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TAKEN IN THE YEAR 1910

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1909

GENERAL REPORT AND ANALYSIS

PREPARED UNDER THE SUPERVISION OF WILLIAM M. STEUART

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Leading cities in 15 leading industries.—Table 4 shows, for each of the 15 leading industries of the United States as determined by value of products in 1909, the 6 cities which reported the largest value of products in 1909 and in 1904, together with the percentage of the total value of products for the industry which was reported from the given city.

The prominence of any particular city with reference to a given industry may be due to the fact that the industry is largely concentrated in a few cities or in a limited section of the country, or it may be due merely to the fact that the city is one of very large population. For example, Kansas City, Kans., although a comparatively small city, ranked second in 1909 among the cities of the country with reference to the slaughtering and meat-packing industry, that industry being in considerable measure concentrated in a few localities. The prominence of Chicago in the same industry may be attributed partly to the size of the city and partly to a concentration of the industry there on account of transportation facilities. Again, the prominence of Fall River, New Bedford, and Lowell in the manufacture of cotton goods is an illustration of the local

concentration of industry. In the case of such localized industries the products are usually marketed widely. On the other hand, in such industries as printing and publishing and the bakery industry, the output is mainly utilized in the community where produced, and the magnitude of such an industry in any given city is largely dependent upon the population of that city. New York, Chicago, and Philadelphia, the three largest cities from the standpoint of population, also ranked first, second, and third, respectively, in the printing and publishing and the bakery industries.

In 1909 New York and Chicago each ranked first among the cities of the country in 5 of the 15 leading industries, and Pittsburgh, Minneapolis, Fall River, Lynn, and Lawrence, each in 1 industry.

In 12 of the 15 industries shown in the table the same cities held first place in 1909 as in 1904, and in 4 industries—printing and publishing, the manufacture of cotton goods, and the making of men's clothing and of women's clothing—the same 6 cities held the leading places at both of these censuses, their rank in each case being the same in both years.

INDIVIDUAL CITIES.

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SIX LEADING CITIES, AS MEASURED BY VALUE OF PRODUCTS IN 15 LEADING INDUSTRIES,¹ WITH PERCENTAGE WHICH EACH REPORTED OF THE TOTAL VALUE OF PRODUCTS FOR THE INDUSTRY: 1909 AND 1904.

INDUSTRY.	Census.	CITY RANKING—					
		First.	Per cent of United States total.	Second.	Per cent of United States total.	Thrd.	Per cent of United States total.
Slaughtering and meat packing.....	1909 1904	Chicago, Ill.....	23.7 29.3	Kansas City, Kans.....	10.8 9.8	New York, N. Y.....	7.0 (²)
Foundry and machine-shop products..	1909 1904	Chicago, Ill.....	7.3 7.8	New York, N. Y.....	5.2 6.6	Philadelphia, Pa.....	3.1 3.7
Lumber and timber products.....	1909 1904	Chicago, Ill.....	2.8 2.4	New York, N. Y.....	2.1 2.2	Minneapolis, Minn.....	1.0 1.2
Iron and steel, steel works and rolling mills.	1909 1904	Pittsburgh, Pa.....	8.3 11.5	Youngstown, Ohio.....	5.1 4.8	Chicago, Ill.....	4.7 4.4
Flour-mill and gristmill products.....	1909 1904	Minneapolis, Minn.....	8.9 8.8	Buffalo, N. Y.....	2.3 (²)	Milwaukee, Wis.....	0.9 1.4
Printing and publishing.....	1909 1904	New York, N. Y.....	24.9 25.1	Chicago, Ill.....	10.1 9.6	Philadelphia, Pa.....	6.2 6.4
Cotton goods, including cotton small wares.	1909 1904	Fall River, Mass.....	7.7 7.2	New Bedford, Mass.....	6.8 5.0	Lowell, Mass.....	3.9 4.3
Clothing, men's, including shirts.....	1909 1904	New York, N. Y.....	38.4 36.7	Chicago, Ill.....	15.0 13.4	Baltimore, Md.....	6.4 6.2
Boots and shoes, including cut stock and findings.	1909 1904	Lynn, Mass.....	9.1 9.9	Brockton, Mass.....	7.7 9.5	St. Louis, Mo.....	6.6 5.7
Woolen, worsted, and felt goods, and wool hats.	1909 1904	Lawrence, Mass.....	13.4 12.3	Philadelphia, Pa.....	12.6 9.7	Providence, R. I.....	6.9 7.2
Tobacco manufactures.....	1909 1904	New York, N. Y.....	15.0 15.3	St. Louis, Mo.....	(²) (²)	Richmond, Va.....	(²) 3.9
Cars and general shop construction and repairs by steam-railroad companies.	1909 1904	Chicago, Ill.....	3.8 (²)	Altoona, Pa.....	(²) 3.6	Pittsburgh, Pa.....	2.1 2.0
Bread and other bakery products.....	1909 1904	New York, N. Y.....	15.6 16.3	Chicago, Ill.....	6.8 7.7	Philadelphia, Pa.....	4.8 5.4
Iron and steel, blast furnaces.....	1909 1904	Chicago, Ill.....	(²) (²)	Youngstown, Ohio.....	(²) 6.7	Pittsburgh, Pa.....	5.3 (²)
Clothing, women's.....	1909 1904	New York, N. Y.....	69.3 68.0	Philadelphia, Pa.....	7.8 5.2	Chicago, Ill.....	4.1 4.7

