MANUFACTURING IN LAWRENCE, KANSAS, 1854-1900

by

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For the department

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ON EARLY RAILROADS

Middleton's Graduate Thesis Discusses First in Kansas

With railroad schedules being changed to affect the city of Lawrence, a portion of a thesis submitted a few days ago by a graduate student at the University of Kansas is of particular interest. It sets forth the history of the growth of railroads thru this section.

The thesis, a book of 200 pages, written by Kenneth A. Middleton, of Lawrence, has as its title, "Manufacturing in Lawrence, Kan., from 1854 to 1900." Middleton is an assistant instructor in economics and has completed work for his master's degree.

The volume devotes several pages to the history of railroads and their construction into Lawrence. The Union Pacific was the first company to build a railroad thru Lawrence and now after 76 years of operation, several of the faster trains have been taken off the schedule.

A few excerpts from Middleton's thesis are reprinted to show steps in the process of making transportation available to the city.

"Railroad schemes were discussed and corporations chartered to put them into effect years before any railroad track was actually laid in Kansas. Back in 1857 the Kansas territorial legislature had chartered the Leavenworth, Pawnee, and Western Railroad company to construct a railroad from Leavenworth to the western boundary of the territory. Work never got beyond the very first steps. In July of 1862 the United States congress passed an act to aid the construction of a railroad and telegraph line from the Missouri river to the Pacific. Relying on this act, the Union Pacific Railway company, eastern division, was organized in 1863 and bought up the franchises of the old and dormant Leavenworth, Pawnee, and Western. Instead of making Leavenworth the jumping-off point for its railway to the far west, however, Union Pacific began at Kansas City. Altho Samuel Hallett, the first contractor, was assassinated on the streets of Kansas City, Kan., a few months after operations got under way, work progressed rapidly and in November, 1864, the first train was welcomed with much ado at Lawrence. By the end of 1865 the track had been laid west to Topeka. In 1868 the name of the road was changed to Kansas Pacific.

"Even with its land grant of 12,800 acres per mile of road and its gift of $16,000 per mile of United States six per cent thirty-year bonds, this railroad went into receivership in 1873. A few years later it was consolidated with the Union Pacific Railroad Company.

"It was an important day in the life of the town when the people of Lawrence crossed their eleven-month-old bridge to get over to the little railroad station and watch the first train arrive (the Union Pacific was built along the north bank of the river,") writes Middleton. "This road from Kansas City to Lawrence was the first of any length in the state and climaxed several years of anticipation."

The company has operated trains thru Lawrence continuously since that time, always adding additional trains, and this is the first time the schedule of trains thru the city has been made less accommodating.

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CHAPTER I

THE BEGINNING OF INDUSTRIAL DEVELOPMENT: BEFORE THE QUANTRELL RAID. (1854-1863)

Much interest is being shown in the prospects of industrial development in Kansas. Possibilities are being investigated, and a movement is under way to bring new manufacturing enterprises into the state. A glance backward at early-day experiences with manufacturing in Kansas ought to furnish pertinent sidelights on the subject, and in any such review of Kansas industrial history the town of Lawrence is particularly worthy of attention. The relative position of Lawrence among the cities of Kansas was formerly higher than at present as far as its political and economic significance is concerned. Also, as one of the very first settlements in the state, Lawrence has a history which reflects the ups and downs of economic life in Kansas from the very beginning of civilization in the region.

The plan of procedure. The plan of organization for this study is to set forth, for each major division, the background of special external developments and general business conditions affecting manufacturing enterprises in Lawrence, and then to give detailed attention to the indi-

vidual enterprises themselves. Whenever available information permits, an analysis is made of the underlying factors which influenced the original establishment of each concern, the development of the concern, and, in the event that it did not survive, its ultimate abandonment. In the final chapter the major influences brought to bear on the history of manufacturing industry in Lawrence are summarized.

Early political history of Lawrence. Two special conditions to bear in mind when considering the industrial progress of Lawrence in its first decade are: first, the violence and political turmoil of the time as evidenced by raids, election "wars," and forays by armed bands seeking to destroy or at least to cripple the new community; second, the absence of railroad connections--the first track to reach Lawrence was that finished by Union Pacific in 1864 connecting the town with Kansas City, Kansas.

The birth date of Lawrence can be set definitely at July 31, 1854. On that day a weary party of twenty-nine men trudged up a long ridge near the bank of the Kansas River about fifty miles up from Kansas City. They had finally reached the site of the new community they were to establish, a site which had been selected a few months before by Charles Robinson and Charles H. Branscomb, representatives of the New England Emigrant Aid Society. On

the high abrupt ridge which overlooked the place, and which they named Mount Oread after a seminary in Massachusetts, the party of colonists ate their first meal in Lawrence, and there along the hilltop they pitched their twenty-five tents that night, tents "which made a fine appearance, although a little soiled," as one of the group remarked in a letter home.[1]

These men, most of whom were from either Massachusetts or Vermont, formed the first colony sent out by the New England Emigrant Aid Society to set up a new community in Kansas as one of the Society's projects to insure that Kansas Territory would become a non-slave-holding state. The group had come from the East to St. Louis by train; there they were instructed as to the location of their destination by Charles Robinson. They went on to Kansas City by Missouri River steamboat and proceeded from there to Lawrence on foot, their luggage drawn by an ox-team.

Several Missourians had set up claims to Kansas land before this time, chiefly to make sure that Kansas would become a slave state. Two had already established claims on the site of Lawrence and had to be persuaded to go.

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1 The letter is given in full by A. T. Andreas in his History of the State of Kansas, p. 312.

More colonies of settlers reached the newly forming town during the fall of 1854. In September the plan of the city was laid out and the new community was christened in honor of Amos A. Lawrence, the Bostonian who was giving much active support to the cause of free-state colonization. During the fall and winter these transplanted Yankees worked hard building habitations on the level area near the bank of the river. Log cabins appeared, together with some frame buildings (including the "Astor House," a hotel), and several "A-houses." These last were nothing more than gable roofs, set directly upon the ground, with a door cut in one end and the sides shingled over, being given their name obviously because of their shape when viewed endwise. In these assorted crude habitations about 750 people were living by the end of the winter of 1854-55. Already, in February, 1855, three newspapers were being published for Lawrence: the Herald of Freedom, the Kansas Pioneer, and the Kansas Free State. All were whole-souled proponents of free-state sentiments.

Lawrence soon acquired the nickname Yankeetown, and with it a repubation as the citadel of free-state-ism, the center of propaganda for the anti-slavery faction, the heart of a cause highly repugnant to the settlement's Missouri neighbors. A blow struck at Lawrence would hit the rallying-point of free-state doctrine on the new fron-

tier. Consequently, the little community was allowed hardly a moment's peace. In March, 1855, about 1,000 armed Missourians, with artillery, took possession of the polls during the territorial election. In the following November during the "Wakarusa War" Lawrence was beleaguered by 1,500 armed Missourians who had determined to destroy the town. In May of 1856, soon after the Emigrant Aid Society had completed the Free State Hotel (at a cost said to be $20,000), the long-suffering settlement endured more violence, this time at the hands of its own county sheriff, Samuel J. Jones, whose election had been forced by Missourians.[2] This man, aided by about 800 cohorts under the leadership of United States Marshal Donaldson, entered the new hotel on pretense of serving some writs and damaged the building and its contents considerably. The marauders then visited newspaper offices, where they broke presses, destroyed type, and dismantled buildings. They finished off by setting fire to the house of Dr. Robinson.

After this, Lawrence was at peace until 1863, in which year a band of raiders under William C. Quantrell, onetime Kansas schoolteacher and former resident of Lawrence, gave the community the bloodiest and most destruc-

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[2] In those days the term "Missourian" was applied to anyone on the pro-slavery side of the argument in Kansas.

tive treatment it had yet undergone. The effects of the Quantrell raid will be considered later in this chapter.

Attitude toward business in the new settlement. In spite of all such troubles and distractions, the economic development of Lawrence went forward with characteristic frontier optimism and energy. Every new community was serenely confident of its future as a great mart of trade. There was a chance for anyone who started early as a developer of the commercial and industrial interests of the region to become a man of wealth and influence later on. And in the fifties, with no conspicuous metropolitan center nearer than St. Louis and few railroad connections west of that point, a frontier community could temporarily support a considerable variety of manufacturing ventures, such as those producing farm implements, soap, iron castings, furniture, and other manufactures typical of new frontier towns. The aggressive business man of the newly settled territory, protected from competing eastern products by high transportation costs, often managed to market his product over a wide area, hoping to maintain some degree of monopoly for several years to come.

The prevalent attitude as far as Lawrence was concerned is well displayed by an editorial entitled "Capitalists," in the Herald of Freedom for January 13, 1855:

> We are acquainted with no place which holds out advantages for the investment of capital equal

> to those in this city. There is a certainty of Lawrence becoming a great point. . . . Half a dozen steam saw mills could be set to work immediately to advantage, and kept constantly supplied with timber. An iron foundry and finishing shop would monopolize for years the business of the Territory. There is none, in fact, of importance between this and St. Louis. A good engine shop is a desideratum. . . . There is no necessity of sending to St. Louis for every engine wanted in all this territory, and it must not be done.
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> Besides these, a paper mill--it would be a mine of wealth to any person able to put one in operation. All the paper now used in western Missouri, as indeed in Iowa, is received through St. Louis. Springs of water can be found suitable for the purpose; and rags . . . can be bought at a low price in any quantity. . . . Manufacturers of agricultural implements would find no competition this side of St. Louis; and cabinet-makers could supply half of Missouri with furniture. . . . We want no "one-horse" establishments. . . .
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> Two thousand dollars will accomplish more now than ten thousand will a few years hence.

Every type of enterprise recommended here by George W. Brown, editor of the Herald of Freedom, was eventually established in Lawrence, and many more besides. All except the paper mill, which dates from 1882, were placed in operation within the next ten years. During this time much was made of water-power possibilities and mineral deposits. Many persons believed that the future would see the development, here in the new West, of a great manufacturing region rivalling that of the Atlantic seaboard.

The men who came out west to settle in Lawrence were no doubt sometimes motivated by their convictions on the slavery question or by the desire to find a more eventful

life on the frontier; but very often they were justified in expecting the new West to offer opportunities for advancement on the social and economic scale to a degree they could probably not achieve at home. As later noted, many of the men who became leaders in Lawrence business development in the enthusiastic early days had learned a trade as an apprentice in the East and found in the West a chance to strike out for themselves where their special knowledge was rarer than at home. Often they acquired wealth and local influence that would have been much more difficult to obtain in the more settled places which they had left. Of the original twenty-nine colonists in Lawrence, nine called themselves mechanics, five farmers, and the remainder were scattered, one or two apiece, among the occupations of lawyer, physician, merchant, and the like.

As a case in point, there were the Kimball brothers: Frank, Samuel, Frederic, and Edward. Frank had learned the carpenter's trade back in New Hampshire, from his father, and had later moved to Massachusetts where he worked in the pattern department of a Fitchburg foundry. Samuel learned and practiced the machinist's trade in Clinton, Massachusetts. Among the first to come to Lawrence, the Kimball brothers were almost immediately given the responsibility of managing the New England Emigrant Aid Society's sawmill.

Sawmills. In the editorial quoted above, a shortage

of sawmills is noted. In September, 1854, the Emigrant Aid Society had bought a sawmill in Rochester, New York, but after long unexplained delay in receiving it, the Society moved a mill from Kansas City to Lawrence. The Kimball brothers were given the contract to set it up and operate it. After the mill was set up the Society refused a bid of $2,000 for it from persons in Missouri. During that first winter the Society's price on lumber from its sawmill was reported to be only about one-half the price prevailing in neighboring Missouri towns.

The demand for lumber was heavy in those early years and the sawmill worked at full tilt under the management of the Kimballs, cutting 4,000 feet of lumber every twenty-four hours. Under the Society's instructions the Kimballs were using two thirds of the mill's output in a hotel. New sawmills were erected as the need for lumber increased; timber was obtained along the river near Lawrence. By June of 1863, two months before the Quantrell raid, a half dozen mills were running at full capacity. The Kansas State Journal for June 18, 1863, was of the opinion that "no town in Kansas, (and we do not except Leavenworth,) is building as much as Lawrence." There was not, of course, enough timber land in eastern Kansas to make sawmilling a permanently important activity in Lawrence.

The Kimball Foundry. The editorial from the Herald

of Freedom quoted above also recommends the establishment of an iron foundry and engine shop. It was the Kimballs, again, who started one, in 1858, getting a planing machine and an iron lathe, and using the experience they had gained in foundry work in Massachusetts.

> They established the Kimball Brothers Foundry and Machine Shop which for many years served a large section of country. The brothers were very ingenious and turned their hand to an endless variety of work. They were three hundred miles from a railroad, three hundred miles from a base of supplies, and the community was practically isolated. If a carpenter needed irons for his building, no matter how odd in form, the Kimballs could furnish them. If a farmer broke a plow or a machine, the Kimballs could replace the broken part. They had to make their own patterns, often to manufacture their own tools, and sometimes to secure to their own material by gathering old iron about town. . . . As a money making institution the Kimball Brothers foundry may not have been largely successful. But as a matter of public utility few institutions filled a larger place.[3]

Besides making repair parts for farm tools, the Kimball Foundry made for Lawrence and nearby towns many of the iron store fronts then in vogue. As early as 1861 the foundry achieved something fairly remarkable for the time and place by fabricating a three-horse-power steam engine and boiler for the Kansas State Journal, successor newspaper to the Herald of Freedom, to be used in operating the printing press. The new engine replaced an unnecessarily large one formerly in use. The State Journal paid $350 for

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[3] So said the Reverend Richard Cordley in his memorial of Samuel Kimball published shortly after the latter's death in the April 7, 1897, issue of the Lawrence Daily Journal.

the engine, hired a boy to tend it, and after a year of use reported it had cost about sixty cents per day to operate and had given no trouble of any kind. This newspaper claimed to have the only steam-operated press then in Kansas. Also in 1861, the foundry made a piece of machinery for the S. S. Kansas Valley; and in 1863, castings were devised for a newly invented windmill. In 1863, the Kimballs advertised for five or six machinists to be employed for several months to come. This was just a month before Quantrell's visit; Fred Kimball was killed in the raid. Later in the sixties the foundry turned out sugar mills, more three-horse-power steam engines, a mowing machine (the "Kansas Mower"), cast iron columns for buildings in Topeka, Garnett, and elsewhere.

Frank Kimball busied himself mostly with the technical side of the business; Samuel was the salesman, politician, and financier. At one time or another Samuel Kimball was a member of the City Council, mayor of Lawrence, engineer of the fire department (which he organized), and superintendent of it one term. During the war he was Major of the First Regiment of Free-State Volunteers.

Like other manufacturing plants in Lawrence, the foundry had to face the power problem. After it outgrew horse power, wind power was tried, and after the Kansas was dammed the foundry contrived to use water-power although it was above the dam--near what is now the corner of Sixth and

Tennessee Streets. Attention will be given later on to the fuel and power problem and to the dam. In later years the character of the coneern's business changed considerably, and the foundry eventually became one of the Bowersock interests, but this also belongs to a subsequent period.

The Dix Plow Factory. To follow up the suggestions of the early editorial in the Herald of Freedom, quoted above on page seven, we find the opinion that "manufacturers of agricultural implements would find no competition this side of St. Louis." With some such expectation in mind R. C. Dix developed a pattern for a plow especially adapted to the prairie soil, acquired some machinery, and began manufacture of the "Lawrence" plow early in 1863. Commenting on the new venture, the Kansas State Journal (February 19, 1863) said, "Shall we keep the money in the State? Let the farmers of Kansas know of the 'Lawrence' plow." At that time about 350 plows had been turned out experimentally, and Dix planned to market his product through southern Kansas. In March he obtained an order from a Pottawatomie Indian agent for a hundred plows. Orders continued to pour in more rapidly than he could fill them, and new buildings with a steam engine for power were erected for the factory in the early summer of 1863. It was planned to turn out a thousand plows before the following spring. But Quantrell and his men put an end to these plans; R. C. Dix was among those at the

Johnson House who surrendered as prisoners under promise of safe conduct and were shot dead before they had gone a stone's throw from the building.

The Dix plow works was almost at once superseded by the plow factory of Wilder and Palm. At the time of the Quantrell raid the foundation had already been laid for the huge European type windmill which was to furnish power for the new enterprise; and the Wilder-Palm plant was to be one of the most flourishing of the new manufacturing concerns which started in the booming years following the raid.

The furniture factory of Stick and Preisach. One last reference to the editorial in the Herald of Freedom which we have been following as an outline: "cabinet-makers could supply half of Missouri with furniture." In 1862 the firm of Stick and Preisach was making furniture on a small scale and continued in business for several years as a retailing concern which also manufactured office desks and bookcases to order for a local clientele. It did not furnish "half of Missouri," being far exceeded in size by the Leavenworth furniture makers, Woods and Abernathy, and also by the Lawrence firm of Clark and Chapman, established after the raid.

Colonel Willemsen's Tannery. During this first period in Lawrence history its earliest tannery went into

operation. This was the one built by Colonel Charles Willemsen and placed in service in 1862. He would buy wool hides from Mexican traders, pull the wool, tan the hide for local markets, and send the wool east. In July, 1863, the State Journal reported that he was preparing to ship 3,000 pounds of wool acquired in this way. He maintained an office on Massachusetts Street where he sold boots and shoes of his own manufacture as well as some of eastern make. In 1869 he expanded his plant, built new buildings, obtained more vats and machinery, and installed a three-horse-power steam engine made by the Lawrence firm of Kimball Brothers. He was making mainly harness and horse-collar leather, doing the tanning with hemlock bark extract shipped to him by the barrel from Chicago. He hired five or six workmen to make horse-collars at the rate of seven to ten dozen per week; they also made saddles for the jobbing trade. The tannery found difficulty in getting sufficient hides during bad weather on account of the roads; but in the spring many thousand would be bought up in southern Kansas and Indian Territory.

The tannery was abandoned by the time the gloomy depression of the seventies had set in, but in 1876 Blake, Earp, and Davis installed a new engine and new vats in the old buildings and again started a tannery on a large scale. This and subsequent ventures of the kind will be duly discussed

in a later chapter.

Grist-mills in the early years. This earliest period in Lawrence saw the beginnings of flour milling, an industry which was to figure large for many years to come. The first grist-mills were generally operated more as a necessity than for profit, were frequently built in connection with sawmills, and commonly ground more corn than wheat. They charged a toll for their services of one eighth to one twelfth of the grain, or twenty-five to thirty-five cents per bushel cash. Later on flour was exchanged for wheat at the ratio of thirty-two to thirty-five pounds of flour per bushel of wheat.[4]

Investigations reported by the Milling and Grain News for January 7, 1909, indicate that the first bolted flour made in Kansas was ground in 1857 by a mill at Blue Mound, seven miles southeast of Lawrence. A sawmill was operated in connection with this establishment. It was conducted by J. W. Willey, who even after four years service found it necessary to run the flour mill only one day in the week. The Lawrence State Journal for September 26, 1881, had these editorial comments to make on the situation:

> Our storekeepers are still sending to Missouri for the flour they feed the people in this city and county with. Why is this? We think the farmers are to blame. Mr. Willey, we suppose, can make

[4] From an address of Leslie A. Fitz, of Kansas State College, before the Kansas Historical Society, December 12, 1910. Kansas Historical Collections, Vol. XII, pp. 53-55.

> from twenty to twenty-five thousand pounds of flour per week. Still he tells us that, as yet, he has only run his mill one day of the week--(Friday.) Why does not the farmer use the few mills we have, to their full capacity in flouring the grain for the needs of the home market at once? . . . The pioneer mill builders are very little short of public benefactors.

Until sufficient business was forthcoming to keep the small grist-mills running nearer their full capacity, all such establishments had a hard time financially. A mill was started in Lawrence in 1860 but the original management gave it up in the following year. It was taken over by Colonel Blood and one of the Kimball brothers, who remodelled it. Two steam engines were installed, one running a circular saw for lumber; the other (manufactured locally by the Kimball Foundry) powered the two run of stones for flour and meal. Water for the boilers was conducted into a reservoir from a spring on the river bank. At that time the capacity was 250 bushels per twenty-four-hour day. Messrs. Blood and Kimball were praised by the newspaper for investing in such a risky enterprise and for making it possible to have more flour and meal ground at home instead of sending it into Missouri, "thereby putting into the pockets of Missouri dealers and millers . . . the profits and cost of manufacture."[5]

A second venture in flour milling was made by Thomas

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[5] Kansas State Journal, July 18, 1861, p. 3.

Guest, who owned a sawmill on the east side of town and early in 1863 decided to add equipment for a distillery with a capacity of one hundred bushels of grain daily; he planned to add a flouring mill soon afterward, inasmuch as no additional machinery would be needed for the latter purpose. The State Journal on February 5, 1863, rejoiced at the idea that money could now be retained in Kansas which would otherwise go into the pockets of St. Louis liquor merchants. "Keep money at home" was the unanswerable economic argument of the times. In July of that year Thomas Guest and Henry Brown were associated in putting flour mill machinery in the building but it appears that the project for a distillery was abandoned.

The early carriage works. During the first years there was a carriage-making establishment conducted by J. H. Wilder, who later joined forces with Andrew Palm to operate a windmill-powered farm implement and wagon factory. Soon after its beginning, Wilder's enterprise was turning out carriages, wagons, and plows to order, building in 1861 a "beautiful" hack for the Emporia stage line of Hard and Reynolds. A second carriage shop of this early period, that of Churchill and Crane, made horse rakes as well as carriages. The source of raw material was St. Louis.

Lawrence's first soap factory. G. H. Sanger started

a small factory for making soap in 1861, and the State Journal expressed the prevailing attitude toward things economic when it said, "It is the duty of our citizens to patronize home manufactures as much as possible, as we need all the money we can keep at home. If our city furnishes as good soap as St. Louis, it is for our interests to ask for G. H. Sanger's soap when we need any."

The earliest pottery in Lawrence. Another industry of the infancy of Lawrence was a pottery (dignified by a contemporary newspaper as an earthenware factory) established by two Germans in 1863, who had come to Lawrence during the war. They used clay from Coal Creek, seven miles from Lawrence, and also from a Mr. Taylor's place two and one-half miles from town. Unfortunately this clay was of poor quality, so that only an inferior grade of product could be turned out. But at the time the State Journal was enthusiastic: "A good grade of ware will be made, and Lawrence will soon supply the State." The optimism is typical.

Lesser manufacturing establishments. Of course there were many small concerns making things for a local market which can scarcely be called manufacturers as far as this study is concerned: saddle-makers, tailors, shoemakers, bookbinders, and the like. Of these, however, we may note W. E. Sutliff, tailor, who was making military uniforms for

persons in Leavenworth in 1861, and had filled orders for civilian suits also from that place. There was also J. G. Sands, who got his start making a bridle from a boot leg in an old "A-house" in Lawrence in 1855. His business grew until in June of 1863 the Weekly Kansas Tribune reported that he was paying the largest manufacturer's tax of anyone in Kansas outside of Leavenworth. He continued making saddles, sets of harness, and horse-collars on a large scale on through the nineties, shipping orders to points as far away as Portland, Oregon.

The Quantrell raid. On August 21, 1863, the early period of Lawrence history was brought to a dramatic close by a band of marauders under the leadership of William Quantrell. Near the first of August Lawrence had heard rumors of Quantrell's intentions and was amply guarded. But when these fears had been set at rest and nobody believed a hostile party could cross the Missouri line without being discovered; when the squad of soldiers stationed in Lawrence had been ordered away by headquarters at Kansas City--then Quantrell struck.

Gathering his men together at their Missouri camp, Quantrell led a wild ride across the plains during the afternoon and night of August 20 and pulled up in sight of the unsuspecting town of Lawrence at dawn. After two of his men had galloped through the town on a reconnoitring mission,

the whole band thundered into the town and began a day of pillage, burning, and killing that Quantrell hoped and believed would leave the hated "Yankeetown" permanently in ruins.

The number killed or dead from wounds was at least 145, including General Collamore, the mayor; J. C. Trask, editor of the State Journal; state senator Thorp; R. C. Dix, the owner of the flourishing plow factory; one of the Kimball brothers; and many others prominent in the life of the community. About seventy-five store buildings on Massachusetts Street were burned, including the new Eldridge House, which was supposed to have cost $70,000. Estimates of total property loss ranged from $750,000 to $2,500,000, according to Andreas.[6] The Reverend Richard Cordley, Lawrence political historian, thought the loss could not have been less than $1,500,000.

The community recovered rapidly from this staggering blow. Even though Lawrence was then a sizeable town, second only to Leavenworth in commercial importance among Kansas communities, a loss of so much in terms of men and property might well be expected to give the town a longer setback than was actually suffered. Plans for reconstruction were almost immediately put into action; and work soon was

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6 Op. cit., p. 323.

resumed on the nearly fifty buildings which had been under construction at the time of the raid.

The Lawrence Weekly Tribune borrowed type from the Topeka Tribune and managed to get an issue out six days after the raid, giving the keynote of the community's reaction as follows:

> Lawrence is not to "wink out." We have a glorious record, and a destiny. We are to be one of the largest cities west of the Missouri. There is no possibility of mistaking that.

This attitude of characteristic optimism set the stage for the rapid development and boom times in business which Lawrence enjoyed during the next decade of its history.

CHAPTER II

INDUSTRIES ESTABLISHED IN THE PERIOD BETWEEN THE QUANTRELL RAID AND THE COMPLETION OF THE DAM (1864-1874)

The period following the raid. The survivors of the raid soon set about the task of reconstruction. The visible traces of the evil day were soon effaced. Other Kansas towns immediately sent aid to stricken Lawrence, and before many months had passed most of the burned buildings had been replaced and life was proceeding in as orderly a fashion as ever.

As for Lawrence industry, the years which followed were ones of booming expansion. Population increased by leaps and bounds, notably in the years just following the raid. The town was caught up in the wave of railroad building enthusiasm. Bigger and more permanent enterprises were begun; and as a climax to this decade of progress the dam across the Kansas was completed in 1874, marking the end of a prosperous era that stands in sharp contrast to the period of dark depression which followed.

Construction of the bridge. In 1864 Lawrence placed itself in closer touch with the rest of the world in two ways, first by a bridge over the river, second by the railroad from Kansas City. A Lawrence Bridge Company had been incorporated by the Territorial Legislature back in 1858;

in March of 1863 the State Legislature passed a bill setting a time limit of 18 months for the completion of a bridge. Work was started post haste and the bridge was finished in January of 1864. Many continued to cross on the ice to avoid the tolls. When the river was not frozen, Orlando Darling's ferry continued to give the bridge company competition; in fact, the tolls had to be lowered in 1871 on account of the ferry, and O. Darling added another ferry boat to his business in that year. The bridge washed out and had to be replaced in the seventies. In 1879 it was decided that the expired charter of the bridge company was not renewable and the bridge was public property and toll-free from then on.

Railroads--the Union Pacific. Railroad schemes were discussed and corporations chartered to put them into effect years before any railroad track was actually laid in Kansas. Back in 1857 the Kansas Territorial Legislature had chartered the Leavenworth, Pawnee, and Western Railroad Company to construct a railroad from Leavenworth to the western boundary of the Territory. Work never got beyond the very first steps. In July of 1862 the United States Congress passed an act to aid the construction of a railroad and telegraph line from the Missouri River to the Pacific. Relying on this act, the Union Pacific Railway Company, Eastern Division, was organized in 1863 and bought up the

franchises of the old and dormant Leavenworth, Pawnee and Western. Instead of making Leavenworth the jumping-off point for its railway to the far west, however, Union Pacific began at Kansas City. Although Samuel Hallett, the first contractor, was assassinated on the streets of Kansas City, Kansas, a few months after operations got under way, work progressed rapidly and in November, 1864, the first train was welcomed with much ado at Lawrence. By the end of 1865 the track had been laid west to Topeka. In 1868 the name of the road was changed to Kansas Pacific.

