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FOURTEENTH CENSUS OF THE UNITED STATES
 MANUFACTURES: 1919

I O W A

Prepared under the supervision of EUGENE F. HARTLEY, Chief Statistician for Manufactures

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EXPLANATION OF TERMS.

Scope of census.—Census statistics of manufactures are compiled primarily for the purpose of showing the absolute and relative magnitude of the different branches of industry covered and their growth or decline. Incidentally, the effort is made to present data throwing light upon character of ownership, size of establishments, and similar subjects. When use is made of the statistics for these purposes it is imperative that due attention be given to their limitations, particularly in connection with any attempt to derive from them figures purporting to show average wages, cost of production, or profits.

The census did not cover establishments which were idle during the entire year or for which products were valued at less than \$500, or the manufacturing done in educational, eleemosynary, and penal institutions.

Period covered.—The returns relate to the calendar year 1919, or the business year which corresponded most nearly to that calendar year, and cover a year's operations, except for establishments which began or discontinued business during the year.

The establishment.—As a rule, the term "establishment" represents a single plant or factory, but in some cases it represents two or more plants which were operated under a common ownership or for which one set of books of account was kept. If, however, the plants constituting an establishment as thus defined were not all located within the same city, county, or state, separate reports were secured in order that the figures for each plant might be included in the statistics for the city, county, or state in which it was located. In some instances separate reports were secured for different industries carried on in the same establishment.

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

As a rule, the same designation is used for the industry wherever it appears, although all of the products indicated by this designation were not manufactured in the state or city for which these statistics are presented. In some instances the wording is changed so as to more correctly describe the products represented. For a number of industries subclasses are shown which indicate more definitely the kind of products.

Selected industries.—The general tables at the end of this bulletin give the principal facts separately for the industries of the state. A selection has been made of certain leading industries of the state for more detailed consideration. Sometimes an industry of great importance has to be omitted because it comprises so few establishments that a detailed presentation would reveal the operations of individual concerns.

Comparisons with previous censuses.—Owing to changes in industrial conditions it is not always possible to classify establishments by industries in such a way as to permit accurate comparison with preceding censuses. At the census of 1909 the figures for kindred industries were combined. This practice has been followed in compiling the statistics for 1919 and 1914 when placed in comparison with those for 1909 and prior years. The comparative summary for 1919, 1914, and 1909, therefore, does not show separately all the industries given for 1919 in the detailed statement for the state.

Influence of increased prices.—In comparing figures for cost of materials, value of products, and value added by manufacture in 1919 with the corresponding figures for earlier censuses, account should be taken of the general increase in the prices of commodities during recent years. To the extent to which this factor has been influential the figures fail to afford an exact measure of the increase in the volume of business.

Persons engaged in the industry.—The following general classes of persons engaged in the manufacturing industries were distinguished: (1) Proprietors and firm members, (2) salaried officers of corporations, (3) superintendents and managers, (4) clerks (including other subordinate salaried employees), and (5) wage earners. In the reports for the censuses of 1904 and 1899 these five classes were shown according to the three main groups: (1) Proprietors and firm members, (2) salaried officials, clerks, etc., and (3) wage earners. In comparative tables covering the census of 1904 it is of course necessary to group the figures according to the classification that was employed at the earlier censuses.

The number of persons engaged in each industry, segregated by sex, and, in the case of wage earners, also by age (whether under 16 or 16 and over), was reported for a single representative day. The 15th of December was selected as representing for most industries normal conditions of employment, but where this date was not a representative day an earlier date was chosen.

In the case of employees other than wage earners the number thus reported for the representative date has been treated as equivalent to the average for the year, since the number of employees of this class does not ordinarily vary much from month to month. In the case of wage earners the average has been obtained in the manner explained in the next paragraph.

In addition to the more detailed report by sex and age of the number of wage earners on the representative date, a report was obtained of the number employed on the 15th of each month, by sex, without distinction of age. From these figures the average number of wage earners for the year has been calculated by dividing the sum of the numbers reported for the several months by 12. The importance of the industry as an employer of labor is believed to be more accurately measured by this average than by the number employed at any one time or on a given day.

The number of wage earners reported for the representative day, though given in certain tables for each separate industry, is not totaled for all industries combined for any state, because, in view of the variations of date, such a total is not believed to be significant. It would involve more or less duplication of persons working in different industries at different times, would not represent the total number employed in all industries at any one time, and would give an undue weight to seasonal industries as compared with industries in continual operation. This total, however, is shown for the different cities, because the limited area and greater regularity of employment largely overcame the objection incident to its publication for the separate states or the United States.

In order to determine as nearly as possible the age distribution of the average number of wage earners for a given state as a whole, the percent distribution by age of the wage earners in each industry for December 15, or the nearest representative day, has been calculated from the actual numbers reported for that date. The percentages thus obtained have been applied to the average number of wage earners for the year in that industry to determine the average numbers 18 years and over, and under 16, employed. These calculated averages for the several industries have been added to give the average distribution for each state as a whole and for the entire country.

Salaries and wages.—Under these heads are given the total payments during the year for salaries and wages, respectively. The Census Bureau has not undertaken to calculate the average annual earnings of either salaried employees or wage earners. Such averages would possess little real value, because they would be based on the earnings of employees of both sexes, of all ages, and of widely varying degrees of skill. Furthermore, so far as wage earners are concerned, it would be impossible to calculate accurately even so simple an average as this, since the number of wage earners fluctuates from month to month in every industry, and in some cases to a very great extent. The Census Bureau's figures for wage earners, as already explained, are averages based on the number employed on the 15th of each month, and while representing the number according to the pay rolls to whom wages were paid on that date, no doubt represent a larger number than would be required to perform the work in any industry if all were continuously employed during the year.

Prevailing hours of labor.—No attempt was made to ascertain the number of wage earners working a given number of hours per week. The inquiry called merely for the prevailing practice followed in each establishment. Occasional variations in hours in an establishment from one part of the year to another were disregarded, and no attention was paid to the fact that a few wage earners might have hours differing from those of the majority. All the wage earners of each establishment are therefore counted in the class within which the establishment itself falls. In most establishments, however, practically all the wage earners work the same number of hours, so that the figures give a substantially correct representation of the hours of labor.

Capital.—The instructions on the schedule for securing data relating to capital were as follows:

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

These instructions were identical with those employed at the censuses of 1914 and 1909. The data compiled in respect to capital, however, at both censuses, as well as at all preceding censuses of manufactures, have been so defective as to be of little value except as indicating very general conditions. In fact, it has been repeatedly recommended by the census authorities that this inquiry be omitted from the schedule. While there are some establishments whose accounting systems are such that an accurate return for capital could be made, this is not true of the great majority, and the figures therefore do not show the actual amount of capital invested.

Materials.—The statistics as to cost of materials relate to the materials used during the year, which may be more or less than the materials purchased during the year. The term "materials" covers fuel, rent of power and heat, mill supplies, and containers, as well as materials which form a constituent part of the product.

Rent and taxes.—The taxes include certain Federal taxes and state, county, and local taxes. Under "Federal taxes" there are included the internal revenue tax on manufactures (tobacco, beverages, etc.), excise taxes when included in values reported for products, corporation capital stock tax, and corporation income tax, but not the income tax for individuals and partners.

Value of products.—The amounts given under this heading represent the selling value or price at the factory of all products manufactured during the year, which may differ from the value of the products sold.

Value added by manufacture.—The value of products is not always a satisfactory measure of either the absolute or the relative importance of a given industry, because only a part of this value is actually created by the manufacturing processes carried on in the industry itself. Another part, and often by far the larger one, represents the value of the materials used. For many purposes, therefore, the best measure of the importance of an industry, from a manufacturing standpoint, is the value created by the manufacturing operations carried on within the industry. This value is calculated by deducting the cost of the materials used from the value of the products. The figure thus obtained is termed in the census reports "value added by manufacture."

Cost of manufacture and profits.—The census data do not show the entire cost of manufacture, and consequently can not be used for the calculation of profits. No account has been taken of depreciation or interest, rent of offices and buildings other than factory or works, insurance, ordinary repairs, advertising, and other sundry expenses.

Primary horsepower.—This item represents the total primary power generated by the manufacturing establishments plus the amount of power, principally electric, rented from other concerns. It does not cover the power of electric motors taking their current from dynamos driven by primary power machines operated by the same establishment, because the inclusion of such power would obviously result in duplication. The figures for primary horsepower represent the rated capacity of the engines, motors, etc., and not the amount of power in actual daily use.

Fuel.—Statistics of the quantity of fuel used are shown only for anthracite and bituminous coal, coke, fuel oils, gasoline and other volatile oils, and gas—natural and manufactured, and represent the quantity used during the year. As only the principal kinds of fuel are shown, comparison as to the total cost of all fuels is impracticable. A comparison, however, of the total quantities of the several kinds of fuel used in 1919 and 1914 is given.

IOWA.

GENERAL STATISTICS.

General character of the state.—Iowa has a gross area of 56,147 square miles, of which 55,586 represent land surface. The inhabitants of the state in 1900 numbered 2,231,853; in 1910, 2,224,771; and in 1920, 2,404,021. In total population Iowa ranked sixteenth among the states in 1920. The number of inhabitants per square mile in 1910 was 40, the corresponding figures for 1920 being 43.2.

In 1920 there were 18 cities in the state having more than 10,000 inhabitants. The combined population of these cities in that year was 604,150, which formed 25.1 per cent of the total for Iowa. Of the total value of the state's manufactured products, 78.4 per cent was reported from these 18 cities.

Importance and growth of manufactures (Table 1).—The large increases in salaries and wages, cost of materials, and the value of products, as presented in Table 1, are largely due to the changes in industrial conditions brought about by the World War, and, therefore, can not properly be used to measure the growth of manufactures during the census period 1914 to 1919. The increases shown, however, in number of wage earners and horsepower are indicative of a decided growth in the manufacturing activities of the state. The addition of the Federal income tax since 1914 will account for the exceptional increase in "Rent and taxes."

Statistics for the state, by counties (Table 2).—Figures are not available for comparison of the totals for the 99 counties in 1919 with those for prior censuses.

Principal industries, ranked by value of products (Table 3).—The ranking of industries by value of products is not always satisfactory as indicating their importance from a manufacturing standpoint. Their ranking in many instances would change materially if based upon the average number of wage earners or value added by manufacture.

Persons engaged in manufacturing industries (Table 4).—The age classification of the average number of wage earners in this and other tables is an estimate obtained by the method described in the "Explanation of terms." The classification by sex for 1919 was reported separately, but for 1914 and 1909 was obtained in the same manner as the distribution by age. Figures for individual industries will be found in Table 29.

Average number of wage earners for selected industries (Table 5).—The industries covered by this table are those which employed more than 500 wage earners

in 1919, and for which statistics can be shown without the possibility of disclosing the operations of individual establishments.

Average number of wage earners, by sex and age, and value of products, for cities of 10,000 inhabitants or more (Table 6).—General increases from 1914 to 1919 are shown in most of the details for the 18 cities included in this table. During this period there was an increase of \$348,885,479, or 148.2 per cent, in the total value of products for these cities and 12,007, or 27.2 per cent, in average number of wage earners.

Wage earners, by months (Table 7).—The statistics for wage earners in this table are intended to show the steadiness of employment, or the reverse, in accordance with the industrial conditions existing during the several census years.

Wage earners, by months, for selected industries and for cities (Table 8).—In addition to the number of wage earners employed by months, similar data are given for males and females for all industries combined, and also for each of the 18 cities. The table also shows a number of industries in the state in 1919 which employed a large number of female wage earners. Of the total number of female wage earners in the state, 80.9 per cent were in the 18 cities, while of the male wage earners, only 67.7 per cent were reported by the cities.

Prevailing hours of labor (Table 9).—Since 1914 there has been a marked shortening of the working-day in Iowa. In that year 17.4 per cent of the wage earners were included in the group "48 and under," as against 38 per cent in 1919. In 1914 the "60" and "over 60" groups constituted 44 per cent of the total wage earners, as compared with 19.5 per cent in 1919.

Size of establishments, by average number of wage earners, for selected industries and for cities (Table 10).—The predominance of the number of small establishments, when based on the number of wage earners employed, is evidenced in this table by the fact that of the total number of establishments in the state, 97.5 per cent were in the several classes having fewer than 101 wage earners, while such establishments employed but 44.6 per cent of the total number of wage earners. On the other hand, the establishments employing an average of more than 100 wage earners represented only 2.5 per cent of the total number of manufacturing establishments in the state, but reported 55.4 per cent of the total number of wage earners.

Size of establishments, by value of products (Table 11).—At the censuses of 1909 and 1914 establishments with products valued at \$100,000 to \$1,000,000 constituted one group, but at the census of 1919 this group was subdivided into "\$100,000 to \$500,000" and "\$500,000 to \$1,000,000." Separate figures for the number of establishments and value of products have been compiled, however, from the returns for 1914. The table, therefore, gives combined figures for these two groups for all items for 1909, and for the average number of wage earners and value added by manufacture for 1914.

Size of establishments, by value of products, for selected industries (Table 12).—In the preparation of this table it was necessary in several instances to combine the establishments of one group of the industry with those of some other group of that industry to avoid the possibility of disclosing the operations of individual establishments.

Size of establishments, by value of products, for cities of 10,000 inhabitants or more (Table 13).—This table strikingly illustrates the fact that the number of establishments of itself is no real index of manufacturing activities.

Character of ownership (Table 14).—The preponderance of corporate ownership is clearly brought out in this table. Although corporations owned but 27.1 per cent of the number of establishments in the state in 1919, they reported 84.5 per cent of the average number of wage earners and 86.5 per cent of the total value of products. During the five-year period 1914 to 1919, the average number of wage earners in corporations increased 19,704, or 40.7 per cent, and the value of products, \$408,837,357, or 173.3 per cent.

