amounted to less than 5 per cent of that for Chicago, Peoria is known widely on account of its distilleries; the value of the products of which in 1909 formed 70.7 per cent of the total for all manufacturing industries of the city. The value of products reported by the four distilleries of Peoria formed a little more than four-fifths of the total for this industry in Illinois, and over one-fifth of the total for the entire country. Other important industries were: Slaughtering and meat packing, cooperage, and printing and publishing; the manufacture of agricultural implements, and of food preparations; and the breweries, foundries and machine shops, flour mills and gristmills, and bakeries.

Joliet holds third place among the manufacturing cities of Illinois. The value of its manufactured products increased 18 per cent and the average number of wage earners in the manufacturing industries, 10.2 per cent between 1904 and 1909. The most important industries of the city in 1909 were steel works and rolling mills, blast furnaces, and the manufacture of wire, and of coke, each of which was represented by one establishment. Over one-half of both the total

<sup>1</sup> These industries are:

Agricultural implements. Babbit metal and solder. Belting and hose, woven and rubber. Bicycles, motorcycles, and parts. Blacking and cleansing and polishing preparations. Butter, cheese, and condensed milk. Butter, reworking. Cash registers and calculating machines. Coke. Cordage and twine and jute and linen goods. Cordials and syrups. Portlanders. Flour-mill and gristmill products. Food preparations. Gas, illuminating and heating. Glass, cutting, staining, and ornamenting. Glue. Gold and silver, reducing and refining, not from the ore. Hair work. House-furnishing goods, not elsewhere specified. Instruments, professional and scientific. Iron and steel, blast furnaces. Iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills. Iron and steel forgings.	Iron and steel, nails and spikes, cut and wrought, including wire nails, not made in steel works or rolling mills. Lard, refined, not made in slaughtering and meat-packing establishments. Lead, bar, pipe, and sheet. Looking-glass and picture frames. Malt. Millinery and lace goods. Mineral and soda waters. Moving pictures. Oil, linseed. Oleomargarine. Paper and wood pulp. Pottery, terra-cotta, and fire-clay products. Roofing materials. Saws. Signs and advertising novelties. Smelting and refining, lead. Soda-water apparatus. Sporting and athletic goods. Stationery goods, not elsewhere specified. Sulphuric, nitric, and mixed acids. Upholstering materials. Wall paper. Windmills. Window shades and fixtures. Wool scouring.
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number of wage earners and the total value of products was credited to the steel works and rolling mills and the blast furnaces. The manufacture of coke is a comparatively new industry in Joliet.

Rockford has a great diversity of manufactures, but the furniture factories, knitting mills, agricultural-implement shops, and foundries and machine shops were the most important in 1909. The city shows a gain of 28.6 per cent in average number of wage earners and 45.8 per cent in value of products for the five-year period 1904-1909.

Moline is well known on account of the large number of plows manufactured there. Four establishments manufacturing agricultural implements gave employment to more than one-half the total number of wage earners in 1909 and reported more than one-half the total value of products for the city. Other important industries were the manufacture of carriages and wagons, foundry and machine-shop products, steel works and rolling-mill products, and automobiles. The city shows an increase from 1904 to 1909 of 36.7 per cent in average number of wage earners and of 58.8 per cent in value of products.

The chief industries of Waukegan are the manufacture of glucose and the steel works and rolling mills; these two industries gave employment to about two-thirds of the wage earners in 1909 and reported over three-fourths of the total value of products for the city. This city, whose population was less than 10,000 in 1900, shows an increase of 36.4 per cent in average number of wage earners from 1904 to 1909, and of 81.8 per cent in value of products. It may be noted also that the value of products reported in 1909 was more than twenty-seven times that in 1899.

East St. Louis made a large increase (72.2 per cent) in value of products between 1904 and 1909. The most important industries in the city in 1909 were flour mills and gristmills, foundries and machine shops, steel works and rolling mills, the chemical industry, slaughtering and meat packing, and the manufacture of paints and of paper and wood pulp. Several very large slaughtering and meat-packing establishments are located at the National Stock Yards, just outside the city limits, but the statistics presented for cities are confined to establishments within the city limits.

In Quincy the principal industries in 1909 were the manufacture of stoves and furnaces, slaughtering and meat packing, the manufacture of food preparations, foundries and machine shops, and breweries. The increase in value of products from 1904 to 1909 was only 6.4 per cent, and there was a decrease in the average number of wage earners employed.

Elgin is well known for the manufacture of watch movements. The manufacture of clocks and watches, including cases and materials, of foundry and machine-shop products and of condensed milk, and printing and publishing were the chief contributors to Elgin's manufacturing importance in 1909, the four industries

employing over three-fourths of the average number of wage earners and reporting more than one-half of the total value of products.

Aurora shows an increase of 24.9 per cent in number of wage earners and of 49.5 per cent in total value of products from 1904 to 1909. The leading industries were steam-railroad repair shops, foundries and machine shops, and the manufacture of bicycles, motorcycles, and parts, and of cotton goods.

The leading industries in Chicago Heights in 1909 were foundries and machine shops, steel works and rolling mills, and steam-railroad car construction shops. These three industries reported a majority of the average number of wage earners and more than one-half the total value of products for the city.

While Alton shows a decrease of 640, or 20.9 per cent, between 1904 and 1909 in the average number of wage earners in its manufacturing industries, there was an increase of 16.1 per cent in the value of its manufactured products. Flour mills and gristmills, glass works, and slaughtering and meat packing were the leading industries, and together contributed four-fifths of the total value of products. More than one-half of the average number of wage earners reported for the city were employed in the glass works.

The leading industries of the other incorporated places included in the preceding table are shown in the following statement:

CITY, TOWN, OR VILLAGE.	Principal industries.
Decatur.....	Flour-mill and gristmill products. Foundry and machine-shop products.
Springfield.....	Agricultural implements. Boots and shoes. Flour-mill and gristmill products. Watches.
Freeport.....	Carriages and wagons and materials. Windmills. Patent medicines and compounds. Foundry and machine-shop products.
Rock Island.....	Agricultural implements. Lumber and timber products. Oilcloth and linoleum.
La Salle.....	Smelting and refining, zinc. Cement.
Bloomington.....	Steam-railroad repair shops.
Belleville.....	Stoves and furnaces. Boots and shoes.
Cairo.....	Flour-mill and gristmill products. Lumber and timber products.
Evanston.....	Wrought-iron and steel pipe.
Danville.....	Steam-railroad repair shops.
Canton.....	Agricultural implements.
Galesburg.....	Steam-railroad repair shops. Foundry and machine-shop products.
Kankakee.....	Hosiery and knit goods.
Jacksonville.....	Men's clothing.
Streator.....	Glass.
Cicero.....	Foundry and machine-shop products. Wrought-iron and steel pipe.
Mattoon.....	Steam-railroad repair shops.
Oak Park.....	Gas, illuminating and heating.
Champaign.....	Leather goods. Pianos. Printing and publishing.
Lincoln.....	Coffins, burial cases, and undertakers' goods. Mattresses and spring beds.

**Character of ownership.**—The table that follows has for its purpose the presentation of conditions in respect to the character of ownership or legal organization of manufacturing enterprises. For all industries combined comparative figures are given covering the censuses of 1909 and 1904. Comparative data for 1899 are not available. Figures for 1909

only are presented for several important industries individually. In order to avoid disclosing the operations

of individual concerns it is necessary to omit several important industries from this table and the one following.

INDUSTRY AND CHARACTER OF OWNERSHIP.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.	INDUSTRY AND CHARACTER OF OWNERSHIP.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.
<b>ALL INDUSTRIES:</b>					<b>Clothing, women's, 1909.....</b>	221	6,151	\$18,635,236	\$7,421,710
1909.....	18,026	465,764	\$1,919,276,594	\$758,340,904	Individual.....	107	1,817	3,938,904	1,896,652
1904.....	14,921	379,436	1,410,342,129	570,284,813	Firm.....	71	2,778	6,960,832	2,873,284
Individual:					Corporation.....	43	1,556	6,785,500	2,651,764
1909.....	9,054	40,524	184,438,206	63,720,740	Per cent of total.....	100.0	100.0	100.0	100.0
1904.....	7,933	44,563	108,126,645	54,092,327	Individual.....	48.4	29.5	23.7	25.6
Firm:					Firm.....	32.1	45.2	41.8	38.7
1909.....	2,960	43,524	133,143,273	57,904,830	Corporation.....	19.5	25.3	34.5	35.7
1904.....	2,680	37,983	120,637,913	52,031,245	<b>Confectionery, 1909.....</b>	140	3,799	\$12,798,077	\$5,132,679
Corporation:					Individual.....	60	437	1,368,845	540,311
1909.....	5,209	374,865	1,046,518,916	634,229,181	Firm.....	22	198	630,027	189,121
1904.....	4,145	296,610	1,179,028,840	462,870,654	Corporation.....	52	3,164	10,799,205	4,403,247
Other:					Per cent of total.....	100.0	100.0	100.0	100.0
1909.....	197	861	5,176,109	2,390,144	Individual.....	47.1	11.5	10.7	10.5
1904.....	103	280	2,548,831	990,587	Firm.....	15.7	5.2	4.9	3.7
Per cent of total:					Corporation.....	37.1	83.3	84.4	85.8
1909.....	100.0	100.0	100.0	100.0	<b>Copper, tin, and sheet-iron products, 1909.....</b>	483	7,473	\$22,822,810	\$9,629,647
1904.....	100.0	100.0	100.0	100.0	Individual.....	283	1,008	2,742,344	1,623,761
Individual:					Firm.....	102	977	3,023,028	1,534,653
1909.....	53.0	10.0	7.0	8.4	Corporation.....	98	5,488	17,067,438	6,471,233
1904.....	53.2	11.7	7.7	9.6	Per cent of total.....	100.0	100.0	100.0	100.0
Firm:					Individual.....	58.6	13.5	12.0	16.9
1909.....	16.5	0.3	6.0	7.6	Firm.....	21.1	13.1	13.2	15.9
1904.....	18.0	10.0	8.6	9.1	Corporation.....	20.3	73.4	74.7	67.2
Corporation:					<b>Flour-mill and gristmill products, 1909.....</b>	461	2,464	\$51,110,681	\$5,521,110
1909.....	28.9	80.5	85.8	83.0	Individual.....	210	424	8,253,320	770,068
1904.....	27.8	78.2	83.0	81.2	Firm.....	146	421	6,622,904	923,049
Other:					Corporation.....	105	1,619	36,234,361	3,827,393
1909.....	1.1	0.2	0.3	0.3	Per cent of total.....	100.0	100.0	100.0	100.0
1904.....	1.1	0.1	0.2	0.1	Individual.....	45.6	17.2	16.1	14.0
<b>Boots and shoes, including outstock and findings, 1909</b>	53	5,792	\$16,754,704	\$5,886,862	Firm.....	31.7	17.1	13.0	16.7
Individual.....	17	510	1,510,025	505,933	Corporation.....	22.8	65.7	70.9	69.3
Firm.....	9	309	815,241	301,945	<b>Foundry and machine-shop products, 1909.....</b>	1,178	52,266	\$138,578,993	\$74,768,805
Corporation.....	27	4,883	14,423,438	4,987,934	Individual.....	300	3,764	8,475,204	4,769,850
Per cent of total.....	100.0	100.0	100.0	100.0	Firm.....	150	1,834	4,288,137	2,258,710
Individual.....	32.1	8.8	9.0	10.1	Corporation.....	608	46,068	125,815,652	67,740,245
Firm.....	17.0	0.9	4.9	5.1	Per cent of total.....	100.0	100.0	100.0	100.0
Corporation.....	50.9	84.3	86.1	84.7	Individual.....	30.6	7.2	6.1	6.4
<b>Brick and tile, 1909.....</b>	340	6,574	\$9,765,051	\$7,273,693	Firm.....	12.7	3.5	3.1	3.0
Individual.....	146	862	1,220,274	986,033	Corporation.....	56.7	89.3	90.8	90.6
Firm.....	100	777	1,103,109	830,501	<b>Furniture and refrigerators, 1909.....</b>	287	13,875	\$27,900,262	\$15,399,042
Corporation.....	94	4,935	7,441,068	5,447,499	Individual.....	88	1,224	2,409,423	1,453,540
Per cent of total.....	100.0	100.0	100.0	100.0	Firm.....	40	903	2,005,844	967,832
Individual.....	42.9	13.1	12.5	13.0	Corporation.....	139	11,448	23,484,995	12,947,670
Firm.....	20.4	11.8	11.3	11.5	Per cent of total.....	100.0	100.0	100.0	100.0
Corporation.....	27.6	75.1	76.2	74.9	Individual.....	33.0	9.0	8.6	9.4
<b>Butter, cheese, and condensed milk, 1909.....</b>	295	1,732	\$17,798,278	\$3,531,357	Firm.....	15.0	6.7	7.2	6.5
Individual.....	90	101	1,574,475	206,040	Corporation.....	52.1	84.3	84.2	84.1
Firm.....	43	83	1,384,627	177,776	<b>Leather goods, 1909.....</b>	188	2,949	\$9,948,324	\$3,813,254
Corporation.....	74	1,447	13,200,466	2,941,488	Individual.....	88	716	2,149,577	916,325
Other.....	78	101	1,038,820	206,047	Firm.....	39	459	1,441,018	704,581
Per cent of total.....	100.0	100.0	100.0	100.0	Corporation.....	41	1,774	5,357,729	2,192,448
Individual.....	30.5	5.8	8.8	5.8	Per cent of total.....	100.0	100.0	100.0	100.0
Firm.....	14.6	4.8	7.8	5.0	Individual.....	52.4	24.3	24.0	24.0
Corporation.....	28.5	83.5	74.2	83.3	Firm.....	23.2	15.6	16.1	18.5
Other.....	26.4	5.8	9.2	5.8	Corporation.....	24.4	60.2	59.9	57.5
<b>Canning and preserving, 1909.....</b>	118	2,383	\$7,619,586	\$2,806,890	<b>Leather, tanned, curried, and finished, 1909.....</b>	29	3,001	\$14,911,782	\$2,761,173
Individual.....	45	204	685,092	273,374	Individual.....	4	201	1,080,872	218,334
Firm.....	24	604	1,642,099	619,071	Firm.....	9	325	1,694,428	359,538
Corporation.....	49	1,615	5,291,495	1,914,445	Corporation.....	10	2,475	12,140,482	2,203,301
Per cent of total.....	100.0	100.0	100.0	100.0	Per cent of total.....	100.0	100.0	100.0	100.0
Individual.....	38.1	11.1	9.0	9.7	Individual.....	13.8	6.7	7.3	7.8
Firm.....	20.3	21.1	21.6	22.1	Firm.....	31.0	10.8	11.3	12.9
Corporation.....	41.5	67.8	69.4	68.2	Corporation.....	55.2	82.5	81.4	79.2
<b>Carriages and wagons and materials, 1909.....</b>	325	5,852	\$16,831,283	\$7,351,948	<b>Lumber and timber products, 1909.....</b>	814	16,567	\$44,951,804	\$17,697,808
Individual.....	201	797	1,714,436	7,804,224	Individual.....	487	2,309	5,419,920	2,749,240
Firm.....	99	421	1,052,885	686,986	Firm.....	169	1,059	2,210,937	1,193,303
Corporation.....	55	4,634	14,063,963	5,704,479	Corporation.....	208	13,199	37,320,947	13,856,065
Per cent of total.....	100.0	100.0	100.0	100.0	Per cent of total.....	100.0	100.0	100.0	100.0
Individual.....	61.8	13.6	10.2	13.6	Individual.....	63.7	14.3	12.1	16.5
Firm.....	21.2	7.2	6.3	8.0	Firm.....	20.8	6.4	4.9	6.4
Corporation.....	16.9	79.2	83.0	78.4	Corporation.....	25.6	79.3	83.0	78.0
<b>Clothing, men's, including shirts, 1909.....</b>	715	36,152	\$89,472,755	\$44,244,475					
Individual.....	449	8,373	12,400,131	7,804,224					
Firm.....	179	18,383	49,000,695	22,064,782					
Corporation.....	87	9,391	28,068,929	14,375,469					
Per cent of total.....	100.0	100.0	100.0	100.0					
Individual.....	62.8	23.2	13.9	17.6					
Firm.....	25.0	50.8	54.8	49.9					
Corporation.....	12.2	26.0	31.4	32.5					

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

## MANUFACTURES—ILLINOIS.

INDUSTRY AND CHARACTER OF OWNERSHIP.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.	INDUSTRY AND CHARACTER OF OWNERSHIP.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.
<b>Millinery and lace goods, 1909</b>					<b>Patent medicines and compounds and druggists' preparations, 1909—Con.</b>				
Individual.....	103	3,328	\$7,281,914	\$3,484,618	Per cent of total.....	100.0	100.0	100.0	100.0
Firm.....	39	373	696,510	377,891	Individual.....	42.6	13.9	11.0	10.7
Corporation.....	29	834	1,954,243	960,288	Firm.....	10.0	5.2	7.0	4.5
Corporation.....	35	2,121	4,631,152	2,146,439	Corporation.....	47.4	81.0	82.0	84.8
Per cent of total.....	100.0	100.0	100.0	100.0	<b>Printing and publishing, 1909</b>				
Individual.....	37.9	11.2	9.6	10.8	Individual.....	2,608	28,644	\$87,247,090	\$62,567,117
Firm.....	25.2	25.1	26.8	27.6	Firm.....	1,362	3,764	10,252,497	7,889,922
Corporation.....	34.0	63.7	63.6	61.6	Corporation.....	423	2,524	5,610,653	4,118,519
<b>Paint and varnish, 1909</b>					Other.....	729	21,914	69,133,450	48,764,031
Individual.....	74	1,792	\$20,434,291	\$7,532,680	Other.....	104	442	2,250,520	1,794,645
Firm.....	5	67	675,344	258,466	Per cent of total.....				
Corporation.....	59	1,610	10,256,053	7,067,811	Individual.....	100.0	100.0	100.0	100.0
Per cent of total.....	100.0	100.0	100.0	100.0	Firm.....	51.8	13.1	11.8	12.6
Individual.....	13.5	6.4	3.3	3.4	Firm.....	16.2	8.8	6.4	6.6
Firm.....	6.8	3.7	2.5	2.7	Corporation.....	28.0	78.5	79.2	77.9
Corporation.....	79.7	89.8	94.2	93.8	Other.....	4.0	1.5	2.6	2.9
<b>Patent medicines and compounds and druggists' preparations, 1909</b>					<b>Slaughtering and meat packing, 1909</b>				
Individual.....	359	1,869	\$13,114,307	\$8,701,289	Individual.....	109	26,765	\$389,594,906	\$45,618,899
Firm.....	153	259	1,440,203	933,545	Individual.....	36	688	9,844,597	857,279
Firm.....	36	97	918,029	391,053	Firm.....	19	350	4,982,255	742,958
Corporation.....	170	1,513	10,756,075	7,376,686	Corporation <sup>1</sup> .....	54	25,667	374,768,054	44,018,692
					Per cent of total.....				
					Individual.....	100.0	100.0	100.0	100.0
					Individual.....	33.0	2.6	2.5	1.9
					Firm.....	17.4	1.3	1.3	1.6
					Corporation <sup>1</sup> .....	49.5	96.1	96.2	96.5

<sup>1</sup> Includes the group "Other," to avoid disclosure of individual operations.

The most important point brought out by this table is the extent of corporate ownership. In all industries combined 28.9 per cent of the total number of establishments were under corporate ownership in 1909, as compared with 27.8 per cent in 1904. Establishments operated by corporations reported 85.8 per cent of the total value of products in 1909, however, and 83.6 per cent in 1904. Establishments under firm ownership represented only 16.5 per cent of the total number in 1909, as against 18 per cent in 1904, and both these establishments and those owned by individuals reported a smaller proportion of the total number of wage earners and the total value of products in 1909 than in 1904.

In 8 of the 20 individual industries for which figures are given in the table, namely, the manufacture of paint and varnish; the foundries and machine shops; the tanning, currying, and finishing of leather; the manufacture of furniture and refrigerators; the manufacture of boots and shoes; slaughtering and meat packing; the manufacture of patent medicines and compounds; and canning and preserving, there was a larger number of establishments under corporate management than under any other form of ownership, while in all except two of the industries shown—the men's clothing and the women's clothing industries—the establishments operated by corporations contributed the greater part of the total value of products and of the total value added by manufacture. In three industries—foundries and machine shops, the manufacture of paint and varnish, and slaughtering and meat packing—over 90 per cent of the total value of products and total value added by manufacture was reported by establishments under corporate ownership. Firm ownership predominates in the men's clothing and women's clothing industries.

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

The table shows that of the 18,026 manufacturing establishments in the state in 1909 only 273, or 1.5 per cent, had a value of products exceeding \$1,000,000. These establishments, however, employed an average of 179,787 wage earners, or 38.6 per cent of the total number in all establishments, and reported 56.2 per cent of the total value of products and 44.9 per cent of the total value added by manufacture.

On the other hand, the very small establishments—that is, those having a value of products of less than \$5,000—constituted a considerable proportion (34.3 per cent) of the total number of establishments, but the value of their products amounted to only eight-tenths of 1 per cent of the total. The great bulk of the manufacturing was done in establishments having products valued at not less than \$100,000.

It will be seen from the table that during the five years from 1904 to 1909 there was a considerable increase in the relative importance of the largest establishments—those reporting products valued at not less than \$1,000,000—as measured by number of wage earners, value of products, and value added by manufacture.

INDUSTRY AND VALUE OF PRODUCTS.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.	INDUSTRY AND VALUE OF PRODUCTS.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.
<b>ALL INDUSTRIES:</b>	18,026	465,764	\$1,919,276,584	\$758,349,904	<b>Carriages and wagons and materials, 1909.....</b>	325	5,852	\$16,831,283	\$7,351,948
1909.....	14,921	379,436	1,410,342,129	570,284,813	Less than \$5,000.....	122	173	341,806	230,353
1904.....	6,181	7,000	15,040,868	9,864,314	\$5,000 and less than \$20,000.....	128	649	1,242,315	780,000
Less than \$5,000:	5,208	7,086	12,892,051	8,741,174	\$20,000 and less than \$100,000.....	40	740	1,901,131	944,169
1909.....	5,823	27,327	50,704,517	33,175,077	\$100,000 and less than \$1,000,000.....	25	2,042	7,482,204	3,211,022
1904.....	4,705	26,594	40,128,016	30,404,088	\$1,000,000 and over.....	4	1,048	5,893,737	2,186,314
\$5,000 and less than \$20,000:	3,773	65,007	170,400,943	91,858,229	Per cent of total.....	100.0	100.0	100.0	100.0
1909.....	3,157	60,376	142,152,026	73,950,358	Less than \$5,000.....	37.5	3.0	2.0	3.1
1904.....	1,970	185,743	595,294,105	280,112,084	\$5,000 and less than \$20,000.....	39.4	11.1	7.4	10.6
\$20,000 and less than \$100,000:	1,503	156,171	451,011,747	215,950,376	\$20,000 and less than \$100,000.....	14.2	12.6	11.3	12.8
1909.....	273	179,787	1,078,746,101	340,338,700	\$100,000 and less than \$1,000,000.....	7.7	45.1	44.5	43.7
1904.....	168	120,210	755,157,380	238,831,917	\$1,000,000 and over.....	1.2	23.2	34.8	20.7
\$100,000 and over:	20	20	\$100,473	\$42,070	Average per establishment.....	18	18	\$51,780	\$22,621
1909.....	25	25	94,521	38,220	<b>Clothing, men's, including shirts, 1909.....</b>	715	30,152	\$89,472,755	\$44,244,475
1904.....	34.3	1.5	0.8	1.3	Less than \$5,000.....	135	618	378,406	343,280
Per cent of total:	100.0	100.0	100.0	100.0	\$5,000 and less than \$20,000.....	297	4,724	3,210,703	2,928,566
1909.....	34.0	1.0	0.9	1.5	\$20,000 and less than \$100,000.....	173	6,131	7,134,896	4,876,629
1904.....	32.3	5.9	3.1	4.8	\$100,000 and less than \$1,000,000.....	91	7,426	30,185,453	14,370,391
\$5,000 and less than \$20,000:	32.1	7.0	3.5	5.3	\$1,000,000 and over.....	19	17,253	48,503,207	21,716,009
1909.....	20.9	14.2	8.9	12.1	Per cent of total.....	100.0	100.0	100.0	100.0
1904.....	21.2	15.9	10.1	13.8	Less than \$5,000.....	18.9	1.7	0.4	0.8
\$20,000 and less than \$100,000:	11.0	30.9	31.0	36.0	\$5,000 and less than \$20,000.....	41.5	13.1	3.0	6.0
1909.....	10.7	41.2	32.0	37.8	\$20,000 and less than \$100,000.....	24.2	17.0	8.0	11.0
1904.....	1.5	38.6	50.2	44.9	\$100,000 and less than \$1,000,000.....	12.7	20.5	33.7	32.5
\$1,000,000 and over:	1.1	34.1	53.5	41.5	\$1,000,000 and over.....	2.7	47.7	54.3	49.1
1909.....	20	20	\$100,473	\$42,070	Average per establishment.....	51	51	\$125,137	\$61,880
1904.....	25	25	94,521	38,220	<b>Clothing, women's, 1909.....</b>	221	5,151	\$16,635,236	\$7,421,710
Per cent of total:	100.0	100.0	100.0	100.0	Less than \$5,000.....	21	54	54,922	54,020
1909.....	17.0	0.3	0.2	0.3	\$5,000 and less than \$20,000.....	94	610	740,280	508,541
1904.....	13.2	1.1	0.5	0.8	\$20,000 and less than \$100,000.....	04	2,154	4,583,540	2,182,009
\$5,000 and less than \$20,000:	20.8	4.1	3.2	3.4	\$100,000 and less than \$1,000,000.....	42	3,327	11,256,425	4,687,050
1909.....	35.8	37.8	32.7	28.8	Per cent of total.....	100.0	100.0	100.0	100.0
1904.....	13.2	56.7	63.5	66.0	Less than \$5,000.....	28.0	1.3	0.7	1.0
Average per establishment:	109	109	\$310,126	\$111,054	\$5,000 and less than \$20,000.....	33.6	5.2	4.0	5.4
1909.....	10	10	\$28,721	\$21,303	\$20,000 and less than \$100,000.....	20.7	14.0	11.6	13.0
1904.....	13.2	56.7	63.5	66.0	\$100,000 and less than \$1,000,000.....	15.0	51.9	49.9	50.0
Per cent of total:	100.0	100.0	100.0	100.0	\$1,000,000 and over.....	2.1	27.1	33.7	30.6
1909.....	39.4	4.7	3.3	3.6	Average per establishment.....	27	27	\$91,415	\$36,062
1904.....	40.0	17.4	13.4	14.2	<b>Confectionery, 1909.....</b>	140	3,799	\$12,798,077	\$5,132,679
\$5,000 and less than \$20,000:	12.9	21.7	20.3	20.8	Less than \$5,000.....	40	48	62,061	52,000
1909.....	6.8	56.1	63.0	61.4	\$5,000 and less than \$20,000.....	47	198	509,871	277,744
1904.....	10	10	\$28,721	\$21,303	\$20,000 and less than \$100,000.....	29	553	1,488,859	603,103
Per cent of total:	100.0	100.0	100.0	100.0	\$100,000 and less than \$1,000,000.....	21	1,972	6,302,435	2,500,127
1909.....	39.4	4.7	3.3	3.6	\$1,000,000 and over.....	3	1,028	4,313,951	1,508,099
1904.....	40.0	17.4	13.4	14.2	Per cent of total.....	100.0	100.0	100.0	100.0
\$5,000 and less than \$20,000:	12.9	21.7	20.3	20.8	Less than \$5,000.....	28.0	1.3	0.7	1.0
1909.....	6.8	56.1	63.0	61.4	\$5,000 and less than \$20,000.....	33.6	5.2	4.0	5.4
1904.....	10	10	\$28,721	\$21,303	\$20,000 and less than \$100,000.....	20.7	14.0	11.6	13.0
Per cent of total:	100.0	100.0	100.0	100.0	\$100,000 and less than \$1,000,000.....	15.0	51.9	49.9	50.0
1909.....	39.4	4.7	3.3	3.6	\$1,000,000 and over.....	2.1	27.1	33.7	30.6
1904.....	40.0	17.4	13.4	14.2	Average per establishment.....	27	27	\$91,415	\$36,062
\$5,000 and less than \$20,000:	12.9	21.7	20.3	20.8	<b>Copper, tin, and sheet-iron products, 1909.....</b>	483	7,473	\$22,822,810	\$9,629,647
1909.....	6.8	56.1	63.0	61.4	Less than \$5,000.....	151	170	430,710	287,382
1904.....	10	10	\$28,721	\$21,303	\$5,000 and less than \$20,000.....	205	849	2,147,922	1,321,954
Per cent of total:	100.0	100.0	100.0	100.0	\$20,000 and less than \$100,000.....	93	1,446	3,964,058	2,082,118
1909.....	39.4	4.7	3.3	3.6	\$100,000 and less than \$1,000,000.....	31	3,259	10,078,576	4,284,133
1904.....	40.0	17.4	13.4	14.2	\$1,000,000 and over.....	3	1,740	6,194,944	1,654,060
\$5,000 and less than \$20,000:	12.9	21.7	20.3	20.8	Per cent of total.....	100.0	100.0	100.0	100.0
1909.....	6.8	56.1	63.0	61.4	Less than \$5,000.....	31.3	2.3	1.9	3.0
1904.....	10	10	\$28,721	\$21,303	\$5,000 and less than \$20,000.....	42.4	11.4	9.4	13.7
Per cent of total:	100.0	100.0	100.0	100.0	\$20,000 and less than \$100,000.....	19.3	10.3	17.4	21.6
1909.....	39.4	4.7	3.3	3.6	\$100,000 and less than \$1,000,000.....	6.4	43.0	44.2	44.5
1904.....	40.0	17.4	13.4	14.2	\$1,000,000 and over.....	0.0	23.4	27.1	17.2
\$5,000 and less than \$20,000:	12.9	21.7	20.3	20.8	Average per establishment.....	15	15	\$47,252	\$19,637
1909.....	6.8	56.1	63.0	61.4	<b>Flour-mill and gristmill products, 1909.....</b>	461	2,464	\$51,110,881	\$5,521,110
1904.....	10	10	\$28,721	\$21,303	Less than \$5,000.....	113	69	284,604	66,764
Per cent of total:	100.0	100.0	100.0	100.0	\$5,000 and less than \$20,000.....	117	172	1,285,941	301,997
1909.....	39.4	4.7	3.3	3.6	\$20,000 and less than \$100,000.....	153	495	6,942,159	1,133,944
1904.....	40.0	17.4	13.4	14.2	\$100,000 and less than \$1,000,000.....	68	1,183	22,355,894	2,571,742
\$5,000 and less than \$20,000:	12.9	21.7	20.3	20.8	\$1,000,000 and over.....	10	695	20,242,113	1,446,063
1909.....	6.8	56.1	63.0	61.4	Per cent of total.....	100.0	100.0	100.0	100.0
1904.....	10	10	\$28,721	\$21,303	Less than \$5,000.....	24.5	2.8	0.6	1.2
Per cent of total:	100.0	100.0	100.0	100.0	\$5,000 and less than \$20,000.....	25.4	7.0	2.5	5.5
1909.....	39.4	4.7	3.3	3.6	\$20,000 and less than \$100,000.....	33.2	20.1	13.0	20.5
1904.....	40.0	17.4	13.4	14.2	\$100,000 and less than \$1,000,000.....	14.8	46.0	43.7	46.6
\$5,000 and less than \$20,000:	12.9	21.7	20.3	20.8	\$1,000,000 and over.....	2.2	24.1	30.6	26.2
1909.....	6.8	56.1	63.0	61.4	Average per establishment.....	5	5	\$110,800	\$11,976
1904.....	10	10	\$28,721	\$21,303	<b>Foundry and machine-shop products, 1909.....</b>	1,178	52,266	\$138,576,993	\$74,768,895
Per cent of total:	100.0	100.0	100.0	100.0	Less than \$5,000.....	201	240	557,632	367,890
1909.....	39.4	4.7	3.3	3.6	\$5,000 and less than \$20,000.....	320	1,587	3,554,851	2,245,264
1904.....	40.0	17.4	13.4	14.2	\$20,000 and less than \$100,000.....	403	8,060	19,702,090	11,205,050
\$5,000 and less than \$20,000:	12.9	21.7	20.3	20.8	\$100,000 and less than \$1,000,000.....	222	20,403	69,525,059	37,442,720
1909.....	6.8	56.1	63.0	61.4	\$1,000,000 and over.....	23	15,970	45,178,152	23,507,857
1904.....	10	10	\$28,721	\$21,303	Average per establishment.....	23	23	\$59,385,649	\$32,517,302

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

MANUFACTURES—ILLINOIS.

