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THE DEVELOPMENT OF CHICAGO AND VICINITY AS
A MANUFACTURING CENTER PRIOR TO 1880

A DISSERTATION

SUBMITTED TO THE FACULTY
OF THE

GRADUATE SCHOOL OF ARTS AND LITERATURE

IN CANDIDACY FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

DEPARTMENT OF HISTORY

BY

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CHICAGO

1911

Press of
McELROY PUBLISHING CO.
6219 Cottage Grove Ave.
Chicago

Acknowledgment is hereby made of the financial assistance received from The Carnegie Institution of Washington in the collection and preparation of materials for this Monograph.

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THE DEVELOPMENT OF CHICAGO AND VICINITY AS A
MANUFACTURING CENTER.

INTRODUCTION

In no phase of its economic development has the United States made greater progress during the last half of the nineteenth century than in manufacturing; and, in the growth of that industry, one of the most conspicuous facts is the increased proportion of manufactures produced west of the Atlantic States. During this half century the center of manufactures in the United States moved westward from a point forty-one miles northwest of Harrisburg, Pennsylvania, to a point near Mansfield, Ohio, a distance of about two hundred and fifty miles. As a part of this movement, well-defined manufacturing centers arose in the Mississippi Valley, with one of which we are chiefly concerned.

In the year 1900 the strip of territory on the western shore of Lake Michigan, comprising the counties of Cook and Lake, in Illinois, and Kenosha, Racine, and Milwaukee, in Wisconsin, contained an area of 2,281 square miles and a population of 2,270,607. Near its northern limits was situated the city of Milwaukee, with a population of 285,315; near its southern limits, eighty-five miles from Milwaukee, was the city of Chicago, with a population of 1,698,575. Between these lay the less important cities of Waukegan, Kenosha, and Racine, with a total population of 50,134, and numerous smaller towns. In this territory nearly eighteen per cent. of the population were engaged in manufacturing, employing during the year ending June 1, 1900, a capital of \$696,217,768 and turning out manufactured products valued at \$1,079,185,631. Although this territory contained but three per cent of the total population of the United States, and less than seven hundredths of one per cent of its area, it employed seven per cent of the total capital engaged in manufacturing in the United States and produced eight per cent of the total value of our manufactured output. It is to this territory that I have applied the term "Chicago and Vicinity," and to seek from

its history the answer to the questions *how* and *why* it became so great a manufacturing center is the purpose of this dissertation.

This purpose cannot be accomplished by a study of events within the territory alone. The growth of any manufacturing center is dependent in a large degree upon the development of regions that furnish raw materials for its manufacture, and provide a market for its products. These regions may be distinct and separate, or they may be one and the same. Broadly speaking, the agricultural territory in the United States westward and southwestward from Lake Michigan, together with the coal and iron fields of Pennsylvania, Ohio, Indiana, Minnesota, and Northern Michigan, and the timbered regions of Michigan, Wisconsin, and the states south of the Ohio River, have become the territory from which Chicago and Vicinity obtains the raw materials for its manufactures; while the whole United States and much of the civilized world have become its marketplace. Thus, the development of Chicago and Vicinity has been so interwoven with, and so dependent upon, the development of its surrounding territory that no adequate conception of the one can be obtained without a somewhat comprehensive study of the other. In other words, it will be necessary to examine the resources and trace the development of this tributary territory, in so far as they effect the growth of manufactures in Chicago and Vicinity, as to examine the actual development of those manufactures themselves. And, as the development of the tributary territory has, in a measure, necessarily preceded the growth of manufactures in the center, the consideration of the tributary territory will naturally be made first.

The scope of this dissertation will be limited to the years preceding 1880. Although Chicago and Vicinity has made its most rapid progress and has achieved the greater part of its reputation as a manufacturing center since that date, the period prior to 1880 contains not only the beginnings but the primary causes, we believe, of all subsequent development.

CHAPTER I.

CHICAGO AND VICINITY PRIOR TO 1830.

Among the things essential to the development of a large manufacturing center are contiguity of raw materials, or cheap means of transporting them from the source of supply to the factories; extensive water power, or cheap fuel for the generation of steam or electricity; cheap, rapid, and reliable means for distributing the manufactured products among the consumers; a requisite supply of effective labor; a climate favorable to the health and vigorous, uninterrupted employment of the laborer; and abundant capital available for investment in manufacturing.

Some of these requisites, such as contiguity of raw materials, water power, fuel, natural means of transportation, and favorable climate, not being dependent primarily upon the settlement of the tributary territory, may be considered with reference to Chicago and Vicinity prior to 1830.

Reference to a map of the United States will indicate the location of this region with respect to its natural resources, means of transportation and markets. To the east lies a continuous waterway 1800 miles long through the Great Lakes and the St. Lawrence River to the Atlantic Ocean, or through the Great Lakes and the Erie Canal, 1,665 miles, to New York and the Atlantic. To the north is Lake Superior, affording water transportation for a wide region whose resources will be discussed later. To the south and west stretches one vast plain, nine hundred miles to the Gulf of Mexico and nearly one thousand miles to the Rocky Mountains, in which flow ten thousand miles of water navigable to steamboats.¹

But Chicago and Vicinity is also fortunately located with reference to timber, coal, clay, stone, lead and iron. Before the pioneer's axe laid waste her forests, the present state of Michigan contained 38,000 square miles of woodland, which was sixty-seven per cent of the entire area of the state.² The upper peninsula and the northern half of the lower peninsula were covered originally with heavy forests of conifers, consisting mainly of white pine. Southward in the lower peninsula various hard-woods were found. The pine belt was

¹Hunt's Merch. Mag., Vol. VIII, p. 327.

²12th U. S. Census, Vol. IX, p. 842.

practically embraced in the country lying north of a line drawn from the head of Lake St. Clair on the east to South Haven on the west.³ In 1880 the stand of white pine in Michigan was officially estimated at thirty-five billion feet.⁴ The St. Joseph, Grand, Muskegon, and other rivers, with Lake Michigan, afforded easy and cheap transportation for the lumber from these forests to Chicago and Vicinity. The northern portion of the territory now comprised in the states of Wisconsin and Minnesota was likewise covered with white pine. It is estimated that Wisconsin contained 31,750 square miles of woodland, comprising fifty-eight per cent of the area of the state; and Minnesota, 52,200 square miles, comprising sixty-six per cent of the area of the state.⁵ The southern portion of the timber belt in Wisconsin contained much hard-wood. Only the timbered area in Wisconsin near the shore of Lake Michigan was tributary to Chicago and Vicinity prior to the building of railroads. But the supply in Michigan was ample for many years. The importance of this easy access to lumber will be made evident in our later discussion of the actual development of the lake shore⁶ and its tributary territory.

Since the application of steam power in manufacturing has become so universal, the importance of an abundant and cheap supply of coal for fuel is fully apparent. Chicago and Vicinity has direct connection by water with the great anthracite coal fields of Pennsylvania. It is only about three hundred sixty miles, on the average, from the coal fields of Ohio, one hundred twenty to one hundred forty miles from the coal fields of Indiana, and only sixty miles from the inexhaustible fields of Illinois.⁷ The Illinois coal field embraces about two-thirds of Illinois and parts of Kentucky and Indiana. It is computed to contain about sixty-two thousand square miles and the combined thickness of all the workable seams is about eighteen feet.⁸ This Illinois coal is of the bituminous variety and contains from forty-eight to sixty-two per cent of fixed carbon,⁹ making it a very usable coal for all ordinary fuel purposes.

Brick clay and building stone in abundance are in easy reach of

³Industrial Chicago, III, p. 28.

⁴12th U. S. Census, Vol. IX, p. 842.

⁵12th U. S. Census, Vol. IX, p. 842.

⁶By "lake shore" here we mean the region which we have chosen to call Chicago and Vicinity. This term will be frequently used in the future pages.

⁷Chicago Board of Trade Report, 1875. App., pp. 221-230.

⁸Lake Side Monthly, Vol. III, p. 198.

⁹"Memorial of Chicago to the Government of U. S. for a Foundry and Armory," Nov. 1, 1861, p. 17 et seq.

the lake shore. In fact, Milwaukee has become known as "The Cream City" from the large use of cream colored brick made in its vicinity,¹⁰ and the greatest lime-stone quarries in the United States are to be found at Joliet,¹¹ forty miles southwest of Chicago.

Another natural resource which has contributed much, though rather indirectly, to the building up of Chicago and Vicinity is the lead deposits in the Upper Mississippi lead region. This lead region occupies an extensive area in the three states of Wisconsin, Illinois, and Iowa, in the vicinity of Galena, Illinois. The whole area over which lead has been raised, in sufficient quantity to be worthy of notice, is about 4,000 square miles, of which nearly two-thirds is in Wisconsin and the other third about equally divided between Illinois and Iowa.¹²

On the southern shore of Lake Superior, only one hundred and fifty miles north of the manufacturing center whose development we propose to study, lie the famous Lake Superior copper and iron fields. It is sufficient at this point to say that these have become the greatest iron producing and the second greatest copper producing fields in the United States.¹³

From the foregoing pages it will readily be seen that Chicago and Vicinity is very favorably situated with reference to many of the chief natural resources or raw materials which are indispensable in the building up of great manufacturing industries; that it is, indeed, the natural meeting point of all these materials—a fact which, ultimately at least, must have a very large influence upon its history. But in the actual development of the lake shore during the period of which this chapter is to treat, other elements were more potent. In fact, by the year 1830, actual manufacturing (in Chicago and Vicinity) had scarcely begun. Yet a proper appreciation of the events prior to 1830 is indispensable to a correct understanding of the development of manufacturing in this district after 1830. Every new country must attain a certain degree of development, must have a considerable population which has solved the more pressing problem of obtaining an adequate food supply, before any portion of it can engage extensively in manufacturing. It is the history of this primitive development, so important in its effects upon the later

¹⁰Barton: "Industrial History of Milwaukee," p. 5 et seq.

¹¹New International Encyclopedia, Vol. X, p. 475.

¹²Geological Survey of Illinois, Vol. I, pp. 155-157.

¹³U. S. Census, 1900, Vol. on Mines and Quarries, pp. 403, 482.

growth of manufacturing, that confronts us in our study of the lake shore and its tributary territory prior to 1830. To this we now turn.

From the close of the fifteenth century, when Columbus dispelled men's fears of ocean navigation, to the middle of the nineteenth century, when the steam railway proved its practicability, water afforded commerce its chief highway, and land was its chief barrier. The truth and significance of this may be seen in the early location of cities in the United States. Largely dependent upon the rivers for means of travel, early immigration may be traced, in general, by the river courses. Along these routes of travel, at portages between the streams or at points convenient for reaching the interior, the trading-post and town grew up. From these as centers, population spread over the surrounding land and reacted upon the trading-posts, frequently building them into thriving cities of trade. Such is the explanation of the American sea-board cities, such is the explanation of St. Louis, Cincinnati, Pittsburgh, and Detroit, and such is the explanation of Chicago and Vicinity's settlement and growth.

Recent development in means of travel makes it difficult now to realize how hampered were American emigrants in their movement from east to west during the closing decades of the eighteenth and the opening decades of the nineteenth centuries. For means of conveyance they knew only the pack-train, the wagon, the river craft, and the deep-sea sailing ship. Travel by pack-train or wagon was slow, expensive, and difficult. West of the Appalachian Mountains there were no roads in this "untouched wilderness" and savages haunted the way. The sea route was indirect and long. But the rivers marked a route for the immigrant and offered to carry his craft loaded with his family and goods. Thus the rivers became to him of great importance.¹⁴

From the far east the population moved westward along four main lines: (1) Through Central New York following the valley of the Mohawk River; (2) across southern Pennsylvania, western Maryland, and northern Virginia, parallel to and along the course of the Upper Potomac River; (3) southward through the valleys of Virginia and through the mountain gaps into Tennessee and Ken-

¹⁴House Ex. Doc., 50th Congress, 1st Session, No. 6, Part II, p. 190.

tucky; (4) around the southern end of the mountains through Georgia and Alabama.¹⁵

It is evident that the movements of population by the last two of these routes could affect the settlement of Chicago and Vicinity's tributary territory but little except by peopling Tennessee and Kentucky, from where new waves of migration might move northward and cross the Ohio.

The first of these four main routes led in the direction of the Great Lakes. It is important for our study of Chicago and Vicinity to notice that this was not early a popular route. Some of the main causes of the early discovery and exploration of the region of the Upper Lakes actually hindered its further development. For instance, the roving disposition of the French, together with the wealth of the lake region in fur-bearing animals, brought discovery, exploration, and a feeble colonial life, but little else. Up to the close of the Revolutionary war the English held Niagara, Detroit, and Michilimackinac, and their garrisons would have turned back adventurous immigrants.¹⁶ Until the introduction of the steamboat on the Lakes in 1818, men were not so ready to embark upon the lakes as upon a river, such as the Ohio, where sheltering banks were near and where a current furnished motive power for the transportation of the settler's goods.

Another reason for the slow march of the immigrant by the northern route is found in the fact that Western New York and Northern Maine and Vermont remained sparsely inhabited long after Maryland and Southern Pennsylvania were fully settled and emigrants were moving past these regions to the Upper Ohio.¹⁷ The sparsely settled sections in Maine, Vermont, and New York, still afforded cheap land for the emigrant nearer home. As late as 1796, so poor were the direct routes of travel through Western New York that the surveyors of the Connecticut Land Company preferred to reach Lake Erie by way of the Wood Creek portage, Lake Ontario, and the Niagara portage.¹⁸

The second, or Ohio River, route was far more accessible. In

¹⁵Hinsdale: *The Old Northwest*, p. 282; 10th Census of U. S., Vol. XIII. Turner: *Rise of the New West*, pp. 80-82.

¹⁶The American flag was raised over Detroit for the first time July 11, 1796 (Cooley, Michigan, p. 118). Terms of Jay's Treaty 1796 brought surrender of all British posts.

¹⁷Hinsdale: *Old Northwest*, p. 329; also Roosevelt: *Winning of the West*, III, p. 47.

¹⁸Hinsdale: *Old Northwest*, page 282.

the French and Indian war two practicable roads were built which crossed the mountains and connected the Atlantic Coast with the Upper Ohio,—one, the Braddock road, cut through the Upper Potomac in 1755, with its eastern terminus at Alexandria; the other the Forbes Road, from Philadelphia to Pittsburgh by way of Lancaster and Bedford, was built in 1758.¹⁹ These roads, together with the Allegheny River and the Catskill turnpike, spread out like so many arms to gather all the travel from Eastern and Southern New York, Pennsylvania, Maryland, and Northern Virginia and concentrate it at the head waters of the Ohio. Upon reaching that point the emigrant usually placed his belongings upon a flat-boat, or later upon a steamboat, and floated down the river to the point nearest his destination.

The reasons for the popularity of this route may be found in the comparatively numerous and easily traveled roads that were early opened from the populous sections in the East to the Ohio, the length of that water highway whose friendly current bore the settler onward with such facility toward his future home, the mildness of its climate when compared with the northern route, the superior fertility of the soil of Southern when compared with Northern Ohio,²⁰ and the fact that its course lay in the direction of the islands of population that had been formed in the Kentucky and Tennessee region during the last half of the eighteenth century by emigrants from Southern Virginia and the Carolinas. The effect of this popularity of the Ohio River route may be seen in the three accompanying maps illustrating the distribution of population in the United States west of Pennsylvania and north of Tennessee in the years 1810, 1820, and 1830.²¹

By 1810 population had spread down the Ohio River covering the eastern and southern halves of the state of Ohio, joining Pennsylvania with Kentucky by a wide band of territory varying in density of population from two to eighteen per square mile. The same movement had extended farther along the Ohio to its junction with the Mississippi and up that river to the mouth of the Missouri, where was gathered a population of from six to eighteen per square mile. At the same time and to the same density, emigrants had

¹⁹Hinsdale: *Old Northwest*, p. 282.

²⁰Hunt's *Merch. Mag.*, Vol. IX, p. 36 et seq. Thwaites: *Early Western Travels*, Vol. IX, p. 82 et seq.

²¹Statistical Atlas, 12th U. S. Census, plates 4, 5, 6.

pushed their way up the Wabash River beyond its junction with the White. At the western extremity of Lake Erie was a small area with a population of from two to six per square mile. Small islands of populations of from two to six inhabitants per square mile were to be found at Saginaw, Sault Ste. Marie, Green Bay, and Prairie du Chien, where a few white settlers had gathered around the Indian trading posts. The remainder of the Old Northwest still remained in the possession of the Indian tribes and a scattered white population of less than two to the square mile.

By 1820 population had pushed farther up the tributaries of the Ohio. The southern belt across the state of Ohio had increased in density of population until it contained from eighteen to forty-five per square mile, while a considerable area had appeared in the southwestern corner of the state surrounding the city of Cincinnati and having a population of from forty-five to ninety per square mile. Thus early had Cincinnati, a stern rival of the future Chicago, gained for herself a densely populated tributary territory and become the "Queen City of the West." The entire Lake Erie shore had now been settled with a population exceeding two to the square mile. Only the northwest corner of the state, containing perhaps one-sixth of its area, remained unsettled or having a population of less than two per square mile. During the period from 1810 to 1820 Ohio had increased in population twelve-fold.²² The southern portions of Indiana and Illinois had been settled with sufficient population to enable them to be admitted into the Union as States in 1816 and 1818 respectively. The wave of immigration had pushed up the Missouri River to the center of the present state of Missouri and north along the Mississippi from the mouth of the Missouri River to the Fabius River. Little change had come to the remainder of the "Old Northwest." Outside of the Indian trading-posts already conspicuous in 1810, the remainder of the territory contained a white population of less than two persons to the square mile and remained in the possession of the various Indian tribes.

The map indicating the distribution of population in 1830 shows that the progress of emigration to the West was still down the Ohio River, then up its tributaries, or from the Mississippi up its tributaries, approaching the western shore of Lake Michigan from the south. By 1830 Illinois had a population of 157,447, but nearly all

²²Hinsdale: Old Northwest, page 329.

the northern third of the state was inhabited by a white population of less than two persons to the square mile. The northern fourth of Indiana had no denser population. The inhabited area in the region of Detroit had considerably enlarged and an area on the St. Joseph River near the eastern shore of Lake Michigan had acquired a population of from two to six persons per square mile. This spread of population in Southern Michigan, with the still large uninhabited area between Lake Michigan on the west and Lake Huron and Lake Erie on the east, indicated that the settlement of Chicago and Vicinity or its immediate tributary territory could not yet be expected from the East by the Lake route.

By 1830, however, the beginnings of a settlement which was destined to have a large influence upon the development of Chicago and Vicinity was visible in the northwestern corner of the state of Illinois and in the southwestern corner of what later became the state of Wisconsin. This was the Upper Mississippi, or Galena, Lead District. The Indians seem to have informed the French of the lead deposits in this region as early as 1658-'59, and Hennepin's map of 1667 has a lead mine located in the vicinity of the present city of Galena.²³ But the mines were little developed by the French or Indians, and little was done in the region by Americans until after 1820. In 1816 John Shaw claims to have taken the first boat-load of lead from Galena.²⁴ He took it to St. Louis in payment for goods that the traders of the Galena section had purchased. By 1820 St. Louis had a population of 4,928 and was then able with its stock of merchandise to meet the demands of the Galena region. The result of this growth of St. Louis was that between 1815 and 1820 the channel of the Indian trade had, in a large measure, changed from Mackinaw, where it had so long continued, to St. Louis, which was far more accessible.²⁵

The development of this Upper Mississippi Lead Region, the extent and location of which has been stated above, had such a large effect upon the future development of Chicago and Vicinity that it is worthy of our somewhat detailed study. The development of the mines was sporadic and desultory until about 1822 when Colonel James Johnson, having obtained a government license, under strong military protection from the Indians, began

²³Thwaites: Notes on Early Lead Mining, Wis. Hist. Coll., XIII, p. 272.

²⁴Wis. Hist. Coll., Vol. II, p. 229.

²⁵Ibid.

operations with a large force of laborers and good tools. About two years previously the Indians had discovered very valuable leads near Galena, one nugget alone being so large as to require the efforts of their entire band to raise it. "At once there flocked thither a horde of squatters and prospectors from Missouri, Kentucky, and Tennessee; while many came from Southern Illinois."²⁶ In 1826 the excitement relative to the Lead Mine country considerably increased, and in 1827 it is said to have been intense, "equaling almost anything pertaining to the California gold fever. People from almost all portions of the Union inconsiderately rushed to the mining region."²⁷ The population of the lead region increased from two hundred in 1825 to ten thousand in 1828, and the amount of lead produced during the same period increased nearly thirty-fold.²⁸

Although the lead region drew to itself a large population during the decade, the surrounding country remained very sparsely settled. A traveler of 1821 reports that, during a trip made by canoe from Green Bay via the Fox and Wisconsin rivers to St. Louis, he saw but seven white men outside the forts.²⁹ He returned by way of the Illinois River, and from its mouth to Ft. Clarke, where Peoria now is, he saw but one house and had great difficulty in securing provisions of any kind.³⁰ In 1822, when Galena consisted of two log cabins, Springfield, the present capital of Illinois contained but four or five houses.³¹ In 1828 Ebenezer Brigham settled at Blue Mounds, some twenty-four miles west of the present capital of Wisconsin, and the most advanced outpost in the mines. "The nearest settler was at what is now Dodgeville, about twenty-four miles distant. On the southeast the nearest house was on the O'Plaine [Des Plaines] River, twelve miles west of Chicago. On the east, Solomon Juneau was his nearest neighbor, at the mouth of the Milwaukee River; and on the northeast Green Bay was the nearest settlement."³² So sparsely settled was the region east of

²⁶Wis. Hist. Coll., Vol. XIII, p. 290.

²⁷Wis. Hist. Coll., Vol. II, p. 328.

²⁸Wis. Hist. Coll., Vol. XI, p. 400.

Estimated population:	1825.....200;	1826.....1,000
	1827.....4,000;	1828.....10,000
Amount lead produced:	1825.....	439,473 pounds
	1826.....	1,500,636 pounds
	1827.....	6,824,389 pounds
	1828.....	12,957,100 pounds

²⁹Wis. Hist. Coll., Vol. IV, p. 162.

³⁰Ibid.

³¹Wis. Hist. Coll., Vol. I, p. 94 et seq.

³²Wis. Hist. Coll., Vol. I, p. 94, et seq.

the Mississippi and north of Alton that in 1827 the United States government sent its agent all the way from Green Bay to St. Louis to buy cattle to provide beef for the garrison at Green Bay. In the neighborhood of Carrollton, Illinois, after six weeks of effort, he succeeded in purchasing two hundred sixty-two head which he drove across the country to Green Bay, killing four upon the way for food.³³

In 1830 the northern half of Illinois had a population of 33,852, against 122,732 in the southern half.³⁴ Within the present limits of the state of Wisconsin there was a white population of about 3,433.³⁵ Of this number, 474 were members of the garrisons at Fort Howard and Fort Winnebago, and four companies were stationed at Fort Crawford in 1827. Thus, in 1830 the regular inhabitants of what is now Wisconsin were something less than 3,000. 1,587 of these were in the lead district in the southwest corner of the territory, and the remaining population was, in the main, gathered about the forts.³⁶ From the sparseness of the populations in northern Illinois and in all of what is now Wisconsin, and from the fact that large portions of the district were still occupied by the Pottawatomie, Sac and Fox, and the Winnebago and Menomonee Indians, as indicated upon the map for the year 1830, it is evident that the produce of this region, aside from lead and furs, was very small. Its influence upon Chicago and Vicinity, either in furnishing materials for exports or demand for imports, could not have been large.

We are now ready to inquire more directly into the development of Chicago and Vicinity itself prior to the year 1830. We have already seen something of the disadvantages of emigration by way of the northern Lake route. We have seen how population rapidly extended westward down the Ohio, northward along its tributaries, up the Mississippi and its branches, and, from the southwest and west, was now approaching the western shore of Lake Michigan. It must not be thought that there was no emigration moving westward along the Lake route, nor that it all was absorbed by the unsettled areas in Western New York, Northern Ohio, or Eastern

³³Wis. Hist. Coll., Vol. IV, p. 168 et seq.

³⁴Hunt's Merch. Mag., Vol. IX, p. 36.

³⁵Exec. Docs., 22nd Cong., 1st Sess., Vol. VI, No. 263; Wis. Hist. Coll., XIII, p. 469.

For Brown Co., I have taken figures of last reference. I have omitted the entire population for Michilimackinaw Co., since the portion in the present limits of Wis. was scarcely inhabited in 1830.

³⁶Wis. Hist. Coll., Vol. XI, p. 362, note.

Michigan. By the beginning of the eighteenth century, missionary zeal and the importance of the fur trade had caused the establishment of stations at Detroit (founded in 1701), Sault Ste. Marie, and Michilimackinac. From these points as centers, a trade with the Indians grew up and a transient population was thus called in. During the century other points farther removed into the Indian country were established. Prominent among these were Green Bay,³⁷ at the head of the bay by that name, and Prairie du Chien³⁸ upon the Mississippi River about six miles above the mouth of the Wisconsin River. As the trade increased and extended, other posts were established from which the *voyageurs* could obtain their supplies. These in turn drew from the older and larger posts, such as Michilimackinac which remained the chief depot of supplies for all the Indian trade west of it until between 1815 and 1820, when it was superseded by St. Louis.³⁹ Such were the considerations that led also to the settlement of the lake shore district which we have called "Chicago and Vicinity."

Prior to 1830 there were but two settlements upon the lake shore—one at the present site of Milwaukee, and one at Chicago. The former may be dismissed with few words. What is believed to be the earliest mention of Milwaukee is found in *Correll's Journal* under date of August 21st, 1762, and the indications are that it was then a considerable Indian village.⁴⁰ Whether it be true or not that there was an Indian village at this point in so early a day, it is certain that the vicinity was occupied by Indian tribes.⁴¹ Being at the junction of the Milwaukee, Menomonee, and Kinnickinnic rivers and very near the shore of Lake Michigan, the location was an advantageous one from which to trade with the Indians. This was early recognized and became the lodestone which attracted the first settlers to Milwaukee. There have been several so-called "first" traders at Milwaukee,⁴² and the honor of being the first permanent white settler is in dispute.⁴³ But whoever the first permanent white

³⁷Mission at Green Bay as early as 1673. In 1680, a garrison there, . . . Strong: Hist. of Wis. Terr'y, p. 77.

³⁸Rand-McNally Atlas says Prairie du Chien was founded as military post prior to 1700. See Strong: Hist of Wis. Terr'y, p. 86. Most direct evidence favors after 1700.

³⁹Wis. Hist. Coll., Vol. II, p. 229.

⁴⁰Wis. Hist. Coll., Vol. I, p. 35 and note.

⁴¹As to what Indians first occupied this region there is considerable doubt. See Wis. Hist. Coll., Vol. I, p. 35, note.

⁴²See Wis. Hist. Coll., Vol. XI, p. 218.

⁴³Ibid.: MacCabe's Directory of Milwaukee, 1847-'48; Barton, Industrial History of Milwaukee, pp. 55 et seq.; Wis. Hist. Coll., III, p. 292.

settler may have been, it is sufficient for our purpose to know that he came in the employ of a Fur Company seeking Indian trade, and that this trade was not of sufficient magnitude to induce the settlement there of more than one family at a time prior to 1835.⁴⁴ One family, then, constituted the entire permanent white population of Milwaukee prior to 1835, and the Indian trade was the only industry.

The settlement of the valleys of the St. Lawrence and Mississippi Rivers by the French in the seventeenth century and the desire for communication between the two regions brought into prominence the various connecting water-ways having short portages, just as at a later day the desire to obtain the best communication between the English communities in the Atlantic Coast states and on the Mississippi River brought these same water routes into prominence. The principal portage routes which at one time and another supplied these needs were the following:

(1) By the Miami (Maumee) river from the west end of Lake Erie to the Wabash river, thence to the Ohio and the Mississippi.

(2) By the St. Joseph's river to the Wabash, thence to the Ohio.

(3) By the St. Joseph's and the Kankakee, and thence to the Illinois and the Mississippi.

(4) By the Chicago river to the Des Plaines, and thence to the Illinois and the Mississippi.

(5) By Green Bay and the Fox and Wisconsin rivers to the Mississippi.

(6) By the Bois Brulé river to the St. Croix, and thence to the Mississippi.⁴⁵

It was the desire for a water route between these French settlements of the St. Lawrence and Mississippi valleys that first brought the site of Chicago into notice. It lies at the mouth of the Chicago River which flowed⁴⁶ into Lake Michigan near its southwestern extremity and was separated from the Des Plaines River by a narrow portage, enabling the traveler thus to pass from the lake to the Mississippi by boat. In the wet season of the spring, it is said that no portage was necessary, but that a lake connected the head waters of the Chicago and Des Plaines rivers and the traveler could make

⁴⁴Ibid.

⁴⁵Turner, Johns Hopkins Studies, Ser. IX, p. 561.

⁴⁶January, 1900, the Chicago Drainage Canal was opened, by which the waters of the Chicago River were turned and made to flow from Lake Michigan instead of into it.

the entire distance in his boat. In dry seasons the portage varied from one and a half to nine miles.⁴⁷

Since the chief French settlements were in the valleys of the St. Lawrence and of the Lower Mississippi, it would be expected that the route by way of the Miami and Wabash rivers would be the most desirable of those named, since it is much the shortest. But this route as well as the one by the St. Joseph and the Wabash were not at first accessible, owing to the hostility of the Iroquois Indians.⁴⁸ Of the remaining routes, with the exception of that via the Bois Brulé and St. Croix rivers, there was little choice on the score of distance. But as the shores of Lake Michigan became more thoroughly settled, and as men accustomed themselves to venturing upon the expanse of the lakes in small boats, the Chicago River route grew in favor.

As early as 1671, Chicago is said to have been the site of an Indian village;⁴⁹ and during the remainder of the seventeenth century, it was often visited by French explorers and missionaries in their journeys between the Mississippi and the settlements upon the Great Lakes and the St. Lawrence.⁵⁰ The first permanent settler of Chicago other than the Indians, it is generally agreed, was a San Domingoan negro named Baptist Point De Saible, who built his cabin there as early as 1779 and made it his home for seventeen years.⁵¹ In 1796 De Saible sold his cabin to Le Mai, who in turn, in 1804, sold it to John Kinzie, who, with his family, occupied it, except for a few intervening years, until 1827.⁵² Thus the cabin of the negro, De Saible, was the beginning of a permanent Chicago. By 1804 three other settlers had established themselves at this point, drawn to it by the portage route to the Mississippi, and by the near-by Indian trade.⁵³

By the treaty of Greenville on August 3rd, 1795, among other large tracts of land, the Indians ceded "one piece of land six miles square, at the mouth of the Chicago River" and agreed to allow a free passage to the people of the United States "from the mouth of the Chicago to the commencement of the portage between that

⁴⁷Major Long, quoted in Andreas' History of Chicago, Vol. I, p. 166; S. A. Starrow, quoted in Andreas' History of Chicago, Vol. I, p. 100.

⁴⁸Turner, Johns Hopkins Studies, Ser. IX, p. 561.

⁴⁹Niles' Register, Vol. 56, p. 240.

⁵⁰Old South Leaflets, II, 46, pp. 8, 10; Andreas' Hist. of Chicago, I, pp. 33 et seq.

⁵¹Wis. Hist. Coll., III, p. 292; Andreas' Hist. of Chicago, Vol. I, pp. 70-71.

⁵²Andreas' Hist. of Chicago, Vol. I, p. 72.

⁵³Hurlbut's Chicago Antiquities, quoted in Fergus' Hist. Ser., No. 16, pp. 12, 13.

river and down the Illinois River to the Mississippi.”⁵⁴ This strengthened the preference for the Chicago route. Permanence was assured to the young settlement when, in 1803, Captain John Whistler’s Company of United States troops was ordered from Detroit to Chicago to occupy the post and build a fort. This was partially accomplished in 1803, but it is claimed by some that the fort was not built until the next year.⁵⁵ So sparsely settled was the surrounding country at that time that no horses or oxen could be found “within hundreds of miles” and the soldiers had to drag the timbers from the woods from which to build the fort.⁵⁶

The development of Chicago from this time until 1830 was very slow. At the latter date its population, outside the fort, was only seventy.⁵⁷ Much of the surrounding territory still remained in possession of the Indians, and this fact retarded the settlement of both the town and country. During the War of 1812 the Indians sympathized with the British to such an extent that the troops were ordered to abandon Fort Dearborn and withdraw to Ft. Wayne. In endeavoring to do so they were treacherously attacked by the Indians, and fifty-seven out of the party of ninety-three were killed.⁵⁸ The next day the Fort was destroyed, and it was not rebuilt until 1816. As late as 1827 there were but two families in Chicago residing outside the fort.⁵⁹ There was little commerce with the surrounding country. In addition to supplying the meager wants of the Indians, the annual yield of furs was bought and forwarded to the Eastern factories of the Company.⁶⁰ Supplies for the garrison were obtained either from St. Louis by way of the portage, or, as was more general, by schooner from the East.

But in meeting the needs of the garrison of Fort Dearborn, there arose the first industry of Chicago; namely, slaughtering. In the winter of 1826-'27 three hundred hogs were driven into Chicago from the Wabash River valley by Gurdon S. Hubbard. They were all sold to the Fort and residents of the village. The same year Archibald Clybourne erected the first slaughter house in Chicago, and commenced the sale of fresh meat to the garrison and village.

⁵⁴Andreas' Hist. of Chicago, I, p. 35.

⁵⁵Fergus' Historical Series, No. 16, pp. 12, 13; see Am. State Papers, Vol. XII, p. 175.

⁵⁶Fergus' Hist. Ser., No. 16, p. 13.

⁵⁷Edwards, Merchant's Census Report, 1871, p. 1228.

⁵⁸Mason, Chapters from III. Hist., p. 318.

⁵⁹Wis. Hist. Coll., Vol. IV, pp. 168 et seq.

⁶⁰The amount of business done by the Gov't. Factor in 1812 amounted to \$6,798.08. Andreas, I, p. 88.

About this time rude pens for hogs, the first stock-yards, were built. But the cattle, which now began to be driven in, were held in droves upon the prairies, and the villagers went there to make their purchases.⁶¹

Thus the year 1830 found the territory which we have called Chicago and Vicinity with but two settlements—Milwaukee and Chicago. Milwaukee contained but a single family engaged in the Indian trade and Chicago consisted of a small fort, whose garrison numbered ninety-five men, and a village of log houses sheltering seventy inhabitants. The slaughtering of cattle and hogs to supply fresh meat for the garrison and villagers was the only manufacturing industry, and the only other business of the place was the trade with the Indians and the furnishing of board and lodging to the passing traveler. Not even a saw mill had been erected, nor a schooner of lumber received.