Manufactures, by population groups, in cities of 10,000 inhabitants or more (Table 15).—This table shows that the combined number of establishments in the 18 cities in 1919 represented 40.6 per cent of the total in the state. They reported in that year 69.7

per cent of the average number of wage earners and 78.4 per cent of the value of products. These proportions do not differ materially from those of 1914.

Principal industries in Davenport, Des Moines, and Sioux City, with per cent of total for the state (Table 16).—This table includes all industries, in each of the three cities in the state having 50,000 inhabitants or more in 1920, which reported products of \$600,000 and over and for which figures can be shown without disclosing the operations of individual establishments. The names of a number of important industries are also given for which figures can not be shown without the possibility of disclosing the operations of individual establishments.

Number and horsepower of types of prime movers (Table 17).—The total horsepower reported in 1919, as compared with that for 1914, shows an increase of 52,897 horsepower, or 27.8 per cent. This increase, however, is due to the gain of 62,309 horsepower, or 123.9 per cent, in rented power, since owned power decreased 9,412 horsepower, or 6.7 per cent, during the five-year period. Of the total horsepower in 1914, 73.5 per cent were owned power and 26.5 per cent rented. The corresponding proportions for 1919 were 53.6 per cent and 46.4 per cent, respectively.

Fuel consumed (Table 18).—This table shows the principal kinds of fuel used by the manufacturing plants in the state in 1919 and 1914, and gives separately for 1919 the amounts consumed by a number of important industries which use considerable quantities of fuel. In 1919, five industries combined, brick and tile, terra-cotta, and fire-clay products, steam railroad-repair shops, cement, glucose and starch, and slaughtering and meat packing consumed 67.4 per cent of the bituminous coal; while 22.1 per cent of the anthracite coal, 60.2 per cent of the coke, and 69.4 per cent of the fuel oils were used in the manufacture of gas.

TABLE 1.—COMPARATIVE SUMMARY: 1919, 1914, 1909, 1904, AND 1899.

	MANUFACTURING INDUSTRIES.					PER CENT OF INCREASE. ¹			
	1919	1914	1909	1904	1899	1914-1919	1909-1914	1904-1909	1899-1904
Number of establishments.....	5,683	5,614	5,528	4,785	4,828	1.2	1.6	15.5	-0.9
Persons engaged.....	105,439	82,631	78,360	61,361	(²)	27.6	5.5	27.7	.....
Proprietors and firm members.....	5,393	5,421	5,323	4,758	(²)	-0.5	1.8	11.9	.....
Salaried employees.....	19,485	14,097	11,402	7,122	5,159	38.3	23.6	60.1	38.0
Wage earners (average number).....	80,551	63,113	61,635	49,481	44,420	27.6	2.4	24.6	11.4
Primary horsepower.....	242,946	190,049	155,384	118,065	106,664	27.8	22.3	31.6	10.7
Capital.....	\$403,205,513	\$233,128,542	\$171,218,604	\$111,427,429	\$85,687,334	73.0	36.2	53.7	30.1
Salaries and wages.....	124,161,129	56,170,325	43,513,581	28,945,430	22,253,197	121.0	29.1	50.3	30.1
Salaries.....	34,043,960	16,310,815	10,971,650	5,948,377	4,232,544	108.7	48.7	84.4	40.5
Wages.....	90,117,169	39,859,510	32,541,931	22,997,053	18,020,653	128.1	22.5	41.5	27.6
Paid for contract work.....	1,470,139	993,326	968,827	961,910	(²)	48.0	2.5	0.7	.....
Rent and taxes.....	15,100,221	3,555,794	2,382,967	\$1,051,399	(²)	324.7	49.2	.....	.....
Cost of materials.....	520,240,807	205,451,359	170,707,048	102,843,892	85,778,867	153.2	20.4	66.0	19.9
Value of products.....	745,472,697	310,749,974	259,237,637	180,572,313	132,870,865	139.9	19.9	61.4	20.8
Value added by manufacture ⁴	225,231,890	105,298,635	88,530,589	57,728,421	47,091,998	113.9	13.9	53.4	22.6

¹ A minus sign (—) denotes decrease.

² Figures not available.

³ Exclusive of internal revenue.

⁴ Value of products less cost of materials.

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TABLE 2.—STATISTICS FOR THE STATE, BY COUNTIES: 1919.

COUNTY.	Number of establishments.	WAGE EARNERS.		Rent and taxes.	Cost of materials.	Value of products.	Value added by manuf-acture.	Primary horse-power.
		Average number.	Wages.					
The state.....	5,083	80,551	\$90,117,160	\$15,100,221	\$520,210,807	\$745,472,697	\$325,231,890	242,946
Adair.....	14	23	23,062	1,046	156,673	210,653	53,980	121
Adams.....	9	0	7,334	974	50,236	81,028	30,792	70
Allamakee.....	53	173	196,795	5,768	1,361,145	1,838,443	477,298	875
Appanoose.....	51	219	217,191	22,509	788,082	1,211,212	423,130	906
Audubon.....	25	50	40,672	5,898	414,362	526,166	111,794	341
Benton.....	63	597	685,749	33,219	959,403	2,095,928	1,136,525	2,300
Black Hawk.....	240	5,023	6,227,128	399,599	26,121,845	39,450,011	13,328,166	12,129
Boone.....	57	1,013	1,349,223	81,226	1,183,389	3,201,718	2,018,329	2,243
Bremer.....	88	261	235,398	52,557	3,150,710	3,937,810	787,100	1,252
Buchanan.....	50	193	167,513	11,609	1,083,272	1,504,324	421,052	1,233
Buena Vista.....	58	146	153,701	43,740	575,881	901,680	415,799	642
Butler.....	39	103	75,381	9,122	981,113	1,182,221	201,108	491
Calhoun.....	37	80	81,676	21,848	378,357	722,011	343,654	253
Carroll.....	46	193	248,234	14,703	985,322	1,505,651	520,320	645
Cass.....	38	171	186,001	14,688	1,321,446	1,808,462	547,016	747
Cedar.....	33	51	47,732	13,312	783,498	953,402	169,904	486
Cerro Gordo.....	88	2,523	3,028,719	457,041	21,098,554	32,115,943	7,417,389	2,018
Cherokee.....	30	74	75,808	8,031	172,400	376,165	202,705	233
Chickasaw.....	33	76	70,814	10,494	1,256,718	1,524,333	208,615	638
Clarke.....	7	20	14,639	2,415	10,507	55,153	38,046	35
Clay.....	34	146	130,926	12,518	361,836	679,178	317,342	508
Clayton.....	02	433	474,462	14,805	2,597,133	3,357,171	790,038	1,032
Clinton.....	162	3,532	4,164,837	1,533,200	19,768,164	30,924,597	11,156,403	10,375
Crawford.....	24	98	137,575	13,475	867,988	1,087,497	287,491	400
Dallas.....	55	557	640,117	32,990	1,250,819	2,071,580	1,420,707	2,648
Davis.....	8	20	13,204	5,007	20,758	60,295	30,537	37
Decatur.....	19	64	54,891	4,315	405,738	516,493	110,755	134
Delaware.....	34	84	83,811	10,492	1,359,390	1,021,963	262,567	252
Des Moines.....	101	3,463	3,033,948	717,074	8,315,223	15,239,767	6,924,544	7,599
Dickinson.....	22	36	38,280	3,310	352,976	460,807	107,831	252
Dubuque.....	157	6,258	6,113,960	1,193,826	21,013,435	35,537,535	14,524,100	11,321
Emmet.....	24	283	407,910	18,150	514,701	1,085,709	571,008	510
Fayette.....	00	1,354	1,765,728	26,227	2,467,982	4,734,079	2,206,097	2,315
Floyd.....	32	906	1,224,878	35,225	3,427,020	7,056,448	4,227,528	3,651
Franklin.....	24	188	190,757	27,591	972,126	1,583,215	611,089	990
Fremont.....	24	56	57,583	3,973	135,010	256,801	121,791	439
Greene.....	23	69	71,783	10,977	225,296	491,150	265,854	326
Grundy.....	24	34	37,800	4,036	203,435	348,736	85,301	813
Guthrie.....	38	52	44,520	8,993	256,538	373,564	117,026	448
Hamilton.....	36	310	315,782	40,122	891,260	1,611,276	720,016	924
Hancock.....	27	36	44,495	5,887	635,532	750,207	114,875	353
Hardin.....	43	215	212,323	17,028	2,096,791	2,680,675	583,014	1,018
Harrison.....	20	525	601,358	9,356	680,366	1,453,271	772,905	487
Henry.....	32	99	62,525	9,753	661,719	417,773	243,940	684
Howard.....	34	108	83,943	7,941	1,236,191	1,434,323	198,132	347
Humboldt.....	21	60	60,282	4,607	401,744	570,610	168,872	505
Ia.....	20	34	31,336	6,169	135,381	252,143	110,762	213
Iowa.....	20	94	51,944	6,893	598,856	783,388	181,532	986
Jackson.....	39	119	115,336	8,780	912,665	1,209,843	297,178	469
Jasper.....	56	838	1,010,222	135,428	3,393,180	6,721,268	3,328,082	3,297
Jefferson.....	44	690	591,190	114,137	1,996,825	4,658,416	2,661,501	1,075
Johnson.....	59	337	283,044	30,878	947,205	1,820,687	882,482	932
Jones.....	41	201	201,307	22,574	1,517,452	2,043,994	525,642	1,255
Keokuk.....	37	155	145,347	5,010	706,964	311,146	395,818	715
Kossuth.....	52	156	171,693	14,313	1,100,112	1,545,632	385,520	596
Lee.....	120	3,812	4,157,598	772,170	17,226,309	27,551,394	10,325,085	14,195
Linn.....	251	0,370	0,566,970	2,412,565	72,802,057	93,109,278	20,306,621	20,204
Louis.....	22	85	63,734	4,348	242,885	387,089	144,204	251
Lucas.....	26	99	88,324	8,133	420,728	662,106	241,378	377
Lyon.....	32	59	69,158	7,089	484,270	755,030	270,760	191
Madison.....	18	48	41,655	5,201	117,839	281,920	164,081	345
Mahaska.....	05	466	401,175	68,775	1,158,271	2,059,298	901,027	1,268
Marion.....	45	201	200,235	35,343	865,239	1,922,398	1,057,169	1,077
Marshall.....	75	1,376	1,547,119	156,031	5,289,850	9,070,827	3,783,977	2,839
Mills.....	35	68	70,248	11,071	279,295	457,419	178,123	479
Mitchell.....	37	67	60,056	7,487	1,034,578	1,251,597	217,019	369
Monona.....	19	29	27,221	2,313	212,593	311,477	98,884	209
Monroe.....	23	102	99,527	10,511	618,099	847,568	229,472	197
Montgomery.....	70	348	343,930	30,070	1,503,205	3,019,672	1,516,467	1,083
Muscataine.....	174	2,581	2,169,418	188,024	5,944,545	11,163,705	5,219,160	4,409
O'Brien.....	38	152	185,598	20,766	1,387,606	1,854,316	466,710	839
Oseola.....	18	30	35,693	4,629	180,239	294,086	113,847	142
Page.....	58	276	291,065	90,995	1,720,070	2,824,478	1,104,408	2,014
Palo Alto.....	29	72	63,140	8,673	504,759	823,275	228,516	332
Plymouth.....	50	170	186,624	36,487	1,018,793	2,120,395	510,602	947
Pocahontas.....	29	98	143,634	10,611	518,229	835,970	317,741	1,749
Polk.....	307	8,282	8,440,957	1,726,071	34,273,693	61,989,556	27,715,863	18,541
Pottawattamie.....	140	1,940	2,534,188	229,821	5,922,613	11,147,966	5,225,353	4,393
Poweshiek.....	36	405	329,938	29,033	1,320,546	2,519,596	1,199,050	1,032
Ringgold.....	12	15	8,123	1,241	32,491	64,644	32,153	17
Sac.....	37	134	149,785	11,317	387,101	817,799	430,698	863
Scott.....	243	5,748	6,969,277	1,083,318	33,132,669	50,933,412	16,933,412	22,027
Shelby.....	22	61	56,582	8,408	216,607	361,382	144,775	221
Sioux.....	61	176	217,343	9,184	1,184,947	1,595,114	460,167	500
Story.....	66	274	840,962	31,813	1,446,473	2,103,995	657,522	1,213

MANUFACTURES—IOWA.

TABLE 2.—STATISTICS FOR THE STATE, BY COUNTIES: 1919—Continued.

COUNTY.	Number of establishments.	WAGE EARNERS.		Rent and taxes.	Cost of materials.	Value of products.	Value added by manufacture.	Primary horse-power.
		Average number.	Wages.					
Tama.....	45	212	\$224,630	\$38,686	\$1,414,669	\$2,003,311	\$588,642	1,630
Taylor.....	19	45	35,415	11,118	132,770	231,970	99,200	57
Union.....	35	591	730,955	26,441	1,812,610	2,809,600	996,990	1,012
Van Buren.....	17	28	14,330	1,644	157,727	204,425	46,698	88
Wapello.....	110	2,810	3,185,903	1,025,270	36,687,053	45,575,291	8,888,238	5,893
Warren.....	16	48	47,252	2,261	118,490	214,712	96,222	339
Washington.....	52	244	216,031	17,137	619,587	1,307,006	687,419	732
Wayne.....	28	55	55,699	3,978	764,723	899,288	134,565	259
Webster.....	106	2,546	2,716,031	227,104	8,401,660	14,126,316	5,724,656	8,278
Winnebago.....	25	87	93,624	9,441	1,003,272	1,251,030	247,758	496
Winneshiak.....	45	223	223,470	15,726	2,086,040	2,682,628	596,588	1,064
Woodbury.....	282	6,784	8,997,538	1,343,985	125,432,151	146,680,197	21,254,046	14,940
Worth.....	18	254	415,145	3,570	863,377	1,363,734	500,357	457
Wright.....	37	240	317,255	8,318	633,130	1,108,880	475,750	488

TABLE 3.—PRINCIPAL INDUSTRIES, RANKED BY VALUE OF PRODUCTS: 1919.