INDUSTRY AND VALUE OF PRODUCTS.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.	INDUSTRY AND VALUE OF PRODUCTS.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.
<b>Foundry and machine-shop products, 1909—Continued.</b>					<b>Millinery and lace goods, 1909—Continued.</b>				
Per cent of total.....	100.0	100.0	100.0	100.0	Per cent of total.....	100.0	100.0	100.0	100.0
Less than \$5,000.....	17.1	0.5	0.4	0.5	Less than \$5,000.....	10.7	0.8	0.3	0.3
\$5,000 and less than \$20,000.....	27.0	3.0	2.6	3.0	\$5,000 and less than \$20,000.....	31.1	6.3	4.5	5.9
\$20,000 and less than \$100,000.....	34.2	15.4	14.3	15.0	\$20,000 and less than \$100,000.....	40.8	30.8	27.3	31.5
\$100,000 and less than \$1,000,000.....	18.8	50.5	50.2	50.1	\$100,000 and less than \$1,000,000.....	17.5	62.1	67.9	62.3
\$1,000,000 and over.....	2.0	30.6	32.6	31.4	Average per establishment.....		32	\$70,698	\$33,831
Average per establishment.....		44	\$117,639	\$63,471					
<b>Furniture and refrigerators, 1909.</b>					<b>Paint and varnish, 1909.</b>				
Less than \$5,000.....	267	13,575	\$27,900,282	\$15,399,042	Less than \$5,000.....	74	1,792	\$20,434,291	\$7,532,680
\$5,000 and less than \$20,000.....	32	33	80,625	52,729	\$5,000 and less than \$20,000.....	11	17	15,999	9,779
\$20,000 and less than \$100,000.....	69	396	780,301	508,150	\$20,000 and less than \$100,000.....	20	110	1,119,135	72,065
\$100,000 and less than \$1,000,000.....	85	2,364	4,248,013	2,432,744	\$100,000 and less than \$1,000,000.....	30	997	10,590,586	3,765,526
\$1,000,000 and over.....	78	9,131	19,123,074	10,466,963	\$1,000,000 and over.....	6	662	8,086,234	3,300,397
Average per establishment.....	3	1,651	3,667,349	1,985,456					
Per cent of total.....	100.0	100.0	100.0	100.0	Per cent of total.....	100.0	100.0	100.0	100.0
Less than \$5,000.....	12.0	0.2	0.3	0.3	Less than \$5,000.....	9.5	0.3	0.1	0.1
\$5,000 and less than \$20,000.....	25.8	2.9	2.8	3.3	\$5,000 and less than \$20,000.....	14.9	1.0	0.6	1.0
\$20,000 and less than \$100,000.....	31.8	17.4	17.0	15.8	\$20,000 and less than \$100,000.....	27.0	6.1	5.0	5.1
\$100,000 and less than \$1,000,000.....	29.2	67.3	68.5	68.0	\$100,000 and less than \$1,000,000.....	40.5	55.6	51.8	50.0
\$1,000,000 and over.....	1.1	12.2	13.1	12.6	\$1,000,000 and over.....	8.1	37.0	42.5	43.8
Average per establishment.....		51	\$104,495	\$57,674	Average per establishment.....		24	\$276,139	\$101,793
<b>Leather goods, 1909.</b>					<b>Patent medicines and compounds and druggists' preparations, 1909.</b>				
Less than \$5,000.....	168	2,949	\$8,948,324	\$3,813,354	Less than \$5,000.....	350	1,869	\$13,114,307	\$8,701,289
\$5,000 and less than \$20,000.....	21	25	65,093	36,318	\$5,000 and less than \$20,000.....	147	57	307,575	219,700
\$20,000 and less than \$100,000.....	74	294	801,787	409,548	\$20,000 and less than \$100,000.....	119	228	1,127,216	778,186
\$100,000 and less than \$1,000,000.....	47	787	2,208,911	1,109,623	\$100,000 and less than \$1,000,000.....	69	501	3,335,888	2,160,017
Average per establishment.....	26	1,863	5,872,593	2,257,865	\$1,000,000 and less than \$1,000,000.....	24	1,083	8,343,928	5,543,386
Per cent of total.....	100.0	100.0	100.0	100.0	Per cent of total.....	100.0	100.0	100.0	100.0
Less than \$5,000.....	12.5	0.8	0.7	1.0	Less than \$5,000.....	40.9	3.0	2.3	2.5
\$5,000 and less than \$20,000.....	44.0	10.0	9.0	10.7	\$5,000 and less than \$20,000.....	33.1	12.2	8.6	8.9
\$20,000 and less than \$100,000.....	28.0	26.0	24.7	20.1	\$20,000 and less than \$100,000.....	19.2	26.8	25.4	24.8
\$100,000 and less than \$1,000,000.....	15.5	63.2	65.6	59.2	\$100,000 and less than \$1,000,000.....	6.7	57.9	63.6	63.7
Average per establishment.....		18	\$53,264	\$22,699	Average per establishment.....		5	\$36,530	\$24,238
<b>Leather, tanned, curried, and finished, 1909.</b>					<b>Printing and publishing, 1909.</b>				
\$20,000 and less than \$100,000.....	29	3,001	\$14,911,782	\$2,781,173	Less than \$5,000.....	2,608	28,644	\$87,247,090	\$62,567,117
\$100,000 and less than \$1,000,000.....	9	78	395,526	100,932	\$5,000 and less than \$20,000.....	1,148	1,433	2,944,486	2,363,626
\$1,000,000 and over.....	15	1,202	5,876,552	1,256,158	\$20,000 and less than \$100,000.....	890	3,405	5,435,336	6,573,012
Average per establishment.....	5	1,721	8,639,704	1,424,083	\$100,000 and less than \$1,000,000.....	479	7,085	20,580,593	15,438,063
Per cent of total.....	100.0	100.0	100.0	100.0	\$1,000,000 and less than \$1,000,000.....	142	12,358	36,279,032	25,421,786
Less than \$5,000.....	31.0	2.6	2.7	3.6	\$1,000,000 and over.....	4	4,273	19,007,643	12,770,630
\$5,000 and less than \$20,000.....	51.7	40.1	39.4	45.2	Per cent of total.....	100.0	100.0	100.0	100.0
\$20,000 and less than \$100,000.....	17.2	57.3	57.9	51.2	Less than \$5,000.....	44.0	5.0	3.4	3.8
Average per establishment.....		103	\$514,199	\$85,903	\$5,000 and less than \$20,000.....	31.8	12.1	9.7	10.5
					\$20,000 and less than \$100,000.....	18.4	24.7	23.6	24.7
					\$100,000 and less than \$1,000,000.....	5.4	43.2	41.6	40.6
					\$1,000,000 and over.....	0.3	14.9	21.8	20.4
					Average per establishment.....		11	\$33,454	\$23,900
<b>Lumber and timber products, 1909.</b>					<b>Slaughtering and meat packing, 1909.</b>				
Less than \$5,000.....	814	16,567	\$44,951,804	\$17,687,608	Less than \$5,000.....	109	26,705	\$389,594,908	\$45,618,899
\$5,000 and less than \$20,000.....	366	568	717,759	485,855	\$5,000 and less than \$20,000.....	0	0	21,099	9,533
\$20,000 and less than \$100,000.....	180	1,012	1,898,762	1,112,506	\$20,000 and less than \$100,000.....	13	31	146,451	44,381
\$100,000 and less than \$1,000,000.....	171	3,980	8,526,678	4,176,080	\$100,000 and less than \$1,000,000.....	23	134	1,208,290	225,779
\$1,000,000 and over.....	61	9,197	23,734,818	9,666,200	\$1,000,000 and less than \$1,000,000.....	43	1,249	15,445,049	2,411,898
Average per establishment.....	6	1,810	10,073,787	2,246,961	\$1,000,000 and over.....	24	25,285	372,776,417	42,927,258
Per cent of total.....	100.0	100.0	100.0	100.0	Per cent of total.....	100.0	100.0	100.0	100.0
Less than \$5,000.....	45.0	3.4	1.6	2.7	Less than \$5,000.....	5.5	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>1</sup> )
\$5,000 and less than \$20,000.....	22.1	6.1	4.2	6.3	\$5,000 and less than \$20,000.....	11.9	0.1	0.3	0.1
\$20,000 and less than \$100,000.....	21.0	24.0	19.0	23.6	\$20,000 and less than \$100,000.....	21.1	0.5	4.0	5.3
\$100,000 and less than \$1,000,000.....	11.2	55.5	52.8	54.6	\$100,000 and less than \$1,000,000.....	39.4	4.7	95.7	94.1
\$1,000,000 and over.....	0.7	10.9	22.4	12.7	\$1,000,000 and over.....	22.0	94.7	245	\$418,522
Average per establishment.....		20	\$55,223	\$21,729	Average per establishment.....		245	\$3,574,265	\$418,522
<b>Millinery and lace goods, 1909.</b>					<b>Patent medicines and compounds and druggists' preparations, 1909.</b>				
Less than \$5,000.....	103	3,328	\$7,281,914	\$3,484,618	Less than \$5,000.....	350	1,869	\$13,114,307	\$8,701,289
\$5,000 and less than \$20,000.....	11	25	21,840	12,040	\$5,000 and less than \$20,000.....	147	57	307,575	219,700
\$20,000 and less than \$100,000.....	32	211	326,117	204,336	\$20,000 and less than \$100,000.....	119	228	1,127,216	778,186
\$100,000 and less than \$1,000,000.....	42	1,026	1,891,063	1,096,275	\$100,000 and less than \$1,000,000.....	69	501	3,335,888	2,160,017
\$1,000,000 and less than \$1,000,000.....	18	2,066	4,942,894	2,171,967	\$1,000,000 and less than \$1,000,000.....	24	1,083	8,343,928	5,543,386
Average per establishment.....					Average per establishment.....				

<sup>1</sup> Includes the groups "Less than \$5,000" and "\$5,000 and less than \$20,000."

<sup>2</sup> Includes the group "\$1,000,000 and over."

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

The fact that the average value of products per establishment increased between 1904 and 1909 from \$94,521 to \$106,473, and the value added by manufacture from \$38,220 to \$42,070, can not be taken as in itself indicating a tendency toward concentration. The increased values shown may be, and probably are, due in part to the increase that has taken place in the prices of commodities. The average number of wage earners per establishment increased from 25 to 26.

Of the individual industries for which figures are given in the table, those in which the average size of establishment as measured by value of products was smallest, were the manufacture of brick and tile; printing and publishing; the manufacture of patent

medicines and compounds and druggists' preparations; the manufacture of copper, tin, and sheet-iron products; and the manufacture of carriages and wagons. In each of these industries more than 70 per cent of the establishments reported products valued at less than \$20,000 for the year 1909. The industries in which the average value of products per establishment was the largest were slaughtering and meat packing, the tanning, currying, and finishing of leather, the manufacture of boots and shoes, and the paint and varnish industry, in which 61.5 per cent, 69 per cent, 49 per cent, and 48.6 per cent, respectively, of the establishments reported products valued at \$100,000 or over.

In some respects, and especially from the standpoint of conditions under which persons engaged in manufactures work, the best classification of the establishments to bring out the feature of size is a classification according to the number of wage earners employed.

The following table shows, for 1909, such a classification for all industries combined and for certain important industries individually, and gives not only the number of establishments falling into each group but also the average number of wage earners employed.

INDUSTRY.	Total.	ESTABLISHMENTS EMPLOYING—								
		No wage earners.	1 to 5 wage earners.	6 to 20 wage earners.	21 to 50 wage earners.	51 to 100 wage earners.	101 to 250 wage earners.	251 to 500 wage earners.	501 to 1,000 wage earners.	Over 1,000 wage earners.
NUMBER OF ESTABLISHMENTS.										
All industries.....	18,026	2,518	8,801	8,500	1,578	708	541	194	88	39
Agricultural implements.....	79	5	16	17	5	9	13	6	4	4
Automobiles, including bodies and parts.....	65	2	28	13	12	6	4	2		
Baking powders and yeast.....	24	2	10	4	5	2	1			
Boots and shoes, including cut stock and findings.....	53	1	12	9	10	5	0	4	3	
Bread and other bakery products.....	2,099	328	1,540	197	10	3	11	3	1	
Brick and tile.....	340	2	185	97	27	14	11	1	2	
Butter, cheese, and condensed milk.....	295	29	232	16	9	5	4			
Canning and preserving.....	118	10	40	29	19	9	5			
Carriages and wagons and materials.....	325	25	101	68	17	11	7	5	1	
Cars and general shop construction and repairs by steam-railroad companies.....	73		5	0	10	7	18	11	0	4
Cars, steam-railroad, not including operations of railroad companies.....	28	1	1	3	5	2	8	4	3	1
Clocks and watches, including cases and materials.....	19	1	7	3	1	2	1	1	2	1
Clothing, men's, including shirts.....	715	20	122	285	188	67	20	12	6	5
Clothing, women's.....	221	4	40	88	60	19	8			
Coffee and spice, roasting and grinding.....	35		14	9	6	3	2	1		
Confectionery.....	140	8	70	20	16	6	8	3		1
Copper, tin, and sheet-iron products.....	483	23	204	117	22	11	11	4		2
Electrical machinery, apparatus, and supplies.....	143	5	55	42	17	14	6	1	1	1
Flour-mill and gristmill products.....	401	70	297	60	22	6				
Foundry and machine-shop products.....	1,178	65	409	321	104	60	78	20	10	3
Furnishing goods, men's.....	61	3	15	16	14	5	6	2		
Furniture and refrigerators.....	207	0	67	60	51	40	20	5	3	
Gas, illuminating and heating.....	78		34	20	9	10	4			1
Iron and steel, blast furnaces.....	6					1		3	2	
Iron and steel, steel works and rolling mills.....	24				1	2	7	6	4	5
Leather goods.....	108	7	82	43	24	7	4	1		
Leather, tanned, curried, and finished.....	20		3	7	4	5	7	2	1	
Liquors, distilled.....	9		2		1	2	4			
Liquors, malt.....	100		12	36	32	19	5	2		
Lumber and timber products.....	814	20	459	181	77	41	24	10	2	
Millinery and lace goods.....	103		24	39	24	10	4	2		
Musical instruments, pianos and organs and materials.....	68	1	8	17	14	6	12	7	2	1
Paint and varnish.....	74	2	38	11	13	5	5			
Patent medicines and compounds and druggists' preparations.....	359	116	185	38	13	5	2			
Printing and publishing.....	2,008	708	1,218	433	144	54	34	11	6	
Slaughtering and meat packing.....	100	5	32	22	21	12	5	1	2	9
Smelting and refining, zinc.....	5					2	1	2	2	
Soap.....	34	1	17	5	5	1	2	1	2	
Stoves and furnaces, including gas and oil stoves.....	71	1	16	14	16	8	12	4		
Tobacco manufactures.....	1,044	681	1,000	212	33	11	5		2	
All other industries.....	4,105	308	2,014	978	421	205	143	48	16	2
AVERAGE NUMBER OF WAGE EARNERS.										
All industries.....	465,764	20,079	40,022	51,490	50,856	82,889	66,781	57,742	95,905	
Agricultural implements.....	19,240	35	186	172	618	1,850	2,108	3,067	11,195	
Automobiles, including bodies and parts.....	2,382	65	156	402	406	737	556			
Baking powders and yeast.....	657	24	36	184	103	250				
Boots and shoes, including cut stock and findings.....	5,792	30	120	371	402	1,531	1,410	1,922		
Bread and other bakery products.....	8,611	3,079	1,775	420	214	1,555	911	657		
Brick and tile.....	0,574	548	1,092	887	1,030	1,511	300	1,208		
Butter, cheese, and condensed milk.....	1,732	348	162	301	303	558				
Canning and preserving.....	2,383	140	322	664	710	547				
Carriages and wagons and materials.....	5,852	496	709	530	720	1,217	1,642	520		
Cars and general shop construction and repairs by steam-railroad companies.....	23,131	13	123	313	460	3,021	4,123	5,004	9,184	
Cars, steam-railroad, not including operations of railroad companies.....	10,945	3	51	209	140	1,385	1,640	2,509	5,002	
Clocks and watches, including cases and materials.....	5,065	12	41	22	148	207	396	1,413	3,426	
Clothing, men's, including shirts.....	30,152	363	3,065	5,825	4,064	3,186	4,170	4,221	10,662	
Clothing, women's.....	6,151	140	1,130	1,859	1,311	1,045	696			
Coffee and spice, roasting and grinding.....	1,018	44	107	196	178	238	255			
Confectionery.....	3,700	168	342	533	442	1,195	1,120			
Copper, tin, and sheet-iron products.....	7,473	607	1,207	748	778	1,643	1,474			
Electrical machinery, apparatus, and supplies.....	9,041	145	469	529	906	699	437	605	5,731	
Flour-mill and gristmill products.....	2,404	634	684	718	428					
Foundry and machine-shop products.....	52,260	1,131	3,818	6,338	5,001	12,306	10,455	5,853	7,306	
Furnishing goods, men's.....	2,088	39	201	431	365	944	708			
Furniture and refrigerators.....	13,576	180	729	1,872	2,064	4,277	1,087	1,886		
Gas, illuminating and heating.....	6,361	81	214	272	727	80	900	1,513	4,470	
Iron and steel, blast furnaces.....	2,463				80			1,513		
Iron and steel, steel works and rolling mills.....	17,584			42	177	1,234	1,511	2,610	12,010	
Leather goods.....	2,940	251	513	769	548	693	275			
Leather, tanned, curried, and finished.....	3,001	5	93	137	367	1,120	620	663		
Liquors, distilled.....	750	4		29	135	582				
Liquors, malt.....	4,398	39	488	1,151	1,373	640	707			
Lumber and timber products.....	10,567	917	1,096	2,487	2,969	3,438	3,470	1,284		
Millinery and lace goods.....	3,328	60	441	775	785	699	612			
Musical instruments, pianos and organs and materials.....	8,777	23	223	471	423	1,979	2,601	1,533	1,524	
Paint and varnish.....	1,792	109	104	480	395	644				
Patent medicines and compounds and druggists' preparations.....	1,869	379	309	278	304	328				
Printing and publishing.....	28,044	2,948	4,686	4,665	3,784	5,372	3,289	4,000	1,026	
Slaughtering and meat packing.....	20,705	90	205	724	891	954	289	1,017	21,910	
Smelting and refining, zinc.....	1,022					283	345	1,294		
Soap.....	2,188	42	41	105	68	322	267	1,203		
Stoves and furnaces, including gas and oil stoves.....	4,499	44	162	498	663	1,850	1,352			
Tobacco manufactures.....	8,034	1,065	2,164	988	777	807		1,335		
All other industries.....	95,772	4,813	11,007	14,081	14,484	21,600	10,513	10,725	2,480	

INDUSTRY.	Total.	ESTABLISHMENTS EMPLOYING—								
		No wage earners.	1 to 5 wage earners.	6 to 20 wage earners.	21 to 50 wage earners.	51 to 100 wage earners.	101 to 250 wage earners.	251 to 500 wage earners.	501 to 1,000 wage earners.	Over 1,000 wage earners.
		PER CENT OF AVERAGE NUMBER OF WAGE EARNERS.								
<b>All industries</b> .....	100.0	4.3	8.6	11.1	10.9	17.8	14.3	12.4	20.6	
Agricultural implements.....	100.0	0.2	1.0	0.9	3.2	9.8	11.0	15.9	58.0	
Automobiles, including bodies and parts.....	100.0	2.7	6.5	16.9	19.6	30.9	23.3			
Baking powders and yeast.....	100.0	3.7	5.5	28.0	24.8	38.1				
Boots and shoes, including cut stock and findings.....	100.0	0.5	2.1	6.4	6.9	26.4	24.4	33.2		
Bread and other bakery products.....	100.0	35.7	20.6	5.0	2.5	18.1	10.6	7.6		
Brick and tile.....	100.0	8.3	16.6	13.5	15.7	23.0	4.6	18.4		
Butter, cheese, and condensed milk.....	100.0	20.1	9.4	17.4	21.0	32.2				
Canning and preserving.....	100.0	5.9	13.5	27.9	29.8	23.0				
Carriages and wagons and materials.....	100.0	8.5	12.1	9.2	12.5	20.8	28.1	8.9		
Cars and general shop construction and repairs by steam-railroad companies.....	100.0	0.1	0.5	1.4	1.9	13.1	17.8	25.5	39.7	
Cars, steam-railroad, not including operations of railroad companies.....	100.0	(1)	0.5	1.9	1.3	12.7	15.0	22.9	45.7	
Clocks and watches, including cases and materials.....	100.0	0.2	0.7	0.4	2.6	3.7	7.0	24.9	60.5	
Clothing, men's, including shirts.....	100.0	1.0	10.1	16.1	11.2	8.8	11.6	11.7	29.5	
Clothing, women's.....	100.0	2.3	18.4	30.2	21.3	17.0	10.8			
Coffee and spice, roasting and grinding.....	100.0	4.3	10.5	19.3	17.5	23.4	25.0			
Confectionery.....	100.0	4.2	9.0	14.0	11.6	31.5	29.7			
Copper, tin, and sheet-iron products.....	100.0	9.3	16.2	10.0	10.4	20.6	19.7		13.7	
Electrical machinery, apparatus, and supplies.....	100.0	1.5	4.9	5.5	10.0	7.2	4.5	6.9	59.4	
Flour-mill and gristmill products.....	100.0	25.7	27.8	29.1	17.4					
Foundry and machine-shop products.....	100.0	2.2	7.3	12.1	9.6	23.7	20.0	11.2	14.0	
Furnishing goods, men's.....	100.0	1.4	7.5	16.0	13.6	35.1	26.3			
Furniture and refrigerators.....	100.0	1.3	5.4	13.8	21.8	31.5	12.3	13.9		
Gas, illuminating and heating.....	100.0	1.3	3.4	4.3	11.5	8.5			70.9	
Iron and steel, blast furnaces.....	100.0				3.2		26.1	60.7		
Iron and steel, steel works and rolling mills.....	100.0			0.2	1.0	7.0	8.6	14.8	68.3	
Leather goods.....	100.0	8.5	17.4	26.1	18.6	20.1	9.3			
Leather, tanned, curried, and finished.....	100.0	0.2	3.1	4.6	12.2	37.5	20.7	21.8		
Liquors, distilled.....	100.0	0.6		3.9	18.0	77.6				
Liquors, malt.....	100.0	0.9	11.1	26.2	31.2	14.6	16.1			
Lumber and timber products.....	100.0	5.5	12.0	15.0	17.9	20.8	21.0	7.8		
Millinery and lace goods.....	100.0	2.0	13.3	23.3	22.1	21.0	18.4			
Musical instruments, pianos and organs and materials.....	100.0	0.3	2.5	5.4	4.8	22.5	29.6	17.5	17.4	
Paint and varnish.....	100.0	6.1	9.2	26.8	22.0	35.9				
Patent medicines and compounds and druggists' preparations.....	100.0	20.3	20.9	20.2	21.1	17.5				
Printing and publishing.....	100.0	10.3	16.4	15.7	13.2	18.8	11.5	14.2		
Slaughtering and meat packing.....	100.0	0.3	1.0	2.7	3.3	3.6	1.0	6.1	82.0	
Smelting and refining, zinc.....	100.0					14.7	18.0	67.3		
Soap.....	100.0	1.9	1.9	7.5	2.6	14.7	12.2	59.1		
Stoves and furnaces, including gas and oil stoves.....	100.0	1.0	3.4	11.1	13.4	41.1	30.1			
Tobacco manufactures.....	100.0	24.5	26.9	12.3	9.7	10.0		16.6		
All other industries.....	100.0	5.0	11.6	14.7	15.1	22.6	17.2	11.2	2.6	

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

Of the 18,026 establishments reported for all industries, 14 per cent employed no wage earners; 48.8 per cent, from 1 to 5; 19.7 per cent, from 6 to 20; 8.8 per cent, from 21 to 50; 3.9 per cent, from 51 to 100; and 4.8 per cent, over 100. The most numerous single group consists of the 8,801 establishments employing from 1 to 5 wage earners each, and the next of the 3,560 establishments employing from 6 to 20 wage earners each. There were 39 establishments that employed over 1,000 wage earners each, of which 9 were engaged in slaughtering and meat packing, 5 in the making of men's clothing, 5 were steel works and rolling mills, 4 were steam-railroad repair shops, and 4 were agricultural-implement factories. In some industries, such as the bakery industry, the manufacture of butter, cheese, and condensed milk, the flour-mill and gristmill, and the lumber industries, printing and publishing, and tobacco manufactures, the establishments are mostly small, employing no wage earners or less than 6.

Of the total number of wage earners, 95,905, or 20.6 per cent, were in establishments employing over 1,000 each. This group, which employed a larger number of wage earners than any other, was composed

mainly of slaughtering and meat-packing establishments, steel works and rolling mills, men's clothing factories, agricultural-implement factories, steam-railroad repair shops, and foundries and machine shops.

Most of the industries listed in this table but not in the preceding one, namely, the manufacture of agricultural implements, railroad repair shops, steam-railroad car construction shops, the manufacture of clocks and watches and of electrical machinery, the gas and blast-furnace industries, steel works and rolling mills, the manufacture of pianos and organs, the smelting and refining of zinc, and the manufacture of soap, are industries in which comparatively large establishments do most of the business, as appears from the classification according to the number of wage earners.

**Expenses.**—As stated in the Introduction, the census does not purport to furnish figures that can be used for determining the cost of manufacture and profits. Facts of interest can, however, be brought out concerning the relative importance of the different classes of expenses which make up the total.

The next table shows, for 1909, in percentages, the distribution of expenses among the classes indicated

for all industries combined and for certain important industries separately. The figures on which the percentages are based appear in Table II, page 292.

INDUSTRY.	PER CENT OF TOTAL EXPENSES REPORTED.			
	Salaries.	Wages.	Materials.	Miscellaneous expenses.
All industries.....	5.3	15.8	67.0	12.0
Agricultural implements.....	6.0	26.5	50.2	11.3
Automobiles, including bodies and parts.....	6.3	24.4	58.7	10.6
Baking powders and yeast.....	8.5	5.8	54.2	31.6
Boots and shoes, including cutstock and findings.....	4.5	20.3	70.2	5.0
Bread and other bakery products.....	4.4	17.8	69.9	7.0
Brick and tile.....	5.6	52.9	30.1	11.4
Butter, cheese, and condensed milk.....	2.4	5.7	86.5	5.3
Canning and preserving.....	5.5	13.5	71.8	9.3
Carriages and wagons and materials.....	4.3	24.2	64.0	7.4
Cars and general shop construction and repairs by steam-railroad companies.....	4.0	47.4	47.3	1.3
Cars, steam-railroad, not including operations of railroad companies.....	3.0	30.5	59.7	5.9
Clocks and watches, including cases and materials.....	5.3	55.3	29.0	10.5
Clothing, men's, including shirts.....	5.6	20.6	56.3	17.5
Clothing, women's.....	6.6	21.0	61.5	10.9
Coffee and spice, roasting and grinding.....	5.9	2.9	82.4	8.9
Confectionery.....	6.9	12.7	68.4	12.0
Copper, tin, and sheet-iron products.....	5.4	21.3	65.0	8.4
Electrical machinery, apparatus, and supplies.....	8.5	25.7	54.6	11.1
Flour-mill and gristmill products.....	1.6	2.6	93.3	2.4
Foundry and machine-shop products.....	8.7	26.9	51.7	12.7
Furnishing goods, men's.....	6.3	15.1	68.0	10.6
Furniture and refrigerators.....	7.0	32.2	49.7	11.2
Gas, illuminating and heating.....	11.2	21.3	44.6	22.9
Iron and steel, blast furnaces.....	1.4	5.2	90.4	2.0
Iron and steel, steel works and rolling mills.....	3.1	17.2	74.8	4.9
Leather goods.....	6.2	20.5	64.3	9.0
Leather, tanned, curried, and finished.....	1.9	10.7	82.3	5.1
Liquors, distilled.....	0.4	0.9	17.3	81.4
Liquors, malt.....	7.2	14.7	29.8	48.3
Lumber and timber products.....	4.8	22.2	60.3	6.8
Millinery and lace goods.....	10.0	21.5	58.9	9.8
Musical instruments, pianos and organs and materials.....	7.3	30.0	51.8	10.9
Paint and varnish.....	0.2	6.2	72.0	12.6
Patent medicines and compounds and druggists' preparations.....	16.3	7.5	41.1	35.1
Printing and publishing.....	16.7	24.9	33.4	25.0
Slaughtering and meat packing.....	1.7	3.9	91.0	3.5
Smelting and refining, zinc.....	3.7	15.2	77.2	3.9
Soap.....	7.2	5.0	74.1	13.2
Stoves and furnaces, including gas and oil stoves.....	0.7	32.8	42.7	14.8
Tobacco manufactures.....	4.5	23.1	47.2	25.2
All other industries.....	6.4	16.7	67.2	9.7

This table shows that, for all industries combined, 67 per cent of the total expenses were incurred for materials, 21 per cent for services—that is, salaries and wages—and 12 per cent for other purposes. As would be expected, these proportions vary greatly in the different industries. The large percentages shown for "Miscellaneous expenses" for the distillery and brewery industries are due to the inclusion of internal-revenue taxes under this head.

**Engines and power.**—The next table shows, for all industries combined, the number of engines or other motors, according to their character, employed in generating power (including electric motors operated by purchased current), and their total horsepower at the censuses of 1909, 1904, and 1899. It also shows separately the number and horsepower of electric motors, including those operated by current generated in the manufacturing establishments.

The amount of primary power used in the manu-

facturing industries of Illinois increased 32.6 per cent from 1899 to 1904, and 36.6 per cent from 1904 to 1909. The total increase during the decade was 453,724 horsepower, 72.9 per cent of which was in power generated by steam engines. Notwithstanding this large increase in the horsepower of steam engines, their proportion of the total primary power decreased from 90.7 per cent in 1899 to 82.7 per cent in 1909. Power generated by water wheels and the forms of power included under the head of "Other" show a decrease from 1904 to 1909. The more general use of gas engines is shown, the number of such engines reported being 1,755 in 1909, as compared with 1,447 in 1904 and 1,293 in 1899. Their indicated horsepower was 37,025 in 1909, as compared with 12,319 in 1904 and 8,758 in 1899, the increase during the five-year period 1904-1909 being 24,706 horsepower, or a little more than 200 per cent. Rented electric power represented 11.5 per cent of the total primary power in 1909, as compared with 2.2 per cent in 1899, and the amount reported in 1909 was more than nine times as great as in 1899.

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.			PER CENT DISTRIBUTION OF HORSEPOWER.		
	1909	1904	1899 <sup>1</sup>	1909	1904	1899 <sup>1</sup>	1909	1904	1899
<b>Primary power, total.....</b>	<b>30,846</b>	<b>7,888</b>	<b>8,343</b>	<b>1,013,071</b>	<b>741,555</b>	<b>550,347</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Owned.....	8,700	7,888	8,343	889,348	688,030	532,251	87.8	92.8	95.2
Steam.....	6,728	6,201	6,787	838,190	651,578	507,471	82.7	87.9	90.7
Gas.....	1,755	1,447	1,293	37,025	12,319	8,758	3.7	1.7	1.6
Water wheels.....	182	194	203	12,178	14,845	11,614	1.2	2.0	2.1
Water motors.....	35	40	(*)	613	185	(*)	(*)	(*)	(*)
Other.....				1,433	9,109	4,408	0.1	1.2	0.8
Rented.....	21,846	(*)	(*)	123,723	53,519	27,096	12.2	7.2	4.8
Electric.....	21,846	(*)	(*)	117,007	41,978	12,471	11.5	5.7	2.2
Other.....				6,716	11,541	14,625	0.7	1.6	2.6
<b>Electric motors.....</b>	<b>39,278</b>	<b>8,285</b>	<b>1,839</b>	<b>398,621</b>	<b>165,285</b>	<b>49,235</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Run by current generated by establishment.....	17,432	8,285	1,839	281,614	123,287	36,704	70.6	74.6	74.7
Run by rented power.....	21,846	(*)	(*)	117,007	41,978	12,471	29.4	25.4	25.3

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

The use of electric motors for the purpose of applying power by means of current generated within the establishment is also shown to be rapidly becoming more common, the horsepower of such motors having increased from 36,764 in 1899 to 123,287 in 1904 and 281,614 in 1909, representing an increase for the decade of over 650 per cent.

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

INDUSTRY.	An-thra-cite coal (tons).	Bitumi-nous coal (tons).	Coke (tons).	Wood (cords).	Oil, in-cluding gasoline (bar-rels).	Gas (1,000 feet).	INDUSTRY.	An-thra-cite coal (tons).	Bitumi-nous coal (tons).	Coke (tons).	Wood (cords).	Oil, in-cluding gasoline (bar-rels).	Gas (1,000 feet).
All industries .....	155,482	14,235,950	3,982,844	125,490	2,831,328	12,645,341	Flour-mill and gristmill products.....	1,670	109,864	580	1,789	1,753	20,387
Agricultural implements.....	800	287,554	38,383	8,643	135,401	2,890	Foundry and machine-shop products.....	9,641	685,292	530,177	13,405	84,109	6,103,955
Automobiles, including bodies and parts.....	7	11,839	101	.....	153	3,196	Furnishing goods, men's.....	33	2,936	.....	.....	12	1,020
Baking powders and yeast.....	.....	19,024	.....	.....	4	4	Furniture and refrigerators.....	443	106,511	466	50	448	5,556
Boots and shoes, including cut stock and findings.....	94	18,054	14	.....	608	1,307	Gas, illuminating and heating.....	5,551	437,127	253,479	.....	1,520,486	200
Bread and other bakery products.....	13,777	33,675	29,762	40,209	633	58,324	Iron and steel, blast furnaces.....	.....	37,389	2,804,991	950	4,360	.....
Brick and tile.....	3,775	964,310	1,236	26,062	118,752	3,550	Iron and steel, steel works and rolling mills.....	15,311	3,083,782	86,143	4,704	260,093	.....
Butter, cheese, and condensed milk.....	94	111,896	.....	718	711	78	Leather goods.....	217	14,936	121	.....	176	2,741
Canning and preserving.....	272	24,891	63	213	375	6,279	Leather, tanned, curried, and finished.....	2,702	56,105	.....	.....	.....	.....
Carriages and wagons and materials.....	637	47,599	3,483	97	6,745	3,122	Liquors, distilled.....	.....	238,278	.....	.....	56	.....
Cars and general shop construction and repairs by steam-railroad companies.....	6,825	602,367	4,025	6,232	50,636	11,197	Liquors, malt.....	2,581	343,470	300	.....	81	1,555
Cars, steam-railroad, not including operations of railroad companies.....	1,967	108,273	51,993	3,199	33,697	5,987	Lumber and timber products.....	1,272	62,128	62	1,855	1,544	10,509
Clocks and watches, including cases and materials.....	9	16,540	200	.....	689	29,120	Millinery and lace goods.....	104	2,951	65	2	31	5,159
Clothing, men's, including shirts.....	1,848	15,001	51	52	3	51,754	Musical instruments, pianos and organs and materials.....	2,406	83,988	.....	6	403	448
Clothing, women's.....	167	387	.....	1	93	7,436	Paint and varnish.....	378	55,018	3,988	178	2,736	8,729
Coffee and spice, roasting and grinding.....	2,646	9,384	46	50	7	29,019	Patent medicines and compounds and druggists' preparations.....	5,247	15,779	41	4	95	5,133
Confectionery.....	154	23,005	1,558	66	49	20,595	Printing and publishing.....	2,317	83,242	209	88	2,741	69,461
Copper, tin, and sheet-iron products.....	1,907	62,767	440	416	1,333	27,499	Slaughtering and meat packing.....	3,609	957,979	600	4,093	1,929	128,503
Electrical machinery, apparatus, and supplies.....	166	71,903	5,720	1	1,100	235,983	Smelting and refining, zinc.....	24,149	378,627	.....	120	.....	.....
							Soap.....	21	113,638	.....	72	13	3,318
							Stoves and furnaces, including gas and oil stoves.....	506	32,978	9,927	850	154	2,604
							Tobacco manufactures.....	3,405	10,417	214	39	22	2,641
							All other industries.....	38,714	4,880,046	64,366	11,320	599,187	5,776,083

NOTE.—In addition, there were 19,567 tons of other varieties of fuel reported.

SUPPLEMENTARY DATA REGARDING IMPORTANT INDUSTRIES.

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

For certain industries the Census Bureau collects, by means of special schedules, details regarding the quantity and cost of materials and the quantity and value of products and other information for securing which no provision is made on the general schedule. Certain data of this character for 11 important industries in Illinois are here presented.

Slaughtering and meat packing.—This classification includes wholesale slaughtering and meat-packing establishments and establishments engaged in the manufacture of sausage only. The following table gives the quantity and cost of the different materials and the quantity and value of the various products reported at the censuses of 1909, 1904, and 1899:

MATERIAL OR PRODUCT.	1909	1904	1899	MATERIAL OR PRODUCT.	1909	1904	1899
Materials used, total cost.....	\$343,976,007	\$280,591,937	\$247,215,120	Products—Continued.			
Beeves slaughtered:				All other meat sold fresh:			
Number.....	2,181,199	2,643,028	2,037,059	Pounds.....	192,514,645	56,323,948	57,936,886
Cost.....	\$109,990,873	\$110,026,678	\$93,289,543	Value.....	\$11,146,711	\$5,346,938	\$6,159,827
Calves slaughtered:				Canned goods:			
Number.....	513,639	295,928	149,450	Pounds.....	78,155,327	(1)	(1)
Cost.....	\$4,720,290	\$2,097,500	\$1,378,384	Value.....	\$9,677,618	\$10,928,144	\$6,446,283
Sheep slaughtered:				Lard:			
Number.....	3,892,142	3,634,216	3,139,160	Pounds.....	403,177,806	458,577,415	372,162,769
Cost.....	\$19,429,169	\$15,156,386	\$13,558,698	Value.....	\$40,592,051	\$31,463,099	\$22,296,356
Hogs slaughtered:				Tallow, oleo stock, and stearin:			
Number.....	7,293,544	7,854,370	8,291,706	Pounds.....	63,069,600	(1)	(1)
Cost.....	\$107,716,321	\$88,459,545	\$82,979,678	Value.....	\$5,100,877	(1)	(1)
Dressed meat, purchased.....	\$35,679,430	\$18,977,058	\$21,373,908	Oleo oil:			
Fuel and rent of power.....	\$1,485,207	\$1,465,830	\$729,948	Gallons.....	7,938,568	9,143,055	9,760,701
All other materials.....	\$64,954,717	\$44,409,940	\$33,904,961	Value.....	\$6,694,011	\$4,515,283	\$5,907,572
Products, total value.....	\$389,594,906	\$318,201,253	\$288,671,779	Other oils:			
Beef, fresh:				Gallons.....	4,396,960	986,981	4,385,191
Pounds.....	1,142,920,016	1,376,889,632	1,042,234,306	Value.....	\$2,382,433	\$496,239	\$2,010,394
Value.....	\$85,704,478	\$91,996,884	\$74,321,711	Oleomargarine:			
Beef, salted or cured:				Pounds.....	30,793,365	(1)	(1)
Pounds.....	53,965,719	78,334,416	67,917,743	Value.....	\$4,413,678	(1)	(1)
Value.....	\$4,676,501	\$4,981,741	\$5,066,362	Fertilizers and fertilizer materials:			
Veal, fresh:				Tons.....	102,638	191,549	53,614
Pounds.....	51,859,193	30,348,138	17,673,896	Value.....	\$2,614,087	\$3,741,650	\$1,212,519
Value.....	\$4,781,751	\$2,135,486	\$1,489,318	Hides:			
Mutton, fresh:				Number.....	2,408,757	2,786,594	2,206,337
Pounds.....	157,615,125	160,511,123	148,003,635	Pounds.....	135,617,679	165,007,637	128,702,578
Value.....	\$15,051,397	\$12,453,289	\$11,842,741	Value.....	\$19,372,440	\$16,664,648	\$13,082,550
Pork, fresh:				Pelts:			
Pounds.....	303,896,802	260,619,428	411,376,731	Number.....	3,619,577	3,632,161	(1)
Value.....	\$30,221,023	\$18,754,198	\$23,774,485	Value.....	\$3,869,008	\$2,895,369	(1)
Pork, salted or cured:				Wool:			
Pounds.....	720,216,994	885,740,292	935,621,438	Pounds.....	10,688,105	8,653,419	8,389,307
Value.....	\$78,049,060	\$72,754,024	\$73,361,355	Value.....	\$4,523,634	\$2,385,020	\$1,935,373
Sausage, fresh or cured.....	\$14,853,731	\$8,748,970	\$8,631,356	Amount received for custom or contract work.....	\$83,125	\$20,109	\$7,559
				All other products.....	\$45,767,652	\$27,970,172	\$26,116,008

1 Figures not available.

From 1904 to 1909 there was an increase of 257,926, or 7.1 per cent, in the number of sheep slaughtered and of 217,711, or 73.6 per cent, in the number of calves slaughtered, but a decrease of 461,829, or 17.5 per cent, in the number of beeves slaughtered, and of 560,826, or 7.1 per cent, in the number of hogs slaughtered. These decreases were due in a large measure to a movement of the industry toward the stock-raising states of the West and Southwest, or nearer the source of supply.