Even with its land grant of 12,800 acres per mile of road and its gift of $16,000 per mile of United States six per cent thirty-year bonds, this railroad went into receivership in 1873. A few years later it was consolidated with the Union Pacific Railroad Company.[7]

It was an important day in the life of the town when the people of Lawrence crossed their eleven-month-old bridge to get over to the little railroad station and watch the first train arrive (the Union Pacific was built along the north bank of the river). This road from Kansas City to Lawrence was the first of any length in the state and climaxed several years of anticipation. But the city's leading

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[7] By this time the Kansas Pacific extended to Denver, and the Denver Pacific reached from there to Cheyenne, where it connected with what was then Union Pacific's main transcontinental line extending west from Omaha. See Andreas, op. cit., pp. 241f.

men were not going to be satisfied with just one railroad; many other railroad projects were in the air. Enthusiasm for one railroad scheme after another led the county to help build so many railroads that drastic scaling down of the resultant burden of debt was necessary in the late seventies.

The Leavenworth, Lawrence and Galveston. The notion that Lawrence needed a railroad to tap the trade of southern Kansas materialized into the Leavenworth, Lawrence and Galveston Railroad. The history of this project goes back to a public meeting in Leavenworth in December, 1857. At that meeting committees were delegated to get a charter from the Territorial Legislature for a road to extend from Leavenworth to Fort Gibson, Indian Territory, and to negotiate with the Cherokee Nation, through whose reservation the track would have to be laid. Kansas Territory granted the charter in 1858 to the company, authorizing a branch to extend to Fort Riley, about ninety miles due west of Lawrence. Already an extension from Fort Gibson on down to the Gulf was talked about. The road was going to make cotton, sugar, molasses, and pine lumber available to northeastern Kansas at low cost.

In August of 1859 the main offices of the company were brought to Lawrence. The president and an associate worked in Washington trying to get a land grant; the name of

the company was changed to Leavenworth, Lawrence and Galveston (from Leavenworth, Lawrence and Fort Gibson); but aside from the annual election of officers little else was accomplished by the enterprise up to 1864. By that time the federal government had granted to the state of Kansas alternate one-by-ten mile pieces of land along the right of way as an aid to this railroad, to be given the road piecemeal as each twenty mile stretch was finished. Counties along the route granted a total of $375,000 in bonds to the company, and on February 6, 1867, Douglas County (of which Lawrence is the county seat) issued $300,000 of bonds to the concern as a subscription to its capital stock.

In 1866 Union Pacific had built a line from Leavenworth to Lawrence, so when the Leavenworth, Lawrence and Galveston finally started construction in 1867, it began working from Lawrence southward. The road was completed to Ottawa early in 1868 and by 1871 extended to Coffeyville, having a branch east to Olathe. The company never bothered with the branch to Fort Riley; by this time it had other troubles on its hands.

The land of the federal grant of 1863 was part of some land originally assigned to the Osage Indians under an 1825 treaty giving them the right to it "so long as they choose to occupy the same." When the government decided to give some of the land to the railroads, the Osages agreed to

take compensation in the form of a $300,000 deposit to be held to their credit in the national treasury at five per cent interest, the interest to be paid in clothing and provisions rather than in cash. In 1869 Congress opened this same region to bona fide settlers at the rate of $1.25 an acre. Incoming settlers ignored the railroad grants, organized a "protective association," and finally brought suit against the railroad for possession of the land. The case was carried to the United States Supreme Court, where it was argued in 1875, and there settled in favor of the settlers. The majority decision of the Court held that the land once assigned to the Indians could not be reassigned to the railroad.[8] Much of the money furnished to the road had been given in reliance on the railroad's title to the land, and the decision was a distinct blow to the concern. The road was eventually taken over by the Atchison, Topeka and Santa Fe Railroad Company, which bought it in 1880 after a preliminary consolidation with two other small railroads in the vicinity. It now survives as the branch of the Santa Fe System extending from Lawrence to Coffeyville.

The Pleasant Hill railroad. The Pleasant Hill railroad project was another scheme which aroused much enthusiasm in Lawrence and was made beneficiary of a large bond issue. The St. Louis, Lawrence, and Denver Railroad Company was

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8 Andreas, op. cit., pp. 249-50.

incorporated in 1867 to build a line from Pleasant Hill, Missouri, to Lawrence by way of De Soto, Kansas. Pleasant Hill is about forty miles south of Kansas City, and the new railroad was expected to do nothing less than sidetrack Kansas City altogether off the main artery of trade with St. Louis; Lawrence would then be the commercial metropolis of the Kansas Valley region. In the sixties Kansas City and Lawrence were much more nearly on a basis of equal competition, and the expectations of Lawrence were not so fantastic as they appear today. Douglas County issued $125,000 of bonds to this railroad.

The road was built, but Kansas City continued its growth, unperturbed by this threat to its progress. The story of the circumvention of the ambitious Pleasant Hill scheme gives one an understanding of the disillusionment with railroads which was to come in later years. When the bonds were voted to aid in the construction of the Pleasant Hill road, the latter agreed to keep rates on freight moving between Lawrence and the East by way of Pleasant Hill as low as rates on traffic between Kansas City and the East. This policy aroused intense opposition among the commission men and other shippers of Kansas City. At a meeting in St. Louis on January 10, 1876, the railroads concerned made a compact to raise the Lawrence rate on corn destined for eastern cities to sixty cents per hundred

pounds, leaving the Kansas City rate fifty-five cents. The Pleasant Hill road, however, went on making contracts for freight from Lawrence to the East at the old rate of fifty-five cents, equal to the rate from Kansas City. Consequently a meeting was called later in the month at Kansas City, attended by representatives of the Pleasant Hill road; the Santa Fe; the St. Louis, Kansas City and Northern; the Missouri Pacific; the Kansas Pacific; the Missouri River, Fort Scott and Gulf; and the Kansas City, St. Joseph and Council Bluffs railroads. The Pleasant Hill road was angrily accused by the representatives of the other roads of not acting in good faith with respect to the previous St. Louis agreement, and they refused to enter into any new compact with it. Finally A. C. Bird, representing the St. Louis, Kansas City and Northern, declared that in future he would protect the interest of Kansas City in the matter of rates on corn, and would maintain a proper differential in his rate from Kansas City as against the rates charged by any road from Lawrence. If there had to be a fight, he observed, it might as well come then as any time.[9] The outcome of the whole question was the acquisition of the Pleasant Hill railroad by the Santa Fe in 1877, at first as lessee, later as outright owner.[10]

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9 See the editorial "Lawrence Freights" in the Weekly Kansas Tribune, January 27, 1876.

10 Andreas, op. cit., p. 244.

The Santa Fe, having its own line connecting Kansas City and Lawrence, thereafter maintained the differential in rates as between the two cities, dashing the latter city's hopes of shunting traffic around Kansas City and making itself the chief trade center of the region.

The railroad to Carbondale. During the sixties confidence continued to repose in the railroads, and the ingenuity of railroad promoters was considerable. A road to Carbondale, about thirty miles southwest of Lawrence, would tap the coal resources of Osage County. Cheap coal would make Lawrence a manufacturing center. Result: Douglas County issued $200,000 of bonds for the Lawrence and Southwestern Railroad Company to lay track to Carbondale. Unfortunately the coal shafts of Osage County proved not to be of any great permanent importance; and the line was shut down for a long period in the seventies, and ultimately a pair of rusty iron rails across the countryside was the only visible result. Union Pacific purchased the road before deterioration set in.

The second railroad to Kansas City--a Santa Fe acquisition. By the early seventies a second railroad from Kansas City to Topeka by way of Lawrence had been built; whereas the Kansas Pacific had laid its tracks north of the Kansas River, this railroad roughly paralleled the river on its south bank. The Kansas Midland Railroads (which had

built the line from Kansas City to Lawrence) and the Lawrence and Topeka (responsible for the other section) were consolidated as the Kansas City, Topeka and Western Railroad and acquired by the Santa Fe in 1875. Thus, by 1880, all railroads communicating with Lawrence were made a part of either the Union Pacific or the Santa Fe systems.

Other Railroad schemes. Two other railroad projects drew attention for a time in the late eighties. One proposal had the backing of both Lawrence and Kansas City men and involved a railroad up into Nebraska from Kansas City by way of Lawrence. The other was for a railroad from Atchison through Lawrence to Burlingame, the main offices and shops of which were to be located at Lawrence. Neither of these plans was ever finally carried out.

The results of railroad development. Of course Lawrence was not the only place to succumb to railroad fever. Citizens of Atchison raised $150,000 to get their town made the terminal of what later became the Atchison, Topeka and Santa Fe. The 1857 charter for such a road as granted by the Territorial Legislature would have made St. Joseph, Missouri, the eastern terminal. Atchison succeeded in getting a road built down the eastern side of the Missouri River from St. Joseph to a point opposite Atchison before making the swing westward. Yet it was not long until the

main traffic of the Santa Fe system came through Kansas City and not Atchison at all. In fact, as indicated by Andreas in his History of the State of Kansas, the Kansas City-Lawrence-Topeka acquisition almost immediately superseded the Atchison-Topeka portion of the Santa Fe Railroad as the main artery west of the Missouri River.

The unwarranted extravagance of the bond issues to aid the Pleasant Hill, the Carbondale, and the Leavenworth, Lawrence and Galveston railroad experiments was not apparent until the close of the period now under consideration: the years 1864 to 1874. During those years the widespread building of railroads in all diredtions contributed to the prosperity of the times. The people of Lawrence then believed that the development of the rail connections of their town would be a great boon to the community such as to "convince any thinking man that this city will, within a few years, be the Indianapolis of Kansas," as an 1863 editorial in the Kansas State Journal put it. Ten years later the tune had changed. Editorials were saying that if it was ever advisable to vote bonds, manufacturing establishments rather than railroads should have the preference; railroads were by that time believed to be "of doubtful utility to a town." When Lawrence voted so much money to the Galveston road, she little supposed she "was giving her money to help

build up Kansas City."[11]

Manufacturing enterprises--the windmill plow works of Wilder and Palm. Turning from railroads to manufacturing industries, one finds significant new developments in connection with many of the manufactures already mentioned in the beginning chapter, namely, farm implements, flour, carriages, furniture, and soap. Unique among these in many respects was the farm implement factory of Wilder and Palm. After the Civil War, the settlement of the new land west of the Missouri took on the proportions of a mass migration from the East. Somebody had to make the plows and other tools to equip thousands of new farms for prairie agriculture. The earliest Lawrence plow factory, with its owner R. C. Dix, was a casualty of the Quantrell raid; but the second and last venture of the kind had been begun even before the raid. On a hill at the western edge of town Quantrell's men found a large power windmill in process of construction and leveled it to its foundations. Fortunately work had not gone very far at this time, and building was resumed before long.

This windmill was promoted by three men: Andrew Palm, J. H. Wilder, and J. C. Trask. Palm was born in Sweden, and after formal four-year apprenticeship as blacksmith he received graduation papers from the Mechanical Association

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11 Lawrence Daily Tribune, March 14, 1873.

of Lund in 1855. He was a journeyman blacksmith in Sweden for a time, emigrated to the United States, settled briefly in Massachusetts, and then in Bloomington, Kansas, near Lawrence. He had worked at his trade and bought a part interest in the Bloomington grist-mill before moving to Lawrence in 1862. J. H. Wilder learned blacksmithing from his father in Massachusetts, came to Lawrence in its early days, ran a carriage works, and was for a while a partner in the firm which built Lawrence's first storebuilding, a general merchandise establishment. He sold out his interest in this in 1862 to go into business with Palm.[12]

It occurred to Palm that the Kansas wind could be harnessed by windmills such as he was familiar with in Europe. He convinced Wilder, who agreed to furnish the hilltop on which they decided to build the mill. The services of Josiah C. Trask, editor of the Lawrence State Journal, were enlisted to borrow some money. Trask succeeded in getting a loan of $10,000 from an Englishman named Garett. Andrew Palm went back to Sweden to hire expert workmen. He returned to Lawrence in early 1863, and they immediately started work on the windmill.

In August, Quantrell's men killed Editor Trask and destroyed what had been built of the windmill. It was even thought for a time that the raiders had stolen the cash that was on hand from the $10,000 loan, but this supposition

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12 Andreas, op. cit., pp. 342, 347.

proved to be erroneous. The Swedish builders began again, floating timbers across the river from the stand of trees on the north side, and repaired the damage. By spring of 1864 the windmill was finished, and Lawrence had acquired a distinctive landmark which stood on the hill in the western part of town for more than forty years.[13]

The mill was a big one, built of stone and massive hewn timbers to a height of fifty-five feet. Its white sails were eighty feet in diameter, and the miller could manipulate a heavy chain-and-sprocket device to turn the whole top of the mill to face the wind. When revolving ponderously in a stiff breeze, the great wheel could deliver about eighty horse-power. The mill had three sets of burrs for grinding wheat and corn and was so arranged that the farmer could drive his wagon into the mill for unloading. But the grist-mill phase of the business was purely a sideline.

The main interest of Wilder and Palm was the manufacture of farm implements, and in this they were highly successful for several years. The windmill, which cost $9,700, paid for itself and earned its owners twelve per cent on their investment in the first five years. A carriage and plow shop building were added in 1865. Within a short time

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13 Bailey, "Old Wind-Mill," from the Dixie Miller; and Ruth G. Boughton, "The Old Windmill."

a carpenter and blacksmith shop, offices for the owners, a paint shop, a cistern, and a cave all appeared around the mill. In 1865 the firm built a showroom on Massachusetts Street, where they sold sold farm implements of their own make and also some shipped in from the East.

Plows of all types and sizes were made, including heavy "sodbusters." The wood for the handles was bent and steamed and hung over a fire in the cave to dry. When dry, the handles went to the paint shop and later were joined to the plowshares which had been made meantime in the blacksmith shop. In the carpenter shop wagon beds were put together. Corn planters, hay rakes, cultivators, iron rollers, and scrapers for use in railroad building all were produced on the busy hilltop.

By 1867 the Massachusetts Street showroom of Wilder and Palm was full of plows of their own make, and they were selling five to fifteen per day at retail. In 1868 the concern shipped sixty-seven of its railroad scrapers down to the end of the Leavenworth, Lawrence and Galveston Railroad's existing track, to be used in grading the roadbed farther south. The firm's plows and attachments won prizes at fairs and competitions. Wilder and Palm began to ship their plows and scrapers by the carload and found it necessary to build a warehouse by the railroad track.

In 1880 the enterprise was incorporated as the Law-

rence Plow Company, with $25,000 capital stock. Andrew Palm was president and J. H. Wilder was treasurer of the new corporation. A current newspaper item reported that at that time twenty-two hands were employed.[14] It is said that in peak seasons the firm sometimes had as many as seventy-five men working for it.[15]

At the time of incorporation the depression of the seventies was lifting, and the business was at its zenith. Soon after this it went into a rapid decline. In 1884 a carload of plows was shipped to Leroy, Coffey County, Kansas, indicating that the Lawrence Plow Company was still selling its products in volume; but in 1885 the corporation was in receivership, having made a voluntary assignment of its assets to Nathan Henshaw, receiver, for benefit of its creditors. At that time its liabilities amounted to about $30,000. These consisted of several interest-bearing loans, some from J. H. Wilder, two from Andrew Palm, and one, the largest, for $7,025, from the Merchants Bank of Lawrence, plus about $1,000 due on various book accounts to iron works, bolt works, and the like, in Kansas City, St. Louis, and Illinois. There was also a "Deposit Account (said to belong to the Wilder heirs)" of $6,764.58.[16]

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14 Lawrence Daily Journal, January 1, 1880.

15 From a brief mention of the concern in an April, 1934, issue of the Lawrence Journal-World.

16 Lawrence Weekly Tribune, August 6, 1885.

By September appraisers had been appointed and had valued the company's assets at $22,791.15. At that time the liabilities were "something over $40,000."[17] In 1886, the big windmill turned its last wheels and ground its last grist, and stood empty and deserted, except for vagrants, bats, and owls, from that time until it was accidentally burned down in 1905.

We can find several reasons for the rapid decline of this concern into insolvency. The early eighties were bad years on account of grasshoppers and drought, and the farmer found it hard to meet his obligations for plows and farm tools. This was likely the immediate cause of the difficulties, although the concern had weathered the severe hard times of the seventies. By the middle eighties, of course, the region was more fully occupied and the market for farm implements had settled down to stability after the early years of rapidly expanding demand. The concern perhaps could not make the necessary adjustment and still operate at a profit, especially in view of the fact that the network of railroads which had appeared since the beginning of the business must have made it harder to meet the competition of larger, better-powered eastern plants nearer to raw materials and now enabled, by the railroads, to extend their market into the new frontier region. The death of J. H. Wilder may

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17 Weekly Tribune, September 3, 1885.

have had some bearing on the decline of the concern.

As for the use of the windmill to grind grain, which was a subsidiary activity anyway, the greater efficiency of the large mills could now be used to capacity, and small grist-mills were beginning to drop out after 1880. The windmill equipment could not have coped with the hard wheat which grew rapidly into favor after that date. The Wilder and Palm plow factory was the last enterprise of its kind to be established in Lawrence. Andrew Palm, however, continued in business for several years as a retail implement dealer.

Developments in flour milling. Some emphasis has already been placed on the fact that flour milling was at first a "poor relation" among Kansas industries.[18] The first grist-mills in Lawrence were all operated in connection with sawmills or, in the case of the Wilder and Palm plow works, with a much more important major activity, to which the grist-mills were more or less subordinate. After the Civil War, however, with the influx of new settlers in thousands, wheat production increased rapidly and flour milling could be by itself a profitable business. This period, commencing about 1865, was the heyday of the small mill. Not until after 1880 did better developed rail

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18 Above, pp. 15-16.

transportation, better technical methods, the new hard grain, and railroad favoritism begin to crowd out the early grist-mills.

The first mill in Lawrence was operated by Colonel E. J. Blood and a Kimball brother after the original owners gave it up in 1861, as was previously mentioned. At the time a sawmill was connected with it, and although this was discontinued before long, the grist-mill did not then become the sole interest of the establishment. In 1865 it was fitted up as a woolen mill and the grist-mill was operated by the same engine. The concern did a prosperous volume of business for several years. In 1870 Blood bought out the interests of Smith, his partner at the time, but later admitted J. W. Shultz to partnership in the business. A few years later, in 1874, Blood and Shultz revamped the grist-mill to give it a capacity of sixty sacks of flour per ten-hour day. As we shall see, the woolen manufacturing business in Lawrence ceased soon after this time, and the grist-mill part of the Blood enterprise did not fare very well either in the ensuing years. In 1879 the "old Blood Mill," as it was then called, was being used in the manufacture of buffalo robes. The larger flour mills which by then were flourishing in Lawrence and using power from the dam had superseded the small grist-mills.

The two small mills so far discussed, the Wilder and

Palm windmill and the old Lawrence mill of Colonel Blood, were abandoned because they either did not or could not expand. Contrasting with them are the other two mills set up in Lawrence during the period now under observation. The first of these, the Pacific Mills, was built in 1864 by R. A. and E. B. Hayes. The mills changed hands frequently in the next five years, but remained in constant operation. In 1870, under the new management of Schmucker and McConnell, the mill was renovated and at that time used a sixty horse-power steam engine, had 10,000 bushels storage capacity for grain, and could turn out 300 sacks of flour and handle 500 bushels of corn daily. By 1879, the firm had come to be McConnell Brothers, new machinery had been introduced, and the mills produced four different qualities of flour. In that year the establishment moved to a building near the river bank, where it had access to the water-power, and continued to flourish for many years. Ultimately it was consolidated with the big Douglas County Mills of J. D. Bowersock, to be discussed in a later chapter.

The Delaware Mill, on the north side of the river, was the other early flour milling enterprise to survive the critical period of the late seventies. Orlando Darling, operator of the river ferry, built the Delaware Mill in 1866 in connection with his sawmill in North Lawrence. When the mill was overhauled and renovated in 1870, the editor of

the Kansas Weekly Tribune took the occasion to puzzle over why flour from St. Louis and Illinois mills still seemed so attractive in Lawrence when mills like the Delaware could furnish flour as good "and at rates with which it is impossible" for the other mills to compete. After periodic enlargements and improvements, the Delaware Mill was probably among the largest in the state, having a 1,000-bushel daily capacity in the early seventies. S. B. Pierson took over the mill in 1874, at which time O. Darling was busy on his contract for the construction of the dam, and as soon as the dam was finished the new owner ran a cable from the water wheel to his mill, although the mill was 1,200 feet from the river bank. In 1879, the year the Pacific Mill changed buildings, Pierson bought land and built a large new mill on the east side of Massachusetts Street, where he continued to use water-power. The Pierson Mill figures importantly in the later history of Lawrence flour milling.

In summary of what has been said about the early history of flour milling in Lawrence, it should be pointed out in the first place that the grinding of grain was a definitely subordinate and generally unprofitable pursuit in the earliest years, but that small grist-mills came into their own in the sixties and early seventies; and in the second place there has been noted a tendency setting in,

about 1879, toward expansion and consolidation, or on the other hand, abandonment, of the small mills. It remains for a later chapter to account for the relative loss of the prestige of Lawrence as a Kansas milling city.

Carriage and wagon factories. Even the smaller western towns of the day typically supported a carriage and wagon factory or two where perhaps a half dozen carpenters and blacksmiths could put together a buggy or a farm wagon in a few days. J. H. Wilder operated such an establishment for a short time before going into business with Andrew Palm. O. Carlson was responsible for the next important venture of the kind. He began business in 1865. By 1869, nine carriage and wagon makers are listed in a Lawrence directory. Most of these were evidently very small concerns doing mostly repair and blacksmith work and only occasionally turning out a farm wagon or a buggy.

The Carlson shop was one of the few carriage factories which in point of size and length of life are entitled to special notice in a study of this kind. O. Carlson steadily expanded operations so that by the late seventies he was renting buildings all around his main shop on Vermont Street for the storage of his finished wagons, buggies, carriages, and omnibuses. He had outlasted all his Lawrence competitors and was selling buggies and wagons in McPherson and other towns as far west. He received an occasional order from Kansas City. He made luxurious conveyances for

Lawrence business men. Andreas reports the capacity of his plant to be in 1883 about one hundred carriages annually. The establishment was divided into blacksmith shop, woodworking shop, paint shop, and warehouse. In the early eighties fifteen skilled mechanics were employed. In October, 1885, Carlson sold out to Johnson and Anderson, who planned to continue the business in the same location; but after the sale the scope of the enterprise declined rapidly and in a few years it had disappeared entirely.

Within a year after O. Carlson had started making carriages in Lawrence there were two other fair-sized firms of carriage and wagon builders. First, there was Learned and Schenck, later Learned and Son, who employed seventeen men, could build about 260 wagons a year, and in 1867 were doing $28,000 annual business.[19] Second, there was the firm of Hidden and Reynolds, employing ten men at this same time, having an annual capacity of 300 wagons, but doing a business of only about $16,000 a year.[20] These two concerns later combined into the Learned and Hidden carriage factory.

In 1871 a smaller shop, that of Reser and Kendall, was also doing business. But in a list prepared under the instruction of the city coucil in 1885, only one wagon maker is listed. And although in 1892 J. A. Wilson set up a shop

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19 According to the Kansas Weekly Tribune, September 12, 1867.

20 Ibid.

where he repaired or built carriages and other vehicles and did general blacksmithing, establishments doing a large and exclusively manufacturing business in wagons and carriages disappeared from Lawrence after the middle eighties. The logical conclusion is that they could not withstand the competition of more highly capitalized concerns nearer the center of the national market.

Furniture manufacturing. It has already been mentioned that the firm of Stick and Preisach[21] made furniture in Lawrence before the Quantrell raid. Soon after the latter event Clark and Chapman went into the furniture manufacturing business on a larger scale. Whereas the first firm was known as a "cabinet works," the latter was usually referred to as a "factory." Clark and Chapman had a steam engine to operate their lathes and saws and employed a force of about fifteen men. Furniture of all ordinary sorts was made, and the firm maintained a salesroom apart from the factory, where they sold their product at retail. In 1865 this concern was second in Kansas only to Woods and Abernathy of Leavenworth, on the basis of assessed valuation.[22]

The mechanical equipment was credited locally with enabling the concern to sell furniture at a lower price than could be quoted on that of Eastern make; but it is

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21 Sometimes spelled Prisack.
22 Weekly Tribune, July 13, 1865.

much more likely that exorbitant freight rates on a finished good so bulky as furniture were the real reason for the early success of the western concerns. At any rate, the bare fact is certain enough that they could locally undersell their eastern competitors. In fact, by 1867 still a third concern of the kind was in operation in Lawrence. In that year the firms compared as follows:

Clark and Chapman:
Capital, $20,000
Annual gross sales, $40,000
Number of workmen, 16
Smith and Bailey:
Capital, $10,000-$12,000
Annual gross sales, $15,000
Number of workmen, 6-8
Stick and Prisack:
Annual gross sales, about $15,000[23]

The figures given may very possibly exaggerate the size of the two smaller firms. Clark and Chapman, however, were making a school desk being placed in general use at that time, and the figures for that firm are quite plausible.

In a few years the lack of nearby sources of wood suitable for furniture construction, or at any rate of direct and inexpensive transportation from such sources, began to tell. Stick and Preisach veered over into retailing, making an occasional office desk or bookcase to order. Aside from this, Lawrence furniture factories were things of the past by the late seventies.

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23 Weekly Tribune, September 12, 1867.

The Bangs brothers' soap factory. Soap was another not uncommon manufacture in the new towns of the West. G. H. Sanger's early factory in Lawrence[24] was apparently a small and shortlived establishment; but in 1868 W. N. and C. W. Bangs came to Lawrence from Boston, Massachusetts, for the special purpose of starting manufacture of soap on a large scale. W. N. Bangs was a Canadian who had learned the soap business in Boston, where he had carried it on until coming to Lawrence. Within two or three months after arriving in Lawrence the Bangs brothers had erected a three-story frame building for their factory and were planning to turn out some ten thousand pounds of bar soap per week.

In the basement of the plant were furnaces to heat the boilers; on the ground floor the soap was made; and the upper story was used for storage and for making packing boxes for the finished article. There were three main ingredients: caustic soda, which was then being manufactured in new factories in the East, having formerly been imported from Europe; resin; and tallow. Some difficulty was anticipated in getting a sufficient supply of the latter; all the tallow furnished by Lawrence butchers was contracted for, and Bangs Brothers sent an agent west to buy up more at points along the Union Pacific railway line.

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24 See page 17, above.

United States Government orders accounted for a substantial part of Bangs Brothers' sales. During the year 1869 the factory filled government orders amounting in all to more than one hundred thousand pounds of soap, which was delivered at army posts on the plains to the west and south. The Lawrence concern enjoyed government preference over similar plants at Leavenworth. In addition to the government contracts, Bangs Brothers sold at wholesale to Lawrence stores, practically monopolizing the local trade, and also sent their product in large amounts to Colorado, Texas, and New Mexico. In its advertisements the concern stressed that it sold at "St. Louis prices."

The first building was already outgrown by 1870 and Bangs Brothers sold it to the Leavenworth, Lawrence and Galveston Railroad, near whose track it was located. A larger plant was built, having a capacity of 150,000 pounds of soap a month. Government orders continued to be forthcoming; in 1878 the Weekly Tribune noted the factory was working on a fifty-thousand-pound contract.