INDUSTRY.	Number of establishments.		WAGE EARNERS.		VALUE OF PRODUCTS		VALUE ADDED BY MANUFACTURE.		INDUSTRY.	Number of establishments.		WAGE EARNERS.		VALUE OF PRODUCTS.		VALUE ADDED BY MANUFACTURE.	
	Average number.	Per cent distribution.	Amount (expressed in thousands).	Per cent distribution.	Amount (expressed in thousands).	Per cent distribution.	Average number.	Per cent distribution.		Amount (expressed in thousands).	Per cent distribution.	Average number.	Per cent distribution.	Amount (expressed in thousands).	Per cent distribution.	Amount (expressed in thousands).	Per cent distribution.
All industries.....	5,683	80,551	100.0	\$745,473	100.0	\$225,232	100.0	Tobacco, cigars.....	211	1,305	1.6	\$3,977	0.5	\$2,155	1.0		
Slaughtering and meat packing.....	21	7,134	8.9	226,362	30.4	21,041	9.7	Clothing, men's.....	18	705	0.9	3,717	0.5	1,166	0.5		
Butter.....	411	1,595	2.0	56,422	7.6	6,983	3.1	Furniture.....	36	894	1.1	3,457	0.5	1,818	0.8		
Food preparations, not elsewhere specified.....	30	2,441	3.0	54,994	7.4	9,732	4.3	Dairymen's, poultrymen's, and apiculturists' supplies.....	12	434	0.5	3,177	0.4	1,308	0.6		
Cars and general shop construction and repairs by steam-railroad companies.....	51	13,536	16.8	33,099	4.4	20,880	9.3	Stoves and hot-air furnaces.....	10	412	0.5	3,096	0.4	2,106	0.9		
Glucose and starch.....	4	1,007	1.3	24,689	3.3	7,047	3.1	Druggists' preparations.....	15	234	0.3	3,070	0.4	1,059	0.5		
Flour-mill and gristmill products.....	189	500	0.6	21,325	2.9	2,712	1.2	Boots and shoes.....	6	653	0.8	3,047	0.4	777	0.3		
Printing and publishing, newspapers and periodicals.....	774	3,352	4.2	20,431	2.7	14,956	6.6	Artificial stone products.....	255	672	0.8	2,962	0.4	1,074	0.7		
Bread and other bakery products.....	538	2,583	3.2	20,244	2.7	7,733	3.4	Wall plaster and composition flooring	7	874	1.1	2,626	0.4	1,786	0.8		
Foundry and machine-shop products	198	3,529	4.4	18,545	2.5	10,475	4.7	Signs and advertising novelties.....	17	550	0.4	2,367	0.3	1,728	0.8		
Engines, steam, gas, and water.....	17	2,739	3.4	17,611	2.4	8,716	3.9	Hardware.....	10	378	0.7	2,258	0.3	1,339	0.6		
Lumber, planing-mill products, not including planing mills connected with sawmills.....	97	3,211	4.0	16,388	2.2	7,602	3.4	Pickles, preserves, and sauces.....	14	311	0.4	2,208	0.3	740	0.3		
Confectionery and ice cream.....	182	1,739	2.2	11,535	1.5	4,664	2.1	Marble and stone work.....	58	244	0.3	2,160	0.3	1,138	0.5		
Poultry, killing and dressing, not done in slaughtering and meat-packing establishments.....	47	689	0.9	11,450	1.5	1,684	0.7	Clothing, women's.....	10	503	0.6	2,069	0.3	924	0.4		
Washing machines and clothes wringers.....	14	1,063	1.3	8,815	1.2	4,186	1.9	Mattresses and spring beds, not elsewhere specified.....	15	239	0.3	1,992	0.3	869	0.4		
Brick and tile, terra-cotta, and fire-clay products.....	113	2,452	3.0	8,127	1.1	5,488	2.4	Fur goods.....	20	268	0.3	1,846	0.2	1,041	0.5		
Cement.....	4	1,017	1.3	8,121	1.1	2,041	1.3	Ice, manufactured.....	46	504	0.6	1,841	0.2	1,309	0.6		
Canning and preserving, fruits and vegetables.....	62	1,271	1.6	8,015	1.1	2,748	1.2	Automobile bodies and parts.....	37	460	0.6	1,713	0.2	897	0.4		
Patent medicines and compounds.....	90	393	0.5	6,349	0.9	4,395	2.0	Structural ironwork, not made in steel works or rolling mills.....	17	224	0.3	1,699	0.2	690	0.3		
Rubber tires, tubes, and rubber goods, not elsewhere specified.....	9	839	1.0	6,333	0.8	2,614	1.2	Coffins, burial cases, and undertakers' goods.....	8	318	0.4	1,649	0.2	777	0.3		
Agricultural implements.....	26	906	1.1	5,959	0.8	3,137	1.4	Mineral and soda waters.....	108	207	0.3	1,633	0.2	807	0.4		
Automobile repairing.....	579	1,355	1.7	5,807	0.8	3,475	1.5	Automobiles.....	6	104	0.1	1,584	0.2	431	0.2		
Gas, illuminating and heating.....	68	727	0.9	5,738	0.8	3,095	1.4	Carrriages and wagons, including repairs.....	60	399	0.5	1,544	0.2	903	0.4		
Buttons.....	77	2,091	2.6	5,615	0.8	3,139	1.4	Gloves and mittens, leather.....	6	290	0.4	1,520	0.2	767	0.3		
Printing and publishing, book and job	207	1,244	1.5	5,210	0.7	3,306	1.5	Tools, not elsewhere specified.....	17	343	0.4	1,468	0.2	820	0.4		
Coffee, roasting and grinding.....	16	173	0.2	5,129	0.7	773	0.3	Boxes, paper and other, not elsewhere specified.....	10	238	0.3	1,438	0.2	459	0.2		
Copper, tin, and sheet-iron work.....	120	803	1.0	5,062	0.7	2,428	1.1	Soap.....	7	82	0.1	1,427	0.2	434	0.2		
Saddlery and harness.....	110	395	0.5	4,168	0.6	1,578	0.7	Pumps, steam and other power.....	4	323	0.4	1,379	0.2	733	0.3		
								Perfumery and cosmetics.....	9	119	0.1	1,240	0.2	549	0.2		
								Steam fittings and steam and hot-water heating apparatus.....	5	167	0.2	1,190	0.2	788	0.4		
								Condensed milk.....	3	51	0.1	1,094	0.1	301	0.1		
								Brooms, from broom corn.....	44	198	0.2	1,052	0.1	507	0.2		
								All other industries ¹	528	9,045	11.2	56,421	7.6	23,984	10.6		

¹ Among the industries for which statistics can not be shown separately without the possibility of disclosing the operations of individual establishments are a number having products in excess of some for which figures are shown in the table. Of these industries the most important are the following: "Cars, steam-railroad not including operations of railroad companies"; "oil, vegetable and composite"; and "phonographs and graphophones."

MANUFACTURES—IOWA.

TABLE 4.—PERSONS ENGAGED IN MANUFACTURING INDUSTRIES: 1919, 1914, AND 1909.

CLASS.	Cen- sus year.	Total.	Male.	Fe- male.	PER CENT OF TOTAL.		CLASS.	Cen- sus year.	Total.	Male.	Fe- male.	PER CENT OF TOTAL.	
					Male.	Fe- male.						Male.	Fe- male.
All classes.....	1919	105,430	87,984	17,455	83.4	16.6	Clerks and other subordinate salaried employees.	1919	13,923	9,312	4,611	66.9	33.1
	1914	82,631	70,211	12,420	85.0	15.0		1914	10,828	7,890	2,738	74.2	25.8
	1909	78,360	66,202	12,158	81.5	18.5		1909	7,911	5,854	2,057	74.0	26.0
Proprietors and officials.....	1919	10,905	10,592	373	96.0	3.4	Wage earners (average number).....	1919	80,551	68,080	12,471	84.5	15.5
	1914	8,890	8,685	205	97.7	2.3		1914	63,113	53,636	9,477	85.0	15.0
	1909	8,814	8,578	236	97.3	2.7		1909	61,635	51,770	9,865	84.0	16.0
Proprietors and firm members....	1919	5,303	5,209	184	96.6	3.4	16 years of age and over.....	1919	79,820	67,641	12,179	84.7	15.3
	1914	5,421	5,263	158	97.1	2.9		1914	62,509	53,224	9,285	85.1	14.9
	1909	5,323	5,137	186	96.5	3.5		1909	60,538	51,123	9,415	84.4	15.6
Salaried officers of corporations...	1919	1,883	1,819	64	96.6	3.4	Under 16 years of age.....	1919	731	439	292	60.1	39.9
	1914	1,283	1,247	36	97.2	2.8		1914	604	412	192	68.2	31.8
	1909	1,424	1,399	25	98.2	1.8		1909	1,047	642	405	61.3	38.7
Superintendents and managers...	1919	3,689	3,564	125	96.6	3.4							
	1914	2,180	2,175	11	99.0	0.5							
	1909	2,067	2,042	25	98.8	1.2							

TABLE 5.—AVERAGE NUMBER OF WAGE EARNERS FOR SELECTED INDUSTRIES, WITH PER CENT, BY SEX AND AGE: 1919 AND 1914.

INDUSTRY.	Cen- sus year.	Wage earners (aver- age num- ber).	PER CENT OF TOTAL.				INDUSTRY.	Cen- sus year.	Wage earners (aver- age num- ber).	PER CENT OF TOTAL.			
			16 years of age and over.		Un- der 16 years of age.					16 years of age and over.		Un- der 16 years of age.	
			Male.	Fe- male.	Male.	Fe- male.				Male.	Fe- male.	Male.	Fe- male.
All industries.....	1919	80,551	84.0	15.1	0.9	Food preparations, not elsewhere specified...	1919	2,441	77.4	22.5	0.1		
	1914	63,113	84.3	14.7	1.0		1914	1,371	72.9	23.6	3.4		
	1909	61,635	83.0	15.3	1.7	Foundry and machine-shop products ¹	1919	3,548	97.7	2.0	0.3		
Agricultural implements.....	1919	906	96.7	2.3	1.0		1914	3,065	98.5	1.3	0.2		
	1914	1,104	99.7	0.1	0.2	Furniture.....	1919	894	91.2	8.3	0.6		
Artificial stone products.....	1919	672	99.4	0.3	0.3		1914	1,106	98.7	1.1	0.2		
	1914	800	99.6	0.2	0.1	Gas, illuminating and heating.....	1919	727	99.6	0.4	.....	
Automobile repairing.....	1919	1,355	98.8	1.1	0.1		1914	768	100.0	.....	.....
	1914	200	100.0	.....	.....	Glucose and starch ²	1919	1,007	95.7	4.3	.....	
Boots and shoes.....	1919	653	49.3	48.5	2.1		1914	578	86.0	13.8	0.2		
	1914	380	54.0	41.0	4.4	Hardware.....	1919	543	88.8	10.5	0.7		
Bread and other bakery products.....	1919	2,583	63.0	33.7	3.3		1914	504	98.8	1.2	.....	
	1914	2,182	73.2	25.6	1.2	Ice, manufactured.....	1919	102	99.5	0.5	.....	
Brick and tile, terra-cotta, and fire-clay products.	1919	2,452	99.6	0.1	0.3	Lumber, planing-mill products, not includ- ing planing mills connected with sawmills.	1919	3,211	95.3	4.0	0.7		
	1914	3,163	99.6	(1)	0.4		1914	2,970	99.4	0.1	0.4		
Butter.....	1919	1,595	86.5	13.0	0.5	Poultry, killing and dressing, not done in slaughtering and meat-packing establish- ments.	1919	659	79.0	20.3	0.7		
	1914	1,274	87.8	12.0	0.2		1914	481	86.9	11.6	1.5		
Buttons.....	1919	2,091	62.5	34.0	3.6	Printing and publishing, book and job.....	1919	1,244	65.0	32.1	2.9		
	1914	2,406	70.6	28.7	0.7		1914	1,303	70.0	27.8	2.2		
Canning and preserving, fruits and vegetables	1919	1,271	61.4	38.2	0.5	Printing and publishing, newspapers and periodicals.	1919	3,352	71.9	25.1	3.0		
	1914	904	55.5	42.3	2.2		1914	3,397	73.7	23.8	2.5		
Cars and general shop construction and re- pairs by steam-railroad companies.	1919	13,530	99.4	0.6	.....	Rubber tires, tubes, and rubber goods, not elsewhere specified. ³	1919	839	92.8	7.2	.....	
	1914	8,024	100.0	(1)	(1)	Slaughtering and meat packing.....	1919	7,134	89.7	10.1	0.2		
Cement ²	1919	1,017	98.6	1.4	.....		1914	4,413	92.3	6.5	1.1	
Clothing, men's.....	1919	705	7.4	91.8	0.9	Tobacco, cigars.....	1919	1,305	41.9	56.2	1.9		
	1914	880	6.0	92.0	1.4		1914	1,662	54.2	42.4	3.5		
Clothing, women's.....	1919	503	25.4	74.6	0.4	Wall plaster and composition flooring.....	1919	884	99.8	.....	0.2	
	1914	503	22.7	76.9	0.4		1914	599	100.0	.....	.....
Confectionery and ice cream.....	1919	1,739	43.1	54.5	2.4	Washing machines and clothes wringers.....	1919	1,063	98.6	1.1	0.3		
	1914	1,519	42.4	55.4	2.2		1914	375	97.0	1.9	0.5		
Copper, tin, and sheet-iron work.....	1919	803	97.5	1.7	0.7	All other industries.....	1919	16,002	76.2	22.3	1.5		
	1914	558	96.2	3.8	.....		1914	14,846	82.2	16.7	1.1	
Engines, steam, gas, and water.....	1919	2,739	98.8	1.1	0.1								
	1914	1,197	100.0	.....	.....						
Flour-mill and gristmill products.....	1919	509	98.8	0.8	0.4								
	1914	790	99.3	0.7	.....							