The total cost of materials shows an increase in 1909 as compared with 1904 of 22.6 per cent, which was practically the same as the relative increase in total value of products.

The output of fresh, salted, and cured beef decreased 258,337,313 pounds, or 17.8 per cent, from 1904 to 1909; that of fresh mutton, 2,895,998 pounds, or 1.8 per cent; and that of fresh and cured pork, 122,245,924 pounds, or 10.7 per cent; while that of fresh veal increased 21,011,055 pounds, or 69.2 per cent, and that of the meats included under the head of "All other meats sold fresh" shows an increase of 136,190,697 pounds, or 241.8 per cent. The production of lard in 1909 was 53,399,609 pounds, or 11.7 per cent, less than in 1904, although its value shows an increase of \$9,128,952, or 29 per cent. The decrease shown in the amount of oleo oil reported in 1909 as compared with 1904 was due to the fact that some slaughtering and meat-packing establishments, instead of selling the oleo oil which they make as a by-product, now use it in the manufacture of oleomargarine. The increase in the quantity of the oils included under the head of "Other oils" results almost entirely from an increase in the output of lard oil.

**Printing and publishing.**—The progress of the newspaper and periodical branch of the printing and publishing industry is indicated in the following statement, which shows the number and aggregate circulation per issue of the different classes of publications for the years 1909, 1904, and 1899:

PERIOD OF ISSUE.	NUMBER OF PUBLICATIONS.			AGGREGATE CIRCULATION PER ISSUE.		
	1900	1904	1899	1900	1904	1899
<b>Total</b> .....	1,682	1,753	1,591	20,823,166	16,542,740	10,429,368
Daily.....	194	192	197	2,323,913	1,954,329	1,449,087
Sunday.....	38	40	43	1,610,506	1,442,721	(1)
Semiweekly and triweekly.....	48	59	76	138,165	177,213	176,058
Weekly.....	1,018	1,089	1,000	5,008,590	4,592,043	3,806,983
Monthly.....	289	287	219	9,492,099	6,344,791	3,072,932
Quarterly.....	50	50	23	1,967,558	1,898,000	1,683,434
All other classes.....	45	36	33	276,335	133,643	180,874

<sup>1</sup> Included in circulation of dailies.

Illinois ranks second both in number and in circulation of all classes of publications combined; third in number and in circulation of dailies; second in number and in circulation of Sunday papers; first in number and third in circulation of weeklies; and second in number and circulation of monthlies.

The number of dailies and the number of monthlies both show an increase of 2 in 1909 as compared with 1904, and the number of publications included under the head of "All other classes" an increase of 9. The number of quarterlies was the same in both years, while the other three classes show decreases in number. A substantial increase in circulation, on the other hand, is shown for each class except the semiweeklies and triweeklies, while the aggregate circulation reported for all newspapers and periodicals published increased during this period from 16,542,740 to 20,823,166, a gain of 4,280,426, or 25.9 per cent. The increase in the circulation of the different classes of publications was as follows: Dailies, 369,584, or 18.9 per cent; Sunday publications, 173,785, or 12 per cent; weeklies, 416,547, or 9.1 per cent; monthlies, 3,147,308, or 49.6 per cent; and quarterlies, 69,558, or 3.7 per cent. In number and circulation of publications printed in foreign languages, Illinois is second among the states, being outranked only by New York, and it leads all the states in number and circulation of newspapers and periodicals printed in the Letto-Slavic languages, having 41, with a total circulation of 342,007.

The following tabular statement gives, for 1909 and 1904, the number and circulation of the different classes of newspapers and periodicals printed, respectively, in English and in a foreign language. Newspapers and periodicals which are printed partly in English and partly in a foreign language are included with those printed entirely in a foreign language.

PERIOD OF ISSUE.	Census.	TOTAL.		IN ENGLISH.		IN FOREIGN LANGUAGES.	
		Number.	Aggregate circulation per issue.	Number.	Aggregate circulation per issue.	Number.	Aggregate circulation per issue.
<b>Total</b> .....	1909	1,682	20,823,166	1,509	19,365,799	173	1,457,367
	1904	1,753	16,542,740	1,604	15,356,385	149	1,184,355
Daily and Sunday.	1909	232	3,940,419	201	3,464,495	31	475,924
	1904	232	3,397,050	201	3,003,160	31	393,890
Semiweekly and triweekly.	1909	48	138,165	34	61,065	14	76,200
	1904	59	177,213	40	123,133	10	54,080
Weekly.....	1909	1,018	5,008,590	923	4,448,973	95	559,617
	1904	1,080	4,592,043	1,008	4,048,729	81	543,314
Monthly.....	1909	289	9,492,099	267	9,239,890	22	252,209
	1904	287	6,344,791	271	6,240,866	16	103,925
Quarterly.....	1909	50	1,967,558	44	1,885,206	6	82,292
	1904	50	1,898,000	47	1,850,800	3	47,200
All other classes.	1909	45	276,335	40	265,210	5	11,125
	1904	36	133,643	28	91,697	8	41,946

The publications in foreign languages increased 24 in number between 1904 and 1909, while their circulation increased 273,012, or 23.1 per cent. The monthlies, which increased 6 in number, made the largest absolute and relative increases in circulation. The languages represented correspond more or less closely to the classes of immigrants that have settled in the North Central states. Sixty-three periodicals were published in German; 11 in German and English; 32 in Scandinavian languages, including 1 in Swedish

INDUSTRY.	An-thra-cite coal (tons).	Bitumi-nous coal (tons).	Coke (tons).	Wood (cords).	Oil, in-cluding gasoline (bar-rels).	Gas (1,000 feet).	INDUSTRY.	An-thra-cite coal (tons).	Bitumi-nous coal (tons).	Coke (tons).	Wood (cords).	Oil, in-cluding gasoline (bar-rels).	Gas (1,000 feet).
<b>All industries</b> .....	155,482	14,235,950	3,982,844	125,490	2,831,328	12,845,341	Flour-mill and gristmill products.....	1,070	109,864	580	1,789	1,753	20,387
Agricultural implements.....	800	287,554	38,303	8,643	135,401	2,890	Foundry and machine-shop products.....	9,641	685,292	530,177	13,405	84,109	6,103,955
Automobiles, including bodies and parts.....	7	11,839	161	.....	153	3,196	Furnishing goods, men's.....	33	2,936	.....	.....	12	1,020
Baking powders and yeast.....	.....	19,024	.....	.....	4	4	Furniture and refrigerators.....	443	106,511	460	50	448	5,555
Boots and shoes, including cut stock and findings.....	94	18,054	14	.....	608	1,307	Gas, illuminating and heat-ing.....	5,551	437,127	253,479	.....	1,520,486	200
Bread and other bakery products.....	13,777	38,675	20,762	40,209	633	58,324	Iron and steel, blast fur-naces.....	.....	37,389	2,894,991	950	4,360	.....
Brick and tile.....	3,775	964,310	1,236	26,062	118,752	3,550	Iron and steel, steel works and rolling mills.....	15,311	3,088,782	86,143	4,704	260,003	.....
Butter, cheese, and con-densed milk.....	94	111,896	.....	718	711	78	Leather goods.....	2,702	56,105	.....	.....	.....	2,741
Canning and preserving.....	272	24,891	63	213	375	6,279	Leather, tanned, curried, and finished.....	2,702	56,105	.....	.....	.....	.....
Carriages and wagons and materials.....	637	47,599	3,483	97	6,745	3,122	Liquors, distilled.....	2,581	238,278	.....	.....	56	.....
Cars and general shop con-struction and repairs by steam-railroad companies.....	6,825	602,367	4,025	6,232	50,636	11,197	Liquors, malt.....	2,581	343,470	300	.....	81	1,555
Cars, steam-railroad, not in-cluding operations of rail-road companies.....	1,967	108,273	51,993	3,199	33,697	5,987	Lumber and timber prod-ucts.....	1,272	62,128	62	1,855	1,544	10,509
Clocks and watches, includ-ing cases and materials.....	9	16,540	200	.....	689	29,120	Millinery and lace goods.....	164	2,951	65	2	81	5,159
Clothing, men's, including shirts.....	1,848	15,001	51	52	3	51,754	Musical instruments, pianos and organs and materials.....	2,406	83,988	.....	6	403	448
Clothing, women's.....	107	387	.....	1	93	7,436	Paint and varnish.....	378	55,018	3,988	178	2,736	8,723
Coffee and spice, roasting and grinding.....	2,646	9,384	46	50	7	29,019	Patent medicines and com-pounds and druggists' preparations.....	5,247	15,779	41	4	95	5,133
Confectionery.....	154	28,005	1,558	66	49	20,595	Printing and publishing.....	2,317	83,242	209	88	2,741	69,461
Copper, tin, and sheet-iron products.....	1,907	62,767	440	416	1,333	27,499	Slaughtering and meat pack-ing.....	3,609	957,979	600	4,093	1,929	128,503
Electrical machinery, appa-ratus, and supplies.....	166	71,903	5,720	1	1,100	235,983	Smelting and refining, zinc.....	24,149	378,627	.....	120	.....	.....
							Soap.....	21	113,638	.....	72	13	3,318
							Stoves and furnaces, includ-ing gas and oil stoves.....	506	32,978	9,927	856	154	2,604
							Tobacco manufactures.....	3,405	10,417	214	39	22	2,641
							All other industries.....	38,714	4,880,046	64,366	11,320	599,187	5,776,983

NOTE.—In addition, there were 19,567 tons of other varieties of fuel reported.

**SUPPLEMENTARY DATA REGARDING IMPORTANT INDUSTRIES.**

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

For certain industries the Census Bureau collects, by means of special schedules, details regarding the quantity and cost of materials and the quantity and value of products and other information for securing which no provision is made on the general schedule. Certain data of this character for 11 important industries in Illinois are here presented.

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Beeves slaughtered:				All other meat sold fresh:			
Number.....	2,181,199	2,043,028	2,057,059	Pounds.....	192,514,645	56,323,948	57,936,886
Cost.....	\$109,990,873	\$110,026,678	\$93,289,543	Value.....	\$11,146,711	\$5,346,938	\$6,159,827
Calves slaughtered:				Canned goods:			
Number.....	513,639	295,928	149,450	Pounds.....	78,155,327	(1)	(1)
Cost.....	\$4,720,290	\$2,097,500	\$1,378,384	Value.....	\$9,077,618	\$10,928,144	\$6,446,283
Sheep slaughtered:				Lard:			
Number.....	3,892,142	3,634,216	3,139,160	Pounds.....	403,177,806	459,577,415	372,162,769
Cost.....	\$19,429,169	\$15,155,386	\$13,558,698	Value.....	\$40,592,051	\$31,463,099	\$22,296,356
Hogs slaughtered:				Tallow, oleo stock, and stearin:			
Number.....	7,293,544	7,854,370	8,291,766	Pounds.....	63,059,600	(1)	(1)
Cost.....	\$107,716,321	\$88,459,545	\$82,979,678	Value.....	\$5,100,877	(1)	(1)
Dressed meat, purchased.....	\$35,679,430	\$18,977,058	\$21,373,908	Oleo oil:			
Fuel and rent of power.....	\$1,485,207	\$1,465,830	\$729,948	Gallons.....	7,938,568	9,143,055	9,760,701
All other materials.....	\$64,954,717	\$44,409,940	\$33,904,961	Value.....	\$6,094,011	\$4,515,283	\$5,907,572
<b>Products, total value</b> .....	\$389,594,906	\$318,201,253	\$288,671,779	Other oils:			
Beef, fresh:				Gallons.....	4,396,960	986,981	4,385,191
Pounds.....	1,142,920,916	1,376,889,532	1,042,234,906	Value.....	\$2,382,433	\$496,239	\$2,010,394
Value.....	\$85,704,478	\$91,996,884	\$74,321,711	Oleomargarine:			
Beef, salted or cured:				Pounds.....	30,793,865	(1)	(1)
Pounds.....	53,965,719	78,334,416	67,917,743	Value.....	\$4,413,578	(1)	(1)
Value.....	\$4,676,501	\$4,981,741	\$5,068,362	Fertilizers and fertilizer materials:			
Veal, fresh:				Tons.....	102,638	191,549	58,614
Pounds.....	51,359,193	30,348,138	17,673,896	Value.....	\$2,614,087	\$3,741,650	\$1,212,519
Value.....	\$4,781,751	\$2,135,486	\$1,489,818	Hides:			
Mutton, fresh:				Number.....	2,408,757	2,766,594	2,206,337
Pounds.....	167,615,125	160,511,123	148,003,635	Pounds.....	135,617,679	165,007,637	128,702,573
Value.....	\$15,051,397	\$12,453,289	\$11,842,741	Value.....	\$19,372,440	\$19,664,648	\$13,092,560
Pork, fresh:				Peils:			
Pounds.....	303,896,802	260,619,428	411,376,731	Number.....	3,619,577	3,632,161	(1)
Value.....	\$30,221,023	\$18,764,198	\$28,774,485	Value.....	\$3,869,008	\$2,895,359	(1)
Pork, salted or cured:				Wool:			
Pounds.....	720,216,994	885,740,292	935,621,438	Pounds.....	10,688,105	8,653,419	8,389,307
Value.....	\$78,049,000	\$72,754,024	\$73,361,355	Value.....	\$4,523,534	\$2,385,020	\$1,935,373
Sausage, fresh or cured.....	\$14,883,731	\$8,748,970	\$8,631,356	Amount received for custom or con-tract work.....	\$83,125	\$20,109	\$7,559
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From 1904 to 1909 there was an increase of 257,926, or 7.1 per cent, in the number of sheep slaughtered and of 217,711, or 73.6 per cent, in the number of calves slaughtered; but a decrease of 461,829, or 17.5 per cent, in the number of beeves slaughtered, and of 560,826, or 7.1 per cent, in the number of hogs slaughtered. These decreases were due in a large measure to a movement of the industry toward the stock-raising states of the West and Southwest, or nearer the source of supply.

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Daily.....	194	192	197	2,323,913	1,954,329	1,449,087
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Weekly.....	1,018	1,089	1,000	5,008,590	4,502,043	3,896,983
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Quarterly.....	50	50	23	1,967,558	1,868,000	1,683,434
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<sup>1</sup> Included in circulation of dailies.

Illinois ranks second both in number and in circulation of all classes of publications combined; third in number and in circulation of dailies; second in number and in circulation of Sunday papers; first in number and third in circulation of weeklies; and second in number and circulation of monthlies.

The number of dailies and the number of monthlies both show an increase of 2 in 1909 as compared with 1904, and the number of publications included under the head of "All other classes" an increase of 9. The number of quarterlies was the same in both years, while the other three classes show decreases in number. A substantial increase in circulation, on the other hand, is shown for each class except the semiweeklies and triweeklies, while the aggregate circulation reported for all newspapers and periodicals published increased during this period from 16,542,740 to 20,823,166, a gain of 4,280,426, or 25.9 per cent. The increase in the circulation of the different classes of publications was as follows: Dailies, 369,584, or 18.9 per cent; Sunday publications, 173,785, or 12 per cent; weeklies, 416,547, or 9.1 per cent; monthlies, 3,147,308, or 49.6 per cent; and quarterlies, 69,558, or 3.7 per cent. In number and circulation of publications printed in foreign languages, Illinois is second among the states, being outranked only by New York, and it leads all the states in number and circulation of newspapers and periodicals printed in the Letto-Slavic languages, having 41, with a total circulation of 342,007.

The following tabular statement gives, for 1909 and 1904, the number and circulation of the different classes of newspapers and periodicals printed, respectively, in English and in a foreign language. Newspapers and periodicals which are printed partly in English and partly in a foreign language are included with those printed entirely in a foreign language.

PERIOD OF ISSUE.	Cen-sus.	TOTAL.		IN ENGLISH.		IN FOREIGN LANGUAGES.	
		Num-ber.	Aggregate circulation per issue.	Num-ber.	Aggregate circulation per issue.	Num-ber.	Aggregate circulation per issue.
<b>Total</b> .....	1909	1,682	20,823,166	1,509	19,366,799	173	1,457,367
	1904	1,753	16,542,740	1,404	15,358,385	149	1,184,355
Daily and Sunday.	1909	232	3,940,410	201	3,464,495	31	476,924
	1904	232	3,397,050	201	3,003,160	31	393,890
Semiweekly and triweekly.	1909	48	138,165	34	61,905	14	76,200
	1904	50	177,213	40	123,133	10	54,080
Weekly.....	1909	1,018	5,008,590	923	4,448,973	95	559,617
	1904	1,089	4,592,043	1,008	4,048,729	81	543,314
Monthly.....	1909	289	9,492,099	267	9,236,890	22	252,209
	1904	287	6,344,791	271	6,240,866	16	103,925
Quarterly.....	1909	50	1,967,558	44	1,885,266	6	82,292
	1904	50	1,868,000	47	1,850,800	3	47,200
All other classes.	1909	45	276,335	40	265,210	5	11,125
	1904	36	133,643	28	91,697	8	41,946

The publications in foreign languages increased 24 in number between 1904 and 1909, while their circulation increased 273,012, or 23.1 per cent. The monthlies, which increased 6 in number, made the largest absolute and relative increases in circulation. The languages represented correspond more or less closely to the classes of immigrants that have settled in the North Central states. Sixty-three periodicals were published in German; 11 in German and English; 32 in Scandinavian languages, including 1 in Swedish

and English; 18 in Bohemian; 14 in Polish; 8 in Yiddish; 6 in Italian; 3 in Greek; 2 each in Dutch, French, Lithuanian, Slovenian, and Slovak; and 1 each in Bulgarian, Croatian, Servian, Spanish, Esperanto, Yiddish and English, English, German, and Italian, and English, German, and French.

Publications devoted to news, politics, and family reading formed the largest class, numbering 1,169, with a circulation of 5,893,427. Those devoted to general literature, consisting largely of monthly magazines, numbered 36, and had a circulation of 5,582,991; religious periodicals numbered 123, and had a circulation of 3,869,839; fraternal journals numbered 49, and had a circulation of 2,125,069; agricultural journals, 36, with a circulation of 1,115,493; trade journals, 102, with a circulation of 707,096; and scientific and mechanical journals, 26, with a circulation of 508,037. The remaining publications, relating chiefly to commerce, insurance, medicine and surgery, law, education and history, society, art, music, and fashion, numbered 141, and had an aggregate circulation of 1,021,214.

**Iron and steel, steel works and rolling mills.**—The quantity and cost of the principal materials used by the steel works and rolling mills and the quantity and value of their leading products are shown for 1909, 1904, and 1899 in the following table:

MATERIAL OR PRODUCT.	1909	1904	1899
<b>Materials used, total cost.....</b>	<b>\$56,244,463</b>	<b>\$38,649,762</b>	<b>\$30,021,296</b>
Pig iron and ferroalloys:			
Tons.....	2,433,805	1,446,299	1,410,721
Cost.....	\$36,686,448	\$19,282,069	\$14,137,074
Scrap, including old rails not intended for rerolling: <sup>1</sup>			
Tons.....	273,874	499,533	461,767
Cost.....	\$3,996,891	\$6,202,392	\$7,312,159
Ingots, blooms, billets, slabs, muck and scrap bar, rerolling rails, and sheet and tin-plate bars: <sup>1</sup>			
Tons.....	280,727	220,572	121,301
Cost.....	\$6,357,611	\$5,343,045	\$3,279,125
Fuel and rent of power.....	\$3,598,585	\$3,308,450	\$2,433,156
All other materials.....	5,604,928	4,513,806	2,859,782
<b>Products, total value.....</b>	<b>\$86,608,137</b>	<b>\$60,021,925</b>	<b>\$45,149,498</b>
Rolled, forged, and other classified products:			
Tons.....	2,644,191	1,657,885	1,435,346
Value.....	\$78,841,720	\$52,809,666	\$37,066,574
All other products, including value added to rolled products by further manufacture.....	\$7,766,417	\$7,212,259	\$8,082,924
<i>Steel production.</i>			
<b>Total tons.....</b>	<b>2,867,043</b>	<b>1,555,198</b>	<b>1,460,710</b>
Bessemer.....	1,631,164	1,193,548	1,211,115
Open-hearth.....	1,020,208	361,650	249,313
Crucible and miscellaneous.....	15,671	.....	232
Ingots.....	2,592,430	1,499,160	1,421,687
Castings.....	74,613	56,038	29,023

<sup>1</sup> Purchased, or transferred from other works of the company reporting; not including scrap and partially manufactured material consumed in plant where produced.

In using this table it should be borne in mind that the year 1904 was one of partial depression in the iron and steel industry, and hence neither comparatively small increases in quantity and value for 1904 as compared with 1899 nor comparatively large increases for 1909

as compared with 1904 are representative of the normal rate of growth for the industry.

The total cost of the materials consumed in the steel works and rolling mills of the state increased 87.3 per cent from 1899 to 1909. The principal increase was in the most important group of materials, pig iron and ferroalloys, the tonnage of which increased from 1,410,721 to 2,433,805, or 72.5 per cent, accompanied by an increase from \$14,137,074 to \$36,686,448, or 159.5 per cent, in cost. Ingots, blooms, billets, etc., also show a material increase in both tonnage and cost, while scrap shows a large decrease in both respects.

The total value of products increased 91.8 per cent from 1899 to 1909. The total steel production was 2,667,043 tons in 1909, as compared with 1,460,710 tons in 1899, the increase for the decade being 82.6 per cent. The output of all classes of steel increased between 1899 and 1909, but the actual increase in open-hearth steel was particularly striking. Most of the increased steel production was in the form of ingots, the tonnage of which increased from 1,421,687 in 1899 to 2,592,430 in 1909, or 82.3 per cent, while the tonnage of castings increased from 39,023 to 74,613, or 91.2 per cent, during the same period. The leading rolling-mill products in 1909 in the order of total tonnage were rails, bars and rods, wire rods, structural shapes, plates and sheets, and rail fastenings.

**Iron and steel, blast furnaces.**—The tonnage and value of pig iron produced and the value of all other products in 1909, 1904, and 1899 are shown in the following table:

PRODUCT.	1909	1904	1899
<b>Total value.....</b>	<b>\$38,299,897</b>	<b>\$27,330,836</b>	<b>\$15,153,646</b>
Pig iron:			
Tons.....	2,468,772	1,060,610	1,469,530
Value.....	\$38,299,897	\$25,608,271	\$15,033,696
All other products.....		\$1,822,565	\$119,950
Pig iron, classified by grades (tons):			
Bessemer.....	1,805,718	1,424,030	1,320,287
Basic.....	352,381	52,658	.....
Foundry.....	60,151	105,835	94,008
Forge or mill.....	2,633	1,411	7,500
Malleable Bessemer.....	173,871	31,588	.....
White, mottled, miscellaneous, and direct castings.....	9,893	680	47
Ferroalloys—spiegeleisen, ferromanganese, etc.....	64,125	44,408	47,688

The production of pig iron in the state increased 48.7 per cent in quantity and 50.1 per cent in value from 1904 to 1909, as compared with 13 per cent in quantity and 69.7 per cent in value during the five-year period 1899–1904. Bessemer pig iron formed only 73.1 per cent of the total production in 1909, whereas in 1904 and in 1899 it formed over 85 per cent. All the pig iron produced in Illinois was coke iron. The establishments operating the blast furnaces produced in 1909, 2,152,608 tons for their own use and 316,164 tons for sale.

**Agricultural implements.**—The following table shows the value of the different classes of agricultural implements manufactured in Illinois in 1909 and 1904 and the total value of products for 1899:

PRODUCT.	1909	1904	1899
Total value.....	\$57,268,325	\$38,412,452	\$42,033,706
Implements of cultivation.....	14,422,070	12,273,939	41,359,006
Seeders and planters.....	5,630,681	2,998,075	
Harvesting implements.....	22,417,070	16,874,413	
Seed separators.....	7,847,026	915,005	
All other products.....	12,528,685	5,107,368	674,700
Amount received for repair work.....	371,893	183,592	

The value of agricultural implements manufactured was \$57,268,325 in 1909, as compared with \$38,412,452 in 1904, an increase for the five years of \$18,855,873, or 49.1 per cent. The production in 1904, however, was abnormally low, owing to an overproduction in 1903, and a comparison of the figures for 1909 with those for 1899, therefore, better indicates the true growth of the industry. Such a comparison shows an increase in value of products for the decade of \$15,234,529, or 36.2 per cent. In both 1909 and 1904 harvesting implements constituted the most important class of products, as measured by value.

**Flour-mill and gristmill products.**—The manufacture of flour-mill and gristmill products has long been one of the leading industries of Illinois. The following tabular statement gives the quantity and value of the products for 1909, 1904, and 1899:

PRODUCT.	1909	1904	1899
Total value.....	\$51,110,681	\$39,892,127	\$28,575,357
Wheat flour:			
White—			
Barrels.....	6,360,318	5,930,363	5,032,815
Value.....	\$33,858,081	\$27,642,880	\$20,320,387
Graham—			
Barrels.....	26,229	15,207	( <sup>1</sup> )
Value.....	\$134,413	\$70,521	( <sup>1</sup> )
Corn meal and corn flour:			
Barrels.....	738,804	1,008,280	1,580,178
Value.....	\$2,168,824	\$2,310,104	\$2,361,940
Rye flour:			
Barrels.....	116,925	77,309	50,043
Value.....	\$339,732	\$279,992	\$175,240
Buckwheat flour:			
Pounds.....	1,802,689	2,055,372	3,090,578
Value.....	\$54,842	\$62,210	\$100,052
Barley meal:			
Pounds.....	110,400	1,272,000	1,322,000
Value.....	\$1,560	\$20,220	\$15,792
Hominy and grits:			
Pounds.....	221,177,853	230,728,150	33,701,026
Value.....	\$3,224,171	\$2,551,006	\$263,050
Feed:			
Tons.....	250,543	147,410	204,080
Value.....	\$8,250,207	\$2,036,897	\$2,897,455
Offal:			
Tons.....	216,309	258,992	203,090
Value.....	\$4,510,073	\$4,344,053	\$2,329,450
All other products.....	\$302,778	\$58,554	\$111,376

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

White flour, which is the leading product of the industry in the state, shows an increase between 1904 and 1909 of 420,935 barrels, or 7.1 per cent, in quantity, and of \$6,315,201, or 22.9 per cent, in value, while the output of feed, the second product in importance on the basis of value, increased 112,124 tons, or

76.1 per cent, in quantity, and \$3,619,310, or 137.3 per cent, in value. The output of hominy and grits shows an increase of \$673,075, or 26.4 per cent, in value in 1909 as compared with 1904, but a decrease of 18,550,303 pounds, or 7.7 per cent, in quantity, and that of offal, which consists mainly of bran and middlings, the by-products of the flour mills, an increase of \$165,420, or 3.8 per cent, in value, but a decrease of 42,683 tons, or 16.5 per cent, in quantity. The output of corn meal and corn flour decreased 329,422 barrels, or 30.8 per cent, in quantity, and \$150,280, or 6.5 per cent, in value. The value of products for the industry as a whole shows an increase from \$39,892,127 in 1904 to \$51,110,681 in 1909, or 28.1 per cent.

The following tabular statement classifies the flour mills reported in 1909 and 1904 according to their output for the year:

OUTPUT.	NUMBER OF MILLS.	
	1909	1904
All classes.....	309	302
Less than 1,000 barrels.....	88	48
1,000 barrels but less than 5,000.....	86	106
5,000 barrels but less than 20,000.....	76	89
20,000 barrels but less than 100,000.....	47	47
100,000 barrels and over.....	12	12

The flour mills and gristmills of the state reported in 1909, 3,477 pairs of rolls as compared with 4,008 pairs in 1904 and 3,008 pairs in 1899, and 416 runs of stone and steel burrs, as against 296 in 1904 and 307 in 1899. Fifty-nine establishments manufactured the barrels in which to ship their product in 1909, and 3 manufactured sacks.

**Soap.**—In the next table the quantity and cost of the principal materials used in making soap and the quantity and value of the chief products are shown.

The quantity of tallow, grease, and other fats used shows a decrease in 1909 as compared with 1904 of 31.1 per cent; that of cottonseed oil, a decrease of 81.3 per cent; and that of caustic soda, a decrease of 21.2 per cent. On the other hand, the quantity of coconut and palm-kernel oil used increased 108.3 per cent; that of foots, 60.1 per cent; and that of soda ash, 61 per cent. The materials included under the head of "All other materials" show an increase of \$5,719,088, or 376.1 per cent, in cost, due largely to the fact that under this head are included the cost of the principal materials used in the manufacture of cottolene, of which a considerable amount was produced in Illinois as a secondary product in 1909 by establishments classified as engaged in the soap industry.

The output of hard soaps, which constitute the most important class of products of the industry, was 55,646,050 pounds, or 28.1 per cent, greater in 1909 than in 1904. Of the total increase of \$6,024,091, or 42.6 per cent, in the value of products for the industry, a little more than two-thirds represented the increase in

the value of hard soaps produced. The quantity of soft soap manufactured in 1909 was more than thirteen times that reported for 1904 and its value more than five times that reported for the earlier year. The quantity of glycerin manufactured in 1909 was nearly double that made in 1904, and its value shows an increase of 130.8 per cent.

MATERIAL OR PRODUCT.	1909	1904
<b>Materials used, total cost</b> .....	<b>\$13,948,180</b>	<b>\$9,345,061</b>
Tallow, grease, and other fats:		
Pounds.....	54,546,522	79,134,570
Cost.....	\$3,225,011	\$3,573,202
Cocconut and palm-kernel oil:		
Gallons.....	2,174,700	1,043,976
Cost.....	\$1,084,613	\$438,644
Cottonseed oil:		
Gallons.....	1,565,800	8,359,680
Cost.....	\$670,324	\$2,515,047
Resin:		
Pounds.....	18,272,898	18,067,593
Cost.....	\$423,829	\$303,456
Foots:		
Pounds.....	21,403,551	13,367,007
Cost.....	\$511,907	\$256,068
Caustic soda:		
Tons.....	8,022	10,186
Cost.....	\$335,312	\$364,256
Soda ash:		
Tons.....	15,040	9,715
Cost.....	\$288,647	\$148,109
Fuel and rent of power.....	\$262,319	\$225,469
All other materials.....	\$7,230,898	\$1,620,810
<b>Products, total value</b> .....	<b>\$20,180,799</b>	<b>\$14,156,708</b>
Hard soaps:		
Pounds.....	253,629,401	197,983,351
Value.....	\$13,050,220	\$8,671,921
Soft soap:		
Pounds.....	7,554,416	567,153
Value.....	\$200,521	\$39,433
Glycerin:		
Pounds.....	6,768,939	3,721,609
Value.....	\$876,871	\$379,863
All other products <sup>1</sup> .....	\$6,053,187	\$5,065,491

<sup>1</sup> Includes liquid soap, special soap articles, and cottolene in 1909.

Musical instruments, pianos and organs and materials.—The following table gives the number and value of the principal products reported by the piano and organ industry for 1909, 1904, and 1899:

PRODUCT.	1909	1904	1899
<b>Total value</b> .....	<b>\$19,176,328</b>	<b>\$13,323,358</b>	<b>\$8,251,930</b>
Pianos:			
Number.....	108,283	74,137	46,134
Value.....	\$14,785,394	\$9,696,142	\$5,691,747
Upright.....			
Number.....	107,903	73,899	46,024
Value.....	\$14,046,471	\$9,614,431	\$5,643,287
Without player attachments—			
Number.....	103,433	73,874	46,024
Value.....	\$13,226,811	\$9,605,081	\$5,643,287
For or with player attachments—			
Number.....	4,470	25	—
Value.....	\$1,419,660	\$8,750	—
Grand.....			
Number.....	380	238	110
Value.....	\$136,923	\$81,711	\$48,460
Player attachments made separate from pianos:			
Number.....	464	2,647	—
Value.....	\$34,908	\$227,887	—
Organs:			
Number.....	28,798	55,759	52,394
Value.....	\$1,281,415	\$1,969,643	\$1,773,200
Pipe—			
Number.....	154	140	87
Value.....	\$307,632	\$230,323	\$105,157
Reed—			
Number.....	28,644	55,619	52,307
Value.....	\$973,783	\$1,739,220	\$1,668,043
Parts and materials.....	\$2,785,667	\$858,111	( <sup>1</sup> )
All other products.....	\$290,944	\$571,675	\$786,983

<sup>1</sup> Included with "All other products."

Increases occurred during the decade in both the number and the value of all kinds of pianos and organs

manufactured except reed organs, which show decreases in both respects from 1904 to 1909. The player pianos, which increased in number from 25 in 1904 to 4,470 in 1909, are now being manufactured in far greater number than the detached piano players, which decreased in number from 2,647 in 1904 to 464 in 1909. The number of upright pianos manufactured without the player attachment was 73,874 in 1904 and 103,433 in 1909, an increase of 29,559, or 40 per cent, while the value of the output increased 37.7 per cent during this interval. From 1904 to 1909 the number of grand pianos manufactured increased from 238 to 380 and the number of pipe organs from 140 to 154.

Butter, cheese, and condensed milk.—The butter, cheese, and condensed-milk industry, although showing a decrease since 1904 of 110, or 27.2 per cent, in the number of establishments, shows an increase of \$4,521,745, or 34.1 per cent, in the total value of products.

In Illinois, as in most other states where dairying is carried on extensively, the total amount of milk used in this industry has decreased and the total amount of cream has increased. This is due to the fact that a large part of the cream used is now separated on the farms instead of at the factories, and only the cream is sold, instead of the whole milk, as formerly. This decrease in the amount of milk bought by the butter factories has been counteracted to some extent by the rapid growth in the demand on the part of the condensed-milk factories, which necessarily use whole milk. The net result has been a decrease of 12.7 per cent in the amount of milk bought.

The following table gives in detail the quantity and value of the products of the industry for 1909, 1904, and 1899:

PRODUCT.	1909	1904	1899
<b>Total value</b> .....	<b>\$17,798,278</b>	<b>\$13,276,533</b>	<b>\$12,879,299</b>
Butter:			
Packed sold—			
Pounds.....	14,767,503	20,466,655	30,238,537
Value.....	\$4,215,191	\$4,280,377	\$6,108,308
Prints or rolls—			
Pounds.....	9,803,473	6,873,270	3,816,725
Value.....	\$2,873,223	\$1,459,935	\$782,725
Cream sold:			
Pounds.....	11,496,133	2,192,048	9,521,000
Value.....	\$1,274,796	\$179,071	\$669,185
All other butter-factory products <sup>1</sup> .....	\$257,711	\$230,568	\$361,103
Cheese:			
Full cream—			
Pounds.....	2,919,897	—	—
Value.....	\$398,397	—	—
Part cream—			
Pounds.....	561,028	5,301,211	9,055,119
Value.....	\$58,005	\$426,026	\$620,984
Other kinds—			
Pounds.....	1,318,310	—	—
Value.....	\$64,084	—	—
All other cheese-factory products.....	\$6,801	\$3,161	\$16,697
Condensed milk:			
Sweetened—			
Pounds.....	48,240,252	47,511,291	—
Value.....	\$4,468,085	\$3,416,927	71,257,449
Unsweetened—			
Pounds.....	66,260,496	45,913,761	—
Value.....	\$3,969,542	\$3,257,807	\$4,303,597
All other condensed-milk factory products.....	\$184,242	—	\$10,700
All other products.....	\$78,201	\$12,661	—

<sup>1</sup> Includes skimmed milk sold and casein.