In 1881 the firm of Bangs Brothers dissolved. W. N. Bangs became general manager of the newly incorporated Pacific Mills. At that time he was also interested as director or stockholder in other Lawrence concerns.[25] The

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25 See Andreas, op. cit., p. 332.

reasons for the abandonment of the soap factory are matter for conjecture; it may be that something happened to break the connection which had enabled Bangs Brothers to get preference in government orders, or it is possible that larger eastern soap makers, by reason of their location nearer the center of population, with consequent access to a larger market, could operate on a smaller profit margin and consequently encroach on the wholesale market territory of Banga Brothers.

The woolen mills. So far in the present chapter the discussion has been concerned with only such types of manufacturing as had already been attempted before the Quantrell raid. Besides these, there were in the period 1864-74 many ventures into hitherto untried pursuits in Lawrence. Important while they lasted were the two woolen factories put into operation in the sixties. Sheep-raising was growing in importance then, and Kansas appeared to be in need of woolen mills. The Studebakers of Ohio were first on the Lawrence scene with such a project in mind. They came to Lawrence to look over conditions in September, 1865, and the Weekly Tribune made the following report of their visit:

> Messrs. John Studebaker and Sons, who have just disposed of a large woolen factory in Miami County, Ohio, propose to establish a factory in Kansas. The old gentleman and one of his sons are now . . . posting themselves in regard to

> woolgrowing in Kansas. They . . . intend to organize a company for . . . putting up a factory in Lawrence with the least possible delay. They . . . express themselves better satisfied with our city than any place they have visited in the West. . . .

By November final arrangements had been made and the machinery was on the way. It was installed in the buildings connected with the grain and sawmill belonging to James Blood, which has been noted before as the first grist-mill in Lawrence. Four sets of looms, 250 spindles, and a set of roll carding machines constituted the equipment of the establishment. Studebaker also refitted the grist-mill, which he operated with the same steam engine that powered the wool-spinning machinery.

Before the Studebakers had procured all their equipment, other Ohio entrepreneurs were already preparing to establish a second woolen mill in Lawrence. S. N. Goodale of Cleveland, representative and general manager for Seldon and Acking, the proprietors of the second concern, arranged to install the mill in what had been a livery stable on Massachusetts Street near the bridge. The Studebaker factory had been in operation only a few months when, in December of 1866, the second mill was also ready for business.

At the Studebaker mill, known as the Lawrence Manufacturing Company, wool was sorted into grades on the upper floor, then washed--in spring water carried to the mill by an aqueduct--and dried. After pickers separated

the fibers, the wool went through two breakers and condensers and then to the spindles. After the yarn issued from the spindles, it was dyed, then taken to the looms and woven into blankets and such fabrics as tweeds and jeans.

Wool was brought by farmers to the mill sometimes from long distances. Frequently they took payment in the finished product. In some seasons sheep-raisers would bring as much as 3,000 pounds of wool to the mill in a day, and in the summer of 1867 the factory was running night and day. By the middle of August of that year the Lawrence Manufacturing Company had on hand 10,000 yards of fabric: blankets, tweeds, flannels, and so on. The plant was shipping five to eight thousand pounds of wool to eastern markets every week. Branches in nearby towns were under consideration. In the fall of 1867 the newspaper reported that this mill was doing "annual business" of $30,000.

As for the other mill, the newspaper reported at the same time an "annual business" of $20,000. This mill, under the management of S. N. Goodale, was known as the Kansas Woolen Manufacturing Company. On Goodale's own suggestion the federal government decided to distribute spinning wheels, looms, and carded wool among the frontier Indians, to supply an occupation which would keep them out of mischief; and in May of 1867 Goodale started his mill to work on a government order for multicolored rolls of wool for the Indians. The mill continued to buy and sell wool and manufacture cloth

at a great rate until winter, when it had to close down for some months for repairs. During that winter its competitors operated full time.

By April, 1868, the Kansas Woolen Manufacturing Company had its mill in running order again and went to work on an order for 700 yards of striped cloth for the state penitentiary. At the same time the Lawrence Manufacturing Company had a similar order on its books. Besides cloth for convicts' garb, it was to furnish the Kansas State Prison with 300 yards of fine gray tweeds or jeans for the guards' uniforms. The entire order amounted to more than eight thousand dollars.[26] The following winter the mill began manufacturing another fifteen hundred to two thousand yards of "striped goods" for the penitentiary. Combined with the regular business of the factory, this was sufficient to keep the mill going at full capacity all winter.

Amid what appeared on the surface to be flourishing prosperity, John Studebaker was dissatisfied with the outlook for the future. He had offers from Kansas City to induce him to supervise the building of a woolen factory there, and in the spring of 1869 he decided to accept and move out of Lawrence. A contemporary newspaper summed up the situation in this way:[27]

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26 Weekly Tribune, April 23, 1868.
27 Ibid., April 8, 1869.

> Mr. John Studebaker, of this city, has made arrangements with parties in Kansas City for the erection of a woolen factory at that point, and, as soon as the necessary buildings are completed, will remove the machinery of the Lawrence Woolen Manufacturing Company's mill to the new building in Kansas City. Mr. Studebaker has no fault to find with Lawrence as a manufacturing point, except in the matter of fuel, wood becoming scarcer and higher-priced each succeeding year, but as more favorable terms were offered by the Kansas City parties than could be obtained here, his personal interests demanded the change. . . . Under his superintendency, the factory at this point ranked second to none in the West.

This did not mean the discontinuance of the factory. Colonel Blood and Major Smith immediately took over the management of the concern, and in both Lawrence woolen factories business went on as usual that year. In 1870 Colonel Blood installed new machinery and in the summer wool-buying season his mill was making 150 yards of cloth daily. The mill then had 288 spindles. The great drawback at thattime was the difficulty in obtaining sufficient wool; the growing of wheat and corn was displacing the growing of wool in the region about Lawrence.

Very shortly the Lawrence woolen industry was in for hard times and prolonged shutdowns. We haar no more of a woolen mill being operated in the "Old Lawrence Mill" of Colonel Blood, although he and his new partner, J. W. Shultz, refitted the grist-mill portion of the business in 1874. By 1879 the buildings were no longer being used even for a grist-mill. The other mill, previously known as the Kansas

Woolen Manufacturing Company, was rechristened Phoenix Woolen Mills in 1869, although still under the management of S. N. Goodale. This establishment had to close down too in the early aeventiex. In 1874, A. W. Cone, a Lawrence man, bought the mills and put them in operation again, planning to use power from the dam as soon as available. The mill was still using steam, however, in 1876, and running fairly continuously in that year. Its equipment then included 200 spindles, five carding machines, and three looms, and Cone was still planning to use the water power as soon as it could be arranged. A break in the dam in that year was not repaired until fall, and another serious break occurred the following spring, so if the woolen mill was counting on cheaper power from the dam it was disappointed. At any rate it soon had to shut down again for a long time.

In 1878, A. W. Cone was a traveling correspondent for the Kansas Farmer, and wrote an article for that paper about twenty farmers in Mitchell County who were concentrating on sheep farming. Mitchell County is in the north central part of the state. Apropos of this the Weekly Tribune for March 28, 1878, had this advice for Kansas farmers:

> The sooner Kansas farmers get out of the habit of <u>selling</u> corn and get in condition to <u>feed it</u> at home the better it will be for them.

> True, corn is the poor man's crop, but the man who depends on raising corn to sell will scratch a poor man's head as long as he lives! Wheat is better because it has more value in proportion to bulk. Wool is far better yet, for the same reason and because Kansas is admirably adapted to it, both as to soil and climate.
>
> Silk will still be better if as good practical men think, it can be made a success. . . .

Wool, as is indicated in these editorial remarks, was not then the major interest of Kansas agriculture. Nevertheless, A. W. Cone saw fit finally to reopen his woolen mill in 1880, after putting the building and equipment in better order following the long period of idleness. This time the mill did make a cable connection with the dam. Cone and his two or three associates had several thousand pounds of wool on hand and the mill remained in operation during the remainder of the year 1880, but evidently not much longer than that. By 1883, at least, the mill was no longer in operation. In December, 1884, the Lawrence Herald-Tribune noted that a six-loom woolen mill had been recently completed at Eldorado and was then working on blankets, flannels, yarns, and the like. Eldorado, in the south central section of the state, was nearer the main wool-producing territory of Kansas. Much of the wool bought by the Lawrence woolen factories had come from the southern part of the state; in speaking of the Lawrence Woolen Manufacturing Company in its prosperous

days a local newspaper had remarked that the reputation of the concern's proprietors was "throwing a large portion of the Southern Kansas wool trade in their hands."[28] And as early as 1867 that enterprise had seen fit to set up a branch--equipped with carding machine and loom--in the upper floor of a sawmill and grist-mill at Leroy, which is about seventy-five miles southwest of Lawrence. Apparently unaware of the experience of the Lawrence mills, the Herald-Tribune followed its description of the Eldorado woolen factory with the declaration that "there ought to be three of four such mills in Lawrence." The truth was that the manufacture of woolen goods in Lawrence had ceased forever. The determining factors were the location of supply and secondarily the cost of fuel for power.

Patent medicine and "chemical" works. Through the period covered by this study, patent remedies and panaceas for all kinds of physical ills found a willing and credulous acceptance on the part of a gullible public. Among the impressive display of bottles in an old-fashioned drug store was frequently to be found some special cure or tonic concocted by the local druggist himself, who sometimes succeeded in finding a wide market for his preparation and made medicine in wholesale lots. In Lawrence there have

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28 Weekly Tribune, May 2, 1867.

been numerous makers of patent remedies, ordinarily as a sideline to a retail drug business, but only a few concerns developed the manufacturing end of the business to any degree of importance.

Back in the earliest days, in 1855, B. W. Woodward and his partner, Finley, had started a drug store in Lawrence. During the ague epidemic of 1858, Woodward devised an ague cure which was believed effective, and he continued to make it. By the middle sixties he was filling wholesale orders from various distant points. By that time he had also placed on the market Woodward's "Kansas Eye Balm," Woodward's Blackberry Syrup (for diarrhea), and the Germania Hair Renewer. He filled orders for this latter from such far away places as New Hampshire. He had to reduce the price of his ague cure from one dollar to fifty cents a bottle in 1879. By this time Woodward had entered the general wholesale drug trade in partnership with one Faxon and the firm built a plant in Kansas City. Fire destroyed the Kansas City branch in 1881, causing a loss estimated at the time at between $100,000 and $125,000. After that, no more is heard of Woodward preparations.

More significant in the manufacturing aspect of the drug business was another Lawrence enterprise, known for a long time as the Leis Chemical Company. This concern

was more exclusively dedicated to manufacturing than the Woodward firm. George Leis was the moving spirit in the organization. He came to Lawrence in 1855 as a youngster of thirteen and learned the pharmacy business clerking in Woodward and Finley's drug store. After a wartime interval of recruiting and enlisting men for the First and Second Colored Regiments, Leis returned to Lawrence and started a drug store of his own. Before long he was making "Camphor Ice" and "Itch Ointment" for various skin irritations, and a sort of dry cleaner, the "Chemical Erasive Fluid."

His first remarkably successful manufacture was the "Condition Powders," a remedy for diseases of cattle. In 1867 he filled orders for the Condition Powders all over Kansas and sent large quantities to St. Louis wholesale houses. Making this preparation by the gross of bottles, George Leis was selling it in big lots; in 1869 five dozen gross went to New Hampshire to fill a demand there which the Lawrence Tribune claimed was created by the Leis advertisements in that newspaper, which had been sent back east to friends of Lawrence and its people. Orders came from wholesale houses as far away as Camden, New Jersey.

Leis acquired a second building, which faced New Hampshire Street and was back of his original plant on Massachusetts. In 1868 he made a two-month buying trip in the East, negotiating directly with manufacturers and

importers. Leis was acquiring a reputation, at least locally, for his energy and skill as a business man and soon became connected with several other Lawrence enterprises. In 1871 he took his brother William J. into the firm. In 1873 George Leis cooperated with Kansas University Professor Saunders to manufacture pepsin from the stomachs of hogs slaughtered in the local packing house. In that year the Daily Tribune, recipient of considerable advertising revenue from the Leis establishment, reported:

> Most of our merchants and business men complain of dull times, but there is at least one noted exception in the city. We refer to George Leis & Brother. They are working a full force of hands, and besides supplying a large home trade, are daily shipping their condition powders and other proprietary articles to all points of the compass. . . .

In the middle seventies Leis preparations were carried by wholesale druggists in Chicago, St. Louis, New York, and throughout the West. In some years Leis' firm spent as much as $3,000 on advertising, no doubt a generous amount, considering the time and place.

George Leis and Brother had now begun the manufacture of a particularly notable preparation, the celebrated Leis Dandelion Tonic. This extraordinary medicine, we are earnestly informed, was a curative for dyspepsia, kidney diseases, sick headache, chills and fever, torpid liver, and "female weaknesses." And in addition to all that it was "a great brain food." Dandelions were an important ingredient,

and Lawrence boys could sometimes earn a little spending money digging dandelions out of Lawrence lawns and taking them to the Leis factory. Probably more important than the dandelions to the success of the Dandelion Tonic was the Cologne spirit in its makeup, which gave a certain alcoholic piquancy to the medicine.[29]

In the seventies the concern added baking powder, flavoring extracts, and perfumes to its list of products. In 1879 it moved into new quarters, a four story building on the corner of Massachusetts and Henry (now Eighth) Streets, also retaining a laboratory in the building facing New Hampshire Street. On the third floor of the larger building was begun the manufacture of the celebrated Dandelion Tonic, and from a vat on this floor pipes ran into the basement, where the manufacturing process was completed and the finished product placed in bottles. Inks, mucilage, bluing, and other preparations were bottled, and all the various products were stored in attached buildings for the purpose.

As a climax to an almost uninterrupted career of expansion, the business was incorporated in 1880, with capital stock of $50,000. J. P. Usher, mayor of Lawrence, was president of the new corporation, and a former mayor,

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29 Lawrence residents who remember the old Leis concern say that the Dandelion Tonic had no therapeutic value but the Cologne spirit gave it an "exhilarating" effect.

J. N. VanHoesen, was vice-president. George Leis was secretary and general manager, and his brother William was superintendent of manufacture. Among the directors was J. D. Bowersock. The concern was then marketing its products through Texas, Colorado, New Mexico, Missouri, through wholesalers in the East, and of course in Kansas.

Leis' German Baking Powder was one of the fautory's leading items. Besides selling it to several hotels and restaurants, the company obtained contracts to furnish the state institutions with baking powder. Under another contract the German Baking Powder was sent in great quantities to the United States Army post at Fort Leavenworth.

In 1881 the company began construction of a new factory building on the corner of Massachusetts and Pinckney (now Sixth Street); and a connection was made to allow the machinery to be run by water-power. The Leis Chemical Manufacturing Company was now reputed to be the largest business of its kind west of the Mississippi. It operated a branch in Kansas City and one in Salt Lake City[30], sending itx products all over the United States; and they were said to be "largely used in Mexico and South America."[31] Annual sales reached $200,000.

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30 Evidence that a Salt Lake City branch existed is found only in a brief mention of it in the Lawrence Daily Record, September 12, 1890.

31 Herald and Tribune, August 8, 1884.

The corporation was recapitalized at $90,000 in 1890; shortly thereafter one of the chief suppliers of new capital became manager and the name of the concern was changed to "Marshall Chemical Manufacturing Company." Under new management, the enterprise experienced a sudden change of fortunes as far as Lawrence was concerned. The defunct Kansas City branch was reestablished and a new branch set up in Denver, but within two years the Lawrence plant was abandoned. Much ruffled by a preliminary rumor of the proposed abandonment, the Lawrence Daily Journal for March 14, 1892, sets forth the situation in this way:

> A notice in the Kansas City Star purporting to be an interview with Mr. Marshall of the Marshall Chemical Co., and relating to the removal of the plant of the Chemical company from Lawrence to Kansas City, is to say the least misleading and ought not to stand unrebuked. It may be that some mismanaged enterprises in some of the late boom towns of Kansas or any other State are desirous of moving somewhere, or anywhere, but to intimate that Kansas City offers superior manufacturing facilities to Lawrence and that cheap rents should induce a movement of Kansas manufacturers to Kansas City is a statement that will not hold water. . . . The Star article referred to closes in this way: "The Marshall Chemical Co. abandons a $36,000 plant in Lawrence." . . . At one time the Leis Chemical Co. (now the Marshall Co.) indulged in the luxury of a Kansas City branch, and paid handsomely for the privilege of hanging out their shingle in that center of "cheap rents"--That is the stockholders paid for it, as the branch was a losing investment.
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> We do not think any $36,000 plant will be abandoned in Lawrence. . . .

Shortly after this editorial, nevertheless, the Marshall Chemical Company did abandon its Lawrence plant, to operate thence from its home offices in Kansas City, Kansas.

During the heyday of the Leis Chemical Manufacturing Company, when it was sending its Dandelion Tonic, its baking powder, its medicines far and wide, it did have some competition in its own bailiwick in the form of Dr. S. O. Himoe's manufacturing enterprise. Dr. Himoe, formerly a surgeon, went into business in 1867, at about the time that George Leis began extending his products to a nationwide market. There had been a retail drug firm of Himoe and Clark since the early sixties; and now Himoe began to make a jobbing drug house out of the business, distributing such preparations as his "Peruvian Tonic," "Elixir Bark and Iron," "Aromatic Blackberry Brandy," "Blackberry Cordial," and others. In 1869 he sold his drug business to George Slosson and Dr. E. R. Russell and devoted himself exclusively to manufacturing.[32] The enterprise was incorporated at about the same time as its bigger competitor, and in the Himoe company as in the Leis company, J. D. Bowersock was a director. "Himoe's Popular Medicines" were reported by Andreas[33] to be known throughout

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32 In 1870 Dr. Himoe bought himself such a luxurious new carriage that the Tribune was roused to comment that his business must be very good or he could not afford such an expensive conveyance.

33 Op. cit., p. 330.

the West, but it appears likely that Kansas and particularly southern Kansas druggists furnished the main market along with some business in Nebraska. In the early eighties, when the Leis concern was doing a business estimated at $200,000, Himoe had sales of only about $15,000 according to Andreas.[34] By the end of the eighties the Himoe firm had disappeared.

Late in 1892 the Blair Manufacturing Company commenced to operate a laboratory on the corner of New Hampshire and Winthrop (now Seventh Street), calling itself a "new industry started in Lawrence." The new concern began by offering prizes for the best advertisement and essay on the subject of their "Crucial Dyspepsia Tablets" written by residents of Lawrence and neighboring counties. Known locally as the "pill factory," this enterprise never achieved size or importance comparable with its predecessors.

Meat-packers in Lawrence. During the period 1864-1874, beginnings were made in still another industry on a notably large scale. That industry is meat-packing. In 1867 G. H. Bew and his father commenced pork-packing and slaughtered about three hundred hogs in the first year. Business grew steadily until in 1876 G. H. Bew, his father having retired from the business, had a $30,000 plant in which about 5,000 hogs were slaughtered annually. Besides

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34 Ibid.

the slaughter-house, on the river near the eastern edge of Lawrence, Bew operated a "packing house" on Massachusetts Street where the meats and lard were prepared and sold.

In 1873 Ridenour and Baker built a second packing plant, ready to do business on a large scale from the start. The establishment consisted of slaughter-house, smoke-houses, packing house, engine-house, cooper shop, and pens, covering in all five acres near the Leavenworth, Lawrence and Galveston Railroad station. In 1876 the capacity of the establishment was 1,000 hogs and 250 " beeves" daily, comparing with the 250-300 daily hog capacity of the Bew concern. During the season which ended in March, 1877, Ridenour and Baker slaughtered and packed about ten thousand hogs.

As with the woolen mill, flourishing activity did not necessarily mean prosperity. And inducements similar to those which had led John Studebaker to move to Kansas City won the packing plant from Lawrence. This time it was Atchison rather than Kansas City which wooed away a Lawrence business enterprise. Casual notice of the fact was taken at the time:

> Heretofore Kansas City has claimed to be the "head centre" of the packing business in the "New West" and it had come to be pretty well settled that the claim was well founded. Lawrence started a big packing house but it did not prove a success, then. Atchison stuck in and built a five acre

establishment for the business.[35]

A speaker at a March, 1879, meeting of the Bluemont Farmers Club in Manhattan, Kansas, mentioned that after one season of operation at Atchison the plant had earned more than enough to repay its cost, which was $75,000. He recommended that the farmers combine to operate a pork packing plant cooperatively, saving themselves the profits going to the packers. The Lawrence Tribune said it had good authority for the statement that the Atchison plant's profits in the one season had actually been $300,000. Even assuming considerable exaggeration, it was evident that the subsidy of the plant had enabled it to make large gains, and spokesmen for the farmers felt that the latter group was being exploited. A current newspaper editorial, for example, cites the solution of a Negro farmer south of Lawrence who had built his own smokehouse and packed his own pork successfully, implying that it might be advisable for farmers in general to try this expedient.

G. H. Bew remained in business after Ridenour and Baker had left. In 1882 he sold his retail business to devote himself to jobbing. Some years later the Thudium brothers of Lawrence commenced operating a packing house. In 1898, although they continued to operate a meat market in Lawrence, the Thudiums purchased a plant in Leavenworth,

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35 Weekly Tribune, February 20, 1878.

and the Lawrence establishment was abandoned. Packing plants in Lawrence found it difficult if not impossible to meet the competition of the large packers with national scope, particularly in a town whose size and location did not permit it to grow into a livestock market.

The Walruff brewery. There remains to be discussed one more large-size manufacturing establishment which had its start in the decade following Quantrell's raid. This was John Walruff's brewery. Another member of the Walruff family, C. J., was the founder of the Lawrence brewery; C. J. Walruff came from Germany, where he had been a brewer, to Lawrence and opened his establishment in 1867. He made "Walruff's Health Beer," which he sold at the rate of four dollars per dozen bottles, with a seven-and-one-half-cent refund on each bottle. The business progressed peacefully until July 28, 1870. On the afternoon of that day somebody discovered a fire on the roof. Unfortunately for C. J. Walruff, the fire-engine horses were being worked in another part of town, and by the time they were found, taken to the fire engine, and the engine taken to the brewery, there was little left to save; there was so little water in the well that even that little was destroyed. The buildings were insured for $6,000. Storing in the Lawrence Turnhalle what furniture and barley had been salvaged, Walruff immediately began rebuilding.

John Walruff took over the management of the rebuilt brewery, located in its new brick building at the north end of Maine Street. The establishment was known as the Lawrence Brewery and Beer Gardens, and to it went particularly the considerable portion of the Lawrence citizenry of German descent to sit at its outdoor tables, drink beer, and enjoy its shooting gallery, bowling alley, swings, and croquet.

For a timeitlooked as though the enterprise might have some competition, because Peter Muggler commenced a brewery in the eastern part of Lawrence. He never got it into working order however; in 1876 the Daily Tribune said that "when the necessary additional buildings shall have been constructed, it will be a very fine brewery."

Soon the Walruff establishment was shipping beer to Leavenworth, reversing the former direction of traffic in the beverage. John Walruff attained a virtual monopoly of beer consumed in Lawrence and shipped his product south to every station on the Leavenworth, Lawrence and Galveston Railroad, and to other points in the state. His brewery grew to be one of the largest in the region; volume reached about 5,000 barrels per year, and only one other brewery in Kansas could equal that figure. Walruff made buying trips to Iowa and Nebraska to obtain barley; he used all raised roundabout Lawrence and ordinarily required in all some ten to fourteen thousand bushels every year. He was becoming

a well-to-do man.

Then, in 1880, the state of Kansas voted anti-liquor legislation, the first state so to vote; and John Walruff was faced with the fact that it was illegal to make beer except for medicinal purposes. In the winter of 1880 John Walruff was busy making certain improvements at his brewery. A different process was required to make beer for medicinal purposes, he said. The newspaper remarked that he wanted two hundred tons of ice in preparation for the coming season. Walruff was at pains to correct the newspaper, pointing out that he already had 800 tons and would require 1,500 tons in all. It appeared that he expected widespread recognition of the medical properties of beer.

The truth was that John Walruff saw the new laws as a totally incomprehensible effort to ruin a perfectly good business, and he would have none of them. He made as little change in his plans a s possible. In May, 1881, the wife of a man who had bought a keg of beer swore a warrant for the arrest of Walruff, who at this juncture discreetly left the state. The county attorney directed the court to dismiss the case against Walruff the following month, for these reasons: the evidence was somewhat too indirect and circumstantial to make a verdict of guilty likely, and the witness would now swear that the beer was bought in April,

whereas it had been previously supposed the beer was bought in May. This was the occasion for sarcastic comment:

> With his frank and full statement we were content, of course, and the lawyers, constables, court, and jurors, will be content when they get their fees. Thus endeth the first case against John Walruff.[36]

Walruff was arrested again later on, and employed George J. Barker as his attorney. But the latter was elected county attorney before the case came to trial and consequently prosecuted his former client rather than defending him. A light jail sentence and fine were imposed, and, the incident finally disposed of, John Walruff went back to his business of making beer for medicinal purposes.

In the 1883 mayoralty election, the opponents of the incumbent made political capital of the brewery scandal.[37] A rumor was current that the Brewers' Alliance had subsidized the election of favored Lawrence candidates to the extent of $1,500. News items refer playfully to "John Walruff's 'invigorator' (?) establishment." The brewery continued to operate more or less constantly and more or less openly until 1885, and then after a brief shutdown reopened for another year, for reasons to be explained presently. Its delivery wagon made the rounds, and the

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36 Weekly Tribune, June 29, 1881.

37 Accusing articles appeared in the Weekly Tribune, denouncing the incumbent mayor as acting in the capacity of representative of John Walruff and the Brewers' Alliance.

"best people" of Lawrence were inclined to side in with John Walruff in his attitude toward the dry laws. When Walruff petitioned the probate court in 1885 to be allowed to manufacture beer for "medical, mechanical, and scientific purposes," his request was signed by leading business men and city officials. Judge Foote denied the permit on the ground that the petitioners were not proper persons to be entrusted with the privilege; eleven Lawrence pastors and ministers endorsed the judge's decision.

In spite of the failure to get a permit, the brewery continued in operation. Walruff published a notice saying authorities had no right to close up his business, since he had made every effort to secure a permit but had been denied one. In short, he was defending his right to remain in business on the somewhat illogical ground that permission to do so had been withheld from him.

Finally, in September, 1885, County Attorney French filed a petition asking an injunction perpetually to prevent the Walruff property from being used in the manufacture and sale of intoxicating liquor. Pending the outcome of the case, a temporary injunction was issued closing the brewery, and John Walruff sent a circular to his patrons saying that he was moving his stock to Kansas City and would fill orders from there. Empty bottles were to be returned to Lawrence as before, however. The trial of the case was held before

a federal court on the ground that a conflict between state law and federal constitution was at issue. In January, 1886, Judge Brewer of the United States Circuit Court sitting at Topeka refused to grant the injunction. He reasoned that the state could rightfully refuse to let the defendants continue the brewing business, but before it could do so it had to compensate them for the loss in value of their property. This last the state had failed to do. The Lawrence Tribune approved the decision and quoted approving opinions of many leading Lawrence citizens; it observed:

> Public sentiment is largely in his favor. His patronage in this city is immense. His wagons deliver thousands of bottles of beer to hundreds of the best families of the city. Thousands of gallons of his beer is (sic,) sent all over the State. The more he is enjoined, arrested, and fined, the more his business increases. His brewery is the best advertised business in the State of Kansas. John Walruff . . . has gained a national reputation. The popular heart of the busy world sympathises with him. The wealthy and powerful Brewer's Association of the United States sympathise with, and assist him. . . .
>
> Five out of every ten members of the Kansas Legislature who passed our present Prohibitory Law, did not believe in it. . . .