The present site of Wisconsin contained but 3,433 inhabitants, and, excepting the settlements as Green Bay, Prairie du Chien, and in the lead region, it had no areas with a density of population greater than two persons per square mile. The population of Illinois numbered 157,447. It had spread north from Alton as far as Peoria, principally upon the rivers and creeks. Settlers were scattered along the Mississippi from St. Louis to Galena, and up the Illinois river to Chicago, with long intervals of wilderness between. Except in the lead district, nearly the whole northern third of the state was yet unpeopled. Few settlements had been made anywhere in the open prairies; they were confined to the margins of the timber in the vicinity of rivers and other streams.⁶²

The natural streams were still the only means in the Mississippi Valley for transporting produce any great distance, and all these ran from, rather than to, Chicago and Vicinity. From 1818 to 1830, the commerce of that region made little progress. Steamboats commenced running upon the western waters in 1816, and by the year 1830 there were only one or two small boats ascending the Illinois river as far as Peoria. Not until 1824 did a steamboat ascend the Mississippi as far as Prairie du Chien.⁶³ New Orleans was the principal market place for the Mississippi Valley. It was only a small city and did not yet have a large export trade. De-

⁶¹Griffith's Annual Live Stock and Produce Review, 1877, pp. 6, 7.

⁶²Ford, History of Illinois, p. 102.

⁶³Wis. Hist. Coll., Vol. II, p. 152.

mand being local, the market was poor and generally glutted. Western commerce was not yet systematized. A farmer often took his own produce on a flat-boat to New Orleans and frequently returned with nothing to show for his produce or his time, having lost an opportunity to grow a crop while absent.⁶⁴

By 1830, the produce which reached New Orleans from the Mississippi Valley amounted to about \$26,000,000. In 1822 three million dollars' worth of goods, it was estimated, passed the Falls of the Ohio on the way to market, representing much of the surplus of the Ohio Valley. Of this, pork amounted to one million dollars in value; flour to nine hundred thousand dollars; tobacco, six hundred thousand dollars; and whisky, five hundred thousand dollars.⁶⁵ In contrast with this, the reporter for Major Long's expedition through Chicago in 1825 says: "As a place of trade, it [Chicago] offers no inducement to the settler; for the whole amount of the trade of the lake did not exceed the cargo of five or six schooners, even at the time when the garrison received its supplies from Mackinaw."⁶⁶

In 1830 Chicago and Vicinity was much more a frontier than was St. Louis and vicinity. We have seen how the stream of emigration from east to west, encountering obstacles such as the unsettled areas of Western New York, the hostility of foreign authority, and the presence of numerous and powerful Indian tribes, was either absorbed on its route, or deflected from its course until it joined the more southern tide and with it advanced chiefly by the Ohio route. We have seen it cover the immediate valleys of the Ohio and Mississippi and begin the ascent of their northern and eastern branches in a recurrent wave toward Chicago and the Great Lakes. For another score of years, from 1830 to 1850, this movement continues, being met by a constantly enlarging stream of immigration flowing by the more direct route of the Lakes. After 1850 a period begins whose chief characteristic, for Chicago and Vicinity, is no longer this eddying course of population and trade, but the establishment of routes more independent and direct. It is to a consideration of the period between 1830 and 1850 that we now turn.

⁶⁴Ford, *History of Illinois*, p. 96.

⁶⁵Turner, *Rise of the New West*, page 105.

⁶⁶Merchant's Census Report, 1871, (Edwards), p. 1221.

CHAPTER II.

THE DEVELOPMENT OF CHICAGO AND VICINITY FROM 1830 TO 1840.

The presence of strong Indian tribes in possession of the greater portion of Northern Illinois and what is now Southeastern Wisconsin did much to retard the settlement of that region until after 1830. Consequently, the lake shore had become the seat of little more than Indian trading-posts. The decade from 1830 to 1840 was destined to bring a great change, but not without a struggle. In 1831-'32 the United States government purchased all the Indian lands lying between Lake Michigan and the Mississippi, south of the Wisconsin and Fox Rivers,¹ and prepared to open all of what is now Southeastern Wisconsin to permanent settlement. In 1804 the Sac and Fox Indians had sold their possessions east of the Mississippi and retired across the Father of Waters. But Black Hawk, their chief, was dissatisfied with the bargain. In 1832 he led his braves back across the Mississippi, and the Black Hawk war ensued. The result could only be a victory for the government of the white settler, and, with the defeat of Black Hawk's band, the safety of white settlements in Northern Illinois was made more certain. Soon followed the treaty of September 26, 1833, which freed the entire region from Indians after two years.² Chicago, after a hundred years of transient French occupation, had first grown into prominence through its Indian trade, and around it the red men lingered longer in considerable numbers after the coming of the whites than around any other frontier settlement of the region. So long had they remained that civilization already fronted them north, east, south, and west. This treaty marked their last great council at Chicago. In September, 1835, the first of their parties began their march beyond the Mississippi, and the next year the last remnants took their leave.

But already a period of rapid immigration and feverish speculation had begun. The currency of the country, which consisted mainly of notes of State Banks, was abnormally expanded. The

¹Wis. Hist. Coll., Vol. IV, p. 212.

²Blanchard: *Discovery and Conquests of the Northwest*, p. 415.

Receivers at the Government Land Offices were authorized to accept much of this bank-note currency in payment for government land. The result was a great desire for land speculation, which, rife for some time in the West, reached a feverish condition in 1836 and at that time began to be felt keenly in Illinois. Under this stimulus Chicago rapidly developed from a village of a few hundred inhabitants to a city of several thousands. Not only were its own lots sold at a rapid rate, but it became a great town market. In it were sold plats of towns laid out all over Northern Illinois, and from it were sent town plats to be sold in Eastern cities. Though the effect may have been injurious, the excitement, while it lasted, proved a great source of advertisement. The very danger of a bursting of the bubble caused the speculators to make heroic and, in a measure, successful efforts to induce rapid permanent settlement with a hope of averting the catastrophe through the development of the country's really wonderful resources.³ Chicago rose from a village of seventy people in 1830⁴ to a city of 4,170 inhabitants on July 1, 1837.⁵ Between 1830 and 1840 the Northern half of Illinois increased in population from 33,852 to 232,222, or 586 per cent.⁶

This speculation in land became very active also in the present state of Wisconsin. The lands purchased of the Indians lying south and east of the Wisconsin and Fox Rivers were surveyed and offered for sale in 1834 and 1835. The total sales of the Government lands in Wisconsin prior to December 31, 1836, amounted to 878,014 acres, of which as much as 600,000 acres were probably sold to speculators.⁷

The Specie Circular, issued by order of President Andrew Jackson, July 11, 1836, which provided that only gold or silver should be received in payment for public lands after the fifteenth of the following December, very soon put an end to a large part of the speculation in the public lands. It was followed by the Panic of 1837 and a period of retrenchment.

In what is now Wisconsin this land speculation was confined chiefly to the southwestern portion of the state, in the vicinity of

³Ford, *History of Illinois*, pp. 181, 182; Fergus, *Historical Ser.*, No. IX, "Chicago in 1836," pp. 37, 38.

⁴Edwards' *Merchant's Census Report*, 1871, p. 1228.

⁵*Railroads, History, and Commerce of Chicago*, 1854, p. 36.

⁶*Hunt's Merchant's Mag.*, Vol. IX, pp. 36 et seq.

⁷Strong, *History of Wisconsin Territory*, p. 217.

the lead region. The result was that the great mass of immigrants really seeking permanent homes turned to the vicinity of the lake shore and settled upon lands that were not offered for sale until 1839, but upon which the pre-emption laws of 1830-1834 encouraged settlement.⁸ The importance of this fact for the development of the lake shore is apparent. In 1830 almost one-half of what is now the state of Wisconsin was included in Brown County, which contained a population of 1,154, of whom 474 were members of the garrisons of Forts Howard and Winnebago.⁹ In 1836 this same territory, then composing the counties of Brown and Milwaukee, contained a population of 5,599, which in 1840 had increased to about 17,000.¹⁰

Beyond furnishing a destination for some thousands of immigrants who now flocked to Chicago, Milwaukee, and other points on the lake shore in search of homes or fortunes in land speculation, this region between Lake Michigan and the Mississippi could contribute little yet to the upbuilding of Chicago and Vicinity. River navigation was still almost the only means for transporting the products of the western country. Its efficiency had been greatly increased by the successful introduction of steamboats on thousands of miles of the Mississippi and its branches. By 1824 steamboats began running upon the Upper Mississippi as far as Fort Snelling,¹¹ and by 1830 upon the Illinois as far as Peoria, and sometimes further.¹² The significance of the introduction of steam upon the western waters may easily be seen in the following figures. Before the introduction of the steamboat the flat-boat was the principal means used in river freight-carrying. It was allowed to float down the stream with the force of the current, but when the course must necessarily be up stream, the brawn of the flat-boat men furnished the only propelling power. By this method in 1810 it took one hundred and twenty days to ascend the Mississippi from New Orleans to St. Louis. In 1828 a steamboat made the same trip in nine days and four hours.¹³ With such improvement in river navi-

⁸Strong, History of Wisconsin Terr'y, pp. 218-219.

⁹Wis. Hist. Coll., XIII, pp. 468-9. In 1818 Gov. Cass of Michigan Terr'y issued a proclamation dividing the territory west of Lake Michigan and south of Michillmackinac co. into two Counties, to be separated by the meridian running through the middle of the portage between the Fox and Wisconsin Rivers, the portion lying east was to be Brown County.

¹⁰Impossible to say with exactness, owing to change in County boundaries.

¹¹Wis. Hist. Coll., Vol. II, p. 152.

¹²Ford, History of Illinois, p. 96.

¹³Hunt's Merch. Mag., Vol. XLVIII, p. 277.

gation and little or no increased facilities in land transportation, it is not strange that commerce continued to seek the river courses, and that cities not upon the great rivers developed slowly.

In 1835, it is asserted, "nearly the whole trade of Illinois, Wisconsin, and of the Upper Mississippi, was concentrated at St. Louis. The little pork, beef, wheat, flour, and such other articles as the country afforded for export, were sent to St. Louis to be shipped. All the lead of the upper and lower lead mines was shipped from, or on account of, the merchants of St. Louis. Exchange on the East to any amount could only be purchased at St. Louis; and many of the smaller merchants all over the country went to St. Louis to purchase their assortments."¹⁴ The steamboat arrivals and departures at Galena increased from 153 in 1835 to 300 in 1840, and the amount of lead shipped by river from that place increased during the same period from 11,000,000 pounds to 22,000,000 pounds.¹⁵ Up to November 16 during the year 1842, the river shipments of lead from the Upper Mississippi amounted to 31,360,211 pounds; while, during the same period, lead shipped from the Upper Mississippi via the lakes amounted to only 1,752,000 pounds.¹⁶

Notwithstanding the fact that the Mississippi and its branches drained their valleys of nearly all their commerce, the lake shore developed rapidly during the latter part of the decade from 1830 to 1840. A glance at a map of the United States will show that no river of more than a hundred miles in length, or reaching inland more than thirty-five miles, flows into Lake Michigan from the west. At a time when river transportation was so nearly the only practicable means of carrying on commerce between points separated by more than a few miles, this fact becomes very significant in the development of Chicago and Vicinity. We have seen, also, that population followed the river valleys and that, as a result, the region immediately west of Lake Michigan was settled very tardily. In view of this fact, and that so much of its commerce with the interior must be by wagon, the progress of settlements upon the lake shore during the years from 1835 to 1840 was quite remarkable.

The beginnings of Chicago and Milwaukee have already been mentioned. Two other lake shore towns came into existence in

¹⁴Ford, History of Illinois, p. 176.

¹⁵Niles' Register, Vol. 63, p. 388.

¹⁶Ibid.

1834 and 1835. These were Racine and Kenosha, respectively. Racine is at the mouth of Root River and Kenosha is at the mouth of a small stream called Pike Creek or Pike River. Neither of these streams afford any extended communication with the interior. The locations were chosen for settlements, no doubt, because of their natural harbor facilities for lake commerce, and because of the fertility of the surrounding country. In 1840 the population of Racine and Kenosha was 337 each.¹⁷

The first white man known to have visited the spot where Kenosha now stands came with John Bullen in June, 1835, representing a number of individuals of Oswego County, New York, who had organized for the purpose of emigrating to the West.¹⁸ The first cargo to arrive at the place came on July 10, 1835, and consisted of 50,000 feet of lumber, bought in Sheboygan for Mr. Bullen.¹⁹ Kenosha saw its first manufacturing establishment in 1836, when James R. Beard began the manufacture of brick.²⁰ In the winter of 1838 it possessed the following manufacturing establishments: one blacksmith's shop, a tailor shop, a boot shop, a shop where were manufactured harness, window sash, and doors "in such proportions as his customers wanted."²¹ The region tributary to Kenosha had developed sufficiently by 1840 to produce a surplus of wheat, and in that year Kenosha shipped eight hundred bushels to the Eastern market.²² In 1843 this was increased to 71,000 bushels.²³

The land speculation of 1835 and 1836 brought a horde of speculators to Milwaukee as it did to Chicago. There were scarcely ten civilized inhabitants in Milwaukee in 1835,²⁴ but in 1836 it had become a village of four hundred people.²⁵ The purposes in the minds of these first settlers and the motives which prompted them to settle here may be seen from the minutes of their first public meeting which was held December 12, 1835. The object of the meeting was stated to be the adoption of measures for petitioning Congress for appropriations for internal improvement, etc. At an

¹⁷Hunt, Wisconsin Gazetteer, p. 183; Wis. Hist. Coll., III, p. 413.

¹⁸Wis. Hist. Coll., Vol. III, p. 396.

¹⁹Ibid., p. 400.

²⁰Wis. Hist. Coll., Vol. III, p. 399.

²¹Ibid., p. 408.

²²Ibid., p. 413.

²³Ibid., p. 416.

²⁴Milwaukee Daily Sentinel, April 18, 1845.

²⁵Fergus, Hist. Ser., No. IX, p. 48.

Milwaukee Directory of 1848-'49 gives population in 1836 as 1,206. I think this a mistake, since it gives the population for 1838 as only 700.

adjourned meeting on December 19th petitions for the passage of a pre-emption law; for an appropriation for constructing a canal from Milwaukee to Rock River; and another for a light-house and harbor, were reported and adopted. A committee was appointed to draft a petition to Congress for an appropriation to build a road from Chicago to Green Bay. Another committee was appointed to correspond with the settlers of the mining district on the subject of a means of communication between the two places.²⁶ Thus it is evident that the possible harbor facilities and the hope for a water communication between Milwaukee and the Mississippi were among the leading considerations which influenced the early settlement and growth of Milwaukee.

The natural advantages for a harbor at Milwaukee were among the best to be found upon the lakes. The bay in front of the city is six miles from cape to cape and three miles broad. The Milwaukee and Menomonee rivers unite about one-half mile from where the former flows into Lake Michigan, near which it is joined by a smaller river, the Kinnickinnic. The petition for a lighthouse and harbor improvement referred to above was answered by Congress on July 4, 1836, with an appropriation of four hundred dollars "for the survey of the mouth of Milwaukee river, to determine the practicability of making a harbor by deepening the channel."²⁷ And March 3, 1837, \$5,000 was appropriated to build a lighthouse at the mouth of the Milwaukee River.²⁸ No other assistance from Congress was secured until 1843.

But in spite of no harbor facilities and in spite of the financial crisis of 1837 and 1838, in the five years from 1835 to 1840 Milwaukee increased in population from not more than ten to 1,751.²⁹ This was due to a number of reasons. The surrounding land was fertile and, being free from the wave of speculation which swept over the southwestern portion of the territory in 1835 and 1836, attracted settlers at a very rapid rate.

The Milwaukee land district included the present counties of Kenosha, Racine, Milwaukee, Ozaukee, Washington, Waukesha, Jefferson, Walworth, Rock, and small portions of Green, Dane, Columbia, and Dodge. It is estimated that in March, 1836, this whole

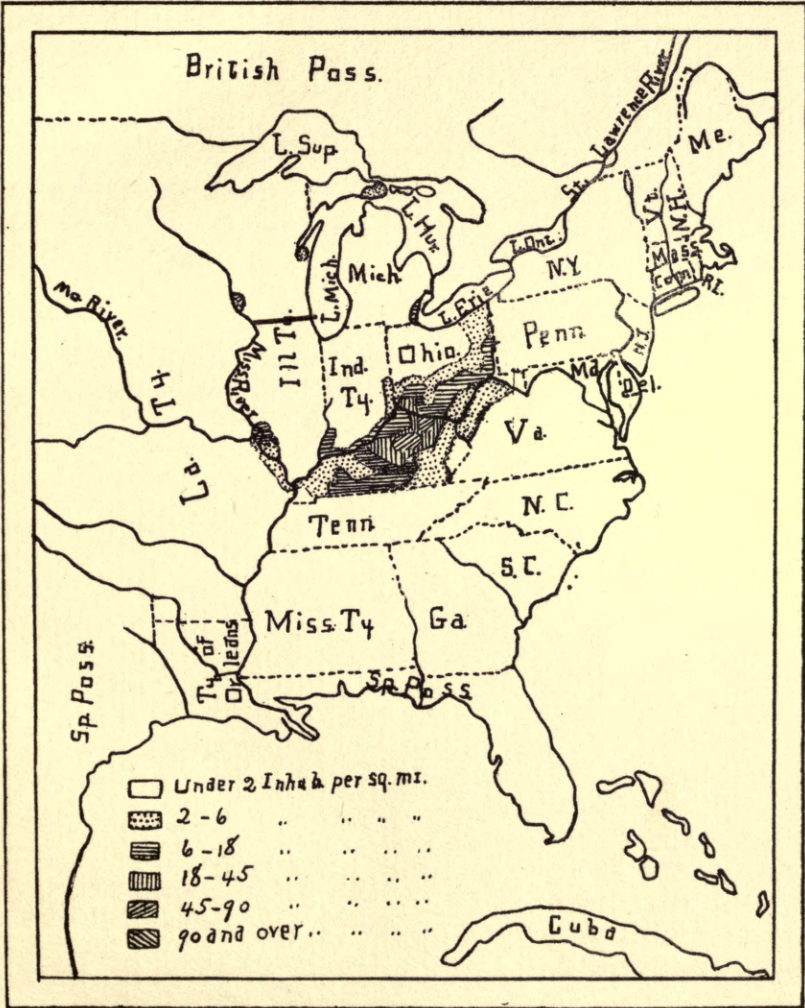
²⁶Strong, *Hist. of Wis. Terr'y*, p. 106.

²⁷Strong, *Hist. of Wis. Terr'y*, p. 385.

²⁸*Ibid.*, p. 240.

²⁹Directory of Milwaukee, 1847-'48, p. 61.

DISTRIBUTION OF POPULATION IN THE OHIO AND UPPER MISSISSIPPI VALLEYS IN 1810.



district did not contain a population of five hundred. By the census of August, 1836, its population was nearly three thousand, and by March 1st, 1837, the population is estimated to have been about six thousand.³⁰ The land sales for this district were held at Milwaukee in February and March, 1839, and averaged \$25,000 a day for at least the first week, purchases being made only by actual settlers.³¹ The speedy effect of this rapid settlement of the territory directly tributary to the lake shore settlements may be seen in the development of the Milwaukee wheat market. The first load of wheat ever brought to Milwaukee came in the year 1839 and sold for fifty cents a bushel.³² In 1845 this territory poured into Milwaukee not only enough wheat to supply her needs but to enable her to export 95,500 bushels. The next year this figure was increased to 213,448 bushels.³³

Another element, which undoubtedly contributed to the early development of the city, was the prospect for a canal soon to connect the Milwaukee and Rock rivers, thus furnishing navigable water communication between Lake Michigan, at Milwaukee, and the Mississippi. We have seen that this project was favorably acted upon in the first public meeting for public purposes ever held in the village of Milwaukee. It remained to be seen whether capitalists, or the government of the Territory or of the Nation, could be induced to look upon it likewise with favor. This was accomplished. Engineers reported favorably upon the project in 1837; in 1836 and 1837 petitions signed by numerous inhabitants of the Territory were presented to the Territorial legislature; and on January 5, 1838, a bill incorporating the Milwaukee and Rock River Canal Company became a law.³⁴ Books of subscription were opened at Milwaukee under the direction of the Commissioners on the second day of February, 1838, and a sufficient amount of stock was immediately subscribed—at least \$50,000. In June, 1838, Congress showed its faith in the project by appropriating to the construction of the Canal “all the land in those sections which are numbered with *odd* numbers within the breadth of five full sections taken in north and south, or east and west tiers on each side of the main route of said canal

³⁰Strong, Hist. of Wis. Terr'y, p. 240.

³¹Strong, Hist. of Wis. Terr'y, page 298.

³²Industrial Hist. of Milwaukee, p. 51.

³³MacCabe's Directory, 1847-'48.

³⁴Strong, Hist. of Wis. Terr'y, p. 597.

from one end thereof to the other."³⁵ Although this proposed canal, like so many others of the period, was never completed; and although little work was done upon its construction until 1842, there can be little doubt that the above-noted progress towards the carrying out of the project had a strong influence, during these years, in building up Milwaukee and the country along the proposed route. In after years it had a more tangible influence upon the development of manufactures in Milwaukee, and will be considered later.

Of all the places with which we are concerned on the western shore of Lake Michigan, the one occupying the site least promising for a city, judged from the nature of the immediate location, is Chicago. As factors in its development, its immediate situation was nothing, its relative position was everything. Though the shortcomings of its immediate location were always apparent and could not escape notice, its advantages in relative position were not always seen. This is aptly illustrated in the following quotation from the report of Major Long's expedition in 1825 to examine the sources of the St. Peter's River: "The village [Chicago] presents no cheering prospects, as, notwithstanding its antiquity, it consists of but few huts, inhabited by a miserable set of men, scarcely equal to the Indians from whom they are descended. Their log or bark houses are low, filthy and disgusting, displaying not the least trace of comfort. . . . As a place of trade, it offers no inducement to the settler; for the whole amount of the trade of the lake did not exceed the cargo of five or six schooners, even at the time when the garrison received its supplies from Mackinaw. It is not impossible that at some distant day, when the banks of the Illinois shall have been covered with a dense population, and when the low prairies, which extend between that river and Fort Wayne, shall have acquired a population proportionate to the produce which they can yield, Chicago may become one of the points in the direct line of communication between the northern lakes and the Mississippi. But even the intercourse which will be carried on through this communication will, we think, at all times, be a limited one; the dangers attending the navigation of the lake, and the scarcity of

³⁵Strong, *Hist. of Wis. Terr'y*, p. 602.

harbors along the shore, must ever prove a serious obstacle to the increase of the commercial importance of Chicago."³⁶

There was no harbor at Chicago. The Chicago River, including the North and South Branches, which united about three-fourths of a mile from the lake shore, was about sixteen miles in length. Its banks were low, its waters were shallow and its current was sluggish. In fact, it was little more than a bayou. Sand-bars closed its mouth to all vessels of lake-trafficking size. The lake shore was so low that a strong east wind flooded the land for some distance back. A large part of the present business section was a veritable swamp. It was nine miles from the mouth of the river to the higher ground inland. In the spring of the year the Des Plaines River frequently overflowed its banks and flooded a large portion of this nine-mile tract.³⁷ The site of the city and the surrounding country was so level and low that drainage by the power of gravitation was impossible. Nor could this be remedied until in 1860, with enormous labor and expense, the grade of nearly the entire city was raised by seven to ten feet.³⁸

The reasons for the early development of Chicago must be found rather in its position relative to the surrounding country. We have already pointed out that it was a desirable location at which to engage in the Indian trade, and that this reason for its early settlement was strengthened by the establishment of Fort Dearborn in 1803. We have also shown that it was at the lake end of the most feasible all-water route between the Lake and St. Lawrence settlements on the one hand and the Lower Mississippi settlements on the other. It was this latter fact that was destined to prove of chief influence in the early building of Chicago. Its possibility was early seen. Prior to 1682 Joliet wrote to his superiors in Canada affirming that the construction of a canal connecting the waters of the Des Plaines and Chicago rivers was feasible.³⁹ In 1814 a writer in *Niles' Register* sees the possibilities of the route and breaks out in the following language: "By the *Illinois* river it is probable that *Buffalo*, in *New York*, may be united with *New Orleans*, by inland navigation, through lakes *Erie*, *Huron*, and *Michi-*

³⁶Edward's Merchant's Census Report, Chicago, 1871, p. 1221. Andreas' History of Chicago, Vol I, p. 576, credits this to Prof. Wm. H. Keating, Geologist and Historiographer to Major Long.

³⁷Engineer's Report—Ex. Docs., 21st Cong., 1st Sess., No. 69, page 2; Fergus' Hist. Ser., No. IX, p. 41; Andreas' Hist. of Chicago, Vol. I, p. 577.

³⁸Charles Dudley Warner, *Studies in the South and West*, p. 178.

³⁹Andreas, *History of Chicago*, Vol. I, p. 45.

gan, and down that river into the Mississippi! What a route! How stupendous the idea! How dwindles the importance of the artificial canals of Europe, compared with *this* water communication. If it should ever take place (and it is said the opening may be easily made) the territory will become the seat of an immense commerce and a market for the commodities of all regions."⁴⁰

The project received the attention of the Legislature of Illinois in 1818 and again in 1822. February 14, 1823, a Board of Canal Commissioners were appointed, and on January 18, 1825, an act was passed to "incorporate the Illinois and Michigan Canal Company," with a capital of one million dollars, for the purpose of constructing this proposed canal. The stock, however, was not taken, and a subsequent legislature repealed the charter. March 2, 1827, the United States Congress granted to the State of Illinois every alternate section in a belt of country extending six miles on each side of the proposed canal. Owing to financial embarrassment, nothing effectual was done until January 22, 1829, when the legislature passed a law organizing a Canal Board. This Board was empowered, among other things, to locate the canal, lay out towns, to sell lots, and to apply the proceeds to the construction of the canal.⁴¹

Then began the events which were of very great importance to the development of Chicago. In 1829 the population of the place consisted of only four white families and three or four Indian traders, together with the garrison of Fort Dearborn.⁴² In 1830, pursuant to the orders of the Canal Commissioners, the town of Chicago was surveyed and platted. This was the beginning of a real Chicago; before that time the name had been applied indiscriminately to the collection of houses, or to the river, or to the surrounding country. The original town as platted covered about three-eighths of a square mile at the mouth of and along either side of the Chicago river to a point above the junction of the North and South branches.⁴³ Although work upon the Canal did not begin until 1836, canal lots in the town site of Chicago were sold in 1830 and the prospective canal began to draw inhabitants thither. In 1833 Chicago had gained a population of about 300 and secured her

⁴⁰Niles' Register (Aug. 6, 1814), Vol. VI, p. 394.

⁴¹Railroads, History, and Commerce of Chicago, 1854, p. 20.

⁴²Ibid., p. 21.

⁴³Andreas, Hist. of Chicago, Vol. I, pp. 112, 174.

first appropriation from the United States Government, amounting to \$25,000, for harbor improvements.⁴⁴ The years 1835 and 1836 brought the land speculation already mentioned. The population rose from about 300 in 1833 to 4,170 on July 1, 1837,⁴⁵ and 4,853, according to the National Census, in 1840.

During these years one of the most significant things to be noted in the development of Chicago is the increased communication between Chicago and the East by way of the Lakes. In 1831 there were only two arrivals of vessels at Chicago except the one which took the troops to Green Bay.⁴⁶ During the year 1833 there were but four arrivals of vessels with an aggregate tonnage of seven hundred tons. In 1835 there were two hundred fifty arrivals with 22,500 tons, and in 1836, prior to December 1, there were 456 arrivals with an aggregate tonnage of 57,550 tons.⁴⁷

The vital necessity for commercial connection between Chicago and the Mississippi region was early realized, as has been shown by the agitation for a canal connecting the Chicago and Des Plaines or Illinois rivers. While the construction of the canal was being delayed, this need led to other projects for its accomplishment. By 1833 Chicago had become a distributing center for a point as distant as Galena in the lead district. There were no railroads, canals, or even improved wagon roads, but the firm of Newberry and Dole were engaged in the forwarding business and conducted it by means of two large covered wagons that made continual trips between Chicago and Galena.⁴⁸ In 1836, there was formed in Chicago a transportation company whose purpose was to carry goods between Chicago and St. Louis and other Mississippi towns. A line of wagons was to be established from Chicago to the Illinois river, terminating at or near Kankakee, from which place flat-boats were to run to the head of steamboat navigation on the Illinois river, and steamboats were to complete the line to St. Louis. It was to be connected with one of the largest lines upon the Lakes and the Erie Canal. The stock of the company was taken chiefly in Ottawa and Chicago. One hundred and twenty merchants in St. Louis and

⁴⁴House Doc. No. 430, 57th Cong., 2nd Sess., (Index).

⁴⁵Fergus, Hist. Ser. No. XIX, p. 29; Railroads, History, and Commerce of Chicago, 1854, p. 36.

⁴⁶Railroads, History, and Commerce of Chicago, 1854, p. 24.

⁴⁷Niles' Register, Vol. 51, p. 274. (Quoting Chicago American).

⁴⁸Fergus, Historical Series, No. XIX, p. 27.

Alton alone entered into a contract to be supplied from the East by this route.⁴⁹

So entirely was Chicago's commerce a distribution of Eastern products among Western consumers in 1836 that, while her imports for that year amounted to \$325,203.90, her exports amounted to the insignificant sum of \$1,000.64.⁵⁰ During that very year this dependence of Chicago upon the East even for her own food supply became painfully evident. An actual scarcity of provisions prevailed, flour rose to twenty-eight dollars a barrel, and a feeling bordering upon panic set in among the inhabitants.⁵¹ The problem of Chicago, which was the problem of all points upon the western shore of Lake Michigan, was to become the distributor to the East of the products of the West, as well as a much larger distributor to the West of the products of the East. Only when it had accomplished this could it become a manufacturing center of consequence also, though the development of both commerce and manufacturing would naturally occur, in a degree, simultaneously. As rapidly as the country west of Lake Michigan and not directly tributary to the Mississippi or its navigable branches should develop sufficiently to produce a surplus, it would naturally become tributary to the settlements upon the lake shore. Whatever else of the products of the Mississippi Valley should be sent to market through the lake shore settlements would have to be won from St. Louis and New Orleans by a struggle. The development of Chicago and Vicinity between 1830 and 1840 was largely the result of the development of the territory west of Lake Michigan not easily tributary to the Mississippi and its branches; but the beginnings of the struggle for the trade of a wider territory already could be seen.

Prior to 1833, Chicago had nothing to export except furs and peltry. In that year her exportations of the products of civilized society began and the first invoice of such goods consisted of 287 barrels of beef, fourteen barrels of tallow, two barrels of bees-wax, and one hundred fifty-two dry hides.⁵² This was followed each year by a small shipment of beef and pork. In 1839 occurred the first shipment of wheat, consisting of three thousand six hundred

⁴⁹Chicago American, January 2, 1836.

⁵⁰Andreas, Hist. of Chicago, Vol. I, p. 556; Fergus, Hist. Ser. No. II, p. 67; Directory, 1839.

⁵¹Ibid., page 554.

⁵²Andreas, History of Chicago, Vol. I, p. 554.

and seventy-eight bushels, bought from farmers' wagons.⁵³ After 1839 the contribution of the surrounding country to the outgoing commerce of Chicago increased with great rapidity. In that year the total value of Chicago's exports was \$33,843.00; in 1840 it aggregated \$228,635.74.⁵⁴ Thus the territory immediately west and southwest of Lake Michigan had developed sufficiently to begin paying for its imports with its own exports, which insured to Chicago and Vicinity a stable and increasing trade.

The development of Chicago and its tributary territory and the rapidity of Chicago's growth as a distributing center for the region west of Lake Michigan are indicated also by its receipts of lumber. Prior to 1833 Chicago had been dependent for lumber upon the native woods that lined the banks of the North and South branches of the Chicago River. The supply was meager, and, for building purposes, the quality was very poor. As soon, therefore, as the town commenced to grow and surrounding country began to be settled, lumber had to be imported. David Carver was the first lumber merchant in the place. He arrived in 1833 and began the lumber business in the same year. He owned a schooner, called "The David Carver," with which he began to ply between Chicago and St. Joseph, Michigan, carrying lumber from the Michigan pineries.⁵⁵ The extent and nature of the timber supply in Michigan has already been discussed. It was but natural that Chicago's first lumber should come from there, since Michigan was settled earlier than Wisconsin and its forests were even more easily reached. The total receipts of lumber in Chicago in 1833 are estimated at only 30,000 feet. In 1843, when the first authentic records of lumber receipts begin, the amount received was 7,545,142 feet.⁵⁶ The value of all imports into Chicago in 1840 was \$562,106.20.⁵⁷

The manufacturing industries of Chicago and Vicinity prior to 1840 were very meager. Only a beginning had been made even in the simplest lines. Life in a new community being simple, its demands for any but the simplest manufactures are small and likely to be supplied for a considerable period from the factories of older communities. But the simpler manufactures, requiring less skill and capital and meeting with a much larger demand, are the first to

⁵³Ibid., Vol. I, p. 555; Fergus, Hist. Ser., No. XVIII, p. 183.

⁵⁴Fergus, Hist. Ser., No. II, p. 67.

⁵⁵Andreas, History of Chicago, Vol. I, p. 554.

⁵⁶Fergus, Hist. Ser., No. 25, p. 15; Industrial Chicago, Vol. III, p. 33.

⁵⁷Fergus, His. Ser., No. 11, p. 67.

be developed. This is well illustrated in the rise of manufactures in Chicago and Vicinity.

The demand for meat is one of the earliest and most insistent demands of any community in this latitude, the raw material from which to supply this demand is one of the first products of an agricultural community such as that in the region of Lake Michigan, and the process of preparing fresh meat is very simple. It is but natural, therefore, that slaughtering became the pioneer industry of Chicago and Vicinity. This industry began as early as 1827, when Archibald Clybourne erected a slaughter-house in Chicago and began supplying the garrison of Fort Dearborn and the few settlers with fresh meat.⁵⁸ This was the first step towards the building up of the great slaughtering and packing industry, for which Chicago is now so widely famed. The second step was taken in 1832 when George W. Dole began the packing industry. Previously, the animals had been slaughtered only as the meat was needed for immediate home consumption, but in the fall of 1832 Mr. Dole packed one hundred fifty-two head of cattle and three hundred thirty-eight hogs.⁵⁹ The beef was shipped the following spring to Oliver Newberry of Detroit, making the first invoice of home manufactures to leave Chicago for the Eastern market, as has already been noted. These hogs and cattle were driven in on foot from the Wabash River Valley, one hundred fifty miles to the south, which continued to be, perhaps, the chief source of supply for some years.⁶⁰ This industry, once begun, grew rapidly. In 1834 there were four thousand four hundred hogs and one thousand cattle slaughtered in Chicago.⁶¹ In 1836, when work was begun at Chicago upon the Illinois and Michigan Canal, Sylvester Marsh, alone, packed six thousand hogs.⁶²

Other primitive manufactures developed slowly. They were either outgrowths of the meat slaughtering industry, or arose to supply the demand for food-stuffs or for agricultural implements. The slaughtering business provided cheap raw materials for the manufacture of leather and for the making of soap and candles. The hides could have been shipped to the Eastern tanneries as they

⁵⁸Industrial Chicago, Vol. III, p. 581.

⁵⁹Andreas, Hist. of Chicago, Vol. I, p. 561.

⁶⁰Griffith's Annual Live Stock and Produce Review, 1877, p. 10; Testimony of Sylvester Marsh, Industrial Chicago, Vol. III, p. 582.

⁶¹Andreas, Hist. of Chicago, Vol. I, p. 535, note; 12th U. S. Census, Vol. IX, p. 413, gives number as 9,600.