¹ Less than one-tenth of 1 per cent.

² Not shown separately in 1914.

³ Includes "iron and steel, tempering, welding, etc."

MANUFACTURES—IOWA.

TABLE 6.—AVERAGE NUMBER OF WAGE EARNERS, BY SEX AND AGE, AND VALUE OF PRODUCTS FOR CITIES OF 10,000 INHABITANTS OR MORE: 1919, 1914, AND 1909.

CITY.	AVERAGE NUMBER OF WAGE EARNERS IN MANUFACTURING INDUSTRIES.												VALUE OF PRODUCTS.		
	Total.			16 years of age and over.						Under 16 years of age.			1919	1914	1909
				Male.			Female.								
	1919	1914	1909	1919	1914	1909	1919	1914	1909	1919	1914	1909	1919	1914	1909
Boone.....	369	256	106	257	152	132	105	102	31	7	2	3	\$1,549,837	\$908,073	\$469,098
Burlington.....	2,274	2,246	3,191	1,525	1,680	2,660	707	528	487	42	38	44	12,090,058	6,865,655	8,443,286
Cedar Rapids.....	5,284	4,394	3,565	5,279	3,671	2,795	986	672	674	19	51	96	92,118,386	34,988,838	24,824,276
Clinton.....	3,452	2,679	2,414	2,960	2,290	2,156	469	362	217	14	27	41	30,321,143	10,427,432	7,479,515
Council Bluffs.....	1,891	1,336	1,434	1,575	1,036	1,207	314	277	222	2	23	5	10,610,664	4,279,165	3,768,508
Davenport.....	3,928	3,958	4,231	2,880	2,952	3,293	1,010	976	956	38	30	72	32,587,229	17,172,963	18,801,842
Des Moines.....	7,085	5,306	5,383	5,310	4,194	4,208	1,628	1,075	1,067	147	37	108	59,830,954	23,746,561	23,584,667
Dubuque.....	6,147	5,171	5,160	5,016	4,071	4,153	1,074	1,043	955	57	57	52	34,277,085	14,714,143	15,249,199
Fort Dodge.....	1,605	951	1,115	1,299	695	834	305	238	252	1	18	20	10,884,039	4,871,421	2,975,469
Fort Madison.....	1,029			819			208			2			4,836,291		
Iowa City.....	322	350	282	230	234	206	92	114	76		2		1,767,313	1,333,106	805,046
Keokuk.....	1,598	1,333	1,541	1,272	1,046	1,181	301	262	334	25	25	26	17,554,816	8,260,274	7,398,733
Marshalltown.....	1,338	1,060	1,365	1,178	974	1,207	156	85	132	4	1	26	8,642,468	5,149,858	4,821,805
Mason City.....	2,367	2,054	807	2,235	1,995	766	112	55	41	20	4		29,512,534	11,742,466	2,880,732
Muscatine.....	2,522	2,397	3,496	1,895	1,781	2,618	552	584	759	75	32	119	10,753,750	5,099,485	6,165,866
Ottumwa.....	2,601	2,447	2,650	2,133	1,944	2,025	454	471	546	14	32	79	45,029,524	21,299,929	14,838,315
Sioux City.....	6,749	4,753	3,750	5,738	3,954	3,293	1,001	749	412	10	50	45	140,393,134	49,479,444	37,424,450
Waterloo.....	4,620	3,483	3,124	4,143	3,183	2,712	421	297	409	56	3	3	35,481,225	14,126,178	8,999,420

¹ Figures do not agree with those published, 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.

TABLE 7.—WAGE EARNERS, BY MONTHS: 1919, 1914, AND 1909.

MONTH.	NUMBER. ¹			PER CENT OF MAXIMUM.			MONTH.	NUMBER. ¹			PER CENT OF MAXIMUM.		
	1919	1914	1909	1919	1914	1909		1919	1914	1909	1919	1914	1909
January.....	75,556	61,051	<i>55,649</i>	88.0	90.0	81.8	July.....	81,343	63,519	62,215	94.8	93.6	91.5
February.....	<i>75,141</i>	60,856	56,081	87.6	89.7	82.5	August.....	83,928	67,845	66,408	97.8	100.0	97.7
March.....	75,692	62,144	57,912	88.2	91.6	85.2	September.....	85,417	67,085	68,006	99.5	98.9	100.0
April.....	76,185	62,970	60,328	88.8	92.8	88.7	October.....	84,496	63,039	64,097	98.5	93.8	94.3
May.....	77,080	62,982	61,440	90.9	92.8	90.3	November.....	85,825	60,946	62,895	100.0	89.8	92.5
June.....	79,993	63,658	62,581	93.2	93.8	92.0	December.....	85,089	<i>60,601</i>	62,018	99.2	89.4	91.2

¹ The figures represent the number employed on the 15th of each month or the nearest representative day. Maximum number indicated by bold-faced figures, minimum by *italic* figures.

TABLE 8.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES AND FOR CITIES: 1919.

[The month of maximum employment for each industry is indicated by bold-faced figures and that of minimum employment by *italic* figures.]

INDUSTRY AND CITY.	Average number employed during year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY.												Per cent minimum is of maximum.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
All industries.....	80,551	75,556	<i>75,141</i>	75,692	76,185	77,980	79,993	81,343	83,928	85,417	84,496	85,825	85,089	87.6
Males.....	68,080	63,783	<i>63,765</i>	64,666	65,131	66,561	68,270	69,612	70,945	70,808	70,866	71,994	71,459	83.2
Females.....	12,471	11,773	<i>11,376</i>	11,020	11,054	11,419	11,693	11,731	13,883	14,809	13,680	13,831	13,627	75.5
Agricultural implements.....	906	886	913	924	915	881	892	900	854	856	909	951	991	86.2
Artificial stone products.....	672	<i>311</i>	343	446	699	771	824	846	927	938	825	645	489	33.2
Automobile repairing.....	1,355	<i>1,110</i>	1,139	1,204	1,329	1,371	1,453	1,508	1,532	1,497	1,407	1,377	1,324	73.0
Boots and shoes.....	653	628	648	653	674	668	701	683	659	633	621	610	658	87.0
Bread and other bakery products.....	2,583	2,439	2,361	<i>2,227</i>	2,389	2,487	2,509	2,625	2,688	2,709	2,735	2,881	2,856	77.3
Brick and tile, terra-cotta, and fire-clay products.....	2,452	<i>1,104</i>	1,223	1,008	2,470	2,872	3,103	3,131	3,199	3,144	2,995	2,542	1,733	34.5
Butter.....	1,595	1,321	1,260	<i>1,243</i>	1,470	1,680	1,881	1,784	1,713	1,774	1,745	1,701	1,568	66.1
Buttons.....	2,091	2,040	2,070	2,145	1,976	1,989	1,959	1,983	2,030	2,005	2,164	2,284	2,477	77.7
Canning and preserving, fruits and vegetables.....	1,271	370	<i>326</i>	372	357	441	478	494	4,302	5,865	1,591	779	377	6.1
Cars and general shop construction and repairs by steam-railroad companies.....	13,536	13,836	13,818	13,596	13,385	13,420	13,420	13,248	13,187	13,339	13,611	13,828	14,037	93.7
Cement.....	1,017	<i>556</i>	556	704	976	1,083	1,182	1,191	1,275	1,310	1,283	1,169	959	40.9
Clothing, men's.....	705	622	627	661	592	653	690	786	777	755	781	792	844	66.5
Clothing, women's.....	503	486	487	509	474	467	483	483	502	525	558	529	532	84.0
Confectionery and ice cream.....	1,739	1,557	1,594	<i>1,559</i>	1,620	1,666	1,753	1,690	1,818	1,935	1,879	1,996	1,821	77.1
Copper, tin, and sheet-iron work.....	803	788	720	<i>664</i>	714	716	789	813	844	897	916	911	924	70.8
Engines, steam, gas, and water.....	2,739	3,063	3,390	3,536	3,165	3,030	3,065	3,003	<i>1,489</i>	1,619	2,116	2,485	2,906	42.1
Flour-mill and gristmill products.....	509	518	507	503	493	477	478	475	484	497	542	560	576	82.5
Food preparations, not elsewhere specified.....	2,441	2,696	2,071	1,836	1,710	1,886	2,083	2,316	2,827	2,995	2,945	3,173	2,754	59.0
Furniture.....	3,529	<i>3,539</i>	3,384	3,354	3,360	3,427	3,441	3,519	3,403	3,509	3,771	3,870	3,971	84.0
Foundry and machine-shop products.....	894	730	762	801	821	848	869	903	931	974	1,011	1,043	1,035	70.1
Gas, illuminating and heating.....	727	727	696	714	732	729	711	718	728	748	730	741	750	92.8
Glucose and starch.....	1,007	1,431	1,254	1,061	1,263	1,272	823	834	849	856	869	809	765	53.3
Hardware.....	578	<i>469</i>	491	470	470	495	520	547	632	684	714	718	717	65.3
Ice, manufactured.....	504	535	521	479	322	405	556	717	712	636	503	349	315	43.7
Lumber, planing-mill products, not including planing mills connected with sawmills.....	3,211	<i>2,461</i>	2,686	2,754	2,864	3,045	3,308	3,483	3,555	3,544	3,587	3,633	3,622	67.5

TABLE 9.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR SELECTED INDUSTRIES AND FOR CITIES: 1919 AND 1914.

INDUSTRY AND CITY.	Census year.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—							
			44 and under.	Between 44 and 48.	48.1	Between 48 and 54.	54.	Between 54 and 60.	60.	Over 60.
All industries.....	1910	80,551	1,411	4,484	24,733	6,657	15,543	12,013	12,996	2,714
	1914	83,113	(²)	(²)	10,966	4,210	12,484	7,662	22,800	4,991
	1909	61,635	(²)	(²)	6,594	2,034	8,072	11,125	27,049	5,861
Agricultural implements.....	1910	906		76	2	213	204	315	96	
	1914	1,164	(²)	(²)	1	141	37	405	580	
Artificial stone products.....	1910	672	10		64	11	134	34	419	
	1914	809	(²)	(²)	41	21	168	32	547	
Automobile repairing.....	1910	1,355	4		165	29	393	32	717	15
	1914	200	(²)	(²)	9		32	14	140	5
Boots and shoes.....	1910	653				146	265	242		
	1914	389	(²)	(²)	1			243	145	
Bread and other bakery products.....	1910	2,583	35	345	447	353	504	46	732	121
	1914	2,182	(²)	(²)	97	115	288	588	936	158
Brick and tile, terra-cotta, and fire-clay products.....	1910	2,452			152	5	553	21	1,721	
	1914	3,163	(²)	(²)	118	12	487	19	2,423	104
Butter.....	1910	1,595	44	5	447	14	236	127	667	55
	1914	1,274	(²)	(²)	158	37	106	16	774	183
Buttons.....	1910	2,001	45	2	1	615	333	989	102	4
	1914	2,406	(²)	(²)	3	362	664	824	553	
Canning and preserving, fruits and vegetables.....	1910	1,271	15		32	7	85	44	862	226
	1914	904	(²)	(²)	78	38	1		593	194
Cars and general shop construction and repairs by steam-railroad companies.....	1910	13,536		3,656	6,461		479	2,940		
	1914	8,024	(²)	(²)	4,301	676	1,166	16	154	711
Cement ¹	1910	1,017					230			787
Clothing, men's.....	1910	705	242	40	73	242	108			
	1914	880	(²)	(²)	188	386	65	167	84	
Clothing, women's.....	1910	503		28	67	408				
	1914	563				171	25	341	26	
Confectionery and ice cream.....	1910	1,739	6	1	201	347	274	252	552	106
	1914	1,519	(²)	(²)	27	2	172	277	595	146
Copper, tin, and sheet-iron work.....	1910	803	41		271	52	369	26	44	
	1914	558	(²)	(²)	74	78	215	26	165	
Engines, steam, gas, and water.....	1910	2,739		4	584		1,005	383	763	
	1914	1,197	(²)	(²)	456		602	59	80	
Flour-mill and gristmill products.....	1910	509	3		112	9	30	3	264	88
	1914	790	(²)	(²)	26	2	15		655	92
Food preparations, not elsewhere specified.....	1910	2,441	1		1,717	28	33	243	233	186
	1914	1,371	(²)	(²)	9	3	4	26	427	902
Foundry and machine-shop products ⁴	1910	3,548	28	9	238	170	1,596	807	685	6
	1914	3,065	(²)	(²)	39	209	619	837	1,360	1
Furniture.....	1910	894	40		160	412	220	20	42	
	1914	1,106				27	538	266	215	60
Gas, illuminating and heating.....	1910	727	3		68	7	173	162	46	268
	1914	768	(²)	(²)	27		14	126	322	279
Glucose and starch ²	1910	1,007						479		528
Hardware.....	1910	578	4			12	439	33	40	
	1914	543	(²)	(²)	1	132	142	83	185	
Ice, manufactured.....	1910	504			14	4	126	203	111	46
	1914	192	(²)	(²)	2		1	18	84	87
Lumber, planing-mill products, not including planing mills connected with sawmills.....	1910	3,211	5		78	120	2,352	40	616	
	1914	2,970	(²)	(²)	187	15	549	270	1,949	
Poultry, killing and dressing, not done in slaughtering and meat-packing establishments.....	1910	689			6		56	20	607	
	1914	481	(²)	(²)	8	16	47		359	51
Printing and publishing, book and job.....	1910	1,244	10	10	1,052	54	108	10		
	1914	1,303	(²)	(²)	731	149	388	17	18	
Printing and publishing, newspapers and periodicals.....	1910	3,352	29	12	2,074	353	596	223	65	
	1914	3,397	(²)	(²)	1,486	359	1,003	313	223	8
Rubber tires, tubes, and rubber goods, not elsewhere specified ³	1910	839			385	64	150	240		
Slaughtering and meat packing.....	1910	7,134	136		5,190		26	41	1,741	
	1914	4,413	(²)	(²)	7		207		4,194	5
Tobacco, cigars.....	1910	1,305	126	13	529	454	129	26	24	4
	1914	1,662	(²)	(²)	975	398	224	11	54	
Wall plaster and composition flooring.....	1910	884					15		4	
	1914	599			865		273		326	
Washing machines and clothes wringers.....	1910	1,063					402	555	106	
	1914	375				33	217	21	104	
All other industries.....	1910	16,002	584	283	3,278		2,519	3,920	1,737	274
	1914	14,846	(²)	(²)	1,916		3,215	2,657	4,225	2,005

¹ Includes 48 and under for 1914 and 1909.
² Corresponding figures not available.