The statement that the more John Walruff was haled into court the more his business increased is much exaggerated. Later on in the same year Walruff complained that his business had fallen to $2,000 in the last year, and his profits were much less than a third of what they had been before the prohibitory law was passed. He was on the point

of accepting an offer from Kansas City, Missouri, to superintend a brewery there.

He decided against it at that time, and in November was again in Topeka in connection with an indictment by a Shawnee County grand jury. Here he forfeited a $1,000 bond. Early in 1887 he was apprehended at Jefferson City, Missouri and extradited to Lawrence, where he forfeited a $5,000 bond. The court then set up a bond of $25,000 to be required for his release regardless of where he was apprehended in the United States. John Walruff was thus made a fugitive from justice and traveled about from place to place, feeling safe nowhere. He wrote a letter to the secretary of the United States Brewers' Association, in which he stated his case as follows:

> I have fought the fanatics for six long years. All they want is to drown me and then they are of the opinion that their victory is complete. They are mad over Judge Brewer's decision, and, as they know they cannot stop me from brewing, they have thrown every obstacle in my way to keep me from wholesaling. Since January I have quit selling in Kansas, and opened a depot in Kansas City, Mo., where I ship my beer, and have to find a sale from there. . . .[38]

He was trying to get a nolle prosequi from the Attorney General on the grounds that he had moved his business from the state. In the meantime he had several thousand labels printed for his "Extract of Malt" bottles, bearing the

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38 Published in the Weekly Tribune, June 10, 1887.

instructions: "Keep it very cool. Take a wine glass full at meal time and before retiring at night."

At length the case of the injunction, which Judge Brewer had decided in favor of the brewery, reached the United States Supreme Court. In a decision handed down late in the year 1887, the Court reversed the lower court's decision, saying that the state was not depriving the defendants of their property but merely abating a nuisance and prohibiting the injurious use of that property. Hence no compensation to John Walruff was required of the state of Kansas. Acceding to this decision, Judge Brewer entered a decree declaring the Walruff brewery a common nuisance and directing the United States Marshal to close it up. Remarked the Lawrence Tribune:[39] "Jno. Walruff must go. There are a great many other Lawrence establishments which our citizens would prefer to see moved than this." The Tribune defended him against attack by other newspapers in the state. The Topeka Capital adopted a similar attitude:

> The jig is up now with Mr. Walruff, and it may not be out of place to say that John Walruff is not a villain by any means, but a good natured, kind, industrious old German, whose pluck is only equalled by his lack of discretion.

As will be noted later on, the brewery buildings were taken over by a Lawrence group for the manufacture of shoes. After this venture proved unsuccessful the buildings changed

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39 Issue of December 7, 1887.

hands again and have housed a tannery until recent times. John Walruff moved to Kansas City, from which point he supervised a brewery at Weston, Missouri, returning to Kansas only on occasional brief visits.

Manufacture of various building materials. The story of the rise and fall of the Lawrence brewery completes the accounts of the larger manufacturing enterprises established in Lawrence up to 1874. Full justice, however, has not yet been done to the energy and optimism of the early-day business man in the new West, and there remain to be mentioned a number of manufacturing ventures of lesser importance. During this decade of growth there was a great deal of building in progress in Lawrence, and that fact accounts for some of the manufacturing activities yet to be considered.

Already, before Quantrell's raid, various individuals had prepared and burned kilns of brick, and by the late sixties builders had to contract for bricks a year in advance to insure getting them on time. It was suggested then that a brick plant was badly needed in Lawrence, but not until twenty years later was a real brick plant established in the town.

A second type of enterprise connected with building construction was the "shingle factory" of Deming and Thurber, situated four miles up river from Lawrence, on the north

bank. A shortage of suitable timber prevented the continuation of such concerns beyond the early seventies, at which time building construction had reached a temporary standstill in Lawrence.

G. O. Arnold began the manufacture of sash and blinds in 1870, and in the same year H. W. Klemp set up a shop where he made newel posts, banister railings, and the elaborate scroll-sawed filigree which adorned the dwelling houses and other buildings of the period.

Early vinegar makers. In vinegar manufacture we have an example of an industry which had its small beginnings in the early decades and later on assumed considerable importance. The making of cider vinegar in Lawrence grew with the Douglas County apple crop. Richards and Putney commenced the manufacture of cider vinegar in 1865. In 1876 G. Bucking and Son were proprietors of a $5,000 establishment where they made several kinds of vinegar, including tomato and wine vinegar, and also crab-apple cider. By the early eighties, as will be later noted, there were two large vinegar factories in Lawrence using more than six thousand barrels of home-grown apples and producing several hundred barrels of vinegar daily in season.

Brooms. At one time or another there have been at least half a dozen small concerns engaged in making brooms

in Lawrence. In the middle sixties Captain W. A. Rankin owned a broom factory on Massachusetts Street to supply local trade. A few years later J. B. Hamilton, who had been in the broom-making business for twenty years, made a broom to be presented to President Grant to symbolize the idea that Kansas grew the best broom corn in the country. In the early seventies James Canavan started a broom factory which persisted for more than thirty years. When the establishment burned in 1872, the loss of the building and the broom corn stored on the upper floor was estimated at only $300 however. Broom concerns were never very significant.

Soda water. By the late sixties J. Haag and Company were manufacturing about 2,400 bottles of soda water daily, supplying Lawrence and shipping out the remainder to Ottawa, Topeka, and other points. A current newspaper noted, "If the retail dealers could be content with less than one hundred per cent profit, its manufacture and sale would form no small item of the city trade."[40] As it was, the enterprise was relatively shortlived and insignificant.

Pottery ware. After the founding of the first pottery[41], a new and better source of clay was discovered during the digging of wells in the western part of Lawrence.

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40 Weekly Tribune, May 28, 1868.
41 Page 18, above.

A pottery in nearby Eudora had had to close because of the lack of good clay and the new source was expected to make a large first-class pottery feasible. In 1873 A. H. Dowell established what was said to be the only pottery in the state. It used a 2,300-gallon kiln and burned about three kilns per month. The available raw material seems not to have been sufficient to maintain this concern. Through the seventies and eighties however, a small pottery remained in operation; its proprietor was G. Schilling, and its product was mainly flower pots and vases. In 1880, at Schilling's death, his chief assistant, G. Epley, took over the business, adding sewer pipe to the other products of the little enterprise. In the winter he would ship in a carload of sewer pipe from St. Louis to supplement that of his own manufacture in supplying the market. Much of the clay was also shipped to Lawrence. When Epley died, the pottery died with him.

Miscellaneous manufactures. To add a few more items to the heterogeneous list: N. A. and E. Lovejoy were making bluing for sale to the retail trade in boxes of from three to twelve dozen bottles. M. Shaw was making buckskin gloves and mittens in a small shop in the Eldridge Hotel. Lawrence had a rope walk in 1866, and a bigger rope works was set up by John Chambers in 1870. John Chambers and Company were then ready to buy "any good hemp that may be raised by our

farmers." In 1864 a young man started making cigars by hand at Governor Robinson's farm house; he was the first of a long list of Lawrence cigar makers, a list which was to include a few comparatively large-size establishments. Ross McCandless was making barrels in 1868 for the flour mills in his small shop, the first of several Lawrence cooperage works. In 1866 C. L. Edwards and R. S. Searl established a match factory with facilities to supply all of Kansas. The former bought the latter's interest two months later and continued to manufacture matches "in improved quality, and quantities to supply the demand." This venture was unprofitable and disappeared shortly. A. Storm and Company, a hardware and metal-working shop, made a patented sorghum evaporator for a time. A. Storm sold out in the early seventies, went to Texas for some years, and reestablished his business in Lawrence in 1878, thus neatly missing the depression of the seventies in Lawrence. After returning he no longer engaged in manufacture.

As would be expected, many of the enthusiasms of the time were only passing fancies, and led to nothing permanent. In addition to the small and ephemeral efforts just mentioned, there were two more projects exciting unjustified expectations; the attempt to raise cotton in Kansas, and the Lawrence salt well.

Cotton ginning. In the early sixties there was a

brief flurry of excitement over raising cotton in Kansas, although the climate is notably unsuitable. The Kansas State Journal for February 19, 1863, reported:

> A cotton gin has been set up in Lyon County. The Douglas County cotton excitement has spread all over the State, and next year we'll talk about cotton mills!

The 1863 Kansas cotton crop was a failure, but irrepressible Kansas planters tried cotton again the following year and that time had fair success. As a result, late in 1864 Robert Irwin erected a cottongin at Blue Mound, a small settlement about three miles southeast of Lawrence, to take care of the needs of the cotton farmers, some of whom had as much as a thousand pounds to be ginned. But future trials of cotton proved unpromising.

The Lawrence salt well. The people of the new West were not yet acquainted with the possibilities of the land on which they were establishing their towns; any small indication of some hitherto unsuspected subterranean resource was enough to set them dreaming of great things to come. Let a man find a thin vein of coal on his farm when drilling a well and he would envision great collieries. Or if somebody came upon a small deposit of pottery clay, he was convinced that here was something to supply the raw material for a pottery that would serve the entire state. So it was that the small spring of salt water in Lawrence

was taken as evidence that Lawrence had "a mine of wealth in her subterranean recesses, in the shape of salt."[42] The Kansas City Journal was even moved to ask, "What has Lawrence got besides her salt spring?"[43]

In 1867 a group was organized, a well was drilled, several hundred feet of tubing were ordered through Storm and Company, and machinery was put into position to extract the subterranean wealth of salt. But just one year later the engine and machinery were removed to a sawmill at Stranger Creek. The next year, 1869, in connection with building the gas works a well was sunk for water and the water was found too salty to be used. Nothing ever came of this incident, but it was enough to call forth a characteristic reaction: "The exact per cent of salt is not known, but it is thought to be strong enough for the profitable manufacture of that article."[44]

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42 Weekly Tribune, February 21, 1867.
43 Quoted in ibid.
44 Ibid., October 7, 1869.

CHAPTER III

THE POWER PROBLEM: THE SEARCH FOR CHEAP FUEL AND THE CONSTRUCTION OF THE DAM

During the twenty years of auspicious beginnings in Lawrence, one specter rose to cast its shadow over the thriving optimism of the little town. That specter was the high cost of power. It has been pointed out that one Lawrence entrepreneur had in 1869 been led to forsake Lawrence for Kansas City partly because of the rising cost of fuel.[45] Wood was much used at that time and its price was higher each year because of its growing scarcity. Transportation costs made coal expensive. Wind power was used by the Wilder-Palm works and temporarily by the Kimball foundry, but it was obviously not generally practicable. Efforts to deal with the problem of costly power took two forms: (1) attempts to secure a nearby source of coal or natural gas; (2) the development of water-power.

Prospecting for coal and natural gas. In the late sixties Colonel Vliet made an agreement to work some land belonging to Reuben Hackett and his sons William and Ephraim, six and one-half miles from Ottawa and about

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45 Page 53, above.

twenty-five miles south of Lawrence. The agreement provided for an annual royalty payment to the lessees for 125,000 bushels of coal at one cent per bushel. The arrangement did not provide a satisfactory solution of the fuel problem, for the coal had to be shoveled into wagons at the mine, drawn three miles to the Leavenworth, Lawrence and Galveston Railroad line, carried by rail to Lawrence, again shoveled into wagons and hauled to the consumer. If Colonel Vliet's mines were to prove all that was expected of them, a railroad spur direct to the mine was necessary. Such a spur was under consideration, but the coal deposits were not lasting enough to warrant it. In 1870 the Lawrence Gas and Coal Company, operators of the gas works and dealers in coal, were bringing in coal from Fort Scott, about one hundred miles from Lawrence by rail, and selling it for twenty-six cents per bushel. Prices had been as high as thirty-five cents per bushel. Ten years later this company was shipping its coal in from Lexington, Missouri.

Understandable excitement was aroused when, in February of 1870, a six-inch vein of high-grade coal was discovered on McClure and Nichols' farm about five miles north of Lawrence. Immediately it was deemed most probable that mining operations would develop a rich deposit. The newspaper headlined the account of the event as "An Impor-

tant Discovery!!!" That was merely the first of many "discoveries" of coal underlying Lawrence and vicinity, none of which was of more than temporary importance. In 1872 a newspaper editorial well summarized the fuel problem at that time:

> Our city has gone ahead well thus far. Its growth is excelled by but few places in the country. . . .
>
> We want manufactures. There are two ways of getting them, and we have them both within our reach--water and steam. We have the water power here, and we have the coal to make steam beneath our feet. The water is about to be utilized by a dam, and in due time we may expect to see all the machinery which it will run in full operation. It will be a motive power not possessed by any other city in Kansas, and therefore the more valuable.
>
> The next enterprise we want is a shaft sunk for coal. That will bring us not only fuel, which commands a good price, but it will serve as the next cheapest motive power to water in driving all the machinery necessary to mechanical pursuits. . . .
>
> We have the means to sink a coal shaft, if we only think so. Our monied men only want to be convinced of the practicability of the enterprise to put their hands in their pockets, and start it. Once secure coal in abundance, and we shall save in the item of fuel large amounts of money now sent off for coal, and paid to miners and dealers, which otherwise would be expended here. . . .[46]

The ensuing business depression and the construction of the dam so effectively occupied the attentions of those "monied men" to whom the editorial refers that there was no revival of interest in a coal shaft in Lawrence until about

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46 Weekly Tribune, March 7, 1872.

1880, in which year the eastern coal strike and resultant shortage brought the subject to public attention again. By that time the dam had long been finished and was serving several enterprises, but for reasons which will be made apparent in a later chapter the dam was not an immediate success and a nearby coal supply would have been a welcome addition to the economic features of the town. During the early eighties there was frequent agitation of the coal-shaft proposal. In digging water wells, Lawrence residents were continually finding veins of coal. Two or three organizations were formed to prospect for coal, and one gets the impression that during 1886 and 1887 there must have been in Lawrence and vicinity an abandoned coal shaft in every other back yard. At that time the price of coal was one dollar per ton higher in Lawrence than in Kansas City.

In early 1886 a prospecting group under a Mr. Gourlay made use of a forty-foot hole already drilled by somebody else and drilled deeper, striking a twelve-inch vein of coal at sixty feet, and an eighteen-inch vein at 104 feet. Later that year the South Lawrence Coal Company struck a twenty-inch vein near the Carbondale Railroad track and was planning to sink a larger shaft for mining purposes. The year 1887 found Mr. Gourlay and his associates south of the University busy with a shaft in which they found an eighteen-inch vein at a depth of one hundred feet. In May of 1887 the Lawrence

Natural Gas and Coal Mining Company was chartered with capital stock of $10,000. The list of directors reads like a roster of Lawrence civic leaders: J. E. Riggs, George Innes, F. Barteldes, J. D. Miles, O. E. Learnard, W. T. Sinclair, J. B. Powell, A. G. Eidemiller, M. Newmark, E. E. Pierson, A. Henley, W. Hadley, J. D. Bowersock, J. N. VanHoesen, D. L. Hoadley. The project evidently had the confidence and financial backing of the most established business element in Lawrence. In September work started on what was optimistically called the "natural gas well," near the Santa Fe Railroad track. At 648 feet the bit passed through a six-inch vein of coal, and a trace of natural gas was struck at 801 feet. After digging to 1,325 feet, the company gave up hope and abandoned the project. Following this conspicuous failure, there was a lack of enthusiasm for such ventures, but in 1898 ever hopeful Lawrence business men organized still another corporation, the Lawrence Gas, Oil and Mining Company, with a modest capitalization: $500. It discovered no mineral deposits of any significance, and Lawrence eventually became reconciled to the absence of wealth in her "subterranean recesses."

The construction of the dam across the Kansas.

Turning back from the abortive attempts to find coal and gas beneath Lawrence to an ultimately more successful

undertaking, the building of the dam, we find that the possibility of harnessing the Kansas River at Lawrence attracted attention back as far as the early sixties, perhaps before. Concerning water-power for Kansas in general, an 1876 editorial in the New York Tribune is noteworthy:

> Kansas can be made one of the foremost manufacturing states. Not one west of Massachusetts equals it in permanent and valuable water powers, and in addition to its water power it has a soil of unsurpassed fertility, salubrious climate, and railroads stretching far out in all directions.

A company for building a dam at Lawrence was incorporated in 1866. A few years went by and in 1869 an engineer's report was under consideration. The report advised that the dam be constructed at a point six miles from the Lawrence bridge and estimated the cost at $271,000. Under the existing technique for transmission of power it is questionable what good such a dam would have done the town of Lawrence. Various other proposals and investigations were made. Credit for originating and carrying through the project in its final form is given to O. Darling, owner of the Delaware Mills and of the ferry.[47] By 1872 discussion of the dam was getting down to details; at that time various conflicting notions had become reconciled to a dam about eight feet high to be built beneath the bridge at Lawrence. At a

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47 Pages 23 and 41-42, above.

meeting, May 15, 1872, called to order by Mayor Hadley, Orlando Darling was asked for his views and read a paper on the subject. A contemporary newspaper, in reporting the meeting, gives a touch characteristic of the times when it says that it would have liked to publish a copy of Mr. Darling's paper "and requested a copy of Mr. Darling for that purpose, but at about that time he was so afflicted with the 'Big Head' that he refused to comply."[48] Opinions were expressed that the city could not relinquish its rights to the river bank, but that a suggested annual payment of $6,000 to Orlando Darling for water-power was exorbitant. It was felt that a franchise to maintain and operate the dam was a sufficient reward. At length a resolution was adopted:

> Resolved, that it is advisable, with proper and safe restrictions, to enter into a contract with Mr. Darling, or any other responsible party, to construct and maintain a dam across the Kansas river, within the city limits.

Finally, an agreement was reached under which the city council appropriated $6,000 of scrip to the Lawrence Land and Water Power Company, and in 1873 construction of the dam got under way. In November Orlando Darling had one hundred men and some thirty teams of horses at work. Construction was halted by sudden freshets, which washed out some of the work, by breakup of the ice, and sometimes by

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48 Weekly Tribune, May 16, 1872.

lack of funds, but through petitions to the city council and to those indebted on stock subscriptions breaks were repaired and work went forward, so that in November of 1874 the long-awaited dam stood completed. On the rock bottom of the south side of the river the foundation was built of stone from the quarry owned by O. Darling near Perry, Kansas; on the north side a tree foundation was used.

Citizens of Lawrence set great store by their new dam stretching its 600-foot length across the river. Already, upon completion, contracts to share in its estimated 2,500 horse-power had been made: with the city for water works, with the Kimball Foundry, with the new Douglas County Mills, with the Delaware Mills that O. Darling had just sold to S. B. Pierson. The Lawrence Water Power Company owned the land along the river bank and offered it as building sites to manufacturers. Before long, cables strung from the water wheels over pulleys began to run the machinery of the various enterprises taking power from the dam. Cables ran nearly 1,200 feet from the 56-inch water wheel to reach the Delaware Mills on the north side of the river. The pulley wheels over which the cables ran were made locally at the Kimball Foundry.

The enthusiasm which greeted the completion of an eight-foot-high dam is easily understandable in a town whose site had been open prairie only twenty years before. A

local newspaper reflected prevailing sentiments when it said:

> Lawrence a Manufacturing City--
>
> The Dam Completed.
>
> On Tuesday morning at half past eight Mr. Zimmerman hoisted the last stone to place on the dam coping and the structure was practically complete. . . . Lawrence may now plume itself on being a manufacturing city indeed. It cannot be long until capital will be determined hither . . . and we look to see mill after mill erected until every foot pound of power is utilized. . . .[49]

In the next few years, those who had put so much faith and money in the dam were fated to a bitter undermining of their confidence, and disappointment in the dam was a big factor in the marked severity with which the nationwide depression of the seventies affected Lawrence. But at the time of its completion, the dam was seen by the people of Lawrence as a crowning achievement, culminating a period of phenomenal growth and giving promise of great things to come.

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49 Weekly Tribune, November 12, 1874, p. 8.

CHAPTER IV

LAWRENCE AND ITS INDUSTRIES IN THE DEPRESSION OF THE SEVENTIES

In the preceding chapters the practice of following the fortunes of many business ventures on through subsequent periods may have obscured somewhat the net effect of the period 1864-1874 taken by itself. But a glance through those chapters will show that the keynote of that decade was expansion. The contrast with the half dozen years that followed is sharp.

The financial crisis of 1873, with the ensuing general depression, is a landmark in the history of United States business conditions. Lawrence had its part in the railroad exploitation which had characterized the boom, and in 1873 had already begun to regret its extravagance in issuing bonds to build railroads which had in many cases proved disappointing. In this year too, men out of work were walking the streets of nearby Kansas City. Many of them had come from the East with vain hopes of finding better conditions "out west." It is plain that the demoralized commercial condition of the country had made itself felt in Lawrence some time before the completion of the dam in November, 1874. But the defeat of President Grant's

party in the Congressional elections that month was looked upon by many as a hopeful sign. And Lawrence citizens reposed their faith in their new eight-foot barricade across the Kansas River. They looked to its cheap power to attract manufacturing enterprises to the town and prevent Lawrence from taking that downward course which it seemed otherwise destined to follow.

The early breaks in the dam; bankruptcy of the water-power company. Consequently, when the great hope of Lawrence proved to be of such flimsy construction that it washed out almost every spring, there seemed to be no bottom to the depths of depression into which the town was fated to sink. Not many months after the last cables were strung on pulleys to the wheels of Lawrence industry, in April, 1876, a raging river swept out a wide stretch of the dam. The repairing of this break was not entirely completed until the following November. Just six months later, May of 1877, another hundred feet or so of the dam went out. The Lawrence Water Power Company went into receivership, and in July Judge Stephens issued an order directing the receiver to repair the dam. To finance reconstruction, the receiver issued debentures constituting a first lien on the dam, and work finally got under way in September. The Weekly Tribune for September 13, 1877, observed:

> We always notice that it cheers up the laborers when there is dam building going on. They are the only class as yet that have got much out of the dam and some of them have made a pretty good thing of it.

Insolvency had overtaken Contractor Darling, who fled to California to make a new start, not bothering to settle some claims against him by his workmen, it seems. While the dam was still under construction he had sold his Delaware Flour Mills to S. B. Pierson.

Later shortcomings of the dam. A rise in the river in 1878 necessitated further repairs costing about $5,000. A quip was becoming current among the people of rival towns to the effect that they had always known Lawrence was not worth a dam. But in 1878, through inheritance and foreclosure, J. D. Bowersock came into possession of the dam.[50] J. D. Bowersock asserted he would make the dam safe if it took all the stone in Wakarusa township to do it; but even after he made extensive repairs and reenforcements, there were disastrous breaks in the dam, one in 1885, another in 1888. And aside from these breaks, all too frequently dry weather would reduce the flow of water so that it was insufficient to operate much of the machinery connected with the dam. Most of the enterprises relying on the dam found it necessary to have a steam engine as an

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50 For further details of the transaction, see the next chapter.

auxiliary source of power both when the water was so high as to rupture the dam and when it was so low that not enough power was forthcoming.

The attitude of disillusionment. From about 1880, notwithstanding its shortcomings, the Lawrence water-power did develop into a going concern serving much of Lawrence manufacturing enterprise, as will be noted later; but during the seventies the dam appeared to have been a great fiasco, and the state of mind expressed in the following letter, written in 1880, must have been fairly typical in Lawrence during its time of trouble:

> I recollect when we had no railroads. We all thought at that time, if we could only get the Kansas Pacific to come to Lawrence, that our fortune would be made. It came. Then we concluded we lacked a railroad to Southern Kansas--that would make that rich portion of the State tributary to us. So we voted $300,000 in bonds building the L., L. & G. R. R. That did not help us out. But we then decided it was a competing eastern outlet that we needed, so we proceeded to give about $450,000 to the Pleasant Hill railroad which was to have killed Kansas City and make Lawrence the commercial centre of the Kansas valley. Unfortunately for our hopes the grass soon grew over the track of that road.[51] Again we were all wrong, it was said it was a coal fields connection with Osage County that was required to bring us cheap coal and make us a great manufacturing place, and so we proceeded to vote $200,000 in building the Carbondale road. After this was all done it was discovered that it was not railroads that we

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51 See pages 27-30, above; the "about $450,000" is an exaggeration.

> wanted, but a dam across the Kansas river.
> That would enrich the stockholders, the
> people, and build up a second Fall River.
> And here we are still poor and dissatisfied.[52]

The county bonds issued to the railroads bore interest at seven per cent. In the seventies the county defaulted on the interest coupons, which consequently began to accumulate their own interest, also at seven per cent. By 1877 Douglas County had a total burden of debt under these bonds and the defaulted interest amounting to $779,336.88. That was more than thirteen per cent of the total assessed valuation of the county. In 1878, the county commissioners passed a resolution providing for issuing new refunding bonds for the old bonds and interest coupons in the proportion of thirty-five cents of new bonds for every dollar of the old indebtedness.

Economic retrogression. The population of Lawrence declined considerably. Property values diminished alarmingly. A terse bit of evidence of retrogression is given by the figures for assessed valuation of all property (real, personal, and railroad) in Douglas County during the middle seventies:

1873	$7,934,855
1874	6,934,615
1875	6,124,315
1876	5,770,017
1877	5,814,885
1878	4,988,017

52 From a letter by G. W. E. Griffith, published in the Lawrence Daily Journal, December 18, 1880.

Even these figures, showing a decline in assessed valuation by about one third over the period, do not give a full account of the decrease. It was said that whereas in 1873 property was commonly sold at prices as much as a third higher than the assessed valuation, in the later yearx it was impossible to obtain the assessed value on the market.[53]

Political decline. Lawrence was losing ground politically as well as economically. In the stormy early days in Kansas, Lawrence was in the center of the turmoil. Kansas attained statehood in 1861, and its first governor was Charles Robinson, leading citizen of Lawrence, one of the men who had come out to Kansas from Massachusetts in 1855 for the specific purpose of selecting a site for the community which became Lawrence. Lawrence was a serious contender for the state capital. In 1866 the state university was located at Lawrence on Mount Oread. The people of Lawrence had styled their town the "Head Center"; and with an institution of learning on its little acropolis, Lawrence came to be referred to half facetiously as the "Athens of Kansas." Kansas political hopefuls found it necessary to consult the leading men of Lawrence. But now, in the seventies, the political prestige of Lawrence seemed largely to have departed. Fraud and corruption were rampant in her

53 Weekly Tribune, June 28, 1877.

local elections. Kansas politicians ceased to regard the political sentiment of Lawrence as a factor of importance. A delegation from Lawrence had founded Topeka, the state capital, but now Lawrence was finding herself outclassed by her godchild.

The clouds lift. In a large measure, of course, the tribulations of Lawrence were shared by the other communities of the region. There was nothing necessarily conclusive or permanent about the prevailing eclipse of Lawrence, and when, in 1877 or 1878, it seemed the worst was over, there was a resurgence of the old frontier spirit of optimism. In order to avoid too black a picture of conditions in Lawrence, one should note an editorial appearing in a Topeka newspaper of the time:

> Lawrence is a little more rusty than Topeka, its sidewalks are not in as good repair, and generally the city looks a little worse for wear. Yet Lawrence is a good town, and undoubtedly has reached bottom. We were told there is not a vacant house in the city, and there begins to be a little brushing up in the way of painting and repairing. It has more business houses than Topeka, and is not cursed like Shawnee county with its rich lands being owned by speculators. Douglas county is far more prosperous than Shawnee. One half its population is not in the city as it is here. Its local trade must, ordinarily, from that fact, be better than that of Topeka. . . .[54]

And the Lawrence Weekly Tribune on August 8, 1878, observed:

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54 Topeka Commonwealth, September 13, 1877.