⁶²Industrial Chicago, Vol. III, p. 582.

had been for years. But why should they be? Here in Chicago and Vicinity was an abundant supply of hides from cattle and other animals; just across the lake was an abundant supply of hemlock bark suitable to use in the tanning process, which could be obtained at low cost for cutting and shipping; and here was an abundant market for the coarsest foot-wear such as the novice in the business with little capital would find it easy to make. So, as early as 1831, Chicago and Vicinity obtained its first tannery built at Chicago by one John Miller.⁶³ In the spring of 1832 the business had so enlarged that it commanded the capital and industry of three partners. By 1840 two or three other tanneries were in operation in Chicago;⁶⁴ but I have no data as to the amount of their manufacture at that time. In 1839 Chicago had twenty-six boot and shoe makers and six harness and saddle makers.⁶⁵

The fats and other offal from the slaughtering industry furnished cheap raw materials for the manufacture of soap and candles. This fact was first taken advantage of by Messrs. Elston & Woodruff, who began the manufacture of soap and candles in the year 1833.⁶⁶ By 1839 there were two soap and candle makers operating in Chicago.⁶⁷

On the North Branch in Chicago the sub-soil at a depth of about six feet was suitable for making brick. Lumber was scarce, there being no native timber suitable for making building lumber, and the lumber trade between Chicago and the pine belt of Michigan was only beginning. In 1833 lumber retailed in Chicago as high as seventy dollars per thousand feet. This gave a stimulus to brick making and during that year Tyler K. Blodgett manufactured the first brick in Chicago.⁶⁸ In 1839 the Fergus Directory contains the names of two brick-makers.

A few saw-mills were erected in Chicago and Vicinity prior to 1840, but these were comparatively unimportant since this territory was neither heavily wooded nor well supplied with any rivers whose sources lay in the pine regions. The earliest of these saw-mills consisted of a pit dug in the ground in which one man stood. The log was laid across the pit, and the saw was operated by hand by

⁶³Andreas, History of Chicago, Vol. I, p. 565.

⁶⁴Ibid., p. 567.

⁶⁵Fergus' Directory of Chicago, 1839; Fergus' Hist. Ser., No. 2.

⁶⁶Andreas, History of Chicago, Vol. I, p. 565.

⁶⁷Ibid., p. 567.

⁶⁸Andreas, History of Chicago, Vol. I, p. 566.

the man in the pit and a man on the ground above. By 1839,⁶⁹ however, Chicago could boast of a steam saw-mill which devoted itself, as far as has been ascertained, to the native timber upon the North Branch. Prior to 1834 a saw-mill had been built also at Milwaukee.⁷⁰

We have seen that no wheat was shipped from Chicago prior to 1838 or 1839, but, before this time, enough had been raised in the tributary territory to supply the inhabitants with flour. In 1836 the first flour mill in Chicago and Vicinity was built by Jared Gage, and, by 1839, Chicago ceased to import flour and began to export it.⁷¹

The development of farming in the region between Lake Michigan and the Mississippi caused increasing and urgent demand for agricultural implements. The immigrants who came intending to pursue farming brought some implements with them. But they were soon worn out and new ones had to be either imported or manufactured. For the most part, at that time, farm machinery was simple in construction and little capital was required to engage in its manufacture. Wagons, plows, grain cradles, and threshing machines were the chief implements needed. The threshing machines used before 1840 were all imported from the factories in the East, but other implements were being turned out by workmen on the lake shore.

At that time blacksmithing and wagon-making were frequently combined in the trades of one man, and nearly all the work was accomplished by hand. Southern Michigan and Southern Wisconsin abounded in the hard woods suitable for wagon-making and they were easily and cheaply shipped across the lake.⁷² A foundry was established at Chicago in 1835 where irons could be purchased, or they could be hammered out at the blacksmith's forge. The result was a wagon maker's establishment in Chicago as early as 1834. Soon afterward, Peter Schuttler, whose name as a wagon maker is now known to millions, erected his first shop in Chicago. By 1839 no less than eleven wagon makers were established in separate shops.⁷³

In 1834 Mr. Asahel Pierce began the manufacture of plows.

⁶⁹Ibid., p. 567.

⁷⁰Wis. Hist. Soc. Proceedings, 1906, p. 200.

⁷¹Andreas, Hist. of Chicago, Vol. I, pp. 555, 564.

⁷²Andreas, Hist. of Chicago, Vol. I, p. 566.

⁷³Fergus' Directory, 1839; Fergus' Historical Series, No. II.

These, at first, were made with wooden mould-boards, but later Mr. Pierce manufactured the first steel or self-scouring plow in the West.⁷⁴

Among the other manufactories having their origin in Chicago prior to 1840 may be mentioned two fanning-mill factories, one brewery, one distillery, three sash and door factories, and one grain cradle factory.⁷⁵

Manufactures in other lake shore settlements were very meager before 1840. In that year the first brewery in Milwaukee was built.⁷⁶ By that time the whole of what is now Wisconsin had only four flouring mills turning out about nine hundred barrels of flour annually.⁷⁷ None of these were yet built on the lake shore. In 1839 Henry Mitchell, who had been a wagon-maker in Chicago since 1834, established a large wagon factory at Kenosha.⁷⁸ In 1855 he removed to Racine and established what has now become the well known wagon-making firm of Mitchell & Lewis Company. I have no data as to the extent of the business done by Mr. Mitchell at Kenosha, but it was said to be "a large factory."

Thus it is seen that by the year 1840 Chicago and Vicinity had made a beginning in manufacturing. The region which was directly tributary to it had developed sufficiently to furnish some of the raw materials required in its manufactures, and to export other products in such quantity as enabled the settlers to purchase increasing amounts of manufactures to satisfy their increasing needs. These manufactures demanded by the inhabitants of the region were, as we have seen, of the most primitive kind and were intended, in the main, either to supply the inhabitants with food, such as meat and flour, or to provide machinery with which the farmer could produce a larger amount of food materials.

The development of Chicago and Vicinity between 1830 and 1840 cannot be fully understood, however, without a study of the growth and distribution of population in its tributary territory during the decade. The accompanying maps for 1830 and 1840 will illustrate this change.⁷⁹ The distribution of population in 1830 has already

⁷⁴Andreas, *History of Chicago*, Vol. I, p. 566.

⁷⁵*Ibid.*, p. 567.

⁷⁶MacCabe's *Directory of Milwaukee*, 1847-'48, p. 67.

⁷⁷*Industrial Hist. of Milwaukee*, p. 60.

⁷⁸*Hist. of Racine and Kenosha Counties*, p. 459.

⁷⁹Both these maps are taken from the *Statistical Atlas of the United States*, 1900, U. S. Census Reports.

been described. A glance at the map, however, will show that in 1830 almost none of the territory which could be considered tributary to Chicago and Vicinity at that time, when means of travel and transportation were so primitive, was settled with a population of two inhabitants per square mile. The route of immigrants from the East was still mainly along the Ohio and Mississippi rivers and their branches. At that time much of the region surrounding Chicago and Vicinity was still owned and occupied by Indian tribes, and the Indian trade was the principal business of the inhabitants of the lake shore.

By 1840 all this was changed. The Indian lands had been purchased by the United States government, the Indians had been moved beyond the Mississippi, and much of their former lands had been thrown open to purchase by *bona fide* settlers at the low price, in general, of one dollar and twenty-five cents per acre.⁸⁰ Travel has shifted in a large degree from the circuitous Ohio River route to the more direct route of the Lakes, or the Lakes as far as Detroit and then across Southern Michigan.

By 1840, as will be seen, practically all of Indiana, Illinois, Southern Michigan and Southern Wisconsin was settled by a population ranging in density from two to ninety inhabitants per square mile. The entire shore of Lake Michigan from the St. Joseph River on the east and around the southern end of the lake to Milwaukee on the west was then occupied by a population of from six to eighteen per square mile. A strip of territory similarly settled extended almost across the northern end of Illinois from the Mississippi River eastward, and down the Illinois River to where, for some distance from its mouth, resided a population of from eighteen to forty-five per square mile. The southern third of the southern peninsula of Michigan was completely settled with a population ranging in density from two to six, in the northern portion of the settled part, to eighteen to forty-five in the neighborhood of Detroit. Southern Wisconsin was almost completely settled south of a line drawn due west across the territory to the Mississippi River, beginning a few miles north of Milwaukee. It contained a population of two to six per square mile. Instead of the most populous section being in the lead region, as in 1830, it was now, in 1840, along the shore of Lake Michigan and

⁸⁰U. S. Statutes at Large, Vol. III, Ch. 51, p. 566, Act of April 24, 1820; Donaldson, *The Public Domain*, p. 205.

directly tributary to the towns located there. It is significant, also, for our purpose, that this district of densest population is found in a purely agricultural region, which will do most for the development of the commerce and manufacturing industries of Chicago and Vicinity.

The principal settlements or towns upon the lake shore in which we are specially interested were Chicago, Kenosha, Racine and Milwaukee. In 1840 Chicago had a population of 4,470,⁸¹ Milwaukee, 1,712,⁸² and Kenosha⁸³ and Racine⁸⁴ 337 each; making a total population for the towns of the lake shore of only 6,856. At the same time St. Louis had a population of 16,469; Cincinnati 46,338; and New Orleans 102,193⁸⁵—the direct results of their more favorable positions for securing the commerce of larger, more populous, and older communities than those in the territory which was tributary to Chicago and Vicinity.

⁸¹U. S. Census, 1840.

⁸²Ibid.

⁸³Wis. Hist. Coll., Vol. III, p. 413.

⁸⁴Hunt, Wis. Gazetteer (Madison, 1853); p. 183.

⁸⁵U. S. Census, 1840.

CHAPTER III.

THE DEVELOPMENT OF CHICAGO AND VICINITY FROM 1840 TO 1850.

The accompanying map exhibits the distribution of population in the region surrounding Chicago in 1850.¹ By that year all the territory that could easily be tributary to Chicago and Vicinity, with the then prevailing modes of travel and transportation, was well settled. The density of population had greatly increased in the territory lying directly between the lake shore and the Mississippi River. On the lake shore from Milwaukee to the northern boundary of Illinois was a population of from forty-five to ninety per square mile. Almost the entire remaining territory between Lake Michigan and the Mississippi River and south of a line drawn diagonally across Wisconsin from the head of Green Bay to the northern boundary of Iowa contained a population of from eighteen to forty-five per square mile. Nearly all of Illinois, Indiana, and the southern half of the Southern Peninsula in Michigan had a population varying in density from six to forty-five per square mile. This comprises the territory of particular importance to the development of Chicago and Vicinity between 1840 and 1850. During this period the population of Michigan increased from 212,267 to 397,654; Indiana from 685,866 to 988,416; Illinois from 476,183 to 851,470; Wisconsin from 30,747 to 305,391—a gain of 893 per cent; Iowa from 43,112 to 192,214.²

This large increase in population, especially in Wisconsin and the northern part of Illinois, could not fail to have an important effect upon the development of that territory, which was in a large degree directly tributary to the lake shore settlements; and those settlements, in turn, must be developed thereby. The character of this increase in population, however, was of much importance. Had the increase been wholly the result of births within the territory it would have added little to the wealth or labor-force of the region for several years. But, since the increase in population was so

¹Statistical Atlas of the United States, 1900, plate 8.
²U. S. Census Reports for 1840 and 1850.

largely the result of immigration from the East, it immediately added much to the capital and labor of the West.³

The physical features of Wisconsin and Northern Illinois are responsible in no small degree, also, for that region's rapid advancement. This fact, so far as it applies to Wisconsin, is well summed up in the following words: "Of all the Northwestern states, no one excelled Wisconsin, and perhaps no state equaled it, in natural advantages especially suited to a quick development. Wisconsin is bounded on the north and east by two of the largest inland lakes in the world. The western boundary is the great Mississippi. Running diagonally across the state is the valley occupied by Green Bay and the Fox and Wisconsin rivers. Situated thus between the limits of the two most important waterways in the United States, Wisconsin possessed great advantages in the way of routes of travel and means of transportation, an especially important factor in the early days. The prospects for Wisconsin in that respect were sometimes greatly magnified. It was suggested by one German writer, that we should doubtless soon see Bremen steamers in Milwaukee harbor. By means of the canal connecting the Fox and Wisconsin rivers, a limited navigation was possible from Lake Michigan through Green Bay to the Mississippi. Before railroads were built, it was declared that Wisconsin had better means of communication, and hence a better market, than many of the eastern states. The soils of the state are of a high degree of fertility and permanence."⁴ Northern Illinois is chiefly an agricultural region of very high fertility. It is bounded on the north by Wisconsin, on the east by Lake

³It is interesting to compare the increase and character of population in this region with that of an older state like Massachusetts. The increase in population in Massachusetts during the decade under consideration was 256,815, an increase of less than thirty-five per cent. Of the total population in 1850, 685,324, or nearly sixty-nine per cent, were born within the state. The increase of population in Wisconsin during the same period was 274,476, or eight hundred ninety-three per cent. Of the total population in 1850, only 54,479, or seventeen per cent, were born within the state. In Illinois the increase of population was 375,287, or nearly sixty-nine per cent. Of the total population in 1850, thirty-nine per cent, or 333,753, were born within the state. In Iowa the increase during the same period was 149,102, or nearly three hundred forty-six per cent. Of the total population in 1850, only 41,357, or twenty-one per cent, were born within the state. Thus, it will be seen that during the decade between 1840 and 1850, the territory more or less directly tributary to Chicago and vicinity experienced a much larger proportionate increase in population than did Massachusetts, and that a much larger per cent of its population was gained by immigration. These facts, as we have already shown, are of a large help in understanding the rapid material development of Chicago and vicinity and its tributary territory. (Compiled from U. S. Census Reports of 1840 and 1850).

⁴Wis. Hist. Coll., Vol. XII, p. 312.

Michigan, on the south, roughly speaking, by the Illinois river, and on the west by the Mississippi. The Illinois river is connected with Lake Michigan by a canal which was opened in 1848. Thus, on account of the fertility of its soil and its natural transportation facilities, Northern Illinois, also, was exceedingly well adapted to rapid development. This region, especially Wisconsin, was fortunate, too, in possessing an unusually healthful climate.⁵

Other inducements to immigration offered by Wisconsin are to be found in the favorable condition of its finances and the liberality of its constitutional provisions for citizenship. So circumspectly were its finances managed as a Territory that, upon being admitted into the Union, it was entirely free from indebtedness, and no large debt was contracted before the Civil War. As a result, between 1840 and 1850, its tax rate was unusually low—a fact which appealed with peculiar force to inhabitants of the frontier. On the other hand, Illinois, Michigan and Indiana had large debts resulting from their ill-advised projects for internal improvements, which made their tax rate sometimes burdensome.⁶ The Constitution of Wisconsin, adopted in 1848, was the most liberal of all the constitutions in the West in regard to the rights of foreigners. It required but one year's residence within the state for the privilege of voting, similar provision being made later in other western states.⁷ Wisconsin followed the policy, also, of disposing of its school lands at once and on terms calculated to attract immigrants.⁸ Much advertising was indulged in, especially after the appointment of a Commissioner of Immigration in 1852, who resided at New York and advertised the advantages of Wisconsin in New York and European newspapers. In 1853 nearly 30,000 pamphlets were sent out from that office, of which one-half found their way to Europe.⁹

In 1839 the first installment of Germans and Norwegians arrived at Milwaukee—the “advance guard” of the influx from Europe into Wisconsin which was to play so important a part in the upbuilding of Chicago and Vicinity's tributary territory. In that year eight hundred Germans—men, women, and children—landed at Milwaukee. Most of them settled upon farms along the Milwaukee river

⁵Ibid., p. 313.

⁶Wis. Hist. Coll., Vol. XII, p. 314; Dewey, Financial History of U. S., p. 244.

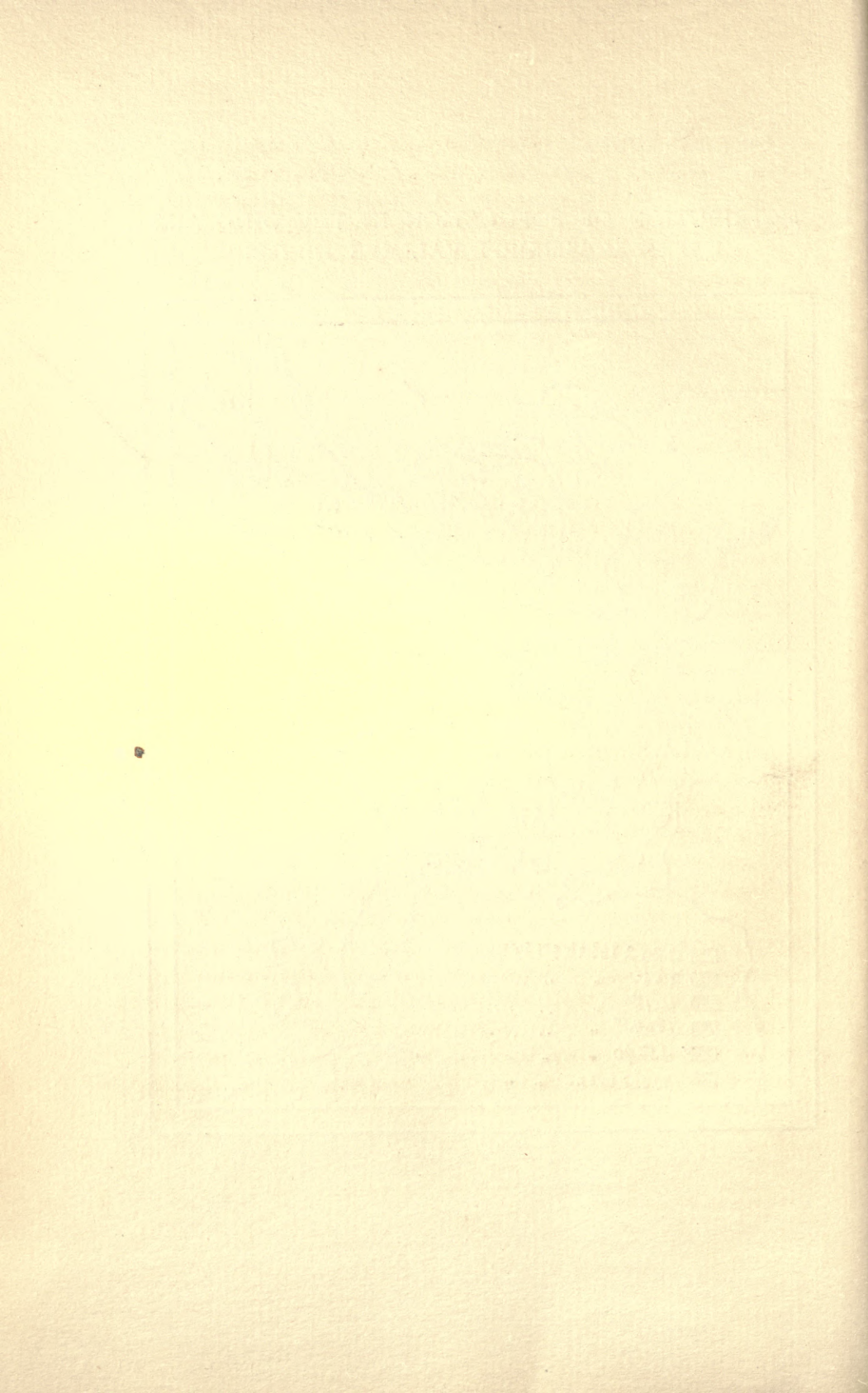
⁷Poore: The Federal and State Constitutions etc. See Constitutions of Wis., 1848; Iowa, 1846; Ill., 1848; Ind., 1816.

⁸Wis. Hist. Coll., XII, p. 321.

⁹Ibid., p. 319.

DISTRIBUTION OF POPULATION IN THE OHIO AND UPPER MISSISSIPPI VALLEYS IN 1820.





and on the division line between Milwaukee and Washington counties.¹⁰ In the language of one of the pioneers who experienced the difficulties of this early frontier life, "The effect of the arrival of these hardy sons of toil, with their gold and silver wherewith to purchase homes for themselves and their children, upon the country was electric. The circulation of this gold and silver among the people was like the distribution of the staff of life among the starving. It set their semi-stagnant blood in motion, and from that hour all doubts about the future were dissipated; confidence was again fully restored, and Milwaukee's long, dark night of financial depression was over."¹¹

The lack of proper banking facilities had greatly hindered the development of Chicago and Vicinity's tributary territory. In 1835 exchange on the East to any amount could be purchased only at St. Louis.¹² After an inglorious career, the first State Bank of Illinois, failing to get its charter renewed, had expired in 1831. In 1835 a second bank was chartered by the state. Its career proved equally or more disastrous and in 1843 the state legislature forced it into liquidation.¹³ In 1835 began the land speculation craze in Illinois and Wisconsin which proved so disastrous upon the bursting of the bubble, followed by the panic of 1837. As if this were calamity not yet dire enough in that same year the legislature of Illinois had entered upon its great scheme of internal improvements by the passage of a bill fit to meet the hopes of the wildest enthusiasts of that visionary time, but which was destined to sink the state almost to the point of repudiation and complete stagnation.¹⁴ This period of legal but disastrous banking was followed by a period of illegal, but far more successful, banking undertakings. The Illinois legislature of 1836-1837 chartered the Chicago Marine and Fire Insurance Company. It was not authorized to engage in the banking business, but, taking advantage of a clause in its charter which enabled it "to receive moneys on deposit, and to loan the same," in 1837 it began a regular banking business. It received deposits, loaned money, bought and sold exchange and coin, and its demand certificates of deposit performed the functions of a circulating medium, although they were not issued in the semblance of "bank notes." Their cir-

¹⁰Buck, *Pioneer Hist. of Milwaukee*, I, p. 265.

¹¹Buck, *Pioneer Hist. of Milwaukee*, I, p. 181.

¹²Ford, *Hist. of Ill.*, p. 176.

¹³Andreas, *Hist. of Chicago*, I, p. 526 et seq.; Ford, *Hist. of Ill.*, p. 90 et seq.

¹⁴Illinois in 1837, p. 55 et seq.

ulation was based on the confidence of the people in the solvency of the institution, rather than on any authority or power conferred on it by the state legislature.¹⁵

The chief outcome of this Chicago institution, was the Wisconsin Marine and Fire Insurance Company of Milwaukee, chartered in 1839 by the Wisconsin territorial legislature and modeled after the Chicago Marine and Fire Insurance Company. Although the banking business of the Wisconsin Marine and Fire Insurance Company was not legalized until 1853, when the Company was reorganized as a legal banking institution, its banking business had reached what for that time and locality were very large proportions. By December, 1851, its certificates of deposit, afloat as currency, amounted to \$1,470,000.¹⁶ It thus satisfied a pressing need for a circulating medium with which the growing business of Wisconsin and Northern Illinois might be transacted. For the better performance of this function, the Company formed connection with a reliable house in Chicago as a branch and opened agencies for the redemption of its bills at Galena, St. Louis, Cincinnati, and Detroit.¹⁷ The institution successfully resisted all attempts by those who were jealous of its place in the confidence of the people to discredit its currency, emerged from every run upon its deposits more firmly established in the public confidence, and in the end had redeemed every dollar of its obligations upon presentation.¹⁸ The general banking situation in Chicago and Vicinity and its tributary territory remained in this condition until after the passage of the general banking laws in Illinois in 1851 and in Wisconsin in 1853.¹⁹ While the situation was far from being all that could be desired, the stability of the Wisconsin Marine and Fire Insurance Company did much to alleviate the difficulties of the region's enlarging business.

The enormous increase in population by immigration, and the improved financial condition and banking facilities already described, could not fail to have a marked effect upon the development of Chicago and Vicinity's tributary territory, and, in turn, upon Chicago and Vicinity itself. By 1840 provisions of all kinds were much cheaper in this region than during the previous year. Potatoes from

¹⁵Andreas, *Hist. of Chicago*, I, pp. 531-2; Morris, *Hist. of First National Bank of Chicago*, p. 26 et seq.

¹⁶Andreas, *Hist. of Chicago*, I, p. 532.

¹⁷*Ibid.*, p. 533.

¹⁸*Ibid.*, p. 532.

¹⁹*Ibid.*, p. 537.

Ohio and Indiana, that cost two dollars and fifty cents per bushel by the vessel load in 1837, could now be purchased at home for fifty cents per bushel. Pork, flour, and in fact all staples in the line of breadstuffs were now cheap and plentiful.²⁰ Chicago shipped her first cargo of wheat in 1838-'39,²¹ Kenosha in 1840,²² and Milwaukee in 1841.²³

An understanding of the character and development of manufactures in Chicago and Vicinity during the years from 1840 to 1850 will be facilitated, obviously, by a fuller knowledge of the character and extent of the development of the resources of its tributary territory during those years. The principal mining industry carried on in Wisconsin and Illinois was lead mining. In 1840 there were 22,000,000 pounds of lead shipped from Galena, which was the chief place of export for the whole Upper Mississippi lead district.²⁴ In the same year Wisconsin alone produced 15,129,350 pounds, worth about \$500,000.²⁵ One in every thirty-eight of the population of Wisconsin engaged in mining, while the average proportion in the rest of the United States was 1 to 1,122. But by far the chief products of Illinois and Wisconsin were agricultural. In their farms, their live-stock, and their staple agricultural products, lay the people's wealth, and in these they made their chief progress between 1840 and 1850. The following table will show the increase in the principal articles.²⁶

Articles Compared.	Wisconsin		Illinois	
	1840	1850	1840	1850
CattleNo.	30,269	183,433	626,274	912,036
SheepNo.	3,462	124,896	395,672	894,043
HogsNo.	51,383	159,276	1,495,254	1,915,907
Woollbs.	6,777	253,963	650,007	2,150,113
Wheatbus.	212,116	4,286,131	3,335,393	9,414,575
Barleybus.	11,062	209,692	82,251	110,795
Oatsbus.	406,514	3,414,672	4,988,008	10,087,241
Ryebus.	1,965	81,253	88,197	83,364
Cornbus.	379,359	1,988,979	22,634,211	57,646,984
Haytons	30,938	275,662	164,932	601,952

²⁰Buck, Pioneer Hist. of Mil., I, p. 182-3.

²¹Andreas, Hist. of Chicago, I, p. 555.

²²Wis. Hist. Coll., III, p. 413.

²³Buck, Pioneer Hist. of Milwaukee, I, p. 200

²⁴Niles' Register, Vol. 63, p. 388.

²⁵Hunt's Merch. Mag., Vol. X, p. 552-3.

²⁶U. S. Census Reports, 1840 and 1850.

Acres Imp'd land	1,045,499	5,039,545
Value of farms	\$28,528,563	\$96,133,290

The importance of agriculture as compared with other industries in Wisconsin and Illinois in 1850 may be seen in the number of farmers in those states as compared with the number of persons employed in other industries. The number of farmers in the two states was 181,759; while the miners numbered 3,962; brewers, 269; distillers, 73; lumbermen, 1,147; cabinet and chair makers, 1,661; millers, 1,203. Other comparisons might be made, but all would show an equally large preponderance in favor of the number of farmers.²⁷

Let us now turn to a consideration of the effect of this increased immigration and enormous development of Wisconsin and Illinois upon the development of the lake shore settlements. It will be recalled that during the preceding decades the chief route of immigration into this region was by way of the Ohio and Mississippi rivers, while only a minimum number came by way of the Great Lakes and passed through the lake shore towns. During the decade from 1840 to 1850 all this was changed. It was estimated at the time that, in 1843, between 50,000 and 60,000 immigrants came to Wisconsin by way of the Great Lakes, while only 10,000 came by way of the Mississippi.²⁸ In July, 1839, a regular line of steamboats was established between Chicago and Buffalo, a boat leaving and arriving at Chicago every alternate day during the season of navigation.²⁹ The statistics of the Erie Canal for the years 1838 to 1842, inclusive, exhibit the following amounts of furniture as having passed through that thoroughfare destined for Wisconsin: in 1838 only 42 tons; in 1839, 742 tons; in 1840, 816 tons; in 1841, 1,190 tons; and in 1842, 1,985 tons—an increase of over 4,600 per cent for Wisconsin, while for Michigan, Indiana and Pennsylvania it fell off more than one-half, and for Ohio and Illinois, more than one-third.³⁰ Of course, this falling off in the amount destined for Illinois detracts by so much from the value of these statistics to prove our contention, but there is an abundant increase still to indicate a large increase of immigration into Chicago and Vicinity's tributary territory by way of the Great Lakes. In 1842, though Racine was only a village of eight hundred

²⁷U. S. Census, 1850.

²⁸Hunt's Merch. Mag., X, p. 542.

²⁹Andreas, Hist. of Chicago, I, p. 241.

³⁰Hunt's Merch. Mag., X, p. 542.

inhabitants, it is said that 3,500 immigrants landed at this place.³¹ In the year 1845, two hundred and fifty thousand acres of land were sold in the Milwaukee land office alone chiefly to actual settlers;³² while in Chicago, between 1835 and 1847, over 2,289,000 acres were sold.³³ During 1844 private expresses began to run daily between Chicago and New York.³⁴ During the decade from 1840 to 1850 the population of Milwaukee increased from 1,751 to 20,061—an increase of over one thousand per cent; Racine, from 337 to 5,107; Kenosha, from 337 to 3,455; Chicago, from 4,470 to 29,963.³⁵ The total gain in population of these four lake shore settlements was 51,691, or nearly 750 per cent.

The settlement of immigrants within easy reach of the lake shore towns began at once to affect the amount of business transacted in them and the amount of their imports and exports. In 1842 Racine exported 38,000 bushels of wheat, 5,000 bushels of oats, 800 barrels of flour, 350 barrels of pork, 100 barrels of beef, 20,000 pounds of hides, and 15 tons of lead and shot. It imported 2,423,000 feet of lumber, 850 tons of household furniture, and \$42,000 worth of farm machinery and implements. Its total imports for the year 1842 were valued at \$414,288.³⁶ The fact that all this import and export business was conducted in one year in a village of eight hundred inhabitants shows the influence of its tributary territory.

The population of Kenosha in June, 1842, was 875; but after 1842 Kenosha made rapid strides in both her business and population. Between November, 1842, and November, 1843, 165 buildings were erected; and by November 18, 1843, the population had increased to 1,820. In the fall of 1843 Kenosha exported 71,500 bushels of wheat.³⁷

The increased export of wheat and flour from Milwaukee tells the same story, and is significant of the influence of the tributary territory upon that city. In 1845 Milwaukee exported 117,948 bushels of wheat and 8,256 barrels of flour; in 1846, 213,448 bushels of wheat and 15,756 barrels of flour; in 1847, 598,011 bushels of wheat and 34,846 barrels of flour. The total value of exports in

³¹History of Racine and Kenosha Counties, p. 368.

³²Wis. Hist. Coll., XII, p. 325.

³³Fergus' Hist. Ser., No. 18, p. 186.

³⁴Fergus' Hist. Ser., No. 25, p. 56.

³⁵U. S. Census Reports for 1840 and 1850.

³⁶Hist. of Racine and Kenosha Counties, p. 368.

³⁷Wis. Hist. Coll., III, pp. 416-17.

1847 exceeded the total value of exports in 1846 by nearly one hundred per cent.³⁸ That Milwaukee had established connection with almost the extreme southwestern part of the territory in 1846 and 1847 is shown by the fact that in the former year there were exported from Milwaukee 1,770,630 pounds of lead; and in the latter year, 1,160,694 pounds.³⁹ It is evident, therefore, that even before there were either canals, plank roads, or railroads in the territory, all the region south of the Fox and Wisconsin rivers was tributary in considerable degree to the lake shore settlements.

The effect of the development of the tributary territory upon Chicago also may best be seen from its statistics of exports and imports. In 1836 the tributary territory had scarcely begun to produce anything for export. In that year the total exports of Chicago amounted to the meagre sum of \$1,000.64. By 1840 it had increased to \$228,637.74, and in 1847 it reached \$2,296,299.00.⁴⁰ The imports for the year 1836 amounted to \$325,203.90; and in 1847 to \$2,641,852.52, thereby only slightly exceeding the value of exports for that year.⁴¹ The wheat exported from Chicago increased from 586,907 bushels in 1842 to 1,974,304 bushels in 1847; and the exports of flour increased from 2,920 to 32,538 barrels.⁴² By Act of July 16, 1846, Chicago was made a port of entry within the district extending from the Indiana-Illinois state line to and including the town of Sheboygan,⁴³ and in 1850 Milwaukee was established as a separate Port. The commerce of the whole west shore of Lake Michigan was estimated in 1844 at \$100,000,000 in value.⁴⁴

During 1849 and 1850 an epidemic of cholera in a violent form swept over Chicago, greatly increasing the death rate. Nevertheless, the city continued improving and enlarging. New warehouses, as well as new business blocks, were erected. New streets were opened and built upon, and many valuable improvements were made, while the price of real estate steadily advanced.⁴⁵ The total value

³⁸Buck, *Milwaukee Under the Charter*, III, p. 93.

³⁹*Ibid.*

⁴⁰Fergus' *Hist. Ser.*, No. 18, p. 184.

⁴¹*Ibid.*

⁴²Fergus' *Hist. Ser.*, No. 18, p. 184.

⁴³Hunt's *Merch. Mag.*, Vol. XV, p. 310; *Chicago Tribune*, 1/18/1868.

⁴⁴Hunt's *Merch. Mag.*, Vol. X, p. 549. The completion of the Illinois and Michigan Canal in 1848 and the Galena & Chicago Union Railroad in 1850 from Chicago to Elgin added much to the commerce of Chicago with the interior. The effect of these will be more fully considered in the chapter upon transportation facilities, hence it will not be further discussed here.

⁴⁵Moses and Kirkland, *Hist. of Chicago*, I, p. 120.

of real estate within the city increased from \$94,437 in 1840 to \$5,685,965 in 1850—an increase of over 5,920 per cent.⁴⁶

The extent of manufacturing in Chicago and Vicinity in 1850 was still meagre. It was yet the period of beginning. The truth of this and some of the reasons for it are thus expressed in the *Chicago Press*⁴⁷: “The beginning of the manufacturing era of our city may be dated back no later [earlier] than the commencement of 1852. Prior to that time, it is true, there were several manufacturing establishments here, some of which were doing a very respectable business, but when strangers visited Chicago and asked of her sanguine citizens what was the basis of her predicted prosperity in time to come, no one thought of pointing to her manufactures as forming any part of it. The interrogator was pointed to the necessity that would ultimately call such establishments into existence—to the concentration at this point of the business of an immense area of territory, and to the fact that all the facilities requisite for profitable manufacturing on an extended scale were easily obtainable.” A year later the same press says:⁴⁸ “For several years every intelligent business man who understood her position has been ready to admit that Chicago was destined to be a great commercial city. The real extent of country whose rich, inexhaustible soil would pour millions of dollars year by year into the coffers of her merchants, rendered her commercial position and future greatness entirely certain. But when the subject of manufactures were broached serious doubts were expressed as to the success of Chicago, owing to the expense of the raw material to the producer. This was specially true when iron, the most lucrative and the most important branch of manufacture, was the subject of conversation.”

Such was the outlook for manufactures in Chicago as late as 1856, six years after the opening of Chicago's first railroad and eight years after the opening of the Illinois-Michigan Canal. The situation of the other lake shore settlements was even more unfavorable to manufacturing, since their connection with the interior by means of railroads and canals was developed more slowly.