INDUSTRY.	Census.	CITY RANKING—					
		Fourth.	Per cent of United States total.	Fifth.	Per cent of United States total.	Sixth.	Per cent of United States total.
Slaughtering and meat packing.....	1909 1904	South Omaha, Nebr.....	(²) 6.1	Indianapolis, Ind.....	2.9 2.7	St. Louis, Mo.....	1.9 1.9
Foundry and machine-shop products..	1909 1904	Cleveland, Ohio.....	3.0 2.7	Pittsburgh, Pa.....	1.8 2.4	Buffalo, N. Y.....	1.7 1.8
Lumber and timber products.....	1909 1904	Portland, Oreg.....	0.9 0.6	Seattle, Wash.....	0.7 0.6	Philadelphia, Pa.....	0.7 0.6
Iron and steel, steel works and rolling mills.	1909 1904	Cleveland, Ohio.....	3.9 3.7	McKeesport, Pa.....	(²) (²)	Johnstown, Pa.....	(²) (²)
Flour-mill and gristmill products.....	1909 1904	Chicago, Ill.....	(²) 0.9	Louisville, Ky.....	0.7 0.8	Indianapolis, Ind.....	0.7 0.6
Printing and publishing.....	1909 1904	Boston, Mass.....	3.8 4.1	St. Louis, Mo.....	2.3 3.0	San Francisco, Cal.....	1.7 2.0
Cotton goods, including cotton small wares.	1909 1904	Philadelphia, Pa.....	3.6 3.9	Manchester, N. H.....	(²) (²)	Pawtucket, R. I.....	2.3 2.2
Clothing, men's, including shirts.....	1909 1904	Philadelphia, Pa.....	5.1 5.8	Rochester, N. Y.....	3.3 3.7	Cincinnati, Ohio.....	3.0 3.6
Boots and shoes, including cut stock and findings.	1909 1904	Haverhill, Mass.....	5.7 5.5	Boston, Mass.....	5.1 3.8	New York, N. Y.....	3.6 3.2
Woolen, worsted, and felt goods, and wool hats.	1909 1904	Passaic, N. J.....	3.8 0.3	Woonsocket, R. I.....	(²) (²)	Holyoke, Mass.....	(²) (²)
Tobacco manufactures.....	1909 1904	Durham, N. C.....	(²) 3.3	Chicago, Ill.....	4.0 (²)	Louisville, Ky.....	3.9 (²)
Cars and general shop construction and repairs by steam-railroad companies.	1909 1904	Baltimore, Md.....	1.8 1.5	Reading, Pa.....	1.4 1.4	Philadelphia, Pa.....	1.3 1.4
Bread and other bakery products.....	1909 1904	St. Louis, Mo.....	2.2 2.3	Boston, Mass.....	2.0 2.3	Pittsburgh, Pa.....	2.0 1.9
Iron and steel, blast furnaces.....	1909 1904	Cleveland, Ohio.....	(²) (²)	Lackawanna, N. Y.....	(²) (²)	Duquesne, Pa.....	(²) (²)
Clothing, women's.....	1909 1904	Cleveland, Ohio.....	3.3 3.0	Boston, Mass.....	2.0 2.3	St. Louis, Mo.....	1.3 1.2

¹ As measured by value of products in 1909.

² Figures can not be shown without disclosing individual operations.

CHAPTER VII.

LOCAL CONCENTRATION OF CERTAIN INDUSTRIES.

Statistics showing local concentration of selected industries.—The statistics already presented in Chapter IV (Table 7), showing the three leading states in each of the manufacturing industries distinguished by the Bureau of the Census, and those presented in Chapter V, showing the six leading cities in certain selected industries, bring out the fact that there is much more local concentration in some industries than in others. This condition, however, may be set forth more clearly by selecting from among the large number of industries those which are of importance and which also show a marked degree of concentration, and indicating what proportion of the total value of products of each industry was reported from the states and cities which lead in that industry. The following table presents statistics for 50 selected industries of this character. It may be noted that, in order to bring out fully the tendency toward concentration, data are shown in a few cases for separate subdivisions

of the broader classifications used in most of the tables of this report. So far as figures can be shown without the disclosure of individual operations, the table names the states, and in most cases also the cities, in which each industry is markedly concentrated, and shows for each state or city the value of products reported for 1909 and 1904 and the proportion which that value represented of the United States total. In some cases important states and cities have been omitted because the figures could not be given. Cities are not named in connection with some industries because there is no significant concentration in cities.

The figures for individual states presented in this table are in some cases less significant than those for the cities, since the importance of a state as a whole in a given industry may be due merely to the prominence of one or two localities, and may not indicate any widespread development of the industry throughout the state.