³ Not shown separately in 1914.
⁴ Includes "iron and steel, tempering, welding, etc."

MANUFACTURES—IOWA.

TABLE 9.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR SELECTED INDUSTRIES AND FOR CITIES: 1919 AND 1914—Continued.

INDUSTRY AND CITY.	Census year.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—							
			44 and under.	Between 44 and 48.	48. 1	Between 48 and 54.	54.	Between 54 and 60.	60.	Over 60.
Total for cities.....	1919 1914	50,181 44,174	1,148 (2)	3,509 (2)	18,184 7,716	5,670 2,012	12,010 8,124	6,610 5,665	6,969 15,751	2,066 4,006
BOONE.....	1919 1914	360 256	(2)	(2)	266 50	3 9	71 20	16 77	6 70	5 21
BURLINGTON.....	1919 1914	2,274 2,240	(2)	34	562 373	1,238 85	137 299	31 270	1,72 1,76	8 34
CEDAR RAPIDS.....	1919 1914	6,284 4,394	(2)	52	4,309 917	297 54	748 345	205 310	400 1,465	263 1,303
CLINTON.....	1919 1914	3,452 2,679	(2)	104	1,625 611	283 280	771 225	491 620	70 574	4 369
COUNCIL BLUFFS.....	1919 1914	1,891 1,336	(2)	132	133 218	14 113	146 106	799 135	538 570	79 185
DAVENPORT.....	1919 1914	3,928 3,958	(2)	13	641 938	350 501	897 639	499 472	1,970 1,171	184 207
DES MOINES.....	1919 1914	7,085 5,300	(2)	437	2,897 1,078	790 318	1,789 1,922	566 697	201 1,026	67 265
DUBUQUE.....	1919 1914	6,147 5,171	(2)	1,390	448 1,202	525 180	2,902 942	503 596	379 2,142	109
FORT DODGE.....	1919 1914	1,005 951	(2)	2	340 29	10 49	393 150	439 261	396 400	19 62
FORT MADISON 1.....	1919 1914	1,029 322	14	77	461 124	295 42	32 122	78 19	8 14	64 8
IOWA CITY.....	1919 1914	322 350	(2)	12	124 59	42 88	122 108	19	14 50	8 20
KROOK.....	1919 1914	1,598 1,333	(2)	3	126 101	77 114	260 132	484 148	273 522	372 310
MARSHALSTOWN.....	1919 1914	1,338 1,060	(2)	3	554 80	58 151	340 401	98 50	271 358	14 20
MASON CITY.....	1919 1914	2,367 2,054	(2)	137	707 103	24 66	25 235	154 5	547 750	769 395
MUSCATINE.....	1919 1914	2,522 2,397	(2)	6	125 220	346 305	656 442	986 503	305 709	8 2
OTTUMWA.....	1919 1914	2,001 2,447	(2)	2	1,405 94	665 163	403 450	21 48	73 1,637	34 55
SIoux CITY.....	1919 1914	6,740 4,753	(2)	352	2,671 952	520 240	584 462	241 637	2,101 2,367	95 95
WATERLOO.....	1919 1914	4,620 3,483	(2)	688	784 646	130 136	1,743 1,246	999 718	136 680	73 48

1 Includes 48 and under for 1914 and 1909.

2 Corresponding figures not available.

3 Not shown separately in 1914.

TABLE 10.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES AND FOR CITIES: 1919.

INDUSTRY AND CITY.	TOTAL.		ESTABLISHMENTS EMPLOYING—																	
	Establishments.	Wage earners (average number).	No wage earners.		1 to 5 wage earners, inclusive.		6 to 20 wage earners, inclusive.		21 to 50 wage earners, inclusive.		51 to 100 wage earners, inclusive.		101 to 250 wage earners, inclusive.		251 to 500 wage earners, inclusive.		501 to 1,000 wage earners, inclusive.		Over 1,000 wage earners.	
			Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.	Establishments.	Wage earners.
All Industries.....	5,683	80,551	770	3,492	7,101	813	8,021	322	10,468	135	9,470	96	15,048	25	8,650	12	8,878	9	12,015	
Agricultural implements.....	26	906	2	9	18	8	90	2	75	1	77	4	646							
Artificial stone products.....	255	672	39	187	273	24	256	5	143											
Automobile repairing.....	579	1,355	41	498	998	40	357													
Boots and shoes.....	6	653				1	11	1	43		60	2	274	1	265					
Bread and other bakery products.....	538	2,583	80	398	750	44	441	14	433	2	119	5	840							
Brick and tile, terra-cotta, and fire-clay products.....	113	2,452	1	47	160	32	357	15	541	14	880	4	514							
Butter.....	411	1,595	26	342	628	35	398	4	133	1	78	3	138							
Buttons.....	77	2,091	4	28	70	24	204	9	252	5	367	7	1,078							
Canning and preserving, fruits and vegetables.....	62	1,271		8	23	30	369	23	695			1	184							
Cars and general shop construction and repairs by steam-railroad companies.....	51	13,536		6	15	4	70	5	180	7	476	13	2,250	7	2,446	6	4,399	3	3,700	
Cement.....	4	1,017									1	53	1	230	2	734				
Clothing, men's.....	13	705		2	3	2	38	10	371	4	293									
Clothing, women's.....	10	503				3	83	5	153	1	67	1	259							
Confectionery and ice cream.....	182	1,739	23	120	234	22	242	7	230	9	680			1	344					
Copper, tin, and sheet-iron work.....	120	803	6	83	145	25	250	1	22	4	247	1	139							

TABLE 16.—PRINCIPAL INDUSTRIES IN CITIES HAVING 50,000 INHABITANTS OR MORE, WITH PER CENT OF TOTAL FOR STATE: 1919.

CITY AND INDUSTRY.	VALUE OF PRODUCTS.				CITY AND INDUSTRY.	VALUE OF PRODUCTS.			
	Amount, 1919.	Per cent of total for the state.	Increase ¹ over 1914.			Amount, 1919.	Per cent of total for the state.	Increase over 1914.	
			Amount.	Per cent.				Amount.	Per cent.
DAVENPORT.					DES MOINES—Continued.				
Gloves and mittens, leather.....	\$768, 104	50.5	(³)	(³)	Cement.....	(³)	(³)	(³)	(³)
Foundry and machine-shop products ² ...	3, 906, 306	21.1	\$1, 006, 017	95.3	Clothing, women's, suits, skirts, and cloaks.....	(³)	(³)	(³)	(³)
Bread and other bakery products.....	2, 709, 338	13.4	1, 135, 851	72.2	Knit goods.....	(³)	(³)	(³)	(³)
Washing machines and clothes wringers.....	1, 471, 755	16.7	850, 551	140.4	Oil, linsced.....	(³)	(³)	(³)	(³)
Tobacco, cigars.....	1, 174, 814	29.5	184, 663	16.3	Perfumery and cosmetics.....	(³)	(³)	(³)	(³)
Confectionery and ice cream.....	977, 190	8.5	580, 711	152.2	Poultry, killing and dressing, not done in slaughtering and meat-packing establishments.....	(³)	(³)	(³)	(³)
Butter.....	911, 823	1.6	(³)	(³)	Rubber tires, tubes, and rubber goods, not elsewhere specified.....	(³)	(³)	(³)	(³)
Printing and publishing, newspapers and periodicals.....	\$17, 980	4.0	300, 803	91.5	Saddlery and harness.....	(³)	(³)	(³)	(³)
Automobile repairing.....	629, 313	10.8	520, 423	477.9	Slaughtering and meat packing.....	(³)	(³)	(³)	(³)
Flour-mill and gristmill products.....	(³)	(³)	(³)	(³)	SIOUX CITY.				
Food preparations, not elsewhere specified.....	(³)	(³)	(³)	(³)	Slaughtering and meat packing.....	\$116, 088, 503	51.3	(³)	(³)
Locomotives, not made by railroad companies.....	(³)	(³)	(³)	(³)	Bread and other bakery products.....	2, 115, 042	10.4	\$1, 165, 533	122.8
Slaughtering and meat packing.....	(³)	(³)	(³)	(³)	Flour-mill and gristmill products.....	2, 650, 918	9.6	(³)	(³)
DES MOINES.					Printing and publishing, newspapers and periodicals.....	1, 705, 168	8.3	844, 123	98.0
Printing and publishing, newspapers and periodicals.....	7, 877, 532	38.6	4, 496, 805	133.0	Cars and general shop construction and repairs by steam-railroad companies.....	1, 530, 887	4.6	(³)	(³)
Bread and other bakery products.....	2, 943, 716	14.5	1, 873, 881	175.2	Coffee, roasting and grinding.....	1, 410, 644	27.5	913, 401	183.7
Butter.....	2, 252, 730	4.0	(³)	(³)	Druggists' preparations.....	1, 317, 016	42.9	905, 550	220.1
Confectionery and ice cream.....	1, 510, 456	13.1	959, 624	171.2	Confectionery and ice cream.....	1, 100, 391	0.5	541, 950	97.0
Flour-mill and gristmill products.....	1, 487, 513	7.0	908, 820	157.0	Copper, tin, and sheet-iron work.....	837, 451	16.5	631, 628	306.9
Patent and proprietary medicines.....	1, 479, 227	23.4	637, 314	75.7	Lumber, planing-mill products, not including planing mills connected with sawmills.....	(³)	(³)	(³)	(³)
Lumber, planing-mill products, not including planing mills connected with sawmills.....	1, 462, 703	8.9	-161, 150	-9.9	Automobiles.....	805, 121	4.9	342, 730	74.1
Printing and publishing, book and job.....	1, 438, 131	27.6	720, 867	100.5	Butter.....	(³)	(³)	(³)	(³)
Stoves and hot-air furnaces.....	1, 266, 884	40.9	827, 763	188.5	Clothing, men's.....	(³)	(³)	(³)	(³)
Brick and tile, terra-cotta, and fire-clay products.....	1, 002, 393	12.3	178, 988	21.7	Rubber tires, tubes, and rubber goods, not elsewhere specified.....	(³)	(³)	(³)	(³)
Foundry and machine-shop products.....	979, 286	5.3	251, 780	34.8					
Fur goods.....	819, 670	45.5	730, 185	735.6					
Copper, tin, and sheet-iron work.....	662, 520	13.1	355, 831	116.0					

¹ A minus sign (-) denotes decrease.
² Includes "iron and steel, tempering, welding, etc." and "textile machinery and parts."
³ Figures can not be shown without disclosing individual operations.

TABLE 17.—NUMBER AND HORSEPOWER OF TYPES OF PRIME MOVERS: 1919, 1914, AND 1909.

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.					
	1919	1914	1909	Amount.			Per cent distribution.		
				1919	1914	1909	1919	1914	1909
Primary power, total.....	16, 747	10, 514	6, 585	242, 946	190, 049	155, 384	100.0	100.0	100.0
Owned.....	2, 142	3, 040	3, 574	130, 334	139, 746	136, 465	53.6	73.5	87.8
Steam ¹	1, 230	1, 636	2, 054	119, 442	125, 340	122, 029	49.2	65.9	78.5
Engines.....	1, 176	(²)	(²)	101, 494	(²)	(²)	41.8	(²)	(²)
Turbines.....	63	(²)	(²)	17, 948	(²)	(²)	7.4	(²)	(²)
Internal-combustion engines.....	809	1, 254	1, 330	7, 630	8, 808	8, 025	2.9	4.7	5.2
Water.....	94	150	184	3, 802	5, 538	6, 411	1.6	2.9	4.2
Water wheels and turbines.....	66	130	161	3, 245	5, 487	6, 320	1.3	2.9	4.1
Water motors.....	28	20	23	617	51	85	0.3	(³)	0.1
Rented.....	14, 605	7, 474	3, 011	112, 612	50, 303	18, 919	46.4	26.5	12.2
Electric.....	14, 605	7, 474	3, 011	112, 486	50, 054	18, 463	46.3	26.3	11.9
Other.....				126	249	456	0.1	0.1	0.3
Electric.....	18, 500	10, 144	4, 459	166, 285	101, 827	40, 736	100.0	100.0	100.0
Rented.....	14, 605	7, 474	3, 011	112, 486	50, 054	18, 463	67.6	49.2	45.3
Generated by establishments reporting.....	3, 895	2, 670	1, 448	53, 799	51, 773	22, 273	32.4	50.8	54.7

¹ Figures for horsepower include for 1909 the amount reported under the head of "Other" owned power.
² Not reported separately.
³ Less than one-tenth of 1 per cent.

TABLE 18.—FUEL CONSUMED, FOR SELECTED INDUSTRIES AND FOR CITIES: 1919.