The facilities for commerce with the East were much better developed than those with the region west of the lake shore. By 1846 daily connection was maintained by boat and coach between Chi-

⁴⁶*Ibid.*, pp. 107, 122.

⁴⁷*Chicago Daily Dem. Press*, Feb. 19, 1855.

⁴⁸*Chicago Daily Dem. Press*, Feb. 26, 1856.

cago and the western termini of the Michigan Southern Railroad at Hillsdale and the Michigan Central Railroad at Kalamazoo, Michigan.⁴⁹ The shipping list of Chicago for 1846 gives arrivals to the number of 1,394, departures to the number of 1,396, and a total tonnage of 44,745 tons.⁵⁰ Other lake shore settlements had similar connection with the East, but it was the lack of cheap and adequate transportation connection with the territory between Lake Michigan and the Mississippi river and beyond that retarded manufactures in the lake shore settlements prior to 1850. Upon this territory were they chiefly dependent for raw materials as well as for a market for a large portion of their manufactured product. How these difficulties were overcome between 1850 and 1860 will be discussed in the following chapter. Let us now consider the character and extent of manufacturing developed under these limitations.

In the earlier years of the settlement of Wisconsin and Illinois, however, even favorable transportation facilities could not have brought the highest development of manufacturing in the lake shore towns. The settlers of the interior were not yet in position to demand any large amount of manufactures. Their time and attention were wholly consumed with subduing the land and providing food and shelter for themselves and their herds. Their wants outside of these were of the simplest kind and were usually satisfied by home production.⁵¹ But after 1830 there was a marked advance in the refinements of society, especially noticeable in the northern part of Illinois as compared with the southern part. This is significant for our study because it is the northern part of Illinois and Southern Wisconsin that influence the lake shore settlements. The southern

⁴⁹Fergus' Hist. Ser., No. 25, pp. 21-22.

⁵⁰Fergus' Hist. Ser., No. 18, p. 189.

⁵¹"Before 1830, a man dressed in the costume of the territory, (which was a raccoon-skin cap, linsey hunting-shirt, buckskin breeches and moccasins, with a belt around the waist." As this society progressed, increasing refinement demanded increasing change in dress, and this called for an increasing amount of factory-made goods "By 1830 the blue linsey hunting-shirt, with red or white fringe, had given place to the cloth coat; the raccoon-skin cap, with the tall of the animal dangling down behind, had been thrown aside for hats of wool or fur. Boots and shoes had supplanted the deer-skin moccasin, and the leather breeches, strapped tight around the ankle, had disappeared before unmentionables of more modern material. The female sex had made a still greater progress in dress. The old sort of cotton or woolen frocks, spun, woven and made with their own fair hands, and striped and cross-barred with blue dye and turkey red, had given place to gowns of silk and calico. The feet, before in a state of nudity, now charmed in shoes of calf-skin or slippers of kid, and the head, formerly unbonnetted, but covered with a cotton handkerchief, now displayed the charms of the female face under many forms of bonnets of straw, silk or leghorn." (Ford, Hist. of Ill., p. 94, et seq.)

part of Illinois sustained almost no commercial relations with Chicago until the era of railroads. Northern Illinois was settled mostly by immigrants from New York and New England, while Southern Illinois was settled by immigrants from the slave-holding states, who generally were poor. Governor Ford, writing about 1847, declares that, while "the settlements in the southern part of the State are twenty, thirty, forty, and fifty years in advance on the score of age, yet they are ten years behind in point of wealth and all the appliances of a higher civilization."⁵²

Notwithstanding the increasing demand for clothing of a better quality, there was little manufacture of cloth in Chicago and Vicinity prior to 1850. A coarse cloth called linsey-woolsey was manufactured to a considerable extent in the homes throughout the territory where this and other cloths were made into clothing by the housewives, but wool continued to be one of the important exports from the port of Chicago, increasing from 1,500 pounds in 1842 to 411,088 pounds in 1847.⁵³ The manufacture of cloth has always been a comparatively immobile industry and still remains so, as is evident from its concentration to so large an extent in the New England states. Yet, in 1847, we find one woolen factory in Milwaukee,⁵⁴ attracted, doubtless, by the production of wool in Wisconsin, by the convenient water power afforded by the mile of canals constructed there, and by the large and increasing local demand for cloth. Likewise, two of the largest clothing factories in Milwaukee as late as 1880 were established prior to 1850,⁵⁵ though I have no data as to their capacity at that time. The total value of woolen goods and clothing manufactured in Milwaukee in 1849 was said to be \$137,000.⁵⁶ In Chicago, Chas. P. Kellogg and Company started the manufacture of clothing for the wholesale trade in 1850; but they were almost alone in the trade, and it was not until ten or fifteen years afterward that the industry began to assume importance as a leading industry.⁵⁷ In 1847 Chicago had twenty-five tailoring houses where custom tailoring was done.⁵⁸

Considering the agricultural character of the territory which was

⁵²Ford, *Hist. of Ill.*, p. 280, et seq.

⁵³Fergus' *Hist. Ser.*, No. 18, pp. 185, 196.

⁵⁴MacCabe's *Directory of Milwaukee, 1847-'48*, p. 68.

⁵⁵*Industrial Hist. of Milwaukee*, p. 61.

⁵⁶Buck, *Milwaukee Under the Charter*, III, p. 214.

⁵⁷*The Western Manufacturer*, Jan., 1876, p. 10.

⁵⁸Fergus' *Hist. Ser.*, No. 18, p. 183.

tributary to Chicago and Vicinity, it is but natural that the meat industry early became and remained one of the foremost industries of the lake shore towns. In 1836 there were 26,201,293 hogs in the United States. In 1846 the number was estimated to be more than 30,000,000. Russia, Austria, and Great Britain, having a population of one hundred twenty millions of people, had only as many hogs as the United States, with a population of twenty millions. "Eight western states (probably Ohio, Indiana, Illinois, Michigan, Wisconsin, Iowa, Missouri, and Kentucky) with a population of six millions, had as many swine as Great Britain, France, Prussia, and Bavaria, with seventy-five millions."⁵⁹ By reference to data given above (p. 49) it will be seen that the number of cattle in Wisconsin increased from 30,269 in 1840 to 183,433 in 1850; the number of sheep from 3,462 to 124,896; and the number of hogs, from 51,383 to 159,276. During the same years, the number of cattle in Illinois increased from 626,274 to 912,036; the number of sheep from 395,672 to 894,043; and the number of hogs, from 1,495,254 to 1,915,907. The explanation of this rapid increase in such live-stock is found chiefly in the fact that this was a great corn-growing section, as reference to page 49 will prove, also. Corn is of so great bulk in proportion to its value that it was impossible to market it at any great distance when the only means of transportation was the wagon or small boat. As the distance increased, the expense of hauling soon equaled the value of the corn. But corn was an excellent food for cattle and hogs, and they could be driven on foot to market at a much greater distance, with profit, than the grain could be hauled. Hence the raising and fattening of cattle and hogs became a very important industry in the West. In the case of cattle and sheep, especially, an additional reason for their growth was found in the wide, open prairies whose grasses were very nutritious and, for some years, practically free. These open prairies were of great aid, also, in the marketing of all live-stock, for stock could live upon them without inconvenience during long pilgrimages to market. The ease with which these drives could be made, even in the case of hogs, and the large margin in price between the East and West sometimes induced drives from the Mississippi valley even to the Atlantic sea-board towns. The following, quoted from the "Cleveland Herald" of Cleveland, Ohio, will illustrate how this

⁵⁹De Bow's Review, I, p. 476, June, 1846, quoting "Cincinnati Prices Current."

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was done as late as 1844: "Large droves of swine have been driven within the last few months from the West to the East. Several thousand have passed through this city, principally for Massachusetts. We learn that the drovers make a very profitable business of it, as they buy up store hogs in the West at from one to two cents per pound, sell in Massachusetts at from five to eight cents, and the drovers lose nothing in weight or numbers on the road, but, on the other hand, increase in both."⁶⁰ Attention has been called already to the early driving of cattle and hogs from the Wabash valley in Indiana and from southern and western Illinois to Chicago and Green Bay for slaughtering there.

But the driving of live-stock from the Mississippi Valley to the Atlantic sea-board could not long continue. With the denser peopling of the country between, the opportunity for free grazing upon the way was lost. As the expenses of this means of transporting the live-stock from West to East increased the Western producer was compelled to ship his live-stock by boat or by railroad to the eastern markets or sell it at the lake shore towns. Throughout the country much of the local demand for meat was supplied by local butchering and winter packing, such as every farmer knew how to do, but the surplus of cattle and hogs soon had to be disposed of in one of the two ways indicated above.

It is evident that the advantage lay in slaughtering in the West and shipping only the dressed meat to the East. The live-stock rapidly deteriorated on board the ship or in the railroad car; freight had to be paid upon much of what was then waste material; and live animals required an extra amount of room, attention, and food. If the animal was slaughtered in the West, the dressed meat could be packed in barrels; it would require less room, almost no attention, and no expense for food; no freight would have to be paid upon waste product, and there would be no deterioration due to the length of the journey. Another thing in favor of slaughtering in the West was the fact that to engage in the business, as at first conducted required little capital beyond the purchase price of the hogs and cattle. Of necessity, the slaughtering industry as distinguished from the packing industry, developed early, but all these causes

⁶⁰Niles' Register, Vol. 66, p. 48.

enumerated gradually built up the packing industry also in the West.

These very causes which built up packing in the West, as opposed to the East, operated likewise within the West to keep the industry from becoming concentrated in a few large centers. Owing to lack of transportation facilities, except upon the rivers, nearly every town became a packing center for its own locality. For a time only the supplying of the eastern market made concentration necessary in a few towns favorably located with reference to the supply of live-stock and river or lake transportation eastward. In fifty-two places throughout Ohio, Indiana, Illinois, and Kentucky the total number of hogs packed during the seasons of 1843-4, 1844-5, and 1845-6 was 823,400, 578,450, and 833,100, respectively.⁶¹ To indicate the extent to which the industry was scattered, I have tabulated the following data:⁶²

Place	1843-4	1844-5	1845-6
	hogs packed	hogs packed	hogs packed
Ohio			
Cincinnati	240,000	196,000	300,000
Columbus	14,000	8,000	19,000
Chillicothe	52,000	24,000	40,000
Hamilton	40,000	32,000	30,000
Dayton	20,000	1,200	8,000
Indiana			
Madison	65,000	45,000	63,000
Lafayette	25,000	15,000	15,000
Terre Haute	27,000	18,000	20,000
Illinois			
Alton	37,000	16,000	22,000
Beardstown	15,000	7,000	12,500
Springfield	16,000	3,000	2,500
St. Louis, Mo.	16,000	13,000	22,500
Louisville, Ky.	68,000	42,000	101,000

Among the fifty-two places referred to above only one, Greenville, Ohio, packed less than one thousand in 1845-6, and one, West Port, Ky., packed 17,000.

The history of the packing industry in Chicago is practically the history of that industry in all the lake shore towns, although some

⁶¹Niles' Register, Vol. 70, p. 21.

⁶²Ibid.

packing was done in each. We have already seen that the industry had an early beginning in Chicago—slaughtering commencing as early as 1827, and packing for the eastern market in 1832. The development of the industry prior to 1840 has already been discussed. The rapidly increasing supply of cattle and hogs in Wisconsin and Northern Illinois between 1840 and 1850, the increased means of transportation between Chicago and the Mississippi river and between Chicago and the eastern markets, and the increase of capital and banking facilities in the West, contributed to a rapid growth of the slaughtering and packing industry in Chicago during those years.

During the winter of 1842-3 Chicago's pioneer butcher, Archibald Clybourne, slaughtered 3,000 head of cattle, packed them in salt, and shipped them to New York early in the following spring. Other packers followed his example, for cattle could then be bought for \$1.50 or \$2.00 per hundred pounds.⁶³ Toward the close of 1844 Wadsworth, Chapin and Dyer packed a tierce of beef for the English market, which seems to be the first venture in that direction.⁶⁴ In 1845 the same firm were slaughtering one hundred head of cattle daily, a portion of the meat being packed under contract with the United States Navy Department, a portion for shipment to England, and some for the home market. During the winter of 1845-6 they killed no less than 2,000 head of cattle, brought in from Central Illinois and Northern Indiana. The price on foot was then about \$2.50 per hundred weight. The best beef was selected for shipment abroad, packed carefully in tierces and sent forward to spread the reputation of grass-fed cattle and of the Chicago packers. Meat was packed in barrels for the Eastern markets, but the same care was observed in the packing of it that obtained in the foreign trade. During the same season 11,469 hogs were packed.⁶⁵

Other men and firms prominently identified with the slaughtering and packing business between 1840 and 1850 were the following:⁶⁶ Gurdon S. Hubbard, who engaged in the slaughtering business as early as 1833 and in 1842-3 began packing cattle for the Eastern market; Dole and Marsh, who packed both for themselves and others; Sherman and Pitkin, an extensive dry-goods firm of 1842-3, who

⁶³Industrial Chicago, III, p. 584.

⁶⁴Industrial Chicago, III, p. 584.

⁶⁵Industrial Chicago, III, p. 584.

⁶⁶Fergus' Hist. Ser., No. 19, p. 47 et seq.

were attracted into the packing industry by its profits, since hogs were then selling at \$1.25 per hundred pounds out of farmers' wagons; Wm. and Norman Felt, extensive farmers near Rochester, New York, who were the first in Chicago to engage in packing for the Eastern market as a regular business; Moshier and Clapp, who also packed largely of pork for the Eastern market as early as 1844-5; and Absolom Funk, who for years kept the largest and best meat market in the city, fattening his own beef on his farms near Bloomington, Illinois.

The packing industry in Chicago increased until, during 1850, 27,500 cattle were packed and \$651,000 were paid out for cattle, salt, barrels, and labor.⁶⁷ The majority of the cattle were fattened in Illinois, McLean County bearing the palm, but a portion were brought from Indiana and Iowa.⁶⁸ About 20,000 hogs were killed in Chicago in the season of 1850-51.⁶⁹ The value of animals slaughtered and packed in Milwaukee for the year ending June 1, 1850, was \$156,500, and during the season of 1851-2 there were packed for shipment from that city 1,935 barrels of beef and 2,927 barrels of pork.⁷⁰

The evolution of methods of marketing and packing kept pace with the increase in the business done. The primitive mode of marketing by which the farmer or feeder left home and drove his cattle or hogs across the prairie soon gave place to the professional drover who made it his business to visit the farms within a certain region and buy the stock, paying for it in cash and running his own risk of selling it on the Chicago market at an advance.⁷¹ At first the cattle intended for sale in Chicago were held in droves on the prairie surrounding the city, and prospective buyers went there to make their purchases. The hogs were detained in small pens built upon the river banks. Nothing aspiring to the dignity of a livestock yard appeared in Chicago until about the year 1836, when Willard F. Myrick began the "Lake Shore Yards and Myrick tavern." Nothing but small yards in different parts of the city ap-

⁶⁷Gem of the prairie, Nov. 16, 1850. Quoted in Andeas' Hist. of Chicago, I, p. 563.

⁶⁸Ibid.

⁶⁹U. S. Census, 1900, Vol. IX, p. 414.

⁷⁰Milwaukee Directory for 1851-2, p. 12.

⁷¹Griffith's Annual Live Stock Review, 1877, p. 13.

peared until after 1850. The most famous among these were the "Bull's Head Yards," opened in 1848 and operated until 1857.⁷²

The methods of slaughtering were at first very primitive. As late as the winter of 1833-4, Sylvester Marsh slaughtered cattle for the Chicago trade by leading them out to an elm tree upon the prairie where he killed them and swung them up by tackle to the limbs of the tree.⁷³ This soon gave place to primitive slaughter houses. For some years in the history of pork packing, especially, the slaughtering was to a large extent a business distinct and separate from the curing and packing operations. The farmer or butcher did the slaughtering and the packer purchased only the dressed hogs and cured them for the Eastern or Southern markets. This was sometimes done on a flat-boat as it floated down the river to Cincinnati, Louisville, St. Louis, or New Orleans. As late as 1844 the Cincinnati packing houses seem to have been separate from the slaughtering houses and did not pack to any considerable extent "on their own account."⁷⁴ This was true to a less extent in Chicago.

Prior to 1850 there was little utilization of ice in connection with the packing industry. Thus, nearly all the packing had to be done during the winter, the packing season extending through only about four months of the year. This was the situation even as late as 1866.⁷⁵ It greatly limited the growth of the industry, since men naturally hesitated to put capital into a business which could run only one-third of the year. This short winter packing season, however, gave employment to hundreds of carpenters, masons, and bricklayers, and thousands of other laborers who found employment in lumber yards and in the building trades during the remainder of the year.⁷⁶ The meat intended for shipment to the Eastern market was salted and packed in barrels, as early as 1832, the first barrels being brought from Detroit;⁷⁷ that intended for the English market was packed in tierces as early as 1844, the tierces being made in Chicago.⁷⁸

It must not be thought, because of the development of the slaughtering and packing industry in the West and the shipment of large

⁷²Ibid., p. 14, seq.

⁷³Andreas, *Hist. of Chicago*, I, p. 561.

⁷⁴P. D. Armour, *One Hundred Years of Am. Commerce*, II, p. 383.

⁷⁵Hunt's *Merch. Mag.*, Vol. LIV, p. 383.

⁷⁶Ibid., p. 384.

⁷⁷Griffith's *Annual Review*, 1877, p. 10.

⁷⁸Griffith's *Annual Review*, 1877, p. 37.

quantities of barreled beef and pork to the East, that there was no need for the continuation of the slaughtering industry in the East, or that live cattle and hogs did not continue to be shipped from the western states to the Atlantic coast cities, there to be slaughtered and, perhaps, packed. As late as 1870 Indiana shipped most of her stock directly to Eastern markets.⁷⁹ In 1853 New York City was said to be "beyond comparison the largest cattle market in America,"⁸⁰ and in 1855 there were 168,700 beeves consumed in that city.⁸¹

The packing of meat in salt and shipping it in barrels from the West could not meet the demand in the East for fresh meats throughout the year. It could only supply the demand, which was comparatively meagre, for salted meats. Until the invention of the refrigerator car, which came into practical use in 1876,⁸² fresh meats could not be shipped any distance except in the coldest weather, and then only at the greatest risk. The result was that large shipments of live-stock from the West to the East had to continue in order to supply the demand there for fresh meats. Practical refrigeration has done much toward obviating this necessity; but this will be discussed later.

Two industries grew up in Chicago in close connection with, and in a way dependent upon, the slaughtering industry. These were the manufacture of soap, candles, and oils, and the tanning industry. Charles Cleaver practically began the former industry in the fall of 1834, and, up to 1857, took nearly all the tallow and lard from the various packing houses in the city, melted them and made them into soap, candles, lard-oil, neatsfoot oil, etc. He supplied the country west and north, and later shipped tallow and oil to New York and Montreal. He retired from business in 1857, and since then the packers have done their own rendering.⁸³ Thus, this early

⁷⁹Griffith's Annual Review, 1877, p. 37.

⁸⁰Hunt's Merch. Mag., Vol. 30, pp. 752-3.

⁸¹Of this number 103,012 were received at Allerton's Yards from the states as follows:

Ohio	31,894	Pennsylvania	900
New York	28,749	Texas	749
Illinois	17,482	Connecticut	528
Kentucky	6,651	Michigan	349
Indiana	6,605	New Jersey	325
Virginia	1,923	Wisconsin	159
Iowa	980	Canada	136

Even in 1900, ranking the states according to the value of the product of their slaughtering and packing industries, New York ranks fourth, Massachusetts seventh, Pennsylvania ninth, and New Jersey twelfth. (Chicago Daily Dem. Press, Jan. 8, 1856; U. S. Census, 1900, Vol. IX, p. 390).

⁸²U. S. Census, 1900, Vol. 9, p. 410.

⁸³Fergus' Hist. Ser. No. 19, p. 47 seq.

industry was directly dependent upon and explained by the slaughtering and packing industry. In 1846 there were in Chicago eight soap and candle factories employing sixteen men.⁸⁴ But all these factories, except that of Charles Cleaver, were of minor size or of brief existence. In 1847 Milwaukee had one soap and candle factory and in 1849 manufactured soap and candles to the value of \$37,000.⁸⁵

The slaughtering of so many cattle in the lake shore towns produced an abundant supply of hides suitable especially for the making of coarse boots and shoes such as those in chief demand at that time in the West. Hemlock bark was very suitable for the tanning of this class of leather, and of it there was abundant supply in Southern Michigan, which could be readily and cheaply imported into Chicago. With this meeting of raw materials for the manufacture of leather and a market for all the product, it was but natural that the tanning industry should early find its way to Chicago and Vicinity. We have already seen how the industry made its beginning prior to 1840. In the spring of that year, James Knox of near Worcester, Massachusetts, landed in Chicago with the purpose of starting a tannery.⁸⁶ He had previously begun in that industry at Black River, Michigan, nearer the supply of hemlock bark; but, becoming discouraged with the prospects there, he came to Chicago. Here he was encouraged by Mr. Jerome Beecher, who ran a shoe and leather store, and agreed to take all the leather Knox might tan. This tannery prospered until 1849 when Mr. Knox fell a victim to cholera. In 1842 Walter S. Gurnee purchased a cargo of unfinished leather in the state of New York, which was transported by the Erie Canal and around the Lakes to Chicago. Mr. Alonzo Dwight, a practical tanner and currier of Utica, New York, was employed to finish the leather. In 1844 the firm was established as "Gurnee and Matteson," and their tannery was called the "Red Tannery." Hides were cheap, selling at one dollar to one dollar and fifty cents each, and the local demand consumed all the leather at a good profit.⁸⁷ In 1849 a third tannery was established, known as "C. F. Grey and Company."⁸⁸ In 1851

⁸⁴Industrial Chicago, III, p. 585.

⁸⁵Buck, Milwaukee under the Charter, III, p. 214.

⁸⁶The Western Manufacturer, June 15, 1878, p. 731.

⁸⁷The Western Manufacturer, June 15, 1878, p. 731.

⁸⁸Ibid.

Chicago had five tanneries, with a capital of \$181,000, using in that year \$99,267 worth of raw material and employing 159 men; while their sales during the year amounted to \$240,000.⁸⁹ In 1845 Milwaukee had one tannery, "Trumbull and Hotchkiss," with a capacity of one thousand hides per year.⁹⁰ The number had not increased in 1847-8,⁹¹ but in 1849 Milwaukee manufactured \$120,000 worth of leather.⁹²

The tanning industry in the lake shore settlements furnishing an abundance of cheap leather, and the local demand for a large supply of coarse boots and shoes fit for rough western wear, gave rise to a large industry in the making of boots and shoes. I have not attempted to follow this industry closely. It was carried on chiefly in small isolated shops, but they were numerous enough to turn out a large product. In Milwaukee, in 1849, they manufactured boots and shoes to the value of \$95,250.⁹³ In Chicago there were twenty-five boot and shoe shops in 1846, employing ninety men.⁹⁴

Saddle and harness manufacturing arose from the same causes that built up the boot and shoe industry. In 1846, Chicago had eight saddle and harness factories, employing fifty-nine men,⁹⁵ and in 1849 Milwaukee manufactured saddles and harness to the value of \$44,000.⁹⁶

Another of the great manufacturing industries of Chicago and Vicinity which owes its existence in large measure to the agricultural resources of the territory west of Lake Michigan is the manufacturing of agricultural implements and farm wagons. Some of these made notable progress during the decade between 1840 and 1850, prominent among which is the manufacture of machinery for the harvesting of small grain. The primitive grain harvester in the West was the grain cradle. This was a kind of scythe with a sort of receiving basket for the grain attached. It was operated entirely by human force in the same manner as the ordinary scythe of today. This made the harvest laborious and slow, and greatly hindered the growing of wheat and oats. We have seen that there was one grain-cradle factory in Chicago as early as 1839. But the problem

⁸⁹Hunt's Merch. Mag., Vol. 26, p. 509.

⁹⁰Milwaukee Daily Sentinel, Jan. 25, 1845.

⁹¹MacCabe's Directory, 1847-8, pp. 68-9.

⁹²Buck, Milwaukee under the Charter, III, p. 214.

⁹³Buck, Milwaukee under the Charter, III, p. 214.

⁹⁴Industrial Chicago, III, p. 585.

⁹⁵Ibid.

⁹⁶Buck, Milwaukee under the Charter, III, p. 214.

of vital interest to the wheat-and-oats-growing region was to obtain some means of applying horse power, instead of human power, to the harvesting of these kindred grains. This problem was solved between 1830 and 1840, but its solution did not affect the West until the following decade. The history of the solution of this problem is the history of the invention and early manufacture of the McCormick reaping machine.

There had been many efforts to solve this problem of a harvesting machine which could be propelled by other than human power, but until 1831 all attempts had failed. Robert McCormick, a Virginia planter, was among those who had tried and failed; but the problem was taken up by his son Cyrus H. McCormick, and in 1831 at Steele's Tavern, Virginia, he publicly tested a reaper, made with his own hands, and demonstrated its practicability.⁹⁷ The chief features of this early invention are still the chief features of every reaping machine built today. These are: first, a fast reciprocating knife in projecting fingers, having a slow forward movement; second, a revolving reel for gathering and holding the grain until cut; third, a receiving platform upon which the grain could fall and be cared for; fourth, the whole mounted on wheels to admit of forward propulsion and the co-ordination of these parts by means of intermediate gearing. To these the modern reaper adds only a mechanical device for binding the grain in sheaves. Although the machine was praised by those witnessing its work in 1831, Mr. McCormick did not patent the reaper until the year 1834. The reaper was first manufactured in Virginia. Only one reaper was sold between 1831 and 1840, and that was subsequently taken back. The reapers did not give satisfaction until the harvest of 1842, when seven were manufactured and all did satisfactory work. Twenty-nine were sold for the harvest of 1843, and fifty for the harvest of 1844. Of these last, eight were sent from the Virginia factory to other states—one to New York, one to Wisconsin, one to Iowa, one to Missouri, one to Illinois, one to Ohio, and two to Tennessee—only four of which reached their destination in time for the harvest.

In 1845 Mr. McCormick engaged with a firm in Cincinnati for the manufacture of two hundred machines for the harvest of 1846, and with two firms in Brockport, New York, for two hundred ma-

⁹⁷For the account of this invention and early manufacture I am chiefly indebted to Andreas, *History of Chicago*, Vol. II, p. 684 et seq.

chines. One firm was to make one hundred machines for Western New York, and the other, one hundred machines for the prairie states. Both the Cincinnati and the Western New York ventures were unsuccessful. Only the manufacture of the machines for the prairie states succeeded. Indeed, twenty-three of the machines manufactured for Western New York were subsequently sold in Iowa at a profit. In 1847 the Brockport firm manufactured two hundred and twelve reapers, all of which were disposed of on orders from the prairie states. In the same year one hundred machines were sold at Chicago, and forty in Kendall County, Illinois.

Undoubtedly this successful marketing of his reapers in the prairie states and uniform failure elsewhere decided Mr. McCormick upon his next step, and in 1847 he moved to Chicago and began the manufacture of his reaper in company with Charles M. Gray. It was but natural that the manufacture of such an agricultural implement should be removed farther west than Virginia, since by far the larger part of the wheat and oats producing area lay west of that state. It was but natural that Cincinnati should be first selected as the seat of manufacture, for it was then in the midst of the chief wheat producing area, and was also in the center of the hard-wood lumber producing region.⁹⁸ But, although Cincinnati was more centrally located with reference to the hard-wood forests, there was, at the time, an abundant supply of hard-wood in Southern Michigan and Central Wisconsin, which was easily accessible from Chicago. Chicago had a decided advantage over Cincinnati as a place for manufacturing the reaper, also, because its tributary territory was principally a vast rolling prairie, far more favorable to the successful operation of the machine than the more hilly region of Ohio and Indiana.

Convenient supply of hard-wood timber, rapidly increasing production of the chief small grains in its tributary territory, favorable surface over a great area for the operation of the reaper, uniform

⁹⁸In 1840 the wheat-growing country directly tributary to Cincinnati, namely Ohio, Indiana and Kentucky, produced 25,424,188 bushels of wheat and 27,530,682 bushels of oats, while Virginia New York and Pennsylvania produced 35,609,211 bushels of wheat and 54,768,728 bushels of oats. Wisconsin, Illinois, Iowa, and Missouri then produced only 4,639,588 bushels of wheat and 7,845,854 bushels of oats. (Sixth U. S. Census Report.) By 1850 Ohio, Indiana, and Kentucky produced 22,844,631 bushels of wheat and 27,329,067 bushels of oats, a slight decrease. In the same year Wisconsin, Illinois, Missouri and Iowa produced 20,304,337 bushels of wheat and 18,212,937 bushels of oats (Seventh U. S. Census Report), a gain of nearly three hundred per cent in the production of oats.

success of the reaper in the West and failure, in the main, elsewhere, are the chief causes, then, for the location of this industry upon the lake shore. By 1850 the demand for the reaper had increased to such an extent that 1,600 were being manufactured per year.⁹⁹

Closely connected with the manufacture of the grain reaper is the manufacture of the grain thresher. The same advantages that brought the former industry to Chicago caused the latter also to be established upon the western Lake Michigan shore. In the spring of 1842 Jerome I. Case procured six threshing machines upon credit in the East and brought them to Wisconsin. The growing of wheat and oats had already become a leading industry in the West, and the use of the thresher was indispensable to its fullest development. Landing at Racine, Wisconsin, then a mere village, Mr. Case disposed of all his machines except one, and with that he proceeded through the country threshing grain and making improvements upon the machine. In the winter of 1843-4 he succeeded in making a thresher and separator combined after a model of his own invention, made by him in a kitchen of a farm-house at Rochester, Wisconsin. This is said to be the first machine used in the West which threshed and cleaned the grain at the same time. In the fall of 1844 Mr. Case began the regular manufacture of his machine at Racine in a rented shop and built a limited number. By 1849 his business had so greatly increased that he erected a three-story brick factory, and by 1879 it had become the largest factory of its kind in the world.¹⁰⁰

Before the perfection of the modern threshing machine and separator, the fanning mill was a much more necessary part of farming machinery than at present. It is still largely used, but formerly all grain had to be run through a fanning mill if it was to be more thoroughly cleaned than could be done by sifting and throwing it in the wind. It was not a complicated machine and did not require a large capital for its manufacture. The large production of wheat, especially in Wisconsin and Northern Illinois, created a large demand for the fanning mill. In Chicago and Vicinity this demand met a plentiful supply of hard-wood suitable for its manufacture. The result was an early development of this industry. We have

⁹⁹Andreas, *History of Chicago*, II, p. 684.

¹⁰⁰*Hist. of Racine and Kenosha Counties*, p. 459.

seen that in 1839 there were two fanning mill factories in Chicago. In 1844 Lucius S. Blake began making fanning mills at Racine, which has since become the greatest center for this industry in the United States.¹⁰¹ He built one hundred mills during the first year and from one hundred to three hundred each year for the next ten years. In 1849 Milwaukee produced \$25,700 worth of fanning mills and threshing machines together.¹⁰²

The flour-milling industry made rapid development upon the lake shore towns during this decade. We have seen that the industry began in Chicago as early as 1836 and that in 1839 Chicago ceased to import flour and began its export. In 1842 the "Hydraulic Mills" were built, and by 1848 they had a capacity of fifty barrels of flour per day. Water was the chief power used in the West in the manufacture of flour, but in 1847 Chicago could boast of a steam flouring mill, the Chicago Mills, whose engines consumed twelve hundred tons of coal annually. The total investment in the plant was \$150,000 and its capacity in 1854 was 25,000 barrels of flour and 600,000 pounds of meal annually.¹⁰³

In 1842 the Milwaukee river was dammed a short distance above the city as a part of the projected Milwaukee and Rock River Canal enterprise. Only one mile of the canal was ever completed. At the end of the mile the canal was turned back into the river, and thus furnished splendid opportunity for water power.¹⁰⁴ This opportunity soon bore fruit, and in 1849 there were five flouring mills in Milwaukee propelled by water, and one by steam. They contained seventeen runs of stone, each run capable of turning out from eighty to one hundred barrels of flour per day, and consuming, in all, seven thousand bushels of wheat daily.¹⁰⁵ In 1850 Milwaukee exported 100,017 barrels of flour.¹⁰⁶

Not only was the lake shore most conveniently located with reference to the wheat supply and water power, as we have seen, but Wisconsin furnished the stones as well with which the wheat could

¹⁰¹Ibid., p. 466.

¹⁰²Buck, Milwaukee under the Charter, III, p. 214.

¹⁰³Andreas, Hist. of Chicago, I, p. 564.

¹⁰⁴Industrial History of Milwaukee, pp. 22-25.

¹⁰⁵Buck, Milwaukee under the Charter, III, p. 214.

¹⁰⁶Ibid., p. 283.

be ground. These were of excellent quality, and in 1849 Milwaukee manufactured \$36,000 worth of burr millstones.¹⁰⁷

Another industry closely connected with the agricultural development of the territory tributary to the lake shore made substantial though not remarkable growth during this decade. This is the Brewing and Distilling industry. In 1840, we have seen, a bare beginning had been made. During that year the first brewery was established in Milwaukee, while there were none at Racine or Kenosha, and but one brewery and one distillery in Chicago. The brewery in Milwaukee, as has just been said, was only beginning; and the brewery and distillery in Chicago employed only eight men and a capital of \$6,000. During the year it produced 25,600 gallons of beer and 5,200 gallons of whisky.¹⁰⁸

By 1848 there were six breweries in Milwaukee,¹⁰⁹ which in 1849 produced \$71,000 worth of malt liquors.¹¹⁰ One of the breweries did distilling also. The first brewery in Racine began in 1848 with a capital of only sixty-two dollars, and the next year Kenosha could claim one brewery with a capacity of five barrels a day.¹¹¹ In Chicago less progress has been made. In 1847 there were but three breweries, and seemingly no distilleries.¹¹² I have no data as to the amount of product of the Chicago breweries in 1850, but in 1856 they employed \$67,000 in capital and their product was valued at \$130,160.¹¹³

The reasons for such progress as was made in this industry during the decade are not far to seek. The chief raw materials used in the production of beer are barley and hops. In 1850, Wisconsin alone produced 209,692 bushels of barley and 15,930 pounds of hops, an increase over 1840 of 198,630 bushels of barley, and 15,797 pounds of hops.¹¹⁴ Though Milwaukee had to import 250 bales of hops in 1850, the supply of raw materials for the manufacture of beer was easily accessible. The other requisite for building up the manufacture of beer was a sufficient demand for the product. This, too, was present. Although the demand for beer is by no means limited to the German, it is well known that it is his most popular

¹⁰⁷Buck, Milwaukee under the Charter, III, p. 214.

¹⁰⁸Sixth U. S. Census.

¹⁰⁹MacCabe's Directory of Milwaukee, 1847-48, p. 67.

¹¹⁰Buck, Milwaukee under the Charter, III, p. 214.

¹¹¹Hist. of Racine and Kenosha Counties, pp. 467, 550.

¹¹²Fergus' Hist. Ser. No. 18, p. 183; No. 25, p. 34.

¹¹³Andreas, History of Chicago, I, p. 564.