SELECTED INDUSTRIES SHOWING A MARKED DEGREE OF LOCAL CONCENTRATION.

Table 1 INDUSTRY.	VALUE OF PRODUCTS FOR THE UNITED STATES.		STATE.	VALUE OF PRODUCTS FOR THE STATE NAMED.				CITY.	VALUE OF PRODUCTS FOR THE CITY NAMED.			
				Amount.		Per cent of United States total.			Amount.		Per cent of United States total.	
	1909	1904		1909	1904	1909	1904		1909	1904	1909	1904
Agricultural implements...	\$146,329,268	\$112,007,344	Illinois.....	\$57,268,325	\$38,412,452	39.1	34.3	Moline, Ill.....	\$11,493,184	\$8,347,014	7.9	7.5
			New York.....	14,970,980	13,045,891	10.2	11.6	Racine, Wis.....	7,174,690	5,177,079	4.9	4.6
			Ohio.....	14,440,461	12,891,197	9.9	11.5	Springfield, Ohio.....	5,442,397	4,051,167	3.7	3.6
			Indiana.....	13,669,824	8,060,575	9.3	7.2					
			Wisconsin.....	11,411,303	10,076,760	7.8	9.0					
			Michigan.....	9,272,787	8,719,719	6.3	7.8					
Artificial flowers and feathers and plumes.	23,980,567	5,246,822	New York.....	21,162,385	3,996,903	88.2	76.2	New York, N. Y.....	21,098,226	3,965,753	88.0	75.6
								Philadelphia, Pa.....	1,313,901	721,940	5.5	13.8
Automobiles, including bodies and parts.	249,202,075	30,033,536	Michigan.....	96,651,451	7,996,534	38.8	26.6	Detroit, Mich.....	59,536,154	6,240,051	23.9	20.8
			Ohio.....	38,838,754	6,358,164	15.6	21.2	Cleveland, Ohio.....	21,403,926	4,624,080	8.6	15.4
			New York.....	30,979,527	4,260,164	12.4	14.2	Flint, Mich.....	16,841,688	(1)	6.8
			Indiana.....	23,764,070	1,638,602	9.5	5.5	Buffalo, N. Y.....	9,597,763	*1,385,509	3.9	*4.6
								Lansing, Mich.....	8,503,316	(1)	3.4
								New York, N. Y.....	6,194,354	1,399,484	2.5	4.7
								Jackson, Mich.....	5,403,134	(1)	2.2
								Dayton, Ohio.....	4,618,839	1.9
								Pontiac, Mich.....	4,418,506	(1)	1.8
Boots and shoes, including cut stock and findings.	512,797,642	357,688,160	Massachusetts.....	236,342,915	173,679,628	46.1	48.6	Lynn, Mass.....	46,659,709	35,430,532	9.1	9.9
			Missouri.....	48,751,235	*23,540,943	9.5	*6.7	Brockton, Mass.....	39,293,118	33,853,128	7.7	9.5
			New York.....	48,185,914	37,521,068	9.4	10.5	St. Louis, Mo.....	33,970,372	19,662,388	6.6	5.5
			New Hampshire.....	39,439,544	22,834,259	7.7	6.4	Haverhill, Mass.....	29,149,609	20,508,825	5.7	5.7
			Ohio.....	31,550,957	25,735,005	6.2	7.2	Boston, Mass.....	26,146,755	*11,413,510	5.1	*3.2
								New York, N. Y.....	18,376,429	13,686,605	3.6	3.8
								Manchester, N. H.....	17,646,652	*6,567,903	3.4	*1.8
								Cincinnati, Ohio.....	14,998,672	11,152,013	2.9	3.1
								Rochester, N. Y.....	13,450,155	9,154,944	2.6	2.6
Boots and shoes, rubber...	49,720,507	70,065,296	Massachusetts.....	18,722,363	39,034,549	37.7	55.7					
Brass and bronze products.	149,989,058	102,407,104	Connecticut.....	66,932,969	*53,916,445	44.6	*52.7	Waterbury, Conn.....	31,461,875	*19,986,964	21.0	*19.5
								Ansonia, Conn.....	16,499,613	16,297,911	11.0	15.9
								Bridgeport, Conn.....	4,445,658	5,362,761	3.0	5.2
Butter, cheese, and condensed milk.	274,557,718	168,182,789	Wisconsin.....	53,843,249	29,994,791	19.6	17.8					
			New York.....	42,458,345	31,047,776	15.5	18.5					
			Iowa.....	25,849,866	*15,028,326	9.4	*9.0					
			Minnesota.....	25,287,462	12,871,129	9.2	7.7					

* Figures can not be shown without disclosing individual operations.
 * Excluding statistics for two establishments, to avoid disclosure of individual operations.
 * Excluding statistics for one establishment, to avoid disclosure of individual operations.

CONCENTRATION OF INDUSTRIES.

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SELECTED INDUSTRIES SHOWING A MARKED DEGREE OF LOCAL CONCENTRATION—Continued.