INDUSTRY AND CITY.	COAL.		Coke (tons, 2,000 pounds).	Fuel oils (barrels).	Gasoline and other volatile oils (barrels).	Gas (1,000 cubic feet).
	Anthracite (tons, 2,240 pounds).	Bituminous (tons, 2,000 pounds).				
All industries.....	1919.. 15,400	2,154,407	134,841	573,958	26,441	181,957
Per cent of increase ²	1914.. 10,279	2,361,179	83,082	280,261	(¹)	120,699
	49.8	-8.8	62.3	114.2	(¹)	50.8
Automobile repairing.....	228	8,287	49	43	1,576	17,184
Bread and other bakery products.....	3,074	14,749	13,138	3,038	1,402	23,811
Brick and tile, terra-cotta, and fire-clay products.....		336,750	180	9,100	3,429	
Butter.....	1,767	77,866	505	1,270	965	
Buttons.....		10,978	150	52	144	
Canning and preserving, fruits and vegetables.....	219	14,980		3	31	3,600
Carriages and wagons, including repairs.....	50	5,639	22	204	94	
Cars and general shop construction and repairs by steam-railroad companies.....	343	276,947	303	11,506	277	1,422
Cars, steam-railroad, not including operations of railroad companies.....		21,471	135	68,599	903	
Cement.....		454,502			100	
Confectionery and ice cream.....	387	17,148	246	4,676	160	11,510
Engines, steam, gas, and water.....		15,008	7,630	12,396	3,861	2,960
Flour-mill and gristmill products.....	515	28,024	7	3,063	836	12
Food preparations, not elsewhere specified.....	672	27,147	839	41	13	18,256
Foundry and machine-shop products.....	163	26,737	11,371	11,891	1,791	2,391
Furniture.....		7,724			52	
Gas, illuminating and heating.....	3,403	82,823	81,222	398,128	5,684	
Glucose and starch.....	474	166,018	586	17,518		
Ice, manufactured.....	80	66,625		2,765		
Lumber, planing-mill products, not including planing mills connected with saw-mills.....	11	15,864	54		35	
Mineral and soda waters.....	237	7,194	6	43	41	375
Paper and wood pulp.....		17,625		500		
Paving materials.....	25	8,916				
Printing and publishing, newspapers and periodicals.....	687	12,692	138	240	1,103	43,765
Roofing materials.....		28,100				
Rubber tires, tubes, and rubber goods, not elsewhere specified.....		10,321		69	350	680
Slaughtering and meat packing.....	500	219,072	100		317	28,666
Sugar, beet.....		11,623	523			
Wall plaster and composition flooring.....		27,404	758		72	
Washing machines and clothes wringers.....	124	5,831	501		490	36
All other industries.....	2,441	130,243	16,330	28,811	2,715	27,289
Total for cities.....	5,771	1,495,250	98,498	265,071	11,010	162,052
BOONE.....	12	3,945	1,336	34	43	779
BURLINGTON.....	179	21,788	5,721	11,269	122	4,568
CEDAR RAPIDS.....	223	106,291	9,885	967	330	27,117
CLINTON.....	513	157,215	1,138	9,235	523	4,532
COUNCIL BLUFFS.....	381	34,477	4,178	15,510	132	11,061
DAVENPORT.....	268	56,890	6,936	27,055	1,720	20,298
DES MOINES.....	1,074	245,678	17,337	61,416	1,117	44,226
DUBUQUE.....	722	44,765	2,675	4,348	218	5,466
FORT DODGE.....	18	31,294	3,327	13,138	3,620	687
FORT MADISON.....	47	9,168	1,040	5,558	1	100
IOWA CITY.....	47	24,051	977	2,219	11	426
KEOKUK.....	747	54,805	8,610	12,143	93	358
MARSHALLTOWN.....	160	27,982	3,783	809	197	6,028
MASON CITY.....	19	372,839	2,018	6,930	60	1,425
MUSCATINE.....	31	22,057	2,129	1,415	284	1,230
OTTUMWA.....	36	74,925	3,466	7,405	193	18,129
SIoux CITY.....	1,019	152,769	10,381	39,260	250	12,563
WATERLOO.....	275	54,320	13,556	45,340	2,096	3,059

¹ Included in figures for fuel oils.² A minus sign (-) denotes decrease.

SPECIAL STATISTICS.

For a number of important industries the Census Bureau collects, by means of special schedules, certain details which do not appear on the general schedule. Data for five of these industries in Iowa are here presented.

Slaughtering and meat packing (Table 19).—This table presents for the census years 1919, 1914, and 1909 the kind, number, and cost of animals slaughtered, and the cost of all other materials, which includes that for dressed meat purchased for curing, fats, cottonseed oil, poultry, refrigeration, seasoning, containers, curing materials, fuel, rent of power, mill supplies, and freight. It also shows the quantity and value of the various products manufactured, except that the value of canned beef and pork, meat puddings, scrapple, etc., lard, oleo, and other oils, oleo stearin,

glue, poultry and stock feed, and skins, other than cattle, calf, and sheep are included in "All other products."

During the census period 1914-1919 the cost of materials increased \$136,647,178, or 201.6 per cent, and the value of products \$152,189,833, or 205.2 per cent. The increase in production during this five-year period is better indicated by the increase in the number of animals slaughtered in 1919 as compared with 1914. Beeves increased 217,696, or 99.2 per cent; calves 30,104, or 198.4 per cent; and hogs 908,272, or 37.9 per cent. The only decrease in the number of animals slaughtered was in sheep and lambs, 42,987, or 14 per cent.

Iowa has ranked sixth in the industry in value of products among the states since 1904.

TABLE 19.—SLAUGHTERING AND MEAT PACKING.

	1919	1914	1909
MATERIALS.			
Total cost.....	\$204,420,686	\$67,773,508	\$53,034,481
Animals slaughtered, cost.....	\$187,034,324	\$63,193,320	\$50,182,075
Beaves—			
Number.....	437,055	219,359	252,821
Cost.....	\$41,943,020	\$15,759,309	\$11,256,446
Calves—			
Number.....	45,275	15,171	20,437
Cost.....	\$902,724	\$213,894	\$202,852
Sheep and lambs—			
Number.....	264,432	307,419	49,577
Cost.....	\$2,782,728	\$1,547,912	\$223,759
Hogs—			
Number.....	3,302,333	2,394,061	2,487,251
Cost.....	\$141,345,852	\$45,672,154	\$38,499,019
All other materials, cost.....	\$17,386,362	\$4,580,179	\$2,852,406
PRODUCTS.			
Total value.....	\$226,361,698	\$74,171,865	\$58,913,482
Fresh meat, value.....	\$70,511,415	\$28,029,755	\$19,212,209
Beef—			
Pounds.....	189,351,003	118,567,051	123,780,302
Value.....	\$33,100,688	\$13,076,747	\$8,854,488
Veal—			
Pounds.....	4,821,377	1,715,791	2,429,149
Value.....	\$739,047	\$206,205	\$220,921
Mutton and lamb—			
Pounds.....	9,820,929	12,539,457	1,848,011
Value.....	\$2,141,308	\$1,270,068	\$170,834
Pork—			
Pounds.....	116,334,618	103,461,549	100,113,209
Value.....	\$20,812,210	\$12,284,615	\$9,750,724
Edible offal and all other fresh meat—			
Pounds.....	36,300,061	8,885,752	3,820,807
Value.....	\$4,623,162	\$592,077	\$209,302
Cured meat, value.....	\$97,897,036	\$29,343,351	\$21,832,404
Beef, pickled and other cured—			
Pounds.....	5,001,801	(1)	(1)
Value.....	\$1,075,805	(1)	(1)
Pork, pickled and other cured—			
Pounds.....	335,237,381	233,138,198	219,106,133
Value.....	\$96,821,231	\$29,343,351	\$24,852,404
Sausage:—			
Pounds.....	21,252,003	17,820,025	15,541,624
Value.....	\$4,347,160	\$2,111,860	\$1,300,758
Lard:—			
Pounds.....	103,502,429	59,038,166	71,084,771
Value.....	\$31,003,935	\$6,491,245	\$8,059,149
Lard compounds and substitutes:—			
Pounds.....	5,032,256	(1)	(2)
Value.....	\$1,227,371	(1)	(2)
Tallow and oleo stock:—			
Pounds.....	9,912,001	30,076,882	5,403,634
Value.....	\$1,857,524	\$2,150,363	\$422,490
Oleomargarine:—			
Pounds.....	474,824	(1)	(1)
Value.....	\$138,853	(1)	(1)
Soap stock and grease:—			
Pounds.....	14,134,500	8,880,127	(2)
Value.....	\$1,752,024	\$514,707	(2)
Casings:—			
Pounds.....	4,003,007	2,001,832	(2)
Value.....	\$641,001	\$253,475	(2)
Fertilizer and fertilizer materials:—			
Tons.....	9,599	7,970	12,819
Value.....	\$647,383	\$235,930	\$294,072
Hides and pelts:—			
Cattle—			
Number.....	437,055	219,359	265,063
Pounds.....	24,107,779	12,259,831	14,727,015
Value.....	\$7,141,823	\$2,138,122	\$1,878,592
Calf—			
Number.....	33,928	8,588	
Pounds.....	559,646	130,548	
Value.....	\$249,513	\$21,677	
Sheep—			
Number.....	263,719	307,648	49,534
Value.....	\$785,673	\$351,967	\$61,386
Hair, hog and cattle:—			
Pounds.....	2,369,606	(2)	(2)
Value.....	\$157,671	(2)	(2)
All other products, value.....	\$8,003,307	\$2,529,413	\$2,832,362

1 Included in "All other products," to avoid disclosure of individual operations.
 2 Not reported separately.
 3 Includes a large amount of grease.

Butter, cheese, and condensed milk (Table 20).—This table presents the quantities and values of the principal products of the industry for 1919, 1914, and 1909. At each of the three censuses butter was the product of chief value, forming 87.3 per cent of the

total value of all products for the industry in 1919, as compared with 90.6 per cent in 1914. During this five-year period the value of butter increased 101.7 per cent, while the quantity decreased 2.5 per cent.

TABLE 20.—BUTTER, CHEESE, AND CONDENSED MILK: 1919, 1914, AND 1909.

	1919	1914	1909
Total value.....	\$57,800,148	\$27,605,968	\$25,840,866
Butter:—			
Pounds.....	90,079,758	92,405,806	88,582,187
Value.....	\$50,438,628	\$25,011,327	\$24,440,715
Packed solid—			
Pounds.....	62,856,122	71,194,299	75,581,191
Value.....	\$34,729,324	\$19,025,043	\$20,890,762
Prints or rolls—			
Pounds.....	27,223,636	21,211,516	13,000,996
Value.....	\$15,709,304	\$5,986,284	\$3,639,953
Cream sold:—			
Pounds.....	4,811,541	2,938,142	1,169,943
Value.....	\$611,338	\$299,071	\$134,156
Cheese:—			
Pounds.....	1,015,790	855,198	999,559
Value.....	\$203,085	\$125,171	\$148,876
All other butter, cheese, and condensed-milk factory products, value.....	\$3,127,892	\$954,904	\$866,565
All other products, value.....	\$3,328,605	\$1,215,405	\$259,554

Flour-mill and gristmill products (Table 21).—This table shows the chief products of the industry in Iowa at the censuses of 1919, 1914, and 1909. Of the total value of products for the industry in the state, wheat flour formed 64.4 per cent in 1919 and 49.9 per cent in 1914. Bran and middlings and feed and offal combined formed 28 per cent and 27.4 per cent, respectively, for the two years. Illustrative of the high prices of commodities in 1919 as compared with 1914, the value of wheat flour increased 92 per cent, while the quantity decreased 15.9 per cent during the five-year period.

TABLE 21.—FLOUR-MILL AND GRISTMILL PRODUCTS (MERCHANT MILLS): 1919, 1914, AND 1909.

	1919	1914	1909
Total value.....	\$21,324,678	\$14,336,576	\$12,870,603
Wheat flour:—			
Barrels.....	1,251,770	1,488,811	1,523,264
Value.....	\$13,728,744	\$7,149,334	\$7,958,975
Rye flour:—			
Barrels.....	11,166	13,133	20,906
Value.....	\$97,436	\$63,451	\$35,019
Corn meal and corn flour:—			
Barrels.....	145,364	318,590	184,301
Value.....	\$1,106,986	\$1,089,155	\$582,328
Buckwheat flour:—			
Pounds.....	1,821,294	1,123,875	2,870,980
Value.....	\$118,308	\$41,424	\$97,510
Barley meal:—			
Pounds.....	61,502		
Value.....	\$1,584		
Bran and middlings:—			
Tons.....	54,516	63,857	
Value.....	\$2,504,998	\$1,389,505	
Feed and offal:—			
Tons.....	62,006	99,210	
Value.....	\$3,456,387	\$2,562,961	\$3,595,581
Hominy and grits:—			
Pounds.....	3,246,610	16,693,110	16,416,130
Value.....	\$101,908	\$188,080	\$232,536
Oatmeal:—			
Pounds.....		4,510,962	
Value.....		\$125,054	
Breakfast foods:—			
Pounds.....	20,242	45,879,016	
Value.....	\$1,293	\$1,658,873	
All other cereal products, value.....	\$206,944	\$24,460	\$90,296
All other products, value.....		\$99,279	\$217,958

Printing and publishing (Table 22).—This table shows the number and aggregate circulation per issue of each of the various classes of newspaper and periodical publications reported for the census years 1919, 1914, and 1909.

Of the 58 dailies reported for 1919, 45, with a circulation of 532,255, were issued in the afternoon. This is an increase over 1914 of 98,172, or 22.6 per cent. The circulation of the morning newspapers during the same five-year period increased 32,167, or 21 per cent. The decrease in the circulation of all publications was due to the discontinuance or reduction in circulation, as reported, of several weeklies of large circulation devoted to agriculture and religion. A considerable reduction in circulation of news weeklies was due to the discontinuance of a number of German papers.

Thirty-six publications, with a circulation of 201,238, were printed in foreign languages in 1919. Of these, 21 were weeklies, 11 of them being printed in German, 3 in Danish, 3 in Dutch, 2 in Bohemian, and 1 each in Norwegian and Swedish. There were 5 monthly publications, 1 each printed in Dutch, German, Norse, Norwegian and Danish, and Swedish; 2 triweeklies, both in German; 1 semiweekly in Norwegian; 1 trimonthly and 1 quarterly in German; and 1 semimonthly in Danish. Of the 1914 foreign-language publications, 78,375 of the 236,235 circulation was in the German tongue, as compared with 60,665 in 1919.