¹¹⁴U. S. Census, 1840 and 1850.

beverage. In 1850 there were 38,064 German-born persons in Wisconsin, constituting 11.3 per cent of the entire population of the state.¹¹⁵ This percentage must have been much higher in the territory immediately surrounding Milwaukee, for it was there that the Germans first began to settle, and this farming region was with them the most popular section of the state. The German population of Chicago was not so large, but that there was a large demand for the products of the brewery and the distillery is shown by the fact that in 1847 Chicago imported liquors valued at \$86,334.67.¹¹⁶ In 1850 Milwaukee imported 10,230 barrels of whisky in excess of the amount exported.¹¹⁷ Thus it is evident that the manufacture of liquors in Chicago and Vicinity had not yet equaled the demand.

Although there had been large demand for wagons in the West during the decade, that industry had scarcely been developed in Chicago and Vicinity beyond the primitive stage. In 1850 most of the wagons were still made in small, scattered shops where general blacksmithing and wagon-making were combined. There seems to have been but one large factory exclusively devoted to the building of wagons. This, as we have seen, was established at Kenosha in 1839 by Mr. Henry Mitchell, the founder of the present great Mitchell and Lewis Company of Racine. He remained in Kenosha until 1855, but I have no data as to the exact extent of his business there. It was considered by his contemporaries, however, as a "large Factory." The large incoming population, the opening of thousands of new farms, and the general development of business, already dwelt upon, made large demand for wheeled vehicles. This must have been true then even to a greater degree than now for the wagon and boat were practically the only means of travel or transportation.

As has already been shown, between 1840 and 1850 immigrants into Northern Illinois and Wisconsin came very largely by way of the Great Lakes or by wagon along the Northern route. This brought them directly to the lake shore settlements where they proceeded to purchase the implements and supplies necessary for commencing their life in the West. "Persons moving West should, *in all cases*, sell or give away their effects, and purchase here. The freight in most cases costs as much as the new article in this mar-

¹¹⁵Wis. Hist. Coll., XII, p. 300.

¹¹⁶Fergus' Hist. Ser., No. 18, p. 184.

¹¹⁷Ruck, Milwaukee under the Charter, III, pp. 282-3.

ket," was the advice given to immigrants in 1847.¹¹⁸ This may have been dictated to an extent by business interests in Chicago and Vicinity, and it is impossible to ascertain to what degree the advice was followed. It was reinforced, however, by a Chicago price-list of thirty articles most commonly needed by immigrants into an agricultural region of that time, and the prices do not seem unreasonably high. Two-horse wagons, for example, are listed at fifty to seventy-five dollars.

Though some farmers made their own wagons by sawing cross sections from large logs for the wheels, into which were fitted crude wooden axles of their own making, they could not long successfully meet the requirements of the region. Since the immigrants who came from the East to Northern Illinois and Wisconsin first landed at the lake shore towns, the demand for wagons and other articles to supply them was concentrated in these places. The hard-wood forests of Michigan and Wisconsin as well as Ohio and Indiana, supplied the necessary raw materials in the way of wood, and the irons could be obtained at the foundries already in operation upon the lake shore or could be hammered out at the blacksmith's forge. This meeting of raw materials and demand for finished wagons gradually developed a larger wagon-making industry. By 1849 Milwaukee was making \$115,000 worth of carriages and wagons annually.¹¹⁹ In 1849-50 Chicago carriage and wagon factories employed \$22,300 in capital, and in 1851 turned out \$46,700 worth of carriages alone.¹²⁰

Excepting a small furnace erected in Milwaukee in 1845, the iron industry of Chicago and Vicinity prior to 1850 was limited to a few small foundries.¹²¹ The great iron mines of Lake Superior had not yet been developed and there were not satisfactory means of communication with them.¹²² Neither had Illinois coal been successfully used in smelting. In order to operate furnaces upon the lake shore at that time it would have been necessary to bring both the iron ore and the coal for fuel from the fields of Ohio and Pennsylvania. This meant too great an expense in freight, and such furnaces could not have competed in the local market with the old

¹¹⁸Fergus' Hist. Ser., No. 25, p. 23.

¹¹⁹Buck, Milwaukee under the Charter, III, p. 214.

¹²⁰Industrial Chicago, III, p. 586; Hunts' Merch. Mag., Vol. 26, p. 509.

¹²¹Milwaukee Daily Sentinel, Jan. 25, 1845.

¹²²Mich. Geological Survey, 1, p. 21.

Mich. Pioneer Soc. Coll., XI, p. 172.

established furnaces in Ohio and Pennsylvania which had to pay but one freight—that upon the finished product.¹²³

For the establishment and operation of foundries in Chicago and Vicinity, conditions were more favorable. For these the pig iron and coal had to be brought from Ohio and Pennsylvania, in the main, although considerable Illinois coal began to be used in Chicago upon the opening of the Illinois-Michigan Canal in 1848.¹²⁴ But the chief reason for the establishment of foundries in Chicago and Vicinity lay in the fact that the local demand called for the iron in specific forms and dimensions to meet specific needs in the various manufactures already described, and these needs could best be understood and satisfied by foundries upon the ground. Hence we find several such industries springing up upon the lake shore prior to 1850. In 1848 Milwaukee could boast of four¹²⁵ foundries turning out goods in 1849 valued at \$195,000.¹²⁶ In 1850 Chicago had a capital of \$55,000¹²⁷ invested in foundries, and the next year her ten iron foundries and machine shops turned out a product valued at \$241,900.¹²⁸ Other foundries and shops upon the lake shore were engaged in the founding and working of brass, copper and tin to the value of \$147,100 a year.¹²⁹

One of the most important resources contributing to the up-building of industries, both directly and indirectly, in Chicago and Vicinity between 1840 and 1850 is yet to be dealt with. This is the lumber supply. We have already seen that Chicago and Vicinity was very favorably located with reference to the immense forests of pine and hard-woods in Michigan and Wisconsin, and that as early as 1833 Chicago began receiving lumber from the forests of Michigan, while the following year found a saw mill at Milwaukee cutting building material from the great forests of Wisconsin which skirted the site of the future village. Although for some years the settler of the interior continued to rear his cabin of logs cut from the woods of his own farm, the progressive settlements of the lake shore, springing rapidly from village to town and from town to city, soon discarded this primitive method of building and demanded in-

¹²³Chicago Tribune, Jan. 3, 1869.

¹²⁴Andreas, History of Chicago, I, p. 575.

¹²⁵MacCabe's Directory of Milwaukee, 1847-8, pp. 68, 69.

¹²⁶Buck, Milwaukee under the Charter, III, p. 214.

¹²⁷Industrial Chicago, III, p. 586.

¹²⁸Hunt's Merch. Mag., Vol. 26, p. 509.

¹²⁹Industrial Chicago, III, p. 586.

Hunt's Merch. Mag. Vol. 26, p. 509.

creasing quantities of sawed lumber. We have seen that the stock of pine lumber in Chicago in 1833 amounted to only five thousand or six thousand feet and was held at sixty to seventy dollars per thousand. By 1837 the price had fallen to eighteen or twenty dollars per thousand.¹³⁰ In 1843 Chicago imported 7,545,142 feet and in 1847, 32,118,225 feet, valued, together with the shingles, etc., imported, at \$265,332.50.¹³¹ In 1850 Milwaukee received and manufactured 30,004,336 feet of lumber and 17,004,000 shingles.¹³²

While little of this lumber was sawed in Chicago and Vicinity, its abundance and quality gave rise to many industries calculated to meet the growing demand for lumber in various finished forms. In this way planing mills, sash, door, and blind factories, box factories, cooperage establishments, furniture factories, and kindred industries sprang up. We have already noticed the development of other industries dependent in a large degree upon the lumber supply, such as the manufacture of wagons, reapers, fanning-mills, threshers, and the like. Lack of suitable transportation facilities between the lake shore and the territory west and south prior to 1850 greatly hampered the development of these industries turning out lumber products, as it had limited the growth of all other industries. Nevertheless, considerable advancement was made. From very small beginnings in 1840, in 1847 Milwaukee possessed three sash factories, one planing mill, one tub and pail factory, one saw mill, and "several" turning shops,¹³³ and in 1849 her factories turned out lumber products valued at \$296,250.¹³⁴ In 1847 Chicago possessed twelve cabinet and chair factories, fourteen coppers, four door factories, and two steam planing mills.¹³⁵ In 1851 this class of industries in Chicago employed a capital of \$148,500, gave work to 287 men, and sold a product during the year valued at over \$168,000.¹³⁶

In 1850 the factories of the five lake shore counties from Chicago to Milwaukee employed 4,733 workmen on a capital of \$2,154,065, and produced goods valued at \$5,956,074.¹³⁷ In other words, Chicago and Vicinity's manufacturing establishments employed 26.8 per cent of all the persons engaged in manufacturing in the states of

¹³⁰Fergus Hist. Ser. No. 19, pp. 39, 40.

¹³¹Ibid., No. 18, p. 185.

¹³²Buck, Milwaukee under the Charter, Vol. 111, p. 283.

¹³³MacCabe's Directory of Milwaukee, 1847-8, pp. 68, 69.

¹³⁴Buck, Milwaukee under the Charter, III, p. 214.

¹³⁵Fergus' Hist. Ser., No. 18, p. 183.

¹³⁶Hunt's Merch. Mag., Vol. 26, p. 509.

¹³⁷Sales from planing mills not given.

¹³⁸U. S. Census, 1850.

Illinois and Wisconsin, with a capitalization equal to 22.4 per cent of the total capitalization, and produced 23 per cent of the total product; while the population of these five counties was less than ten per cent of the total population of the two states, and their area was only two per cent.

In order fully to appreciate the character of the development in manufacturing in Chicago and Vicinity prior to 1850, it is important to observe that the above data apply only to goods manufactured outside of the homes. The home manufactures during the year ending June first, 1850, were valued at only \$10,131.00.¹³⁸

¹³⁸U. S. Census, 1850.

CHAPTER IV.

A CHANGE IN COMMERCIAL ROUTES.

A glance at any map of the United States will reveal at once the natural and original route of commerce in the Mississippi Valley. The Mississippi River System embraces an area of 1,238,642 square miles, or forty-one per cent of the whole area of the United States proper. Its navigable streams number forty-five and furnish more than sixteen thousand miles of river navigation—a distance more than four times the length of the ocean line from New York to Liverpool, and more than four times the distance across the continent, by rail, from New York to San Francisco.¹ Until the middle of the nineteenth century these navigable streams provided almost the only means in the Mississippi Valley for carrying on commerce between distant points. They were so numerous and so placed that they poured practically all the increasing wealth of this vast area into the laps of a few cities along their courses, such as New Orleans, St. Louis, and Cincinnati. We have seen that these streams early marked the chief routes of immigration, thereby controlling the distribution of population in the Valley. We shall now see that this early service of the rivers greatly augmented the demands upon them later to carry the immigrant's products to market.

While New Orleans and St. Louis were situated upon the main thoroughfare of these sixteen thousand miles of inland navigation, the cities upon the western shore of Lake Michigan had no water communication which reached more than thirty-five miles inland. They had sixteen hundred miles of water communication with the markets upon the Atlantic Coast, but they had no tributary territory west of them upon which to draw for supplying these markets, except to the extent that produce could be hauled in wagons, or live stock could be driven upon foot. Nor could they command a larger market for the products they might receive from the East.

The result was inevitable. As noted above, by 1830 the produce that annually reached New Orleans from the Mississippi Valley amounted to about \$26,000,000 in value. In 1822 three million dollars' worth of goods passed the Falls of the Ohio on the way to

¹House Ex. Doc. 50th Congress, 1st Session, 1887-'88, Vol. 20, No. 6, Part II, p. 5.

market, representing much of the surplus of the Ohio Valley. Of this, manufactures formed the major part. The pork shipped amounted to \$1,000,000 in value; flour, \$900,000; tobacco, \$600,000; and whisky, \$500,000.² Writing of the year 1835, Governor Ford says: "As yet, however, nearly the whole trade of Illinois, Wisconsin, and of the upper Mississippi, was concentrated at St. Louis. The little pork, beef, wheat, flour, and such other articles as the country afforded for export, were sent to St. Louis to be shipped. All the lead from the upper and lower lead mines was shipped from, or on account of, the merchants of St. Louis. Exchange on the East to any amount could only be purchased at St. Louis, and many of the smaller merchants all over the country went to St. Louis to purchase their assortments."³

Probably no other article of commerce from the Upper Mississippi Valley will better illustrate the movement of general commerce from this region than lead. By far the larger part of the lead produced in the Mississippi Valley was mined in the neighborhood of Galena, Illinois, a district in the very heart of the region from which Chicago and Vicinity later draws its chief supplies and where it later finds one of its chief markets. Although our data are not always coincident, they unmistakably lead to one conclusion; namely, that the river trade greatly exceeded the lake trade from the Upper Mississippi prior to 1850. In 1836 Galena shipped 13,000,000 pounds of lead,⁴ or about 185,714 pigs of seventy pounds each. During the same year, New Orleans received 295,644 pigs,⁵ while Chicago, practically the only settlement upon the lake shore at that time, received none, so far as the records indicate. In 1846 the Galena lead district produced 51,268,200 pounds,⁶ or 732,400 pigs of lead. In the same year New Orleans received 785,495 pigs,⁷ and St. Louis 730,829 pigs;⁸ while Chicago exported only 10,254 pounds,⁹ or less than 150 pigs, which must have been practically all that was received, since little lead was then used in the city.¹⁰ To take a more specific case, in the year 1842 the Upper Mississippi region shipped 447,903 pigs of lead by way of Galena and the rivers, and only

²Turner, *Rise of the New West*, p. 105.

³Ford, *History of Illinois*, p. 176.

⁴Niles' Register, Vol. 63, p. 388.

⁵Hunt's Merch. Mag., Vol. XVI, p. 97.

⁶History of Jo Daviess Co., Illinois, p. 273.

⁷Hunt's Merch. Mag., Vol. XVI, p. 97.

⁸Hunt's Merch. Mag., Vol. XXVI, p. 325.

⁹Fergus' Historical Series, No. 18, p. 185.

¹⁰Hunt's Merch. Mag., Vol. XXVI, pp. 437, 439.

25,000 pigs by way of the Lakes,¹¹ most of which probably went by way of Green Bay. Thus, as far as can be judged from one of the leading articles of commerce from the Upper Mississippi, it is seen that, prior to 1847, that region sent practically all its produce to market by way of the Mississippi and very little by way of Chicago and Vicinity or the Lakes.

In confirmation of this general conclusion concerning the route taken by the commerce of the Upper Mississippi, the distribution of steamboat tonnage in the United States is significant. In 1842 the total steamboat tonnage of the United States was 218,994 tons, and was distributed as follows:¹²

The Southwest.

New Orleans	80,993 tons
St. Louis	14,725 tons
Cincinnati	12,025 tons
Pittsburgh	10,107 tons
Louisville	4,618 tons
Nashville	3,810 tons
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Total,	126,278 tons

The Northwest.

Buffalo	8,212 tons
Detroit	3,296 tons
Presque Isle	2,315 tons
Oswego	1,970 tons
Cuyahoga	1,859 tons
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Total,	17,652 tons

The Atlantic Coast.

Total on the Seaboard, 76,064 tons.

Thus it is seen that more than one-half of the total steamboat tonnage in the United States was employed upon the Mississippi River and its branches, and that this tonnage was more than *seven times* that employed upon the Lakes. The speed of the steamboat which had reduced the time from New Orleans to St. Louis from one hundred twenty days in 1810 to nine days and four hours in 1828, or three days in 1860,¹³ had done much to hold commerce to

¹¹Niles' Register, Vol. 63, p. 388.

¹²Hulbert, Waterways and Westward Expansion (Cleveland, 1903), pp. 147, 148.

¹³Hunt's Merch. Mag., Vol. XLVIII, p. 277.

the river system; for, until the opening of the Illinois-Michigan Canal in 1848 and, later, the building of the railroads west from Lake Michigan, there was no more expeditious means of trade between Lake Michigan and the Upper Mississippi than hauling in wagons,

The result of all this was that in 1850 St. Louis had attained a population of 77,860, New Orleans 116,375, and Cincinnati 115,435, while the combined populations of Chicago, Kenosha, Racine and Milwaukee numbered less than 59,000. Similar comparisons may be made with similar results when considering their business, manufactures, and wealth.

Had the condition of trade in the Mississippi Valley remained unchanged, had practically all the commerce of the Upper Mississippi continued to seek its market by way of St. Louis, Cincinnati, or New Orleans, the preponderance of the river towns must have increased, and Chicago and Vicinity never could have become the great commercial and manufacturing center it now is. To some, for a time, this seemed inevitable! In 1836 Lieutenant Albert M. Lea of the United States Dragoons, whose duties took him through the West and Northwest, expressed it as his opinion that "the Mississippi is, and must continue to be the main avenue of trade for this country."¹⁴ Even as late as 1843 a writer upon "Missouri and its Resources" had this to say: "A few miles above the mouth of the Missouri, is the Illinois River, running for three hundred miles to the Northwest through the fertile state of Illinois. It is to be hoped that, in the course of a few years, a canal will unite this river with the waters of Lake Michigan; which will open the trade of the eastern part of Wisconsin, and western part of Michigan, to the markets of St. Louis. The trade of the whole of this part of the country passes by St. Louis and it is constantly increasing. Groceries of all kinds will seek this market, to be re-shipped to the North, East, and West. Instances have been known of persons purchasing cigars and coffee in St. Louis, shipping them to Peru, on the Illinois, by steamboats, and wagoning thence to Chicago; and selling them there at lower prices than those brought from New York, by a continuous water navigation. From this point is shipped nearly all the lead produced at the mines in Illinois and Wisconsin."¹⁵

On the other hand, it is said that as early as 1682 the explorer

¹⁴Atby, *Wis. Hist. Coll.*, Vol. XIII, p. 293.

¹⁵Hunt's *Merch. Mag.*, Vol. VIII, p. 543.

La Salle, in writing of the present location of Chicago, made this prophecy: "The boundless regions of the West must send their products to the East through this point. This will be the gate of empire, this the seat of commerce."¹⁶ Whether or not this prophecy were ever uttered, the condition it portrays is now an accomplished fact. But before it could be true there had to be an almost complete change in the route of commerce from the great Upper Mississippi Valley. That this change came is the most significant fact in the history of Chicago and Vicinity—significant not only for its commercial development, but for its growth in manufacturing as well. The two forms of development have been inextricably bound together. The causes of one were identical with the causes of the other, and progress in the one was closely followed by progress in the other. This commercial change, then, is worthy of our careful study. To understand it we must go back of the accomplished fact, which became evident about 1850, and seek its beginnings. It had its basis in certain difficulties in the river route which could not be overcome as easily as the difficulties in the lake route. These relative difficulties we will now consider.

(1) The ultimate market of the greater part of the surplus products of the Upper Mississippi Valley was an Atlantic Coast city of the United States or of Europe. If these products took the river route, they could not be consumed in St. Louis or New Orleans but had to be transhipped from the latter place to the East, probably to New York or Liverpool. After the completion of the Erie Canal in 1825 and the general introduction of steamboats upon the Great Lakes and the Mississippi, freight rates upon the lake route could not long remain in excess of the freight rates upon the rivers. For the first time distance became an important factor in determining the route of commerce from the Upper Mississippi Valley. Upon distance now depended not only the amount of freight charges but the time consumed in getting the returns.

Taking Galena, Illinois, as the center of the Upper Mississippi trade, the distance by river to New Orleans was one thousand six hundred and eighty miles; while the distance by way of Chicago, the Lakes, and the Erie Canal to New York was one thousand six hundred and sixty-five miles. Thus, if goods bound from Galena to New York took the river route, they had to travel the entire dis-

¹⁶Gale, *Reminiscences of Chicago*, p. 12.

tance by sea from New Orleans to New York in excess of the distance required by the Lake route. Should Liverpool be the objective point, the advantages of the lake route in reference to distance and time is also apparent. The distance from New Orleans to Liverpool exceeds the distance from New York to Liverpool by one thousand four hundred and fifty-five miles.

Another serious difficulty in the way of the Upper Mississippi commerce was found in the rapids in the Mississippi at the mouth of the Des Moines River and at the head of Rock Island. These rapids were about seventy miles apart, and each was nearly twelve miles in length. At these points the water was shallow, the descent great, the channel crooked, the current rapid, and boats drawing more than two feet of water were liable to strike upon the rocks, by which they were totally wrecked or greatly injured. As long as the Mississippi was the only route of commerce in that region, the imports and exports of Iowa and the Northern part of Illinois, the lead and other articles from Galena and Wisconsin, lumber from St. Croix and the head waters of the Mississippi, and the supplies for the Indians and the United States forts on the Mississippi all had to cross these rapids and were subject to the dangers they created. Steamboats, when ascending or descending with freight, were compelled to discharge their cargoes into flat-boats in which they were conveyed over the rapids. In ascending, the flat-boat was towed by horses or oxen a distance of about twelve miles at each rapid. In descending, they were floated down by the current. In 1845 it was estimated that the freight charges on the Upper Mississippi were increased, because of these rapids, one hundred and fifty per cent.¹⁷

In 1832 the waters of the Ohio River were connected by canal with Lake Erie, and then with the Hudson. Thus the Ohio River became a rival route for the Upper Mississippi trade. But the disadvantages of both river routes are well summed up in the following language: "There are numerous objections to the Southern route as a route for produce, among which its circuitry, the dangers of navigation, and the climate may be mentioned. The latter is the most fatal, causing, as it does, risk of loss or damage of most articles; additional expense of packing; and heavy rates of insurance.

¹⁷Journal of Proceedings Southwestern Convention, Memphis, November 12, 1845, p. 63.

Numerous instances might be adduced, some of them of recent occurrence, where large and valuable cargoes of produce have been entirely lost, or greatly injured, by the humidity of the atmosphere or the heat, which prevails at the South for the greater part of the season.

“If the Southern route is objectionable, that by the Ohio is still more so, notwithstanding its connection by railroads and canals with Lake Erie and the Atlantic. The length of river navigation before this route can be attained, but more especially the considerable portion of the year during which it is either closed by ice, or deprived of the amount of water which its navigation requires, are obstacles of so serious a character that no others needs be mentioned.”¹⁸

On the other hand, the possible advantages of the lake route are beginning to be realized. In 1841 the Milwaukee Courier says: “Lead can be sent from this place to New York for about fifty cents per hundred, and it costs 93 cents per hundred to deliver it here from Muskoday,¹⁹ making the entire expense of transporting the lead from the furnace to New York about \$1.50 per hundred, or \$30 per ton. This is a much less price than it costs to ship lead to New York via New Orleans. We understand the average cost by that route is about \$40 per ton. . . . The greatest inducement, however, which the lake route holds out to the smelter, over the southern route for the lead trade, is the increased expedition with which their lead gets to market. The lead which arrived here on Saturday was shipped on the Madison on Monday, and will be in New York within 20 days from the time it left the furnace, near the Mississippi River; and the owner will get his returns in about four weeks from the time the lead was smelted. A gentleman from Galena recently informed us that he shipped, over 90 days since, about \$1,500 worth of lead to New York by the southern route, and had not then got his returns from it.”²⁰

As early as 1842, even Southern writers began to realize the disadvantages in the transportation facilities of the Mississippi, and became alarmed. The New Orleans Picayune had this to say: “Our conceptions are every day awakening more fully to the important

¹⁸Fergus' Hist. Ser. No. 25, pp. 18, 19.

¹⁹In Grant County, Wisconsin, about the same distance from Milwaukee as from Galena to Milwaukee.

²⁰Quoted from Milwaukee Courier in Niles' Register, Vol. 61, p. 23. For similar data, see also Meyer, "Wisconsin Railroad Legislation", Wis. Hist. Coll., XIV, p. 210.

and intimate connection of trading interests between New Orleans and the towering city of St. Louis, a bond of union already vibrating with loud pulsations from one place to another. . . . The Upper Mississippi, in its present condition, is the greatest wet blanket upon the spirit and enterprise of the West that may be conceived, or could possibly exist. The cry for relief is already swelling in the West, and shall we not lend our echoes to promulgate the sound? Yes, and let our united voices commingle in a roar, loud as the surge of the broad-spread Mexico, that shall, even like the singing sea-shell, buzz in the ears of Congress until proper action is taken upon a subject of such magnitude. . . . Illinois alone can victual the whole United States! Beef, bread, beans, potatoes, and a vast amount of the surplus produce of this prolific and fertile state is driven to Chicago and so across the Lakes. The trade from Illinois, Wisconsin, and Iowa flies our market by the same route."²¹ The Memphis Convention²² of 1845, although its resolutions displayed the utmost confidence in the future of the Mississippi as a commercial route, clearly recognized the need for river improvement and called upon the National Government to undertake the work.²³

Thus we have seen that the Mississippi River route possessed grave disadvantages, and that these disadvantages began to be recognized in North and South alike in the early forties. Let us now see how Chicago and Vicinity took advantage of these difficulties and began to secure a share in the Upper Mississippi commerce.

Wagon routes were early established between the lake shore towns and interior settlements even as far as Galena, but, if the lake shore towns were to obtain a large share of the region's commerce, more ambitious efforts must be made. In 1836, as already mentioned, there was formed in Chicago a transportation company for the purpose of transporting goods from Chicago to the Mississippi. A line of wagons was to be established from Chicago to the Illinois River, from where flat-boats were to be used to the head of steamboat navigation, and steamboats from there to the Mississippi. This wagon line was connected with one of the larger steamboat lines upon the Lakes and the Erie Canal. One hundred and twenty merchants in

²¹Libby, Wis. Hist. Coll., Vol. XIII, p. 296.

²²The first great river Convention, which met at Memphis, Tenn., 1845. 15 states were represented and it was presided over by John C. Calhoun.

²³House Ex. Doc., 50th Congress, 1st Session, 1887-'88, Vol. 20, Doc. No. 6, Part II, p. 203.

St. Louis and Alton entered into a contract to bring their supplies from the East by this route.²⁴

As early as 1814 the idea of connecting Lake Michigan with the Illinois and Mississippi Rivers by canal was beginning to be agitated.²⁵ The subject received the attention of the Illinois Legislature upon various occasions from 1818 to 1836, when actual work upon construction began. March 2, 1827, Congress granted to the State of Illinois for canal purposes "a quantity of land equal to one-half of five sections in width, on each side of said canal," each alternate section being reserved to the United States.²⁶ The canal was laid out between the South Branch of the Chicago River and La Salle on the Illinois River, a distance of ninety-six miles. It was called the Illinois and Michigan Canal. Work was begun near Chicago July fourth, 1836, and the canal was completed and opened to commerce on April 16, 1848, at a cost of over six million dollars. The influence of the canal upon the commerce of Chicago was immediate and helpful. The following table shows the shipments of certain articles upon the canal during the first eighteen months of its being open to commerce:²⁷

Articles	Shipped in 1848	Shipped in 1849
Pork, pounds,	683,600	2,783,102
Stone, cubic yards,		7,995
Coal, tons,	5,416	7,579
Wheat, bushels,	451,876	624,978
Corn, bushels,	516,230	754,288
Oats, bushels,	72,659	61,988
Lumber, feet,	14,425,357	25,882,000
Shingles and Lath, No.,	17,899,000	35,551,000

The tolls on the Canal increased from \$87,891 in 1848 to \$118,376 in 1849. So important did the Canal become in its influence upon the commerce of Chicago before its popularity began to wane that in 1868 the Chicago Daily Tribune declared: "To this Canal it is due that it [Chicago] did not develop from a military post into a mere village instead of a still growing metropolis. It was the location of the Northeastern terminus of the Canal at the Chicago River, that

²⁴Chicago American, January 2, 1836.

²⁵Niles' Register, Vol. 6, p. 394. (Aug. 6, 1814.)

²⁶Debates of Congress, 19th Congress, 2nd Session, App. p. xviii. For detailed history of project see Andreas, Hist. of Chicago, vol. 1, pp. 165-173.

²⁷Chicago and Its Suburbs, p. 69.

first called public attention to a then remote and almost unheard of spot, and gave the first impetus to that tide which has not yet ceased to set toward this city."²⁸

Milwaukee was not slow to see the need of better commercial connection with the Mississippi. In 1836, during the very year in which work was begun upon the Illinois and Michigan Canal, the Wisconsin Legislative Assembly took action looking to the incorporation of the "Milwaukee and Rock River Canal Company."²⁹ The company was later organized for the purpose of connecting the Milwaukee and Rock Rivers by canal and thus opening water communication between Lake Michigan, at Milwaukee, and the Wisconsin and Mississippi Rivers. The project failed. Only one mile of the proposed Canal was ever built. But, being at the site of Milwaukee, it became of great importance to the early manufacturing interests of the place, furnishing cheap and abundant water power. In 1845 it was supporting eight manufacturing establishments at Milwaukee, and was said to furnish sufficient power which, if all were used in running flour mills, would produce flour enough to supply the whole United States.³⁰

The Illinois and Michigan Canal, it was now clear, was the only one that could be made to assist Chicago and Vicinity in capturing the Upper Mississippi commerce. Other means must be found. Realizing unmistakably that their interests lay in the closest possible communication with the magnificent and rapidly developing country between Lake Michigan and the Mississippi River, the cities upon the Lake Shore now began to seek better transportation facilities by land. The means proposed were of two kinds,—railroads and plank roads. The success of steam railroads in the East, of which there were eight hundred miles in operation by the close of 1835,³¹ and the mania for internal improvements that swept over Illinois and other western states just prior to the panic of 1837, brought agitation for railroads between the lake shore towns and the Mississippi. The novelty of railroads in the West, however, the uncertainty of their success here, and their heavy cost of construction made many

²⁸Chicago Tribune, January 18, 1868.

²⁹For full history of the Milwaukee and Rock River Canal, see Moses M. Strong's Hist. of Wisconsin Territory, p. 506, et seq.

³⁰Milwaukee Daily Sentinel, January 25, 1845.

³¹Hadley, Railroad Transportation (N. Y. 1888), p. 33.

hesitate to join in the agitation for their building. To these the construction of plank roads seemed more feasible and desirable.

Although the building of a railroad west from Lake Michigan was begun before the building of a plank road, the era of plank roads preceded the era of railroads and, for a time, was of more consequence to the lake shore towns. The abundance and comparative cheapness of lumber in Chicago and Vicinity made the plank roads possible. The first of such roads constructed west from the shore of Lake Michigan was built in 1849 from Racine to Delavan in Walworth County, a distance of forty-six miles. Two other such roads extending thirty-four miles from Racine into the surrounding country were finished soon afterwards.³² By 1850 charters had been obtained and companies formed for the building of eight plank roads from Milwaukee to Janesville, Watertown, Lisbon, Green Bay, Waukesha, Wauwatosa, Fond du Lac, and Humbolt, of which sixty-eight miles were then completed.³³ Chicago was not to be far behind in connecting herself with the surrounding country by this means. By 1853 these arms of commerce, named from the direction they took, extended from Chicago northwest, west, southwest, and south, reaching in one instance at least—the southwestern—a distance of thirty miles.³⁴

The influence of these plank roads upon the development of the lake shore towns and their tributary territory cannot now be measured. That it was important at a time when the wagon was the only means of transportation for so large and productive a region cannot be doubted. But the means of transportation between the western shore of Lake Michigan and the region stretching westward to the Mississippi and beyond destined to be of greater service in building up the commerce and industries of Chicago and Vicinity, was the railroad. In the same year in which work began upon the Illinois and Michigan Canal, the Galena and Chicago Union Railroad was chartered.³⁵ The Canal was to give water communication with St. Louis and the Southwest; the railroad was designed to give land communication with Galena and the Northwest. The relative importance of Galena and its lead trade at that time secured it precedence in the title of the company. Although the road was chartered

³²History of Racine and Kenosha Counties, p. 370.

³³Directory of Milwaukee, 1851-'2, p. xiv.

³⁴Moses and Kirkland: History of Chicago, Vol. I, p. 304.

³⁵For detailed history of the building of this railroad see Moses and Kirkland's Hist. of Chicago, Vol. I, pp. 415 et seq.

in 1836, little could be accomplished towards its construction until 1847, when a new charter was obtained and work was actively begun. On December the fifteenth, 1848, the same year in the spring of which the Illinois-Michigan Canal was opened, the first train left Chicago over the new railroad. This road never reached Galena as at first intended. In 1850 it was completed to Elgin, a distance of forty-two miles. It was gradually extended until in 1855 it was one hundred twenty-one miles in length. Its immediate success is shown in the following table of its earnings and expenses.⁸⁶

<i>Year</i>	<i>Gross Earnings</i>	<i>Expenditures</i>
1849-'50	\$ 48,331.96	\$ 18,519.82
1850-'51	127,685.78	48,904.24
1851-'52	211,310.55	87,361.67
1852-'53	473,548.21	187,396.39
1853-'54	799,013.88	359,199.04
1854-'55	1,506,710.11	686,516.86
1855-'56	2,315,786.96	1,063,744.85

Thus it is seen that during the first seven years of its existence this road earned from its freights nearly five and one-half millions of dollars, its net income being over three millions of dollars. Its importance as a factor in building up the commerce of Chicago will be considered later.

The same year (1836) that marked the beginning of actual work upon the Illinois and Michigan Canal and the chartering of the Galena and Chicago Union Railroad Company saw the beginning of active agitation for the building of a railroad from Milwaukee to the Mississippi.⁸⁷ Although figures were deduced to show that such a railroad would make an annual saving of \$110,000.00 in⁸⁸ freight rates upon lead from Wisconsin alone, with a probable saving of an equal amount upon imports into the state each year, the project was doomed to failure for nearly fifteen years. In the meantime the people had become more modest in their demands. They no longer talked glibly of a railroad to the Pacific, or the Rocky Mountains, or even the Mississippi. In 1847 permission was secured from the Legislature to build a railroad from Milwaukee to Waukesha, twenty and one-half miles.⁸⁹ But even this was not accomplished and

⁸⁶Andreas, *History of Chicago*, Vol. I, p. 257.

⁸⁷Meyer: "A History of Early Railroad Legislation in Wisconsin", *Wis. Hist. Coll.*, XIV, p. 207.

⁸⁸*Ibid.*, p. 210.

⁸⁹*Milwaukee Daily Sentinel*, January 9, 1850.

opened for traffic until February 25, 1851.⁴⁰ Chicago, in its corporate capacity, did nothing to help finance the Galena and Chicago Union. Neither did the State or National governments give aid. But Milwaukee bonded itself for \$234,000.00 to aid in building the Milwaukee and Waukesha Railroad.⁴¹

As early as 1845⁴² Racine was agitating the building of a railroad from there to the Mississippi. Progress was slow, but in 1866 one hundred and eighty-two miles had been constructed, terminating at Port Byron, Illinois.⁴³

The success of the Milwaukee and Waukesha Railroad and its contribution to the commerce of Milwaukee may be judged from the shipments of five leading articles from its fourteen stations between January 1, 1854, and January 1, 1855; and from the more complete table of shipments from one of these stations alone. The shipments from the fourteen stations upon the fifty-odd miles of road were as follows:⁴⁴

Wheat, bushels	1,184,662
Barley, bushels,	155,280
Flour, barrels,	55,492
Pork, pounds,	5,062,510
Wool, pounds,	148,417

When the Milwaukee and Waukesha Railroad was extended, as the Milwaukee and Mississippi Railroad, to Whitewater, in September, 1852, that town had a population of only eight hundred. In 1855 it had a population of sixteen hundred, and its shipments by the railroad during the preceding year were as follows:⁴⁵

Wheat,	322,226 bushels
Barley,	55,257 bushels
Oats,	48,700 bushels
Corn,	12,823 bushels
Rye,	6,427 bushels
Pork (in hog),	614,258 pounds
Produce,	425,964 pounds
Grass Seed,	94,732 pounds
Wool,	47,098 pounds

⁴⁰Meyer: "Wis. R. R. Legislation", Wis. Hist. Coll. XIV, p. 216.