INDUSTRY.	VALUE OF PRODUCTS FOR THE UNITED STATES.		STATE.	VALUE OF PRODUCTS FOR THE STATE NAMED.				CITY.	VALUE OF PRODUCTS FOR THE CITY NAMED.				
				Amount.		Per cent of United States total.			Amount.		Per cent of United States total.		
	1909	1904											1909
Canning and preserving....	\$157,101,201	\$130,465,976	California.....	\$32,914,829	\$26,083,226	21.0	20.0						
			New York.....	19,039,735	16,821,221	12.1	12.9						
			Maryland.....	13,709,449	12,935,065	8.7	9.9						
Carpets and rugs, other than rag.	71,188,152	61,586,433	New York.....	25,606,262	19,404,133	36.0	31.5	Philadelphia, Pa.....	\$22,628,537	\$25,232,510	31.8	41.0	
			Pennsylvania.....	24,879,232	27,120,311	34.9	44.0						
Clocks.....	12,235,631	8,868,000	Connecticut.....	6,809,746	6,158,034	55.7	69.4						
Clothing, men's, including shirts.	568,076,635	406,767,676	New York.....	266,075,427	187,409,206	46.8	46.1	New York, N. Y.....	218,411,030	149,483,620	38.4	36.7	
			Illinois.....	89,472,755	57,001,643	15.8	14.0	Chicago, Ill.....	85,296,407	54,625,979	15.0	13.4	
								Baltimore, Md.....	36,289,212	25,276,257	6.4	6.2	
								Philadelphia, Pa.....	29,000,899	23,642,289	5.1	5.8	
								Rochester, N. Y.....	18,878,508	14,948,708	3.3	3.7	
Clothing, women's.....	334,751,649	247,601,560	New York.....	272,517,792	173,548,385	70.8	70.1	New York, N. Y.....	266,477,381	168,418,895	69.3	68.6	
			Pennsylvania.....	32,837,424	15,085,790	8.5	6.1	Philadelphia, Pa.....	30,132,842	12,871,857	7.8	5.2	
								Chicago, Ill.....	15,676,826	11,636,818	4.1	4.7	
Coke.....	95,696,622	51,728,647	Pennsylvania.....	51,816,449	28,924,229	54.1	55.9						
			Alabama.....	8,842,512	6,175,126	9.2	11.9						
			West Virginia.....	7,563,419	4,174,186	7.9	8.1						
Collars and cuffs.....	17,230,452	12,587,277	New York.....	15,897,376	12,188,181	92.3	96.8	Troy, N. Y.....	13,638,745	11,271,708	79.2	89.5	
Corsets.....	33,257,187	14,862,081	Connecticut.....	12,814,736	5,590,637	38.5	37.6	Bridgeport, Conn.....	6,998,875	2,954,418	20.7	19.9	
Cotton goods, including cotton small wares.	628,391,813	450,467,704	Massachusetts.....	186,462,313	120,068,982	29.7	28.9	Fall River, Mass.....	48,576,114	32,538,667	7.7	7.2	
			North Carolina.....	72,680,385	47,254,054	11.6	10.5	New Bedford, Mass.....	42,505,907	22,411,996	6.8	5.9	
			South Carolina.....	65,929,585	49,437,644	10.5	11.0	Lowell, Mass.....	24,744,240	19,383,878	3.9	4.3	
			Rhode Island.....	50,312,597	34,573,450	8.0	7.7	Philadelphia, Pa.....	22,537,898	17,462,724	3.6	3.9	
			Georgia.....	48,036,817	135,174,248	7.6	17.8	Pawtucket, R. I.....	14,337,874	10,099,361	2.3	2.2	
								Cumberland, R. I.....	8,166,455	5,286,632	1.3	1.2	
								Warwick, R. I.....	7,621,518	5,370,318	1.2	1.2	
Cutlery and edge tools (not including tools not elsewhere specified).	22,884,914	18,614,929	Connecticut.....	6,720,700	6,167,852	29.4	33.1						
			Massachusetts.....	4,391,424	2,584,927	19.2	13.9						
Dyeing and finishing textiles.	83,556,432	50,849,545	Massachusetts.....	21,892,890	11,048,512	26.2	21.7	Philadelphia, Pa.....	6,327,261	4,371,009	7.6	8.6	
			New Jersey.....	15,795,788	11,979,947	18.9	23.6	Paterson, N. J.....	6,206,830	5,699,295	7.4	11.2	
			Rhode Island.....	13,955,700	9,981,457	16.7	19.6	Fall River, Mass.....	4,742,271	3,124,604	5.7	6.2	
			Pennsylvania.....	12,059,297	6,786,263	14.4	13.3	Lawrence, Mass.....	3,972,149	1,428,174	4.8	2.8	