> We are not dead. Lawrence today, in spite of railroad oppression, in spite of thieves, and the machinations of Kansas City, has a brighter future before her than any other town in the State. We don't want any tears wept over our grave. We are lively yet.

After deflation and retrenchment had proceeded to a certain point, business activity had a way of reviving; and for the nation as a whole things began to improve. For Lawrence, the tide began to turn about the time J. D. Bowersock made his home in Lawrence and began to invest in Lawrence commercial interests right and left. He had funds to support his expressed determination to make the Lawrence water-power a success. There was a revival of the enthusiasm for the dam and the prospects of a beehive of industrial activity engendered by it on the banks of the Kansas. Omniscient editors began pouring out suggestions and projects in a way reminiscent of their pioneer predecessors. For example:

> We should have a paper mill, an oil mill, and a tow factory to start on, and other enterprises will follow in due season.
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> The large quantities of castor beans, flax seed and flax straw produced in our vicinity, should all be worked up here.[55]

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55 Concluding paragraphs of an editorial in the Weekly Tribune, September 25, 1879.

CHAPTER V

THE DAM AND ITS RELATION TO LAWRENCE INDUSTRIAL DEVELOPMENT

Acquisition of the dam by J. D. Bowersock. Central figure in the renaissance of Lawrence beginning about 1878 was Justin D. Bowersock, although he was not solely responsible for the revival of trade. He had spent his childhood in Ohio, where his father was a country storekeeper, and had at the age of fifteen gone to Iowa. At Iowa City he set up for himself as a merchant and grain dealer and accumulated a tidy fortune. His father-in-law, James H. Gower, an Iowa miller, came to Lawrence in the seventies and with his partner, Houghtellin, built the Douglas County Mills beside the new Lawrence dam in 1875. During the first few years the mills were frequently shut down because of the breaks in the dam. After the big break of 1877, when the receiver for the Lawrence Land and Water Power Company issued debentures to finance repairs, it was Gower of the Douglas County Mills who extended the loan, about $20,000, and took over the debentures.

Soon afterward, J. D. Bowersock followed in Gower's steps and came to Lawrence to become a partner in his father-in-law's milling business. In the October term of court,

1878, Gower foreclosed his debentures and thus became owner of the dam. But it was Bowersock who immediately began to push the work of reinforcing and repair. When, in November of 1879, James Gower died, J. D. Bowersock, as his son-in-law, fell heir to the dam and the Douglas County Mills.

Extent of the economic and political interests of J. D. Bowersock. Young Bowersock immediately began to occupy an important role in Lawrence business life. He set to work with determination to put the dam on a paying basis. As assignee of the insolvent Lawrence Savings Bank, he helped to rehabilitate Lawrence banking; he established the Douglas County Bank and continued to act as president for many years after that institution had evolved into the present Lawrence National Bank. He retained an interest--after 1905 a half-interest--in the flour mill and the dam until his death in October, 1922. And in addition, J. D. Bowersock became, within twenty years after coming to Lawrence: director and vice-president of the rising new Consolidated Barb Wire Company; director in the Leis Chemical Manufacturing Company when it was incorporated in 1880; director in the Himoe patent medicine concern; director in the Lawrence Natural Gas and Coal Mining Company, which prospected for gas and coal in Lawrence in the eighties; owner of the Bowersock Opera House; proprietor of the Lawrence Paper Company; owner of the Pacific Mills; purchaser

of the Kimball Foundry; director in the Kansas Tanning and Shoe Company; treasurer of the Sutton Manufacturing Company, a short-lived project to manufacture various small household articles; and director in the Griffin Ice Company.

Bowersock's political prestige grew with his economic importance. He had lived in Lawrence only five years when he was first elected mayor, and in 1883, after an acrimonious campaign, he was reelected. From 1898 to 1906 he served as Representative of the second Kansas district in the United States Congress, retiring voluntarily from public life in the latter year.

The nucleus of the Bowersock interests was the dam and the Douglas County Mills, and of course the dam served as a source of power to several enterprises in which J. D. Bowersock had no direct equity. The revenue derived from the water-power gave him an even more comprehensive interest in Lawrence industry than the above list indicates.

The use of water-power in Lawrence. It is interesting to see how industrial Lawrence took advantage of the new water-power. Of the plants already in existence at the time the dam was built, only a few were so situated as to be able to make a connection with it. The Kimball Foundry was one of these, but since it was about 1,000 feet up river from the dam, the Kimballs devised a special system. They

dammed the mouth of a ravine near their buildings so that the water in the mill-pond created by the big dam flowed into the ravine and operated a small turbine wheel, from which they took power. To drain the ravine, a tube ran along the bottom of the river from the ravine to an outlet below the large dam. The foundry nevertheless continued to use a twenty-horse-power steam engine, and in 1879 was reported to be using water-power only when extra power was needed.[56] After the foundry moved to a building nearer the dam in 1886, however, it made the dam its regular source of power. The Usher-Savage Foundry, briefly located in Lawrence, also used water-power, to which it had direct access by cable.

Another of the original users of the water-power was the Delaware Mill, whose founder, O. Darling, being engaged in building the dam, had sold the mill to S. B. Pierson in 1874. Power was transmitted to the mill, 1,200 feet away from the dam on the north side of the river, by a cable. A few years later Pierson built a large new mill on the south side of the river, where he continued for a time to use power from the dam.

J. D. Bowersock's own Douglas County Mills had been built directly over the flume by his father-in-law to give

56 St. Louis Magazine, September, 1879, as reported in the Lawrence Journal-World, November 27, 1937.

them direct access to the water-power. The woodenware factory of General J. N. Roberts, built in 1876 at the south end of the dam, used water power until 1879, in which year General Roberts traded buildings with the Pacific Flour Mills at Connecticut and Quincy (now Eleventh) Streets. Since the woodenware factory required steam anyway in the process of manufacture, it had not benefitted so much from the use of water-power, and by moving to the Quincy Street buildings it gained much-needed space. On the other hand, the owners of the Pacific Mills desired to use water-power and made the change mainly for that reason.

In 1880, two concerns engaged in that new and phenomenally growing Lawrence industry, barb-wire making, had cable connections with the dam. Later on, when all Lawrence barb-wire plants had coalesced into the Consolidated Barb Wire Company, the industry continued to be a chief user of the water-power, although a steam engine stood by for emergencies.

When the Leis concern built a new plant in 1881 at Massachusetts and Pinckney (Sixth) for the manufacture of its patent medicines and other preparations, it made a connection with the dam for power. As soon as Wilder Brothers engaged in shirt-making on a large scale in the old Waverly House near the south end of the bridge, they used water-power exclusively "except when not available."

They continued to take power from the dam after they built a large new factory for their flourishing business in 1882, at New Hampshire and Pinckney. During one of the brief revivals, under A. W. Cone, of the Lawrence woolen mill, the dam was used as the source of its power.[57] The paper mill, promoted by J. D. Bowersock, began business in 1882, and used power from the dam as a matter of course. The dam furnished power to the Lawrence Electric Light Company, established in the late eighties; to Bigger and Hindman's corn meal and hominy mill, one of the many corn meal mills appearing in Lawrence in the eighties; and to the P. T. Foley printing concern. A cable ran up the alley between Massachusetts and New Hampshire Streets as far as the middle of the seven hundred block, and at this point the old Lawrence Journal made a connection to run its presses.

By 1884 eight important enterprises were getting their motive energy from the dam. Most of these enterprises were housed in buildings erected within the preceding five years. At that time about 300 horse-power was being utilized out of the 1,200 then available; by 1890 there were twelve turbine wheels in the dam developing about 900 horse-power, and in 1898 a new 125-horse-power wheel was added to serve increased demands for power due not to an increased number of users but rather to increased need for power by

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57 Page 55, above.

the existing group of users, a group which had remained about the same since the middle eighties. At about the turn of the century the dam was electrified and a steam engine installed to run the generator when water-power was insufficient.

The dam's failure to fulfill the more enthusiastic expectations. Most of the factories and mills that sprang up near the dam in the eighties were built by established Lawrence concerns; when expanding trade had necessitated larger buildings and more equipment they had erected new plants having more convenient access to the water-power. As an inducement attractive enoughtto cause an influx of manufacturing establishments from outside Lawrence, the dam did not measure up to the hopes of its more optimistic proponents; in fact, only in the instances of the Douglas County Mills and the paper factory can the dam clearly have been a major factor in the decision to locate at Lawrence. At best, the dam may have served to help retain in Lawrence enterprises that but for it might have moved away or been abandoned; as it was, Lawrence nevertheless lost for one reason or another many of her most important manufacturing establishments.

An enterprise which made use of the dam for power did not thereby gain any great competitive advantage over similar enterprises which obtained power by other means. Piersons'

Roller Mills used steam power extensively, buying in 1885 a 150-horse-power engine said at that time to be the largest in Kansas, and maintained a business equal if not superior in size to that of their big water-powered competitors, the Douglas County Mills. Several of the enterprises established in Lawrence in the eighties or nineties did not take advantage of the idle capacity of the dam, but used steam or gasoline engines instead. Examples are the corn meal mills of Brooks and Babcock, of Smith and Son, of Harris Gibson and Son; the Kansas Tanning and Shoe Company, which started making shoes in 1889 in the old Walruff brewery building and used a thirty-horse-power steam engine for power, although J. D. Bowersock, owner of the dam, was one of the organizers; and the straw lumber mill which started operation in 1880, piping steam for its engine from the boilers of the box factory across the street.

Although J. D. Bowersock had succeeded in restoring faith in the dam, it was still far from being an ideal source of power. In 1885 a serious break occurred, and the repairs cost several thousand dollars. Weeks went by before the dam was again available for power. In the fall of the year 1886 Bowersock had to close down the Douglas County Mills temporarily because the flow of water was insufficient to supply them and at the same time operate machinery for the other enterprises with which he had

contracts. And again, in January of 1888, not enough power was forthcoming; Bowersock sued his rivals, Pierson's Sons, for using water out of his mill-pond to make steam for their huge Corliss engine which then powered the Pierson Mills. But the very next month the situation suddenly changed from too scanty to too voluminous a flow of water, with disastrous results; the sudden loosening of an ice gorge up river released a mighty wave of water and floating ice which swept through the head gates--unfortunately frozen open--and carried before it the eighty-by-six-by-eighteen-foot stone wall composing the flume, together with all the water-power machinery. Down the river went the water wheels, cables still attached, with such force that the cable connecting with the paper factory jerked away almost the entire upper part of that building; the general debris fell on the machinery and equipment on the lower floor, doing considerable damage there. Mending the break was an expensive, time-consuming task, and although a temporary flume could be built for the Douglas County Mills, the other enterprises dependent on the dam--the foundry, shirt factory, Journal print shop, Pacific Mills, and others--all had to resort to auxiliary steam engines or remain idle.

In 1887 there had been some discussion of a second dam to be built five miles upstream, at the point which the early survey had recommended. Such a dam would not interfere

with the existing dam, it was said, and the bottom of the river at the suggested place was not so treacherous as it had proved to be beneath the Bowersock dam. Nothing ever came of this projects.

Of all the enterprises once dependent on the dam for power, only the Bowersock Mills, the paper-box factory, and the iron works now remain to get motive energy from this source. On the whole, the influence of the dam on the character and extent of Lawrence industrial development has been slight.

CHAPTER VI

LAWRENCE ADJUSTS ITSELF TO ITS MODEST ROLE: MANUFACTURING INDUSTRIES THAT HAVE SURVIVED

In the early eighties, with new factories and other evidences of progress on every hand, Lawrence could still entertain hopes of becoming a really important midwestern industrial and commercial center; but in the next few years the true destiny of Lawrence came into sharper focus, and the town assumed the rather modest economic role among the cities of Kansas which it was to fill. Many of the manufacturing establishments which in the early eighties were flourishing and looked to be full of promise had by the end of the century disappeared from Lawrence. Of the numerous manufacturing industries represented in Lawrence at one time or another, only nine now remain; seven of these were already in existence in Lawrence before 1900. The increase in the town's population since 1900 has been comparatively small, too small for Lawrence to maintain its rank with the other cities of Kansas in that respect. By the turn of the century Lawrence had settled down, and its commercial and industrial interests had become fairly well crystallized. The marked change in outlook for Lawrence during the last two decades of the nineteenth century can

be clearly demonstrated by a review of contemporary comments on the prospects of Lawrence as a business town and by noting the tides in general business conditions as they affected Lawrence over that period. Before proceeding to consider the individual concerns and industries themselves, then, it is well to survey the Lawrence scene in general, as it presented itself during the eighties and nineties.

The changing business outlook in Lawrence, 1878-1900. The nation as a whole began to emerge from the depression of the seventies in 1878-9. And Lawrence in particular, its dam rehabilitated, shared in the general upturn and resumed its old appearance of prosperity and industry; sales increased; farm land was in demand; service was reestablished on the long-idle Carbondale railroad. A newspaper editor exulted:

> The night was long and dark, and dreary, but it is past at length, and joy cometh with the morning. Let us all rejoice and be of good cheer![58]

Again Lawrence looked forward to a brilliant future:

> The Lawrence Water Power is proving itself more and more valuable as time rolls on. If now we could add cheap coal--from our own coal shaft, we might feel assured of building up here on this historic spot one of the brightest, best--and largest manufacturing cities in the West. . . .[59]

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58 Weekly Tribune, November 13, 1879.
59 Ibid., February 9, 1881.

The boom had spent itself by about 1884, except in building construction, and the next two or three years were dull commercially. Farm prices were low; grasshoppers and drought played havoc with crops; and trade was stagnant in Lawrence. The Wilder and Palm plow factory went into receivership in 1885 and was liquidated; prohibition law enforcement began to throttle John Walruff's brewery, where business was finally brought to a complete stop in 1887. It was during those years too that carriage-making virtually came to an end in Lawrence.

Trade began to flourish again in Lawrence by 1888, and on August 24 of that year the Weekly Tribune remarked editorially:

> Outside cities are a little inclined to sneer when anyone speaks of business in connection with Lawrence. But the old town is "getting a move on her" and will show them a thing or two yet.

There are several indications however that after this time outsiders continued to belittle the business prospects of Lawrence. Slurs of this kind were not altogether justified but did represent a real disillusionment regarding the part Lawrence was to play as an industrial town, a part which had been greatly overestimated.

The panic of 1893 ushered in another national depression with its accompanying discourggement. During the general decline in trade, Lawrence's chief industrialist came to the

defense of his town by writing a letter to the newspaper:

For the Croakers.

> Now and then I meet a man, sometimes a Lawrence man, who remarks--thoughtlessly, no doubt--in speaking of Lawrence, "The town is dead." Let us diagnose the corpse in sections, and call this section No. One.
>
> During the seven days ending today, May 12th, the product, sale and shipment of three Lawrence industries was as follows:
>
> Bowersock Milling Co., flour . . 750,000 lbs.
> Consolidated Barb Wire Co.,
> wire and nails . . . . . 600,000 lbs.
> Lawrence Paper Co.,
> straw paper . . . . . 140,000 lbs.
>
> Or a total of seventy car loads.
>
> These manufacturers support 800 people, and the weekly payroll is over $1,900.00. There is some encouragement for the live citizens of our town in the above figures, and there is no barefooted petition beating its way to Washington from the Lawrence industrial district.
>
> J. D. Bowersock[60]

By 1895 business reached rock bottom in Lawrence and a revival commenced the following year, particularly noticeable in building construction. Lawrence ended the century with its business in a fairly prosperous phase but with a much more modest appraisal of its own prospects. In brief, Lawrence had by 1900 attained its maturity, in a business sense.

It should not be thought that Lawrence was devoid of important business enterprises or of successful business men. In his capacity as owner of the dam, as active promoter of several new ventures, and as a man with a widespread financial interest in Lawrence business, J. D. Bowersock

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60 Printed in the Lawrence Daily Journal, May 13, 1894.

stands out through this and subsequent periods, particularly in connection with the manufacturing section of the Lawrence economy, but he was not the only man of wealth and influence in the town. Judge Solon O. Thacher, for example, had acquired city real estate, farm land, and bank stock which by the middle eighties was estimated to aggregate $125,000, placing him among the wealthier Kansans of the period. G. W. Griffith, prominent in the Lawrence Coke and Coal Company and the basket works, was rated somewhat higher than Judge Thacher. W. W. Cockins, real estate dealer, and B. W. Woodward, druggist, were each at that time credited with wealth amounting to about $100,000. J. B. Watkins, banker, was one of the few Kansas millionaires of the eighties; his interests consisted mainly of real estate, mortgages, and loans, but included active participation in at least one Lawrence manufacturing venture, the first cannery.[61] Much will be said in a later chapter about Albert Henley, who came to Lawrence to start from scratch in 1878, and soon acquired a considerable reputation for business ability as president of the Consolidated Barb Wire Company and later on as head of the American Cement Plaster Company. The Pierson brothers, millers, were also prominent among the Lawrence

61 The estimates of wealth for the various individuals are from the reprint in the Lawrence Weekly Tribune for May 7, 1886, of an article on wealthy Kansans, appearing in the St. Louis Globe-Democrat, May 2, 1886. At that time, J. B. Watkins was rated by Bradstreet at $1,500,000.

business men of the time.

Thus, Lawrence had by the late eighties its well-defined set of wealthy men, some of whom had been entirely made by the boom of the early eighties. The residential streets of Lawrence began to be adorned with large red-brick structures, of ungainly towers, cupolas, fancy filigree about the eaves, wrought iron railings, tall gaunt windows; decorated inside with heavy voluminous draperies, massive furniture, bric-a-brac, elaborate gas chandeliers--structures which represented the 1890 ideal of elegance in a dwelling.

The later history of the Lawrence flour mills. Turning now to consider the vicissitudes of individual Lawrence concerns, one finds that of those industries which have settled into a permanent place in the Lawrence economy, flour milling is of particular interest and importance. It cost the Gower Brothers and Houghtellin about $30,000 to construct the Douglas County Mills in 1875. They commenced making Head Center brand flour at the rate of some fifty barrels per day, and were soon filling orders for a trade territory extending from Colorado to Illinois, furnishing flour to places which had formerly furnished flour to Lawrence. After J. D. Bowersock acquired the mills, in 1878, even though he made extensive repairs and improvements in the dam, the mill was often plagued with power-failures,

due either to disastrous breaks or to an insufficient flow of water.[62] Nevertheless, the capacity of the mills was periodically increased: to 800 barrels of flour per twenty-four hours in 1883; after improvements costing some $15,000 in 1896 to 1000 barrels; and later on to 1,500. In the eighties the product of the mill went largely to Texas and Iowa; later on, contracts were obtained to furnish various Indian schools and agencies; and as the development of the flour-milling industry in Texas removed that territory from the market of the Lawrence mills, the latter turned east to New England and Europe to find a sale for its flour.

The Pacific Mill, one of the oldest of Lawrence flour mills, became in 1881 an adjunct of Bowersock's mills. At its original location on the corner of Connecticut and Quincy, the Pacific Mill, powered by a sixty-horse-power steam engine, had by 1870 reached a capacity of 300 sacks daily of its Pacific brand flour. In 1879, the McConnell brothers, who had been proprietors for ten years, traded buildings with General J. N. Roberts' woodenware factory, thereby gaining access to the water-power. Shortly after the move, J. N. McConnell shifted his attention to the development of his new invention, the circular reel flour bolt. The Lawrence carpenter shop of Phillips and Eddy was

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62 Pages 106-7, above.

for a time chiefly occupied in manufacturing the device, which was placed in use in both the Pacific and the Douglas County Mills; and McConnell soon left Lawrence to go to Springfield, Ohio, where he expected to go into the business of making his patented flour bolt on a larger scale than had so far been possible. At that time the Pacific Mill was incorporated and its operation placed in the hands of the following group: H. Tisdale, president; J. D. Bowersock, treasurer; F. M. March, secretary; and W. N. Bangs (whose soap factory business had been dissolved shortly before), general manager. With a daily capacity of 100 barrels of flour, the size of the Pacific Mill was very modest in comparison with the bigger mills in Lawrence. Ultimately, in 1897, a dump and wagon scales were added to the equipment and the mill was remodeled to handle corn and rye rather than wheat.

By the late nineties J. D. Bowersock's mills and dam were by this time incorporated as the Bowersock Mills and Power Company. In 1905, R. C. Jackman, formerly of Minneapolis, Kansas, bought a half-interest in the enterprise and rebuilt the plant destroyed in the 1903 flood; after the death of J. D. Bowersock in 1922, Jackman bought from the estate the remaining interest, but has retained the old name. Since the early nineteen hundreds, the mills have been the only flour mills in Lawrence; they continue to

make Zephyr flour and also turn out, through an allied organization of comparatively recent origin, the Jenny Wren Company, a line of ready-mixed flours for various purposes.

The Bowersock Mills and Power Company had for many years one big competitor in the Pierson Roller Mills. S. B. Pierson came to Lawrence in 1874 to take over the Delaware Mills on the north side of the river from Orlando Darling, who was then occupied with his contract for the construction of the dam. In 1879, Pierson moved across the river and broke ground for a big new mill a short distance south of the Bowersock plant. A few years later a 75,000-bushel elevator was added, making the establishment the largest of its kind in the state at that time. After the death of S. B. Pierson in 1882, his two sons, E. B. and E. E., carried on under the firm name of S. B. Pierson's Sons, and in the middle eighties were doing a flourishing business, serving a nationwide market including points as widely separated as Flagstaff, Arizona, and Boston, Massachusetts, a market which they extended in the nineties to include the export trade. In 1897 a large warehouse and a track spur connecting with the Santa Fe line were built. The following year the daily capacity of the mill was raised to 1,000 barrels of Pierson's Kanasota flour.

Using for a time both steam and water-power, Pierson's

Mills soon turned to steam exclusively and in 1885 bought a big Corliss 150-horse-power engine. J. D. Bowersock sued the Piersons for using water from his mill-pond to make steam for their big engine, and there was a sharp spirit of competition between the two rivals. Both concerns began investigating electric light systems in the eighties, but the Piersons were first to have an Edison system installed, and in 1886 began furnishing power for electric lighting all over Lawrence. For some time the business of the Pierson Mill exceeded that of the Bowersock Mills, but after the Pierson plant was completely destroyed by fire in March, 1900, the Bowersock establishment was left as the only flour mill in Lawrence.

Reasons for the relative decline of Lawrence as a flour milling center. Although for many years Lawrence had in the Pierson and Bowersock enterprises two of the largest flour mills in the state, the city did not hold its own, relative to other milling centers in Kansas. In 1860 Douglas County was first among the counties of Kansas in flour milling; by 1870 Douglas County ranked fourth in value of product of its flour mills; and in 1880 it had dropped to seventh place with a product valued at $329,877.[63] By the

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63 Vernon O. Johns, The Development of the Flour Milling Industry in Kansas, p. 52.

late eighties the two big Lawrence mills were outranked by mills in Atchison, Leavenworth, and Topeka.[64] In the earlier years, as pointed out by Vernon O. Johns,[65] the freight rate on wheat was much lower than that on flour, encouraging the location of mills nearer the market than the source of supply, that is, in the eastern part of Kansas, at points with good rail connections. But after the inauguration of the milling-in-transit rule, the miller could ship wheat to his mill, grind it into flour, and ship the flour to its destination all at the same rate as for wheat alone, provided the mill lay in a fairly direct route between the shipping point for the wheat and the destination of the flour. Consequently, mills could be located advantageously near the source of supply, where under the milling-in-transit principle they were on a competitive footing with mills in population centers and main distributing points. The center of gravity of the Kansas wheat-raising area moved steadily westward, however, so that on the one hand central Kansas points like Wichita and Salina became important flour-milling towns and on the other hand milling continued to develop in populous eastern cities, leaving the town of Lawrence with no special incentive to enlarge its milling capacity, inasmuch as the nearby source of supply was

64 Johns, op. cit., p. 90.
65 Ibid., pp. 92-94.

declining. As a result, Lawrence has lost its position among the first flour-milling towns of Kansas, and although the Lawrence mill continues to make flour for wholesale distribution, a considerable part of its business is in such specialties as ready-mixed biscuit flour and similar preparations, in which it does not meet direct competition from other Kansas mills.

Corn and feed mills. Although wheat-raising moved west, Lawrence attained some importance in the middle eighties as a corn market. In 1884 Smith and Son fitted up as a corn mill the old building at Quincy and Connecticut which had originally been the home of the Pacific Mill and after 1879 had been the location of the woodenware factory, but was now vacant. During their first season, Smith and Son manufactured 3,000 barrels of hominy, enough to dominate the Kansas City hominy market, and shipped out thirty carloads of feed. The next spring they enlarged the capacity of the mill to 150 bushels of corn daily and outbid shippers by a few cents so that farmers came considerable distances to sell to the Lawrence concern. Smith and Son bought for hominy about eighty-five per cent of all the white corn available, and shipped three carloads of corn meal weekly to New Orleans.

The early grist mills had commonly provided for grinding much corn as well as wheat, but the mill of Smith

and Son, doing an exclusive business in corn, was something new; it was one of several to be put in operation about the same time. In late 1884 the Nicholson brothers leased the Massachusetts Street building which had once housed the Kansas Woolen Factory and spent about $3,000 fitting it up as a corn mill. They marketed most of their feed in Kansas City, and, like the Smith mill, found their market for corn meal mainly in the South, shipping to Arkansas, Texas, and Tennessee. In 1885 Messrs. Lewis and Barber set up a small mill for chop and corn meal on a farm near Lawrence belonging to Barber. And in April of that year Paul R. Brooks and General C. W. Babcock broke ground for a meal mill in North Lawrence. Rollers rather than burrs were used, and the capacity was 300 bushels a day. For power they bought the old engine of the Pierson Mills, which at that time had installed the new Corliss. They contracted with the local cooperage, Hauber and Sons, for 200 barrels daily, and began operation full blast in August, 1885. After one year's operation, the mill was left idle for several months, presumably because of grasshoppers and drought, which ruined the corn crop of 1886. In 1887 Joseph Rahskopf bought the building and converted it into a flour mill of 100-bushel daily capacity, which he operated for several years.

In 1890, after a lull in the corn milling business, the mill in the old woolen factory, by that time under the

management of Bigger and Hindman, was repaired and put into operation on a bigger scale than ever. Through the nineties this mill turned out corn meal and chop by the thousands of barrels. A new milling rate on corn in the nineties made it much more economical than before to ship corn in from long distances. William Bigger bought corn from points as far away as southern Nebraska and sold much of it to Douglas County farmers for feed.

Harris Gibson and Son bought a piece of land from J. D. Bowersock in 1896 and erected a corn meal mill big enough to overshadow all former concerns of the kind in Lawrence. Its capacity was 400 bushels of corn per twelve-hour day; a twenty-three horse-power Otto gasoline engine was used for power. The Gibson mill was destroyed by fire in 1900. In 1897 the Pacific Mill, by then a part of the Bowersock interests, was converted into a corn and rye mill, counterbalancing the shift in the opposite direction made some years before by the north side mill of Brooks and Babcock. In 1900, the year that the Gibson mill burned, the Pacific Mill was enlarged to a 400-bushel daily capacity for corn; it produced rye flour as well as corn meal and chop. At the present time there are two or three feed mills in Lawrence; J. Underwood Sons, for instance, located in the building erected to replace the old Pierson flour mill after the fire, manufacture a variety of mixed feeds and also do

custom grinding and mixing.