The quantity of butter produced in factories has shown a marked decrease at each of the last two censuses. In 1899 the quantity produced was 34,055,312 pounds, but by 1909 it had decreased to 24,570,976 pounds, a loss of 9,484,336 pounds, or 27.8 per cent. The value of the output, on the other hand, although it decreased a little between 1899 and 1904, increased during the next five-year period. In 1899 the total value was \$6,891,033, but in 1909 it was \$7,088,414, an increase of \$197,381, or 2.9 per cent, for the decade as a whole. A decrease of 27.8 per cent in quantity has thus been accompanied by an increase of 2.9 per cent in value.

The total value of the cheese-factory products decreased from \$643,681 in 1899 to \$429,187 in 1904 and increased during the following five years to \$527,287. The total output of all kinds of cheese in 1909 amounted to 4,799,235 pounds, representing a decrease of 47 per cent as compared with 1899, when it was 9,055,119 pounds.

There were 15 condensed-milk factories in Illinois in 1904 and 27 in 1909. In 1909 the total value of the condensed-milk product, including both sweetened and unsweetened, formed 48.2 per cent of the state total for the combined industry. For both kinds of condensed milk combined there was an increase from 1899 to 1904 of 31.1 per cent in quantity and of 55.1 per cent in value, while the corresponding gains for the five-year period 1904-1909 were 22.6 per cent and 26.4 per cent, respectively.

Boots and shoes, including cut stock and findings.—The following table shows the number of pairs of the various kinds of footwear manufactured in Illinois during 1909, 1904, and 1899:

KIND.	NUMBER OF PAIRS.		
	1909	1904	1899
Boots and shoes.....	6,893,731	5,730,197	5,669,470
Men's.....	4,018,016	3,463,185	2,975,957
Boys' and youths'.....	1,270,520	691,165	419,839
Women's.....	1,034,470	887,707	1,652,473
Misses' and children's.....	570,725	694,140	721,207
Slippers.....	274,697	201,265	213,126
Men's, boys', and youths'.....	112,060	43,099	45,420
Women's, misses', and children's.....	161,797	218,166	197,706
Infants' shoes and slippers.....	1,002,277	( <sup>1</sup> )	( <sup>1</sup> )
All other kinds.....	125,100	140,000	179,380

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

The number of pairs of boots and shoes manufactured increased 1,157,534, or 20.2 per cent, between 1904 and 1909, and the number of pairs of slippers, exclusive of infants' slippers, increased 13,432, or 5.1 per cent. Increases in the production of men's and of boys' and youths' boots and shoes are shown for both five-year periods, while decreases are shown for the two five-year periods in the output of misses' and children's boots and shoes. A decrease in the output of women's boots and shoes occurred between 1899 and 1904, but an increase took place between 1904 and 1909. In the latter period there was a decrease of 56,369 pairs, or 25.8 per cent, in the production of women's, misses', and children's slippers, but an

increase of 69,801 pairs, or 162 per cent, in the production of men's, boys', and youths' slippers.

The following table classifies the number of pairs of the various kinds of footwear produced in 1909 according to the method of manufacture:

KIND.	NUMBER OF PAIRS, BY METHOD OF MANUFACTURE.			
	Total.	Machine or hand welt.	McKay.	All other methods. <sup>1</sup>
Boots and shoes.....	6,893,731	3,310,544	3,174,420	408,767
Men's.....	4,018,016	3,127,767	650,765	239,494
Boys' and youths'.....	1,270,520	( <sup>2</sup> )	1,170,688	99,832
Women's, misses', and children's.....	1,035,195	182,777	1,372,977	40,441
Slippers, all kinds.....	274,697	45,540	211,722	17,435
Infants' shoes and slippers.....	1,002,277	448,338	( <sup>2</sup> )	553,939
All other kinds.....	125,100	( <sup>2</sup> )	( <sup>2</sup> )	125,100

<sup>1</sup> Includes wire-screw or metal-fastened, turned, and wooden-pegged.  
<sup>2</sup> Included in "All other methods."

Of the total output of boots and shoes, nearly one-half were made by the machine or hand-welt process and a slightly smaller proportion by the McKay process, the remainder being turned, wooden-pegged, or wire-screw or metal-fastened. The greater part of the men's boots and shoes (77.8 per cent) were made by the machine or hand-welt method, while most of the boys' and youths' boots and shoes (92.1 per cent) and the greater part of the women's, misses', and children's boots and shoes (85.5 per cent) were made by the McKay process.

Leather, tanned, curried, and finished.—The quantity and cost of the principal materials used and the quantity and value of the various products are shown, for 1909, 1904, and 1899, in the following table:

MATERIAL OR PRODUCT.	1909	1904	1899
<b>Materials used, total cost.....</b>	<b>\$12,130,609</b>	<b>\$8,173,788</b>	<b>\$5,784,474</b>
Hides, all kinds:.....			
Number.....	1,663,928	707,441	748,978
Cost.....	\$3,859,429	\$2,537,979	\$2,294,141
Skins:.....			
Number.....	4,952,358	4,496,856	2,775,971
Cost.....	\$6,891,454	\$4,571,793	\$2,642,318
Calf and kip—			
Number.....	3,008,610	2,291,546	1,478,882
Cost.....	\$5,532,850	\$3,378,163	\$2,073,504
Sheep—			
Number.....	1,562,628	2,065,943	1,263,323
Cost.....	\$922,406	\$1,075,737	\$559,904
All other—			
Number.....	231,114	139,307	33,765
Cost.....	\$436,138	\$117,873	\$11,785
Fuel and rent of power.....	\$161,707	\$78,604	\$73,736
All other materials.....	\$1,228,019	\$987,982	\$774,244
<b>Products, total value.....</b>	<b>\$14,911,782</b>	<b>\$10,758,196</b>	<b>\$7,847,835</b>
Leather:.....			
Sole, hemlock and chrome—			
Sides.....	109,260	103,198	68,324
Value.....	\$490,442	\$400,000	\$310,295
Upper, other than calf or kip skins—			
Grain, satin, pebble, etc.—			
Sides.....	932,483	364,950	932,186
Value.....	\$3,058,427	\$828,000	\$1,318,646
Finished splits—			
Number.....	613,045	100,800	974,992
Value.....	\$414,160	\$123,000	\$487,675
Horsehides.....			
Number.....	101,875	134,893	100,000
Value.....	\$356,760	\$617,604	\$385,000
Calf and kip skins, tanned and finished—			
Number.....	2,926,674	2,203,950	1,455,154
Value.....	\$7,071,221	\$4,741,324	\$3,034,307
Sheepskins.....			
Number.....	1,142,669	1,690,713	1,263,323
Value.....	\$716,005	\$904,099	\$540,193
Glove.....	\$580,823	\$707,419	\$188,450
All other.....	\$1,639,786	\$1,504,208	\$1,067,949
All other products.....	\$577,608	\$752,482	\$518,359

<sup>1</sup> Cattle hides only.

<sup>2</sup> Includes horsehides.

This table shows an increase of 48.4 per cent from 1904 to 1909 in the total cost of materials used, as compared with an increase of 41.3 per cent from 1899 to 1904. There was a decrease during each of the five-year periods in the number of hides used, but an increase in their total cost. Large increases are shown for both five-year periods in the number and cost of calf and kip skins treated, while for sheepskins increases are shown for the earlier period only, although both the number and the value of the sheepskins used in 1909 were materially larger than in 1899.

The total value of products increased 38.6 per cent from 1904 to 1909 and 37.1 per cent from 1899 to 1904. Tanned and finished calf and kip skins were the leading products, on the basis of value, at each census, contributing 47.4 per cent of the total value of all the products of the industry in 1909. The value of grain, satin, pebble, and similar upper leathers, the class of products second in importance in this respect, formed only 20.5 per cent of the total value of products in 1909. The relative increase in value from 1904 to 1909 was greater for leather of this class, however, than for any other, amounting to 269.3 per cent. The output shows an increase of 155.5 per cent in 1909 as compared with 1904, although practically the same as in 1899. The greatest relative increase in output for the five-year period 1904-1909 (281.2 per cent), was reported for finished splits of upper leather, which, however, show a decrease of 37.1 per cent in 1909 as compared with 1899. Sheepskins and horsehides increased in number and value from 1899 to 1904 and decreased in both respects from 1904 to 1909, the output of sheepskins in 1909 being somewhat less than in 1899, while that of horsehides was slightly greater.

**Laundries.**—Statistics for steam laundries are not included in the general tables or in the totals for manufacturing industries. There were 448 such establishments in the state of Illinois, 226 of which were in Chicago, 8 in Rockford, 7 each in Evanston and Peoria, 6 each in Decatur and Springfield, and 5 each in Aurora, Moline, Quincy, and Rock Island. No other incorporated place of 10,000 inhabitants or over had as many as 5 steam laundries.

The following statement summarizes the statistics:

Number of establishments.....	448
Persons engaged in the industry.....	10,916
Proprietors and firm members.....	470
Salaried employees.....	741
Wage earners (average number).....	9,705
Primary horsepower.....	10,780
Capital.....	\$5,540,003
Expenses.....	8,239,441
Services.....	5,035,652
Materials.....	1,721,845
Miscellaneous.....	1,481,944
Amount received for work done.....	10,049,445

Of the total number of wage earners in the industry, 6,601, or 68 per cent, and of the total amount received for work done in the state, \$7,108,126, or 70.7 per cent,

were reported from Chicago. The most common form of ownership was the individual, with 250 establishments. The firm and the corporate forms of ownership were represented by 100 and 98 establishments, respectively. Ninety-nine establishments had receipts for the year's business of less than \$5,000; 209, receipts of \$5,000 but less than \$20,000; 130, receipts of \$20,000 but less than \$100,000; and 10, receipts of \$100,000 but less than \$1,000,000.

The average number of wage earners employed each month and the percentage which this number represented of the greatest number employed in any one month were as follows:

MONTH.	WAGE EARNERS.		MONTH.	WAGE EARNERS.	
	Number.	Per cent of maximum.		Number.	Per cent of maximum.
January.....	9,288	91.6	July.....	10,042	99.0
February.....	9,369	92.4	August.....	10,141	100.0
March.....	9,425	92.9	September.....	10,008	98.7
April.....	9,522	93.9	October.....	9,718	95.8
May.....	9,741	96.1	November.....	9,657	95.2
June.....	9,862	97.2	December.....	9,686	95.5

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

KIND.	Number of engines or motors.	Horsepower.
<b>Primary power, total.....</b>		<b>10,780</b>
Owued:		
Steam.....	304	9,404
Gas.....	23	171
Water wheel.....	1	15
Rented:		
Electric.....	271	1,044
Other.....		56

The kind and quantity of fuel used are shown in the following statement:

KIND.	Unit.	Quantity.
Anthracite coal.....	Tons.....	12,854
Bituminous coal.....	Tons.....	128,088
Coke.....	Tons.....	551
Wood.....	Cords.....	39
Oil.....	Barrels.....	2,172
Gas.....	1,000 feet.....	47,655

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

	Custom sawmills.	Custom gristmills.
Number of establishments.....	123	157
Persons engaged in the industry.....	305	311
Proprietors and firm members.....	149	206
Salaried employees.....		4
Wage earners (average number).....	156	101
Primary horsepower.....	2,244	5,577
Capital.....	\$139,731	\$628,452
Expenses.....	48,190	2,126,560
Services.....	38,784	42,206
Materials.....	2,699	1,2,062,502
Miscellaneous.....	6,707	20,762
Value of products.....	117,443	1,2,340,612

<sup>1</sup> Includes estimate of all grain ground. A similar estimate for the value of the lumber sawed by custom sawmills is impracticable.

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

THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES.

INDUSTRY.	Census.	PERSONS ENGAGED IN INDUSTRY.					Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
		Number of establishments.	Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).							
STATE—All industries.....	1909	18,026	561,044	17,357	77,823	465,764	1,013,071	\$1,548,171	\$91,449	\$273,319	\$1,160,927	\$1,919,277	\$758,350
	1904	14,821	447,947	13,980	54,521	379,436	741,555	975,845	60,560	208,405	840,057	1,410,842	570,285
	1899	14,374	.....	.....	40,984	332,871	559,347	732,830	40,549	159,104	681,450	1,120,868	439,418
Agricultural implements.....	1909	70	21,511	48	2,223	10,240	38,040	110,005	2,933	11,718	24,824	57,268	32,444
	1904	82	17,331	43	1,029	16,350	34,034	71,383	2,152	8,851	17,761	38,413	20,661
	1899	94	22,731	56	4,444	18,231	30,161	62,202	3,420	9,065	18,860	42,034	23,174
Artificial stone.....	1909	366	1,312	473	54	785	1,111	1,236	39	439	577	1,488	911
	1904	27	142	34	17	91	32	121	11	62	53	158	105
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Automobiles, including bodies and parts.	1909	65	2,804	41	381	2,382	1,786	4,084	426	1,053	3,079	7,154	3,175
	1904	12	192	8	17	167	139	401	28	107	112	357	245
	1899	4	.....	.....	36	303	.....	975	28	218	292	748	456
Babbitt metal and solder.....	1909	10	291	6	102	183	988	1,410	101	109	3,374	4,146	772
	1904	12	200	4	54	142	427	971	91	70	1,916	2,500	584
	1899	9	177	2	40	135	.....	558	68	68	1,292	1,621	259
Bags, other than paper.....	1909	6	213	4	20	180	157	576	24	175	685	965	280
	1904	4	150	2	21	127	112	104	21	47	642	809	167
	1899	4	127	4	17	106	.....	94	11	30	369	547	178
Baking powders and yeast.....	1909	24	1,133	11	465	657	1,189	6,115	509	346	3,291	7,032	4,371
	1904	22	971	21	192	758	1,057	3,808	248	349	1,787	4,541	2,754
	1899	17	612	11	154	447	.....	1,170	229	155	1,288	3,347	2,059
Belting and hose, leather.....	1909	11	403	9	161	233	430	1,279	183	165	1,385	2,188	803
	1904	10	220	6	63	157	212	833	82	96	617	1,055	438
	1899	8	326	2	93	231	.....	640	71	108	803	1,361	468
Bicycles, motorcycles, and parts.....	1909	14	1,005	8	87	910	775	1,276	78	600	973	1,777	804
	1904	13	1,057	6	82	909	2,234	1,030	82	594	513	1,161	648
	1899	60	5,061	31	642	4,388	.....	7,695	522	2,145	4,837	8,960	4,123
Blacking and cleansing and polishing preparations.	1909	58	407	50	121	236	336	517	153	123	569	1,230	661
	1904	38	257	33	49	175	63	219	49	69	358	661	303
	1899	37	203	37	45	121	.....	144	46	43	195	508	313
Boots and shoes, including out stock and findings.	1909	53	6,392	38	562	5,792	2,770	7,579	709	3,143	10,809	16,755	5,886
	1904	52	4,587	41	297	4,249	1,977	3,945	336	1,991	6,415	9,993	3,578
	1899	203	.....	.....	304	4,700	.....	3,568	347	2,085	7,160	10,499	3,339
Boxes, cigar.....	1909	18	463	17	42	404	290	358	51	158	317	664	347
	1904	17	466	21	29	416	183	263	30	151	262	575	323
	1899	17	398	17	29	352	.....	187	26	111	221	470	249
Boxes, fancy and paper.....	1909	61	4,500	31	393	4,085	4,143	3,813	444	1,501	3,012	6,350	3,338
	1904	50	2,946	35	211	2,700	2,049	2,102	241	954	1,684	3,686	2,002
	1899	44	2,073	35	101	2,477	.....	1,495	160	798	1,453	2,991	1,538
Brass and bronze products.....	1909	79	2,052	50	308	1,088	1,850	4,056	426	1,136	4,148	0,842	2,694
	1904	58	1,932	46	281	1,065	1,231	3,430	289	919	2,372	4,751	1,379
	1899	53	1,430	44	129	1,203	.....	1,472	149	617	1,948	3,276	1,323
Bread and other bakery products.....	1909	2,099	12,566	2,409	1,546	8,011	5,018	24,224	1,347	5,495	21,606	30,118	14,512
	1904	1,406	9,632	1,512	705	7,415	3,795	13,515	591	4,115	14,279	26,145	11,860
	1899	1,064	7,703	1,157	987	5,550	.....	7,294	700	2,667	8,193	15,879	7,686
Brick and tile.....	1909	340	7,347	384	389	6,574	30,013	18,495	466	4,386	2,491	9,765	7,274
	1904	435	6,275	509	303	5,403	28,050	12,988	350	3,052	1,705	7,546	5,841
	1899	503	6,120	688	208	5,224	23,876	9,199	218	2,131	1,026	5,081	4,055
Brooms and brushes.....	1909	110	1,074	124	130	820	503	1,220	137	415	1,389	2,430	1,041
	1904	120	908	120	68	711	621	631	97	334	893	1,637	810
	1899	156	658	162	70	720	.....	501	67	324	711	1,453	742
Butter, cheese, and condensed milk.....	1909	295	3,000	896	372	1,732	6,753	7,820	398	942	14,207	17,798	3,531
	1904	405	2,302	272	295	1,735	6,350	5,322	154	829	10,709	13,277	2,568
	1899	527	2,007	394	220	1,483	6,880	4,466	136	697	10,199	12,870	2,680
Buttons.....	1909	28	623	39	36	548	275	262	31	247	237	676	439
	1904	22	330	30	20	280	220	164	11	162	71	251	180
	1899	14	301	15	14	272	121	53	8	101	66	242	176
Canning and preserving.....	1909	118	2,800	113	304	2,383	4,305	5,630	367	904	4,813	7,620	2,807
	1904	125	2,533	166	221	2,140	2,630	4,067	225	827	4,216	7,044	2,728
	1899	122	.....	.....	313	2,121	.....	2,470	202	641	3,750	5,864	2,114
Carriages and wagons and materials.....	1909	325	0,746	349	545	5,852	9,694	17,859	644	3,688	9,470	10,831	7,352
	1904	324	5,981	361	465	5,155	7,238	12,005	534	2,778	5,746	11,302	5,646
	1899	361	.....	.....	345	4,345	.....	8,880	350	2,114	4,353	9,002	4,649
Cars and general shop construction and repairs by steam-railroad companies.	1909	73	24,466	.....	1,275	23,131	20,740	18,722	1,295	15,288	15,233	32,229	16,096
	1904	99	20,232	.....	1,137	19,095	15,733	13,242	1,062	12,165	12,268	25,491	13,223
	1899	98	14,421	.....	618	13,803	6,979	11,728	560	7,423	8,287	16,580	8,293
Cars and general shop construction and repairs by street-railroad companies.	1909	30	2,364	.....	124	2,240	2,225	3,880	123	1,395	1,807	3,451	1,644
	1904	10	1,035	.....	29	1,030	412	1,082	31	654	418	1,143	725
	1899	12	914	.....	29	885	.....	736	32	509	532	1,116	584
Cars, steam-railroad, not including operations of railroad companies.	1909	28	11,782	2	835	10,945	18,651	37,935	1,062	7,824	15,336	27,001	11,665
	1904	16	9,666	2	628	9,036	14,830	15,467	719	5,931	12,173	30,926	9,753
	1899	17	9,593	.....	279	9,314	.....	18,732	330	5,361	17,075	24,846	7,771

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

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

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

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

INDUSTRY.	Consus.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).							
STATE—Continued.													
Cement.....	1909	6	1,536	.....	141	1,395	15,270	\$6,687	\$266	\$355	\$1,619	\$4,088	\$2,469
	1904	6	607	.....	67	540	6,100	2,455	102	328	460	1,178	718
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chemicals.....	1909	19	972	2	134	830	5,907	4,639	181	531	2,896	4,656	1,700
	1904	14	846	2	123	721	2,874	4,280	186	392	1,355	2,283	928
	1899	26	688	13	96	579	1,461	2,384	119	309	1,170	2,086	910
Clocks and watches, including cases and materials.	1909	19	5,833	9	209	5,665	2,578	12,412	306	3,217	1,688	7,045	5,357
	1904	12	4,240	8	161	4,071	1,232	8,639	247	2,357	996	4,999	4,003
	1899	17	3,400	14	116	3,270	.....	7,285	115	1,691	706	2,811	2,105
Clothing, men's, including shirts.....	1909	715	41,122	861	4,109	36,152	3,729	38,763	4,494	16,580	45,228	89,473	44,245
	1904	624	25,063	746	2,962	21,355	2,176	19,724	3,138	10,215	28,026	57,002	28,970
	1899	638	.....	.....	1,837	16,867	.....	14,417	1,943	6,427	19,386	39,685	20,299
Clothing, women's.....	1909	221	7,279	267	861	6,151	804	5,567	987	3,152	9,214	16,635	7,421
	1904	191	5,664	256	718	4,690	721	3,558	717	2,198	6,333	12,237	5,904
	1899	169	5,179	218	559	4,402	578	2,946	603	1,492	5,019	9,775	4,756
Coffee and spice, roasting and grinding..	1909	35	1,792	23	751	1,018	2,709	8,752	1,080	525	15,114	19,751	4,637
	1904	25	1,361	22	386	853	2,010	6,488	473	432	12,483	15,745	3,262
	1899	27	1,484	19	535	930	.....	5,225	564	373	10,007	12,708	2,701
Coffins, burial cases, and undertakers' goods.	1909	21	924	10	182	732	1,071	2,089	305	406	982	2,260	1,278
	1904	18	819	11	132	678	1,102	1,494	159	345	929	1,867	938
	1899	13	575	10	72	493	.....	681	79	242	725	1,242	517
Confectionery.....	1909	140	4,622	112	711	3,799	3,417	6,094	771	1,429	7,665	12,798	5,133
	1904	87	4,116	67	461	3,587	3,623	3,704	425	1,170	4,202	7,646	3,444
	1899	64	.....	.....	447	3,079	.....	2,253	348	835	3,703	6,461	2,698
Copperage and wooden goods, not elsewhere specified.	1909	80	2,617	56	173	2,388	5,247	4,453	249	1,127	4,479	6,611	2,132
	1904	110	2,845	110	168	2,567	4,672	3,830	203	1,176	4,782	7,088	2,306
	1899	147	3,283	146	123	3,019	.....	2,942	129	1,295	3,890	6,181	2,291
Copper, tin, and sheet-iron products....	1909	483	8,897	508	916	7,473	5,510	31,018	1,088	4,315	13,193	22,923	9,630
	1904	288	6,472	305	522	5,645	3,686	27,378	767	2,958	8,795	15,385	6,580
	1899	282	.....	.....	310	4,541	.....	5,498	328	2,145	6,191	10,598	4,407
Corsats.....	1909	16	1,663	6	155	1,502	541	1,306	210	525	1,195	2,711	1,516
	1904	15	1,011	14	36	961	387	579	36	331	561	1,237	676
	1899	18	1,163	20	48	1,095	.....	532	35	274	463	1,005	542
Cotton goods, including cotton small wares.	1909	5	1,397	.....	78	1,319	2,020	1,979	105	522	1,102	2,111	1,009
	1904	3	548	2	25	521	1,665	1,869	27	187	295	613	318
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cutlery and tools, not elsewhere specified.	1909	80	1,661	63	205	1,393	2,385	2,455	276	760	1,072	2,758	1,686
	1904	59	1,036	56	85	895	1,340	1,445	87	416	565	1,615	950
	1899	39	400	37	58	305	.....	742	29	168	156	689	433
Dairymen's, poulterers', and apiarists' supplies.	1909	29	427	30	74	323	664	859	59	178	575	1,181	606
	1904	24	459	22	78	359	578	571	53	152	561	1,131	570
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Electrical machinery, apparatus, and supplies.	1909	143	11,854	55	2,158	9,641	11,636	24,202	2,124	6,413	13,628	26,826	13,191
	1904	104	7,808	46	1,631	6,131	6,253	21,645	1,407	3,203	7,649	16,700	9,053
	1899	82	7,251	61	1,142	6,048	6,274	11,641	638	2,815	4,676	12,169	7,498
Electroplating.....	1909	43	457	49	33	375	703	290	31	245	226	697	471
	1904	26	324	29	23	272	281	158	20	155	124	425	301
	1899	30	.....	.....	19	320	.....	87	20	140	56	817	261
Explosives.....	1909	8	327	.....	37	290	1,828	1,562	44	190	935	1,469	534
	1904	5	174	.....	32	142	1,383	775	56	83	412	712	300
	1899	3	85	.....	14	71	.....	494	14	32	144	290	146
Fancy articles, not elsewhere specified..	1909	44	613	32	137	444	230	659	140	222	574	1,320	746
	1904	39	934	29	120	785	286	718	137	334	668	1,674	1,016
	1899	44	.....	.....	96	468	.....	370	67	175	425	908	483
Flags, banners, regalia, society badges and emblems.	1909	24	376	18	65	293	57	383	58	112	313	676	363
	1904	27	359	23	55	281	51	275	45	102	241	563	322
	1899	12	.....	.....	27	178	.....	128	23	66	141	290	149
Flour-mill and gristmill products.....	1909	461	3,634	544	626	2,464	38,472	18,454	805	1,271	45,590	51,111	5,521
	1904	363	3,287	412	465	2,410	33,158	14,128	509	1,211	34,930	39,892	4,962
	1899	353	.....	.....	356	1,966	.....	10,714	356	1,030	24,937	28,575	3,638
Foundry and machine-shop products....	1909	1,178	61,303	700	8,337	52,266	92,831	143,277	10,721	33,157	63,810	138,579	74,769
	1904	947	43,912	639	5,644	42,629	55,903	95,618	7,035	25,425	30,761	94,917	55,156
	1899	949	.....	.....	3,777	39,536	.....	64,051	4,304	20,877	38,325	81,987	43,662
Fur goods.....	1909	63	473	63	91	319	59	972	109	230	1,071	1,929	858
	1904	36	410	40	44	326	27	522	68	205	819	1,432	613
	1899	34	.....	.....	82	711	.....	756	77	325	1,261	2,331	1,070
Furnishing goods, men's.....	1909	61	3,116	60	368	2,688	796	2,881	427	1,015	4,573	7,213	2,640
	1904	36	1,938	45	246	1,047	277	1,819	179	581	2,470	4,103	1,633
	1899	33	1,944	43	151	1,750	.....	998	133	534	2,066	3,165	1,299
Furniture and refrigerators.....	1909	267	15,240	300	1,365	13,575	20,875	22,383	1,755	8,100	12,501	27,900	15,399
	1904	207	13,638	141	1,071	12,420	15,538	17,027	1,239	6,714	9,664	22,395	12,731
	1899	156	10,976	128	874	9,974	.....	10,356	891	4,543	6,849	15,623	8,774

1 Not reported separately.

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

3 Figures can not be shown without disclosing individual operations.

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

MANUFACTURES—ILLINOIS.

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

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

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employes.	Wage earners (average number).							
Expressed in thousands.													
<b>STATE—Continued.</b>													
Gas and electric fixtures and lamps and reflectors.	1909	78	2,010	41	488	2,090	1,883	\$3,657	\$907	\$1,184	\$2,694	\$5,797	\$3,103
	1904	44	1,385	34	198	1,154	793	1,736	219	640	1,194	2,805	1,711
	1899	56	855	50	171	1,034	.....	800	154	323	1,688	1,707	1,019
Gas, illuminating and heating.....	1909	78	8,020	2	1,717	6,301	18,385	131,790	1,567	2,907	6,210	21,052	14,842
	1904	64	4,069	10	1,095	2,964	5,700	97,119	1,344	1,695	4,519	16,008	11,439
	1899	53	3,198	.....	827	2,371	.....	70,810	770	1,306	1,991	8,774	6,783
Glass.....	1909	11	3,086	3	170	3,507	6,688	7,738	231	2,182	1,541	5,047	3,506
	1904	13	4,895	8	119	4,708	1,583	3,576	151	3,012	1,400	5,620	4,220
	1899	6	3,380	1	75	3,804	700	2,182	110	1,021	674	2,834	2,160
Gloves and mittens, leather.....	1909	29	1,403	33	121	1,309	657	1,093	169	519	1,478	2,523	1,045
	1904	24	2,446	30	65	1,134	500	555	63	425	862	1,601	839
	1899	25	1,910	23	108	1,779	159	701	94	600	1,234	2,484	1,250
Grease and tallow.....	1909	30	959	30	151	778	2,842	2,852	224	531	4,005	5,500	1,525
	1904	24	708	22	90	590	1,124	1,207	105	390	1,488	2,438	950
	1899	22	385	25	50	301	.....	673	53	175	1,630	2,030	391
Hats and caps, other than felt, straw, and wool.	1909	38	574	48	63	463	61	280	64	267	470	1,046	567
	1904	35	510	51	23	436	39	175	17	253	536	1,027	491
	1899	48	521	48	44	429	.....	321	37	214	479	952	473
Hosiery and knit goods.....	1909	43	3,141	40	188	2,913	3,452	5,110	221	1,116	3,232	5,947	2,715
	1904	38	2,446	38	66	2,342	1,336	2,903	97	782	2,165	3,730	1,565
	1899	27	1,896	18	46	1,832	815	1,550	67	507	1,280	2,205	910
Ice, manufactured.....	1909	83	1,013	25	184	804	13,288	5,575	192	534	442	1,923	1,486
	1904	43	648	29	134	485	6,559	2,162	110	269	247	940	693
	1899	29	738	22	92	624	4,083	1,689	75	303	174	991	817
Iron and steel, blast furnaces.....	1909	6	2,327	.....	434	2,493	70,453	52,390	496	1,793	30,908	38,300	7,392
	1904	4	1,993	.....	83	1,910	45,487	14,263	101	1,398	19,005	27,331	8,326
	1899	4	3,220	.....	210	3,010	35,520	10,684	295	2,170	11,708	16,154	3,440
Iron and steel, steel works and rolling mills.	1909	24	19,437	3	1,850	17,584	152,470	99,682	2,295	12,002	56,244	80,008	30,364
	1904	23	17,718	3	1,267	16,448	111,308	44,276	1,684	10,071	38,560	60,022	21,372
	1899	22	14,205	3	570	13,632	77,610	32,502	632	7,404	30,021	46,149	15,123
Jewelry.....	1909	67	1,280	69	221	990	307	1,823	210	650	1,264	2,780	1,516
	1904	43	890	51	135	713	189	827	124	456	801	1,755	954
	1899	31	597	37	70	484	.....	754	82	341	802	1,601	799
Leather goods.....	1909	168	3,569	172	448	2,940	2,290	5,300	498	1,633	5,135	8,948	3,813
	1904	165	3,164	163	346	2,655	1,115	3,783	364	1,416	3,437	6,715	3,278
	1899	143	.....	.....	271	2,042	.....	2,806	268	1,153	2,787	5,205	2,418
Leather, tanned, curried, and finished..	1909	29	3,194	26	167	3,001	6,709	15,975	277	1,582	12,131	14,912	2,781
	1904	28	2,887	20	97	2,770	5,290	11,049	135	1,326	8,174	10,758	2,584
	1899	27	2,373	24	86	2,263	3,305	4,751	177	1,145	5,784	7,848	2,064
Lime.....	1909	10	572	12	49	511	794	1,258	64	283	174	688	514
	1904	20	1,121	12	75	1,034	1,312	2,665	100	533	413	1,660	1,247
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Liquors, distilled.....	1909	9	851	1	100	750	3,908	7,500	201	479	9,209	55,200	45,991
	1904	11	762	3	67	692	4,055	5,450	131	407	6,406	54,102	47,096
	1899	20	402	6	58	338	.....	3,165	105	192	3,735	38,208	34,473
Liquors, malt.....	1909	106	5,361	25	938	4,398	27,900	56,141	1,699	3,473	7,033	28,449	21,416
	1904	110	4,881	51	4,033	4,777	26,012	39,003	1,409	5,004	6,271	23,787	18,536
	1899	94	3,894	47	578	3,269	17,511	32,798	1,041	2,000	4,036	19,734	15,688
Lumber and timber products.....	1909	814	19,025	825	1,033	16,567	52,015	29,778	1,961	9,110	27,264	44,952	17,688
	1904	591	16,909	611	1,172	15,126	44,347	21,651	1,303	7,424	18,222	32,741	14,519
	1899	706	.....	.....	683	11,809	.....	13,490	645	5,178	13,035	23,190	10,155
Marble and stone work.....	1909	278	2,821	324	271	2,226	5,003	4,689	369	1,766	3,030	6,771	3,741
	1904	176	2,431	212	179	2,040	3,422	3,252	244	1,435	2,140	5,892	3,252
	1899	200	.....	.....	222	2,044	.....	3,674	223	1,101	1,043	4,022	2,379
Mattresses and spring beds.....	1909	86	1,036	85	120	831	840	1,151	100	448	1,634	2,860	1,226
	1904	59	1,048	64	98	880	699	995	104	380	1,210	2,117	907
	1899	62	.....	.....	92	692	.....	646	70	314	702	1,651	859
Millinery and lace goods.....	1909	103	3,987	105	554	3,338	549	2,189	645	1,384	3,797	7,282	3,485
	1904	47	3,145	47	298	2,800	398	1,321	278	1,097	2,894	4,948	2,554
	1899	26	1,092	27	148	1,517	.....	516	135	396	1,042	2,103	1,061
Mirrors.....	1909	10	396	4	39	353	370	447	40	232	635	1,106	471
	1904	16	572	9	69	494	640	791	86	265	702	1,408	706
	1899	9	351	4	47	300	.....	430	50	145	568	900	332
Models and patterns, not including paper patterns.	1909	81	585	92	67	426	701	521	79	308	203	889	686
	1904	60	407	64	31	312	277	260	32	216	62	539	457
	1899	60	348	69	8	271	.....	252	7	153	69	375	306
Musical instruments and materials, not specified.	1909	30	425	35	54	330	208	512	57	201	178	629	451
	1904	28	559	27	41	491	255	641	51	302	207	674	467
	1899	27	479	25	24	430	.....	350	20	216	168	514	346
Musical instruments, pianos and organs and materials.	1909	68	9,628	18	833	8,777	8,123	27,719	1,215	5,006	8,642	19,176	10,534
	1904	56	8,265	18	739	7,508	6,869	10,471	858	3,632	5,398	13,823	7,925
	1899	45	5,092	33	389	4,670	4,424	11,166	486	2,392	3,323	8,156	4,333