								Providence, R. I.....	2,521,315	2,254,074	3.0	4.4	
								Pawtucket, R. I.....	2,450,858	1,644,548	2.9	3.2	
								Passaic, N. J.....	2,156,837	1,621,131	2.6	3.2	
								Warwick, R. I.....	1,681,187	1,262,329	2.0	2.5	
Firearms and ammunition.	34,111,564	28,206,381	Connecticut.....	19,948,235	17,761,675	58.5	63.0						
			Massachusetts.....	3,407,838	4,011,316	10.0	16.2						
Fur goods.....	55,937,549	37,123,129	New York.....	41,301,451	26,244,346	73.8	70.7	New York, N. Y.....	39,574,386	25,278,617	71.3	68.1	
Furnishing goods, men's (not including collars and cuffs and suspenders, garters, and elastic woven goods).	42,129,938	36,444,305	New York.....	19,763,785	17,148,982	46.9	47.1	New York, N. Y.....	18,819,024	16,336,132	44.7	44.8	
Glass.....	92,095,203	79,607,998	Pennsylvania.....	32,817,936	27,671,693	35.8	34.8						
			Ohio.....	14,358,274	9,026,298	15.6	11.3						
			Indiana.....	11,593,094	14,706,929	12.6	18.5						
Gloves and mittens, leather.	23,630,598	17,740,385	New York.....	14,336,365	9,946,443	60.7	56.1	Gloversville, N. Y.....	8,669,706	5,202,196	27.5	29.9	
								Johnstown, N. Y.....	3,266,362	2,581,274	13.8	14.6	
Grindstones.....	1,688,171	788,049	Ohio.....	1,498,256	517,069	88.8	65.6						
Hair work.....	11,216,175	1,782,491	New York.....	7,861,306	1,012,150	70.1	56.8	New York, N. Y.....	7,817,490	997,750	69.7	56.9	
Hats, fur-felt.....	47,864,630	36,629,353	Pennsylvania.....	13,022,617	7,350,311	27.2	20.1	Philadelphia, Pa.....	10,401,794	5,847,771	21.7	15.9	
			Connecticut.....	10,399,860	8,662,799	21.7	23.6	Danbury, Conn.....	7,114,683	5,798,197	14.9	15.8	
			New York.....	10,218,660	7,739,774	21.4	21.1	New York, N. Y.....	4,765,629	3,899,435	10.0	10.6	
			New Jersey.....	8,825,217	9,540,433	18.4	26.0	Newark, N. J.....	4,433,132	4,588,049	9.2	12.5	
								Orange, N. J.....	1,904,660	2,311,614	4.0	6.3	
Hosiery and knit goods (not including hand-knit goods).	198,571,588	136,558,139	New York.....	65,852,133	46,108,600	33.2	33.8	Philadelphia, Pa.....	23,901,699	15,770,873	12.0	11.5	
			Pennsylvania.....	49,583,463	39,753,140	25.0	22.5	New York, N. Y.....	12,386,254	8,030,721	6.2	4.4	
								Amsterdam, N. Y.....	8,158,701	4,677,022	4.1	3.4	
								Utica, N. Y.....	8,063,844	5,261,166	4.1	3.9	
								Cohoes, N. Y.....	5,087,315	4,126,873	2.6	3.0	
								Little Falls, N. Y.....	4,654,852	2,547,676	2.3	1.9	
								Reading, Pa.....	4,551,067	2,540,105	2.3	1.9	
Ink, printing.....	8,865,504	5,774,254	New York.....	4,058,557	2,320,135	45.8	40.2	New York, N. Y.....	3,965,174	2,256,106	44.7	39.1	
Iron and steel, blast furnaces	391,429,283	231,822,707	Pennsylvania.....	168,573,413	107,455,267	43.1	46.4	Pittsburgh, Pa.....	20,668,022	15,499,861	5.3	16.7	
			Ohio.....	83,699,238	40,862,451	21.4	17.6						
			Illinois.....	38,299,897	27,330,836	9.8	11.8						
			New York.....	26,620,948	8,634,737	6.8	3.7						
Iron and steel, steel works and rolling mills.	985,722,534	673,965,026	Pennsylvania.....	500,343,995	363,773,577	50.8	54.0	Pittsburgh, Pa.....	82,306,627	77,439,999	8.3	11.5	
			Ohio.....	197,780,043	111,996,673	20.1	16.6	Youngstown, Ohio.....	50,175,133	29,738,301	5.1	4.4	
			Illinois.....	86,608,137	60,021,925	8.8	8.9	Chicago, Ill.....	45,983,782	24,839,623	4.7	3.7	
			New York.....	39,532,414	21,227,399	4.0	3.1	Cleveland, Ohio.....	38,463,316	32,279,437	3.9	4.8	