TABLE 22.—PRINTING AND PUBLISHING: 1919, 1914, AND 1909.

PERIOD OF ISSUE.	NUMBER OF PUBLICATIONS.			AGGREGATE CIRCULATION PER ISSUE.		
	1919	1914	1909	1919	1914	1909
Total.....	845	928	1,004	4,910,108	4,856,373	3,806,253
Daily.....	58	68	68	717,607	587,268	450,919
Sunday.....	14	14	14	266,152	200,666	169,678
Semiweekly.....	28	34	48	96,337	110,113	136,726
Triweekly.....	8	6	4	25,654	24,150	15,900
Weekly.....	657	738	784	1,190,932	1,459,849	1,419,700
Semimonthly.....	11	11	8	144,400	193,830	84,960
Monthly.....	58	53	66	2,334,376	2,256,097	1,490,861
Quarterly.....	11	34	12	134,650	24,600	37,500

¹ Includes 1 trimonthly.

² Includes 2 bimonthlies.

³ Includes 1 bimonthly.

⁴ Includes 3 bimonthlies and 5 classed as "all other."

Agricultural implements (Table 23).—This table shows the value of the principal classes of agricultural implements manufactured in Iowa in 1919, 1914, and 1909. While the total value of products for the industry in the state shows an increase from census to census, consideration should be given to the increased value of commodities in 1919, in connection with the increase from 1914. In 1919, as in previous censuses, the largest single item of value was, "All other products, including parts," forming 57.7 per cent of the total for the industry in 1919, and 55.1 per cent in 1914. Although this item includes the value of

engines, wagons, etc., it is made up largely of agricultural implements the value of which could not be shown separately without the possibility of disclosing the operations of individual establishments.

TABLE 23.—AGRICULTURAL IMPLEMENTS: 1919, 1914, AND 1909.

	1919	1914	1909
Total value.....	\$5,959,129	\$5,216,245	\$4,757,089
Plows and cultivators.....	248,340	922,599	438,637
Harvesting implements.....	1,610,684	936,505	1,157,701
Seed separators.....	656,133	440,990	55,018
All other products, including parts.....	3,436,994	2,875,266	2,785,870
Amount received for repair work.....	6,978	34,885	318,763

Laundries (Table 24).—Statistics for power laundries are not included in the general tables nor in the totals for manufacturing industries. Table 24, however, summarizes the statistics for such laundries in the state of Iowa for 1919 and 1914.

TABLE 24.—POWER LAUNDRIES: 1919 AND 1914.

	NUMBER OR AMOUNT.		Per cent of increase, ¹ 1914-1919
	1919	1914	
Number of establishments.....	129	176	-26.7
Persons engaged.....	2,406	2,883	-14.5
Proprietors and firm members.....	137	196	-26.3
Salaried employees.....	255	179	42.5
Wage earners (average number).....	2,074	2,518	-17.6
Primary horsepower.....	3,168	3,873	-18.2
Capital.....	\$2,569,074	\$1,784,871	43.9
Salaries and wages.....	1,730,459	1,331,153	30.0
Salaries.....	357,951	180,634	98.2
Wages.....	1,372,508	1,150,519	19.3
Paid for contract work.....	12,128	3,192	279.9
Rent and taxes.....	289,925	101,131	178.1
Cost of materials.....	901,410	587,027	53.1
Amount received for work done.....	3,904,658	2,882,005	35.5

¹A minus sign (-) denotes decrease.

Dyeing and cleaning (Table 25).—Statistics for dyeing and cleaning establishments that were operated by mechanical power in 1919 are presented in this table. Statistics for such establishments are not included in the general tables nor in the totals for manufacturing industries for censuses since 1900. This presentation is the first of its kind that has been made since the census statistics were confined to manufacturing industries as distinguished from the hand trades, household industries, etc.

TABLE 25.—DYEING AND CLEANING: 1919.

	Number or amount.
Number of establishments.....	70
Persons engaged.....	584
Proprietors and firm members.....	76
Salaried employees.....	103
Wage earners (average number).....	405
Primary horsepower.....	523
Capital.....	\$679,719
Salaries and wages.....	550,091
Salaries.....	127,310
Wages.....	422,751
Paid for contract work.....	5,593
Rent and taxes.....	65,263
Cost of materials.....	253,684
Amount received for work done.....	1,333,047

Custom sawmills and custom gristmills (Tables 26 and 27).—Statistics for custom sawmills and custom gristmills are not included in the general tables nor in the totals for manufacturing industries. Data for these custom mills were not collected in 1914.

TABLE 26.—CUSTOM SAWMILLS: 1919 AND 1909.

	NUMBER OR AMOUNT.		Per cent of increase, ¹ 1909-1919.
	1919	1909	
Number of establishments.....	53	117	-54.7
Persons engaged.....	91	284	-68.0
Proprietors and firm members.....	61	148	-56.8
Salaried employees.....	27	133	-79.7
Wage earners (average number).....	1,465	2,232	-34.4
Primary horsepower.....	\$91,313	\$150,795	-39.4
Capital.....	19,120	41,319	-53.8
Salaries and wages.....	1,062	4,437	-76.2
Salaries.....	19,120	40,287	-52.5
Wages.....	493	(²)	
Rent and taxes.....	6,412	2,000	113.8
Cost of materials.....	58,460	124,124	-52.9
Amount received for work done.....			

¹ A minus sign (-) denotes decrease.
² Figures not available.

Tables 26 and 27, however, summarize the statistics for such mills for 1919 and 1909. The value of products for custom sawmills represents the amount charged for the work performed, and that for custom gristmills, the selling value of the grain milled.

TABLE 27.—CUSTOM GRISTMILLS: 1919 AND 1909.

	NUMBER OR AMOUNT.		Per cent of increase, ¹ 1909-1919.
	1919	1909	
Number of establishments.....	129	174	-25.9
Persons engaged.....	206	260	-20.8
Proprietors and firm members.....	155	219	-28.2
Salaried employees.....	1	2	
Wage earners (average number).....	50	42	
Primary horsepower.....	4,042	6,043	-33.1
Capital.....	\$338,527	\$546,774	-16.8
Salaries and wages.....	42,103	18,214	131.2
Salaries.....	600	580	3.4
Wages.....	41,503	17,634	135.4
Rent and taxes.....	6,437	(²)	
Cost of materials ³	2,574,678	1,094,569	135.2
Value of products ³	2,971,103	1,351,291	119.9

¹ A minus sign (-) denotes decrease; percentages are omitted where base is less than 100.
² Figures not available.
³ Includes estimate of all grain ground.

GENERAL TABLES.

Table 28 gives, for 1919, 1914, and 1909, the number of establishments, average number of wage earners, primary horsepower, wages, cost of materials, and value of products for selected industries in the state and in the cities of Des Moines and Sioux City, and for Davenport and each of the cities in the state having from 10,000 to 50,000 inhabitants, for which comparative figures are available, similar data for all industries combined.

Table 29 presents, for 1919, for the state as a whole and for Davenport, Des Moines, and Sioux City, statistics in detail for each industry for which figures can be shown without disclosing the operations of individual establishments, and the statistics for all industries combined for each of the cities in the state having from 10,000 to 50,000 inhabitants.

TABLE 28.—COMPARATIVE SUMMARY FOR SELECTED INDUSTRIES AND FOR CITIES: 1919, 1914, AND 1909.

INDUSTRY.	Census year.	Number of establishments.	Wage earners (average number).	Primary horsepower.	Wages.	Cost of materials.	Value of products.	INDUSTRY.	Census year.	Number of establishments.	Wage earners (average number).	Primary horsepower.	Wages.	Cost of materials.	Value of products.
THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES.															
All industries.....	1919	5,083	80,551	242,946	\$90,117	\$520,241	\$745,473	Bread and other bakery products.	1919	538	2,583	3,376	\$2,973	\$12,511	\$20,244
	1914	5,614	83,113	190,049	39,800	205,451	310,750		1914	518	2,182	2,041	1,269	5,166	9,151
	1909	5,528	61,635	155,384	32,542	170,707	259,238		1909	495	1,647	1,172	846	4,147	6,818
Agricultural implements..	1919	26	906	2,306	1,082	2,822	5,959	Brick and tile, terra-cotta, and fire-clay products.	1919	113	2,452	18,335	2,994	2,639	8,127
	1914	34	1,164	2,459	794	2,052	5,216		1914	158	3,163	20,081	2,189	2,021	6,400
	1909	42	1,318	2,554	683	2,171	4,757		1909	245	3,444	21,929	1,846	1,384	4,947
Artificial stone products..	1919	255	672	2,563	734	1,288	2,962	Brooms, from broom corn..	1919	44	198	263	181	545	1,052
	1914	384	809	2,464	502	951	2,082		1914	40	198	248	111	260	572
	1909	308	730	1,730	397	632	1,569		1909	51	240	127	111	331	649
Automobile bodies and parts.	1919	37	460	552	469	816	1,713	Butter, cheese, and condensed milk.	1919	434	1,663	10,135	1,756	50,481	57,800
	1914	10	29	34	20	22	68		1914	490	1,333	9,048	1,013	24,075	27,606
	1909	4	84	(¹)	42	68	132		1909	512	1,231	8,911	855	22,842	25,850
Awnings, tents, and sails..	1919	18	77	91	62	214	417	Buttons.....	1919	77	2,091	2,340	1,519	2,477	5,615
	1914	19	92	69	46	189	339		1914	81	2,406	3,086	1,000	1,473	3,255
	1909	16	77	61	35	137	245		1909	70	3,172	2,809	1,412	1,414	4,035
Boots and shoes.....	1919	6	653	779	440	2,270	3,047	Canning and preserving ² .	1919	76	1,582	6,949	1,099	6,735	10,223
	1914	9	389	427	244	591	845		1914	64	1,209	4,400	438	2,122	3,920
	1909	10	716	345	318	1,059	1,633		1909	71	1,247	2,989	299	1,568	2,549
Boxes, cigar.....	1919	7	60	57	44	67	179	Carpets, rag.....	1919	22	64	142	53	32	144
	1914	7	76	46	31	49	115		1914	24	79	103	41	23	104
	1909	7	79	59	26	54	112		1909	32	158	220	78	44	206
Boxes, paper and other, not elsewhere specified.	1919	10	238	178	142	978	1,438	Carriages and wagons and materials.	1919	68	493	1,689	432	1,008	2,155
	1914	8	125	98	43	81	176		1914	93	994	2,120	636	1,903	3,437
	1909	6	128	64	33	57	128		1909	119	1,441	2,387	825	2,748	4,786

¹ Figures not available.
² Includes "canning and preserving, fruits and vegetables"; and "pickles, preserves, and sauces."

MANUFACTURES—IOWA.

TABLE 29.—DETAILED STATEMENT OF ALL INDUSTRIES

Table with columns for Industry and City, Number of establishments, Persons Engaged in the Industry (Total, Proprietors, Clerks, Wage earners), Wage Earners Dec. 15, or nearest representative day (Total, 16 and over, Under 16), and Capital.

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

Table listing various industries like Tobacco, cigars, Tools, Shovels, spades, scoops, and hoes, with columns for establishments, persons, and wage earners, and a total dollar value.

Table listing miscellaneous industries such as Artificial flowers, Baking powders, Basketry, and Cash registers, with columns for establishments, persons, and wage earners, and a total dollar value.

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

Table detailing industries in Davenport, Iowa, with columns for establishments, persons, and wage earners, and a total dollar value.

Table listing miscellaneous industries such as Automobiles, Awnings, tents, and sails, and Carpets, rag, with columns for establishments, persons, and wage earners, and a total dollar value.

1 Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).
2 Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).

MANUFACTURES—IOWA.