The paper mill. The Lawrence Paper Company represents another industry of permanent importance in the town. A suggestion that a paper mill might be a profitable enterprise for Lawrence was made as early as 1855, editorially in the Kansas Herald of Freedom,[66] but this was one of the few possibilities put forward by Editor George W. Brown in those early days that failed to materialize immediately. In 1871 J. B. Clark proposed to erect a paper mill at Lawrence to run by steam power, and tried to find Lawrence citizens to subscribe to a third of the cost, that is, about $15,000, but he never succeeded in getting the project out of the discussion stage, and it was not until the dam offered an inducement that a paper mill was actually begun. At the time he took over the dam, J. D. Bowersock was negotiating with some Iowa business men for the construction of a paper mill at Lawrence. Of these men, Edwards, Gardner, and Higley, the latter came to Lawrence in 1881 to superintend the construction of the plant on the high bank of the river a few hundred feet east of the dam. The following year the factory was in operation. In October the business was incorporated, with J. D. Bowersock as president, H. K. Edwards as vice-president, and L. C.

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66 See page 7, above.

Gardner as treasurer.

During the first several years brown wrapping paper was the product, straw being the chief raw material. On the upper floor of the mill straw was placed in large vats to be boiled and steamed for eighteen hours, and then chopped thoroughly. Taken from there to a vat on the lower floor containing a wire cylinder, the straw was again mixed with water; as the water was pumped from the vat the mass of straw pulp was left adhering to the cylinder and was drawn off through a series of rollers, the last of which were steam heated for drying. After being cut to size and stacked in bundles the paper was ready for shipment. In 1884, the plant was manufacturing wrapping paper at the rate of four or five tons per day, shipping most of it to Kansas City. Twenty-two men were employed, besides the several haulers who collected straw through the countryside with wagon and team.

Aside from a brief shutdown in 1884 in protest against an increase in the railroad rates, the paper mill grew steadily until 1895, at which time it was furnishing employment for thirty-five persons, had an annual payroll of $15,000, was buying up most of the straw raised within a radius of fifteen or twenty miles from Lawrence, and was shipping its product at the rate of 200 carloads a year. It suffered a prolonged idle period in late 1895 and 1896;

and some of the original founders sold out, leaving J. D. Bowersock sole proprietor. The paper factory had not been, and for some years to come was destined not to be, a profitable enterprise; high freight rates were a principal reason. In January, 1897, R. R. Clark, a former executive in the mill, returned to Lawrence and negotiated to refit the equipment and reopen the factory. He later became manager also of the Douglas County and Pacific Mills.

Soon after the reopening, paper boxes were added to the plant's product, and manufacture was carried on twenty-four hours a day; paper boxes have been the concern's mainstay ever since. The plant's own men developed the corrugating process, devised a machine to produce corrugated paper boxes, and began large-scale production under the control of Mr. Irving Hill, son-in-law of J. D. Bowersock, and active manager since then, and Mr. Paul Dinsmoor, also a Bowersock son-in-law, who was co-manager until his death in 1940. In 1910 the wooden box industry sought through the courts to prevent the railroads from accepting for shipment any freight in corrugated paper boxes, at that time making great inroads on the demand for wooden containers. Irving Hill directed the paper-box side of the case, and brought it to a successful conclusion.

The Lawrence plant produced the first corrugated paper box for canned goods in 1914, but did not patent the idea. Now the plant produces millions of boxes annually

for the shipment of canned goods and other products. The concern has imported partially processed wood pulp from Sweden, has obtained other raw material from southern Kraft mills, and reclaims thousands of tons of paper boxes and old newspaper every year in Kansas and adjacent states. It established a branch at Oklahoma City and several sales offices at various scattered points, through which it markets its paper packing boxes and such specialties as asphalted boxes for refrigerated meats and flowers, mattress containers, boxes for baby chicks, and so forth, serving a clientele including large mail order houses, manufacturers of various household necessities of well-known brands, and other concerns, numbering in all some three thousand customers. The Lawrence Paper Company, still a part of the Bowersock estate, is one of the few surviving conspicuous successes in the field of manufacturing in Lawrence to have been established before 1900.

The canneries. Like the paper mill, the canning business in Lawrence can show a history of continuous existence and had claims to some national importance because of its size. A cannery supplied from the nearby fruit orchards and fields of sweet corn had seemed a feasible possibility for some years, when, in February, 1881, the Lawrence Canning Company was incorporated with capital stock of $50,000 and began refitting the former

Ridenour and Baker pork-packing plant as a cannery. President of the new corporation was O. E. Learnard; J. B. Watkins was vice-president; J. M. Wood, treasurer; and T. P. Fletcher secretary and general manager. Fletcher was the chief promoter, and had come to Lawrence from Elk Falls, Kansas; he was a native of Maine, where he had learned the methods of the canning business as applied there in canning sweet corn.

The cannery set out to be as nearly self-sufficient as possible. During the summer of 1881 fifteen tinners were put to work making cans at the rate of 3,000 per day. The following year the company leased from the Santa Fe Railroad some land near the river to the east of Lawrence on which to raise its own sweet corn, tomatoes, and other vegetables. During the season of 1882 the cannery had on the average 125 persons working for it: making the necessary half million cans, for which tin was bought by the carload; preparing and canning sweet corn from the company's own 140-acre field, tomatoes from its ten-acre patch; a much larger amount of both sweet corn and tomatoes purchased from the farmers near Lawrence; and enough apples from Douglas County fruit-growers to make 17,000 three-pound cans and 22,000 one-gallon cans. Next season the concern acquired more land to the south of Lawrence and put in 225 acres of sweet corn. It had kept its tinners at work through the winter so that

800,000 tin cans would be on hand when the new season opened, and one of the old Ridenour-Baker buildings had been given over entirely to the can-makers. There was a cook-room, a room for storage, labelling, and packing, and a place where the packing cases were assembled from lumber which the company bought ready-cut to size from the local woodenware factory. The machines which the company was using to remove the husks and silk from the corn, and the presses used to pack the cans were inventions of the general manager, T. P. Fletcher. Elevators were used to move work in process from floor to floor. Food was placed in the cans, then the cans were capped, placed in vats for cooking, punctured to let the air out, resealed, and sent to the labeling and packing department to be prepared for shipment.

Ridenour and Baker were then operating their wholesale grocery house in Kansas City, and it was through them that the cannery marketed much of its product, which was mainly corn, apples, and tomatoes, although it began about that time to put up peas and string beans from its own garden. Peas, particularly, grew in importance in the factory's business from then on. A few years later peaches were shipped in, mainly from Sedgwick County, for canning in Lawrence; and in the early nineties the cannery equipped itself to handle strawberries. At that time the Lawrence

produced a total of about one million cans a year and was generally credited with being the largest inland cannery in the country.

In the nineties, the bank of J. B. Watkins, a chief stockholder in the cannery, went into receivership, and the cannery was leased by A. ("Bert") Herning, who employed F. L. Draper as manager. The enterprise continued to can apples, corn, and tomatoes under the established "Kaw Valley" brand name, and tried pumpkins and beans experimentally; it ceased to manufacture its own cans in 1894 and began buying them ready made, from six to ten carloads each season. In the busy part of the year the enterprise sometimes required as many as 300 workers to gather the crops from its own fields and gardens and carry on the canning processes; perhaps a third of these were children. Most of the labor force was paid on a piece-work basis, corn-huskers, for example, earning from twenty-five cents to two dollars a day, depending on their speed. Other employees received wages ranging all the way from three to fifteen dollars weekly, but even these modest sums were not paid entirely in cash. It was customary for the cannery workers to sign an agreement at the first of each season under which they received only part payment as the work was done and waited for the remainder until the following year. For instance, in 1896, a good year for the cannery, the

"hands" were not paid in full until December, and this was earlier than the company usually called in its obligations.

With prevailing low prices, the years at the end of the century were bad for the cannery and it was decided to shut down. As lessee, A. Herning had sold the product through the Theodore Poehler wholesale house in Lawrence, and with prospects brighter at the turn of the century, the Poehler concern tried to buy or lease the old cannery plant and put it into operation again. Unable to obtain terms satisfactory to them, the Poehlers decided to build a new canning plant of their own, equip it with new machinery, and incorporate it as the Kaw Valley Canning Company. Construction commenced in 1899 and in the following year the buildings were completed. President of the new corporation was Theodore Poehler, Sr.; vice-president, Theodore Poehler, Jr.; secretary-treasurer, George Kirchoff; and on the board of directors, besides the executive committee, were F. H. Smithmeyer, L. C. Poehler, and Otto Guffler. A. Herning was made superintendent of the new cannery; and G. W. Schell, one-time can-maker in the old cannery and later mechanical overseer there, was also employed in the new cannery as mechanical engineer and plant superintendent, serving in that capacity under the two subsequent managements as well. The older cannery had found a market throughout the West and also in the South; competition in

those sections had somewhat limited the territorial extent of the new plant's sales territory, but the variety of the product was considerably increased, for it was canning spinach, beets, beans, sweet potatoes, pumpkins, and several fruits in addition to the old staples of peas and tomatoes.

In 1912 the cannery came under the control of the Pendletons, father and son, who operated it until 1925, after which year it suffered a prolonged shutdown, due in part to the nationwide overproduction of canned goods in that year and consequent declining prices. Finally, in 1930, the cannery was taken over by the Columbus Foods Corporation of Columbus, Wisconsin, and its output now goes to wholesalers operating in Kansas, Oklahoma, Missouri, and Colorado, and to a lesser degree to some other states, including Ohio, Illinois, and Louisiana. W. H. Pendleton has continued as manager of the Lawrence plant. The cannery confines itself to vegetables: beets, spinach, peas, sweet corn, tomatoes, and tomato juice, and in the 1936 season produced 1,754,000 cans of peas alone, for which about $35,000 was paid to the growers in the vicinity of Lawrence. The 1937 output was even larger, and the cannery continues to require a large number of workers in season; growers cooperate with the cannery in making plans for planting and harvesting. The almost continuous operation of a cannery in Lawrence for more than fifty years has of

course rested ultimately on the suitability of the surrounding region for truck-farming.

Vinegar manufacturing. Vinegar manufacture is another pursuit which has persisted in Lawrence. There were small ventures of the kind very early,[67] and by the eighties the Douglas County apple crop was important enough that cider and vinegar making became an activity of considerable significance. W. R. Fowler put into operation a vinegar factory which in 1881 produced several hundred barrels of vinegar, mostly destined for the Colorado market. Profits were somewhat precarious because of the high freight rates then prevailing and the unpredictable nature of the apple crop. In connection with the vinegar factory, known as the Lawrence Cider and Vinegar Works, Fowler and his associates opened the following year a grocery store, where they sold their vinegar at retail, and marketed it at wholesale in several Kansas towns. In that year, 1882, a second enterprise, the Kansas Fruit Vinegar Company, was chartered, with $15,000 capital, and began to manufacture in a three-story frame building on Pennsylvania Street between Henry and Warren (now Eighth and Ninth), where it had storage tanks with several thousand gallons capacity, a grater and cider press, and equipment for producing 350

67 Page 76, above.

pounds of dried apples daily and 100 barrels of apple juice. Machinery was powered by a ten-horse-power engine. This concern likewise did a local retail business and sold at wholesale throughout the state. D. B. Hunnicutt was president, W. W. Cockins vice-president, L. D. L. Tosh secretary, J. C. Studebaker assistant secretary, and Robert Carpenter treasurer. A few years later General J. N. Roberts, A. Rowley, and E. F. Goodrich replaced all on the above list except Hunnicutt and Carpenter. In 1882 still a third vinegar-making establishment was put into operation, this by N. N. Brown, who fitted up a large building in North Lawrence for the purpose. Of the Douglas County apple crop of 1883, the Fowler vinegar works consumed 2,500 barrels, The Kansas Fruit Vinegar Company 3,800, the cannery 1,063, and an evaporator plant 500. That left more than 50,000 barrels of apples to be shipped out of town.

A fire completely destroyed the plant of the Kansas Fruit Vinegar Company in 1883, but the concern immediately rebuilt and remained in operation. In 1885 Fowler and his partner J. W. Krum moved their vinegar works to North Lawrence, installed a new engine, and prepared to increase capacity. Although Krum continued to manufacture vinegar in North Lawrence, Fowler shortly became associated with the Kansas Fruit Vinegar Company and represented it in court in 1887 when the concern was on trial for selling intoxicating

cider. These were the years when enforcement of the new prohibition laws was proceeding amid difficulties, and that was not the first accusation to be made against the cider works; the company had always maintained that its cider was not intoxicating when it left its own premises, and that if later on the cider became or was made so, the company was not to be blamed. In the 1887 court action, however, the company was found guilty and fined $250; Robert Carpenter, speaking for the concern, immediately threatened that it would leave the state, a move which would probably mean the loss of the Lawrence barrel factory as well, inasmuch as the vinegar factory was a chief customer of the latter. The threat was not carried out and the Kansas Fruit Vinegar Company continued to prosper; in 1890 it used 20,000 bushels of apples, paying an average of eighteen cents a bushel for them, and manufactured, besides cider, several grades of vinegar and a new line of carbonated beverages.

Existing cider mills and evaporating plants still did not consume enough of the apples raised in Douglas County to prevent apples from rotting in the orchards. The 1891 crop was especially large and in that year Reedy Brothers established a new cider mill at the corner of New Jersey and Warren Streets with daily capacity of more than fifty barrels; by 1895 they were turning out 1,000 barrels of cider during a season and paying aggregate wages to their

fifteen employees of $10,000. J. W. Krum was then producing 3,000 barrels of cider annually with the aid of five employees, to whom he paid annual wages of about $2,000.[68]

After that time there was some elimination and consolidation of the vinegar and cider manufacturing facilities of Lawrence. The old plant of the Kansas Fruit Vinegar Company changed hands two or three times, and in 1917 suffered a bad fire. Following that, J. W. Krum became owner and manager, and his son C. C. Krum continues to operate the concern, for many years known as the Lawrence Cider and Vinegar Company, at the old Pennsylvania Street location. Mr. Krum owns an apple orchard which furnishes the vinegar works with part of its raw material and also does a retail coal business to compensate for the seasonal lull in the vinegar business. The vinegar is marketed through various Kansas wholesalers; annual capacity is now 175,000 gallons, but the volume of trade in vinegar varies widely from year to year and is to a high degree dependent on the cucumber crop, because pickle-making accounts for much of the demand.

Foundries and iron works. One can trace an unbroken line of existence back into the nineteenth century for another Lawrence manufacturing activity: foundry work, but

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68 Lawrence Daily Journal, July 15, 1895.

its importance has declined considerably from the days when the Kimball Foundry was in its prime. Samuel and Frank had had their establishment in operation at the same location on Sixth Street since the early years of pre-Quantrell Lawrence, and by the eighties it was becoming something of an historic institution.[69] During the eighties it benefitted from the general upturn; it then had one seventy-by-forty-foot building for the foundry proper, a smaller one used as a machine shop, and two special departments for making patterns and for the woodworking division of the business. Calls on the Kimball Foundry were made for shafts, pulleys, boiler-work, for repairs and castings for the mills; in 1885 Samuel Kimball got the contract for the iron work for the Osawatomie insane hospital, and in the same year an order for 1,400 steam-heating radiators for the Topeka insane hospital, enough to keep the foundry working at capacity all winter. The cables which transmitted power from the dam to its various users were strung over pulley wheels that were a specialty of the foundry. The grooves of the wheels were filled with rubber to prevent the cables from slipping. Iron store-fronts made in the Kimball works were to be seen in several Kansas towns roundabout Lawrence. For a time the foundry made road-graders; in 1885 it turned out some steam boiler cookers for

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69 See pages 9-12, above.

a Lawrence company sponsored by one Cartwright, who had invented the cooker, used in hog feeding.

The Kimballs' command of a statewide market was not allowed to go unchallenged by competition. In 1882 Savage and Lightcap began construction of a building to house a second foundry and machine shop. They ordered three large turning lathes from Lowell, Massachusetts, for which they paid $4,000, and were open for business by 1883. The new concern, known as the Douglas County Iron Works, and later, after a change in management, as the Usher Iron Company, was soon busy on a number of large orders. It made repairs on a big planer used in the railroad shops at Ottawa; it built a set of cars and other machinery for a roller-coaster at Wichita. In 1885 it was awarded the contract for furnishing the Missouri Valley Bridge Company, of Leavenworth, with all castings used in the latter's work; upon receiving this new business, the management saw that Lawrence was not the logical location for its enterprise, and moved away, selling part of its building to J. D. Bowersock. One of the owners of the building refused to sell his half of the premises, making necessary a wooden partition separating the two parts of the structure.

To that building, in 1886, moved the Kimball Foundry, gaining a more direct access to the dam than it had had before. Samuel Kimball continued to supervise the business,

which grossed about $12,000 a year, until his death in March, 1897. After a short period of idleness, the plant was acquired by J. D. Bowersock, who installed some new equipment and continued to operate the business as the Lawrence Iron Works. During the late nineties it filled large orders for castings to be used in constructing the new brick plant, for new buildings at Haskell Indian Institute, for the new chemistry building at the University, for the new Lawrence Central School building. From thirty-five to fifty persons were employed during this period. The Lawrence Iron Works, like the paper-box factory, is now a part of the Bowersock estate, and continues to do general machine work and repairing, but has ceased to make castings. It and the paper-box factory are both still users of water-power, now transmitted electrically of course.

The ice plant. Another Lawrence enterprise which dates back to a nineteenth century origin is the ice plant. Even in pre-Quantrell days ice had been cut from the river in winter and stored to be sold in Lawrence during the summer. Later on, the erection of the dam created a "pond" several miles long which was an excellent source of natural ice--the best, in fact, in the region. Packing plants in Kansas City, Leavenworth, and Atchison erected large ice-storage houses along the river near Lawrence. A local organization, the Eidemiller Ice Company, regularly harvested

ice in the winter and stored it in its own warehouse on the south side of the river, selling during the summer to the railroads as well as to Lawrence customers. Increasing demand soon tended to outrun the available local supply of natural ice, which was itself variable from year to year; and in 1894 A. J. Griffin erected a $13,000 building and installed $9,500 worth of machinery for the making of artificial ice. In 1896 he made and stored in the spring more than three hundred tons of ice for the summer trade. The following year the Griffin and Eidemiller ice interests joined forces in a new corporation, the Griffin Ice Company, with J. D. Bowersock, A. J. Griffin, J. Underwood, and W. L. Howe as its directors. In 1898 the new company put an ice factory into operation at Iola and began selling to farmers and creameries at a special introductory price of three dollars per ton. The concern continued to cut and store natural ice at Lawrence, and sometimes this source was sufficient to supply the market so that no artificial ice was needed; but after the disastrous flood of 1903 swept away the ice-storage houses along the river, no more natural ice was sold.

The Griffin Ice Company continued to supply the community with ice until September 1, 1928, on which date its business was bought by the American Service Company, owner of several scattered ice plants. Mr. R. C. Rankin

remained as general manager of the Lawrence plant. In 1938 $75,000 worth of new machinery was installed; the concern sells ice to commercial and domestic users and carries a line of ice refrigerators. There is now a second concern, the Independent Ice Company, making and selling ice to business concerns.

Creameries. One enterprise established in the nineties which was immediately profitable was the creamery, which began operations in 1895. It was efficiently managed from the start and during its first ten months handled about one and one-half million pounds of milk and made thirty-six tons of butter, which it sold in Lawrence and neighboring towns. At the same time a creamery in Eudora, seven miles east of Lawrence, was likewise prospering, with about the same or perhaps a slightly larger volume of business. Depending much on the capability of the manager, the Lawrence creamery was not consistently as successful as it had been at first. After the decline of the early creamery, the present dairy products manufacturing concern, the Lawrence Sanitary Milk and Ice Cream Company, was established by the Hurwitz brothers, who came to Lawrence in 1920 from Topeka, where they had operated a dairy since 1915. After five years of expanding trade carried on in a small Sixth Street building, they replaced it with the larger present structure. The company pasteurizes milk, makes

cottage cheese, butter, and ice cream; it pays for milk about $100,000 to farmers around Lawrence in some years. Most of the output is sold locally, but the concern had had government contracts for supplying the army post at Fort Leavenworth with its products.

Summary. In brief recapitulation of what has been covered in this chapter, it should be noted that of all the kinds of manufacturing attempted in Lawrence before 1900, only seven have survived: flour and feed milling, paper-box making, vegetable canning, vinegar manufacturing, iron working, ice making, and dairy-product manufacturing. It is of interest to observe that four of these are dependent on farm products for their raw material and have had their fortunes closely bound up with the nature of agricultural activities in the region about Lawrence; and of the remaining three, two are not of a distinctive kind: the purely manufacturing functions of the iron works have almost disappeared, and the ice plant is a general utility type of enterprise, which, like electric power plants and water works, is likely to be found in any town the size of Lawrence or larger. There are in Lawrence, however, two additional manufacturing establishments of some importance, founded since 1900; and these will be given attention in the final chapter.

CHAPTER VII

INDUSTRIES OF THE EIGHTIES AND NINETIES THAT HAVE NOT SURVIVED

Among the new Lawrence industries that got into their stride in the eighties and nineties are many which temporarily loomed large in the town's economy, but which, for one reason or another, were ultimately removed or discontinued. The causes of their disappearance are numerous, and these establishments evade any thoroughgoing classification on that basis, making it necessary to consider each on its own merits. A few, however, may be grouped together as having departed mainly because the demand for their product either declined or vanished entirely. A clear-cut example of this group was the horse-collar factory.

John Hermann's horse-collar factory. John Hermann came from Germany as a boy of fifteen and settled in St. Louis, where he learned the horse-collar-making trade. In the seventies, scraping together his $600 savings, he decided to move farther west and set up a shop of his own; Lawrence was the town he chose for his new venture. He rented a small space in what is now the Eagle Building, next to the establishment of a lady hairdresser, whom he later married. John Hermann was not the only local maker

of horse-collars when he settled in Lawrence. J. G. Sands, the pioneer Lawrence harness-maker, was specializing at that time in wool-stuffed horse-collars, which he continued to produce even in the nineties, when his business had become mainly retail in character. But John Hermann's establishment made horse-collars exclusively, and in a short time Hermann bought two lots at the corner of Tennessee and Warren (now Ninth) Streets, filled in the ravine there, and erected a building of his own. This first building was a very tiny one, about twelve or fifteen feet square, but business was good in the flourishing days of the early eighties, and in 1885 John Hermann built a fine new brick building. To it he added another story in 1903, and about ten years later he built a two-story annex, so that before the war he was operating one of the largest horse-collar plants in the middle west. Next to the factory he built a large residence for himself.

Competition was often bitter as the demand for horse-collars began to decline, but John Hermann met it successfully and built up a market chiefly in the states of Kansas, Colorado, Iowa, Nebraska, and Missouri. Part of his success was doubtless due to the high quality of his product. His collars were made of high-grade leather and stuffed with rye straw which he bought, several tons a year, from farmers around Lawrence, who would otherwise have had no market for

it. At its zenith the factory employed thirty to forty men the year around, and turned out about 1,500 collars weekly.

Already, in 1913, Hermann had rented part of his building space to a bakery, the upper floor of which was fitted up as living quarters for the manager, showing that all available funds were not going into expansion of the factory; and, particularly after the war, trucks and tractors began sharply to reduce the market for horse-collars, with the result that business grew worse and worse. By 1930 the main part of the factory building was a grocery store, but a few workers still carried on in a back room, making horse-collars for the local trade. A few years later the business expired. Some Lawrence concerns, such as the ice plant, which was one of the last to change over from horse-drawn delivery wagons to motor-trucks, patronized the concern to the end, when there was simply not enough business to support an enterprise whose sole function was the making of horse-collars.

The Wilder Brothers Shirt Factory. Similar in some respects was the experience of the shirt factory, which produced only made-to-order garments. No relation to the J. H. Wilder of the plow factory, the Wilder brothers were natives of Vermont. Working independent of one another, both learned the machinist's trade in factories in the East. In 1863 Frank Wilder started working for Wheeler, Colburn,

and Company, makers of shirts and collars in Troy, New York. Seven years later his brother Charles joined him and with another man they formed at Troy the firm of Clapp and Wilder to succeed Wheeler, Colburn, and Company.[70]

In 1870, on account of poor health, Frank came west to Lawrence, where he set up a retail branch of the Troy firm, and three years later his brother Charles again followed him. Together they organized the firm of Wilder Brothers and started a factory in Lawrence. For a time the scene of operations was the large building near the river bank which had been a hotel known as the Waverly House, next to which the Wilders shortly built a laundry. Their experience, previous contacts, and the lack of nearby competition combined to permit rapid and immediate expansion of the business. Their traveling salesmen began to send orders for men's shirts and underwear from all over the states of Kansas, Colorado, New Mexico, and Texas. Some of the regular customers bought often and in large quantities. Uniform shirts were made for fire companies; the miners of Colorado and New Mexico bought all-wool flannel and cassimere shirts; and many bartenders would not have felt properly dressed without their fancy shirts made to order by Wilder Brothers.

As soon as the dam was finished a cable was installed

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70 Andreas, op. cit., p. 347.

to furnish the motive power for the shirt factory's bank of twenty-four sewing machines. Already fifty employees, mostly women and girls, were needed to operate the sewing machines, cut the cloth, and run the laundry. The laundry division of the business did a widespread mail-order business on its own account; many of the factory's customers in Colorado, New Mexico, Nebraska, and even to the east, in Iowa and Missouri, sent their shirts back to Lawrence to be laundered. Laundries properly equipped to wash, starch, and iron fine fabrics and fancy shirts were few and far between in the West in those days.

Sales territories were extended and orders continued to pour in until, with its existing facilities, the factory could not handle them. A new building near the old one was begun in 1881, and finished in 1883, a substantial three-story building with basement, which allowed space for a cutting room, a room for the sewing machines, a room for trimming and marking the garments, a laundry room, an ironing room, a shipping room, and an office for the management. The new plant was equipped with steam heat and gas lights; and a new connection was made with the dam, although arrangements were made for steam power when the water-power was not available.

The shirt factory was one of the rare concerns that had flourished through the seventies, and the boom years of

the eighties intensified its prosperity. Its salesmen crossed the Rockies and brought the entire western half of the country into its trade territory. The labor force increased to nearly one hundred. Besides shirts and collars and firemen's uniforms the factory began to turn out ladies' made-to-measure shirtwaists, and underwear for men, women, and children. In a few years Wilder Brothers added a fourth floor to their building, making the establishment one of the largest factories in the country devoted to making shirts to measure.

In the nineties the factory began selling locally its accumulated "on-hand" stock--shirts and underwear which had been ordered but not paid for. In 1895 the firm of Wilder Brothers was reported to be employing forty persons and paying annually $9,000 for labor,[71] a piece of information which indicates two things, if the figures are at all accurate: the factory had declined somewhat from its 1890 zenith, and it paid very low wages to its factory force (the traveling salesmen are definitely not included in this estimate). At least for a time the garments were "farmed out" to Lawrence women who worked the buttonholes for a small piece-rate remuneration.

In January of 1896 the business was incorporated under a twenty-year charter as the Wilder Brothers Shirt

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71 Daily Journal, July 15, 1895.

Company, with $100,000 capital stock. Directors at that time were, besides the two Wilder brothers, William H. Lowe, who for many years had been the office manager; John W. Bailey, one of the oldest traveling salesmen; and Henry Kane, a machinist from Troy, New York, who was given charge of the sewing department. After incorporation, there was little if any expansion in the business of the shirt factory. During the next several years some improvements were made, such as the extension in 1897 of a Santa Fe Railroad switch nearer to the factory, the installation of electric lights, and the addition of a water-softening system to the laundry; but the volume of business remained about constant and then began to decline, particularly after about 1912 or 1913. Wilder Brothers produced only made-to-measure garments, and by that time the much improved standardized article began to grow in popularity by leaps and bounds, rendering the product of the Lawrence plant obsolete. Charles Wilder had died in 1899, Frank Wilder was aging, and no one was inclined to change completely the manufacturing methods and marketing system so as to compete with the standardized shirts. When the company's charter expired in 1916 it was not renewed.