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

SELECTED INDUSTRIES SHOWING A MARKED DEGREE OF LOCAL CONCENTRATION—Continued.

Table 1—Continued.			VALUE OF PRODUCTS FOR THE STATE NAMED.				VALUE OF PRODUCTS FOR THE CITY NAMED.					
INDUSTRY.	VALUE OF PRODUCTS FOR THE UNITED STATES.		STATE.	Amount.		Per cent of United States total.		CITY.	Amount.		Per cent of United States total.	
	1909	1904		1909	1904	1909	1904		1909	1904	1909	1904
Jewelry.....	\$80,349,874	\$53,225,681	Rhode Island.....	\$20,685,100	\$14,431,756	25.7	27.1	Providence, R. I.....	\$20,166,003	\$14,317,050	25.1	26.9
			New York.....	20,362,620	12,350,865	25.3	23.2	New York, N. Y.....	19,236,368	11,347,531	23.9	21.3
			Massachusetts.....	15,210,738	10,073,595	18.9	18.9	Newark, N. J.....	13,152,340	9,238,095	16.4	17.4
			New Jersey.....	13,272,004	9,303,646	16.5	17.5	Attleboro, Mass.....	7,396,558	5,544,285	9.2	10.4
Leather, tanned, curried, and finished.	327,874,187	252,620,986	Pennsylvania.....	77,926,321	69,427,852	23.8	27.5	Milwaukee, Wis.....	27,453,829	14,074,397	8.4	5.6
			Wisconsin.....	44,667,676	25,845,123	13.6	10.2	Philadelphia, Pa.....	23,526,421	23,903,239	7.2	9.5
			Massachusetts.....	40,002,079	33,352,999	12.2	13.2	Newark, N. J.....	18,858,046	13,577,719	5.8	5.4
			New Jersey.....	28,430,955	21,495,329	8.7	8.5	Chicago, Ill.....	13,243,550	9,420,426	4.0	3.7
			New York.....	27,642,383	21,642,946	8.4	8.6	Peabody, Mass.....	12,893,653	7,919,370	3.9	3.1
			Michigan.....	15,331,104	9,340,349	4.7	3.7	Wilmington, Del.....	12,079,225	10,250,842	3.7	4.1
			Illinois.....	14,911,782	10,758,196	4.5	4.3	Camden, N. J.....	5,920,238	6,364,928	1.8	2.5
			Delaware.....	12,079,225	10,250,842	3.7	4.1					
Liquors, vinous.....	13,120,846	11,097,853	California.....	8,936,848	6,688,620	68.1	60.3					
Millinery and lace goods....	85,893,632	50,777,768	New York.....	52,106,200	32,844,273	60.7	64.7	New York, N. Y.....	51,238,767	32,342,603	59.7	63.7
Needles, pins, and hooks and eyes.	6,694,095	4,750,589	Connecticut.....	4,236,036	3,062,193	63.3	64.5					
Oil, cottonseed, and cake..	147,867,894	96,407,621	Texas.....	29,915,772	18,698,815	20.2	19.4					
			Georgia.....	23,640,779	13,539,899	16.0	14.0					
			Mississippi.....	15,965,543	12,687,147	10.8	13.1					
			Louisiana.....	13,084,586	13,187,608	8.8	13.7					
			South Carolina.....	10,902,935	5,462,818	7.4	6.7					
			Alabama.....	9,178,016	5,769,061	6.2	5.0					
			North Carolina.....	8,504,477	3,748,789	5.8	3.9					
			Arkansas.....	7,788,885	4,939,919	5.3	5.1					
Paper and wood pulp.....	267,658,964	188,715,189	New York.....	48,859,610	37,750,605	18.3	20.0					
			Massachusetts.....	40,096,713	32,012,247	15.0	17.0					
			Maine.....	33,950,230	22,951,124	12.7	12.2					
			Wisconsin.....	25,962,069	17,844,174	9.7	9.5					
			Pennsylvania.....	19,872,717	15,411,032	7.4	8.2					
			Ohio.....	16,965,260	10,961,527	6.3	5.8					
			New Hampshire.....	13,994,251	8,930,291	5.2	4.7					
			Michigan.....	13,922,124	7,240,631	5.2	3.9					
Peanuts, grading, roasting, cleaning, and shelling.	9,736,551	7,260,810	Virginia.....	7,933,440	7,055,036	81.5	97.2	Petersburg, Va.....	1,721,576	922,308	17.7	12.7
								Norfolk, Va.....	991,439	791,700	10.2	10.9
Pens, fountain, stylo-graphic, and gold.	4,738,693	2,774,034	New York.....	3,218,760	1,945,282	67.9	70.1	New York, N. Y.....	3,218,760	1,945,282	67.9	70.1
Pipes, tobacco.....	5,311,900	2,834,496	New York.....	3,212,262	1,880,874	60.5	66.4	New York, N. Y.....	3,136,671	1,794,676	59.0	63.3
Plated ware (not including silversmithing and silverware).	18,526,193	12,138,886	Connecticut.....	14,333,213	8,125,831	77.4	66.9	Meriden, Conn.....	6,661,427	4,869,303	36.0	40.1
			New York.....	2,414,334	2,516,744	13.0	20.7	Wallingford, Conn.....	2,946,163	486,257	15.9	4.0
Pottery, terra-cotta, and fire-clay products.	76,118,861	64,200,792	Ohio.....	21,173,272	18,550,840	27.8	28.9	Trenton, N. J.....	6,995,793	5,882,701	9.2	9.2
			New Jersey.....	13,139,000	11,717,103	17.3	18.3	East Liverpool, Ohio..	5,452,199	5,373,852	7.2	8.4
			Pennsylvania.....	13,072,106	10,759,272	17.2	16.8					
Rice, cleaning and polish-ing.	22,371,457	16,296,916	Louisiana.....	12,528,656	10,718,311	56.0	65.8	New Orleans, La.....	5,124,836	4,881,954	22.9	30.0
			Texas.....	8,142,438	4,640,269	36.4	28.5	Beaumont, Tex.....	1,627,868	1,203,123	7.3	7.4
Salt.....	11,327,834	9,437,662	Michigan.....	3,652,996	2,404,717	32.2	25.5					
			New York.....	2,896,826	3,167,279	25.6	33.6					
			Ohio.....	1,807,347	1,167,546	16.0	12.4					
			Kansas.....	1,105,920	1,123,114	9.8	11.9					
Silk and silk goods, includ-ing throwsters.	196,911,667	133,288,072	New Jersey.....	65,429,550	42,862,907	33.2	32.2	Paterson, N. J.....	40,358,271	25,433,245	20.5	19.1
			Pennsylvania.....	62,061,302	39,333,520	31.5	29.5	New York, N. Y.....	16,949,664	14,035,970	8.6	10.5
			New York.....	26,518,821	20,181,212	13.5	15.1	Allentown, Pa.....	7,455,528	3,901,249	3.8	2.9
			Connecticut.....	21,062,687	15,623,693	10.7	11.7	Scranton, Pa.....	6,630,848	4,426,635	3.4	3.3
								Philadelphia, Pa.....	6,502,044	5,079,193	3.3	3.8
Slaughtering and meat packing.	1,370,568,101	922,037,528	Illinois.....	389,594,906	318,201,253	28.4	34.5	Chicago, Ill.....	325,061,657	270,548,962	23.7	29.3
			Kansas.....	165,360,516	96,375,639	12.1	10.5	Kansas City, Kans.....	148,459,212	89,975,508	10.8	9.8
			New York.....	127,130,051	75,549,917	9.3	8.2	New York, N. Y.....	95,862,422	55,937,982	7.0	6.1
			Nebraska.....	92,305,484	69,328,920	6.7	7.5	South Omaha, Nebr..	89,445,383	65,530,935	6.5	7.1
			Missouri.....	79,581,294	60,110,427	5.8	6.5	Indianapolis, Ind.....	39,133,737	24,487,416	2.9	2.7
								St. Louis, Mo.....	26,600,956	17,485,393	1.9	1.9
								Buffalo, N. Y.....	25,416,054	16,219,823	1.9	1.8
Smelting and refining, copper.	378,805,974	240,780,216	New Jersey.....	125,651,087	62,795,613	33.2	26.1					
			Arizona.....	41,059,240	22,761,981	10.8	9.5					
Smelting and refining, zinc.	34,205,894	24,791,299	Kansas.....	10,857,250	10,999,468	31.7	44.4					
			Illinois.....	9,003,624	5,425,636	26.3	21.9					
Turpentine and rosin.....	25,295,017	23,937,024	Florida.....	11,937,518	9,901,905	47.2	41.4					
			Georgia.....	6,938,957	7,705,643	27.4	32.2					
			Alabama.....	2,471,999	2,434,365	9.8	10.2					
			Mississippi.....	1,474,629	2,365,720	5.8	9.9					
			Louisiana.....	1,173,848	211,820	4.6	0.9					
			North Carolina.....	673,954	743,421	2.7	3.1					
			South Carolina.....	406,286	574,150	1.6	2.4					
Wood distillation, not including turpentine and rosin.	9,736,998	7,813,483	New York.....	3,401,722	3,357,057	34.9	43.0					
			Pennsylvania.....	2,960,162	3,092,657	30.4	39.6					
			Michigan.....	2,398,927	738,254	24.6	9.4					