TABLE 29.—DETAILED STATEMENT OF ALL INDUSTRIES

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

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

1	DES MOINES—All industries.....	379	10,350	236	705	1,416	917	7,085	No 7,950	Fe 6,239	7,967	5,956	1,846	134	31	Dollars. 43,683,553
2	Artificial stone products.....	5	32	7	4	1	20	No 35	Ja ³ 6	38	38	.....	.....	.....	.....	123,670
3	Automobile bodies and parts.....	5	218	2	12	6	5	193	No 296	Ap 144	288	265	2	1	.....	583,721
4	Automobile repairing.....	6	28	5	4	1	1	17	Je ² 18	Ja 14	17	17	.....	.....	.....	29,141
5	Bookbinding and blank-book making.....	7	42	7	3	2	1	29	No 35	Mh ³ 26	36	17	18	1	.....	68,165
6	Bread and other bakery products.....	30	538	34	21	87	37	359	De 425	Ja 310	421	220	160	33	8	1,585,547
7	Brick and tile, terra-cotta, and fire-clay products.....	8	331	3	22	7	4	295	Au 401	De 104	382	381	.....	1	.....	1,344,196
8	Butter.....	4	92	1	7	9	11	64	Je 80	De 52	52	43	9	.....	.....	244,516
9	Cars and general shop construction and repairs by steam-railroad companies.....	3	257	.....	9	8	3	237	No 248	Fe 226	247	246	1	.....	.....	208,652
10	Confectionery and ice cream.....	7	238	2	16	42	10	168	Jy 198	Ja ³ 134	177	62	89	26	.....	603,768
11	Copper, tin, and sheet-iron work.....	12	153	7	11	13	11	111	Ja 145	Mh 75	142	142	.....	.....	.....	330,635
12	Dairymen's and poultrymen's supplies.....	3	77	.....	8	9	9	51	Fe 78	Au 25	67	67	.....	.....	.....	137,775
13	Flavoring extracts.....	3	12	2	1	1	.....	8	Jy 12	De 5	13	11	2	.....	.....	69,658
14	Flour-mill and gristmill products.....	5	68	3	10	8	7	40	Oc 63	Fe 24	60	57	3	.....	.....	707,428
15	Food preparations, not elsewhere specified.....	4	12	2	.....	2	1	7	My 11	Se ³ 4	11	6	5	.....	.....	31,030
16	Foundry and machine-shop products.....	13	232	6	27	27	10	182	.....	.....	184	176	.....	8	.....	893,829
17	Machine shops.....	8	160	2	19	25	10	104	No 124	Mh 86	119	119	.....	.....	.....	545,400
18	All other.....	5	72	4	8	2	.....	58	No 76	My 49	65	57	.....	8	.....	318,429
19	Fur goods.....	4	140	4	8	21	8	99	Ja 124	Se 70	122	71	51	.....	.....	439,529
20	Furniture.....	4	135	1	8	14	2	110	De 119	Ja 100	119	114	5	.....	.....	342,768
21	Gloves and mittens, leather.....	3	195	3	14	42	9	127	Jy 139	Ja 99	136	51	84	1	.....	400,877
22	Jewelry.....	5	28	6	2	4	1	15	Se 17	Ja ³ 14	15	14	1	.....	.....	22,295
23	Lumber, planing-mill products, not including planing mills connected with saw-mills.....	10	285	4	21	61	19	180	Je 200	Ja ³ 158	188	188	.....	.....	.....	1,352,294
24	Marble and stone work, except slate.....	4	93	4	3	19	5	62	Jy 76	Ap 50	67	67	.....	.....	.....	305,297
25	Mineral and carbonated waters.....	7	33	11	1	5	1	15	Au 28	Ja ³ 9	18	14	.....	4	.....	160,036
26	Patent and proprietary medicines.....	18	257	7	23	41	41	145	Ja 156	My 132	141	55	86	.....	.....	790,901
27	Printing and publishing, book and job.....	44	554	35	63	105	39	312	.....	.....	358	246	103	8	1	981,545
28	Job printing.....	35	502	27	56	101	32	286	De 331	Ja 265	328	222	98	8	.....	896,581
29	Book publishing and printing.....	4	25	5	2	3	6	9	Oc ³ 11	Ap ³ 7	11	7	3	.....	.....	26,546
30	Linotype work and typesetting.....	5	27	3	5	1	1	17	No ³ 21	Fe ³ 15	19	17	2	.....	.....	58,418
31	Printing and publishing, newspaper and periodicals.....	33	1,575	15	116	383	427	634	.....	.....	756	557	184	13	2	4,769,810
32	Printing and publishing.....	3	285	.....	27	93	30	135	My 149	Fe 117	135	117	11	7	.....	770,804
33	Printing, publishing, and job printing.....	8	1,174	7	64	250	363	490	De 615	Ja 428	609	436	165	6	2	3,826,362
34	Publishing without printing.....	22	116	3	25	40	34	9	Au 14	Je ³ 6	12	4	8	.....	.....	172,644
35	Stoves and hot-air furnaces.....	5	317	1	19	45	22	230	Oc 285	Ja 158	270	270	.....	.....	.....	1,278,100
36	Tobacco, cigars.....	12	81	12	4	5	.....	60	Oc 65	Ja 49	65	44	20	.....	.....	68,805
37	All other industries*.....	106	4,336	50	265	445	232	3,335	.....	.....	3,597	2,517	1,023	39	18	25,843,140

*All other industries embrace—

Agricultural implements.....	1	Chemicals.....	1	Glue, other than fish.....	1
Artificial flowers.....	1	Cleansing and polishing preparations.....	2	Grease, soap stock.....	1
Artificial limbs.....	1	Clothing, men's.....	2	Hair work.....	1
Awnings, tents, and sails.....	2	Clothing, women's, suits, skirts, and cloaks.....	1	Hand stamps.....	1
Boxes, cigar.....	1	Coffee, roasting and grinding.....	2	Hats and caps, other than felt, straw, and wool.....	1
Boxes, set-up paper boxes.....	1	Coffins, burial cases, and undertakers' goods.....	1	Ice, manufactured.....	2
Brass and bronze products.....	2	Cooperage, hogsheads and barrels.....	2	Iron and steel, welding.....	2
Brooms, from broom corn.....	5	Druggists' preparations.....	2	Knit goods.....	1
Carpets, rag.....	1	Electroplating.....	2	Lithographing.....	2
Cars and general shop construction and repairs by electric-railroad companies.....	1	Furnishing goods, men's, neckwear.....	1	Lubricating greases.....	2
Cash registers and calculating machines.....	1	Gas, illuminating and heating.....	1	Lumber and timber products.....	1
Cement.....	1	Gas machines.....	1	Mattresses and spring beds, not elsewhere specified.....	2
		Glass, cutting, staining, and ornamenting.....	2		

¹ Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).

² Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).

MANUFACTURES—IOWA.

COMBINED AND SPECIFIED INDUSTRIES: 1919—Continued.

EXPENSES.										POWER.				
Salaries and wages.			For contract work.	Rent and taxes.		For materials.		Value of products.	Value added by manufacture.	Primary horsepower.				
Officials.	Clerks, etc.	Wage earners.		Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.			Total.	Owned.				Electric horsepower generated in establishments reporting.
									Steam engines (not turbines).	Steam turbines.	Internal-combustion engines.	Water power. ¹	Rent. ²	

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

Dollars. 2,304,110	Dollars. 3,132,968	Dollars. 7,568,837	Dollars. 336,336	Dollars. 362,377	Dollars. 1,341,622	Dollars. 31,687,203	Dollars. 1,603,260	Dollars. 59,830,954	Dollars. 26,540,392	17,341	6,590	1,760	40	8,961	5,069	1
16,275	2,545	26,380	.....	2,030	670	50,271	1,795	107,238	55,170	62	.....	.....	5	57	.....	2
24,935	23,400	211,479	.....	5,999	9,005	224,058	6,465	574,246	349,723	294	150	.....	.....	144	.....	3
6,300	1,020	24,090	.....	5,030	358	16,875	2,740	81,450	61,535	25	.....	.....	.....	26	.....	4
6,765	1,819	22,574	.....	4,280	294	22,688	785	87,923	64,450	31	.....	.....	.....	31	.....	5
55,780	180,816	328,623	.....	22,277	66,889	1,685,272	50,526	2,043,716	1,207,313	295	48	.....	3	244	.....	6
48,769	17,070	382,674	.....	17,081	60,859	87,645	220,705	1,002,393	685,043	1,529	995	.....	.....	534	25	7
39,683	19,697	65,596	.....	5,286	12,780	1,862,738	15,923	2,252,730	374,059	146	55	.....	.....	91	.....	8
25,320	12,352	274,625	.....	.....	8,043	141,864	14,200	474,316	318,153	120	68	.....	.....	52	.....	9
50,405	57,815	176,450	22,767	9,425	35,200	916,792	21,393	1,510,456	572,271	513	150	.....	.....	363	42	10
34,186	25,828	137,346	.....	4,042	33,951	276,488	4,445	692,520	381,537	71	.....	.....	.....	62	.....	11
20,540	16,440	47,935	.....	2,014	2,372	157,502	1,713	330,280	171,065	36	.....	.....	9	36	.....	12
2,080	1,597	7,316	.....	2,700	3,734	36,937	856	62,887	25,094	10	.....	.....	.....	10	.....	13
34,813	12,799	42,608	.....	1,058	3,768	1,311,107	17,441	1,487,513	159,965	615	.....	.....	.....	615	.....	14
.....	2,086	7,513	.....	1,899	57	41,484	1,374	64,565	21,707	10	.....	.....	.....	10	.....	15
71,785	43,161	216,953	.....	7,502	20,086	406,435	10,400	976,288	559,442	350	.....	.....	7	343	.....	16
44,670	43,161	131,070	.....	5,565	10,618	288,410	6,629	703,305	498,257	274	.....	.....	7	267	.....	17
27,115	.....	85,833	.....	1,937	15,408	118,016	3,780	272,981	151,185	76	.....	.....	.....	76	.....	18
18,328	23,844	117,944	.....	3,800	7,426	427,858	4,481	839,670	407,331	36	.....	.....	.....	36	.....	19
18,622	16,432	123,881	.....	4,720	7,420	233,210	5,487	476,377	237,780	812	545	150	.....	117	.....	20
46,697	46,702	100,369	.....	2,760	4,516	482,083	2,522	769,104	285,499	55	30	.....	.....	25	.....	21
2,400	750	13,495	.....	2,399	340	4,311	204	44,417	39,902	6	.....	.....	.....	6	.....	22
62,502	127,420	187,345	.....	5,030	45,532	710,877	13,698	1,462,703	739,128	490	220	.....	.....	270	.....	23
13,189	59,357	100,297	.....	3,185	5,026	184,275	5,015	438,232	248,942	176	.....	.....	.....	176	.....	24
1,800	5,573	15,072	.....	2,126	9,089	80,484	1,543	132,709	59,632	29	.....	.....	.....	29	.....	25
67,111	105,450	107,116	.....	7,544	60,056	414,424	6,084	1,470,227	1,058,719	215	185	.....	.....	30	93	26
147,730	116,595	306,215	15,767	30,617	9,080	465,471	12,789	1,438,131	959,871	341	.....	.....	.....	341	.....	27
141,008	109,978	276,847	11,745	34,491	9,357	453,841	11,040	1,352,287	387,406	327	.....	.....	.....	327	.....	28
2,800	5,242	9,854	4,022	1,252	82	7,378	283	42,521	34,890	7	.....	.....	.....	7	.....	29
3,922	1,375	19,514	.....	874	541	4,252	1,465	45,323	37,605	7	.....	.....	.....	7	.....	30
377,456	952,030	751,354	180,239	46,425	177,808	1,839,084	43,942	7,877,532	5,094,506	1,383	315	.....	.....	1,073	150	31
92,372	149,546	166,897	.....	8,206	74,931	443,272	8,201	1,408,170	956,607	325	.....	.....	.....	325	.....	32
241,823	689,247	578,159	4,275	28,157	102,374	1,352,409	35,561	6,001,934	4,613,964	1,059	315	.....	.....	744	150	33
43,261	113,846	6,298	175,964	9,972	503	43,403	90	487,423	429,035	4	.....	.....	.....	4	.....	34
77,933	157,505	319,502	1,475	30,680	16,689	449,416	10,578	1,296,884	806,890	317	.....	.....	.....	317	.....	35
4,800	4,390	53,503	.....	7,137	22,626	100,156	965	214,351	113,230	11	.....	.....	.....	11	.....	36
1,027,906	1,097,742	3,390,522	116,088	113,391	759,893	10,057,488	1,116,142	30,774,100	10,600,470	9,357	3,829	1,000	16	3,912	4,759	37

Millinery and lace goods, not elsewhere specified.....	2	Printing materials.....	1	Stationery goods, not elsewhere specified.....	2
Models and patterns, not including paper patterns.....	2	Pumps, power, other than steam.....	1	Stereotyping and electrotyping.....	1
Mucilage, paste, and other adhesives, not elsewhere specified.....	1	Refrigerators.....	1	Stoves, gas and oil.....	1
Oil, linseed.....	1	Roofing materials.....	2	Structural ironwork, not made in steel works or rolling mills.....	3
Optical goods.....	1	Rubber tires, tubes, and rubber goods, not elsewhere specified.....	3	Suspenders, garters, and elastic woven goods.....	1
Paints.....	1	Saddlery and harness.....	4	Tools, machinists'.....	1
Perfumery and cosmetics.....	2	Sausage, not made in slaughtering and meat-packing establishments.....	1	Trunks and valises.....	1
Photo-engraving.....	1	Shirts.....	1	Washing machines and clothes wringers.....	1
Photographic materials.....	2	Signs and advertising novelties.....	5	Windmills.....	2
Pickles and sauces.....	1	Slaughtering and meat packing.....	1	Wirework, not elsewhere specified.....	1
Poultry, killing and dressing, not done in slaughtering and meat-packing establishments.....	1	Soap.....	1	Wood, turned and carved.....	1

¹ Same number reported for one or more other months.

MANUFACTURES—IOWA.

TABLE 29.—DETAILED STATEMENT OF ALL INDUSTRIES

Table with columns for Industry and City, Number of establishments, Persons Engaged in the Industry (Total, Proprietors, Salaried officers, Clerks, Wage earners), Wage Earners Dec. 15 or near-est representative day (Total, 16 and over, Under 16), and Capital.

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

Main data table for cities with 50,000+ inhabitants, including rows for Sioux City and various industries like Artificial stone products, Automobile bodies, etc.

*All other industries embrace— listing specific sub-industries like Automobiles, Awning, tents, and sails, Boxes, cigar, etc.

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

Main data table for cities with 10,000-50,000 inhabitants, including rows for Boone, Burlington, Cedar Rapids, Clinton, Council Bluffs, Dubuque, Fort Dodge, Fort Madison, Iowa City, Krokuk, Marshalltown, Mason City, Muscatine, Ottumwa, and Waterloo.

1 Includes water wheels and turbines (irrespective of ownership of water supply), and water motors (operated by water from city mains).
2 Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).

COMBINED AND SPECIFIED INDUSTRIES: 1919—Continued.

Table with columns for EXPENSES (Salaries and wages, Rent and taxes, For materials) and POWER (Primary horsepower, Owned: Steam engines, Steam turbines, Internal-combustion engines, Water power, Rented). Includes sub-columns for Officials, Clerks, etc., and Wage earners.

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

Main data table for cities of 50,000+ inhabitants, showing various industry categories and their values in dollars across multiple columns.

Table listing specific industry categories such as Hats and caps, Ice, Instruments, Jewelry, Marble and stone work, etc., with corresponding numerical values.

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

Main data table for cities of 10,000 to 50,000 inhabitants, showing various industry categories and their values in dollars across multiple columns.

* Same number reported for one or more other months.
† Same number reported throughout the year.