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

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

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

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employes.	Wage earners (average number).							
Expressed in thousands.													
<b>STATE—Continued.</b>													
Paint and varnish.....	1909	74	2,906	31	1,083	1,792	7,108	\$15,725	\$1,657	\$1,114	\$12,902	\$20,434	\$7,532
	1904	63	1,979	19	684	1,276	5,068	11,340	987	771	8,656	13,325	4,069
	1899	52	1,425	18	518	889	3,231	5,733	703	473	5,653	8,178	2,525
Paper and wood pulp.....	1909	19	1,542	3	142	1,397	15,169	8,400	200	727	3,099	4,983	1,884
	1904	19	1,036	4	73	959	12,818	3,993	120	462	1,416	2,443	1,027
	1899	15	664	6	35	623	9,551	1,555	37	250	798	1,432	634
Paper goods, not elsewhere specified....	1909	46	1,659	27	315	1,317	869	2,260	331	546	1,997	3,779	1,782
	1904	47	1,095	29	131	935	412	933	130	330	745	1,632	887
	1899	21	638	18	57	563	.....	519	68	172	632	1,032	400
Patent medicines and compounds and druggists' preparations.	1909	359	3,902	249	1,784	1,869	3,234	7,989	1,766	805	4,413	13,114	8,701
	1904	312	3,428	237	1,323	1,868	1,545	7,062	1,208	818	3,438	13,320	9,882
	1899	256	2,348	221	823	1,304	.....	3,364	706	502	2,025	6,542	4,517
Photographic apparatus and materials.	1909	13	356	8	64	284	430	708	81	157	318	740	422
	1904	20	481	13	201	267	207	484	156	127	287	811	524
	1899	24	331	24	54	253	.....	254	35	113	194	638	444
Photo-engraving.....	1909	27	1,561	8	439	1,114	606	1,391	475	949	534	2,678	2,144
	1904	21	834	9	229	596	434	605	240	519	259	1,365	1,106
	1899	20	834	8	165	661	.....	359	171	449	155	1,061	906
Pottery, terra-cotta, and fire-clay products.	1909	39	3,474	23	294	3,157	7,995	14,901	383	1,885	1,126	4,615	3,489
	1904	45	2,710	34	260	2,416	5,915	6,608	329	1,244	732	3,256	2,524
	1899	53	2,199	41	153	2,005	4,980	3,612	201	841	576	2,144	1,568
Printing and publishing.....	1909	2,608	43,074	2,384	12,046	28,644	26,975	60,084	12,372	18,437	24,680	87,247	62,567
	1904	2,414	32,909	2,232	7,859	22,818	17,577	41,380	7,738	13,883	17,034	62,292	45,258
	1899	2,150	27,475	2,120	5,078	20,277	.....	28,125	4,537	9,873	11,211	43,327	32,116
Pumps, not including steam pumps.....	1909	14	348	7	59	282	328	664	68	179	328	659	331
	1904	15	323	8	44	271	502	709	56	170	208	603	395
	1899	5	190	2	27	161	.....	378	23	62	109	225	116
Scales and balances.....	1909	13	306	7	51	248	293	515	65	151	245	574	329
	1904	9	136	3	23	110	82	274	23	71	98	305	207
	1899	9	149	7	19	123	.....	214	20	57	89	308	219
Sewing machines, cases, and attachments.	1909	7	2,073	1	359	1,713	2,366	4,430	265	1,114	1,110	3,622	2,512
	1904	19	1,645	5	250	1,390	1,840	3,693	257	803	1,058	2,711	1,653
	1899	14	1,662	3	137	1,522	1,648	2,196	170	829	2,018	3,485	1,467
Shipbuilding, including boat building..	1909	23	470	24	33	413	1,113	2,061	34	252	199	584	385
	1904	21	322	20	14	288	1,191	1,694	17	179	118	414	296
	1899	17	343	19	13	311	.....	363	47	159	83	322	239
Show cases.....	1909	16	442	18	38	386	419	539	56	248	290	829	539
	1904	19	498	17	42	439	534	398	44	252	359	848	489
	1899	17	398	19	21	358	.....	280	20	191	299	631	332
Slaughtering and meat packing.....	1909	109	32,642	93	5,844	26,705	56,651	131,026	6,440	14,602	343,976	389,595	45,619
	1904	95	32,856	99	5,646	27,111	39,400	80,733	6,571	14,058	280,592	318,201	37,609
	1899	78	.....	.....	4,236	27,991	.....	71,394	4,432	14,115	247,215	288,672	41,467
Smelting and refining, zinc.....	1909	5	2,034	2	110	1,922	7,485	7,593	313	1,275	6,490	9,004	5,508
	1904	5	1,717	.....	74	1,643	5,187	2,876	140	884	3,900	5,426	1,626
	1899	5	1,631	.....	80	1,551	.....	3,186	222	759	4,417	5,883	1,466
Smelting and refining, not from the ore..	1909	11	423	4	50	369	1,763	1,603	108	207	3,234	3,930	696
	1904	9	274	3	21	250	1,642	1,479	42	125	1,586	1,976	390
	1899	6	50	5	6	39	.....	58	7	24	213	296	83
Soap.....	1909	34	3,408	20	1,200	2,188	5,155	11,694	1,356	1,053	13,948	20,181	6,233
	1904	34	2,497	24	568	1,905	3,519	7,604	640	887	9,345	14,157	4,812
	1899	39	1,987	38	393	1,556	.....	6,629	453	560	6,033	9,436	3,403
Stereotyping and electrotyping.....	1909	21	747	13	142	592	725	777	187	472	316	1,282	966
	1904	20	812	8	110	685	506	666	139	547	229	1,205	876
	1899	15	515	9	51	455	.....	344	68	299	94	673	579
Stoves and furnaces, including gas and oil stoves.	1909	71	5,223	28	696	4,499	4,983	9,863	876	2,957	3,856	10,287	6,431
	1904	60	4,350	25	417	3,908	4,623	7,543	520	2,358	2,815	7,867	5,052
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Surgical appliances and artificial limbs.	1909	29	820	19	265	536	595	1,674	372	285	921	2,090	1,178
	1904	29	560	20	107	433	239	615	149	178	411	1,010	599
	1899	27	289	20	77	192	.....	234	105	87	170	525	355
Tobacco manufactures.....	1909	1,944	10,707	2,127	546	8,034	878	12,794	818	4,216	8,603	21,870	13,267
	1904	1,825	6,874	2,032	371	7,471	618	9,102	315	3,738	5,995	16,062	10,067
	1899	1,519	7,856	1,658	306	5,892	.....	4,109	315	2,670	4,189	11,909	7,720
Type founding and printing materials..	1909	19	588	9	141	438	391	1,852	201	303	375	1,248	873
	1904	17	574	15	127	432	314	2,111	139	293	321	1,168	847
	1899	10	533	4	86	443	.....	565	91	246	360	1,257	897
Wall paper.....	1909	5	389	2	97	299	492	1,140	120	173	702	1,367	665
	1904	7	320	.....	54	206	491	851	76	139	666	1,094	428
	1899	3	.....	.....	38	146	.....	222	32	84	271	532	261
Woolen, worsted, and felt goods, and wool hats.	1909	9	543	6	38	499	1,342	1,063	75	237	773	1,314	541
	1904	9	491	8	37	446	1,150	1,030	53	162	495	783	288
	1899	213	747	4	50	693	1,229	1,572	69	210	492	933	441
All other industries.....	1909	1,751	51,450	1,350	8,830	41,270	107,835	191,102	11,011	23,535	144,990	223,763	78,773
	1904	1,445	41,373	1,243	6,215	33,915	90,453	99,844	6,639	18,028	101,285	150,137	48,852
	1899	1,481	.....	.....	3,735	29,996	.....	106,212	3,927	13,373	83,144	127,440	44,296

<sup>1</sup> Excluding statistics for two establishments, to avoid disclosure of individual operations.

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

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

MANUFACTURES—ILLINOIS.

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

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

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employes.	Wage earners (average number).							
Expressed in thousands.													
CHICAGO—All industries.....	1909	9,656	356,954	8,156	54,821	293,977	525,236	\$971,841	\$65,925	\$174,112	\$793,470	\$1,281,171	\$487,701
	1904	8,159	289,529	7,269	40,278	241,984		637,743	45,601	136,405	589,914	955,033	365,122
	1899	7,668			32,408	221,181		511,249	32,068	108,727	502,222	797,879	296,667
Artificial stone.....	1909	19	192	20	22	150	82	240	21	104	140	359	210
	1904	3	18	3	3	12		8	2	8	5	19	14
	1899												
Automobiles, including bodies and parts.	1909	41	1,725	17	248	1,400	734	2,094	305	1,131	1,707	3,040	2,233
	1904	11	190	7	17	106		399	28	106	111	354	243
	1899												
Bags, other than paper.....	1909	6	213	4	20	189	157	576	24	175	685	965	280
	1904	4	150	2	21	127		104	21	47	542	809	107
	1899	4	127	4	17	106		94	11	30	369	547	178
Baking powders and yeast.....	1909	16	940	8	410	522	1,142	5,873	447	304	2,888	7,009	4,121
	1904	10	804	14	145	645		3,718	200	317	1,481	3,800	2,469
	1899	14	603	7	154	442		1,163	229	153	1,284	3,336	2,052
Baskets, and rattan and willow ware.....	1909	10	52	11	1	41	10	29		26	34	81	47
	1904	10	68	11	1	50		31	2	27	30	80	59
	1899	8		6	6	51		49	4	28	21	70	49
Belting and hose, leather.....	1909	11	403	9	161	233	430	1,279	183	165	1,385	2,188	803
	1904	10	226	6	63	157		833	82	96	617	1,055	438
	1899	8	326	2	63	231		640	71	108	893	1,301	468
Boots and shoes, including out stock and findings.	1909	31	3,326	29	270	3,027	1,103	3,881	325	1,020	6,045	9,855	3,810
	1904	35	2,651	33	172	2,446		2,311	208	1,311	4,138	6,559	2,421
	1899	45	3,245	51	202	2,902		1,788	239	1,431	4,422	6,814	2,392
Boxes, cigar.....	1909	9	348	9	35	304	214	292	40	125	258	541	283
	1904	10	380	10	26	344		188	28	130	198	478	280
	1899	9	327	7	28	292		153	26	94	204	399	195
Boxes, fancy and paper.....	1909	48	3,984	22	353	3,609	1,575	3,118	400	1,311	2,232	5,044	2,812
	1904	39	2,541	24	193	2,324		1,557	217	809	1,324	2,825	1,501
	1899	38	2,505	25	159	2,381		1,455	158	771	1,427	2,923	1,406
Brass and bronze products.....	1909	56	1,430	38	225	1,167	1,099	2,492	304	810	3,256	5,131	1,865
	1904	43	1,092	37	108	889		1,940	195	534	1,825	3,195	1,370
	1899	44	923	38	97	788		944	114	421	1,088	2,703	1,015
Bread and other bakery products.....	1909	1,177	8,842	1,240	1,159	6,437	3,847	20,000	1,148	4,146	16,280	20,908	10,628
	1904	852	7,216	889	532	5,795		11,191	499	3,240	11,132	20,054	9,522
	1899	710	6,007	740	338	4,423		5,940	631	2,051	6,560	12,763	6,203
Brick and tile.....	1909	7	657	6	39	612	3,225	2,210	62	559	210	1,172	902
	1904	26	853	3	70	780		3,304	121	585	309	1,573	1,264
	1899	22	441	34	18	889		923	23	187	77	434	357
Brooms and brushes.....	1909	56	616	60	59	497	263	690	66	281	918	1,560	642
	1904	62	489	61	33	395		342	35	205	530	1,048	518
	1899	67	506	71	27	408		291	29	199	422	805	443
Buttons.....	1909	18	231	14	27	190	39	151	26	72	139	335	106
	1904	11	68	17	4	47		27	2	16	22	71	49
	1899	7	70	8	3	59		22	1	24	30	82	52
Calcium lights.....	1909	3	12	1	4	7	10	29	4	5	19	27	18
	1904	3	14	1	6	7		7	5	5	6	24	18
	1899	3	12	1	4	7		15	4	4	9	34	25
Canning and preserving.....	1909	47	1,107	41	162	904	1,274	2,058	203	395	2,533	3,827	1,294
	1904	50	1,208	54	144	1,010		2,124	153	440	2,398	3,882	1,484
	1899	40			240	914		1,137	151	322	2,323	3,545	1,222
Carpets, rag.....	1909	25	205	24	18	163	73	87	14	68	43	206	163
	1904	39	219	42	12	165		128	10	84	32	212	180
	1899	52	284	61	10	213		59	7	90	28	204	176
Carriages and wagons and materials.....	1909	126	2,263	139	159	1,965	3,022	7,816	194	1,253	2,602	5,203	2,601
	1904	122	2,108	138	141	1,829		4,466	200	1,093	1,812	4,076	2,264
	1899	97			99	1,569		3,406	111	839	1,355	3,036	1,681
Cars and general shop construction and repairs by steam-railroad companies.	1909	22	11,562		503	11,059	7,232	9,558	567	7,305	7,310	15,359	8,049
	1904	22	9,082		490	8,592		7,582	465	5,792	4,993	11,172	6,179
	1899	24	7,094		307	6,787		6,779	301	3,708	4,030	8,185	4,155
Cars and general shop construction and repairs by street-railroad companies.	1909	7	1,721		57	1,664	1,584	3,061	64	1,069	1,520	2,758	1,238
	1904	8	1,011		26	985		1,061	27	641	403	1,110	707
	1899	9	890		24	866		705	25	497	517	1,076	559
Cars, steam-railroad, not including operations of railroad companies.	1909	18	9,226		673	8,553	14,576	29,730	787	6,387	11,620	20,892	9,272
	1904	11	7,606		547	7,059		11,535	621	4,897	15,761	23,799	8,038
	1899	13	7,800		211	7,589		14,482	240	4,474	13,007	19,108	6,011
Chemicals.....	1909	10	218	2	73	143	780	887	92	92	598	1,149	551
	1904	8	445	2	92	351		2,974	151	223	1,026	1,724	688
	1899	13	457	9	51	397		1,491	63	223	746	1,382	636
Clocks and watches, including cases and materials.	1909	5	145	3	33	109	26	421	44	60	282	445	163
	1904	3	58	2	11	45		39	14	32	34	147	113
	1899	6	77	6	17	54		78	11	27	40	111	71

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

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

MANUFACTURES—ILLINOIS.

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

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

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).							
Expressed in thousands.													
<b>CHICAGO—Continued.</b>													
Cloth, sponging and refinishing.....	1909	6	106	4	11	91	36	\$31	\$13	\$52	\$1	\$119	\$118
	1904	5	73	4	5	64	.....	19	7	47	3	90	87
	1899	5	64	4	6	54	.....	13	7	29	2	55	53
Clothing, men's, including shirts.....	1909	678	38,370	830	3,925	33,615	2,916	36,521	4,292	15,777	42,768	85,296	42,528
	1904	593	23,163	723	2,785	19,655	.....	18,512	2,975	9,706	26,655	54,626	27,971
	1899	905	.....	.....	1,710	15,019	.....	13,527	1,827	5,957	18,447	37,847	19,400
Clothing, women's.....	1909	204	6,666	254	797	5,615	698	5,193	915	2,997	8,658	15,677	7,019
	1904	174	5,217	239	670	4,398	.....	3,304	680	2,083	6,011	11,637	5,626
	1899	151	4,708	197	523	3,988	.....	2,793	575	1,400	4,685	9,208	4,523
Coffee and spice, roasting and grinding..	1909	32	1,775	22	747	1,006	2,575	8,698	1,078	521	14,969	10,593	4,624
	1904	23	1,341	21	380	940	.....	6,440	467	425	12,319	15,563	3,244
	1899	25	1,474	19	533	922	.....	5,196	563	369	9,937	12,612	2,675
Coffins, burial cases, and undertakers' goods.	1909	13	733	5	152	576	828	1,721	270	339	764	1,838	1,074
	1904	10	576	8	97	471	.....	986	117	236	632	1,297	665
	1899	8	453	9	58	388	.....	473	61	207	610	1,005	395
Confectionery.....	1909	87	3,865	53	571	3,241	3,045	5,275	638	1,250	6,703	11,222	4,510
	1904	62	3,378	44	381	2,953	.....	3,143	362	1,018	3,594	6,550	2,956
	1899	51	.....	.....	406	2,586	.....	1,971	320	713	3,332	5,718	2,380
Cooperage and wooden goods, not elsewhere specified.	1909	37	1,269	32	71	1,166	1,984	1,860	110	601	2,188	3,368	1,180
	1904	54	1,436	61	89	1,286	.....	1,591	101	623	2,135	3,406	1,271
	1899	57	1,474	64	69	1,341	.....	1,249	63	555	1,850	2,912	1,062
Copper, tin, and sheet-iron products....	1909	268	4,610	256	495	3,859	2,850	12,216	659	2,472	6,463	12,242	5,779
	1904	170	3,885	167	371	3,347	.....	8,712	510	1,933	3,957	8,137	4,180
	1899	161	.....	.....	233	3,606	.....	4,382	270	1,741	4,952	8,425	3,473
Corsets.....	1909	10	1,124	5	114	1,005	120	925	150	340	705	1,779	1,074
	1904	11	472	12	22	438	.....	179	26	175	192	559	367
	1899	15	370	17	24	329	.....	172	20	83	161	395	234
Cutlery and tools, not elsewhere specified	1909	53	1,167	43	142	932	1,499	1,796	200	554	680	1,895	1,215
	1904	37	721	37	45	639	.....	946	50	238	348	946	698
	1899	24	228	22	31	175	.....	518	13	87	86	278	192
Dairymen's, poulterers', and apiarists' supplies.	1909	7	70	5	16	49	79	179	21	37	147	340	193
	1904	5	36	4	14	18	.....	90	12	10	199	271	72
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dentists' materials.....	1909	10	85	5	32	43	36	72	28	36	115	232	117
	1904	8	98	7	13	78	.....	190	12	36	24	115	61
	1899	9	123	9	8	106	.....	143	9	40	71	173	102
Electrical machinery, apparatus, and supplies.	1909	123	7,333	45	1,192	6,096	6,443	10,624	1,370	3,860	11,405	20,669	9,264
	1904	96	7,564	38	1,599	5,927	.....	21,271	1,367	3,099	7,501	16,292	8,791
	1899	71	6,951	51	1,113	5,787	.....	11,216	611	2,711	4,283	11,368	7,075
Electroplating.....	1909	34	374	40	24	310	422	181	25	214	107	484	377
	1904	23	282	27	21	234	.....	101	19	142	54	327	273
	1899	26	.....	.....	19	301	.....	75	20	134	53	302	249
Fancy articles, not elsewhere specified..	1909	40	603	29	136	438	210	641	139	218	568	1,289	721
	1904	33	929	23	120	781	.....	711	137	332	650	1,064	1,008
	1899	39	.....	.....	79	376	.....	281	52	152	365	791	426
Fire extinguishers, chemical.....	1909	5	54	2	24	28	11	110	56	15	62	164	102
	1904	4	23	3	2	18	.....	10	4	14	25	66	31
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Foundry and machine-shop products....	1909	669	36,868	338	5,475	31,055	54,876	90,050	7,308	20,490	40,755	89,660	48,914
	1904	582	33,378	349	4,237	28,792	.....	68,558	5,407	17,772	28,558	68,491	39,933
	1899	593	29,130	450	2,663	26,017	.....	45,369	3,116	14,296	26,883	57,721	30,838
Fur goods.....	1909	59	455	53	89	308	59	959	108	225	1,060	1,903	843
	1904	34	399	33	43	318	.....	514	67	198	816	1,421	605
	1899	33	.....	.....	82	706	.....	743	77	322	1,257	2,319	1,062
Furnishing goods, men's.....	1909	38	2,273	38	330	1,905	562	2,340	393	820	3,877	6,122	2,245
	1904	31	1,542	41	219	1,282	.....	1,618	157	488	2,131	3,593	1,372
	1899	30	1,932	40	148	1,744	.....	985	130	531	2,045	3,335	1,290
Furniture and refrigerators.....	1909	202	11,097	144	1,077	9,876	14,371	16,373	1,454	6,026	9,096	20,512	11,416
	1904	157	10,702	120	872	9,710	.....	13,607	1,037	5,386	7,537	17,662	10,125
	1899	119	8,792	107	735	7,950	.....	8,114	755	3,703	5,397	12,519	7,122
Gas and electric fixtures and lamps and reflectors.	1909	63	2,068	30	436	1,602	1,060	2,705	588	914	2,124	4,683	2,559
	1904	40	1,143	30	183	930	.....	1,422	204	532	1,009	2,485	1,476
	1899	48	704	41	165	598	.....	746	152	306	653	1,630	977
Gloves and mittens, leather.....	1909	25	1,223	29	85	1,109	570	900	130	441	1,308	2,181	873
	1904	21	1,139	27	63	1,049	.....	506	62	390	749	1,511	762
	1899	22	1,533	20	79	1,559	.....	624	75	606	1,085	2,240	1,155
Gold and silver, leaf and foil.....	1909	7	169	6	10	143	13	65	15	61	128	226	98
	1904	5	154	6	8	140	.....	52	9	74	100	223	123
	1899	5	101	5	2	94	.....	41	1	44	101	178	77
Grease and tallow.....	1909	10	773	7	117	649	2,207	2,181	187	452	3,781	4,948	1,167
	1904	13	652	10	82	550	.....	1,130	99	371	1,417	2,303	886
	1899	9	335	9	57	299	.....	606	52	161	1,677	1,922	345

<sup>1</sup> Excluding statistics for two establishments, to avoid disclosure of individual operations.

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

<sup>3</sup> Figures can not be shown without disclosing individual operations.

<sup>4</sup> Excluding statistics for one establishment, to avoid disclosure of individual operations.

MANUFACTURES—ILLINOIS.

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

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employ-ees.	Wage earners (average number).							
Expressed in thousands.													
<b>CHICAGO—Continued.</b>													
Hand stamps and stenoids and brands...	1909	27	273	29	72	172	100	\$287	\$57	\$101	\$167	\$467	\$300
	1904	25	263	24	47	222	-----	261	27	134	84	363	279
	1899	24	285	20	37	238	-----	248	30	113	128	452	324
Hats and caps, other than felt, straw, and wool.	1909	38	574	48	63	463	61	280	64	267	479	1,046	567
	1904	35	510	51	23	436	-----	175	17	253	536	1,027	491
	1899	48	521	48	44	420	-----	321	37	214	479	952	473
Hosiery and knit goods.....	1909	29	837	36	58	743	137	908	90	289	783	1,477	694
	1904	30	828	38	21	709	-----	595	22	262	621	1,300	688
	1899	19	615	13	22	580	-----	321	26	148	319	647	328
Ice, manufactured.....	1909	6	229	-----	23	206	3,024	1,136	42	153	126	569	443
	1904	3	183	3	52	133	-----	341	47	78	87	340	262
	1899	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Ink, printing.....	1909	7	86	3	45	38	185	254	72	25	164	415	251
	1904	6	64	4	27	33	-----	133	37	17	99	257	153
	1899	7	35	7	14	14	-----	100	9	8	59	96	37
Iron and steel, steel works and rolling mills.	1909	6	7,689	-----	706	6,983	79,456	32,577	978	5,603	29,023	45,984	16,961
	1904	5	5,695	-----	508	5,087	-----	16,913	638	3,626	16,711	24,340	8,129
	1899	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Jewelry.....	1909	55	1,169	55	204	610	294	1,574	104	606	1,218	2,635	1,417
	1904	41	892	40	133	710	-----	825	123	455	798	1,740	948
	1899	31	597	37	76	484	-----	754	82	341	802	1,601	769
Lapidary work.....	1909	3	18	2	2	14	6	34	1	13	53	88	35
	1904	4	28	5	4	19	-----	52	3	18	52	140	68
	1899	4	20	4	2	20	-----	50	2	12	99	140	50
Leather goods.....	1909	90	2,581	90	307	2,178	804	2,877	367	1,174	3,280	5,861	2,581
	1904	32	2,354	74	258	2,022	-----	2,421	269	1,070	2,492	5,023	2,531
	1899	72	-----	193	2,023	-----	-----	1,876	209	885	2,078	3,558	1,780
Leather, tanned, curried, and finished..	1909	24	2,841	23	144	2,074	6,212	14,486	242	1,418	10,738	13,244	2,456
	1904	23	2,577	18	80	2,479	-----	10,749	111	1,133	7,133	9,420	2,287
	1899	22	2,128	20	61	2,047	-----	4,075	130	1,061	5,142	6,079	1,837
Liquors, malt.....	1909	45	3,450	2	581	2,867	15,066	29,385	1,145	2,378	4,850	19,512	14,662
	1904	56	3,314	11	540	2,763	-----	23,353	1,004	2,127	3,529	16,933	13,454
	1899	37	2,670	9	389	2,272	-----	25,525	812	1,508	2,959	14,057	11,998
Lumber and timber products.....	1909	195	11,080	119	1,690	10,462	25,917	17,695	1,448	6,149	20,768	32,709	11,941
	1904	154	8,000	106	700	7,794	-----	11,431	845	4,013	11,763	19,808	8,045
	1899	128	6,153	128	359	5,006	-----	6,249	381	2,069	6,500	11,536	4,976
Marble and stone work.....	1909	107	1,640	108	144	1,388	3,002	2,557	230	1,137	1,714	3,930	2,216
	1904	73	1,637	97	103	1,337	-----	1,872	170	961	1,244	3,356	2,112
	1899	71	-----	106	1,103	-----	-----	1,572	130	708	735	2,061	1,326
Mattresses and spring beds.....	1909	58	835	53	90	683	495	837	135	371	1,349	2,377	1,028
	1904	46	874	45	74	755	-----	802	83	331	1,011	1,753	742
	1899	49	723	56	71	506	-----	523	60	284	705	1,488	783
Models and patterns, not including paper patterns.	1909	56	435	63	50	322	494	362	47	227	161	637	526
	1904	49	351	52	20	273	-----	222	29	197	75	494	419
	1899	49	304	58	8	238	-----	223	7	142	65	342	277
Musical instruments and materials, not specified.	1909	27	418	33	53	332	200	502	57	199	172	614	442
	1904	24	547	22	41	484	-----	623	51	269	206	693	457
	1899	20	471	22	24	425	-----	347	20	214	106	507	341
Musical instruments, pianos and organs and materials.	1909	37	5,792	12	571	5,209	4,677	17,335	812	3,034	4,848	11,487	6,639
	1904	32	5,383	11	486	4,886	-----	10,318	603	2,710	3,416	8,488	5,072
	1899	30	4,415	21	337	4,067	-----	9,740	425	2,034	2,730	6,802	4,072
Paint and varnish.....	1909	61	2,667	27	1,034	1,606	5,837	13,830	1,587	996	11,846	18,042	7,097
	1904	52	1,842	13	634	1,195	-----	9,793	940	725	8,262	12,665	4,463
	1899	46	1,385	16	593	806	-----	5,421	690	462	5,697	8,096	2,489
Paper goods, not elsewhere specified....	1909	41	1,255	27	271	957	607	1,367	200	410	1,393	2,831	1,438
	1904	29	508	19	66	423	-----	435	69	154	325	781	456
	1899	17	401	10	40	345	-----	185	41	104	211	455	244
Patent medicines and compounds and druggists' preparations.	1909	273	3,011	179	1,490	1,301	2,030	5,377	1,512	632	3,210	10,360	7,144
	1904	243	2,949	173	1,212	1,564	-----	5,820	1,119	675	2,833	11,942	9,169
	1899	204	2,031	168	734	1,129	-----	2,821	640	448	1,745	5,921	4,176
Photographic apparatus and materials..	1909	13	356	8	64	284	430	708	81	157	318	740	422
	1904	19	473	13	290	260	-----	463	159	124	282	802	520
	1899	18	215	21	41	153	-----	169	25	70	156	494	338
Photo-engraving.....	1909	21	1,156	4	304	878	405	902	341	848	422	2,150	1,734
	1904	18	800	5	224	571	-----	563	236	507	254	1,324	1,070
	1899	20	834	8	165	661	-----	359	171	449	155	1,061	906
Printing and publishing.....	1909	1,395	33,439	1,065	10,048	22,326	20,162	47,982	10,725	15,077	21,255	74,211	52,055
	1904	1,262	25,147	983	6,700	17,404	-----	33,083	6,836	11,279	14,872	53,033	38,161
	1899	1,093	20,845	946	4,482	15,417	-----	22,336	4,033	7,962	9,357	36,238	26,881

<sup>1</sup> Figures can not be shown without disclosing individual operations.  
<sup>2</sup> Not reported separately.  
<sup>3</sup> Excluding statistics for one establishment, to avoid disclosure of individual operations.  
<sup>4</sup> Excluding statistics for two establishments, to avoid disclosure of individual operations.

THE STATE, BY INDUSTRIES: 1909.

Capital.	EXPENSES.										Value of products.	Value added by manu- facture.
	Total.	Services.			Materials.		Miscellaneous.					
		Officials.	Clerks.	Wage earners.	Fuel and rent of power.	Other.	Rent of factory.	Taxes, including internal revenue.	Contract work.	Other.		
1 \$1,548,170,701	\$1,733,327,352	\$38,128,168	\$53,320,948	\$273,319,005	\$48,194,400	\$1,112,732,280	\$11,163,287	\$57,023,503	\$13,625,794	\$125,829,989	\$1,919,276,594	\$758,349,904
2 110,905,187	44,148,098	1,226,127	1,406,096	11,718,384	797,022	24,020,185	8,315	358,174	15,631	4,590,664	57,268,325	32,444,218
3 174,548	332,502	6,970	13,882	85,975	2,000	146,931	17,082	580	520	57,682	400,030	287,099
4 1,236,408	1,123,179	31,639	7,043	439,214	10,548	506,363	11,137	4,358	1,311	50,006	1,488,299	911,388
5 4,083,973	6,774,357	207,622	158,547	1,053,186	61,312	3,917,807	96,973	12,110	70,947	535,853	7,032,818	3,174,699
6 1,409,799	3,817,767	89,838	71,447	108,517	22,617	3,351,255	4,616	8,450		101,008	4,145,780	771,917
7 575,574	895,618	14,500	9,060	175,042	4,060	680,973	4,442	1,453		5,488	965,442	280,409
8 1,690,925	1,028,829	22,492	32,980	98,899	9,804	757,091	756	3,377		103,430	1,123,610	356,715
9 6,819,498	6,017,782	107,123	342,250	346,259	83,239	3,227,629	29,367	20,138		1,851,787	7,632,063	4,371,195
10 40,675	80,046			30,296	413	44,115	3,020	330		1,806	101,472	56,944
11 1,279,476	2,051,612	64,586	118,499	164,630	16,632	1,808,036	30,755	2,935		285,733	2,187,555	802,987
12 1,276,356	1,755,516	25,322	53,072	600,233	19,099	954,033	9,271	3,088	1,080	90,318	1,777,464	804,332
13 381,023	350,957	15,490	26,500	87,000	5,813	163,022	2,220	1,378		66,944	403,163	243,428
14 516,686	997,542	53,909	98,833	122,922	7,385	592,016	17,249	2,270	30	132,878	1,220,961	600,500
15 15,277	52,649	1,800	578	7,802	247	31,816	3,012	58		6,370	66,949	34,886
16 7,699,620	15,486,947	298,955	400,916	3,142,012	109,865	10,761,977	81,340	23,920	4,170	604,892	10,764,704	5,885,892
17 358,050	581,030	20,880	30,357	158,099	8,672	308,414	10,153	1,395	1,000	33,000	664,409	347,383
18 3,813,498	5,050,611	249,707	197,198	1,601,273	64,233	2,947,314	123,413	19,509	25,000	525,961	6,349,621	3,338,074
19 4,055,823	6,180,929	250,033	176,238	1,130,179	95,743	4,051,802	61,443	11,746	2,840	395,105	6,841,735	2,694,190
20 24,224,216	30,899,184	304,629	981,980	5,494,607	672,880	20,933,099	629,595	103,443	1,064	1,717,887	30,117,980	14,512,007
21 18,495,247	8,285,610	347,258	118,882	4,380,001	1,805,102	886,256	13,897	79,548	33,094	815,572	9,765,651	7,273,093
22 722,783	1,248,515	27,500	64,042	235,099	5,758	820,038	9,336	2,061	8,885	65,400	1,404,896	630,100
23 497,181	874,123	25,349	18,700	180,370	4,316	549,830	10,748	1,680		83,067	964,850	410,704
24 7,819,995	16,486,553	176,463	222,812	942,206	259,306	14,007,625	20,150	34,180	225	823,590	17,978,278	3,531,357
25 262,004	557,542	16,231	14,056	240,892	7,187	229,350	8,328	514	10,015	24,309	675,981	439,444
26 29,265	32,385	2,800	1,240	5,292	250	10,130	1,740	60		1,807	20,729	7,343
27 5,629,637	6,704,951	201,452	165,382	903,632	73,393	4,739,303	65,786	26,037	10,383	518,083	7,610,686	2,806,890
28 178,701	249,365	12,034	9,080	115,229	8,943	56,143	12,818	804	700	32,645	340,700	275,713
29 17,858,786	14,810,098	343,145	300,393	3,688,016	182,208	9,207,007	105,592	85,148	4,805	903,634	16,831,283	7,351,948
30 18,722,338	32,230,134	553,697	741,000	15,287,571	943,716	14,289,000		95,395	27	325,608	32,220,243	10,000,467
31 3,885,611	3,439,334	80,470	42,391	1,395,029	44,004	1,793,238	1,250	24,905	554	87,427	3,450,643	1,643,341
32 37,934,778	25,685,593	509,012	494,720	7,823,919	493,240	14,872,742	92,441	133,282	277,851	1,020,456	27,001,092	11,665,110
33 6,686,567	3,197,433	83,855	181,086	854,797	709,399	900,440	15,520	14,823		427,940	4,087,607	2,488,608
34 4,639,170	3,927,458	88,888	92,443	631,315	205,714	2,600,686	6,607	8,839	4,190	290,408	4,650,274	1,700,474
35 12,411,573	6,819,648	143,516	162,117	3,217,140	46,745	1,642,706	0,098	70,233	148	531,936	7,045,276	5,356,824
36 30,806	93,072	6,820	5,088	51,324	672	13,300		201		14,567	119,290	118,624
37 38,762,929	80,393,885	1,314,012	3,170,394	16,580,002	280,747	44,947,533	800,744	77,358	5,250,046	7,858,449	80,472,755	44,244,475
38 5,567,194	14,992,614	334,753	651,855	3,151,998	54,109	9,169,417	282,251	15,434	502,014	840,783	16,635,236	7,421,710
39 8,751,861	18,352,146	257,183	822,389	524,800	87,949	15,025,755	152,953	40,697	33,183	1,407,188	19,751,188	4,637,484
40 2,088,863	2,042,393	103,521	201,777	405,910	16,545	965,835	24,086	10,802	5,150	399,297	2,259,783	1,277,403
41 6,094,450	11,214,399	248,102	522,742	1,428,045	116,187	7,549,211	184,909	21,497	1,105	1,101,032	12,798,077	5,132,679
42 4,462,842	6,137,357	184,461	64,263	1,126,580	62,667	4,416,811	24,248	17,978	6,373	234,136	6,610,969	2,131,651
43 81,018,411	20,300,274	588,053	499,565	4,314,684	213,683	12,979,480	219,785	81,528	14,251	1,389,245	22,822,810	9,029,647
44 13,014,494	6,888,306	66,968	24,058	669,584	66,222	5,875,409	3,000	50,079		142,386	8,237,165	2,295,534
45 180,918	207,433	16,040	6,524	44,071	2,855	110,714	7,740	649		12,840	238,468	118,899
46 1,306,114	2,286,612	77,999	132,378	524,530	14,857	1,180,498	26,796	2,585		321,139	2,711,213	1,515,888
47 1,979,075	1,896,952	60,860	44,043	522,073	80,720	1,071,204	18,800	9,620		189,542	2,111,208	1,009,194
48 2,455,288	2,363,064	155,942	120,180	760,385	53,280	1,018,883	33,484	11,034	985	208,885	2,757,762	1,685,593
49 859,129	978,164	27,878	31,130	178,338	10,006	595,436	8,560	2,914	2,627	161,280	1,180,898	605,456
50 71,764	201,740	13,000	14,874	36,043	1,639	113,103	6,653	339		16,089	231,884	117,142
51 24,201,532	24,937,552	762,884	1,806,742	6,412,671	235,039	13,395,080	200,879	159,782	37,172	2,315,277	20,826,177	13,197,729
52 289,762	562,107	23,110	7,739	245,432	15,920	210,402	29,510	1,115		28,879	696,572	470,260
53 84,866	119,180	9,662	10,766	19,784	1,489	43,415	4,640	197		29,246	155,318	110,423
54 14,066	40,230	1,992		14,745	1,547	15,632	2,629	57		3,337	45,068	27,579
55 1,561,612	2,250,894	28,630	15,190	189,538	29,226	906,036	2,150	4,414	1,593	76,157	1,469,469	534,177
56 659,251	1,119,375	67,122	73,075	221,757	7,788	596,598	31,294	1,209	24,672	125,930	1,810,861	745,585
57 84,200	86,973	2,240	1,970	49,081	3,009	28,200	1,172	744	200	4,391	99,522	72,353
58 109,771	142,038	10,340	37,050	14,596	166	61,750	3,318	83		5,795	164,437	102,521
59 189,844	142,939	21,990	4,916	38,548	745	66,522	470	1,037		8,711	142,973	75,706
60 383,331	576,368	18,136	39,445	111,923	3,894	309,301	11,181	1,008	12,110	69,310	675,845	392,500
61 18,453,727	48,862,744	488,994	316,182	1,271,182	330,242	45,259,329	25,140	87,392	546	1,073,827	51,110,681	5,521,110
62 143,276,987	123,396,892	5,413,640	5,306,986	33,156,824	2,689,463	91,120,725	1,065,152	589,672	1,050,200	12,095,230	138,578,993	74,768,805
63 971,515	1,584,835	49,408	50,403	220,532	3,206	1,067,726	71,349	1,976	20,370	81,865	1,929,470	858,538
64 2,881,103	6,720,981	170,894	255,018	1,014,719	17,084	4,555,098	83,040	17,676	16,969	594,093	7,213,437	2,640,355
65 22,383,174	25,169,458	887,571	897,002	8,090,083	317,015	12,183,805	313,768	110,333	55,147	2,328,734	27,000,262	15,399,042
66 3,657,969	5,102,485	381,241	280,240	1,184,283	44,024	2,649,280	89,950	10,800	10,459	445,898	5,797,873	3,103,169
67 131,789,940	13,938,452	631,084	935,387	2,967,342	5,394,978	814,700	580,035	926,147	3,725	1,684,148	21,052,100	14,842,416

\* Same number reported for one or more other months.