Cooperage works. A third Lawrence industry which suffered from the obsolescence of its product was barrel making. Back in the sixties, Ross McCandless had made

barrels in Lawrence, but on a small scale. In the seventies a cooper shop was operated in connection with the packing house of Ridenour and Baker, but had been abandoned when that firm left Lawrence. Soon afterward, the increasing importance of the Douglas County apple crop, the growth of the vinegar and cider factories, and the expanding flour and corn meal mills all operated to create an active demand for barrels. In 1878 the Hauber brothers came to Lawrence, bought the vacant cooper shop from Ridenour and Baker and inaugurated the first significant independent cooperage in town. They shipped their barrels to the apple growers near Lawrence, sold them to the flour mills, and did such a good business that they soon outgrew their original building, which was taken over by the Lawrence cannery when it began business in 1881. A new barrel factory was constructed on Pennsylvania Street, near one of its best customers, the Kansas Fruit Vinegar Works. The new plant had to be almost immediately enlarged by a twenty-nine-foot extension and the addition of a separate twenty-four-by-sixty-foot storehouse. Besides furnishing several hundred barrels to the vinegar and cider mills every season, Hauber Brothers had a contract with the Brooks and Babcock corn meal mill for 200 barrels daily, furnished a Lawrence commission merchant with seventy-five to one hundred barrels daily in season for shipping apples, supplied a southern

Kansas sugar and syrup mill, sold to Lawrence flour mills, and continued to sell to fruit growers near Lawrence.

In the summer of 1894 Raible Brothers came to Lawrence and built a second large cooperage, advertising in eastern newspapers for workmen. The factory, which was along the Santa Fe tracks in the eastern part of town, flourished from the beginning, and in 1895 had already exceeded Hauber Brothers' plant in output. In that year Raible Brothers were reported to be producing at the rate of 100,000 barrels per year, employing fifteen men, and paying $10,000 wages, whereas Hauber Brothers were said to be making only 70,000 barrels annually, employing twelve men, and paying out in wages $7,000.[72] If correct, these figures indicate that although the wages per barrel were the same in each plant, the wages per man were for some reason lower in Hauber Brothers' shop. At any rate Hauber Brothers had a labor dispute to contend with later that year, and labor disputes are rare in the history of Lawrence industry. The difficulties were summarily disposed of within a week in a manner recorded by the Lawrence Daily Journal in two news items, the first of which appeared on September 9, 1895:

> The coopers working for Hauber Bros, in the east part of the city last night notified their employers that they would no longer work for the

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72 Daily Journal, July 15, 1895.

> same money they had been getting. This was repeated this morning, and Hauber Bros. at once paid all the men off and discharged them, and will not allow them to work longer under any circumstances. . . .

One of the Haubers said he was paying as much as anyone in town for such work, and that he did not intend to pay more. Inasmuch as he had 19,000 barrels on hand he expected to be in operation again before the lockout caused him any inconvenience. As for the sixteen discharged coopers:

> The men are loafing on the streets . . . and many of them are willing to go back . . . at the old prices. . . .

A few days later, September 17, 1895:

> The lock-out at Hauber Bros.' cooper factory is all over. Yesterday the firm put at work six new men and this morning three more were given jobs, and the full force will be on again in a very short time. The effort of the men to force their demands with the company has cost them all good jobs, and the cooper factory is again in shape to run its full capacity.
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> Mr. Hauber said this morning that he had anticipated no trouble in getting men and there were daily applications for places, making it a much easier matter than the dissatisfied men thought for, to fill their jobs with competent workmen.

Hauber Brothers continued to operate the Lawrence Barrel Works on through 1915, having acquired the Raible Brothers' shop; they operated barrel factories in Topeka and Kansas City as well. Local demand for the product of the Lawrence plant declined as sacks and baskets replaced barrels in the shipment of flour, grain, and fruit. The barb-wire and nail factory, which had been a good customer

for nail kegs, was taken from Lawrence in 1899. The vinegar factory adopted a system of marketing in which the barrels were used over and over and had to be replaced only rarely; the cooperage consequently ceased to make what are known as tight barrels--barrels to hold liquids. And finally Hauber Brothers left Lawrence to make Kansas City their headquarters, so that they would be closer to the remaining market.

The straw lumber swindle. For the remaining enterprises, the chief cause of abandonment was not exhaustion of demand for their products, and they cannot be conveniently grouped according to any other cause or causes; each will be considered individually. An interesting case is the straw lumber factory promoted by S. H. Hamilton. Fresh from a similar project in Topeka, Hamilton came to Lawrence in 1880; he was a gentleman of parts, it seemed, and the good citizens of Lawrence were duly impressed by his fine broadcloth clothes, his shiny plug hat, and the gold-headed walking stick he carried. He soon had some prominent business men of Lawrence interested in his process for making straw into lumber good for construction, interior decorative woodwork, movable partitions, packing cases, and the like. A building at Rhode Island and Quincy Streets was acquired and machinery installed for the manufacture of straw lumber. Underground pipes were laid to bring steam from the boiler of General Roberts' woodenware factory across the street to

run the engine in the straw lumber plant. The elegant Mr. Hamilton was exhibiting a sewing machine cover made of straw lumber which he proposed to send to the Singer Sewing Machine Company. If it met with their approval, he said, they planned to use straw lumber exclusively in the future. He also talked enthusiastically of the prospects of using straw lumber for piano cases.

Suddenly, on the morning of March 16, 1881, the factory caught fire, and before the Lawrence fire department could get its engine through the muddy streets and into action, all was destroyed. Only the walls of the building were left standing. The cause of the fire was supposedly accumulated gas in the flue connecting a chemical vat with the chimney. Nothing daunted, Mr. Hamilton showed as much enthusiasm as ever a few weeks later, when, although nursing a back injury received at the time of the fire, he displayed several letters offering him great inducements to locate the straw lumber mill in various distant points. He observed, however, that if he could find suitable buildings and obtain "reasonable support from the people of Lawrence" he much preferred to reopen his factory in town. The editor of the Weekly Tribune recommended that "the Chamber of Commerce and the leading business men of Lawrence see to it at once that Mr. Hamilton receives sufficient encouragement to re-estab-

lish his works. . . ."[73]

A committee of citizens was appointed to secure the factory for Lawrence, and before long Lawrence was the home of the Hamilton Straw Lumber Company, incorporated under New York laws, with Silas H. Hamilton as president, and $150,000 authorized capital stock. Finally, in 1884, the new factory was in running order. It opened briefly in March of that year and then closed down for repairs and the addition of more equipment. The next fall the plant, by then under the management of General J. N. Brannell, of New York, began to turn out some boards. The raw material was not straw, as at first supposed, but straw building paper purchased in St. Louis. The paper was passed through a vat containing various chemicals, then pressed between heated cylinders, after which it was cut to size. Pieces were coated with a glue-like mixture, piled up to the desired thickness, and compressed in a steam press. The result was a stiff board which could be polished or painted and used in a variety of ways. Orders were on hand from various eastern points and the mill was supposed to have a market for all the straw lumber it could possibly turn out.

Again all looked bright--and again there was a fire! The truth dawned: the gentlemanly Mr. Hamilton was nothing more nor less than an artful swindler; he departed for the

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73 Weekly Tribune, April 20, 1881.

East, leaving a host of angry former associates and unpaid creditors.[74] Some months later, the people of Lawrence were informed of his whereabouts in the following way:

> S. H. Hamilton, who figured in this city for a number of years as a colossal fraud and dead beat, is now in New York City extensively engaged in the same business. There are few men now on the face of the earth that would measure as many square inches of meanness as the aforesaid Hamilton. His entire aim in life seems to be to swindle somebody. His shiny plug hat, fine broad cloth clothes, polished boots and gold-headed cane are the external symbols with which he lures his victims to ruin.[75]

A few years later he fell foul of the law and was jailed in Pennsylvania for obtaining $1,500 from one Brice on the strength of straw lumber patent rights which Hamilton professed to have but which in reality had already been revoked.[76] The process of making straw lumber was genuine enough, but Hamilton had seen fit to use it as bait for swindling schemes rather than developing the business in legitimate fashion.

The woodenware factory. In 1876, on the levee at the south end of the dam, a building was erected and equipped with a turning lathe, planing and splitting machines, and a large circular saw. This was the woodenware factory of

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74 Charles A. Dana, of the New York Sun, had been interested in the scheme to the extent of $5,000, according to an interview with Colonel Charlie Duncan reported in the Lawrence Evening Tribune, November 3, 1887.

75 Lawrence Herald-Tribune, September 25, 1885.

76 Evening Tribune, November 9, 1887.

General J. N. Roberts and Company. It manufactured berry baskets, butter platters, cheese boxes, broom handles, and packing boxes--the latter in "knocked down" form: the pieces were cut to size and could be assembled and quickly nailed together by the buyer. The business expanded rapidly and new machinery was installed every few years. When a Lawrence group was incorporated to manufacture the Randall wheat separator, General Roberts arranged to have the wood work done in his establishment, the iron work being furnished by Kimball Brothers.[77]

By 1879 the woodenware works was already pressed for space, and in that year, as has already been mentioned, it traded buildings with the Pacific Mill, then owned by the McConnell brothers. In the new quarters on Quincy Street, the woodenware factory had more room but was no longer able to use the dam for power as it had done previously; inasmuch as steam was required for processing the wood, however, the fact that an engine now had to be installed was not regarded as a great disadvantage. Two years later the warehouse building was moved bodily to the new location. Business continued to flourish; carload upon carload of baskets and boxes were sent out of Lawrence. The number of berry baskets mounted to about two million annually, according to Andreas.

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[77] The wheat separators were sent to Ottawa and Olathe by wagon to avoid the high freight rates, and the venture was soon abandoned.

For raw material the concern used cottonwood and black walnut veneering, sometimes as much as three carloads of the latter weekly. In 1881 the enterprise was incorporated with $50,000 authorized capital stock, and named the Kansas Basket Manufacturing Company.

Too frequently Lawrence was fated to lose manufacturing establishments at about the time they reached the peak of their powers, and in three years time after incorporation the basket factory was moved to Kansas City, Kansas, and an allied plant was set up at St. Louis. At the new locations, inview of the positions both of the source of raw material and the market for the finished product, the business was much more advantageously situated in the matter of freight rates than it had been at Lawrence. G. W. Griffith, prominent Lawrence business man and Douglas County Commissioner, was active in both the Kansas Basket Manufacturing Company and the St. Louis Basket Manufacturing Company after the change. General Roberts and his associates set up a basket factory at Poplar Bluff, Missouri, although General Roberts continued to reside in Lawrence. In 1893 the Poplar Bluff factory was destroyed by fire; the loss was estimated at $40,000, only one-fourth of which was covered by insurance.

A few years after the original box factory left Lawrence, W. S. Tanner, who had been connected for several

years with a similar enterprise at Peru, Indiana, and briefly with the St. Louis plant, came to Lawrence and commenced anew in the old box-factory buildings at Connecticut and Quincy, still owned by General Roberts. The revival was on a much smaller scale than the original, but Tanner continued to carry on his business for some years. In a newspaper survey of Douglas County manufacturing made in 1895, Tanner furnished no detailed figures about his concern, but it is safe to say that the second factory did only a fraction of the business of the first, and shortly afterward the woodenware manufacturing business was at last abandoned in Lawrence.

Tanneries and shoe factories. There have been several ventures into the tanning of leather and making of shoes in Lawrence both as separate and as combined activities. Colonel Willemsen's early-day tannery has already been spoken of;[78] Willemsen also kept a stock of shoes for sale, some of which were made in his own plant. In addition, he employed a half-dozen workmen to make horse-collars and saddles. In those days there were several shoemakers making boots and shoes to order for the local trade. One of these, Peter McCurdy, brought a $3,000 stock of materials to Lawrence in the sixties, built up a large trade, took his brothers Ben and James into the

78 Pages 13-14, above.

business, and in the seventies employed a force of twenty-odd men. In good years McCurdy Brothers grossed more than $60,000. This concern was superseded in 1879 by Markley and Sons, formerly of Fort Wayne, Indiana, a short-lived enterprise which was located in a rented store room at 67 Massachusetts Street, where it offered custom-made boots and shoes for sale.

Although the Willemsen tannery had recently expired, a tannery still appeared to be a logical enterprise for Lawrence. To many it seemed unreasonable that hides should be shipped east, tanned, then shipped back to local makers of shoes, saddles, harness, horse-collars, and the like. A tannery at Lawrence should save citizens of Kansas the cost of two-way transportation of the hides and leather and would be an admirable means of keeping money at home--so ran the familiar argument, a line of reasoning by no means uncommon today. Not long since, tanneries had to be located near the source of tanbark, but by the sixties and seventies hemlock bark extract could be shipped in barrels from Chicago cheaply enough to make it appear feasible to locate tanneries near the source of hides. Aside from the fact that transportation costs are not the only factors to be considered, the argument overlooks the objection that large-scale plants in populous regions may be able to manufacture and market the product more efficiently than a plant

away from the center of the general trade areas, even though the latter plant may be nearer the source of raw material.

At any rate, after Messrs. Blake, Earp, and Davis in 1876 re-established the tannery in the buildings formerly used by Colonel Willemsen, they found themselves unable to compete with large-scale eastern concerns. They set up a new engine and new vats and used a process patented by Blake; they also had a scouring mill, which replaced the old method of scouring by hand with stones; but even with the more advanced methods the tannery was consistently unable to meet the prices of its bigger eastern competitors and was again abandoned after a few years. Later on, the Weekly Tribune editorially suggested a new trial of the tannery business in Lawrence. The blame for previous failures was placed on the lack of capital, a condition which was said to have since been corrected.

In 1889 several interested persons met in J. D. Bowersock's office in the Douglas County Bank to talk over a project for a shoe factory. A corporation was formed and the following board of directors elected: J. D. Bowersock, J. D. Steep, D. C. Imboden, A. G. Menger, J. Hermann, A. Werlfkuhle, J. F. Wilder, A. Henley, and George Leis. J. D. Steep, above, was connected with the shoe factory then located in Kansas City and came to manage the new Lawrence enterprise. Within three months machinery was in

position, much of it having been brought from the Kansas City plant, the steam engine was fired up, and the old buildings which had once housed John Walruff's brewery were again the scene of much activity. The factory first went to work on 150 calf hides bought from Tom Walker of North Lawrence, tanning them in the underground vaults formerly used by the brewery as a storage place for beer. By April the factory was at work on an order from a Kansas City firm for 150 dozen pairs of shoes, and the future looked rosy, although the plant was being worked at a level far below its stated capacity. Only about thirty men were employed and twenty of these were relatively inexperienced local workers who had to learn the business before any expansion was planned. Four short months later the Kansas Tanning and Shoe Company found itself in difficulties; in August the employees struck, not for higher wages, but simply for wages: they had not been paid for some weeks. And in November, only eleven months after the company had first been organized, the directors met and decided to sell all shoes, tanned leather, and hides on hand; collect money due on stock subscriptions (by law if necessary); and pay all debts. After that they planned a reorganization.

Early the following year, 1890, the reorganization had been completed and the officers of the corporation were J. J. Russell, president; D. C. Imboden, vice-president;

John Charlton, secretary; and A. Schall, treasurer. Under the new management the concern fared no better. In July the old brewery building, which had belonged to D. C. Imboden, went under the hammer at a sheriff's sale and was bought by Harkert and Russell; by the time another year had passed the company was applying for a receiver. The attempt at tanning and shoe-manufacturing on a large scale had failed, partly because of the lack of experience on the part of both directors and labor force, partly because of a lack of sufficient capital to get the enterprise under way and tide it over the organization period.

The tannery part of the business did survive, however, as the only tangible result of the venture. Operated for many years by McCarter Byrd, a Negro, and after his death by a son and daughter, the tannery stayed in business until 1939. Hides were bought from suppliers in various parts of the country and after tanning were disposed of mainly through Kansas City dealers. After a disagreement with her brother, McCarter Byrd's daughter sold her share in the business to a Kansas City man by the name of Taylor. George Byrd, the brother, and Taylor also disagreed about the management of the concern, so that finally the partnership had to be dissolved and the business abandoned. The old building was sold; Taylor started a small shop on Massachusetts Street where furs were prepared, repaired, and

cleaned (the Taylor-Ne View Fur Shop); George Byrd obtained a Works Progress Administration job. Had it not been for the disagreement between its proprietors, the business could have continued to produce a small but welcome return on their investment.

The brick plant. It is difficult to realize that Lawrence, with its recurrent high-flown pretensions as a budding metropolis, its dam, its state university, was, right up to the end of the nineteenth century, a town of unpaved streets and, for the most part, board sidewalks. After a sorry attempt at paving with wood blocks, a failure because of a bad underlying foundation, the town's leading men were reluctant to appropriate money for paving. Through the nineties the city's streets were dusty and full of ruts in dry weather, cursed with mudholes in wet; and down the main thoroughfare, Massachusetts Street, ran a decrepit street-car, drawn by a pair of weather-beaten mules. By the nineties the mule-car line was sufficiently outdated to be regarded as quaint, and to serve as the object of much ridicule from neighboring towns. When the replacement of the mule-car line with a modern electric street railway was discussed, it was usually observed that the latter would not likely be a success unless the streets were paved. Consequently, there was during the nineties a simultaneous agitation for paving the streets and for building up a fund

for an electric trolley service.

In the late eighties John McFarlane and his son Ben established a brick plant in Lawrence; before that, kilns of brick had often been shipped into Lawrence to be burned locally.[79] McFarlane and Son turned out common building brick and drain pipe of porous red tile, using clay from a bed on the river bank. When the river overflowed in 1890 and inundated the plant, the McFarlanes filed suit against J. D. Bowersock for $1,165 damages "consequent upon the damming of said river at this place," but lost the case. Eying the growing demand for brick for sidewalks and the mounting agitation for paving the streets, McFarlane and Son completely overhauled their plant in 1897, installing a new boiler, a thirty-five-horse-power steam engine, and machinery for making vitrified brick such as is suitable for sidewalks and street paving; a force of thirty-five men was employed.

At about that time a company, of which George F. Leonard was secretary and business manager, was organized in Lawrence to produce tile for sidewalks, and a sample tile walk was laid in fromt of Leonard's home, but the concern did not succeed in displacing the less-expensive brick with tile as a paving material and never developed into a growing concern.

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79 Page 75, above.

Construction of sidewalks continued apace, but if the city of Lawrence was to undertake paving the streets, the McFarlane yard was still much too small to supply the brick that would be needed. Consequently, the Lawrence commercial club was negotiating with a manufacturer of brick-making machinery who was willing to build a $21,000 brick plant in Lawrence on condition that the city agree to buy five million brick annually for the next five years. This was regarded as too big a commitment and a committee was appointed to see what chances there were for a locally-sponsored enterprise. In 1899, after the city had given definite assurance that Massachusetts Street, at least, would be paved, the Lawrence Vitrified Brick and Tile Company was organized by the following group: A. Monroe, president; A. Marks, vice-president; N. O. Stevens, Eben Baldwin, M. Robinson, John McFarlane, Ben McFarlane, L. C. Wilson, and J. N. Roberts. The new company used part of its $32,000 paid-in capital to buy the McFarlane brick yard entire, together with the clay and shale beds on the river bank, which an expert had estimated were large enough to supply the new brick plant for two hundred years.

Construction of the plant got under way in the summer of 1899. A machinery building with attached power house and office, a ten-tunnel steam dryer, and four down-draft kilns were erected, a big order for iron castings

to be used in construction being given to the Lawrence Iron Works. By fall the factory was in operation and the paving of Massachusetts Street had begun. After being dynamited from its bed, the clay was crushed and ground, elevated to a pug-mill where it was mixed with water, then moulded into bricks by machine, and following that the bricks were transported by belts to the kilns. There was equipment for making fine pressed brick and glazed sewer tiling as well as the vitrified and common building varieties of brick. Forty men were employed, and the plant began to operate night shifts.

During its first years the enterprise thrived, producing at the rate of 35,000 bricks daily for long periods of time. But after the paving boom was over the brick plant suffered a long slow decline. With the demand more stabilized, the concern naturally did not enjoy the rush of business it had experienced at the beginning. The fuel problem was a bugbear; after many other Kansas brick plants had adopted natural gas in the early nineteen hundreds, the Lawrence yard continued to use coal, being thereby at some disadvantage. Eventually it did adopt natural gas, and still later, fuel oil, but was always at a disadvantage with relation to more favorably situated plants. Before the enterprise was abandoned its control changed hands two or three times, to the disadvantage of

the quality of its product. One shutdown resulted when the Lawrence city engineer rejected some of its bricks as improperly fired. His successor accepted bricks from the plant, but later experience proved that the rejection had been wise. As if the difficulty of obtaining economical fuel, the discrediting of its product, and the lessened amount of paving were not enough, a fourth factor, the competition of concrete as pavement material, began to plague the enterprise; and about twenty years after incorporation the Lawrence brick plant was abandoned.

As for the electric street railway, after much delay a street-car line was constructed but did not prove profitable, and when its first proprietors gave it up J. D. Bowersock took it over and maintained it in operation, although still at a loss.

Cigar manufacturing. Of the numerous individuals who have at one time or another devoted themselves to making cigars in Lawrence, the great majority were so occupied on a small scale and for only a brief time. There have been a few, however, who developed cigar-manufacturing into a sizeable business; such concerns prospered best in the days before the cigarette had achieved its immense popularity and before the making of cigars became a highly mechanized, highly capitalized, mass-production type of process. Julius Miller, for example, switched over from the restaurant

business to the making of cigars in 1873, and employed ten men at his factory near the north end of Massachusetts Street; six years later he sold the business to Weiman, one of the employees. A few years later S. Hoene, originally from Ohio, made a similar venture in connection with his wholesale smoking goods business and in the eighties produced more than one hundred thousand cigars annually.

Lawrence's biggest undertaking of this kind got its start in 1893, when William Boener sold his stock of groceries to William Hickox and went into the cigar manufacturing business with his brother. The Boener brothers succeeded in lining up several wholesale customers for their product so that two years later they had already attained a rate of production of more than 15,000 cigars weekly. Continuously expanding, Boener Brothers bought the Sands Building on Massachusetts Street in January of 1897 and remodeled it at a cost of approximately $1,000 to serve as a factory. In 1899, William Boener moved with his family to Port Arthur, Texas, to establish a wholesale house for the distribution of Lawrence cigars in the states of Texas and Louisiana. The concern held its markets and continued to do business until the nineteen twenties. By that time, however, the prospects of the cigar business did not look so bright as in the early days and Boener Brothers gave up the enterprise to invest their money in

Florida land, at the time of the great post-war real estate boom in that state. There, unfortunately, they lost the greater part of their funds.

Commencing later but surviving longer than Boener Brothers was the venture of August Pierson into cigar-making, taken up as a sideline to his wholesale and retail tobacco and confectionery house. The cigar-making adjunct of the business has now been abandoned, largely because of the competition of advanced machine methods of big manufacturers. There was not sufficient inclination or available capital to risk setting up an establishment using mass-production technique.

Planing mills. When in 1887 J. N. McFarland and his son established a planing mill in Lawrence, persons acquainted with the project freely predicted it would be a failure. Building construction, along with trade in general, had been very dull in the preceding years, and the new business was certainly not oversupplied with capital. For several years it appeared that the pessimists had been dead wrong, for the late eighties and early nineties were flourishing years. There was an active market for real estate and much building activity, so that the McFarlands were able to build their business up to an annual production level of about $15,000 and a working force of ten men. As planing mills go, this one was not large; total investment in the plant was about

$8,000; there was one large lathe, and various other equipment--planing machines, jointing machines, "sanders." As long as business in general was better than average the mill was profitable. But when the depression of 1893 struck, Lawrence experienced its worst trade slump since the seventies; by 1895 business hit bottom, and in early 1896 the McFarland planing mill failed.

There have been similar ventures since, but always the story has been about the same: scanty capital, unfavorable freight rates, and distance from source of raw material combine to put a local concern at a disadvantage. Under normal or subnormal conditions it is more economical for local contractors to order doors and window sash and the like in large lots from the huge planing mills nearer source of supply, than to buy from a Lawrence concern, operated on a small scale, which has had to pay high freight on its raw material, a portion of which is necessarily wasted in process of manufacture.

Fruit evaporators. Closely allied with the cider and vinegar works previously mentioned, as far as raw material was concerned, were the evaporator plants of the nineties. One was located in the building on Sixth Street which had formerly been the home of the Kimball Foundry. Here 300 bushels of apples could be disposed of in a day; most of them were dried and shipped to markets in the East.

The poorer specimens were chopped, dried, and pressed into cakes to be shipped to factories in Chicago, New York, and Boston, where they were used in making apple jelly. About forty persons, mostly women and girls, were employed here, and approximately the same number at a second enterprise of the kind operated in the Allendorph Building on Massachusetts Street. Paring the apples by hand, spreading them out in rooms where they were dried by artificial heat from gas burners, and packing the finished product in boxes had to be done rapidly and required the labor of several helpers. A similar though somewhat smaller concern was in operation in North Lawrence.

Evaporator plants were practicable only in years when the apple crop was so large that the apples could be bought at a very low price. The drying of apples was a marginal use for the fruit which was rendered uneconomic by improving methods of handling and transportation.

Miscellaneous manufacturing enterprises. Granted that surprisingly numerous and diverse ventures of a manufacturing nature have been spoken of already, still no attention has as yet been given to a host of lesser attempts of the kind, short-lived and trivial for the most part, about which little information is available. They can be only briefly mentioned here. There was a company in North Lawrence making road scrapers for about a year in the

eighties; the proprietor sold his patent rights on the scraper for a controlling interest in a steamship plying between Baltimore and New York. The business was later revived briefly under new management. The Rutter Brothers made rubber stamps and stencils for a time. A Lawrence man patented a collar button which was for a short period manufactured on a large scale in romms in the Bowersock Opera House. There was the Sutton Manufacturing Company, in which J. N. VanHoesen, M. Sutton, J. D. Bowersock, and H. J. Canniff were associated, organized to make several patented articles "of general utility," but it never became a going concern in Lawrence. And the Olsted Stove Company, having patents on several varieties of heating stoves or parts thereof was ambitiously awaiting subscriptions to its $800,000 authorized capital stock, of which about $23,000 had been paid in, at its North Lawrence office in the late nineties; but it was led to merge with an existing Kansas City concern of the same kind. There have been in Lawrence at one time or another, and in most cases for brief periods, persons making hats, yeast, candy, guitars, and mattresses; there have been several producers of patent medicines, usually in connection with a retail drug store, who operated on a much smaller scale than the patent medicine factories already cited. And of course there have always been present the makers of a number of common commodities for the local

trade, not here included in the definition of manufacturing industries: bread, bottled beverages, custom-tailored clothing, tombstones, and the like.

CHAPTER VIII

THE BARB-WIRE INDUSTRY: A SPECIAL CASE AMONG LAWRENCE MANUFACTURES

In a review of Lawrence manufacturing the barb-wire industry is entitled to special consideration, not only because the barb-wire factory grew to be in many respects the most important single manufacturing concern in town, but also for the reason that its history brings out clearly some important factors influencing Kansas industrial development that have not come into prominence in connection with Lawrence's other manufacturing enterprises.