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

The following table, derived from Table 1, brings out the most conspicuous instances of local concentration. In each industry named in this table a single state in 1909 contributed more than two-fifths of the total value of products:

INDUSTRY.	State.	Percent of total value of products for United States: 1909
Collars and cuffs.....	New York.....	92.3
Grindstones.....	Ohio.....	88.8
Artificial flowers and feathers and plumes.....	New York.....	88.2
Peanuts, grading, roasting, cleaning, and shelling.....	Virginia.....	81.5
Plated ware (not including silversmithing and silverware).	Connecticut.....	77.4
Fur goods.....	New York.....	73.8
Clothing, women's.....	New York.....	70.8
Hair work.....	New York.....	70.1
Liquors, vinous.....	California.....	68.1
Pens, fountain, stylographic, and gold.....	New York.....	67.9
Needles, pins, and hooks and eyes.....	Connecticut.....	63.3
Gloves and mittens, leather.....	New York.....	60.7
Millinery and lace goods.....	New York.....	60.7
Pipes, tobacco.....	New York.....	60.5
Firearms and ammunition.....	Connecticut.....	58.5
Rice, cleaning and polishing.....	Louisiana.....	56.0
Clocks.....	Connecticut.....	55.7
Coke.....	Pennsylvania.....	54.1
Iron and steel, steel works and rolling mills.....	Pennsylvania.....	50.8
Turpentine and rosin.....	Florida.....	47.2
Furnishing goods, men's (not including collars and cuffs nor suspenders, garters, and elastic woven goods).	New York.....	46.9
Clothing, men's, including shirts.....	New York.....	46.8
Boots and shoes, including cut stock and findings.....	Massachusetts.....	46.1
Ink, printing.....	New York.....	45.8
Brass and bronze products.....	Connecticut.....	44.6
Iron and steel, blast furnaces.....	Pennsylvania.....	43.1