MANUFACTURES—ILLINOIS.

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

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

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employ-ees.	Wage earners (average number).							
Expressed in thousands.													
<b>PEORIA—All industries</b> .....	1909	283	7,323	242	1,100	5,981	16,266	\$24,945	\$1,331	\$3,552	\$17,773	\$83,061	\$45,288
	1904	263	6,787	227	786	5,834	.....	20,513	815	3,209	15,835	60,420	44,585
	1899	291	.....	.....	686	5,086	.....	26,638	708	2,872	12,985	44,509	31,584
Bread and other bakery products.....	1909	30	274	39	41	194	172	289	22	104	482	704	282
	1904	40	237	41	24	172	.....	436	20	81	430	600	230
	1899	42	200	42	37	211	.....	301	13	76	325	562	237
Carriages and wagons and materials....	1909	8	78	9	6	63	62	100	4	41	69	141	72
	1904	* 6	125	6	5	114	.....	199	6	57	128	211	83
	1899	* 8	.....	.....	8	127	.....	154	7	57	141	243	102
Cooperage and wooden goods, not elsewhere specified.	1909	5	543	2	27	514	910	935	50	172	840	1,153	313
	1904	4	466	2	17	447	.....	636	38	176	984	1,288	304
	1899	4	773	1	22	750	.....	872	34	356	776	1,325	549
Copper, tin, and sheet-iron products....	1909	9	283	12	32	239	195	415	33	130	453	684	231
	1904	10	215	7	27	181	.....	210	26	90	211	395	184
	1899	8	.....	.....	17	133	.....	184	14	59	143	301	158
Flour-mill and gristmill products.....	1909	4	54	6	14	34	320	199	9	22	640	759	119
	1904	3	47	5	10	32	.....	282	10	19	487	594	107
	1899	3	.....	.....	3	28	.....	176	7	15	384	481	97
Foundry and machine-shop products...	1909	20	488	10	58	420	986	915	75	315	515	1,082	567
	1904	19	463	16	49	398	.....	804	48	221	298	786	488
	1899	25	.....	.....	80	440	.....	729	85	214	610	1,130	520
Leather goods.....	1909	4	55	7	11	37	10	30	6	24	21	72	51
	1904	3	59	4	8	47	.....	140	9	30	68	151	83
	1899	* 6	.....	.....	6	63	.....	112	5	20	93	109	76
Liquors, distilled.....	1909	4	652	.....	70	582	3,367	5,959	149	380	7,478	44,570	37,092
	1904	6	507	.....	36	561	.....	4,515	72	323	4,944	42,171	37,227
	1899	11	246	.....	33	213	.....	2,467	53	124	2,554	26,792	24,238
Liquors, malt.....	1909	3	228	.....	31	197	990	2,211	81	143	199	1,101	902
	1904	3	132	.....	22	110	.....	1,196	34	79	184	888	704
	1899	3	115	.....	20	89	.....	848	35	47	112	531	419
Lumber and timber products.....	1909	6	190	7	17	166	458	366	20	120	184	308	214
	1904	5	169	5	9	155	.....	242	9	95	177	325	148
	1899	3	99	.....	2	59	.....	118	7	32	88	158	70
Models and patterns, not including paper patterns.	1909	4	10	5	.....	11	24	15	.....	9	2	21	19
	1904	3	12	2	1	9	.....	11	1	7	1	15	14
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Printing and publishing.....	1909	32	513	25	163	325	410	606	167	209	221	881	660
	1904	26	390	20	81	280	.....	432	78	165	168	608	442
	1899	* 20	375	30	86	259	.....	392	64	137	159	543	384
Tobacco manufactures.....	1909	36	360	41	20	308	.....	273	15	204	240	647	407
	1904	43	338	45	17	270	.....	233	12	155	162	479	317
	1899	32	270	35	4	240	.....	150	3	133	117	357	240
All other industries.....	1909	109	3,580	79	610	2,891	8,355	12,626	700	1,079	6,429	10,788	4,359
	1904	92	3,547	65	490	3,052	.....	11,177	452	1,711	7,595	11,549	4,254
	1899	117	.....	.....	351	3,384	.....	20,135	402	1,593	7,483	11,977	4,494
<b>SPRINGFIELD—All industries</b> .....	1909	171	4,355	174	529	3,652	6,368	\$7,174	\$466	\$2,096	\$4,204	\$8,497	\$4,293
	1904	122	3,546	118	367	3,071	.....	5,264	333	1,639	2,490	5,797	3,307
	1899	108	.....	.....	174	2,199	.....	3,459	164	1,037	1,412	3,467	2,055
Bread and other bakery products.....	1909	16	88	22	11	55	79	24	7	43	182	310	128
	1904	10	57	11	.....	40	.....	82	.....	34	132	204	72
	1899	12	39	13	.....	20	.....	33	.....	14	53	62	39
Carriages and wagons and materials....	1909	7	70	10	6	54	80	100	4	35	41	98	57
	1904	4	25	5	.....	21	.....	59	.....	10	12	28	16
	1899	5	39	9	.....	30	.....	50	.....	13	14	38	24
Copper, tin, and sheet-iron products....	1909	10	77	11	6	60	32	79	5	39	60	178	88
	1904	* 6	51	7	2	42	.....	70	2	28	47	95	48
	1899	5	.....	.....	2	24	.....	29	2	12	20	43	23
Foundry and machine-shop products...	1909	10	270	14	35	221	704	647	28	135	255	482	227
	1904	4	286	6	39	241	.....	397	32	127	153	427	274
	1899	6	194	7	9	178	.....	246	6	93	107	267	160
Lumber and timber products.....	1909	7	176	10	19	147	312	220	14	89	110	242	132
	1904	4	153	3	3	147	.....	174	2	108	131	280	149
	1899	4	99	5	4	90	.....	139	3	56	112	201	89
Marble and stone work.....	1909	5	36	4	6	26	70	96	10	20	52	119	67
	1904	3	39	2	3	34	.....	52	3	20	41	84	45
	1899	3	29	2	1	26	.....	42	1	16	40	79	39
Printing and publishing.....	1909	27	549	20	208	321	257	584	133	203	163	739	578
	1904	16	447	8	85	354	.....	411	66	181	98	470	377
	1899	13	296	11	44	241	.....	233	34	115	70	310	240
Tobacco manufactures.....	1909	30	157	31	4	122	.....	54	4	61	73	206	133
	1904	32	166	38	2	126	.....	68	1	61	64	195	131
	1899	20	110	21	3	86	.....	40	2	34	43	124	81
All other industries.....	1909	59	2,932	52	234	2,046	4,744	5,270	261	1,471	3,238	6,123	2,885
	1904	43	2,321	38	223	2,060	.....	3,851	277	1,009	1,817	4,014	2,197
	1899	38	.....	.....	111	1,498	.....	2,647	116	684	953	2,313	1,360

1 Figures do not agree with those published in 1904, because it was necessary to revise the totals in order to include data only for those establishments located within the corporate limits of the city.  
 2 Excluding statistics for one establishment, to avoid disclosure of individual operations.  
 3 Excluding statistics for two establishments, to avoid disclosure of individual operations.  
 4 Figures can not be shown without disclosing individual operations.

## MANUFACTURES—ILLINOIS.

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

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

CITY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employes.	Wage earners (average number).							
Expressed in thousands.													
Alton.....	1909	69	2,729	45	255	2,429	5,453	\$5,585	\$299	\$1,528	\$7,262	\$10,096	\$2,884
	1904	62	3,346	37	240	3,069	.....	4,002	220	1,728	5,423	8,607	3,274
	1899	59	.....	.....	123	2,174	.....	2,773	112	1,037	2,472	4,250	1,778
Aurora.....	1909	165	5,884	165	624	5,095	7,906	11,427	722	2,936	5,580	10,954	5,374
	1904	103	4,517	91	348	4,078	.....	6,800	387	2,068	3,538	7,329	3,791
	1899	97	.....	.....	280	3,949	.....	4,660	275	1,615	2,592	5,638	3,046
Belleville.....	1909	110	2,248	107	269	1,872	4,541	5,541	296	1,062	2,324	4,615	2,291
	1904	96	2,005	75	165	1,765	.....	3,084	171	1,011	1,787	4,357	2,670
	1899	89	.....	.....	118	1,335	.....	2,314	108	620	935	2,873	1,939
Bloomington.....	1909	107	2,495	99	319	2,077	2,877	4,762	325	1,186	2,527	4,868	2,341
	1904	81	2,679	78	326	2,275	.....	3,347	268	1,228	3,492	5,777	2,285
	1899	68	.....	.....	166	1,671	.....	2,135	127	797	1,595	3,012	1,417
Cairo.....	1909	56	1,444	51	156	1,237	4,764	4,854	178	628	2,957	4,440	1,483
	1904	57	1,649	64	150	1,435	.....	3,086	153	653	2,838	4,381	1,543
	1899	53	.....	.....	105	1,501	.....	1,936	92	548	1,900	3,117	1,217
Canton.....	1909	33	1,421	39	120	1,262	3,710	8,189	129	692	1,183	2,942	1,759
	1904	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Champaign.....	1909	42	381	44	64	273	476	895	52	174	419	846	427
	1904	36	360	40	31	289	.....	580	28	169	158	486	328
	1899	33	.....	.....	26	245	.....	379	23	118	132	354	222
Chicago Heights.....	1909	79	4,444	60	431	3,953	10,176	10,421	606	2,471	5,611	10,839	5,228
	1904	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clairo.....	1909	7	735	2	75	658	1,530	2,496	97	406	733	1,461	728
	1904	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Danville.....	1909	76	2,044	76	224	1,744	3,258	2,656	236	1,077	1,430	3,351	1,921
	1904	70	2,109	77	148	1,884	.....	2,102	129	977	1,665	3,304	1,639
	1899	72	.....	.....	47	957	.....	1,413	47	458	1,047	1,914	867
Decatur.....	1909	157	3,447	148	600	2,609	6,447	6,579	609	1,420	5,918	9,768	3,850
	1904	116	2,841	91	410	2,340	.....	4,874	373	1,125	5,593	8,667	3,074
	1899	108	.....	.....	217	1,920	.....	3,296	201	830	3,359	5,134	1,775
Elgin.....	1909	115	5,583	100	389	6,094	6,069	16,079	491	3,379	4,538	11,120	6,582
	1904	76	5,253	72	296	4,885	.....	10,980	427	2,713	4,090	9,349	5,259
	1899	80	.....	.....	152	4,376	.....	8,383	189	2,074	2,614	6,386	3,772
Evanston.....	1909	60	1,040	63	140	837	1,056	4,241	178	590	2,350	3,778	1,428
	1904	33	876	36	102	738	.....	1,723	76	384	1,583	2,551	1,668
	1899	27	.....	.....	29	400	.....	1,290	24	192	362	830	468
Freeport.....	1909	69	3,225	56	316	2,853	4,412	6,403	307	1,570	4,417	7,811	3,394
	1904	61	1,754	70	168	1,516	.....	3,490	145	827	1,423	3,109	1,686
	1899	51	.....	.....	127	1,333	.....	2,010	118	695	1,314	2,708	1,394
Galesburg.....	1909	62	1,738	58	215	1,465	1,968	2,454	201	887	1,416	2,919	1,503
	1904	58	1,665	46	172	1,447	.....	1,566	165	766	936	2,218	1,282
	1899	39	.....	.....	99	1,070	.....	1,285	89	521	620	1,450	830
Jacksonville.....	1909	57	1,698	58	91	947	1,189	1,503	84	487	1,307	2,290	992
	1904	55	1,077	70	108	899	.....	1,817	115	458	1,102	1,982	880
	1899	55	.....	.....	113	1,066	.....	1,290	103	433	860	1,684	834
Joliet.....	1909	137	7,266	128	755	6,383	37,744	25,586	930	4,435	27,758	38,817	11,059
	1904	104	6,627	83	749	5,792	.....	14,136	853	3,699	21,259	32,897	11,638
	1899	135	.....	.....	406	5,792	.....	15,040	345	3,548	17,193	26,132	8,939
Kankakee.....	1909	55	1,552	60	143	1,349	3,988	2,599	105	622	1,493	2,723	1,230
	1904	49	1,205	47	120	1,038	.....	1,746	120	512	1,026	2,089	1,063
	1899	36	.....	.....	19	377	.....	604	19	162	289	649	360
La Salle.....	1909	29	1,439	24	122	1,293	3,795	4,393	324	856	2,928	5,308	2,330
	1904	24	1,298	22	79	1,197	.....	2,053	139	685	1,878	3,158	1,280
	1899	26	.....	.....	67	917	.....	2,020	177	447	2,397	3,309	912
Lincoln.....	1909	40	308	49	39	220	385	611	32	115	290	570	289
	1904	39	331	53	42	236	.....	551	26	125	375	784	409
	1899	36	.....	.....	31	188	.....	398	17	82	156	375	219
Mattoon.....	1909	35	1,102	39	115	948	1,019	832	94	561	668	1,434	766
	1904	34	1,112	32	58	1,022	.....	683	60	599	522	1,309	787
	1899	39	.....	.....	38	632	.....	449	297	297	346	764	418
Moline.....	1909	66	6,106	44	613	5,449	10,230	26,334	888	3,523	11,189	20,892	9,703
	1904	62	4,474	45	442	3,987	.....	24,405	630	2,363	6,895	13,158	6,263
	1899	55	.....	.....	332	4,138	.....	10,994	372	2,116	4,598	9,302	4,704
Oak Park.....	1909	23	362	21	59	282	758	6,061	57	197	391	1,118	727
	1904	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

1 Figures not available.

2 Not incorporated in 1900.

3 Figures do not agree with those published in 1904, because it was necessary to revise the totals in order to include data only for those establishments located within the corporate limits of the city.

MANUFACTURES—ILLINOIS.

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

CITY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.					Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employ-ees.	Wage earners (average number).								
Expressed in thousands.														
Quincy.....	1909	235	5,056	201	823	4,032	7,587	\$11,006	\$680	\$2,083	\$5,792	\$11,436	\$5,644	
	1904	234	5,509	207	700	4,602	.....	9,470	643	2,206	5,188	10,748	5,660	
	1899	198	.....	.....	408	3,815	.....	6,443	364	1,602	4,351	7,919	3,568	
Rock Island.....	1909	74	2,179	51	374	1,754	3,173	9,287	366	1,026	2,818	5,387	2,560	
	1904	72	2,027	58	266	1,703	.....	7,203	262	895	2,580	5,333	2,753	
	1899	60	.....	.....	184	1,385	.....	4,762	190	662	2,683	4,622	1,939	
Rockford.....	1909	205	10,523	208	1,006	9,309	16,217	22,412	1,131	5,213	10,582	22,266	11,684	
	1904	180	7,969	112	618	7,239	.....	14,159	669	3,608	8,066	15,276	7,210	
	1899	159	.....	.....	430	5,851	.....	13,613	405	2,397	6,202	11,022	4,820	
Streator.....	1909	45	1,409	44	90	1,275	3,140	4,538	103	644	817	2,137	1,320	
	1904	34	1,629	35	50	1,544	.....	1,379	68	1,035	584	1,889	1,305	
	1899	42	.....	.....	41	1,283	.....	937	44	602	362	1,245	883	
Waukegan.....	1909	59	3,773	146	337	3,090	23,144	17,092	586	2,103	14,164	19,984	5,820	
	1904	42	2,614	34	315	2,295	.....	8,608	363	1,436	7,721	10,994	3,273	
	1899	32	.....	.....	41	495	.....	771	40	181	333	733	395	

<sup>1</sup> Figures do not agree with those published in 1904, because it was necessary to revise the totals in order to include data only for those establishments located within the corporate limits of the city.

MANUFACTURES—ILLINOIS.

TABLE II.—DETAIL STATEMENT FOR

INDUSTRY.	Number of establishments	PERSONS ENGAGED IN INDUSTRY.										WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY.					Primary horse-power.
		Total.	Proprietors and firm members.	Salaried officers, supts. and managers.	Clerks.		Wage earners.			Total.	16 and over.		Under 16.				
					Male.	Female.	Average number.	Number.			Male.	Female.	Male.	Female.			
								Maximum month.	Minimum month.								
1 All industries .....	18,026	561,044	17,357	16,254	46,390	15,279	465,764	De 498,540	Ja 438,594	(1)	(1)	(1)	(1)	(1)	1,013,071		
2 Agricultural implements.....	79	21,511	48	604	1,342	277	19,240	De 21,855	Jy 16,391	21,528	21,244	264	20		38,040		
3 Artificial flowers and feathers and plumes.	25	338	26	5	16	7	284	Mh 339	Jy 241	311	40	258		13	12		
4 Artificial stone.....	366	1,312	473	32	11	11	785	Je 1,040	Ja 369	1,117	1,117				1,111		
5 Automobiles, including bodies and parts.	65	2,804	41	122	195	64	2,382	My 2,524	No 2,107	2,598	2,562	36			1,786		
6 Babbitt metal and solder.....	19	291	6	34	49	19	183	De 243	Mh 137	245	242	2	1		988		
7 Bags, other than paper.....	6	213	4	6	8	6	189	Oc 199	Ap <sup>2</sup> 173	198	88	110			157		
8 Bags, paper.....	4	231	1	8	26	2	194	Se 216	My 182	200	136	64			455		
9 Baking powders and yeast.....	24	1,133	11	48	316	101	667	De 689	Jy 624	689	311	372		6	1,189		
10 Baskets, and rattan and willow ware.	16	78	16	7			62	Jy 83	Ja 44	64	46	18			16		
11 Belting and hose, leather.....	11	403	9	25	116	20	233	Se 251	Fe 210	247	241	6			430		
12 Bicycles, motorcycles, and parts .....	14	1,005	8	12	66	9	910	Je 1,047	Ja 726	933	929		4		775		
13 Billiard tables and materials.....	8	204	6	9	17	5	107	My 211	De 133	133	125	8			213		
14 Blacking and cleansing and polishing preparations.	58	407	50	26	65	30	236	Oc 261	Ja 218	249	150	84	15		336		
15 Bluing.....	10	28	8	1		1	18	De 21	Ja <sup>2</sup> 16	21	11	8	2		23		
16 Boots and shoes, including cut stock and findings.	53	6,392	38	113	311	138	5,792	Fe 5,981	Je 5,572	5,917	3,623	1,953	177	164	2,770		
17 Boxes, cigar.....	18	463	17	11	24	7	404	Se 421	Mh 392	419	148	229	14	28	296		
18 Boxes, fancy and paper.....	61	4,509	31	150	139	104	4,085	De 4,443	Fe 3,925	4,448	1,523	2,478	44	403	4,143		
19 Brass and bronze products.....	79	2,052	55	110	138	60	1,638	De 1,861	Mh 1,574	1,865	1,817	41	7		1,859		
20 Bread and other bakery products.....	2,099	12,566	2,409	161	801	584	8,611	Au 8,765	Ja 8,319	8,871	7,047	1,711	56	57	5,018		
21 Brick and tile.....	340	7,347	384	242	117	30	6,574	Je 8,302	Ja 3,795	7,849	7,796		53		30,013		
22 Brooms.....	87	682	98	23	56	11	494	De 550	Je 452	641	537	92	6	6	365		
23 Brushes.....	32	392	26	15	16	9	326	My 358	Jy 308	321	212	103	2	4	338		
24 Butter, cheese, and condensed milk.	295	3,000	896	133	187	52	1,732	Je 1,837	De 1,627	1,689	1,340	335	6	8	6,757		
25 Buttons.....	28	623	39	13	6	17	548	De 685	Jy 434	680	588	92	5	1	275		
26 Calcium lights.....	3	12	1	2			2	De <sup>2</sup> 7	Je <sup>2</sup> 6	7	7				10		
27 Canning and preserving.....	118	2,800	113	114	140	50	2,383	Se 6,539	Ja 1,013	4,996	2,428	2,399	82	87	4,305		
28 Carpets, rag.....	67	366	69	10	18	3	266	My 302	Fe 218	273	230	38	5		220		
29 Carriages and wagons and materials.....	325	6,746	349	188	260	97	5,852	My 6,069	Ja 5,345	6,004	5,975	106	13		9,684		
30 Cars and general shop construction and repairs by steam-railroad companies.	73	24,406		394	835	46	23,131	De 25,501	My 21,319	25,501	25,441	56	4		20,740		
31 Cars and general shop construction and repairs by street-railroad companies.	30	2,364		73	49	2	2,240	No 2,427	Jy 2,101	2,573	2,569	4			2,225		
32 Cars, steam-railroad, not including operations of railroad companies.	28	11,782	2	200	589	46	10,945	De 14,553	Au 8,670	13,746	13,695	51			18,651		
33 Cement.....	6	1,536		28	95	18	1,395	Je 1,491	Fe 1,254	1,468	1,466	2			15,270		
34 Chemicals.....	19	972	2	37	69	28	836	No 993	Fe 660	976	964	12			5,907		
35 Clocks and watches, including cases and materials.	19	5,883	9	37	125	47	5,665	No 5,931	Ap 5,493	5,881	3,232	2,614	23	12	2,578		
36 Cloth, sponging and refinishing.....	6	106	4	4	3	4	91	De 94	Ja 87	94	93				36		
37 Clothing, men's, including shirts.....	715	41,122	861	400	2,544	1,165	36,152	Se 37,746	Ja 33,275	38,493	18,081	19,353	266	793	3,729		
38 Clothing, women's.....	221	7,279	267	143	483	235	6,151	Oc 6,865	Ja 5,578	6,524	2,031	4,397	9	87	804		
39 Coffee and spice, roasting and grinding.	35	1,792	23	71	596	84	1,018	No 1,070	Au 975	1,043	583	429	18	13	2,709		
40 Coffins, burial cases, and undertakers' goods.	21	924	10	41	130	11	732	Mh 774	Se 705	717	508	182	7	20	1,071		
41 Confectionery.....	140	4,622	112	112	392	207	3,799	Oc 4,617	Ja 3,299	4,493	1,546	2,645	25	277	3,417		
42 Cooperage and wooden goods, not elsewhere specified.	80	2,617	56	95	50	28	2,388	Je 2,685	No 2,685	2,572	2,556	2	14		5,247		
43 Copper, tin, and sheet-iron products.	483	8,897	508	276	425	215	7,473	De 7,923	Ja 6,551	8,020	6,837	1,045	85	53	5,510		
44 Cordage and twine and jute and linen goods.	7	1,884		49	28	8	1,790	De 2,147	Au 1,619	2,162	956	1,142	14	50	6,459		
45 Cork, cutting.....	4	112	1	4	4	1	102	Mh 113	Jy <sup>3</sup> 98	99	65	34			64		
46 Corsets.....	16	1,663	6	30	59	66	1,502	Fe 1,574	Je 1,400	1,479	104	1,248	25	102	541		
47 Cotton goods, including cotton small wares.	5	1,397		33	26	19	1,319	De 1,454	Ja 1,212	1,454	445	911	43	55	2,020		
48 Cutlery and tools, not elsewhere specified.	80	1,661	68	72	81	52	1,393	De 1,517	Ja 1,322	1,547	1,402	117	22	6	2,385		
49 Dairymen's, poulterers', and apiarists' supplies.	29	427	30	21	21	32	323	Ap 455	Se 234	343	319	20	4		664		
50 Dentists' materials.....	10	85	5	9	8	15	48	Ja <sup>2</sup> 52	Jy <sup>2</sup> 44	52	42	8	2		36		
51 Electrical machinery, apparatus, and supplies.	143	11,854	55	367	1,262	529	9,641	No 11,273	Ja 8,112	11,382	8,566	2,763	44	9	11,636		
52 Electroplating.....	43	457	49	18	7	8	375	No 397	Au 352	399	373	11	12	3	703		
53 Emery and other abrasive wheels.....	4	67	3	9	10	4	41	De <sup>2</sup> 43	Fe 39	43	40	3			42		
54 Enameling and japanning.....	5	35	4	2			29	Oc 36	Ja 22	84	81		3		15		
55 Explosives.....	8	327		15	15	7	290	De 326	Ap 251	326	326				1,828		
56 Fancy articles, not elsewhere specified.	44	613	32	43	53	41	444	Oc 556	Ap 334	521	290	215	8	8	230		
57 Files.....	4	85	5	2	1	1	76	Fe <sup>2</sup> 79	Au <sup>2</sup> 74	78	78				522		
58 Fire extinguishers, chemical.....	5	54	2	5	16	3	28	Au 33	De <sup>2</sup> 21	32	29	3			11		
59 Fireworks.....	6	114	1	8	4	3	98	Ap 126	Jy 64	95	49	46			46		
60 Flags, banners, regalia, society badges, and emblems.	24	376	18	12	33	20	293	Je 345	De 257	257	64	181	5	7	57		
61 Flour-mill and gristmill products.....	461	3,634	544	253	285	88	2,464	Au 2,557	Je 2,272	2,627	2,608	17	2		38,472		
62 Foundry and machine-shop products.	1,178	61,303	700	2,317	4,863	1,157	52,266	De 59,229	Ja 47,909	59,221	57,542	1,450	211	18	92,831		
63 Fur goods.....	63	473	63	21	57	13	319	No 434	Mh 237	394	215	175	1	3	59		
64 Furnishing goods, men's.....	61	3,116	60	59	215	94	2,688	Ja 3,018	Ja 2,355	2,878	358	2,423	9	88	796		
65 Furniture and refrigerators.....	267	15,240	300	407	701	257	13,575	Oc 14,451	Ja 12,139	14,125	13,613	323	185	4	20,875		
66 Gas and electric fixtures and lamps and reflectors.	78	2,619	41	125	238	125	2,090	Je 2,334	Je 1,940	2,335	1,826	468	40	11	1,883		
67 Gas, illuminating and heating.....	78	8,020	2	269	1,315	133	6,301	Je 7,135	Fe 5,018	5,785	5,785				18,385		

<sup>1</sup> No figures given for reason explained in the Introduction.

MANUFACTURES—ILLINOIS.

THE STATE, BY INDUSTRIES: 1909.

Capital.	EXPENSES.										Value of products.	Value added by manu- facture.
	Total.	Services.			Materials.		Miscellaneous.					
		Officials.	Clerks.	Wage earners.	Fuel and rent of power.	Other.	Rent of factory.	Taxes, including internal revenue.	Contract work.	Other.		
1 \$1,548,170,701	\$1,733,327,352	\$38,128,168	\$53,320,948	\$273,319,005	\$48,194,400	\$1,112,732,280	\$11,163,287	\$57,023,503	\$13,625,794	\$125,829,989	\$1,919,276,594	\$758,349,904
2 110,905,187	44,148,098	1,226,127	1,406,096	11,718,384	797,022	24,020,185	8,315	358,174	15,631	4,590,664	57,268,325	32,444,218
3 174,548	332,502	6,970	13,882	85,975	2,000	146,931	17,082	580	520	57,682	400,030	287,099
4 1,236,408	1,123,179	31,639	7,043	439,214	10,548	506,363	11,137	4,358	1,311	50,006	1,488,299	911,388
5 4,083,973	6,774,357	207,622	158,547	1,053,186	61,312	3,917,807	96,973	12,110	70,947	535,853	7,032,818	3,174,699
6 1,409,799	3,817,767	89,838	71,447	108,517	22,617	3,351,255	4,616	8,450	.....	101,008	4,145,780	771,917
7 575,574	895,618	14,500	9,060	175,042	4,060	680,973	4,442	1,453	.....	5,488	965,442	280,409
8 1,690,925	1,028,829	22,492	32,980	98,899	9,804	757,091	3,377	3,377	.....	103,430	1,123,610	356,715
9 6,819,498	6,017,782	107,123	342,250	346,259	83,239	3,227,629	29,367	20,138	.....	1,851,787	7,632,063	4,371,195
10 40,675	80,046	.....	.....	80,296	413	44,115	3,020	330	.....	1,806	101,472	56,944
11 1,279,476	2,051,612	64,586	118,499	164,630	16,632	1,808,036	30,755	2,935	.....	285,733	2,187,555	802,987
12 1,276,356	1,755,516	25,322	53,072	600,233	19,099	954,033	9,271	3,088	1,080	90,318	1,777,464	804,332
13 381,023	350,957	15,490	26,500	87,000	5,813	163,022	2,220	1,378	.....	66,944	403,163	243,428
14 516,686	997,542	53,909	98,833	122,922	7,385	592,016	17,249	2,270	.....	30	1,220,961	600,500
15 15,277	52,649	1,800	578	7,802	247	31,816	3,012	58	.....	6,370	66,949	34,886
16 7,699,620	15,486,047	298,955	400,916	3,142,012	109,865	10,761,977	81,340	23,920	4,170	604,892	10,764,704	5,885,892
17 358,050	581,030	20,880	30,357	158,099	8,672	308,414	10,153	1,305	1,000	33,000	664,409	347,383
18 3,813,498	5,050,611	249,707	197,198	1,601,273	94,233	2,947,314	123,413	19,509	25,000	525,961	6,349,621	3,338,074
19 4,056,823	6,180,920	250,033	176,238	1,130,179	95,743	4,051,802	61,443	11,746	2,840	395,105	6,841,735	2,694,190
20 24,224,216	30,899,184	304,629	981,980	5,494,607	672,880	20,933,099	629,595	103,443	1,064	1,717,887	30,117,980	14,512,007
21 18,495,247	8,285,610	347,258	118,882	4,380,001	1,805,102	886,256	13,897	79,548	33,094	815,572	9,765,051	7,273,093
22 722,783	1,248,515	27,500	64,042	235,099	5,758	820,038	9,336	2,061	8,885	65,400	1,404,896	630,100
23 497,181	874,123	25,340	18,700	180,370	4,316	549,830	10,748	1,680	.....	83,067	964,850	410,704
24 7,819,995	16,486,553	176,463	222,812	942,206	259,306	14,007,525	20,150	34,180	225	823,530	17,978,278	3,531,357
25 262,004	557,542	16,231	14,056	240,892	7,187	229,350	8,328	514	10,015	24,309	675,981	439,444
26 29,265	32,385	2,800	1,240	5,292	250	10,130	1,740	60	.....	1,807	20,729	7,343
27 5,629,637	6,704,951	201,452	165,382	903,632	73,393	4,739,303	65,786	26,037	10,383	518,083	7,610,686	2,800,890
28 173,701	249,365	12,034	9,080	115,229	8,943	56,143	12,818	804	700	32,645	340,700	275,713
29 17,858,786	14,810,098	343,145	300,393	3,688,016	182,208	9,207,007	105,592	85,148	4,805	903,634	16,831,283	7,351,948
30 18,722,338	32,230,134	553,697	741,000	15,287,571	943,716	14,289,000	.....	95,395	27	325,008	32,220,243	10,000,467
31 3,885,611	3,439,334	80,470	42,391	1,395,029	44,004	1,793,238	1,250	24,905	554	87,427	3,450,643	1,643,341
32 37,934,778	25,685,593	509,012	494,720	7,823,919	403,240	14,872,742	92,441	133,282	277,851	1,020,456	27,001,092	11,665,110
33 6,686,567	3,197,433	83,855	181,086	854,797	709,399	900,440	15,520	14,823	.....	427,940	4,087,507	2,488,698
34 4,639,170	3,927,458	88,888	92,443	631,315	205,714	2,600,086	6,607	8,839	4,160	290,408	4,650,274	1,700,474
35 12,411,573	6,819,648	143,516	162,117	3,217,140	46,745	1,642,706	0,098	70,233	148	531,936	7,045,276	5,356,824
36 30,806	93,072	6,820	5,088	51,324	672	13,300	201	.....	.....	14,567	119,290	118,624
37 38,762,929	80,393,885	1,314,012	3,170,394	16,580,002	280,747	44,947,533	800,744	77,358	5,250,046	7,858,449	80,472,755	44,244,475
38 5,567,194	14,992,614	334,753	651,855	3,151,998	54,109	9,169,417	282,251	15,434	502,014	840,783	16,635,236	7,421,710
39 8,751,861	18,352,146	257,183	822,389	524,800	87,949	15,025,755	152,953	40,697	33,183	1,407,188	19,751,188	4,637,484
40 2,088,863	2,042,393	103,521	201,777	405,910	16,545	965,835	24,086	10,802	5,150	309,297	2,259,783	1,277,403
41 6,094,450	11,214,390	248,102	522,742	1,428,045	116,187	7,549,211	184,909	21,497	1,105	1,101,932	12,798,077	5,132,679
42 4,462,842	6,137,357	184,461	64,263	1,126,580	62,607	4,416,811	24,248	17,978	0,373	234,136	6,610,969	2,131,651
43 81,018,411	20,300,274	588,053	490,565	4,314,684	213,083	12,979,480	219,785	81,528	14,251	1,389,245	22,822,810	9,029,647
44 13,014,494	6,888,306	66,968	24,058	669,584	66,222	5,875,409	3,000	50,079	.....	142,386	8,237,165	2,295,534
45 180,918	207,433	16,040	6,524	44,071	2,855	110,714	7,740	649	.....	12,840	238,408	118,899
46 1,306,114	2,280,612	77,909	132,378	524,530	14,857	1,180,408	26,796	2,585	.....	321,139	2,711,213	1,515,888
47 1,979,075	1,896,952	60,860	44,043	522,073	80,720	1,071,204	18,800	9,620	.....	189,542	2,111,208	1,009,194
48 2,455,288	2,363,064	155,942	120,180	760,385	53,280	1,018,883	33,484	11,034	985	208,885	2,757,762	1,685,593
49 859,129	978,164	27,878	31,130	178,338	10,006	595,436	8,560	2,914	2,627	161,280	1,180,898	605,456
50 71,764	201,740	13,000	14,874	36,043	1,639	113,103	6,653	339	.....	16,089	231,884	117,142
51 24,201,532	24,937,552	762,884	1,806,742	6,412,671	233,073	13,395,080	200,879	159,782	37,172	2,315,277	20,826,177	13,197,729
52 289,762	562,107	23,110	7,739	245,432	15,920	210,402	29,510	1,115	.....	28,879	696,572	470,260
53 84,866	119,180	9,662	10,766	19,784	1,489	43,415	4,640	197	.....	29,246	155,318	110,423
54 14,066	40,230	1,992	.....	14,745	1,847	15,632	2,629	57	.....	3,337	45,068	27,579
55 1,561,612	2,250,894	28,630	15,190	189,638	29,226	906,036	2,150	4,414	1,593	76,157	1,469,469	534,177
56 659,251	1,119,375	67,122	73,075	221,757	7,788	596,598	31,294	1,209	24,672	125,930	1,810,881	745,585
57 84,200	86,973	2,240	1,970	49,081	3,009	28,200	1,172	744	200	4,391	99,522	72,353
58 109,771	142,038	10,340	37,050	14,596	160	61,750	3,318	83	.....	5,795	164,437	102,521
59 189,844	142,939	21,990	4,916	38,548	745	66,522	470	1,037	.....	8,711	142,973	75,706
60 383,331	576,368	18,136	30,445	111,923	3,894	309,301	11,181	1,008	12,110	69,310	675,845	392,500
61 18,453,727	48,862,744	488,994	316,182	1,271,182	330,242	45,259,329	25,140	87,302	546	1,073,827	51,110,681	5,521,110
62 143,276,987	123,396,892	5,413,640	5,306,986	33,156,824	2,689,463	91,120,725	1,065,152	589,672	1,050,200	12,095,230	138,578,993	74,768,805
63 971,515	1,584,835	49,408	50,403	220,532	3,206	1,067,726	71,349	1,976	20,370	81,865	1,929,470	858,538
64 2,881,103	6,720,981	170,894	255,018	1,014,719	17,084	4,555,098	83,040	17,676	16,969	594,093	7,213,437	2,640,355
65 22,383,174	25,169,458	887,571	807,002	8,090,083	317,015	12,183,805	313,768	110,333	55,147	2,328,734	27,000,262	15,399,042
66 3,657,969	5,102,485	381,241	280,240	1,184,283	44,024	2,649,280	89,950	10,800	10,459	445,808	5,797,873	3,103,169
67 131,789,940	13,988,452	631,084	635,387	2,967,342	5,394,978	814,700	580,035	926,147	3,725	1,684,148	21,052,100	14,842,416

\* Same number reported for one or more other months.

MANUFACTURES—ILLINOIS.