⁴¹Industrial History of Milwaukee, p. 25 et seq.

⁴²Milwaukee Daily Sentinel, January 28, 1845.

⁴³History of Racine and Kenosha Counties, p. 470.

⁴⁴Wis. Hist. Coll. III, pp. 430, 431.

⁴⁵Wis. Hist. Coll. III, pp. 430, 431.

Hops,	21,116 pounds
Tobacco,	3,640 pounds
Bags of Flour,	9,964 number
Barrels of Flour,	8,561 number
Empty barrels,	5,187 number
Barrels of Pork,	2,731 number
Barrels of high Wine and Whisky,	2,351 number
Hides and Pelts,	1,013 number
Head of Live-stock,	936 number
Kegs of Butter,	496 number
Kegs of Beer,	32 number

The successful installation and operation of the Galena and Chicago Union and the Milwaukee and Mississippi Railroads opened the railroad era of the West.† Men having once overcome the obstacles that necessarily confronted them in undertaking so gigantic an experiment, and having demonstrated its feasibility and its financial success, others were then eager to share in the opportunity for achievement and financial reward which they saw opening before them. In 1852 the Michigan Southern and the Michigan Central Railroads were completed to Chicago. The next year the Cleveland and Toledo Railroad was opened to traffic, and for the first time the city had all-rail communication with the East.⁴⁶ Numerous railroads had been chartered in the West between 1840 and 1850, a number of them having Chicago for one of their termini. These and others now began actively looking toward construction.⁴⁷

↓ So rapidly was the building of railroads tributary to Chicago now carried on, that, in the five years following the completion of the Galena and Chicago Union to Elgin, the number of roads increased from one to seventeen and the miles in actual operation, from forty-two to 2,436. They formed a network of lines covering a large part of the region between Lake Michigan and the Mississippi, besides the lines to the south and east. The total mileage in operation January 1, 1855, was distributed as follows:⁴⁸

The Galena and Chicago Union	121 miles
The Michigan Central	282 miles
The Illinois Central	242 miles

⁴⁶Poor: Manual of Railroads of the United States, 1868-9, p. 17.

Andreas, Hist. of Chicago, Vol. 1, p. 256 et seq.

⁴⁷Andreas, Hist. of Chicago, Vol. 1, p. 256 et seq.

⁴⁸"Extracts from the Early History of Chicago Railroads," A. W. Wright; Also Chicago Daily Dem. Press, Jan. 19, 1855.

The Michigan Southern and Northern Indiana	242 miles
The Chicago and Milwaukee	40 miles ✓
The Illinois and Wisconsin	41 miles ✓
The Beloit Branch of the Galena and Chicago Union	20 miles
The Beloit and Madison	16.5 miles
The Chicago and Galena Air Line	98 miles ✓
The St. Charles Branch	4 miles ✓
The Chicago and Aurora	89 miles ✓
The Central Military Tract	84 miles
The Peoria and Oquawka	35 miles ✓
The Chicago and Rock Island	181 miles ✓
The Peoria and Bureau Valley	47 miles
The Chicago and Mississippi	265 miles ✓
The New Albany and Salem	214 miles
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Total	2,436.5 miles

Over these roads nearly one hundred trains were said to arrive at, or depart from, Chicago every twenty-four hours. By 1860 the mileage of railroads in Wisconsin, Illinois, and Iowa, nearly all of which were tributary to Chicago and Vicinity, was 4,470.28 miles—a gain since 1850 of 3,300 per cent.⁴⁹

We have now seen how Chicago and Vicinity had conducted her land campaign down to 1860 for the capture of the commerce of the great Upper Mississippi Valley. Let us now turn, next, to a consideration of the efforts to improve her water communication with the East in order to utilize to the fullest extent the facilities developed for commerce with the West.

Among all the means used by Chicago and Vicinity for this purpose, none is more worthy of notice than the River and Harbor Convention held in Chicago, July 5th, 6th, and 7th, 1847.⁵⁰ Several thousand delegates were in attendance⁵¹ representing nineteen states and territories, the principal number being from Wisconsin, Illinois, Indiana, Ohio, Michigan, New York, and Missouri. The pride of Missouri being greatly wounded because the Convention was not held at St. Louis instead of Chicago, that State sent but forty-five delegates, while New York sent two hundred twenty-three. Although

⁴⁹U. S. Census of 1880.

⁵⁰For a rather full report of the Convention see Fergus' Hist. Ser., No. 18.

⁵¹The number is variously estimated at from 2,300 to 10,000. See Fergus' Hist. Ser., No. 18, p. 52 et seq. for a probably trustworthy list.

the questions of *river* and harbor improvement concerned the entire West, and no part more than the Southwest, the people of Chicago and Vicinity regarded this convention as being primarily concerned with their own peculiar interests.⁵²

It was felt that the Convention was a great success. Eastern delegates wrote home enthusiastically of it, and the ardor of the Western delegates knew no bounds. Writing of the first day of the Convention, a Chicago Editor says: "A great, a glorious day has gone down—a day which children's children will remember when the actors that took part, and the hands that indited, are cold and motionless."⁵³ It was attended by many men of national prominence, such as Horace Greeley, Thurlow Weed, and David Dudley Field, of New York, and others. Letters of approval were read from Daniel Webster, Henry Clay, and Thomas H. Benton. Its influence in calling the attention of the nation to Chicago and other lake ports, and to their expanding commerce was strong and opportune. While the need of river improvement in the West was considered, the resolutions adopted by the Convention clearly showed that its primary interest was in the construction and improvement of lake harbors and the fostering of lake commerce.⁵⁴

Although the Chicago River and Harbor Convention served to interest equally the East, North, and West in the lake route for Western commerce, the General Government remained slow to expend its funds upon the western lake harbors. Prior to the meeting of the

⁵²This fact is shown in a resolution previously adopted at a Chicago mass meeting: "Resolved, that we sincerely regret the action of the St. Louis Chamber of Commerce in reference to the subject of the proposed Convention, believing that the almost unanimous expression of the press in favor of Chicago, and the action of the meeting in New York, should determine the question in favor of this city, especially as the South-West have already held a Convention (at Memphis) to advance river and peculiarly **South-Western interests**, and we deem it but just that the North-West should assert its claim, free from all prejudice, to have this Convention held within Northwestern borders, at the same time trusting that St. Louis, having with us a unity of interests, will see nothing unreasonable in this determination". (Fergus' Hist. Ser., No. 18, p. 24.) The same spirit is manifest in the following from the Chicago Daily Journal of August 19, 1846. After roundly accusing President Polk of vetoing the recent Harbor Bill simply because it favored Northern instead of Southern commerce and institutions, it says: "All other pretences of objections to the Harbor Bill are idle and vain. The North can and will be no longer hood-winked. If no measures for protection and improvement of anything North or West are to be suffered by our Southern masters, if we are to be down-trodden, and all our cherished interests crushed by them, a signal revolution will ensue. The same spirit and energy that forced emancipation for the whole country from Great Britain will throw off the Southern yoke. The North and West will look to and take care of their own interests henceforth." (Fergus' Hist. Series, No. 18, p. 15.)

⁵³Chicago Evening Journal, July 6, 1847. (Quoted, Fergus' Hist. Series, No. 18, p. 41.)

⁵⁴Fergus' Hist. Ser., No. 18, p. 81 et seq.

Chicago Convention, the General Government had expended upon the harbors of Milwaukee, Racine, Kenosha (or Southport), and Chicago the total sum of \$338,001.00. Between the meeting of the Chicago River and Harbor Convention and 1860, the General Government expended upon these harbors only \$55,163.94. During the decade between 1860 and 1870 it spent \$612,919.92 upon them.⁵⁵ But, however small the improvements in the harbors of Chicago and Vicinity between 1850 and 1860, they obtained a large increase of commerce and showed themselves capable of caring for it. The really important thing in connection with the agitation of the period for increased harbor facilities was not the actual improvements secured, but it was the ascertaining of the commercial possibilities of the Northern route and the impressing these possibilities upon the country.

We have now examined the natural disadvantages of the Mississippi or Ohio river routes for the commerce of the Upper Mississippi Valley; we have followed somewhat the development of public opinion in the West as to the probable change of this commerce to the lake route; and we have noticed the means adopted by the lake shore towns, backed by Eastern interests, to actually capture this Upper Mississippi commerce for the Northern route. Let us next examine the actual success of this change and its effect upon the development of Chicago and Vicinity.

At New Orleans the receipts of lead sank from 785,000 pigs in 1846⁵⁶ to 210,287 pigs in 1852-'3⁵⁷ and 18,291 in 1857.⁵⁸ At St. Louis the receipts of lead declined from 749,128 pigs in 1847⁵⁹ to 315,677 in 1855.⁶⁰ Thus, by 1857 the lead trade of New Orleans from the Upper Mississippi had almost disappeared, and in 1855 the receipts at St. Louis were less than half what they were in 1847. During this period the actual production in the Galena district was, it is true, decreasing. But the decrease in production was by no means so rapid as the decrease in receipts at St. Louis and New Orleans. The shipments from Galena declined from 778,408 pigs

⁵⁵House Doc., No. 439, 57th Congress, 2nd Session, (Index).

⁵⁶Hunt's Merch. Mag., Vol. XXVII, p. 430; *Ibid.*, Vol. XVI, p. 97.

⁵⁷*Ibid.*, Vol. XXIX, p. 572. (Sept. 1 to Sept. 1.)

⁵⁸*Ibid.*, Vol. XXXVII, p. 604.

⁵⁹*Ibid.*, Vol. XXVI, p. 325.

⁶⁰*Ibid.*, Vol. XXXIV, p. 361.

in 1845, the banner year, to 474,000 pigs in 1851, and increased to 485,475 pigs in 1857.⁶¹

It is impossible to learn the exact amounts of lead shipped during these various years by way of the lake shore towns, but it is evident that, while the receipts at St. Louis and New Orleans were decreasing at such a phenomenal rate and while the shipments from the Galena district were also decreasing during a portion of the period, the receipts at the lake ports were rapidly increasing. The receipts at Chicago increased from less than twenty pigs in 1845⁶² to 19,390 in 1851, over 142,000 in 1855, and over 205,000 in 1859.⁶³ In 1850 Milwaukee exported 15,000 pigs.⁶⁴ It is evident from this data that Chicago and Vicinity was making good progress toward capturing the Upper Mississippi lead trade.

But more significant is the changed route taken by the agricultural products of the Upper Mississippi, for after 1846 or 1847 they assume a greater importance than the lead production. The immediate influence of the Illinois and Michigan Canal upon the commerce of Chicago and Vicinity has already been noted by a tabulation of some leading articles that passed its locks during the first eighteen months after its opening to public use.⁶⁵ In 1852 Chicago received by way of the Canal 504,996 bushels of wheat, and in 1853 over 901,000 bushels. In 1852 she received 1,810,800 bushels of corn, and in 1853 over 2,481,000 bushels.⁶⁶ Thus, in the first five years of the existence of the Canal, the amount of wheat passing through it to Chicago nearly doubled, and the amount of corn more than trebled. "During the first ten years of the Canal's existence (1848-1858) there were transported through it, approximately, 563,000,000 feet of lumber, 27,000,000 pounds of pork, 26,000,000 bushels of corn, 5,500,000 bushels of wheat, and 50,000 tons of coal. The tolls collected at Chicago alone amounted to more than \$1,000,000. The high water mark in tolls was reached in 1854, when they amounted to \$198,326."⁶⁷ The figures need no comment. They plainly tell a story of the successful reaching out of one of the arms by which Chicago and Vicinity would gather the commerce of the

⁶¹Ibid., Vol. XL, p. 244.

⁶²Fergus' Hist Ser., No. 25, p. 17; (Exports: little used in city.)

⁶³Chicago Board of Trade Report for 1871, p. 38.

⁶⁴Buck, Milwaukee under the Charter, Vol. III, p. 283.

⁶⁵See page 83.

⁶⁶"Railroads, History and Commerce of Chicago", pp. 58, 59.

⁶⁷Brown: Drainage Channel and Waterway, (Chicago, 1894), p. 212.

Upper Mississippi to the Lakes. That this fact was not escaping the South is evident from their own words in 1852: "All the lead from the Upper Mississippi now goes East by the way of Milwaukee. But the most recent and astonishing change in the course of the Northwestern trade is to behold, as a friend tells us, the number of steamers that now descend the Upper Mississippi, loaded to the guards with produce, as far as the mouth of the Illinois River, and then turn up that stream with their cargoes, to be shipped to New York via Chicago.

"The Illinois Canal has not only swept the produce along the line of the Illinois river to the East, but it is drawing the products from the Upper Mississippi through the same channel, thus depriving not only New Orleans, but St. Louis, of a rich portion of their former trade."⁶⁸

But the building of the railroads west and southwest from Lake Michigan had a much larger effect in turning the commerce of the Upper Mississippi. No sooner had railroad building in the West been proved a success in 1850 and 1851 by the building of the first few miles of the Galena and Chicago Union, and the Milwaukee and Mississippi, than a wonderful era of railroad extension was inaugurated in the Upper Mississippi Valley. In 1850 Illinois had 110.5 miles of railroad, Wisconsin 20 miles, and Iowa none. In 1860 Illinois had 2,867.9 miles, Wisconsin 922.61 miles, and Iowa 679.77 miles,—a gain in the three states of over 3,300 per cent.⁶⁹ The larger part of these roads were spread out west and northwest of the southern end of Lake Michigan and were directly tributary to the lake shore towns.

Prior to the building of the railroads, the produce of all the country not directly tributary to the navigable streams had to be hauled to market in wagons. This greatly limited the territory that could be made tributary to Chicago and Vicinity, for the cost of transportation by wagon rapidly approached the value of the produce as the distance from market increased. Transportation by railroad was much cheaper, and hence they greatly expanded the tributary territory of the lake shore towns. This is very graphically told by the following figures. They indicate the value of a ton of wheat and a

⁶⁸De Bow's Review, Vol. XII, p. 38.

⁶⁹U. S. Census, 1880.

ton of corn at given distances from market, as affected by the cost of transportation by railroad and by the ordinary wagon road.⁷⁰

	<i>By Railroad.</i>		<i>By Wagon Road.</i>	
	<i>Wheat</i>	<i>Corn</i>	<i>Wheat</i>	<i>Corn</i>
Value at market	\$49.50	\$24.75	\$49.50	\$24.75
Value 10 miles from market	49.35	24.60	48.00	23.35
Value 50 miles from market	48.75	24.00	42.00	17.25
Value 100 miles from market	48.00	23.25	34.50	9.75
Value 150 miles from market	47.25	22.50	27.00	2.25
Value 170 miles from market	46.95	22.20	24.00	0.00
Value 200 miles from market	46.50	21.75	19.50	
Value 250 miles from market	45.75	21.00	12.00	
Value 300 miles from market	45.00	20.25	4.50	
Value 330 miles from market	44.25	19.80	0.00	

Thus, if the rates for transportation here assumed be accepted, corn 170 miles (165 to be exact) from market is worth no more than the cost of transporting it thither in wagons; and wheat at 330 miles from market. Railroad transportation widens the tributary territory ten-fold, and makes it possible to ship corn 1,650 miles and wheat 3,300 miles before the cost of transportation equals the value of the produce. The possible effect, then, of ample railroad facilities upon the commerce of Chicago and Vicinity is apparent.

That these possibilities were being realized is evident from the following receipts by rail at Chicago during the years 1852, 1854, and 1856.⁷¹

<i>Articles received</i>	1852	1854	1856
Flour, bbls.,	124,316	234,575	410,989
Wheat, bushels,	937,496	3,038,935	8,767,760
Corn, bushels,	2,991,011	7,490,753	11,888,398
All grains, bushels	4,195,192	15,726,968	25,817,248
Hogs, number,	65,158	138,515	220,702
Cattle, number,	24,663	23,691	14,971
Lumber, thousand feet,	147,816	238,337	441,962
Coal, tons,	46,233	56,774	93,020
Lead, tons,	678	2,124	3,314

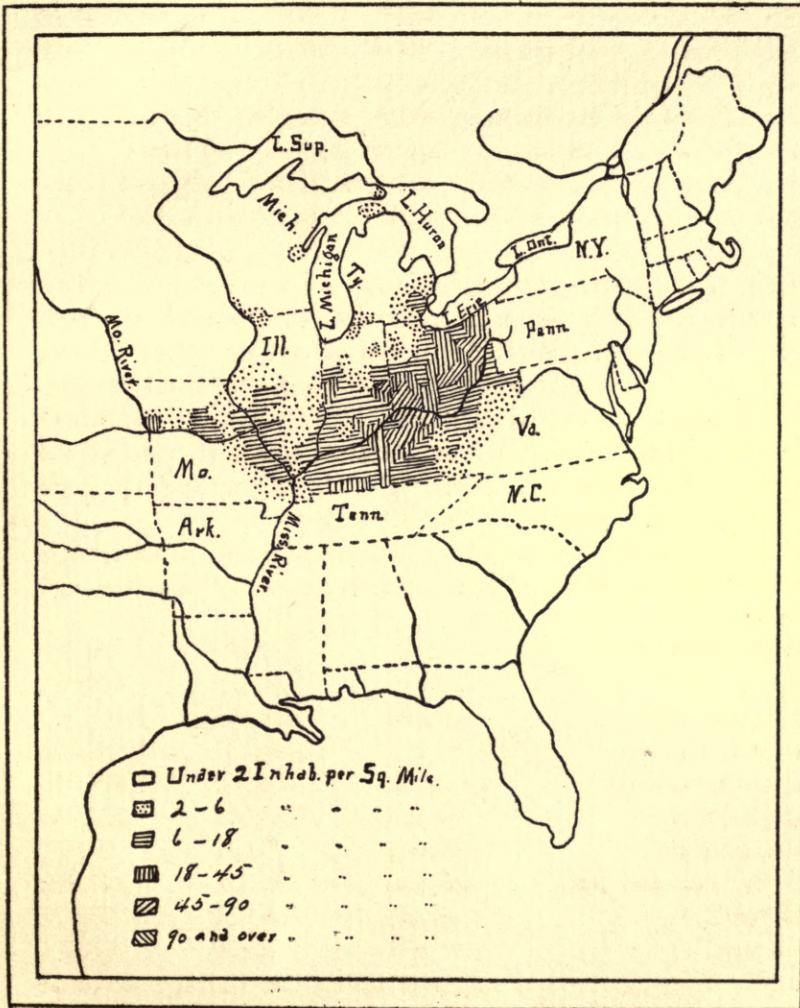
The total earnings of all the railroads leading into Chicago increased from about \$40,000 in 1851 to \$13,298,200 in 1855.⁷² The extension

⁷⁰U. S. Senate Doc. No. 112, 32nd Congress, 1st Session, p. 381.

⁷¹Chicago and Its Suburbs, p. 69.

⁷²Chicago Daily Dem. Press, Feb. 16, 1856.

DISTRIBUTION OF POPULATION IN THE OHIO AND UPPER MISSISSIPPI VALLEYS IN 1830.



of these iron arms every year was opening much additional tributary territory to the lake shore towns. In 1855 an extension of five hundred miles added one hundred thousand square miles of tributary territory.⁷³

Chicago was not the only one of the lake shore towns to benefit by the building of railroads. It increased the commerce of all. The receipts of wheat at Milwaukee increased from a few hundred thousand bushels in 1850⁷⁴ to 9,108,458 bushels in 1860;⁷⁵ and the westward movement of freight was correspondingly large.⁷⁶ Nor was the expansion of commerce by railroad to be limited to the territory east of the Mississippi River. In 1855 that stream was spanned by the Chicago, Rock Island and Pacific Railroad bridge at Rock Island, Illinois, and the commercial conquest of the region beyond was begun. In 1860 there moved across this bridge from east to west 77,219,217 pounds of freight, and from west to east, 122,200,564 pounds.⁷⁷ During 1858 the total value of the imports and exports of Chicago is stated to be \$174,896,011.70. Of this amount the value moved by Chicago's railroads was \$120,673,355.06,⁷⁸ or nearly seventy per cent of the whole.

The stupendous growth in commerce between the lake shore towns and the territory west of them was met by reduced rates of transportation to the Eastern markets, and increased lake transportation facilities. The freight charges by lakes and canal from Chicago to New York between the years 1835 and 1863 declined fifty and one-half per cent.⁷⁹ Between 1846 and 1862 the arrivals of vessels at the port of Chicago increased from 1,394 vessels with a tonnage of about 22,350 tons, to 7,417 vessels of 1,931,692 tons. And the de-

⁷³Ibid., January 1, 1856.

⁷⁴In 1850 Milwaukee exported 207,578 bushels, (Buck, Milwaukee under the Charter, III, p. 283.)

⁷⁵Industrial History of Milwaukee, p. 51.

⁷⁶Milwaukee Chamber of Commerce Report for 1861, p. 29.

⁷⁷That the nature of this exchange may be known, I will give the accounts of a few of the most important items taken from the Chicago Daily Tribune, January 1, 1861. Moving west were 1,570,330 pounds of agricultural implements; 672,180 pounds of furniture; 326,920 pounds of stoves; 18,464 tons of coal; 952,000 feet of lumber, and 2,516,000 shingles. Moving east there were 442,040 bushels of wheat; 874,331 bushels of corn; 28,651 bushels of oats; 39,963 bushels of barley; 606,800 pounds of hides; 671,930 pounds of lard; 10,344 head of cattle; 18,925 head of hogs; 1,642,140 pounds of dressed hogs; 66,341 barrels of flour; and 44,470 pounds of wool.

⁷⁸Chicago Board of Trade Report for 1858, p. 6.

⁷⁹N. Y. Produce Exchange Report, June 1, 1873, p. 244.

partures, during the same period, increased from 1,396 vessels of 22,350 tons⁸⁰ to 7,270 vessels of 1,915,554 tons.⁸¹

How successful were all these means provided for capturing the entire commerce of the Upper Mississippi and furnishing it an outlet through the Lakes is vividly told by a faithful guardian of the Southern route in words written while the change had only fairly begun. "New Orleans," said he, "has suffered herself to sleep soundly in the arms of all the prosperity which the God of nature seemed to have showered upon her. Like Achilles of old, she conceived that a Deity had lent her armor, and, as the pet child of destiny, she must be forever invulnerable. Bewildered in her dreams of eastern magnificence and rank, as she contemplated herself at the very foot and receptacle of all the greatest and most magnificent rivers upon earth . . . with fifteen great states of the confederacy claimed to be inalienably tributary to her, . . . the connecting link between the two great continents, . . . New Orleans . . . laughed the doubter into scorn and said unto herself, 'Go to, let us take our rest—eat, drink, and be merry; and who shall gainsay us?' . . . This was New Orleans; but what is New Orleans now? where are her dreams of greatness and of glory? . . . Whilst she slept an enemy has sowed tares in her most prolific fields. Armed with energy, enterprise, and an indomitable spirit, that enemy, by a system of bold, vigorous and sustained efforts, has succeeded in reversing the very laws of nature and of nature's God—rolled back the mighty tide of the Mississippi and its ten thousand tributary streams, until their mouth, practically and commercially, is more at New York or Boston than at New Orleans."⁸²

The effect upon Chicago and Vicinity of this great era of internal improvement and the changing of so large a part of the commerce of the Upper Mississippi Valley was electrical. The cities on the western shore of Lake Michigan, especially Chicago and Milwaukee, sprang in one decade from the rank of frontier towns to great marts of trade, to which the products of a vast and exceedingly productive area were gathered to be shipped to the Atlantic seaboard towns, and where even European Governments now maintained their agents

⁸⁰Fergus' Hist. Ser., No. 18, p. 189.

⁸¹Chicago Board of Trade Report for 1871, p. 109.

⁸²De Bow's Review, Vol. XII, p. 501.

to buy for them and ship directly to Europe.⁸³ Not only that, but these lake shore towns found themselves now called upon to furnish vast quantities of manufactured goods to supply the needs of this ever widening and developing territory to the west. Such goods as they were not yet able to supply from their own mills and factories had to be imported from the East. Chicago and Vicinity thus became the distributing center for the West and grew wealthy in the toll taken from this vast trade in each direction.

In growth of population between 1850 and 1860, Chicago and Vicinity far outstripped her rivals of the rivers. During this brief period the City of Chicago increased in population from 29,963 to 109,260, a gain of nearly two hundred sixty-five per cent; and Chicago, Kenosha, Racine and Milwaukee combined increased from a population of 58,586 to 166,318, a gain of one hundred sixty-five per cent. During this same decade St. Louis had gained one hundred fifteen per cent; Cincinnati, thirty-eight per cent; and New Orleans, nearly forty-five per cent. Only one of them now possessed a greater population than the four lake shore towns combined, and this was New Orleans. In 1850 her population exceeded that of the lake shore towns by 57,789, or nearly one hundred per cent; in 1860 by only 2,257.⁸⁴

The increase of population in the lake shore towns was but in keeping with the expansion of their business and industries. Capital poured in, banks multiplied, new business blocks were built, manufacturing industries were inaugurated, and all business went forward with feverish excitement.⁸⁵ The value of real and personal property in Chicago increased from \$7,220,249 in 1850 to \$36,553,380 in 1859. Writing of his visit to Chicago in 1860, Charles Dudley Warner, after discussing the unsubstantial and mushroom appearance of the city, says: "Yet I am not sure that even then the exceedingly busy and excited traders and speculators did not feel that the

⁸³The Chicago Daily Democratic Press, Jan. 1, 1856, says: "The principal new commercial feature of the year is the appearance in this market of Foreign Governments through their agents as purchasers of grain and produce for direct consignment to Europe. It is not, of course, new or unusual for a portion of Western produce to find its way ultimately to European consumers. This has previously been effected through the agency of speculators and middle-men, and has thus far followed the usual and ordinary course of trade. It is, however, a new, and by no means unimportant feature, to find Europe a customer at our granaries, an operator in our Corn Exchange, and her consumers competing for their share of bread-stuffs and provisions directly at the doors of our Western producers".

⁸⁴U. S. Census, 1850 and 1860.

⁸⁵Moses and Kirkland: Hist. of Chicago, Vol. I, p. 122.

town was more important than New York. For it had a great business. Aside from its real estate operations, its trade that year was set down at \$97,000,000."⁸⁶ What was true in Chicago was true to a more limited degree in all the lake shore towns.

So far we have discussed the changed route for the commerce of the Upper Mississippi Valley in its effect upon the general growth and commercial development of Chicago and Vicinity. In the following Chapter we will discuss its effect upon the development of manufactures on the Lake Shore from 1850 to 1880.

⁸⁶Warner: *Studies in the South and West*, p. 178.

CHAPTER V.

CHICAGO AND VICINITY BECOMES A LEADING MANUFACTURING CENTER.

It is the purpose of this chapter to trace the effects of the causes and conditions already treated in the foregoing chapters, together with certain causes arising later, upon the development of Chicago and Vicinity as a manufacturing center between 1850 and 1880. In pursuing this purpose, our attention will be confined to the manufacture of Iron and Steel and Iron and Steel Goods, Agricultural Implements, Malt and Distilled Liquors, and the Slaughtering, Packing, and Canning of Meats, which will be considered in the order named.

These industries have been selected out of the multitude of industries existing in Chicago and Vicinity, not because in every instance they are the largest, but because, in my judgment, they are the most representative, the explanation of whose rise and development will best enable us to understand the general growth of Chicago and Vicinity as a manufacturing center.

It has been thought convenient to close this dissertation with the year 1880 because by that date the chief characteristics of the manufacturing industries of Chicago and Vicinity have become well established, the peculiar effects of the Civil War have largely subsided, and industry, in the main, has recovered from the great depression following the panic of 1873. The development of manufacturing in Chicago and Vicinity after 1880 is little else than the outcome of causes already operating prior to that date—causes that become continually more effective with the increasing production of raw materials in the tributary territory, the growing demand for manufactured goods in the regions where a market has been found, and the extension of transportation facilities. }

1. During this period, from 1850 to 1880, the manufacture of iron and steel and iron and steel goods made surprising progress. We have seen that in Chicago and Vicinity prior to 1850 this industry was quite insignificant in both variety and extent. A single small furnace had been erected and the foundries were producing

less than \$450,000 worth of goods annually. But few of the great industries of the lake shore were more vitally affected by the change of commercial routes from the Upper Mississippi Valley and the general development that it brought, and in 1880 Chicago ranked thjrd among the iron manufacturing centers of the United States.

One of the chief means by which this change of commerce stimulated the manufacture of iron and steel and iron and steel goods was through the inspiration it gave to the building and equipping of railroads. In 1850 there were but 97 miles of railroads in Illinois, Wisconsin, Minnesota, Iowa, and Missouri. In 1860 these had increased to 4,704.70 miles, in 1870 to 9,114.92 miles, and in 1880 to 22,962.73 miles.¹ If, however, to this mileage in the states named, which were the most directly tributary to Chicago and Vicinity, we add the mileage in the other states and territories west of the Mississippi River, we will find that the total railroad mileage which would more or less directly increase the demand upon Chicago and Vicinity for iron and steel goods was 143.48 miles in 1850, 4,966.61 miles in 1860, 12,839.02 miles in 1870, and 39,135.54 miles on June 30, 1880.² The influence of this tremendous growth in railroad mileage in the region west of Chicago and Vicinity can hardly be realized from these figures. Without reference to the demands arising from repair, it meant a demand during those years for rails alone which, if laid end to end in a single strand, would encircle the globe three times and reach from San Francisco to New York besides. In addition to this demand for rails, the demand for structural iron to span the hundreds of streams that the railroads must cross cannot now well be computed. Another large source of demand for iron and steel as a part of this great railorad expansion is found in the engines and cars needed. If we estimate the total equipment of all the railroads west of Chicago and Viicity from the rolling-stock equipment of five of the leading roads running out of Chicago in 1867 and in 1880—the Chicago and Northwestern; Chicago and Alton; Chicago, Burlington and Quincy; Chicago, Rock Island and Pacific; and the Illinois Central—in 1850 they employed about 32 locomotives and 789 cars, while in 1880 this equipment had grown to 8,697 locomotives and 215,245 cars.³

As the surrounding country developed, its demand for iron and

¹U. S. Census, 1880, Vol. IV, Transportation.

²U. S. Census, 1880, Vol. IV, Transportation.

³Compiled from Poor's Manual of American Railroads.

steel goods necessarily increased rapidly, and that demand was made increasingly effective by the growth of railroad communication. In 1867 two firms in Chicago alone sold over \$390,000 worth of nails⁴—indicative of the rapidity with which the region and its demands were developing. Likewise the demand for agricultural implements and other machinery, as will be seen from our later treatment of their manufacture in Chicago and Vicinity, greatly augmented the local demand for iron and steel in various forms.

Prior to 1868 practically no iron or steel was manufactured in Chicago and Vicinity.⁵ But the large and rapidly increasing demand for iron and steel in the various finished forms early built up a large industry in their manufacture, the raw iron and steel being imported from the East. The rapidly increasing demand for rails, locomotives, and car trucks soon bore fruit. No sooner had the Galena and Chicago Union Railroad begun laying its tracks in 1848 than a Chicago firm, H. H. Scoville and Sons, entered into contract with the company to build a number of its freight and passenger cars. In a short time they began the construction of the first locomotive ever built in Chicago and Vicinity, called the "Enterprise."⁶ November 1, 1853, the Chicago Locomotive Company was chartered with a capital of \$150,000. By 1855 it had become one of the most extensive establishments of its kind in the West and had manufactured ten locomotives valued at \$100,000, besides stationary engines and other machinery to the value of \$15,000.⁷

In September, 1852, the Union Car and Bridge Works began the erection of their manufacturing plant in Chicago. During 1853 they built 250 freight cars, 20 first class passenger cars, 10 second class passenger cars, and 10 baggage and mail cars. In addition they furnished all the iron work for 150 railroad bridges, numerous turntables, and other furniture for some twenty-four lines of railroad in Illinois, Missouri, and Wisconsin. In this work they consumed 3,600 tons of wrought and cast iron and 7,000,000 feet of lumber. In 1854 they built 400 cars, worth \$300,000, and in their construction consumed 1,650 tons of iron, 725,000 feet of lumber, and 1,500 tons of coal. In Illinois alone, they completed 11,897 linear feet of bridges and had 7,000 feet partially completed, all

⁴Wright: Chicago, Past, Present, and Future, p. 244.

⁵Chicago Tribune, Jan. 3, 1869.

⁶Andreas, History of Chicago, I, p. 568.

⁷Chicago Daily Dem. Press, Feb. 16, 1855.

worth \$450,000. Among these bridges was the first railroad bridge across the Mississippi, at Rock Island. For these and other works within the state of Illinois they used 1,534 tons of iron. Other similar operations were carried on in Wisconsin, Iowa, and Missouri during the same year.⁸ Similar work was done by the American Car Company, which began operations in the fall of 1852. In 1853 they built 700 cars and turned out finished work to the value of over \$450,000. The next year they manufactured 39 first-class passenger cars, 11 baggage express cars, 510 house freight cars, 230 platform cars, and car and railroad castings amounting in all to \$600,000 in value.⁹ The value of locomotives, machinery, railroad cars, and other iron goods produced in Chicago in 1854, exclusive of agricultural implements and wagons, was \$3,200,000.¹⁰ Nor was all such manufacture upon the lake shore confined to Chicago. In Milwaukee, for the year ending March 1, 1853, the various iron manufactures, excluding agricultural implements and wagons and including tin and copper, had a value of \$176,099.¹¹ In 1856 Milwaukee manufactured iron goods, including railroad cars, valued at \$1,555,000.¹²

So rapidly did this industry develop that by the close of 1856 there were thirty-five different firms so engaged in Chicago alone, employing a capital of \$1,763,900, giving labor to 2,366 men, consuming 22,594 tons of iron, and turning out a finished product valued at \$3,887,084.¹³ This, added to the value of the iron goods manufactured in Milwaukee during the same year, amounts to \$5,442,084 in value. In describing this year's progress in the manufacture of iron goods, the Chicago Daily Democratic Press says, "The great demand for machinery of all kinds throughout the West and Northwest, as well as the high estimation in which Chicago iron manufactures are held has so crowded our foundries and machine shops with orders that they have had to employ all the available force that could be obtained, and to extend their limits as fast as it was possible to erect the necessary buildings."¹⁴

By 1854 the railroad companies themselves began to realize the great amount of manufactures needed in their equipment and the

⁸Chicago Daily Democratic Press, Feb. 16, 1855.

⁹Ibid.

¹⁰Industrial Chicago, III, p. 588.

¹¹Milwaukee City Directory for 1854-5.

¹²Hunt's Merch. Mag., Vol. 41, p. 319.

¹³Chicago Daily Dem. Press, Jan. 21, 1857.