Reasons for local concentration of industries.—It would require very extended discussion to attempt to determine for each industry covered by Table 1 the reasons for the concentration in the states or cities named. Moreover, such a discussion would involve a great deal of mere speculation, as the reasons for local concentration are often exceedingly obscure. It is necessary for the most part to confine the discussion to statements of a general character.

There are certain advantages which particular states or cities have with reference to manufacturing industries in general and which tend to give them prominence in manufactures as a whole. Among these advantages may be mentioned: (1) Water power, (2) convenient transportation facilities, (3) large amounts of capital available for investment in manufactures, and (4) a large supply of labor adapted to manufacturing enterprises in general. Besides these broad factors which affect the geographic distribution of manufactures in general, there are others which tend to bring about a local concentration of particular classes of manufacturing industries. Among the principal factors of this class may be mentioned: (1) Proximity to the source of the required materials, (2) proximity to the market for the specified products, (3) a supply of labor peculiarly adapted to the industry, (4) the momentum of an early start, which is usually closely related to the labor supply, and (5) the habit of industrial imitation. Moreover, some of the general

factors above mentioned act more powerfully in the case of certain industries than in the case of others. For example, water power is obviously more important in the case of those industries which require large quantities of power than in the case of those which require little power, and transportation facilities are more important with reference to heavy products than with reference to those of little weight in proportion to their value.

In some cases two or more factors cooperate in rendering a particular locality peculiarly favorable to the development of a given industry. Again, one or two factors may be so strong as to prevail in spite of the lack of favorable conditions in other respects; and part of the establishments in an industry may be concentrated in one locality or group of localities by reason of one set of advantages and part concentrated elsewhere by reason of a quite different set of advantages. For example, proximity to the market and the momentum of an early start may result in the concentration of an industry in a locality by no means convenient to the source of raw materials. This is conspicuously illustrated by the manufacture of cotton goods. This industry was originally developed mainly in the northeastern section of the country, particularly in New England, far from the cotton fields. In recent years, however, the influence of proximity to materials, together with other causes, has led to great development of cotton manufactures in the cotton producing states themselves, particularly in the South Atlantic states. The industry at present, therefore, is chiefly concentrated in two widely separated sections of the country.

On the whole, however, proximity to the source of materials is probably the most important single factor in determining the location of the more important industries. This factor is particularly effective in those industries where the raw materials are bulky, so as to involve heavy transportation charges, and most of all where the bulk of the raw materials is relatively much greater than that of the finished product. Proximity to the source of materials is also very influential in industries whose materials spoil or deteriorate quickly.

In the case of those industries which are dependent upon materials produced largely throughout the country, the need of proximity to materials may result in a wide distribution rather than a local concentration of the industry. For example, the production of lumber is not locally concentrated in any marked degree. The lumber mills are in general situated in or near the forests, and the latter in turn are more or less generally scattered over the country. For similar reasons the flour-mill and grist-mill industry is widely distributed. It is only where the production of the required materials is confined to more

or less limited areas that the need of proximity to materials can bring about local concentration of a manufacturing industry.

Other causes as well as the location of the materials have affected the geographic distribution of some of the industries just named. In the case of the blast furnace industry, for example, the present predominance of Pennsylvania can not be attributed to the production of large quantities of iron ore in the state. Pennsylvania doubtless got its start in this industry by virtue of the local supply of iron ore, but since the opening of the Lake Superior mines most of the ore which is used in the Pennsylvania blast furnaces has been brought from a long distance, although by very convenient methods of transportation. On the other hand, Pennsylvania's abundant deposits of coal suitable for coking give that state a peculiar advantage with respect to the next most important

material used in the industry; and that fact, together with the momentum of an early start and the accessibility of markets, has enabled the state to maintain its original lead.

In some industries in which proximity to materials is an important factor in determining the location of manufacturing establishments, and in which the local concentration in certain states is conspicuous, there is no marked concentration in any particular city. These are for the most part, however, industries which are not carried on to any great extent in large cities. In the butter, cheese, and condensed-milk industry, in canning and preserving, in the cottonseed-oil industry, and in the manufacture of paper and wood pulp, for example, a great part of the establishments are located in immediate proximity to the farms or forests, rather than in cities of any considerable magnitude.