TABLE II.—DETAIL STATEMENT FOR THE

INDUSTRY.	Number of establishments	PERSONS ENGAGED IN INDUSTRY.										WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY.				Primary horse-power.
		Total.	Proprietors and firm members.	Salaried officers, superis. and managers.	Clarks.		Wage earners.				Total.	16 and over.		Under 16.		
					Male.	Female.	Average number.	Number.		Male.		Female.	Male.	Female.		
								Maximum month.	Minimum month.							
1 Glass.....	11	3,688	3	38	98	40	3,507	Ap <sup>1</sup> 4,396	Se 1,441	4,385	3,975	203	202	5	6,638	
2 Gloves and mittens, leather.....	29	1,463	33	33	64	24	1,309	No 1,355	Ap 1,272	1,345	456	838	17	34	657	
3 Gold and silver, leaf and foil.....	7	159	6	7	.....	3	143	Se <sup>1</sup> 153	Ja <sup>1</sup> 124	126	62	58	5	1	13	
4 Grease and tallow.....	36	959	30	34	106	11	778	Se 869	My 693	849	827	20	2	.....	2,842	
5 Hand stamps and stencils and brands.....	33	284	35	17	33	23	176	No 194	Ap 161	194	154	27	13	.....	101	
6 Hats and caps, other than felt, straw, and wool.....	38	574	48	21	29	13	463	Oc 501	Fe 422	509	357	145	5	2	61	
7 Hats, fur-felt.....	10	123	9	1	11	3	99	De 111	Jy 93	111	61	50	.....	.....	20	
8 Hosiery and knit goods.....	43	3,141	40	52	103	33	2,913	No 3,091	Ja 2,678	3,137	938	1,987	53	159	3,452	
9 Ice, manufactured.....	83	1,013	25	106	52	28	804	Au 1,134	Ja 479	730	728	1	1	.....	13,283	
10 Ink, printing.....	7	86	3	12	28	5	38	De <sup>1</sup> 39	Ja <sup>1</sup> 38	39	34	1	4	.....	185	
11 Iron and steel, blast furnaces.....	6	2,927	.....	37	341	56	2,493	De 2,997	Ja 2,053	2,997	2,997	.....	.....	.....	70,453	
12 Iron and steel, steel works and rolling mills.....	24	19,437	3	290	1,408	152	17,534	De 22,141	Mh 15,381	22,146	22,101	25	20	.....	152,470	
13 Jewelry.....	67	1,280	69	46	106	69	990	De 1,052	My 943	1,067	890	148	15	14	367	
14 Kaolin and ground earths.....	7	123	3	13	25	6	75	Oc 89	Ja 61	73	17	6	.....	.....	1,558	
15 Lapidary work.....	3	18	.....	.....	.....	2	14	No 16	Ja <sup>1</sup> 13	13	12	.....	.....	.....	6	
16 Leather goods.....	163	3,569	172	115	253	80	2,940	Mh 3,107	Je 2,764	3,026	2,619	373	19	15	2,200	
17 Leather, tanned, curried, and finished.....	29	3,194	26	53	99	15	3,001	De 3,208	Je 2,839	3,208	3,203	5	.....	.....	6,769	
18 Lime.....	16	572	12	22	23	4	511	Au 623	Ja 399	487	487	.....	.....	.....	794	
19 Liquors, distilled.....	9	851	1	31	59	10	750	De 800	My 696	813	767	46	.....	.....	3,908	
20 Liquors, malt.....	106	5,361	25	337	574	27	4,393	Jy 4,693	Ja 4,198	4,313	4,229	60	24	.....	27,900	
21 Liquors, vinous.....	12	17	14	.....	.....	3	.....	Oc <sup>1</sup> 6	Ja <sup>1</sup> 2	6	6	.....	.....	.....	2	
22 Lumber and timber products.....	814	19,025	825	638	783	212	16,867	No 17,596	Ja 15,002	18,122	17,768	153	199	2	52,015	
23 Marble and stone work.....	278	2,821	324	116	111	44	2,226	Se 2,401	Ja 1,792	2,311	2,306	1	4	.....	5,003	
24 Mattresses and spring beds.....	86	1,036	85	36	55	29	831	Oc 974	Ja 704	832	651	170	10	1	849	
25 Millinery and lace goods.....	103	3,987	105	135	244	175	3,323	Mh 4,056	Je 2,644	3,144	592	2,370	29	153	549	
26 Mirrors.....	10	396	4	14	14	11	353	De 393	Fe <sup>1</sup> 334	393	392	1	.....	.....	370	
27 Models and patterns, not including paper patterns.....	81	585	92	23	25	19	426	De 463	Jy 392	472	443	20	9	.....	701	
28 Musical instruments and materials, not specified.....	30	425	35	19	20	15	336	No 383	Jy 290	370	351	11	8	.....	208	
29 Musical instruments, pianos and organs and materials.....	68	9,628	18	199	455	179	8,777	Oc 9,293	Ja 8,341	9,187	8,361	503	264	59	8,123	
30 Paint and varnish.....	74	2,906	31	204	671	208	1,792	Mh 1,905	Ja 1,601	1,855	1,650	190	8	7	7,108	
31 Paper and wood pulp.....	19	1,542	3	50	69	23	1,397	No 1,541	Ja 1,183	1,675	1,552	19	4	.....	15,169	
32 Paper goods, not elsewhere specified.....	46	1,659	27	67	155	93	1,317	My 1,356	Ja 1,287	1,474	1,555	872	7	40	869	
33 Patent medicines and compounds and druggists' preparations.....	359	3,902	249	303	759	722	1,869	De 2,040	Je 1,720	2,068	893	1,008	13	154	3,234	
34 Pens, fountain, stylographic, and gold.....	7	65	5	4	14	7	35	Au 38	Ja 32	33	29	4	.....	.....	14	
35 Photographic apparatus and materials.....	13	356	8	22	22	20	284	Oc 322	Je 250	304	143	159	2	.....	430	
36 Photo-engraving.....	27	1,561	8	72	286	81	1,114	De 1,246	Fe 1,003	1,250	1,014	233	9	.....	606	
37 Pottery, terra-cotta, and fire-clay products.....	39	3,474	23	79	183	32	3,157	Oc 3,528	Ja 2,552	3,431	3,385	42	4	.....	7,995	
38 Printing and publishing.....	2,608	43,074	2,384	2,026	6,573	3,447	28,644	De 29,892	Je 27,869	30,054	22,269	7,010	501	214	26,975	
39 Pumps, not including steam pumps.....	14	348	7	31	21	7	282	My 296	Se 252	292	290	.....	.....	.....	328	
40 Rubber goods, not elsewhere specified.....	13	145	8	9	7	17	104	De 115	My 95	115	63	52	.....	.....	293	
41 Scales and balances.....	13	306	7	18	22	11	248	De 275	Au 224	275	269	5	1	.....	293	
42 Sewing machines, cases, and attachments.....	7	2,073	1	37	229	93	1,713	De 1,939	Jy 1,626	1,939	1,857	77	5	.....	2,366	
43 Shipbuilding, including boat building.....	23	470	24	16	13	4	413	Ap 696	No 297	554	553	1	.....	.....	1,113	
44 Show cases.....	16	442	18	10	21	7	386	No 400	Ja 361	393	392	2	4	.....	419	
45 Signs and advertising novelties.....	51	1,835	25	72	376	72	1,290	Je 1,384	Ja 1,101	1,348	941	351	32	24	781	
46 Slaughtering and meat packing.....	109	32,642	93	246	5,148	450	26,705	De 29,652	My 24,293	28,755	25,537	3,175	40	3	56,051	
47 Smelting and refining, zinc.....	5	2,034	2	34	71	5	1,922	De 2,066	Mh 1,670	2,066	2,052	.....	.....	.....	7,485	
48 Smelting and refining, not from the ore.....	11	423	4	23	19	8	369	De 432	Ap 292	432	432	.....	.....	.....	1,763	
49 Soap.....	34	3,408	20	75	908	217	2,188	No 2,303	My 2,075	2,399	1,671	597	44	87	5,155	
50 Steam packing.....	15	160	8	14	19	11	108	De 139	Mh 90	139	137	2	.....	.....	140	
51 Stereotyping and electrotyping.....	21	747	13	37	85	20	592	No 610	Au 571	602	583	3	16	.....	725	
52 Stoves and furnaces, including gas and oil stoves.....	71	5,223	28	173	424	99	4,499	Je 4,888	Ja 3,572	4,688	4,652	1	35	.....	4,983	
53 Surgical appliances and artificial limbs.....	29	820	19	40	150	75	536	De 547	Jy 518	548	275	263	9	.....	595	
54 Tobacco manufactures.....	1,944	10,707	2,127	132	336	78	8,034	De 8,461	Ja 7,620	8,688	6,004	2,508	145	31	878	
55 Typefounding and printing materials.....	19	588	9	37	81	23	438	Oc 467	Ja <sup>1</sup> 403	450	357	89	4	.....	391	
56 Wall paper.....	5	389	2	15	69	13	290	De 347	Au 243	347	287	50	.....	.....	492	
57 Wall plaster.....	6	82	2	4	3	3	80	Ap 87	No 74	81	81	.....	.....	.....	414	
58 Woolen, worsted, and felt goods, and wool hats.....	9	543	6	22	13	3	499	No 518	Ap 482	513	353	154	4	2	1,342	
59 All other industries.....	1,397	44,544	1,078	1,659	4,397	1,616	35,794	.....	.....	.....	.....	.....	.....	.....	96,122	

<sup>1</sup> Same number reported for one or more other months.

<sup>2</sup> All other industries embrace—

Artists' materials.....	9	Drug grinding.....	2	Hair work.....	40
Awnings, tents, and sails.....	45	Dyeing and finishing textiles.....	12	Hammocks.....	1
Axle grease.....	3	Dyestuffs and extracts.....	2	Hat and cap materials.....	2
Beet sugar.....	1	Engravers' materials.....	3	Hats, straw.....	2
Belting and hose, woven and rubber.....	4	Engraving and desinking.....	17	Horseshoes, not made in steel works or rolling mills.....	2
Butter, reworking.....	4	Engraving, wood.....	13	House-furnishing goods, not elsewhere specified.....	27
Candles.....	1	Fertilizers.....	11	Ink, writing.....	9
Card cutting and designing.....	4	Firearms and ammunition.....	4	Instruments, professional and scientific.....	25
Carriages and sleds, children's.....	6	Flavoring extracts.....	30	Iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills.....	11
Cars, street-railroad, not including operations of railroad companies.....	2	Food preparations.....	116	Iron and steel, doors and shutters.....	5
Cash registers and calculating machines.....	9	Foundry supplies.....	6	Iron and steel forgings.....	17
Charcoal.....	3	Furs, dressed.....	3	Iron and steel, nails and spikes, cut and wrought, including wire nails, not made in steel works or rolling mills.....	6
China decorating.....	14	Galvanizing.....	7	Iron and steel pipe, wrought.....	3
Chocolate and cocoa products.....	1	Glass, cutting, staining, and ornamenting.....	49	Jewelry and instrument cases.....	5
Clothing, horse.....	2	Glucose and starch.....	5	Labels and tags.....	12
Clothing, men's, buttonholes.....	10	Glue.....	9	.....	.....
Coke.....	2	Gold and silver, reducing and refining, not from the ore.....	3	.....	.....
Cordials and sirups.....	10	.....	.....	.....	.....

MANUFACTURES—ILLINOIS.

295

STATE, BY INDUSTRIES: 1909—Continued.

	Capital.	EXPENSES.									Value of products.	Value added by manufacture.	
		Total.	Services.			Materials.		Miscellaneous.					
			Officials.	Clerks.	Wage earners.	Fuel and rent of power.	Other.	Rent of factory.	Taxes, including internal revenue.	Contract work.			Other.
1	\$7,738,286	\$4,664,447	\$126,669	\$104,784	\$2,181,683	\$408,582	\$1,072,872	\$1,320	\$25,634	\$596	\$682,367	\$5,047,333	\$3,505,879
2	1,093,490	2,331,000	79,176	60,287	518,862	19,114	1,450,208	22,007	7,962	15,000	119,214	2,522,963	1,044,551
3	65,747	209,833	14,050	1,274	61,183	1,163	126,702	3,000	174	-----	2,227	225,800	97,941
4	2,852,240	5,076,472	91,285	132,282	531,865	154,021	3,010,127	9,345	13,259	400	233,488	5,559,617	1,524,569
5	295,100	306,473	26,665	30,714	102,930	4,253	165,074	22,648	938	1,090	41,801	478,911	309,584
6	279,637	902,607	37,406	26,320	266,879	5,978	472,532	30,171	963	5,286	57,009	1,046,485	507,975
7	70,007	250,898	1,590	10,650	70,980	1,774	153,163	9,732	227	-----	2,802	280,721	131,784
8	5,115,692	4,938,850	105,170	115,841	1,116,476	56,391	3,175,974	35,128	14,967	38,825	277,088	5,946,737	2,714,372
9	5,574,739	1,424,435	145,830	46,246	534,166	201,192	150,738	7,298	26,012	8,082	219,271	1,628,323	1,480,393
10	254,387	316,408	20,000	42,409	25,598	5,304	168,869	4,320	939	-----	49,382	415,025	260,772
11	52,869,822	34,196,011	174,841	320,726	1,792,065	12,256,101	18,652,361	-----	184,240	-----	814,768	38,299,897	7,391,435
12	69,682,495	75,221,710	880,017	1,414,278	12,962,087	3,598,585	62,646,878	5,800	207,690	-----	3,446,576	30,608,137	30,303,674
13	1,822,666	2,368,271	94,446	115,277	650,233	16,727	1,247,125	68,723	5,706	2,006	158,028	2,779,962	1,516,110
14	687,177	368,440	26,720	67,474	37,198	10,147	157,617	3,230	2,200	-----	63,794	431,352	263,588
15	34,067	70,525	-----	716	12,974	252	52,010	1,140	53	-----	2,477	87,883	34,721
16	5,369,975	7,985,071	218,900	279,004	1,633,407	50,040	5,078,924	132,987	25,214	4,990	555,609	8,048,324	3,813,354
17	15,974,832	14,736,180	189,994	116,908	1,582,930	151,707	11,978,002	20,278	35,181	7,310	677,900	14,911,782	2,781,173
18	1,268,141	501,605	40,717	23,694	282,967	88,878	55,442	488	7,608	-----	61,911	687,976	513,656
19	7,500,330	53,219,662	129,059	71,483	478,985	247,594	3,001,701	4,451	42,779,367	24,235	523,087	55,199,874	45,990,579
20	56,141,165	23,018,940	1,018,247	680,966	3,473,300	501,827	6,441,396	-----	5,502,471	8,601	5,902,162	28,440,148	21,416,955
21	34,150	15,846	-----	-----	1,989	4	12,604	236	84	-----	629	28,711	16,893
22	29,777,623	41,125,558	1,132,843	823,257	9,106,584	356,832	26,007,394	306,484	140,020	234,491	2,103,683	44,951,804	17,087,008
23	4,689,083	5,667,371	231,309	137,570	1,789,107	87,010	2,943,239	60,710	20,408	123,782	297,239	6,770,996	3,740,747
24	1,150,945	2,503,892	76,020	84,131	447,691	16,876	1,614,888	60,629	3,864	4,877	193,405	2,890,402	1,226,778
25	2,188,576	6,444,318	293,213	352,067	1,385,832	31,217	3,700,079	108,758	7,367	2,650	439,129	7,281,914	3,484,613
26	447,280	922,144	22,854	17,435	231,681	11,086	623,702	19,545	2,182	-----	63,259	1,106,490	471,692
27	520,739	701,416	45,043	33,302	398,255	14,507	188,893	34,061	1,252	1,455	73,448	839,437	680,037
28	511,662	502,478	36,041	21,206	200,606	8,797	160,075	18,500	2,192	72	45,380	629,163	450,691
29	27,718,851	16,686,005	631,455	683,811	5,009,042	158,028	8,484,403	89,168	95,084	14,144	1,020,930	19,176,328	10,533,897
30	15,725,376	17,926,283	608,050	1,048,943	1,114,298	149,280	12,752,331	61,785	72,083	6,144	2,113,360	20,494,201	7,532,680
31	8,400,323	4,567,670	118,514	81,299	727,420	320,352	2,779,088	8,080	17,723	3,927	511,267	4,983,075	1,883,635
32	2,260,405	3,435,708	149,076	182,130	546,105	32,582	1,904,579	69,873	46,277	70,577	374,449	1,782,130	1,226,130
33	7,988,944	10,742,989	652,117	1,104,065	804,761	73,303	4,339,710	183,928	39,313	70,795	3,474,992	13,114,307	8,701,239
34	117,164	141,815	3,000	21,260	23,224	784	67,551	3,000	166	8,850	12,224	170,467	102,182
35	798,260	642,709	54,005	27,006	150,502	6,493	311,882	9,120	3,919	500	73,897	739,867	422,078
36	1,390,850	2,268,578	177,332	297,753	949,100	31,342	502,413	63,385	6,488	25,500	214,896	2,678,304	2,144,549
37	14,900,981	3,040,183	190,795	180,052	1,884,870	433,215	668,215	3,894	23,434	45,666	479,117	3,488,282	3,488,282
38	60,084,133	73,904,422	4,788,751	7,583,416	18,430,924	845,568	23,834,405	1,705,047	250,085	4,738,140	11,773,089	87,247,090	62,567,117
39	664,266	641,106	40,371	21,435	179,136	11,363	310,198	6,770	3,167	246	56,440	658,554	331,093
40	251,977	323,520	15,900	11,973	52,875	5,448	194,528	12,517	462	-----	20,829	381,393	181,937
41	515,477	528,831	30,870	25,103	151,168	7,790	237,429	7,579	3,299	-----	56,589	574,420	329,195
42	4,430,468	3,306,683	114,404	151,014	1,113,886	48,432	1,092,064	2,938	15,767	-----	798,209	3,621,554	2,511,073
43	2,090,884	532,277	22,772	11,070	251,694	21,423	177,332	3,179	12,595	288	32,015	583,783	385,028
44	539,256	691,413	23,709	32,779	247,809	9,125	280,525	10,525	3,025	22,175	61,690	829,472	539,522
45	2,693,629	2,915,025	158,210	283,002	750,349	18,170	967,166	57,780	4,993	76,229	649,512	3,271,351	2,285,967
46	131,026,247	378,189,439	1,007,485	5,432,564	14,601,991	1,485,207	342,490,800	165,003	519,147	230,782	12,255,870	389,594,806	45,618,860
47	7,666,278	8,409,661	200,891	111,705	1,275,162	620,206	5,806,578	27,729	27,729	-----	298,830	9,003,624	2,507,840
48	1,603,000	3,638,984	69,929	38,369	209,679	78,503	3,155,013	6,628	4,240	-----	70,017	3,920,755	695,639
49	11,093,653	18,835,398	219,162	1,136,533	1,052,008	202,319	13,985,841	28,066	40,811	19,468	2,381,056	20,180,790	6,232,039
50	156,862	365,509	20,369	21,375	61,942	5,180	188,452	9,835	343	29,717	18,409	407,890	214,308
51	777,366	1,156,678	106,926	70,798	472,378	26,593	280,335	50,493	2,122	4,784	124,251	1,282,292	966,364
52	9,862,626	9,025,880	360,171	569,866	2,957,046	143,368	3,712,579	33,213	40,180	13,631	1,239,496	10,237,335	6,431,393
53	1,673,702	1,855,796	83,031	288,851	284,512	13,947	900,887	23,743	4,719	1,150	248,956	2,088,942	1,178,108
54	12,794,393	18,230,593	287,298	560,436	4,215,848	66,709	8,535,962	250,791	2,410,065	3,486	1,929,497	21,870,252	13,267,500
55	1,852,184	1,188,289	100,600	100,096	302,606	12,926	862,459	46,703	3,754	5,592	253,023	1,247,937	872,552
56	1,139,847	1,188,877	64,020	56,273	173,127	14,864	688,779	7,790	4,248	-----	161,776	1,300,763	685,120
57	281,035	177,630	7,758	5,979	33,361	7,825	108,797	1,936	2,126	-----	203,312	10,148	86,000
58	1,063,075	1,190,230	60,938	14,054	236,799	21,110	752,637	2,720	5,917	-----	96,685	1,314,100	540,944
59	169,900,392	181,930,730	4,310,009	5,539,512	20,944,403	7,892,285	127,048,368	1,181,455	832,792	209,172	13,974,734	205,467,461	70,528,808

\* All other industries embrace—Continued.

Lard, refined, not made in slaughtering and meat-packing establishments	1	Petroleum, refining	7	Sulphuric, nitric, and mixed acids	2
Lasts	2	Phonographs and graphophones	1	Tin plate and terneplate	1
Lead, bar, pipe and sheet	2	Pipes, tobacco	4	Tin foil	2
Looking-glass and picture frames	68	Roofing materials	17	Toys and games	10
Malt	12	Rules, ivory and wood	1	Typewriters and supplies	11
Matches	1	Safes and vaults	3	Umbrellas and canes	4
Millstones	1	Sand and emery paper and cloth	1	Upholstering materials	10
Mineral and soda waters	276	Saws	8	Vault lights and ventilators	15
Moving pictures	3	Screws, machine	2	Vinegar and cider	13
Mudlage and paste	8	Screws, wood	2	Washing machines and clothes wringers	2
Oil, cottonseed, and cake	2	Shoddy	1	Waste	2
Oil, linseed	8	Silk and silk goods, including throwsters	2	Whips	11
Oil, not elsewhere specified	5	Silverware and plated ware	1	Windmills	10
Oilcloth and linoleum	11	Smelting and refining, lead	4	Window shades and fixtures	36
Oleomargarine	1	Soda-water apparatus	9	Wire	7
Optical goods	3	Sporting and athletic goods	24	Wirework, including wire rope and cable	60
Paper patterns	8	Springs, steel, car and carriage	5	Wood preserving	3
Paving materials	3	Stationery goods, not elsewhere specified	21	Wood, turned and carved	16
Peanuts, grading, ro					

MANUFACTURES—ILLINOIS.

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

INDUSTRY.	Number of establishments	PERSONS ENGAGED IN INDUSTRY.										WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY.					Primary horse-power.
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks.		Wage earners (average number).			Total.	16 and over.		Under 16.				
					Male.	Female.	Total.	Male.	Female.		Under 16.	Male.	Female.	Male.	Female.		
																16 and over.	
1 All industries.....	9,656	356,954	8,156	10,205	33,531	11,065	293,977	231,461	57,545	4,971	314,706	248,144	61,288	2,252	3,022	525,236	
2 Artificial stone.....	19	192	20	16	3	3	150	150	.....	.....	148	148	.....	.....	.....	82	
3 Automobiles, including bodies and parts...	41	1,725	17	80	136	32	1,460	1,440	20	.....	1,556	1,535	21	.....	.....	734	
4 Bags, other than paper.....	6	213	4	6	8	6	189	84	105	.....	198	88	110	.....	.....	157	
5 Baking powders and yeast.....	16	940	8	38	285	87	522	265	261	6	556	282	268	.....	6	1,142	
6 Baskets, and rattan and willow ware.....	10	52	11	.....	.....	.....	41	37	4	.....	44	40	4	.....	.....	16	
7 Belting and hose, leather.....	11	403	9	25	116	20	233	227	6	.....	247	241	6	.....	.....	430	
8 Boots and shoes, including out stock and findings.	31	3,326	29	48	137	85	3,027	1,983	856	188	3,119	2,042	884	89	104	1,103	
9 Boxes, cigar.....	9	348	9	8	21	6	304	114	155	35	319	120	163	9	27	214	
10 Boxes, fancy and paper.....	48	3,984	22	131	128	94	3,609	1,086	2,111	412	3,913	1,179	2,290	44	400	1,575	
11 Brass and bronze products.....	56	1,430	38	78	103	44	1,167	1,142	19	6	1,309	1,281	21	7	.....	1,099	
12 Bread and other bakery products.....	1,177	8,842	1,246	109	677	373	6,437	4,879	1,474	84	6,608	5,012	1,509	31	56	3,847	
13 Brick and tile.....	7	657	6	21	14	4	612	597	.....	15	745	727	.....	18	.....	3,225	
14 Brooms.....	23	232	34	15	6	5	222	181	38	3	323	268	56	.....	4	169	
15 Brushes.....	23	334	26	12	15	6	275	190	79	6	280	194	80	2	4	94	
16 Buttons.....	13	231	14	6	5	16	190	81	102	7	169	72	91	5	1	39	
17 Calcium lights.....	3	12	1	2	.....	.....	7	.....	.....	.....	7	.....	.....	.....	.....	10	
18 Canning and preserving.....	47	1,107	41	40	89	33	904	465	431	18	906	456	432	9	9	1,274	
19 Carpets, rag.....	25	205	24	6	12	.....	163	145	14	4	168	149	15	4	.....	73	
20 Carriages and wagons and materials.....	126	2,263	139	60	81	18	1,965	1,945	20	.....	1,942	1,922	20	.....	.....	3,022	
21 Cars and general shop construction and repairs by steam-railroad companies.	22	11,562	.....	141	343	19	11,059	11,006	49	4	12,100	12,042	54	4	.....	7,232	
22 Cars and general shop construction and repairs by street-railroad companies.	7	1,721	.....	31	25	1	1,664	1,661	3	.....	1,912	1,908	4	.....	.....	1,584	
23 Cars, steam-railroad, not including operations of railroad companies.	18	9,226	.....	160	473	40	8,553	8,508	45	.....	9,731	9,680	51	.....	.....	14,576	
24 Chemicals.....	10	218	2	15	36	22	143	132	11	.....	162	150	12	.....	.....	780	
25 Clocks and watches, including cases and materials.	5	145	3	9	20	4	109	103	3	.....	138	130	4	1	3	23	
26 Cloth, sponging and refinishing.....	6	106	4	4	3	4	91	90	1	.....	94	93	.....	.....	.....	36	
27 Clothing, men's, including shirts.....	678	38,370	830	357	2,443	1,125	33,615	16,639	16,068	908	35,529	17,729	17,140	260	691	2,916	
28 Clothing, women's.....	204	6,666	254	123	451	223	5,615	1,870	3,689	56	5,980	1,900	3,930	6	54	698	
29 Coffee and spice, roasting and grinding....	32	1,775	22	67	596	84	1,006	561	415	30	1,030	575	424	13	13	2,575	
30 Coffins, burial cases, and undertakers' goods.	13	733	5	31	113	8	676	426	125	25	661	415	121	6	19	828	
31 Confectionery.....	37	3,865	53	95	310	166	3,241	1,118	1,906	217	3,826	1,920	2,250	8	248	3,045	
32 Cooperage and wooden goods, not elsewhere specified.	37	1,269	32	37	20	14	1,166	1,160	.....	6	1,205	1,199	.....	6	.....	1,984	
33 Copper, tin, and sheet-iron products.....	268	4,610	256	173	216	106	3,859	3,468	370	31	4,003	3,589	383	22	9	2,859	
34 Corsets.....	10	1,124	5	20	39	55	1,005	67	818	120	974	65	793	25	91	130	
35 Cutlery and tools, not elsewhere specified..	53	1,167	43	47	56	39	982	898	61	23	1,134	1,038	70	20	6	1,499	
36 Dairymen's, poulterers', and apiarists' supplies.	7	70	5	5	7	4	49	46	2	1	64	60	3	1	.....	79	
37 Dentists' materials.....	10	85	5	9	8	15	48	39	7	2	52	42	8	2	.....	36	
38 Electrical machinery, apparatus, and supplies.	123	7,333	45	257	653	282	6,096	4,255	1,792	49	5,988	4,178	1,762	40	8	6,443	
39 Electroplating.....	34	374	40	12	7	5	310	299	2	9	325	314	2	9	.....	422	
40 Fancy articles, not elsewhere specified.....	40	603	29	42	53	41	438	243	181	14	514	285	213	8	8	210	
41 Fire extinguishers, chemical.....	5	54	2	5	16	3	28	25	3	.....	32	29	3	.....	.....	11	
42 Foundry and machine-shop products.....	669	36,868	338	1,442	3,349	684	31,055	30,154	808	93	35,010	33,963	916	100	11	54,876	
43 Fur goods.....	59	455	58	21	56	12	308	173	132	3	377	212	161	1	3	59	
44 Furnishing goods, men's.....	38	2,273	38	44	202	84	1,905	215	1,621	69	2,016	228	1,716	4	68	562	
45 Furniture and refrigerators.....	202	11,097	144	310	584	183	9,876	9,491	237	148	10,270	9,874	244	148	4	14,371	
46 Gas and electric fixtures and lamps and reflectors.	63	2,068	30	107	217	112	1,602	1,206	372	24	1,785	1,345	414	15	11	1,060	
47 Gloves and mittens, leather.....	25	1,223	29	22	44	19	1,109	394	665	50	1,139	604	684	17	34	570	
48 Gold and silver, leaf and foil.....	7	159	6	7	.....	.....	143	70	66	7	126	62	58	6	1	13	
49 Grease and tallow.....	10	773	7	21	86	10	649	629	18	2	714	692	20	2	.....	2,207	
50 Hand stamps and stencils and brands.....	27	273	29	17	33	22	172	137	23	12	190	151	26	13	.....	100	
51 Hats and caps, other than felt, straw, and wool.	38	574	48	21	29	13	463	325	132	6	509	357	145	6	2	61	
52 Hosiery and knit goods.....	29	837	36	20	31	7	743	119	565	59	802	128	610	3	61	167	
53 Ice, manufactured.....	6	229	.....	13	9	1	206	206	.....	.....	192	192	.....	.....	.....	3,024	
54 Ink, printing.....	7	86	3	12	28	5	38	33	1	4	39	34	1	4	.....	185	
55 Iron and steel, steel works and rolling mills.	6	7,689	.....	106	538	62	6,983	6,983	.....	.....	7,514	7,514	.....	.....	.....	79,456	
56 Jewelry.....	55	1,169	55	38	101	65	910	754	131	25	979	812	141	12	14	294	
57 Lapidary work.....	3	18	.....	.....	.....	.....	14	13	.....	.....	13	12	.....	.....	.....	6	
58 Leather goods.....	99	2,581	96	83	171	53	2,178	1,810	340	28	2,251	1,871	350	15	15	804	
59 Leather, tanned, curried, and finished.....	24	2,841	23	48	84	12	2,674	2,671	3	.....	2,875	2,872	3	.....	.....	6,212	
60 Liquors, malt.....	45	3,450	2	171	399	11	2,807	2,815	52	.....	2,835	2,784	51	.....	.....	15,666	
61 Lumber and timber products.....	185	11,680	119	390	573	136	10,462	10,305	21	136	10,774	10,612	25	137	.....	25,917	
62 Marble and stone work.....	107	1,640	108	72	49	23	1,388	1,386	1	1	1,413	1,411	1	1	.....	3,022	
63 Mattresses and spring beds.....	58	835	53	29	44	26	683	538	134	11	680	536	133	10	1	485	

MANUFACTURES—ILLINOIS.

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

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

CHICAGO.

Capital.	EXPENSES.										Value of products.	Value added by manufacture.
	Total.	Services.			Materials.		Miscellaneous.					
		Officials.	Clerks.	Wage earners.	Fuel and rent of power.	Other.	Rent of factory.	Taxes, including internal revenue.	Contract work.	Other.		
1 \$871,840,545	\$1,156,530,537	\$26,548,124	\$39,376,717	\$174,112,069	\$27,663,335	\$785,806,188	\$9,870,326	\$10,569,336	\$12,783,076	\$89,801,166	\$1,281,171,181	\$487,701,458
2 240,095	294,472	18,485	2,644	103,926	2,125	143,705	3,605	785	19,197	355,938	210,108	
3 2,064,348	3,065,004	194,545	109,066	1,181,443	38,767	1,088,008	91,224	8,539	70,947	3,930,735	2,232,070	
4 675,574	895,618	14,500	9,000	175,042	4,000	880,973	4,442	1,463	5,488	865,442	230,409	
5 5,873,320	5,421,951	150,023	297,105	303,834	31,369	2,850,876	27,540	18,883	1,736,324	7,008,662	4,120,426	
6 29,473	64,175	.....	.....	26,277	385	33,339	2,520	203	1,391	81,357	47,633	
7 1,279,476	2,051,612	64,586	118,499	164,536	16,532	1,368,036	30,755	2,935	285,733	2,187,555	802,987	
8 3,880,566	8,783,902	140,004	178,141	1,919,794	34,547	6,010,142	79,018	12,089	100	9,856,302	3,810,613	
9 292,197	477,051	18,000	27,057	124,804	6,163	251,931	10,553	1,262	1,000	29,031	282,680	
10 3,118,225	4,423,868	214,448	185,236	1,311,235	43,626	2,188,293	122,554	13,979	25,000	310,527	5,043,621	
11 2,491,807	4,636,193	176,181	128,536	810,203	62,362	3,203,222	59,164	7,085	2,040	240,810	5,181,891	
12 20,600,228	23,567,268	307,030	840,898	4,145,608	488,185	15,792,000	473,250	82,613	1,437,624	26,908,238	10,627,993	
13 2,210,037	925,915	45,950	15,936	559,214	162,716	67,347	.....	16,368	78,364	1,172,271	902,208	
14 240,943	576,576	17,704	7,432	118,204	2,924	399,432	8,255	1,047	8,020	680,003	277,047	
15 440,034	794,717	23,456	17,140	163,084	8,011	612,964	10,128	1,650	.....	63,005	879,548	
16 151,440	275,200	11,880	14,032	71,528	1,879	137,470	7,780	203	10,000	20,419	334,479	
17 29,265	32,385	2,800	1,240	5,202	256	19,130	1,740	60	.....	1,867	28,729	
18 2,057,888	3,427,988	99,314	103,877	395,177	37,760	2,495,025	55,246	12,925	9,808	238,854	3,826,530	
19 87,343	159,388	9,630	4,675	68,144	5,332	37,800	8,540	371	700	23,891	162,717	
20 7,616,150	4,377,030	118,240	75,899	1,253,481	54,300	2,547,686	63,420	39,213	1,530	223,261	5,203,015	
21 9,558,282	15,358,825	236,505	330,005	7,304,671	621,838	6,088,242	.....	23,070	.....	153,894	15,358,825	
22 3,061,331	2,747,078	40,620	23,406	1,068,627	20,801	1,489,889	1,250	10,156	.....	74,260	2,758,388	
23 29,720,609	20,006,561	401,706	385,274	6,887,316	176,767	11,443,727	90,041	118,718	277,851	730,071	20,892,016	
24 887,063	953,316	37,914	54,278	91,730	30,901	567,585	6,307	2,862	4,100	157,579	1,140,408	
25 421,037	400,703	21,059	22,596	59,733	1,123	281,283	5,404	534	48	8,023	445,040	
26 30,806	93,072	6,820	5,688	51,824	672	.....	13,300	201	.....	14,507	119,296	
27 26,521,124	76,619,182	1,238,383	3,053,397	15,770,054	256,684	42,511,450	876,032	70,704	5,185,138	7,640,936	86,296,407	
28 5,193,048	14,136,673	308,535	606,487	2,006,959	48,441	8,600,808	272,153	14,392	561,714	778,184	15,070,925	
29 8,096,361	18,199,207	255,783	822,380	520,259	87,201	14,381,755	152,503	40,597	33,183	1,404,038	10,593,188	
30 1,720,093	1,674,600	87,921	181,004	339,365	13,202	750,334	22,566	8,443	5,150	265,085	1,837,558	
31 5,275,044	9,815,894	210,278	421,336	1,249,942	99,694	6,003,701	145,244	18,587	760	1,060,332	11,222,436	
32 1,860,251	3,044,282	83,127	26,463	600,885	38,430	2,140,478	20,338	8,851	5,175	111,545	3,368,165	
33 12,215,009	10,532,059	389,877	260,584	2,472,424	107,514	6,355,490	180,120	55,201	5,085	697,304	12,241,950	
34 924,802	1,477,407	65,869	83,742	339,698	3,600	701,084	25,646	1,182	.....	256,776	1,778,921	
35 1,796,438	1,634,318	115,693	83,834	553,864	34,939	646,366	29,477	8,372	985	161,095	1,895,518	
36 179,200	257,710	7,660	13,300	36,920	905	146,320	3,250	623	200	48,532	339,735	
37 71,704	201,740	13,000	14,874	36,043	1,639	113,103	6,653	339	.....	16,089	231,884	
38 16,623,727	18,824,304	581,773	788,138	3,859,677	144,479	11,290,995	264,604	77,712	30,547	1,828,479	20,668,605	
39 181,098	396,971	19,880	5,141	214,222	12,670	94,478	28,155	840	.....	21,585	484,045	
40 641,101	1,101,255	66,262	73,075	218,480	7,325	580,672	30,874	1,183	18,845	124,599	1,289,110	
41 109,771	142,098	19,340	37,050	14,599	106	61,750	8,318	83	.....	5,795	164,437	
42 90,049,533	80,149,864	3,728,983	3,578,559	20,489,963	1,574,560	39,180,970	979,392	419,028	941,058	9,257,411	89,669,362	
43 959,109	1,568,374	49,408	58,773	224,832	2,946	1,057,399	68,799	1,884	20,370	81,053	1,620,507	
44 2,339,851	5,745,904	152,515	230,786	820,150	10,196	3,860,417	74,901	15,156	16,959	558,818	6,122,344	
45 16,373,435	18,799,188	725,640	728,763	6,025,901	247,147	8,848,619	304,683	88,868	55,147	1,774,722	20,612,384	
46 2,706,026	4,141,909	330,396	257,313	914,339	36,353	2,087,967	86,150	7,378	10,459	411,654	4,083,034	
47 899,939	2,005,800	64,256	65,307	441,017	17,048	1,290,604	20,977	4,046	.....	102,545	2,181,350	
48 65,747	209,833	14,050	1,274	61,183	1,163	126,702	3,050	174	.....	2,227	225,866	
49 2,181,134	4,642,841	72,910	113,890	452,288	139,039	3,641,918	7,995	11,874	400	202,527	4,947,923	
50 286,579	390,541	26,665	30,484	101,247	40,110	162,623	21,816	896	1,990	40,710	466,874	
51 279,637	962,607	37,400	26,320	266,879	5,978	472,532	30,171	963	5,286	57,009	1,046,485	
52 908,497	1,298,276	31,356	58,715	258,519	9,256	773,457	26,040	1,575	18,822	90,537	1,477,380	
53 1,136,271	426,202	31,804	10,520	153,000	89,916	86,041	5,400	9,253	3,682	88,586	699,133	
54 254,887	316,498	20,600	42,496	25,508	5,394	168,859	4,320	939	.....	49,382	415,025	
55 32,576,734	37,399,885	344,061	634,303	5,608,458	1,805,881	27,217,511	5,800	158,378	.....	1,630,493	45,988,782	
56 1,573,730	2,233,656	83,586	109,919	605,931	13,885	1,204,429	67,363	5,164	2,006	141,373	2,634,642	
57 84,067	70,525	.....	716	12,974	252	52,910	1,140	56	.....	2,477	87,883	
58 2,877,179	5,294,532	173,160	193,380	1,173,773	34,678	3,244,933	116,068	14,947	4,990	338,653	5,861,234	
59 14,485,671	13,100,580	147,994	94,438	1,417,978	135,496	10,652,378	26,230	31,545	6,500	588,031	13,243,550	
60 29,384,856	16,610,966	638,049	506,785	2,377,783	347,233	4,592,504	.....	4,109,150	.....	4,129,466	14,662,697	
61 17,694,605	30,350,578	829,189	627,706	6,148,867	253,931	20,513,864	237,334	101,109	187,828	1,469,690	32,708,725	
62 2,557,400	3,376,789	160,818	68,744	1,136,923	53,858	1,669,866	41,604	12,060	100,267	136,630	2,216,026	
63 837,173	2,089,270	62,620	72,840	371,063	15,226	1,383,631	55,656	2,599	1,859	173,836	2,377,332	

MANUFACTURES—ILLINOIS.