Beginnings of the barb-wire industry in Lawrence. In 1878 Albert Henley came to Lawrence with a trunk containing four little hand-operated machines for making barb-wire. In the space of a few years he built up one of the largest manufacturing enterprises in the state and attained economic and political prestige comparable to that of his fellow-citizen J. D. Bowersock, who had come to Lawrence at about the same time, and who was soon associated with Henley in the barb-wire business. Henley was only twenty-four when he moved to Lawrence. Born in Newcastle, Indiana, where he went to grades and high school, young Henley got a job as clerk in a store at Ackley, Iowa, later followed a natural bent and

became a machinist, at Marshalltown. Of a restless disposition, in 1878 he packed his barb-wire machines, put his few dollars cash in his pocket and came out to Lawrence, where he had relatives, the well-to-do Washington Hadleys.

Setting up for himself in the old stone street-car stables building on the river bank, he began to make barb-wire. Those were the days when state laws were requiring the fencing of fields; as the settlement of the whole vast western region proceeded, mile after mile of barb-wire was stretched on fence posts to mark the boundaries of fields and farms. Lawrence business men were not blind to the possibilities for gain in the manufacture of barb-wire, a relatively new development; and within a year a second enterprise, the Southwestern Barb Wire Company, put up a barb-wire factory near the dam, from which it drew power, and began turning out some 3,000 pounds of varnished barb-wire daily under a licensing arrangement with owners of patents which permitted a 300,000-pound annual production. This new plant was under the management of M. W. Warne, a man with long experience in the wholesale hardware trade in St. Louis; A. D. Mackey, J. D. Bowersock, and Charles Chadwick were prominent sponsors.

Not to be left behind in the scuffle, Albert Henley interested some other Lawrence business men in his plans and began in the same year the construction of a new plant,

also to use water power, with a still greater capacity than that of the Southwestern Barb Wire Company. Henley's new plant was in full operation by February of 1880 under license to make a different variety of patented barb-wire, and in a few weeks Henley introduced the new automatic machine which he and one of the Kimball brothers had perfected after several months of experiment. The machine took wire from three coils, twisted two of them together for the strand, cut off small pieces of the third and attached them ax barbs to the other two, finally rolling the completed wire on sppols for shipment. At this time and for several years to come the Lawrence plants had no wire-drawing equipment but bought plain wire as raw material and converted it into barbed fence.

Conflicts over patents; the licensing agreement. Developed within such a short time, the two barb-wire factories already constituted one of the town's chief industries. Toward the end of 1880, however, the wire business throughout the country marked time while awaiting an important decision pending in the United States Circuit Court at Chicago. The Washburn and Moen Manufacturing Company of Worcester, Massachusetts, had been assiduously buying up patents on barb-wire machinery, and the decision, finally handed down in December, gave the concern a practical monopoly of the process of manufacture. Next February

Henley and Warne, managers of the two Lawrence plants, went to Chicago and made arrangements allowing them to continue manufacture in return for the payment of a royalty to Washburn and Moen on the wire to be produced. It was further arranged that no plant farther east would be allowed to undersell the two at Lawrence in the western territory, although large payments had to be made by the Lawrence plants as damages for infringements previous to the decision and to protect existing dealers and the users of the wire. At that time two Iowa mills, at Des Moines and Marshalltown, were the only other barb-wire factories west of the Mississippi. As a result of the decision and subsequent negotiations, the price of barb-wire advanced a few cents per pound. This first brush with Washburn and Moen was only the beginning of a long fight over patent rights and infringements waged by Henley, who had some barb-wire machinery patents of his own. In 1890, in an Oregon decision, a federal court ruled that the Washburn and Moen patents covering the Glidden variety of fence were void. The Glidden, however, was only one of the brands of barb-wire turned out in volume by the Lawrence plant, and the large patent royalties were always a bone of contention.

The consolidation of the Lawrence barb-wire plants. In 1882 still a third fence factory appeared in Lawrence. It was known as the Western Steel Fence Factory, the chief

promoters of which were three Lawrence men, J. W. Harbaugh, owner of a patent, J. N. Shimmons, and D. G. Alford. A smaller concern, the Frye Fence Works, was also placed in operation that year. With the rising tide of competition in an industry requiring considerable fixed equipment which it would be advantageous to use to full capacity, Lawrence barb-wire manufacturers took a logical step by combining, in August, 1883, all existing wire plants in town into one big unit: the Consolidated Barb Wire Company. Its officers were men who had been founders of both the two original factories: A. Henley, president; J. D. Bowersock, vice-president; J. A. Henley, secretary; and A. D. Mackey, sales agent.

Early freight-rate difficulties. The new firm at once set to work making preparations for a large new factory building, but was immediately faced with a new problem: higher freight rates. In 1884 the railroad commission imposed a rise in rates so severe that it aroused a storm of protest in Lawrence. The paper mill closed down;[80] building contractors fumed at what they regarded as senseless differentials on rates applying to different kinds of lumber; others threatened to abandon business. The barb-wire company began to reconsider its plans for a new

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80 Page 124, above.

building. But soon a reduction in rates was secured.

Expansion of the enterprise. The Consolidated Barb Wire Company went ahead with its new plant, a fifty-by-one-hundred-foot structure, and moved into it in August, 1884. During the ensuing several years the factory did a rushing business and had its twenty-five machines going day and night in good seasons, turning out as much as two carloads of wire per day and grossing in the neighborhood of $250,000 annually in the late eighties. More of the wire used by Kansas farmers came from the Lawrence plant than from all other sources combined, and the company sent miles of wire to Indian Territory, Colorado, New Mexico, Wyoming, Utah. Forty men were on its factory payroll, and its traveling salesmen were dispatched far and wide, sending orders in so constantly that sometimes the wire could not be turned out fast enough to keep up. Before 1893, it should be remembered, the plant shipped in plain wire from the East and merely converted it into barb-wire at Lawrence. But in that year the company embarked on a program of ambitious expansion and integration, of both the horizontal and vertical kinds.

The wire and nail mill. In 1887, the St. Louis firm of Best and Spate had submitted to the Lawrence Chamber of Commerce a proposal to erect a wire-drawing mill if the city

would donate land and a stone building costing not less than $5,000. J. D. Bowersock offered to donate the land himself, and A. Henley also participated in the negotiations, but the project was dropped for the time being. In 1892, the factory moved into a new sixty-by-three-hundred-foot building and soon thereafter its owners began consultation with A. J. Bates of Joliet, Illinois, a manufacturer of wire-drawing machinery, concerning plans to build a wire-drawing and nail-manufacturing plant in Lawrence. Erected as a big two-story annex to the barb-wire plant proper, the new mill was completed in 1893. Thereafter, the raw material of the factory was rods, which it bought in carload lots and drew into wire at its own establishment. Some of the wire was sold plain and some was barbed as before. In the new addition ten nail-making machines were in operation before long, producing at first 50,000 kegs of nails yearly and, by 1896, 63,000 kegs. The kegs were made in Lawrence by the Hauber Brothers cooperage.

The hay press factory adjunct of the barb-wire works. The wire-drawing and nail mill was not the only new development of 1893. The factory began to make and sell wire baleties, attaining an output of 50,000 bundles the following year. And it was in 1893 that the Consolidated Barb Wire Company sponsored the establishment of a factory to make hay presses, used to compress hay into bales. Occupying a

building vacated by the wire factory a year or two before, the new enterprise, known as the Eclipse Hay Press Company, got under way in 1894, sending a representative, Ben Williams, to the south in March to be on hand at the very start of the haying season there. Working northward with the season, the company made and sold more than a hundred presses during the spring and summer. The next year the company sent carloads of its presses to points as far away as Las Vegas, New Mexico, and Salt Lake City. Twenty-six men were on the payroll. A fire in October of 1895 did considerable damage, mostly covered by insurance; and although the machinery was at once repaired and put into operation the concern was removed to Kansas City that winter, where, as will presently be explained in connection with the barb-wire company, the freight-rate system operated more favorably in connection with the shipment of its presses. When early in 1896 an agreement was reached, a Kansas City firm bought the Eclipse Hay Press Company and immediately changed its name, ending the history of the venture as far as the Lawrence barb-wire mill was concerned. The latter had enough other business on its hands without the hay press factory, and inasmuch as there had been some mechanical defects in the presses it seemed advisable to sell.

The paint shop. In the years that had seen the completion of the wire-drawing and nail departments and

the temporary addition of the hay press factory, the company sponsored J. E. Henderson in putting an independent paint factory in operation near the barb-wire plant. Although the paint shop was strictly a separate enterprise, the barb-wire company bought the first raw materials and paid the freight on supplies for Henderson when he came to Lawrence and began business in 1894. With his patron buying paint at the rate of thirty barrels a week, Henderson was soon able to stand on his own feet. His chief raw materials were asphalt, shipped by the carload from Utah; naphtha, also bought by the carload, and kept in Henderson's own storage tank; and resin. The asphalt and resin were boiled together at a temperature of five hundred degrees, the mixture was thinned with the naphtha, and then coloring matter was added. Varnishes and japans were also made; and besides serving the Lawrence wire mill, the paint shop accepted special orders from other users of its products.

The effect of the depression of the nineties and the subsequent revitalization of the company's markets. During the years that the Consolidated Barb Wire Company had its hay press factory adjunct, placed its new wire and nail mill in service, and sponsored the paint shop, the country as a whole was going through a severe depression, a depression which bore heavily on some Lawrence concerns. The barb-wire plant, however, held the level of its business well up to

the $1,000,000 sales figure achieved in 1893. It had outgrown the dam as a source of power, and besides using water-power from two 150-horse-power turbine wheels to which another was added in 1897, the factory had, since the establishment of its wire and nail mill, made use of a 200-horse-power steam engine. It was during these years of the middle nineties that Henley received his patent on the wire used in making bale-ties. It is true that during the depression period the western half of Kansas practically dropped out of the picture as far as barb-wire sales were concerned, and that the plant sometimes overproduced for a period and consequently had to shut down to allow the accumulated stock to be sold. By 1896 and 1897, however, general trade conditions began to improve; slack western territories commenced to show new signs of life; new sales records were achieved. The plant began to produce a Henley-patented woven wire fence, at the rate of 360 rods a day, that proved an immediate success. In brief, the years 1896-98 saw enormous growth and development in this most significant of existing Lawrence manufacturing enterprises.

Branch plants at Joliet and Cincinnati. In 1896 the Consolidated Barb Wire Company acquired a plant at Joliet, Illinois, having twice the capacity of the Lawrence establishment, and J. A. Henley was placed in charge. The

following year the sales of the Lawrence plant alone were said to have been greater than the combined sales of the Joliet and Lawrence plants had been previously. For a short time J. E. Henderson of the paint shop went to Joliet to serve as manager, but when this arrangement was found to cost the Lawrence plant about five dollars more per day for paint than previously, Henderson returned to his old job in Lawrence. In 1897 men and machines were sent from Lawrence to Cincinnati, Ohio, to set up a second branch there. The sole product was the Henley woven wire fence, and the central and southeastern states were thus brought into the orbit of the Consolidated Barb Wire Company.

As for the Lawrence plant, it extended its market to cover California, Washington, Oregon, at one extreme of its territory, and Missouri, Iowa, and Wisconsin at the other. It began to accumulate a backlog of unfilled orders. Payroll was doubled, and the force of employees approached 150. The capacity of the nail plant was increased; the old hay press building had to be appropriated as storage room for the raw material. Eight traveling salesmen were on the road in the nineteen states and territories served, making the company's Owl Brand wire a household commonplace throughout the West.

The galvanizing mill. As the last major addition to the concern's Lawrence establishment, a galvanizing mill was

built and equipped in 1898. For this, fifty employees were hired in day and night shifts. After being drawn from rods in the main part of the plant, the wire to be galvanized was taken through a forty-eight-foot furnace; issuing through holes in the end of the furnace the several strands of hot wire were doused in a water tank, plunged first in cold then in hot muriatic acid, and finally passed through a vat of melted zinc. The wire came out of the zinc galvanized, but had to be run through asbestos wipers to remove excess coating and passed through a final water bath before it was wound on spools ready for shipment. A steam engine served as power and kept twenty strands of wire moving through the process at a time. The galvanizing plant was so located that one end connected with the wire-drawing room, the other with the railroad dock. Over six hundred tons of zinc from southern Kansas mines was used daily; muriatic acid was shipped to the Lawrence plant from the East in twenty-gallon bottles, a carload every twenty days.

The financial policy of the concern. Having followed the barb-wire plant's history up through its last full year in Lawrence, one may well stop to take stock of the policy followed by its owners in achieving such notable success. The price of barb-wire had ranged from twelve to sixteen cents per pound back in the late seventies; in 1898 it had fallen to less than two cents. In the face of this decline

in the price of its product, the company had maintained the original scale of wages. It did not take undue advantage of its monopolistic privileges, setting lower prices in its territory than prevailed for such products in any other part of the country;[81] and profits were to a great extent reinvested in the business. The reinvestment of earnings, together with the low-price policy, made possible the spectacular growth of volume and expansion of plant, so that the company occupied a position of considerable national significance by 1898.

The freight rate question. Albert Henley, the company's president and guiding force, in 1898 had occasion to give his views concerning freight rates, a subject necessarily of considerable importance to him as one of the biggest shippers in the state of Kansas; he expressed himself in a letter dealing with the bill proposed by Governor Leedy to restrict freight charges in the state. Henley opposed the bill on the grounds that reducing rates within the state would tend to reduce employment and would be countered by a ruinous increase in rates from outside the state. High freight rates in the West were due, he believed, to the fact that there was less railroad competition and not so large a

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81 According to a statement made by Professor Erasmus Haworth of the University of Kansas in an address, "Historic Sketch of the Gypsum, Cement and Plaster Industry in Kansas," before the Kansas Historical Society, January 15, 1901. Kansas Historical Collections, Vol. VII, p. 89, footnote.

volume of business as in the East; and he recommended as the wisest policy, not a frontal attack on the rates themselves, but rather the encouragement of industrial development so that large tonnage would justify lower rates. "Shippers generally are well satisfied with the present rates," he wrote, "and while they may be somewhat high in some places they are generally as low as this western situation will admit."[82] This is interesting, because the rate structure was distinctively disadvantageous to his company and was a major factor in determining the ultimate fate of the Lawrence barb-wire plant. Under the basing-point system, freight was paid on the plant's raw material, rods, from the eastern source of supply to Kansas City, and a high local rate added for transportation from Kansas City to Lawrence. But when the finished product was shipped out to the plant's customers, largely to the west of Lawrence, freight was figured as from the Kansas City basing point to the destination. In other words, the plant had to pay freight on its raw material covering the entire distance from source to plant at Lawrence, forty miles west of Kansas City, but on its finished goods the plant paid freight rates calculated as though for all practical purposes the the plant was in Kansas City. And on such heavy commodities as rods and barb-wire a few cents extra expense on every

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82 From the copy of the letter published in the Lawrence Daily Journal, February 16, 1898.

hundred pounds was a matter of some consequence.

During the time that the new galvanizing mill was being constructed, Henley, accompanied by Mrs. Henley, left for a vacation in Europe. Returning home in October, 1898, Henley, who was well-liked by his employees and business associates and had acquired a reputation for modesty and business ability, won election to the lower house of the state legislature and was prominently suggested as a candidate for the speakership; he declined to make a campaign for that office, however, pleading poor health and the pressure of his private business affairs. As representative he nevertheless worked conscientiously in the interests of his community, particularly in the matter of encouraging appropriations for the state university.

The forced sale of the barb-wire plant to the American Steel and Wire Company. During the nineties the American Steel and Wire Company was working toward a monopoly of the barb-wire industry. It had made Henley an offer for the Lawrence plant before he left on his trip abroad; Henley had refused. Upon his return from Europe, a second offer was made, and this time the trust suggested that the deal be speedily consummated. Again Henley refused, but was awakened to the discovery that the American Steel and Wire Company acting with the Federal Steel Company had cornered all the steel rods in the country and had op-

tions on all to be produced in the future. Inasmuch as this meant that the Lawrence plant would be unable to get raw material, its stockholders were in effect confronted with this ultimatum: Sell now at our generous price or we'll bankrupt you in six months. They sold, taking payment in cash rather than in the stock of the purchasing company.

After the sale of the barb-wire plant, Henley purchased from W. R. Stubbs, later governor of Kansas, control of the American Cement Plaster Company, originally organized in 1889; locating its headquarters at Lawrence, Henley commenced a long career in that business. Though the cement plaster company operated seven plants, in five states, no manufacturing plant was ever located in Lawrence, and consequently the American Cement Plaster Company cannot be taken to represent a Lawrence manufacturing industry.

The abandonment of the Lawrence barb-wire plant. When the new owners of the barb-wire plant took possession in January, 1899, Lawrence was in the dark as to their plans for the future. In view of the fact that there was no similar plant nearer than Joliet, that the Lawrence mill had been serving a vast territory, and that the old management had seen fit so recently to add a whole new galvanizing division to the business, the consensus of public opinion was that the trust would keep the factory in operation and might even bring to Lawrence the big American Steel and Wire

Company warehouse then located in Kansas City. But after the fashion of trusts in those days, the new ownership made no effort to ingratiate itself with the people of the community and succeeded in becoming thoroughly unpopular in a few weeks. In the first place, several traveling salesmen of long standing were summarily discharged, the trust having its own selling channels. Secondly, the insurance carried by the Henley management on all the employees was dropped. In March a workman in the wire-drawing department was so severely injured that both arms had to be amputated, leaving his family without apparent means of support; later another man was badly hurt. Prices of the products rose; the price of wire bale-ties, for example, was nearly doubled. And almost from the first the new owners commenced to discharge the labor force, a few at a time.

All too plainly, it appeared that the new management had no intention of maintaining the Lawrence plant in operation. In February, Arthur H. Symons, who had been connected with the plant under the old regime, leased a part of the old Kimball Foundry buildings and with machines of his own devising commenced to manufacture bale-ties with the idea of undercutting the trust's new high prices. He was able to keep this new enterprise, known as the Lawrence Bale-Tie Company, running even for some time after the barb-wire mill left, but eventually had to give it up.

On March 21, 1899, the feared event occurred, and the Lawrence barb-wire mill shut down in most departments, only a few hands being kept at their jobs to work up the small remaining supply of raw material. As soon as the trust had assumed ownership two months previously, it had started sending all orders from the mill's customers on to Chicago to be filled from there, and it now made ready to dismantle the equipment and quit Lawrence altogether. This development attracted some attention throughout the state, being viewed as a distinct loss for Kansas industry. In fact, the Topeka Capital editorially referred to it as one of the greatest misfortunes that had happened to Kansas. The reaction in Lawrence was bitter. Throwing the two hundred workmen out of their jobs, besides meaning financial embarrassment and possible deprivation for the discharged employees themselves, was figured to cause a loss to Lawrence trade of some three hundred dollars a day. Some resentment was even manifested against Henley as having "sold out" his community for a good cash price. Such an attitude was entirely unfair, because, as explained, Henley could scarcely have done otherwise than he did. One cannot blame the stockholders of the old Consolidated Barb Wire Company for accepting a good price for their business when they could get it, rather than allowing themselves to be forced to close down through the shutting off of their sources of raw material. The blow

to the community can be readily understood, however, when it is recalled that Lawrence was losing its most important business enterprise from the standpoints of size of payroll, number of employees, and amount of capital invested.

The conflict with local officials over taxation. By way of retaliation, the county officials set a generous appraisal value on the property for the purposes of taxation. The possibility of yet reopening the plant was bandied about as a bargaining point by the trust, which appealed in June to the board of county commissioners to reduce the assessment, but to no avail. During the summer, when the trust began to remove the equipment of the plant, the county promptly served a summons on the trust's representative, levying the taxes at once under a law making property tax immediately due and payable if an attempt is made to remove the property from the county. An agreement for settlement of the tax bill was reached, and soon the Lawrence barb-wire mill was no more.

Reasons for the abandonment. The failure of the trust to continue operation of its mill in Lawrence can be readily explained. Aside from the attitude of the county officials concerning taxation, which may have made the break more decisive, the operation of the basing-point system, as explained above on page 187, made the continuation of the

plant in Lawrence untenable. And even if the basing-point system is disregarded, the trust, now owning its own steel rods, as well as facilities for the production of wire which were more favorably located with respect to the raw material, would not have found it compatible with productive efficiency to send its rods half way across the country--that is, to Lawrence--to be fabricated into wire and then to ship the finished product from there to its various scattered destinations. Greater economy in production and distribution was doubtless attained by bringing the various steps in the process from iron ore to wire geographically closer together.

After the barb-wire plant had been moved out of Lawrence in an atmosphere of general bad temper and ill will, J. E. Henderson continued to operate his paint shop for more than a year but ultimately had to follow suit. Thus Lawrence was left to end the century without the barb-wire plant and its dependent paint shop; the loss culminated a period of about twenty years which had seen a gradual economic settling-down, and marked a time at which what were really to be the town's lasting manufacturing interests had already been well established.

CHAPTER IX

NEW MANUFACTURES SINCE 1900, AND CONCLUSIONS

The departure of the barb-wire mill marked the close of the period of less than fifty years which has been the chief concern of this survey. During that period in Lawrence a great deal of water flowed under the bridge, speaking both literally and figuratively; the scope and variety of economic activity carried on in this small midwestern city is impressive, especially if one recognizes that in this respect Lawrence was fairly typical of many other towns in Kansas and neighboring states. An attempt has been made to carry the accounts of all industries thus far considered on beyond 1900, pointing out significant developments since that time--that is, for such industries as survived the turn of the century, and it will be recalled that many did survive it; but as yet no attention has been paid to the new kinds of manufacturing introduced into Lawrence since 1900, and to complete the picture it is interesting to note briefly these later developments.

Temporary enterprises established since 1900. Most of the new manufactures originating since 1900 were not of a lasting or significant nature. There have been short-lived

ventures in the manufacture of "jockey wagons," a sidewalk toy for children, power plants to generate electricity for rural use, and soap in powdered form. Of greater importance and longer life was the Bell Brothers piano factory. John H. Bell came to Lawrence as a piano-tuner in 1873, later began to carry a stock of music and musical instruments for the retail trade, and was joined by his brother Olin some years later on. About 1905 the Bell Brothers commenced to manufacture pianos in Lawrence, the quality of which was highly esteemed. In 1912 the Bells received special inducements, exceeding any similar concessions obtainable in Lawrence, to relocated their factory in Muncie, Indiana, and they did so, while retaining their retail music store in Lawrence. John Bell returned permanently to Lawrence five years later and in 1923 the brothers separated their interests, Olin taking the Muncie factory. The Bell Music Store survives, and since John Bell's death in 1936 has been operated by his son-in-law. Actual manufacture of pianos was carried on in Lawrence only for a period of about seven years. Another relatively short-lived manufacturing venture was a product of the early years of radio. Hovey Hanna, now owner of a radio and appliance store, for a time worked nights with two assistants building sets which were sold next day at twenty dollars each. Appearance of mass-produced factory radio sets on the market naturally

put an end to this work.

Important surviving manufactures of post-1900 origin. There have been two important and surviving new manufactures established in Lawrence since 1900, those of the Edgar Steel Seal Manufacturing Company and the Reuter Organ Company. The former company began business in Lawrence in May, 1912; its raw material comes from New York in the form of cold rolled steel strips wound on spools. Machines at the Lawrence plant convert the strips into freight-car, carton, and laundry-bag seals. The seals are sold to railroads and private carload-lot shippers all over the United States and Canada.

The decision of the Reuter Organ Company, manufacturers of pipe-organs, to make Lawrence their home came about mainly through chance. The enterprise first began operating at Trenton, Illinois, in 1917, but by 1920 was already contemplating a move; the management felt that the business was outgrowing so small a town as Trenton and was in particular dissatisfied with the railroad connections. In the latter year Professor Carl Preyer of the University of Kansas fine arts faculty went to the factory to consult with its personnel about the building of a pipe-organ for the Lawrence Masonic Temple. Finding that the company was planning a change in location, he was the main influence in inducing its officers to consider Lawrence. Favorably

impressed by the town and its railroad facilities, the company moved its plant to Lawrence and has since then placed its pipe-organs in all but six or seven states of the union, although its main market territory has been in the two-thirds of the nation lying west of a line connecting Chicago and New Orleans. Having no competition within a vast region surrounding Lawrence, the company is satisfied with its present location but finds that some eastern prospects have a certain skepticism about buying such an article as a pipe-organ from a prairie-state factory, an attitude which has been in many cases favorably altered by the company's sales representatives.

Conclusions: major influences affecting the history of Lawrence manufacturing. With the two post-1900 additions to the roster of surviving Lawrence manufacturing industries, the list reads as follows: paper-box factory, flour mill, cannery, steel seal factory, pipe-organ factory, vinegar factory, ice plant, creamery, and iron works. As for the other manufacturing establishments at one time or another in operation in Lawrence--some important, some trivial; some long-lived, some of brief duration--all have departed. As each concern or industry was taken up in this survey, an effort was made to trace the underlying factors having a bearing on its sojourn in Lawrence; and although it is difficult to generalize on a subject so detailed and many-

sided as the changing nature and importance of manufacturing activities in a midwestern town, certain influences stand out. The following list includes those found to be of greatest importance.

(a) The changing uses of the land in the surrounding territory, having special pertinence in connection with the flour mills, the development of which has been affected by the westward shift in wheat-raising (see pages 118-20, above); the corn and feed mills (see page 120); the woolen mills (pages 55-6); the vinegar and cider works (page 132); the canneries (pages 126-32); in short, all concerns dependent on farm products.

(b) Freight rate structure, coming to the fore as influencing the eclipse of Lawrence by Kansas City (pages 28-30), the relative decline in Lawrence flour milling (pages 119-20), the removal of the barb-wire factory (pages 178, 186-7, 192), the failure of planing mills (page 170).

(c) The failure to find adequate coal or other fuels near Lawrence, which, linked with the inability of the dam to provide a constant and plentiful source of power, is doubtless basic to the absence of great industrial development in Lawrence. The importance attached to the power and fuel question is indicated in the chapter dealing with that problem (pages 82-90), and is to be noted in connection with the abandonment of the brick plant (page 166). In connection

with this point, too, it is significant that those surviving manufacturing enterprises which employ power machinery to a considerable degree--the flour mill, paper-box factory, and the iron works--make use of water-power.

(d) The trend toward industrial integration and mass-production, tending to concentrate manufacturing more rationally with respect to raw materials and markets, drawing it particularly toward populous areas. This factor has much general application, and shows up clearly in the case of the barb-wire plant (pages 192-3), the disappearance of cigar manufacturing from Lawrence (pages 167-9), and the declining scope of Lawrence foundry and agricultural implement enterprises during the period.

(e) Changes in consumption and business technique, tending to decrease or destroy demand for certain products, an influence plainly brought to bear on the horse-collar factory, the shirt factory, and the barrel works (pages 144, 148, 151-2), and several lesser establishments of earlier years.

(f) Development of the transportation and communication system, allowing more efficient and highly-capitalized existing firms to capture the markets of enterprises previously more or less isolated, an influence obviously having a bearing on the decline or disappearance of the early-day manufactures of Lawrence; for instance, the products of the

Kimball Foundry in the first years (pages 10-11), of the plow factories (page 38), the furniture factories, and probably the carriage works (page 45).

LIST OF SOURCES

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The following Lawrence newspapers were consulted through the periods named. These newspapers are on file in the Newspaper Section of the Kansas State Historical Society, Memorial Building, Topeka.

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INTERVIEWS AND CORRESPONDENCE

Information was gained on the general history of Lawrence or upon specific points through interviews or exchange of letters with the following persons, listed alphabetically, all residents of Lawrence unless otherwise stated:

Mr. Irving Bratton
Mr. J. T. Constant
Mr. George Hedrick
Mrs. A. Henley
Mr. Roy A. Henley, Los Angeles, California
Mrs. Byrd Jordan
Mr. C. C. Krum
Judge Hugh Means
Mr. J. W. Murray
Mr. Robert C. Rankin
Mr. G. W. Schell
Mr. John Selig, jr.
Mr. W. C. Simons