¹⁴Chicago Daily Dem. Press, Jan. 21, 1857.

disadvantage of depending altogether upon independent firms for their making. In that year the Galena and Chicago Union Company established its own machine and repair shops in Chicago.¹⁵ Other railroads followed the example, and in 1856 six railroad companies owned their own shops in Chicago.¹⁶

In 1857 the increased demand for rails with which to extend and repair the tracks of the rapidly developing railroad systems west of Chicago and Vicinity brought a new industry to Chicago. This was found in the Chicago Rolling-Mill built by Captain Eber B. Ward, of Detroit, for the purpose of re-rolling iron rails. It proved to be the nucleus which later developed into the great Illinois Steel Company, having plants, at the time of its absorption by the Federal Steel Company in 1898, at Chicago and Joliet in Illinois; and at Bay View, Wisconsin. \$225,000 was the capital of the original Chicago Rolling-Mill and its capacity was about one hundred tons of iron rails a day. In 1864, to keep pace with the demands made by the growth of the railway systems centering in Chicago and Vicinity, its capacity was doubled and a puddling department was added. In the same year the Chicago Rolling-Mill Company was formed with a capital of \$500,000, and the private enterprise of Captain Ward was merged with this. As yet no iron or steel was manufactured by the company, but on May 24, 1865, the first steel rail ever manufactured in America was rolled at the works of this company from steel blooms made from Lake Superior iron ore at Wyandotte, Michigan.¹⁷

Although in 1868 Chicago possessed twenty-seven establishments working in iron and steel, aside from the manufacture of agricultural implements, wagons and carriages, which turned out goods valued at \$2,830,000,¹⁸ very little iron or steel was being manufactured in Chicago and Vicinity. We have seen that a small furnace was in operation at Milwaukee as early as 1845. But the industry developed slowly owing to the difficulty of obtaining both ore and fuel for smelting. In 1860 Illinois and Wisconsin together produced only 4,000 tons of pig iron, valued at \$94,900.¹⁹ Practically all the iron used in Chicago and Vicinity prior to 1860 had to be imported

¹⁵Andreas, History of Chicago, I, p. 568.

¹⁶Chicago Daily Dem. Press, Jan. 21, 1857.

¹⁷Andreas, History of Chicago, II, 674. Moses and Kirkland, History of Chicago, III, p. 410.

¹⁸Colbert, History of Chicago, p. 78.

¹⁹U. S. Census, 1860.

from Ohio and Pennsylvania, and even from Scotland, although some was brought from Missouri and Lake Superior.²⁰ So long as Pennsylvania and Ohio remained the principal regions for the supply of both iron ore and coal with which to smelt it, this dependence of Chicago and Vicinity upon them for its iron supply was to be expected. The finished iron product could be shipped from Ohio and Pennsylvania to Chicago and Vicinity cheaper than could the crude ore and most of the coal for smelting. But, with the development of the Lake Superior iron fields, new elements were introduced into the problem of how Chicago and Vicinity could best obtain its iron supply.

Iron mining began in the Lake Superior region as early as 1846, but, for ten years, owing largely to a want of transportation facilities from the mines to suitable shipping points, little progress was made. In 1855, however, a plank and strap-railroad was laid from the mines to Marquette, a port upon Lake Superior,²¹ and the same year the St. Mary's Ship Canal, giving free egress to vessels from Lake Superior through the St. Mary's River into Lake Huron, was opened.²² In September, 1864, the Peninsular Branch of the Chicago and Northwestern Railroad was opened between Escanaba, a port on the Lake Michigan shore of the Upper Peninsula, and Negaunee on the Marquette, Houghton and Ontonagon Railroad. This road had been opened between Marquette and Ishpeming in the mining region in 1857.²³ Thus, between the years 1855 and 1865, the problem of transportation for the iron ore of Lake Superior had been solved.

The effect upon the production of Lake Superior iron ore was electrical. From 1,447 tons in 1855, the shipments of ore from the Lake Superior fields increased to 116,998 tons in 1860²⁴ and 856,471 tons in 1870.²⁵ Meanwhile the manufacture of pig iron in the Lake Superior region had increased from 5,660 tons in 1860 to 49,298 tons in 1870.²⁶ The reason for this comparatively small development of pig iron manufacture is found in the fact that no coal fields were easily accessible to that region and charcoal was the only

²⁰Memorial to U. S. Government for a National Armory and Foundry at Chicago, p. 12 et seq.

²¹Mich. Geol. Survey, I, 21; Mich. Pioneer Soc. Coll., XI, p. 173.

²²Chicago Daily Dem. Press, Jan. 1, 1856.

²³Report of Commissioner of Railroads, Mich., 1875, pp. 47, 295.

²⁴Hunt's Merch. Mag., Vol. 48, p. 260.

²⁵Chicago Daily Tribune, Jan. 31, 1873.

²⁶Ibid.

fuel that could be readily used there.²⁷ Here, then, was the question: could the furnaces of Ohio and Pennsylvania continue to supply the rapidly expanding needs of Chicago and Vicinity for pig iron when one-fourth of all the iron ore produced in the United States was being mined in the Lake Superior region, although little could be smelted there? Upon the solution of this question depended much of the future history of iron and steel and kindred manufacturing in Chicago and Vicinity.

Escanaba, on Lake Michigan, rapidly became one of the chief shipping ports for ore from the Lake Superior region. In 1872 there were 474,715 tons shipped from Escanaba and 415,789 tons from Marquette.²⁸ This fact had great significance for Chicago and Vicinity, for it brought the iron fields some three or four hundred miles nearer than if Marquette had been the only port for its shipment. The distance from Escanaba to Chicago is only 300 miles, while the distance from Escanaba to Cleveland is 800 miles. Hence, in 1869, the difference in the direct freight rate was said to be from one dollar to one dollar and fifty cents per ton in Chicago's favor, saying nothing of the cost of bringing the pig iron from Cleveland or Pittsburgh to Chicago.²⁹ But Chicago had yet another advantage in freight rates with respect to Cleveland or other eastern points. Eastern bound freights were at that time always higher than western bound freights, because there was really not enough westward freight to load the vessels returning from carrying their cargoes to the East. Vessels usually had to return laden with coal or ballast, which considerably lowered westward freight rates. This applied to ore shipped from Escanaba to Chicago.³⁰

We have seen that the demand for iron and steel had been growing rapidly in Chicago and Vicinity until, in 1868, 75,000 tons of pig iron were used in Chicago alone. The only remaining element necessary to the establishment of furnaces and the manufacture of pig iron in Chicago and Vicinity was the requisite fuel supply. This, also, could now be obtained. Illinois coal had already been successfully used in smelting Lake Superior iron ore and could now be laid down at Chicago in large quantities at \$3.00 to \$4.00 per ton. Indiana coal, of a quality little inferior to Brier Hill coal, could be

²⁷Chicago Tribune, Jan. 3, 1869.

²⁸Chicago Daily Tribune, Jan. 31, 1873.

²⁹Chicago Tribune, Jan. 3, 1869; Statistical and Historical Review of Chicago,

p. 62.

³⁰Ibid.

obtained at nearly the same price, and Pittsburgh coke and anthracite coal could be delivered in Chicago at a very small advance upon the price in Cleveland.³¹ The receipts of coal at Chicago from all sources had increased from 170,897 tons in 1860 to 658,234 tons in 1868.³² The amount of coal forwarded from Chicago had increased at the same time from 20,364 to 83,399 tons,³³ showing that an abundance of coal could then be obtained to meet every demand.

Here, then, the chief elements for the beginning of iron manufacture upon an extended scale in Chicago and Vicinity had met—a large and rapidly growing demand for pig iron; an abundance of iron ore of the finest quality, easily accessible and at large advantage in freight rates over eastern competing points; and an abundant supply of coal to be used in the smelting at a cost little, if any, in advance of the cost of fuel in Ohio and Pennsylvania. It only remained for enterprising capitalists to seize the opportunity. This came in 1868. A. B. Meeker, having sold 40,000 tons of pig iron in Chicago during the preceding year, determined, in conjunction with some other capitalists, to start blast furnaces. In March, 1868, the Chicago Iron Ore Company was organized for this purpose with a capital of \$250,000. Work was begun upon the plant in June, and on Monday, December 28, 1868, it was ready to begin the manufacture of pig iron with a capacity of twenty-five tons daily.³⁴ In 1870 the North Chicago Rolling-Mill Company added two blast furnaces to their plant at a cost of \$250,000.³⁵ During the same year Milwaukee manufactured 12,830 tons of pig iron and 16,248 tons of railroad iron.³⁶

Another phase of the iron and steel industry in the United States now began to make its appearance and had a large effect upon the iron and steel industry in Chicago and Vicinity. This was the manufacture of steel rails. The manufacture of steel rails in Europe may be said to have commenced in 1856 when Sir Henry Bessemer's patent for the manufacture of steel was issued. The production of steel by the Bessemer process was introduced into the United States in 1865, and in 1867 steel rails for railroads were rolled at Johnstown, Pennsylvania. The output of Bessemer steel rails in the

³¹Wright: Chicago, Past, Present, and Future, p. 240.

³²Chicago Board of Trade Reports, 1862 and 1869.

³³Ibid., 1861 and 1869.

³⁴Chicago Daily Tribune, Jan. 3, 1869.

³⁵Andreas, History of Chicago, II, p. 674.

³⁶Milwaukee Chamber of Commerce Report, 1870, p. 60.

United States grew from 2,550 tons in 1867 to 954,460 tons in 1880. During that year also 13,615 tons of open-hearth steel were manufactured, making a total of 1,126,305 tons.³⁷ The introduction of steel rails was simultaneous with the beginning of one of the most remarkable periods of railroad expansion in the United States, during which the annual construction of railroads increased from 2,540.68 miles in 1867 to 7,439.04 miles in 1872, and the total mileage in the country increased from 36,939.92 to 63,267.64 miles.³⁸ During this same period the annual construction of railroads west of Chicago and Vicinity increased from 1,282 miles to 4,293.39 miles.

Although in 1880 the price of steel rails was still higher than the price of iron rails, the reduction in the cost of "keeping up track" and "renewals of rails" was so large—being from 40 to 60 per cent per ton-mile—and the possibilities of reducing the cost of transportation through enlarging cars and locomotives was so great, that steel rails were rapidly substituted for iron ones. By the close of 1881, of the 130,536 miles of railroad track in the United States, 49,062 miles were laid with steel rails. 25,623 miles were in the central western states.³⁹ This led naturally to the manufacture of steel rails in Chicago and Vicinity. In 1872 the North Chicago Rolling-Mill Company added a Bessemer steel plant, at a cost of \$350,000, for the purpose of making Bessemer steel rails. In 1882 four blast furnaces and a Bessemer steel rail mill were added at South Chicago at a cost of \$3,000,000.⁴⁰

The period of rapid railroad expansion referred to above was followed by the disastrous financial panic of 1873. It is not necessary here to deal with this in detail. Suffice it to say that the annual mileage of railroad construction in the United States sank from 7,439.04 miles in 1872 to 1,606.48 miles in 1875. With 1876 the industry began to recover and in 1879 reached 5,006.47 miles.⁴¹ The iron interest throughout the country suffered more from the effects of the panic of 1873 than any other one interest, but, with the return of prosperous railroad and other industrial conditions,

³⁷Internal Commerce Report, 1882, p. 304.

Sparks, National Development, p. 322.

³⁸U. S. Census, 1880, Vol. IV, p. 290.

³⁹Internal Commerce Report, 1882, pp. 297, 298.

	1868	1872	1876	1880
Price of rails per ton.				
Bessemer steel	\$158	\$112	\$59	\$67
Iron	79	85	41	59

"Statistics of Iron Trade," 1880, p. 55.

⁴⁰Andreas, History of Chicago, II, p. 674.

⁴¹U. S. Census, 1880, Vol. IV, p. 290.

iron and steel manufacturing rapidly revived.⁴² Of the ten Bessemer steel works in the United States in 1876, two were in Chicago, and were producing about one-fifth of all the Bessemer steel produced in the United States. ✓ Of the 291,000 tons of Bessemer steel rails produced in the country in 1875, about 85,000 tons, or nearly one-third, were made in Chicago.⁴³ During the same year Chicago and Milwaukee together manufactured over 66,000 tons of pig iron and over 46,000 tons of railroad iron.⁴⁴ The iron industries of Chicago alone numbered 200, gave employment to 10,000 men, paid \$7,000,000 in wages, and produced goods valued at \$35,000,000,⁴⁵ while the iron manufactures of Milwaukee for the same year amounted to \$2,921,000 in value.⁴⁶

The remaining history of the iron and steel industry of Chicago and Vicinity to the close of the period of which we are treating is simply the natural growth due to the reviving and expanding industries of the country and the working out of the forces already noticed. A few of the larger incidents of this development will be mentioned. In 1878 the works of the Milwaukee Iron Company, then engaged in the manufacture of pig metal, iron rails and merchant sizes of bar iron, at Bay View, Wisconsin, were purchased by the North Chicago Rolling-Mill Company. A little after the close of our period, during 1882, a further addition was made at South Chicago, Illinois, by the building of four blast furnaces, a Bessemer steel department and a steel rail mill, at a cost of \$3,000,000. The North Chicago Rolling-Mill Company now operated upon a capital of \$5,000,000 and owned the plants at Milwaukee, North Chicago, and South Chicago.⁴⁷ It thus became the forerunner of the great Illinois Steel Company, organized in 1889 with a capital of \$50,000,000 and owning plants at Milwaukee, North and South Chicago, Joliet, Illinois, and the Union Steel Company's works at Chicago. Another enterprise of Chicago and Vicinity whose history begins in the early '80's just after the close of our period is the Pullman Palace Car manufacturing industry. It was located, in part, at Pullman, within the city limits of Chicago. \$5,000,000 were expended in building the works and town, and in 1895 the industry had reached

⁴²The Western Manufacturer, Jan., 1876, p. 10.

⁴³The Western Manufacturer, Sept., 1876, p. 214.

⁴⁴Ibid., Milwaukee Chamber of Commerce Report, 1875, p. 104.

⁴⁵Western Manufacturer, Sept., 1876, p. 214. Chicago Daily Tribune, Jan. 1. 1876.

⁴⁶Ibid., Feb., 1876, p. 40.

⁴⁷Andreas, History of Chicago, II, p. 674.

such magnitude that it consumed annually 51,000,000 feet of lumber and 85,000 tons of iron, part of which was manufactured at the two furnaces operated by the Company at Pullman.⁴⁸

Aside from the manufacture of iron and steel goods, the manufacture of iron and steel in Chicago and Vicinity, during the year ending June 1, 1880, was carried on in 13 establishments, with a capital of \$5,175,000, employing 4,531 workmen. These establishments, paid out \$2,240,677 in wages and produced 376,670 tons of iron and steel, valued at \$15,414,902. In that year only one city in the United States surpassed Chicago in the extent of its iron and steel industries. The manufacture of iron and steel goods in Chicago and Vicinity was carried on in 491 establishments, having a capital of \$11,536,679 and employing 13,049 workmen. These establishments paid out \$6,083,496 in wages, and produced goods valued at \$25,407,681.⁴⁹

2. No one of the great manufacturing industries of Chicago and Vicinity, except the preparation of meats, has been more completely dependent upon the development of the territory west of Lake Michigan than the manufacture of Agricultural implements and wagons. We have already discussed the reason for, and extent of, the rise of this industry prior to 1850. But, simultaneous with the phenomenal development of the central and western portions of the United States since that date, this industry naturally has had its greatest growth. That this was necessarily true can scarcely admit of question when we notice the position of Chicago and Vicinity. It was almost in the heart of the hard-wood forests of Michigan, Indiana, and Wisconsin. It was surrounded on three sides by, and was in easy reach of, the coal and iron fields of Illinois, Ohio, Pennsylvania, and Lake Superior. It was on the edge of one of the largest and most productive agricultural valleys in the world, while railroads were rapidly pushing out in every direction across this plain and supplying the best of modern transportation facilities between the lake shore and every section of the West.

The accompanying tabulation of the growth by decades from 1850 to 1880 of railroad mileage, farm acreage, and value of agricultural implements used in each state and territory west of Chicago⁵⁰ will reveal at once the growth in demand for agricultural implements,

⁴⁸Moses and Kirkland, *History of Chicago*, II, p. 438.

⁴⁹U. S. Census, 1880.

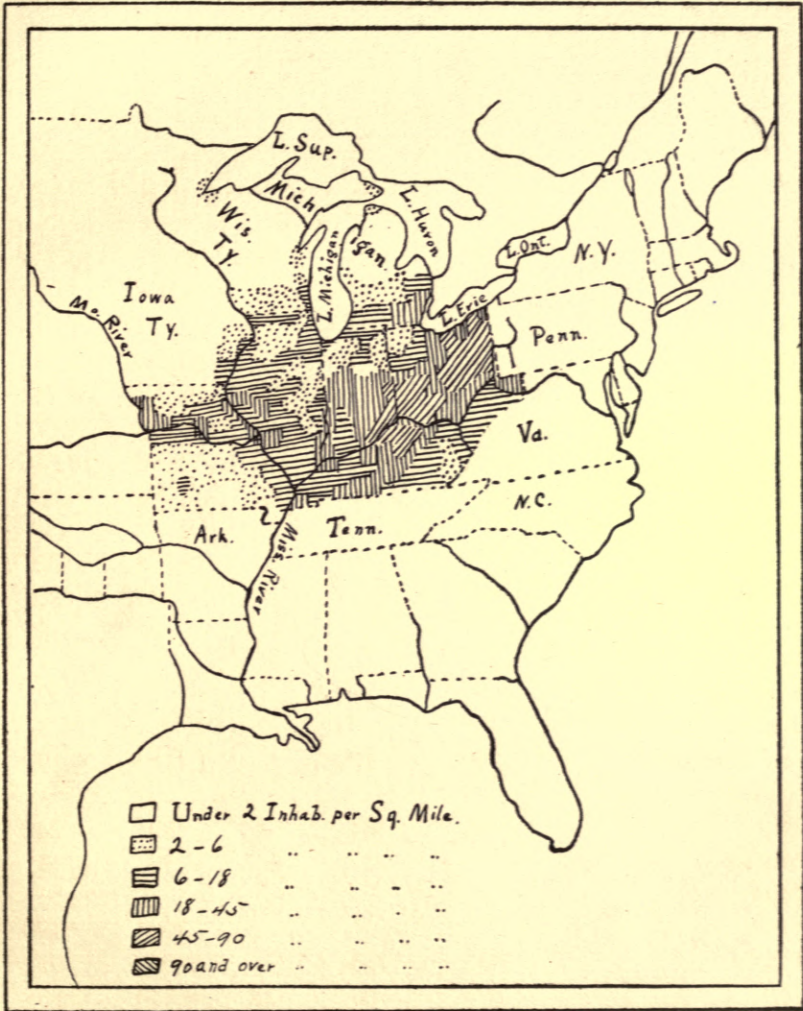
⁵⁰Tabulated from U. S. Census Reports.

and in means for distributing them from Chicago and Vicinity. Although this demand has not been entirely supplied from Chicago and Vicinity alone, yet the presence of the demand and the fact that Chicago and Vicinity was so favorably situated for supplying it are the primary factors in the development of this industry upon the lake shore.

	1850			1860		
	Railroads Miles (a)	Farms Acreage (000, omitted)	Farm imple- ments, Value (000, omitted)	Railroads Miles	Farms Acreage (000, omitted)	Farm imple- ments, Value (000, omitted)
Ill.	176	12,037	6,405	2,790	20,911	17,235
Wis.	20	2,976	1,641	905	7,893	5,758
Minn.		28	15		2,711	1,018
Iowa		2,736	1,172	655	10,069	5,327
Mo.		9,732	3,981	817	19,984	8,711
Ark.		2,598	1,601	58	9,573	4,175
La.	63	4,989	11,576	335	9,298	18,648
Texas		11,496	2,151	307	25,344	6,259
Ind. Ty.						
Kansas					1,778	727
Nebraska					631	205
Dakota					26	15
Mont.						
Wyoming						
Colo.						
New Mexico		290	77		1,414	192
Arizona						
Utah		46	84		89	242
Nevada					56	11
Idaho						
Wash.					366	190
Oregon		432	183		2,060	952
Calif.		3,893	103	23	8,730	2,558

(a) For Jan. 1, 1852.

DISTRIBUTION OF POPULATION IN THE OHIO AND UPPER MISSISSIPPI VALLEYS IN 1840.



	1870			1880		
	Railroads Miles	Farms Acreage (000, omitted)	Farm imple- ments, Value (000, omitted)	Railroads Miles	Farms Acreage (000, omitted)	Farm imple- ments, Value (000, omitted) (b)
Ill.	4,823	25,822	27,661	7,851	31,673	33,739
Wis.	1,525	11,715	11,391	3,155	15,353	15,641
Minn.	1,092	6,483	5,376	3,151	13,403	13,089
Iowa	2,683	15,541	16,408	5,400	24,752	29,371
Mo.	2,000	21,707	12,476	3,965	27,879	18,103
Ark.	256	7,597	1,789	859	12,061	4,637
La.	450	7,025	5,727	652	8,273	5,435
Texas	711	18,396	2,716	3,244	36,292	9,051
Ind. Ty.				289		
Kansas	1,501	5,656	3,242	3,400	21,417	15,652
Nebraska	705	2,073	1,239	1,953	9,944	7,820
Dakota	65	302	114	1,225	3,800	2,390
Mont.		139	116	106	405	401
Wyoming	459	4	4	512	124	95
Colo.	157	320	202	1,570	1,165	910
New Mexico		833	96	758	631	255
Arizona		21	16	349	135	88
Utah	257	148	232	842	655	946
Nevada	593	208	130	739	530	378
Idaho		77	47	206	327	363
Wash.		649	232	289	1,409	958
Oregon	159	2,389	1,034	508	4,214	2,956
Calif.	925	11,427	4,252	2,195	16,593	8,447

(b) Corrected for gold at 25% premium.

It will be noticed that during the earlier years of the period, while railroad communication had not yet extended greatly west of the Mississippi River, the regions most easily tributary to Chicago and Vicinity were most rapidly increasing their demands for agricultural implements. Between 1850 and 1870 Illinois and Wisconsin alone increased their farm acreage from 15,013,000 to 37,597,000 acres and the value of their agricultural implements from \$8,046,000

to \$39,052,000. But, if we add to this the value of agricultural implements used in Minnesota, Iowa, and Missouri, in 1870, all of which had become easily tributary to Chicago and Vicinity through the extension of its railroad lines, we find the demand for agricultural implements had increased from \$8,046,000 to \$73,312,000. By 1880 Chicago and Vicinity had been placed in communication with the entire West, the value of whose agricultural implements was then \$170,731,000.

This demand was met in Chicago and Vicinity by the requisite raw materials. By 1857 there were several lumber yards in Chicago dealing in hard-wood lumber alone. The receipts for that year amounted to 10,000,000 feet, which came from Michigan and Indiana and retailed at \$12 to \$20 per thousand.⁵¹ Similar supplies could be as easily received at other points on the lake shore. For some years the manufacturers of Chicago and Vicinity had to depend upon Pennsylvania and Ohio furnaces, in the main, for their iron supply. In 1861 the price for pig iron at Chicago ranged from \$15 to \$25 per ton,⁵² while the price at Philadelphia was \$20.25 per ton.⁵³ After 1868, as we have seen, Chicago and Vicinity began to manufacture its own iron in sufficient quantity to help regulate its price. But the advantage of Chicago and Vicinity for manufacturing agricultural implements did not depend upon its own manufacture of iron, for the raw material (raw iron) could be shipped from the furnaces in the East to Chicago and Vicinity more cheaply than the iron goods, had they been manufactured near the furnaces of the East. Chicago and Vicinity's advantages as a distributing center gave it its chief advantage as a manufacturing center.

The chief implements for use upon the farms consisted of reapers and mowers, threshers, fanning-mills, plows, harrows, seeders, and wagons. The manufacture of most of these implements has been followed in previous chapters down to 1850. By that time they had become quite well located at points where they still remain characteristic industries. Chicago leads in the manufacture of grain reapers, while Racine is the home for most of the manufacture of grain threshers, fanning-mills, and wagons. Kenosha, also, is noted for

⁵¹Andreas, *History of Chicago*, II, p. 603.

⁵²"Memorial to Government of U. S. for a National Armory and Foundry," Chicago, p. 12 et seq.

⁵³Swank, *Iron in All Ages*, p. 514.

its wagon making; while Milwaukee is least important of all as a manufacturing center for agricultural implements.

The manufacture of the grain reaper in Chicago and Vicinity prior to 1880 was conducted chiefly by three firms in Chicago—the McCormick Manufacturing Company, founded in 1847; John S. Wright & Company, founded in 1853 for the manufacture of the Atkins Self-Raking Reaper and Mower; and the Deering Manufacturing Company, established in 1870. Improvements in the machines were made rapidly, and these companies could scarcely keep pace with the demand of the country for reapers. At the beginning of the Civil War the self-raking machine was made successful, thus saving the labor of one man on each reaper just at a time when men's services were most needed in the armies of the North. It has been well said that "what the slave was to the South the reaper was to the North," allowing thousands of men to go to war who otherwise would have been compelled to remain at home to help provide sustenance for the rest. In 1875 another great improvement was made when the automatic wire binder was perfected. This added much to the popularity and value of the machine by greatly reducing the work in harvest which had formerly been done by hand. The wire binder was soon followed by the twine binder.

Although this industry, in common with many others, suffered greatly from the disastrous fire in Chicago in 1871 and from the financial panic of 1873, being dependent for its market upon the still prosperous West, it recovered rapidly. In 1874 about 15,000 reapers were manufactured, which was one-third more than had ever been manufactured previously in one year.⁵⁴ In 1875 this number was increased to 20,000,⁵⁵ a reaper for every ten minutes of labor time throughout the year. Yet, large as is this increase in production of reapers since 1850 when 1,600 were produced, it scarcely kept pace with the increasing demand due to the production of wheat alone in the eight principal wheat-growing states of the Mississippi Valley. Between 1850 and 1880 the production of wheat in Illinois, Wisconsin, Minnesota, Iowa, Missouri, Kansas, Nebraska, and Dakota Territory, increased from 18,214,340 to 200,719,490 bushels.⁵⁶ At the same time their production of oats increased from 20,334,919 to 207,711,619 bushels. This increased production of

⁵⁴Chicago Daily Tribune, Jan. 1, 1875.

⁵⁵Ibid., 1876.

⁵⁶Compendium of Tenth U. S. Census.

small grains meant increased demands upon Chicago and Vicinity for agricultural implements, for, as early as 1869, such were the transportation facilities of Chicago that goods destined for Dakota, Montana, and Idaho, could reach their destination in twenty days less time from Chicago than from St. Louis.⁵⁷ Illustrative of this advantage in transportation facilities and of the growing demand, the following is in point. On the 28th of July, 1882, one of Chicago's establishments shipped to Fargo, Dakota, 22 cars filled with harvesting machinery. The train went through in 45 hours, a distance of 648 miles. Two days later, the same firm shipped 25 cars, loaded with harvesting machinery, to Grand Forks, Dakota.⁵⁸

Yet, the manufacturers of agricultural implements in Chicago and Vicinity were not dependent upon the demand in the West alone. Indeed, it is said that the chief cause for the increased output of reapers in 1874 was due to the increased demand from England as a result of the great strike among English farm laborers.⁵⁹ A few years later reapers were being shipped from Chicago to New Zealand, Australia, Africa, South America, Russia, Germany, Italy, Spain and France. Upon one occasion 112 car-loads were shipped to New York, en route to New Zealand, to fill a single order.⁶⁰

The great increase in the production of wheat and oats in the Mississippi Valley, which we have already seen was one of the chief factors in developing the manufacture of grain reapers in Chicago and Vicinity, acted at the same time as the chief stimulus to the manufacture of grain threshers. This industry was carried on in Chicago, Racine, and Milwaukee, though Racine soon became, and remains, the chief point for this industry. In Chicago, threshing machinery was manufactured chiefly by H. A. Pitts & Company, and Wemple, Kline & Company. In 1856 the former made 200 separators and horse-powers, valued at \$75,000 and had 300 machines in course of construction for the following year. The latter firm was doing a business of similar proportions.⁶¹ By 1879, J. I. Case & Company of Racine had become the largest establishment for the manufacture of threshing machines in the world. They were then manufacturing 325 engines and 2,500 separators and

⁵⁷Chicago Daily Tribune, Jan. 19, 1869.

⁵⁸Land, op. cit., p. 59.

⁵⁹Chicago Daily Tribune, Jan. 1, 1875.

⁶⁰Andreas, History of Chicago, II, p. 685.

⁶¹Chicago Daily Dem. Press, Jan. 21, 1857.

horse-powers a year. They employed 500 men in their factory and had over 500 agencies throughout North America.⁶²

Between 1850 and 1880 the amount of improved land in farms in Illinois, Wisconsin, Minnesota, Iowa, Missouri, Kansas, Nebraska, and Dakota, increased from 9,853,196 to 96,530,628 acres. Thus was greatly increased the demand in the region for plows. The development of the industry cannot now be followed with any detail, for it has been conducted generally in connection with the manufacture of other agricultural implements. Like the improvements in means of harvesting grain, nearly every improvement in means of breaking the soil beyond the methods used by the ancient Egyptians has been made since 1830. At that time the rudest sort of wooden mould-board plows were still in use and farmers believed that iron plows would poison the soil. From this primitive wooden implement has been evolved the various forms now in use from the light self-scouring, steel walking-plow to the big wheel plows turning from two to six or more furrows at once. Something of the growth of this industry may be seen from the fact that in Chicago alone the production of plows increased from 28,000 in 1874 to 66,000 in 1876, which were sold as far west as Montana and Idaho.⁶³

The rapid increase in farms and farm products in the states west of Chicago brought increased demand for farm wagons and other vehicles, while the rapid development of the lake shore towns themselves added much to the same demand. The hard woods and iron needed in wagon manufacture being easily accessible in Chicago and vicinity, wagon making early developed. The period from 1850 to 1880 saw the industry evolve from one conducted in small isolated shops connected with blacksmithing to one engaging mammoth factories, where division of labor is highly developed and where a wagon can be turned out complete every twenty minutes. This concentration of the industry in large factories was especially true in Racine and Kenosha. In 1852 the Bain Wagon Works were established in the latter place; by 1865 they were building about 20 wagons per week. In 1879 they manufactured 10,000 wagons worth \$650,000, engaged a capital of \$700,000 and gave employment to over 300 men. They marketed their wagons throughout the West and in Europe.⁶⁴ In Racine the manufacture of wagons was

⁶²History of Racine and Kenosha Counties, p. 459.

⁶³Chicago Daily Tribune, Jan. 1, 1876 and 1877.

⁶⁴History of Racine and Kenosha Counties, p. 547.

carried on by three large firms—Mitchell, Lewis & Company, established in 1855; Fish Brothers & Company, established in 1862; and the Racine Wagon and Carriage Company, established in 1877. The brands of wagons produced by these factories have become famed throughout the country. In 1879 Mitchell, Lewis & Company had a capacity for turning out one wagon every twenty minutes, and their average production was 800 per month. Their sales amounted to \$600,000 annually and extended from California to Pennsylvania and even to Europe.⁶⁵ Fish Brothers & Company began in the fall of 1862 with a capital of only \$1,000. In 1879 their plant covered twenty acres and they were producing 12,000 vehicles a year, which they sold throughout the United States, Europe, South America, and Australia.⁶⁶ The Racine Wagon and Carriage Company, though young, had a capital of \$50,000 and produced, during the same year, vehicles valued at \$75,000.⁶⁷ In Milwaukee this industry did not make rapid progress. In the thirty years between 1849 and 1879 the annual value of its wagon and carriage manufactures increased from \$115,000 to only \$184,000.⁶⁸

In Chicago, concentration in this industry was less marked than in Kenosha and Racine. In 1857 there were 32 firms engaged in the manufacture of wagons and carriages, having a capital of \$356,400 and turning out vehicles valued at \$948,160.⁶⁹ In 1870 Chicago had 63 wagon-making establishments, which produced vehicles valued at \$1,430,368. Only New York and St. Louis surpassed it in the value of output.⁷⁰ The wagon-making industry of Chicago suffered severely by the great fire of 1871. For this reason the production in 1872 was scarcely seventy per cent that of 1870. But by 1874 the industry had largely recovered, and that year showed an increase of 270 per cent in capital and 35 per cent in production.⁷¹ In 1880 Chicago produced \$1,809,759 worth of wagons and carriages and was surpassed by only New York and Philadelphia, which produced wagons and carriages valued at \$2,613,361 and \$2,057,119 respectively.⁷²

As agriculture advanced in the West, new forms of farm machin-

⁶⁵Ibid., p. 459 et seq.

⁶⁶Ibid.

⁶⁷Ibid.

⁶⁸Buck, *Milwaukee under the Charter*, III, p. 214.

⁶⁹Chicago Daily Dem. Press, Jan. 21, 1857.

⁷⁰Industrial Chicago, III, p. 604.

⁷¹Chicago Daily Tribune, Jan. 1, 1875.

⁷²Industrial Chicago, III, p. 604.

ery were demanded. Thus new industries sought the advantages offered by Chicago and Vicinity for their manufacture. In 1880 Chicago and Vicinity had 87 establishments devoted to the manufacture of agricultural implements, wagons and carriages. They employed a capital of \$8,562,210 and produced manufactures valued at \$9,237,941.⁷³

3. In accordance with the recommendation of Mr. Jefferson upon his accession to the presidency in 1801, the whole system of internal taxation by the federal government was repealed. And, although reinstated for a time during the second war with Great Britain, the tax upon distilled spirits practically formed no part of our fiscal system during the period of more than half a century between the years 1801 and 1862. Resulting in part from this policy there was an enormous growth in production and consumption of distilled spirits among the American people. Indian corn, the cheapest and most abundant of all the cereals, became the chief source of manufacture, and the amount of distilled spirits produced increased from about 6,500,000 proof gallons in 1791 to 90,412,581 gallons in 1860.⁷⁴ The cheapness of the raw material from which the spirits were chiefly made and the freedom from taxation such as obtained in European countries had a marked effect upon the price of the American article. For the five years preceding 1862, the average price in the New York market was 24 cents per proof gallon, with a minimum price of 14 cents.⁷⁵ This led to a very large consumption, both for personal use and in the arts. For example, in 1860, in the city of Cincinnati alone, the distillate from 12,000 bushels of corn was required every twenty-four hours in the manufacture of an illuminating agent called "burning fluid," which contained about 80 per cent alcohol. Throughout the country during the same year, it is estimated that over 25,000,000 proof gallons of spirits were consumed for this purpose.⁷⁶ Aside from the extensive use of spirits in the arts, their large consumption as a beverage in the homes of the American people during the period under discussion is a well known fact.

These conditions could not fail to have an effect upon the distilling industry in Chicago and Vicinity. Enough has already been

⁷³U. S. Census for 1880.

⁷⁴Lalor, *Cyclopaedia of Pol. Science*, I, p. 809.

⁷⁵Lalor, *Cyclopaedia of Pol. Science*, I, p. 809.