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

INDUSTRY.	Number of establishments	PERSONS ENGAGED IN INDUSTRY.									WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY.					Primary horse-power.
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks.		Wage earners (average number).			Total.	16 and over.		Under 16.			
					Male.	Female.	Total.	16 and over.			Under 16.	Male.	Female.	Male.	Female.	
								Male.	Female.							
64 Models and patterns, not including paper patterns.	56	435	63	15	20	15	322	295	18	9	348	319	20	9	494	
65 Musical instruments and materials, not specified.	27	418	33	19	20	14	332	315	10	7	368	347	11	8	200	
66 Musical instruments, pianos and organs and materials.	37	5,792	12	107	343	121	5,209	4,770	266	167	5,471	5,017	279	146	4,077	
67 Paint and varnish.	61	2,867	27	182	851	201	1,606	1,407	185	14	1,653	1,448	190	8	5,837	
68 Paper goods, not elsewhere specified.	41	1,255	27	61	125	85	957	880	541	36	1,055	419	596	5	607	
69 Patent medicines and compounds and druggists' preparations.	273	3,011	160	234	656	600	1,361	555	664	142	1,550	633	756	8	2,030	
70 Photographic apparatus and materials.	13	356	8	22	22	20	284	133	149	2	304	143	159	2	430	
71 Photo-engraving.	21	1,188	4	62	185	57	878	816	53	9	940	874	67	0	405	
72 Printing and publishing.	1,395	33,439	1,065	1,559	5,585	2,904	22,326	16,767	5,023	536	23,344	17,532	5,245	381	20,182	
73 Pumps, not including steam pumps.	6	74	1	13	6	2	52	51	1	1	51	50	1	1	43	
74 Rubber goods, not elsewhere specified.	13	145	8	9	7	17	104	57	47	.....	115	63	52	.....	293	
75 Shipbuilding, including boat building.	8	306	7	5	9	3	282	281	1	.....	429	428	1	.....	902	
76 Slaughtering and meat packing.	67	27,147	66	183	4,462	372	22,064	19,384	2,047	33	23,789	20,899	2,854	33	45,629	
77 Smelting and refining, not from the ore.	7	127	4	13	12	7	91	91	.....	.....	102	102	.....	168		
78 Soap.	27	3,329	17	62	899	212	2,139	1,491	528	120	2,345	1,635	579	44	87	
79 Steam packing.	15	160	8	14	19	11	108	106	2	.....	137	137	.....	146		
80 Stereotyping and electrotyping.	21	747	13	37	85	20	692	573	3	16	602	583	2	16	725	
81 Stoves and furnaces, including gas and oil stoves.	28	1,263	14	55	117	29	1,048	1,042	1	5	1,097	1,091	1	5	937	
82 Surgical appliances and artificial limbs.	24	807	13	40	150	75	529	264	256	9	530	269	261	9	502	
83 Tobacco manufactures.	1,050	6,758	1,111	97	208	62	5,220	3,304	1,874	42	5,684	3,598	2,038	28	783	
84 Type founding and printing materials.	19	588	9	37	81	23	438	347	87	4	450	357	89	4	391	
85 All other industries.	1,305	60,504	929	2,044	5,468	1,596	50,477	40,987	8,632	858	53,028	43,525	9,198	389	159,447	

1 All other industries embrace: Agricultural implements, 4; artificial flowers and feathers and plumes, 23; artists' materials, 7; awnings, tents, and sails, 33; babbitt metal and solder, 15; bags, paper, 3; beet sugar, 1; belting and hose, woven and rubber, 3; bicycles, motorcycles, and parts, 11; billiard tables and materials, 8; blacking and cleans- ing and polishing preparations, 50; bluing, 8; butter, cheese, and condensed milk, 6; butter, reworking, 2; candles, 1; card cutting and designing, 3; carriages and sleds, 10; children's, 4; cash registers and calculating machines, 8; cement, 1; china decorating, 13; chocolate and cocoa products, 1; clothing, horse, 1; clothing, men's, buttonholes, 10; cordage and twine and jute and linen goods, 4; cordials and sirups, 9; cork, cutting, 4; cotton goods, including cotton small wares, 2; drug grinding, 1; dyeing and coke, 1; cordage and twine and jute and linen goods, 4; cordials and sirups, 9; cork, cutting, 4; cotton goods, including cotton small wares, 2; drug grinding, 1; dyeing and finishing textiles, 10; dyestuffs and extracts, 2; emery and other abrasive wheels, 4; enameling and japanning, 3; engravers' materials, 3; engraving and dieing, 16; engraving- ing, wood, 13; fertilizers, 4; files, 2; firearms and ammunition, 1; fireworks, 2; flags, banners, regalia, society badges, and emblems, 18; flavoring extracts, 19; flour-mill and grist- mill products, 3; food preparations, 77; foundry supplies, 4; furs, dressed, 3; galvanizing, 4; gas, illuminating and heating, 2; glass, cutting, staining, and ornamenting, 44; glue, 6; gold and silver, reducing and refining, not from the ore, 3; hair work, 39; hammocks, 1; hat and cap material, 2; hats, fur-felt, 9; hats, straw, glucose and starch, 1; glue, 6; gold and silver, reducing and refining, not from the ore, 3; hair work, 39; hammocks, 1; hat and cap material, 2; hats, fur-felt, 9; hats, straw, 2; horseshoes, not made in steel works or rolling mills, 1; house-furnishing goods, not elsewhere specified, 26; ink, writing, 9; instruments, professional and scientific, 24; iron and steel, blast furnaces, 5; iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills, 8; iron and steel, doors and shutters, 5; iron and steel forgings, 11; iron and steel, nails and spikes, cut and wrought, including wire nails, not made in steel works or rolling mills, 4; iron and steel pipe, wrought, 1; jewelry

EAST ST. LOUIS.

1 All industries	139	6,005	92	156	422	83	5,252	5,032	156	64	7,280	6,974	214	82	10	23,273
2 Bread and other bakery products.	20	121	21	5	19	5	71	69	2	.....	71	69	2	.....	.....	49
3 Carriages and wagons and materials.	5	35	4	2	1	.....	28	28	.....	.....	27	27	.....	.....	.....	16
4 Copper, tin, and sheet-iron products.	14	92	17	.....	.....	2	73	73	.....	.....	93	93	.....	.....	.....	1,251
5 Foundry and machine-shop products.	11	925	3	25	35	5	857	848	6	3	1,093	1,086	8	4	.....	.....
6 Lumber and timber products.	7	147	9	10	23	3	102	102	.....	.....	132	132	.....	.....	.....	685
7 Printing and publishing.	8	77	5	10	7	5	50	41	9	.....	51	42	9	.....	.....	51
8 Tobacco manufactures.	12	23	12	.....	.....	.....	11	10	1	.....	17	16	1	.....	.....	.....
9 All other industries.	62	4,585	21	104	337	63	4,060	3,861	138	61	5,791	5,509	194	78	10	21,221

1 All other industries embrace: Artificial stone, 3; awnings, tents, and sails, 1; baking powders and yeast, 2; brooms, 1; canning and preserving, 1; cars and general shop construction and repairs by steam-railroad companies, 3; cars and general shop construction and repairs by street-railroad companies, 1; cars, steam railroad, not including operations of railroad companies, 1; chemicals, 2; clothing, women's, 1; copperage and wooden goods, not elsewhere specified, 3; flour-mill and gristmill products, 6; food preparations, 1; foundry supplies, 2; furniture and refrigerators, 2; gas, illuminating and heating, 1; glass, 1; ice, manufactured, 2; iron and steel, steel works and

PEORIA.

1 All industries	283	7,323	242	312	574	214	5,981	5,213	722	46	6,201	5,413	742	39	7	16,286
2 Bread and other bakery products.	39	274	39	5	11	25	194	136	58	.....	193	136	57	.....	.....	172
3 Carriages and wagons and materials.	8	78	9	2	.....	4	63	63	.....	.....	69	69	.....	.....	.....	62
4 Copperage and wooden goods, not elsewhere specified.	5	543	2	16	9	2	514	514	.....	.....	540	540	.....	.....	.....	910
5 Copper, tin, and sheet-iron products.	9	233	12	16	7	9	239	172	60	7	232	167	58	7	.....	190
6 Flour-mill and gristmill products.	4	54	6	2	7	5	34	34	.....	.....	35	35	.....	.....	.....	326
7 Foundry and machine-shop products.	20	438	10	35	13	10	420	419	1	.....	416	415	1	.....	.....	980
8 Leather goods.	4	55	7	1	.....	3	37	37	.....	.....	37	37	.....	.....	.....	10
9 Liquors, distilled.	4	652	.....	17	46	7	582	549	33	.....	640	604	36	.....	.....	3,367
10 Liquors, malt.	3	228	.....	17	13	1	197	192	5	.....	189	184	5	.....	.....	990
11 Lumber and timber products.	6	190	7	10	5	2	166	166	.....	.....	191	191	.....	.....	.....	453
12 Models and patterns, not including paper patterns.	4	16	5	.....	.....	.....	11	11	.....	.....	9	9	.....	.....	.....	24
13 Printing and publishing.	32	513	25	33	93	31	325	264	50	11	342	278	53	11	.....	410
14 Tobacco manufactures.	36	369	7	3	13	4	308	236	67	5	313	244	69	4	1	.....
15 All other industries.	109	3,580	79	155	344	111	2,891	2,420	448	23	2,990	2,504	463	17	6	8,355

1 All other industries embrace: Agricultural implements, 1; artificial stone, 2; awnings, tents, and sails, 2; baking powders and yeast, 2; bluing, 1; boxes, cigar, 2; boxes, fancy and paper, 1; brass and bronze products, 2; brooms, 2; butter, cheese, and condensed milk, 1; buttons, 1; canning and preserving, 1; carpets, rag, 5; cars and general shop construction and repairs by steam-railroad companies, 2; cars and general shop construction and repairs by street-railroad companies, 1; charcoal, 1; clothing, men's, including shirts, 3; clothing, women's, 1; coffee and spice, roasting and grinding, 1; coffins, burial cases, and undertakers' goods, 1; confectionery, 5; cordage and twine and jute and linen goods, 1; cutlery and tools, not elsewhere specified, 3; dyeing and finishing textiles, 1; electrical machinery, apparatus, and supplies, 2; electroplat- ing, 1; flags, banners, regalia, society badges, and emblems, 1; flavoring extracts, 1; food preparations, 4; furnishing goods, men's, 1; furniture and refrigerators, 3; gas and

MANUFACTURES—ILLINOIS.

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

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

CHICAGO—Continued.

Capital.	EXPENSES.										Value of products.	Value added by manufacture.
	Total.	Services.			Materials.		Miscellaneous.					
		Officials.	Clerks.	Wage earners.	Fuel and rent of power.	Other.	Rent of factory.	Taxes, including internal revenue.	Contract work.	Other.		
64 \$361,820	\$528,395	\$22,883	\$24,388	\$226,834	\$11,122	\$150,211	\$20,902	\$839	\$300	\$61,856	\$686,538	\$525,205
65 502,440	492,618	30,041	20,842	198,872	8,019	163,245	18,380	2,158	72	44,389	614,307	442,443
66 17,335,144	9,909,001	387,874	424,389	3,034,442	77,820	4,770,031	65,890	65,940	14,144	1,068,471	11,487,464	6,689,613
67 13,830,209	16,580,211	555,593	1,031,417	995,733	129,536	11,715,496	58,945	67,540	6,144	2,019,807	18,942,448	7,097,416
68 1,366,605	2,648,480	137,041	152,713	409,922	27,181	1,365,658	67,473	44,199	70,577	2,783,716	2,830,754	1,437,015
69 5,376,754	8,716,806	525,917	685,836	631,700	49,779	3,160,260	167,865	30,998	69,740	3,088,705	10,359,984	7,143,945
70 708,269	642,709	54,005	27,006	153,562	6,402	311,382	9,126	3,919	500	73,807	739,857	422,073
71 901,851	1,887,293	161,532	178,071	843,224	25,250	396,593	61,865	5,093	24,069	135,685	2,156,055	1,734,212
72 47,982,013	63,066,460	4,105,807	6,619,033	15,077,167	648,615	29,906,950	1,479,378	207,929	4,401,763	10,459,802	74,210,809	62,955,238
73 93,795	165,119	22,378	6,312	38,262	2,152	69,784	6,630	289	.....	10,287	179,041	107,105
74 251,977	323,520	15,900	11,070	52,875	5,448	194,628	12,517	402	.....	20,829	381,393	181,387
75 1,858,412	332,541	10,700	7,348	173,502	18,867	88,873	2,264	11,828	288	.....	359,033	251,293
76 115,311,628	314,771,683	844,656	4,690,317	11,984,893	1,248,511	284,001,894	150,748	489,099	220,196	11,131,859	325,061,657	39,811,252
77 816,079	2,405,526	39,650	31,544	63,277	17,914	2,210,200	6,628	1,772	.....	25,541	2,573,789	336,665
78 11,473,794	18,621,802	203,094	1,129,894	1,035,233	258,327	13,529,132	27,320	48,952	19,498	2,370,382	19,939,041	6,151,582
79 169,862	355,509	20,369	21,375	61,942	5,130	188,452	9,835	343	29,717	18,406	407,890	214,368
80 777,360	1,156,678	100,926	70,798	472,376	26,593	289,335	50,493	2,122	4,784	124,251	1,282,292	966,364
81 2,545,769	2,663,609	129,292	145,495	725,932	28,929	1,127,737	20,833	14,614	8,150	459,927	3,182,745	2,026,079
82 1,658,164	1,843,072	83,031	288,851	279,012	13,801	902,736	23,215	4,677	1,150	240,599	2,074,528	1,157,991
83 10,331,461	14,010,348	215,765	501,065	2,784,763	49,577	6,072,129	174,336	1,935,886	2,508	1,074,319	16,032,515	9,910,809
84 1,852,184	1,188,289	100,000	302,569	302,569	12,020	382,459	40,703	3,764	5,682	1,247,937	872,552	872,552
85 326,870,538	200,086,810	5,200,020	5,944,092	28,399,469	17,484,179	125,107,197	1,958,736	1,941,208	258,184	18,738,751	234,193,550	91,512,174

and instrument cases, 5; kaolin and ground earths, 2; labels and tags, 12; lard, refined, not made in slaughtering and meat-packing establishments, 1; lasts, 2; lead, bar, pipe, and sheet, 2; lime, 2; liquors, distilled, 2; looking-glass and picture frames, 61; malt, 9; millinery and lace goods, 100; millstones, 1; mineral and soda waters, 63; mirrors, 9; moving pictures, 3; muclilage and paste, 5; oil, lincseed, 6; oil, not elsewhere specified, 11; oleomargarine, 3; optical goods, 7; paper and wood pulp, 2; paper patterns, 2; paving materials, 4; peanuts, grading, roasting, cleaning, and shelling, 1; pens, fountain, stylographic, and gold, 6; phonographs and graphophones, 1; pipes, tobacco, 2; pottery, terra-cotta, and fire-clay products, 12; roofing materials, 8; rules, ivory and wood, 1; sales and vanils, 2; sand and emery paper and cloth, 1; saws, 7; scales and balances, 9; screws, machine, 2; screws, wood, 2; sewing machines, cases, and attachments, 4; show cases, 14; signs and advertising novelties, 43; silk and silk goods, including throwsters, 2; smelting and refining, lead, 2; soda-water apparatus, 5; sporting and athletic goods, 20; springs, steel, car and carriage, 4; stationery goods, not elsewhere specified, 13; stonuary and art goods, 12; sugar and molasses, 1; sulphuric, nitric, and mixed acids, 1; tin foil, 2; toys and games, 17; typewriters and supplies, 8; umbrellas and canes, 2; upholstery materials, 9; vauf lights and ventilators, 5; vinegar and cider, 2; wall paper, 4; wall plaster, 2; washing machines and clothes wringers, 7; waste, 2; whips, 2; windmills, 1; window shades and fixtures, 36; wirework, including wire rope and cable, 33; wood, turned and carved, 37; wool pulling, 10; wool scouring, 3; woolen, worsted, and felt goods, and wool hats, 4.

EAST ST. LOUIS.

1	\$31,297,548	\$16,701,465	\$338,170	\$352,379	\$3,250,104	\$528,644	\$10,913,432	\$33,626	\$176,430	\$2,470	\$1,108,204	\$18,227,960	\$6,787,884
2	128,352	279,716	5,980	18,572	52,990	6,099	171,060	8,064	700	.....	10,240	839,176	169,027
3	54,972	42,575	1,040	520	14,954	933	22,864	700	313	.....	1,251	359,041	32,244
4	52,830	167,843	.....	988	66,262	722	31,618	1,072	300	.....	5,975	183,350	101,010
5	2,031,248	1,760,212	70,799	37,078	512,587	78,190	974,575	3,400	5,680	.....	67,933	1,871,593	818,798
6	405,001	313,363	8,139	10,681	62,170	4,314	207,481	200	754	.....	19,615	327,780	115,065
7	147,500	93,256	10,192	6,949	38,217	1,251	25,278	4,600	687	2,470	3,012	105,290	78,761
8	19,242	26,552	.....	0,144	9,144	28	12,034	754	3,028	.....	1,564	30,793	27,701
9	28,458,553	14,037,948	242,110	277,591	2,493,702	435,107	9,418,532	13,876	104,962	.....	992,008	15,308,017	5,454,378

rolling mills, 2; iron and steel forgings, 2; kaolin and ground earths, 1; leather goods, 1; liquors, malt, 3; marble and stone work, 3; mattresses and spring beds, 1; mineral and soda waters, 3; paint and varnish, 4; paper and wood pulp, 1; patent medicines and compounds and druggists' preparations, 2; roofing materials, 1; slaughtering and meat packing, 1; springs, steel, car and carriage, 1; surgical appliances and artificial limbs, 1; wirework, including wire rope and cable, 1.

PEORIA.

1	\$24,945,147	\$59,091,889	\$719,882	\$611,012	\$3,551,905	\$551,233	\$17,221,973	\$91,942	\$34,831,328	\$39,287	\$1,473,347	\$63,061,155	\$45,237,949
2	238,736	649,591	10,840	11,194	103,840	12,914	468,754	8,607	1,341	1	23,100	763,789	282,121
3	106,144	124,887	2,400	2,008	41,174	1,925	66,709	3,136	393	.....	7,232	140,825	72,191
4	934,737	1,096,729	39,396	10,996	172,243	16,793	823,261	1,160	1,120	.....	32,141	1,152,842	312,878
5	414,619	652,365	22,022	10,050	129,834	3,611	449,193	4,992	2,329	860	28,994	684,351	231,637
6	199,029	741,999	535	7,993	22,352	5,411	634,257	.....	1,111	100	79,240	759,334	119,666
7	915,052	961,360	55,653	19,053	215,166	10,419	498,590	5,812	2,566	4,000	43,801	1,081,520	568,511
8	29,997	61,845	990	5,080	23,920	313	20,998	1,950	306	.....	8,648	72,275	50,994
9	5,959,380	42,933,697	94,758	54,030	380,451	184,725	7,293,939	601	34,558,162	24,235	392,448	44,570,613	37,091,691
10	2,211,181	729,139	69,290	12,265	142,092	23,642	176,564	.....	192,864	.....	140,302	1,101,015	902,409
11	366,076	351,198	16,338	3,909	129,489	2,862	181,188	2,480	2,091	.....	21,841	308,270	214,220
12	14,905	13,021	.....	.....	8,650	652	1,699	1,200	67	.....	753	20,915	18,564
13	600,138	690,175	74,494	92,934	298,760	13,649	297,090	14,667	1,640	10,091	66,571	881,477	660,793
14	272,890	545,687	6,595	7,968	293,985	735	238,083	3,340	54,668	.....	20,413	466,091	406,973
15	12,626,263	9,502,196	325,771	373,232	1,078,430	268,274	6,192,148	43,697	42,751	.....	607,893	10,787,838	4,357,416

electric fixtures and lamps and reflectors, 2; gas, illuminating and heating, 1; grease and tallow, 2; hand stamps and stencils and brands, 1; ice, manufactured, 2; jewelry, 3; liquors, vinous, 1; malt, 2; marble and stone work, 5; mattresses and spring beds, 1; mineral and soda waters, 7; muclilage and paste, 1; paint and varnish, 1; paper and wood pulp, 2; paper goods, not elsewhere specified, 1; patent medicines and compounds and druggists' preparations, 7; photo-engraving, 1; scales and balances, 1; slaughtering and meat packing, 3; soap, 1; soda-water apparatus, 1; stoves and furnaces, including gas and oil stoves, 3; surgical appliances and artificial limbs, 1; wall plaster, 1; wirework, including wire rope and cable, 1.

MANUFACTURES—ILLINOIS.

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

INDUSTRY AND CITY.	Number of establishments	PERSONS ENGAGED IN INDUSTRY.										WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY.					Primary horse-power.
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks.		Wage earners (average number).			Total.	16 and over.		Under 16.				
					Male.	Female.	Total.	16 and over.			Under 16.	Male.	Female.	Male.	Female.		
								Male.	Female.								
1 All industries.....	171	4,355	174	134	292	103	3,652	2,920	688	44	3,737	2,991	700	40	6	6,368	
2 Bread and other bakery products.....	16	88	22	2	3	6	55	54	1	.....	56	55	1	.....	.....	79	
3 Carriages and wagons and materials.....	7	70	10	4	.....	2	54	54	.....	.....	50	50	.....	.....	.....	80	
4 Copper, tin, and sheet-iron products.....	10	77	11	3	1	2	60	60	.....	.....	59	59	.....	.....	.....	32	
5 Foundry and machine-shop products.....	10	270	14	10	17	8	221	214	.....	7	238	230	.....	8	.....	794	
6 Lumber and timber products.....	7	176	10	9	7	3	147	141	.....	5	154	148	.....	5	1	312	
7 Marble and stone work.....	5	36	4	2	3	1	26	26	.....	.....	22	22	.....	.....	.....	70	
8 Printing and publishing.....	27	549	20	34	135	39	321	273	.....	45	353	300	.....	50	3	257	
9 Tobacco manufactures.....	30	157	31	2	2	.....	122	103	.....	10	130	110	.....	11	9	.....	
10 All other industries <sup>1</sup> .....	59	2,032	52	68	124	42	2,046	1,995	627	24	2,675	2,017	633	19	6	4,744	

<sup>1</sup> All other industries embrace: Agricultural implements, 3; artificial stone, 4; automobiles, including bodies and parts, 1; awnings, tents, and sails, 2; boots and shoes, including cut stock and findings, 1; brick and tile, 1; brooms, 1; brushes, 1; canning and preserving, 1; carpets, rag, 1; cars and general shop construction and repairs by steam-railroad companies, 2; cars and general shop construction and repairs by street-railroad companies, 1; clocks and watches, including cases and materials, 4; confectionery, 4; cutlery and tools, not elsewhere specified, 1; electrical machinery, apparatus, and supplies, 1; flour-mill and gristmill products, 1; food preparations, 2;

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

1 ALTON.....	69	2,729	45	79	112	64	2,429	2,247	124	58	2,818	2,006	145	67	.....	5,453
2 AURORA.....	165	5,884	165	180	372	122	5,095	4,081	943	71	5,331	4,273	984	41	33	7,906
3 BELLEVILLE.....	119	2,248	107	103	134	32	1,872	1,662	139	71	1,937	1,721	143	68	5	4,541
4 BLOOMINGTON.....	107	2,495	99	97	163	59	2,077	1,767	266	44	2,220	1,890	283	22	25	2,877
5 CAIRO.....	56	1,444	51	56	69	31	1,237	1,202	32	3	1,337	1,299	35	3	.....	4,764
6 CANTON.....	33	1,421	39	13	80	27	1,262	1,143	111	8	1,568	1,448	141	9	.....	3,716
7 CHAMPAIGN.....	42	381	44	18	33	13	273	253	14	6	288	267	15	6	.....	476
8 CHICAGO HEIGHTS.....	79	4,444	60	111	248	72	3,953	3,830	95	28	4,357	4,222	103	29	3	10,176
9 CICERO.....	7	735	2	29	42	4	555	553	.....	.....	597	597	.....	.....	.....	1,580
10 DANVILLE.....	76	2,044	76	80	108	36	1,744	1,605	127	12	2,063	1,808	151	11	3	3,288
11 DECATUR.....	157	3,447	148	163	310	127	2,099	2,213	402	84	2,892	2,371	432	67	22	6,447
12 ELGIN.....	115	6,583	100	104	192	93	6,094	3,044	2,352	98	6,337	3,790	2,447	46	54	6,059
13 EVANSTON.....	60	1,040	63	19	88	33	837	754	82	1	839	756	82	1	.....	1,056
14 FREEPORT.....	69	3,225	56	82	149	85	2,863	2,535	245	23	3,198	2,808	275	23	2	4,412
15 GALESBURG.....	62	1,738	58	74	110	31	1,465	1,266	186	13	1,595	1,379	202	2	12	1,968
16 JACKSONVILLE.....	57	1,096	58	27	49	15	947	700	234	13	981	725	242	8	6	1,189
17 JOLIET.....	137	7,266	128	138	481	136	6,383	5,834	523	26	6,942	6,346	571	8	17	37,744
18 KANKAKEE.....	55	1,552	60	38	84	21	1,349	935	348	63	1,455	1,012	375	22	46	3,988
19 LA SALLE.....	29	1,439	24	32	79	11	1,293	1,266	9	18	1,359	1,330	10	19	.....	8,795
20 LINCOLN.....	40	308	49	15	19	5	220	204	15	1	246	228	17	1	.....	385
21 MATTOON.....	35	1,102	39	21	79	15	948	916	32	.....	1,013	979	34	.....	.....	1,019
22 MOLINE.....	66	6,106	44	142	372	99	5,440	5,225	180	44	5,777	5,540	190	46	1	10,230
23 OAK PARK.....	23	362	21	9	36	14	282	276	6	.....	255	250	5	.....	.....	758
24 QUINCY.....	235	5,055	201	213	440	170	4,032	3,242	730	60	4,159	3,345	752	42	20	7,557
25 ROCK ISLAND.....	74	2,179	51	111	198	65	1,754	1,598	112	46	2,058	1,872	132	54	.....	3,173
26 ROCKFORD.....	205	10,523	208	278	456	272	9,309	7,815	1,499	195	9,910	8,107	1,591	113	99	16,217
27 SREATOR.....	45	1,400	44	33	34	23	1,275	1,109	108	58	1,588	1,352	134	70	2	3,140
28 WAUKEGAN.....	59	3,773	146	121	320	96	3,000	2,790	281	19	3,543	3,199	322	15	7	23,144

MANUFACTURES—ILLINOIS.

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

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

SPRINGFIELD.

	Capital.	EXPENSES.										Value of products.	Value added by manufacture.
		Total.	Services.			Materials.		Miscellaneous.					
			Officials.	Clerks.	Wage earners.	Fuel and rent of power.	Other.	Rent of factory.	Taxes, including internal revenue.	Contract work.	Other.		
1	\$7,174,014	\$7,548,771	\$227,730	\$237,982	\$2,095,552	\$148,986	\$4,057,121	\$39,895	\$112,280	\$36,351	\$594,874	\$8,497,245	\$4,293,138
2	124,291	245,593	3,000	4,413	43,444	4,005	177,308	2,310	889	.....	9,564	309,692	127,719
3	100,221	85,740	3,903	100	34,518	1,717	39,657	8,100	537	.....	2,118	98,478	57,104
4	79,069	141,922	3,244	1,343	38,910	1,112	89,285	2,248	278	471	5,025	178,129	87,732
5	647,337	471,849	13,728	13,798	134,761	14,515	240,223	3,049	2,938	776	46,042	482,383	227,045
6	219,924	225,688	7,950	5,823	89,048	2,251	108,079	500	939	.....	11,092	242,213	131,883
7	95,717	99,988	3,000	6,117	20,000	1,050	50,688	1,175	373	3,526	3,448	119,007	67,269
8	583,706	664,038	44,074	88,209	202,737	10,709	151,829	12,504	2,387	29,200	121,669	738,955	576,357
9	53,911	171,408	2,920	1,140	61,129	741	71,995	3,293	17,910	.....	12,334	206,158	133,422
10	5,269,848	5,452,487	144,705	110,949	1,470,970	110,100	3,128,057	11,716	80,023	2,319	381,582	6,122,230	2,884,007

furnishing goods, men's, 1; gas and electric fixtures and lamps and reflectors, 2; gas, illuminating and heating, 1; hair work, 1; ice, manufactured, 3; leather goods, 5; liquors, malt, 1; mattresses and spring beds, 1; mineral and soda waters, 3; optical goods, 1; paint and varnish, 1; patent medicines and compounds and druggists' preparations, 2; shoddy, 1; slaughtering and meat packing, 2; wall plaster, 1.

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

1	\$5,595,240	\$9,613,321	\$162,721	\$135,905	\$1,527,058	\$209,223	\$7,053,039	\$14,802	\$43,275	\$10,321	\$461,077	\$10,090,333	\$2,834,071
2	11,427,258	10,255,520	250,227	471,296	2,036,480	258,816	5,321,015	34,191	87,518	10,886	375,491	10,954,175	5,373,744
3	5,541,452	4,180,387	171,020	123,640	1,002,100	89,033	2,235,262	9,655	111,885	7,429	369,367	4,614,608	2,290,373
4	4,781,817	4,355,961	148,901	176,481	1,186,253	110,871	2,416,247	23,326	20,797	10,306	250,809	4,887,930	2,340,812
5	4,853,881	4,099,103	95,294	82,924	628,420	52,814	2,903,733	49,380	30,862	130	255,027	4,440,148	1,483,001
6	8,189,392	2,443,161	27,905	100,944	691,543	41,795	1,141,600	4,747	35,613	460	398,554	2,941,625	1,758,230
7	894,784	720,662	21,859	36,148	174,472	33,465	385,938	7,019	0,507	.....	69,453	840,489	427,146
8	10,420,527	9,475,197	311,971	293,651	2,471,087	321,783	5,288,030	39,685	34,724	3,419	709,241	10,830,268	5,227,849
9	2,496,100	1,403,038	53,729	43,365	406,154	82,961	640,918	1,500	17,009	4,706	144,236	1,461,104	738,285
10	2,656,033	3,022,789	117,200	118,973	1,077,341	86,737	1,343,335	19,547	43,260	3,803	212,733	3,360,590	1,920,724
11	6,579,494	8,628,270	270,593	338,317	1,419,925	103,822	5,818,733	42,329	58,038	5,511	576,002	9,767,988	3,850,433
12	16,078,632	9,430,657	275,800	215,014	3,379,222	178,300	4,360,011	26,974	128,884	2,000	804,452	11,119,070	6,581,359
13	4,241,198	3,329,854	44,738	138,012	589,557	141,570	2,208,510	10,886	12,398	37,705	151,478	3,778,208	1,428,218
14	6,402,838	6,881,443	136,658	170,851	1,570,371	123,260	4,294,150	12,357	53,406	1,293	520,097	7,811,277	3,363,867
15	2,454,346	2,721,546	94,574	109,574	887,130	92,271	1,324,059	13,175	13,708	3,089	186,080	2,919,091	1,502,761
16	1,502,781	2,036,443	40,871	42,765	487,125	40,409	1,280,792	8,109	34,842	9,227	106,302	2,298,700	991,499
17	25,586,101	34,908,578	319,979	610,184	4,435,478	6,508,486	21,249,084	21,055	239,907	74,721	1,449,084	38,816,523	11,058,353
18	2,599,115	2,516,160	64,432	40,886	621,093	99,288	1,424,030	7,138	43,888	1,980	242,525	2,723,171	1,229,847
19	4,392,559	4,360,118	148,101	176,379	856,100	518,332	2,400,397	3,844	21,344	.....	226,522	5,307,551	2,379,822
20	611,472	483,466	17,334	14,286	115,214	19,806	269,800	5,820	0,541	.....	34,569	570,243	280,668
21	831,933	1,380,872	25,823	67,741	501,480	39,829	628,620	3,756	5,800	1,404	40,419	1,434,420	705,971
22	26,333,647	17,412,515	433,879	453,963	3,522,729	243,371	10,945,928	25,913	69,288	15,168	1,792,276	20,891,698	9,702,360
23	6,060,795	734,654	23,247	33,762	196,602	219,106	171,781	3,889	14,965	19,328	51,977	1,117,697	726,810
24	11,906,181	10,257,065	311,541	398,319	2,082,908	249,450	5,542,635	63,713	203,593	57,593	1,377,908	11,435,572	5,043,487
25	9,287,204	4,718,891	184,904	181,212	1,025,755	107,013	2,709,728	11,337	108,838	870	388,334	5,386,776	2,569,135
26	22,411,897	19,347,792	560,836	579,082	5,213,305	375,493	10,209,279	64,280	108,238	37,744	2,211,485	22,265,740	11,083,068
27	4,887,764	1,870,150	63,013	39,652	643,503	195,807	621,247	7,008	18,558	1,000	285,102	2,137,252	1,320,198
28	17,091,901	18,103,066	232,961	353,344	2,102,504	721,338	13,442,924	157,593	67,266	8,570	1,016,636	16,984,082	5,819,820