⁷⁶*Ibid.*

said to show that it was most favorably located with reference to the great cereal producing region of the upper Mississippi Valley, and that means of communication between the two were being rapidly provided by the building of many miles of railroads. The receipts of corn at Chicago increased from 7,490,753 bushels in 1854 to 29,574,328 bushels in 1862, and the receipts of rye increased during the same time from 85,191 to 1,038,825 bushels.⁷⁷ The demand for high wines was large. The amounts forwarded from Chicago throughout the region tributary to it in various directions increased from 6,335 barrels in 1855 to 100,170 barrels in 1862.⁷⁸ To meet this demand and that for home consumption, Chicago increased her manufacture from 1,653,000 gallons in 1856 to 5,394,000 gallons in 1861.⁷⁹ Little manufacture of high wines in Chicago and Vicinity took place outside of Chicago prior to 1860. Even as late as 1865 Milwaukee was producing only 3,046 barrels per annum.⁸⁰ This slow development in Milwaukee was probably due in the main to the development of the brewing industry at that place, as we shall see a little later. The pioneer distillers of Chicago were D. Ballentyne and A. Crosby & Company.⁸¹ Both were doing a large business as early as 1855, and they seem to have been practically the only occupiers of the field prior to 1860.

“In colonial times, as well as in the early decades of the nation’s history, the consumption of malt liquors was relatively small and increased slowly. . . . Where the demand existed at all, it was for ale, porter, or stout. The manufacture of lager beer in the United States was begun about 1840. Its use extended with the general increase of population, the influx of German immigrants, and the cultivation of the tastes of the people for milder beverages. In 1900 its use had almost entirely superseded that of ale and porter.”⁸² In the whole United States the production of malt liquors increased in value in different decades as follows: 1850-1860, 272 per cent; 1860-1870, 161.4 per cent; 1870-1880, 81.4 per cent.⁸³

√ These facts help us to explain the rise of the brewery industry in Chicago and Vicinity. In the first place, a very large German element is to be found in this and surrounding region between 1850

⁷⁷Chicago Board of Trade Report, 1869, pp. 37, 43.

⁷⁸Chicago Board of Trade Report, 1862, p. 48.

⁷⁹Ibid., 1870, p. 106.

⁸⁰Milwaukee Chamber of Commerce Reports, 1866, p. 42.

⁸¹Chicago Daily Dem. Press, Feb. 16, 1855.

⁸²12th U. S. Census, Vol. IX, Part III, p. 599.

⁸³Ibid.

and 1880. The German-born population of Wisconsin increased from 38,064 in 1850 to 123,879 in 1860, 162,314 in 1870, and 184,328 in 1880. If to this number be added those both of whose parents were German, the German-Americans in Wisconsin in 1880 numbered 410,653, or 31.2 per cent of the total population of the state.⁸⁴ These were very largely settled in counties near Milwaukee.⁸⁵ The Germans did not constitute so large a per cent of the population of Chicago, perhaps, but their number was large. The significance of this German element in the population with respect to the brewing industry may readily be seen in the nationality of nearly all of the early brewers of Chicago and Vicinity. The names of the firms brewing beer in Chicago in January, 1857, were Conrad Seipp, George Metz, Braham & Company, V. Busch, J. F. Roder-meyer, Bucher & Company, Blattner & Company, S. Irwin, and Spriggs;⁸⁶ while some of the most prominent early Milwaukee brewers were August Krug, Joseph Schlitz, Alfred and Henry Uihlein, and Valentine Blatz.⁸⁷ The predominance of the German element in this industry was unmistakable.

The principal raw materials required in the manufacture of beer are barley and hops. We have already seen that Chicago and Vicinity was very favorably located with reference to the supply of both these materials. As early as 1855 the Chicago Daily Democratic Press says, "The facilities for obtaining the necessary supplies of barley at all seasons of the year are perhaps unequaled at any other point, and there are various advantages here offered which assist in making it [brewing] a profitable and flourishing business."⁸⁸ The receipts of barley at Chicago increased from 127,022 bushels in 1851 to 872,053 bushels in 1862.⁸⁹

In 1860 Chicago and Vicinity possessed 52 establishments devoted to the manufacture of malt and malted liquors, having a capital of \$846,000. They employed 290 workmen, paid out \$88,548 in wages, and produced goods valued at \$1,021,457. At the same time the distilling and rectifying industries were carried on in 23 establishments with a capital of \$276,900. They employed 81 workmen,

⁸⁴Wis. Hist. Coll., XII, p. 300.

⁸⁵Ibid., p. 304.

⁸⁶Chicago Daily Dem. Press, Jan. 21, 1857.

⁸⁷Andreas, History of Chicago, III, p. 579.

⁸⁸Chicago Daily Dem. Press, Feb. 16, 1855.

⁸⁹Chicago Board of Trade Report, 1869, p. 46.

paying them \$45,252 in wages, and turned out products valued at \$726,187.⁹⁰

The period of the Civil War began a new era in the brewing and distilling industries of Chicago and Vicinity. For over half a century, as we have seen, these industries were practically free from Federal tax or control, and the respective states had generally pursued a liberal policy toward them. But, with the imperative needs of the Government for funds to carry on that gigantic struggle, what had for so long served the European countries as source of large revenues was eagerly seized upon by the United States and heavy taxes were laid upon the manufacture of alcoholic beverages. The first tax imposed, act of July 1, 1862, was 20 cents per gallon on spirits and one dollar per barrel on malt liquors. By the act of March 7, 1864, the tax upon spirits was increased to 60 cents per gallon; by the act of July 1, 1864, to \$1.50; and January 1, 1865, the rate was further advanced to \$2.00. But the duty on malt liquors was not increased.⁹¹

The result of this system of taxation was at once reflected in the prices of high wines especially. During the year ending April 1, 1862, the price of high wines in Chicago had ranged from 12 to 19 1/2 cents per gallon; by January, 1866, it had risen as high as \$2.19 per gallon,⁹² partly due to the depreciation of the paper money in circulation. Much of the consumption of alcohol in the arts was now cut off and the production of high wines in Chicago decreased from 5,394,900 gallons in 1861 to 1,427,416 gallons for the year ending March 31, 1868.⁹³ The decrease would, no doubt, have been greater but for certain artificial conditions. One of these conditions has been thus described: "Chicago became one of the chief distributing centers of troops and military supplies in the West. Hither flocked recruits, merchants, contractors, and speculators by tens and even hundreds of thousands. Money was plentiful; fortunes were made and lost in a day; a baleful moral atmosphere was engendered, and under the influence of nervous restlessness and inordinate excitement men drank deeply."⁹⁴ Also, since the tax was not levied at its full all at once but was increased from time to time,

⁹⁰U. S. Census, 1860.

⁹¹Lalor, *Cyclopaedia of Pol. Science*, 1, p. 810. Rhodes, *Hist. of U. S.*, IX, pp. 50, 428.

⁹²Chicago Board of Trade Report, 1867, p. 77.

⁹³Chicago Board of Trade Report, 1868, p. 81.

⁹⁴Moses and Kirkland, *History of Chicago*, II, p. 458.

the distilleries were, at times, run to their utmost capacity in anticipation of an increase of the tax. The reflection of this sort of influence may best be seen in the curtailing of production in Chicago from 2,550,724 gallons in 1866-'7 to 1,427,416 gallons in the year ending March 31, 1868, in anticipation of the reduction of the tax to 50 cents per gallon in July, 1868. The production immediately arose to 3,438,454 gallons for the year ending March 31, 1869, and the price declined to 88 cents per gallon.⁹⁵

The high taxes imposed upon the distillation of spirits during the Civil War led, in various places, to a systematic evasion of the law. In St. Louis, Chicago, and Milwaukee, this assumed gigantic proportions, which led to the "Whisky Fraud" or "Whisky Ring" exposure in May, 1875. At that time 24 distilleries and 37 rectifying houses were seized and 238 indictments were returned, 86 being against Federal officials. The ascertainable effect of this upon the industry in Chicago and Vicinity was short-lived and need not receive our attention long. Nearly all the distilleries were seized by government officials and the business brought to a stand. But, by the end of the year 1876, most of the distilleries were reorganized and in operation. In Chicago the production fell off from 8,487,506 gallons in 1875 to 6,450,456 gallons in 1876.⁹⁶

The comparatively low tax upon malt liquors, only one dollar per barrel even when distilled spirits were taxed two dollars per gallon, enabled that beverage to remain comparatively cheap and did much to develop the taste of the American people for the milder drink. The price of beer ranged from about 17 cents per gallon in 1859⁹⁷ to 35 cents in 1870.⁹⁸ The favorable price and the growing demand were met by an increasing supply of the raw materials of which beer is made. The receipts of barley in Chicago increased from 617,619 bushels in 1860 to 3,335,653 bushels in 1870 and 5,211,536 bushels in 1880.⁹⁹ At Milwaukee the receipts for the respective years were 159,795, 585,971, and 3,878,272 bushels.¹⁰⁰ By 1882 or 1883 Chicago had become one of the most important distributing points for hops in the country, all the brewers of the Northwest

⁹⁵Chicago Board of Trade Report, 1869, p. 73.

⁹⁶Chicago Daily Tribune, Jan. 2-4, 1876;

Chicago Board of Trade Report for 1876, pp. 18, 106;

Appleton's Annual Cyclopaedia, 1875, pp. 665-7.

⁹⁷Milwaukee Chamber of Commerce Report, 1859, p. 35.

⁹⁸U. S. Census, 1880, Vol. XX.

⁹⁹Chicago Board of Trade Report, 1885, p. 65.

¹⁰⁰Milwaukee Chamber of Commerce Report, 1902-3, p. 97.

drawing their supplies principally from this city. The annual receipts had grown to 4,230,000 pounds and were rapidly increasing.¹⁰¹

The manufacture of distilled spirits did not suffer as heavily as some other industries in the great Chicago fire of 1871. Only three important distilleries and one rectifying house were destroyed, and by 1874 the annual production had fully recovered.¹⁰² The brewing industry suffered a much heavier loss. No less than seventeen breweries were destroyed, involving a loss of over \$2,500,000 and taking away one-half the brewing capacity of the city. But by 1876 nearly all the breweries that had been burned had been rebuilt with increased capacity, so that the production of 1875 exceeded that of 1870.¹⁰³

The financial panic of 1873 did not affect the brewing and distilling industries of Chicago and Vicinity seriously. In fact, these industries made even larger gains in 1874 than usual in preceding years. The increase in the manufacture of high wines in Chicago for the year 1874 was 536,433 gallons.¹⁰⁴ Its breweries also made large increase, turning out 335,200 barrels,¹⁰⁵ while the Milwaukee breweries increased their output by 32,021 barrels.¹⁰⁶ This large increase in the production of beer was stimulated by the lower price of hops and by the temperance agitations in the country which tended to turn men from the consumption of stronger drinks.¹⁰⁷

The latter part of the decade between 1870 and 1880 continued to be favorable to the growth and prosperity of the manufacture of brewed and distilled liquors in Chicago and Vicinity and it rapidly assumed prominence as one of the largest centers for their manufacture in the United States. Old breweries and distilleries were enlarged and new ones of increased capacity were built. By 1880 the industry had attained large proportions. There were twelve establishments devoted to the manufacture of distilled liquors, employing a capital of \$1,567,000, giving labor \$348,250 in wages, and producing goods valued at \$4,688,054. By the same year there were 68 establishments devoted to the manufacture of malt and malt liquors,

¹⁰¹Land, *The Future Metropolis*, etc., p. 43.

¹⁰²Andreas, *History of Chicago*, III, p. 571.

¹⁰³Chicago Daily Tribune, Jan. 1, 1876.

¹⁰⁴Chicago Board of Trade Report, 1875, p. 102.

¹⁰⁵Chicago Daily Tribune, Jan. 1, 1875.

¹⁰⁶Milwaukee Chamber of Commerce Report, 1885, p. 167.

¹⁰⁷Chicago Daily Tribune, Jan. 1, 1875.

employing a capital of \$9,761,109, paying out \$1,194,763 in wages, and turning out a product valued at \$10,478,242.¹⁰⁸

4. No manufacturing industry in Chicago and Vicinity was more dependent upon, and more responsive to, the change of commercial route for the products of the Upper Mississippi Valley, described in the preceding chapter, than the slaughtering and packing of meats. The reason for this is easily seen in the fact that no industry was more dependent upon that territory for the supply of its raw materials, which in the slaughtering and packing industry consisted of cattle, hogs, and sheep. As we have already indicated, the building of railroads west of Lake Michigan was the chief factor in completing this commercial change. Had they not been built, it is only reasonable to suppose that, instead of becoming concentrated in a few large centers, the slaughtering and packing industry of the upper Mississippi Valley would have been conducted in a large number of places whither the live stock could have been driven most easily upon foot or hauled in wagons, and from where the meat products could have been marketed by water navigation. We have already shown that this is precisely what had taken place in Illinois, Indiana, Ohio, and Kentucky prior to the railroad era.

The accompanying tabulation of statistics will assist in showing the relation between the extension of railroads and the receipts of cattle and hogs at Chicago. It gives the number of miles of railroad and the number of cattle and hogs in each state and territory west and southwest of Lake Michigan in the years 1850, 1860, 1870, and 1880, together with the receipts of cattle and hogs at Chicago during the same years.¹⁰⁹ If we take the states of Illinois, Wisconsin, Iowa, and Minnesota, which form the chief sources of the cattle and hog supply for Chicago and Vicinity until it became established as the greatest live stock market of the world, we find that the total number of miles of railroad in these states in 1850 was 196 and that the receipts of cattle and hogs at Chicago numbered 21,806 and 22,036 respectively,¹¹⁰ or only one and seven-tenths per cent of all the cattle and nine-tenths of one per cent of all the hogs in the four states. In 1860 the number of miles of railroad was 4,350, and the receipts of cattle and hogs at Chicago were 177,101 and 292,864

¹⁰⁸U. S. Census Report, 1880.

¹⁰⁹Compiled from U. S. Census Reports and Chicago Board of Trade Reports.

¹¹⁰The figures given for 1850 represent the number of cattle and hogs slaughtered instead of received, the latter not being available.

State	1850			1860		
	Miles of Railroad	No. of Cattle	No. of Hogs	Miles of Railroad	No. of Cattle	No. of Hogs
Ill.	176	912,036	1,915,910	2,790	1,583,813	2,502,308
Wis.	20	183,433	159,276	905	521,860	334,055
Minn.		2,002	734		119,257	101,371
Iowa		136,621	323,247	655	540,088	934,820
Mo.		791,510	1,702,625	817	1,168,984	2,354,425
Ark.		292,710	836,727	38	567,799	1,171,630
La.	63	575,342	597,301	335	516,807	634,525
Texas		901,545	683,514	307	3,535,768	1,371,532
Ind. Ty.						
Kansas					93,455	138,224
Neb.					37,197	25,369
Dakota					801	287
Mont.						
Wyo.						
Colo.						
N. Mex.		32,977	7,314		88,729	10,313
Ariz.						
Utah		12,616	914		34,094	6,707
Nevada					5,471	3,571
Idaho						
Wash.					28,459	6,383
Oregon		41,729	30,235		154,131	81,615
		No. slaughtered in 1851 (Hunt, 26,431)	No. cut in 1851 (Hunt, 26,432)			
Calif.		262,659	2,776	23	1,180,142	456,396
Rec'd in Chicago		21,806	22,036		177,101	392,864

State	1870			1880		
	Miles of Railroad	No. of Cattle	No. of Hogs	Miles of Railroad	No. of Cattle	No. of Hogs
Ill.	4,823	1,715,586	2,703,343	7,851	2,384,322	5,170,266
Wis.	1,525	693,294	512,778	3,155	1,129,141	1,128,825
Minn.	1,092	310,379	148,473	3,151	669,050	381,415
Iowa	2,683	1,006,235	1,353,908	5,400	2,612,036	6,034,316
Mo.	2,000	1,153,695	2,306,430	3,965	2,080,932	4,553,123
Ar.	256	357,935	841,129	859	708,243	1,565,098
La.	450	385,261	338,326	652	470,601	633,489
Texas	711	3,494,043	1,202,445	3,244	4,084,605	1,950,371
Ind. Ty.				289		
Kansas	1,501	373,967	206,587	3,400	1,451,057	1,787,969
Neb.	705	79,928	59,449	1,953	758,550	1,241,724
Dakota	65	12,467	2,033	1,225	140,815	63,394
Mont.		36,738	2,599	106	172,387	10,278
Wyo.	459	11,130	146	512	278,073	567
Colo.	157	70,736	5,509	1,570	346,839	7,656
N. Mex.		57,534	11,267	758	166,701	7,857
Ariz.		5,132	720	349	44,983	3,819
Utah	257	39,180	3,150	842	95,416	17,188
Nevada	593	31,516	3,295	739	172,221	9,090
Idaho		10,456	2,316	206	84,867	14,178
Wash.		47,254	17,491	289	134,554	46,828
Oregon	159	120,197	119,455	508	416,242	156,222
Calif.	925	631,398	444,617	2,195	664,307	603,550
Rec'd in Chicago		532,964	1,953,372		1,382,477	7,148,457

respectively, or six and four-tenths per cent of all the cattle and ten and one-tenth per cent of all the hogs in the states named. In 1870 the number of miles of railroad had increased to 10,123, the receipts to 532,964 and 1,953,372 and the per cents to fourteen and three-tenths and forty-one and four-tenths respectively. In 1880 the railroad mileage had increased to 19,557, the receipts to 1,382,477 and 7,148,457 and the per cents to twenty and three-tenths and fifty-six and two-tenths respectively. That this large increase in the receipts of cattle and hogs at Chicago was due to the railroad transportation facilities is evident from the fact that the number otherwise received remained about 25,000 and 30,000 respectively until 1862 and then steadily declined to 5,329 cattle and 2,263 hogs in 1880.¹¹¹

For the reasons named in the previous discussion of the development of the slaughtering and packing industry prior to 1850, these increased receipts of cattle and hogs at Chicago could hardly fail to build up that industry to still greater proportions. As Chicago became the greatest live stock market in the United States, it is but natural that it likewise became the greatest slaughtering and packing center. In the season of 1861-'2 Chicago for the first time surpassed Cincinnati in the number of hogs packed and thus became the leading hog-packing center in the United States—a position held ever after. That this was destined to become true sooner or later is evident from the steady gain which Chicago had been making upon the number of hogs packed in Cincinnati for some years previous; that it came when it did and was able to be sustained was probably due to the Civil War. The blockade of the Mississippi River cut off that avenue, which was still the chief one, for the marketing of the surplus corn of the upper Mississippi Valley. The corn crops of Iowa during 1861 and 1862 were unusually large and the price in the East was low. With the Mississippi closed, all that remained for the farmers of Iowa was to feed their corn to hogs which could be marketed in Chicago.¹¹² Thus the receipts at Chicago rose from 392,864 in 1860 to 1,348,890 in 1862, and the number packed increased from 271,805 to 505,691,¹¹³ while Cincinnati packed only 474,467.¹¹⁴

It does not seem true that the Civil War had as large an influ-

¹¹¹Chicago Board of Trade Reports for years concerned.

¹¹²Hunt's Merch. Mag., Vol. 48, p. 400.

¹¹³Chicago Board of Trade Report, 1865, p. 36.

¹¹⁴Griffith's Annual Live Stock Review, 1877, p. 97.

ence in building up the slaughtering and packing industry in Chicago and Vicinity, through increasing the demand for meats, as is sometimes thought. Cattle and hogs shared in the general rise in prices engendered by the war¹¹⁵ and this stimulated their production in the Upper Mississippi Valley and the receipts at Chicago, but did not result in a corresponding increase at Chicago in the packing industry. Especially is this true with respect to beef packing. Both bacon and fresh beef entered into the rations of the Union armies, but these supplies were purchased primarily in the markets of New York, Boston, Philadelphia, Cincinnati, Louisville, Baltimore, St. Louis, and San Francisco.¹¹⁶ Fresh beef was provided for the armies in the main by purchasing live cattle in the markets named and sustaining them near armies in the field, slaughtering them only as needed. This contributed toward increased shipments of cattle from Chicago to the Eastern markets, but not to their being slaughtered in the West. The shipments of cattle from Chicago increased from 37,584 in 1859 to 310,444 in the year ending March 31, 1866. During the same time the number of cattle packed in Chicago increased from 51,606 in 1859 to 92,459 for the year ending March 31, 1865, but fell to 27,172 and 25,998 the two following years.¹¹⁷

It is probable that the demand for pork product to supply the Union armies was partially supplied in the Chicago market and contributed in a measure to enlarging the pork-packing industry there, though it is difficult to determine the exact extent of this influence. While the shipments of hogs from Chicago increased from 110,246 in 1859 to 663,566 for the year ending March 31, 1866, the number of hogs packed in Chicago increased during the same time from 179,684 to 970,264 in the season of 1862-'3, but fell again to 507,355 in the season of 1865-'6.¹¹⁸

The influence of the foreign trade in its effect upon the packing industry of Chicago and Vicinity should not be neglected. Owing to the abundance and nutritiousness of the grasses covering the vast

¹¹⁵The price of cattle in Chicago increased from a maximum of \$3.00 per cwt. on Apr. 1, 1861 to \$8.25 on the first of April, 1865, while hogs increased during the same time from \$4.75 to \$11.25 per cwt.—Chicago Board of Trade Reports for years named.

¹¹⁶Annual Reports of the Commissary-General, 1861-'4; Official Records of the War of the Rebellion, Series III, Vols. I-IV, pp. 676, 738, 944, 782 respectively.

¹¹⁷Chicago Board of Trade Report, 1868, p. 64.

¹¹⁸Ibid., p. 56.

plains of the upper Mississippi, the healthful climate, the freedom of the cattle from work, and the skill and care in slaughtering and packing, Chicago beef early became a favorite in European markets. In 1855 the Liverpool quotations for American tierce beef were: Hough's (Chicago) 150 shillings per tierce, Dominick's (Cincinnati) 140 shillings—a difference of nearly \$2.50 per tierce in favor of the Chicago brand.¹¹⁹ During 1855 Chicago firms furnished 63,000 barrels of beef, requiring 29,000 cattle, to the allied armies in the Crimean War.¹²⁰ During the seasons of 1860-'62 a large proportion of the hogs cut in Chicago were made into English Middles for the Liverpool and London markets, and during a part of that time nearly every packing house in the city was engaged in this trade.¹²¹ By 1876 there were eight firms in Chicago that killed and packed on direct orders from Europe, and six of these houses did so exclusively, never offering their product in the Chicago market. They employed some 300 men with a capital of \$350,000 and had a capacity of 10,000 hogs per day.¹²²

The building of the Union Stock Yards in Chicago was a great step in the building up of the slaughtering and packing industry there. Prior to 1865 the live stock business of Chicago had been transacted at five or six separate yards located in different parts of the city. This proved of much inconvenience in the marketing of thousands of cattle and hogs then received, made the freest competition among buyers impossible and made Chicago really a number of small markets instead of one great market of equal advantage to all. During the early part of 1865 the Union Stock Yard and Transit Company was organized with a capital stock of \$1,000,000. 345 acres of land were purchased just outside the city where connections could be made with all the railroads entering it. Yards were then constructed with every modern convenience at a cost of \$1,675,000 and having a capacity for 21,000 cattle, 76,000 hogs, 18,000 sheep and 200 horses. They were opened for business December 25, 1865.¹²³

Coincident with the building of the Union Stock Yards came the adoption of a system of meat inspection at the packing establish-

¹¹⁹Chicago Daily Dem. Press, Feb., 1855.

¹²⁰Hunt's Merch. Mag., XXXVI, p. 374.

¹²¹Chicago Board of Trade Report, 1862, p. 32.

¹²²Chicago Daily Tribune, Jan. 1, 1876, p. 12.

¹²³Chicago Daily Tribune, Jan. 1, 1866 and 1867;

Wright: Chicago, Past, Present, and Future, p. 166.

ments. The irregularity of the packing and the absence of any thorough system of inspection had been an evil long felt by the trade. In March, 1866, the Pork Packer's Association adopted a thorough system of inspection for all provisions, which was immediately adopted by the Chicago Board of Trade to the benefit of the industry.¹²⁴

The only other point upon the lake shore that became a packing center of any note is Milwaukee. Though it enjoyed practically the same shipping facilities to the Eastern markets, it did not enjoy as large facilities for receiving live stock from the Upper Mississippi Valley. The result was that it fell far behind Chicago in the growth of this industry, though it took high rank among the packing centers of the West.¹²⁵

The development of the slaughtering and packing industry in the United States between 1870 and 1880 was due primarily to the improvement in various refrigerating processes. Up to 1872 few hogs were killed during the summer because little had been done in the development of mechanical or chemical refrigeration. The packing season had extended over only four months of the year, from November 1 to March 1. During the remaining eight months the packing establishments stood practically idle. But in the late sixties and the early seventies practical processes of refrigeration were developed and summer packing on an extensive scale began. During the packing year, 1872-1873, 505,500 hogs were killed in the United States during the summer season. The number increased rapidly and, during the packing year, 1879-1880, 4,051,248 hogs were killed in the summer season. During this period winter packing increased 28.5 per cent, while summer packing increased 701.6 per cent, or from 8.5 per cent to 37.7 per cent of the total year's packing.¹²⁶

Summer packing in Chicago began to assume large proportions in 1873 when 306,536 hogs were summer-cured. During 1874 and 1875 more than one-fourth of the entire packing of hogs was done in the summer months. Summer-cured meats rapidly gained the

¹²⁴Chicago Daily Tribune, Jan. 1, 1866.

¹²⁵The receipts of hogs at Milwaukee increased from 59,790 in 1859 to 76,758 in 1867, and the receipts of cattle from 12,000 to 15,527. (Mil. Chamber of Commerce Reports, 1859 and 1872). The number of hogs packed in Milwaukee increased from 51,687 in the season of 1859-60 to 107,229 in the season of 1864-65, and the number of cattle increased from 7,876 to 11,360. (Mil. Chamber of Commerce Reports.)

¹²⁶12th U. S. Census, Vol. IX, p. 388.

preference of many European buyers, and in the summer of 1880 Chicago packed 2,875,000 hogs against 2,525,219 during the preceding winter season.¹²⁷

Refrigeration was likewise of great influence in building up the cattle slaughtering industry in Chicago and Vicinity. The refrigerator car was invented by William Davis, of Detroit, in 1868, and in September, 1869, the first cargo of dressed beef was shipped from Chicago to Boston.¹²⁸ Prior to that time, as we have seen, the beef packing industry of Chicago and Vicinity had been limited not only to the winter season but to salt-packing in barrels and tierces to be shipped to Eastern and European markets. To supply the demand for fresh beef in those markets, cattle had been shipped from the West on foot at excessive cost in freightage and with inevitable deterioration in quality of beef owing to the length and wearisomeness of the journey. Although this condition of things contributed to the building up of Chicago and Vicinity as a shipping point to Eastern and European markets, it did not develop its slaughtering and packing industries. But, with the perfection of the refrigerator car and the application of its principle also to ocean shipping, it was made possible to supply the tables of New York, Philadelphia, Boston, and even Europe with fresh beef from the slaughter houses upon the shore of Lake Michigan. The possibilities of this in its influence upon the slaughtering industry of Chicago and Vicinity can readily be seen, as the beef dressed in Chicago could thus be supplied in New York and Europe in better condition than when shipped on foot.¹²⁹ This method of shipment was not made wholly satisfactory, however, until after 1875. Exportation of fresh beef began in 1876 and 19,838,000 pounds were shipped in that year. By 1880 this had increased to 100,622,000 pounds.¹³⁰ Chicago, being favorably located with reference to the great cattle producing area of the United States, was quick to respond to these possibilities of the fresh beef trade. By 1876 the Secretary of the Chicago Board of Trade was able to say, "A very important branch of the slaughtering and packing business is that of beef preparations for the foreign market. The business of shipping dressed beef to En-

¹²⁷Chicago Board of Trade Report, 1880, p. 34.

¹²⁸12th U. S. Census, Vol. IX, p. 416.

¹²⁹For freight rates from Chicago to New York, 1852-1893, see McCain, Senate Report, No. 1394, Finance Com., Part I, p. 524. 2nd Session, 52nd Congress.

¹³⁰P. D. Armour, One Hundred Years of Am. Commerce, II, p. 387; 12th U. S. Census, Vol. IX, p. 416.

gland has assumed considerable magnitude, and it has been made a financial success, and is rapidly growing in favor and demand."¹³¹ The number of cattle slaughtered in Chicago increased from 21,254 during the year ending March 1, 1871, to 486,537 during the year ending March 1, 1880.¹³² Statistics are not available for the proportion of these used in the dressed beef trade. But by 1885 it is estimated that 900,000 cattle were required for the dressed beef trade of Chicago out of a total of 1,334,775 slaughtered.¹³³

Canning of beef was attempted in Chicago in the sixties. The packers did not take it up on a large scale until some years later, but by 1876 it had become a leading article of manufacture at the Chicago packing establishments.¹³⁴ By this process the beef was cooked and packed in air-tight tin cans which could be easily and safely shipped to any distance and into any climates. It proved popular in widely distributed markets and contributed largely, probably chiefly, to the increase in the number of cattle slaughtered at Chicago in the latter seventies. It rapidly superseded the packing of beef in barrels and tierces. By January 1, 1878, the Chicago packers were canning about 1,000 beeves per day during the busy season, and the product had found a market in England, Germany, France, Austria, Italy, Denmark, Belgium, South America, and in all parts of our own country.¹³⁵

By 1880 railroads had become extended throughout every state and territory of the West and Chicago packers were drawing their supply of live stock from that entire area. So great had become the advantages of the Chicago market that hogs were received at its yards from St. Louis and from within thirty miles of Cincinnati—Chicago's former principal rival. Kansas City, St. Joseph, and Omaha had only begun to assume importance as packing centers.

During the two decades between 1860 and 1880, therefore, the slaughtering and packing industry of Chicago and Vicinity became its chief manufacturing interest and made it the chief center of the kind in the world. In 1860 Chicago and Vicinity had 19 establishments engaged in the slaughtering and preparation of meats, em-

¹³¹Chicago Board of Trade Report, 1876, p. 17.

¹³²Ibid., 1880, p. 35. (Latter figure includes city consumption.)

¹³³Chicago Board of Trade Report, 1885, p. 63.

¹³⁴Ibid., 1876, p. 18.

¹³⁵Chicago Daily Tribune, Jan. 1, 1878. See Bushnell, Social Problem of the Chicago Stock Yards, p. 4, for geographic illustration of Chicago's tributary territory and market area in the packing industry at different periods.

ploying a capital of \$332,500, giving labor to 232 workmen, and turning out products valued at \$2,226,383. In 1880 the number of such establishments had increased to 77, which employed a capital of \$9,244,000, gave labor to 8,431 workmen, and turned out products valued at \$91,423,857.¹³⁶

Thus, from the condition of mere frontier life with but a handful of men collected in a knot at the mouth of the Chicago River, surrounded by an almost untouched wilderness and having no industries but barter with the Indian and the collection of furs, we have seen Chicago and Vicinity, in fifty years, become one of the most populous, wealthy, and industrious centers of like area in the whole United States. From a position of insignificance beside Cincinnati and St. Louis, we have seen it surpass them and leave them far behind in population, commerce, wealth, and manufacture. We have followed its development especially in four leading and typical industries, whose rise and development gave us the key to its remarkable growth in other lines. From these I believe it is clear that the pivotal point in the history of Chicago and Vicinity, both commercially and industrially, was the change in route of the commerce of the Upper Mississippi Valley from the river courses southward, to the lake, canal, and railroad routes eastward. The primary factor in bringing about this change was the building of railroads westward from Lake Michigan. With the commercial problem solved, the unsurpassed natural resources of the region surrounding Chicago and Vicinity in every direction could be, and were, brought into play. It was now seen to be at the center where, of all points in the great Northwest, could be most easily brought together in profusion all kinds of lumber, raw iron, iron ore, fuel, the cereals, and live stock, and where these raw materials, turned into manufactured articles of which they were capable, found large and increasing demand. From the West came the demand for those things especially needed by a vast and wealthy agricultural region, from the East came the demand for those things needed in urban life, the raw materials of which could be largely produced in the agricultural West. The incoming tide of immigrants from the East and from Europe furnished the labor, and capital poured in from the same sources, all attracted by these virgin opportunities for

¹³⁶U. S. Census Reports, 1860, 1880.

gain far beyond anything to be found among the exploited resources of older communities.

Thus grew up in Chicago and Vicinity the manufacture of not only those industries which we have treated in particular, but a multitude of others. By 1880 Chicago had become the third largest manufacturing city in the United States; Chicago and Vicinity was manufacturing annually furniture valued at \$6,923,000; flour and grist valued at \$7,360,000; leather, \$12,840,000; boots and shoes, \$2,965,000; men's clothing, \$21,146,000; and, in all its lines of manufacturing, was giving employment to over 100,000 workmen, using a capital of over \$95,000,000 and producing goods valued at over \$305,000,000.¹³⁷

¹³⁷Compiled from U. S. Census, 1880.

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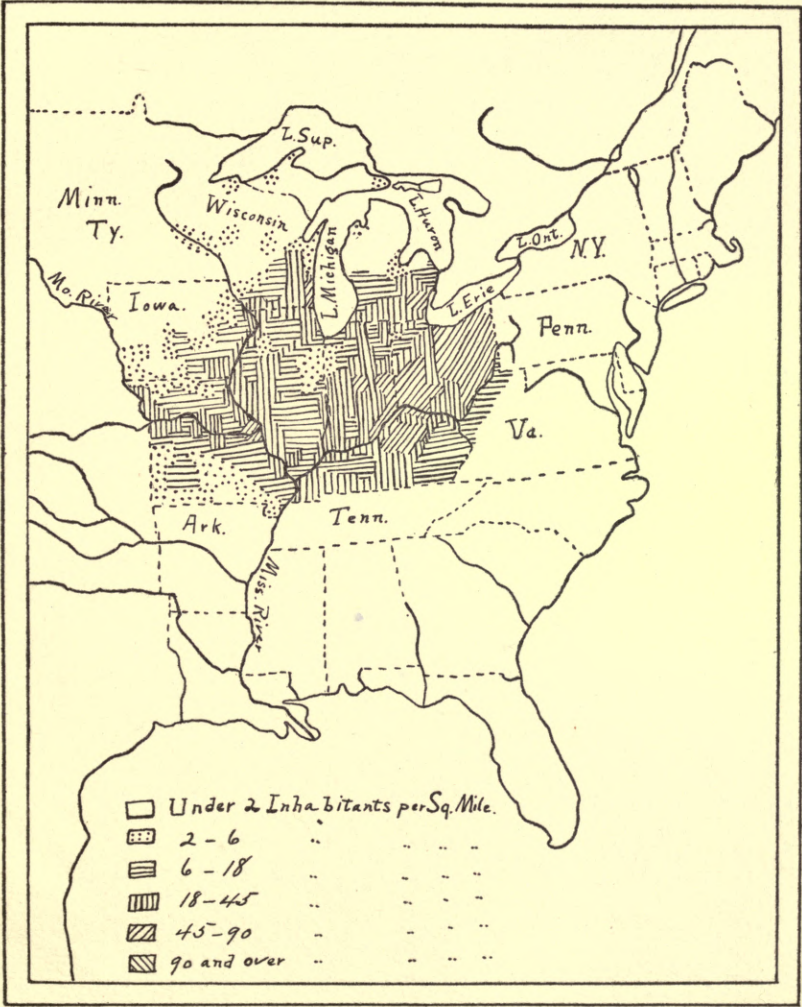
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