

1955

# An industrial history of Lowell, Massachusetts for secondary schools

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<https://hdl.handle.net/2144/8105>

*Boston University*

BOSTON UNIVERSITY  
GRADUATE SCHOOL

Thesis

AN INDUSTRIAL HISTORY OF LOWELL, MASSACHUSETTS  
FOR SECONDARY SCHOOLS

by

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(A.B., Boston University, 1950)

Submitted in partial fulfilment of the  
requirements for the degree of  
Master of Arts  
1955

AM  
1955  
she

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## INTRODUCTION

While teaching at Lowell High School in Lowell, Massachusetts, the writer became aware of the need of a brief history of that city for use in the secondary schools. An objective of the chairman of the Lowell High School history department was to inject local illustrations into the American history courses whenever feasible. In this manner, it was hoped that the students could better visualize their community as an important part of the national whole. It was also desired to show the students the specific contributions of their community to the nation.

The several books which have been written on Lowell history were found to be inadequate for school use. All of the books are out-of-print, and some of them are not found in the municipal or school libraries. Most of the books dedicate too much space to special items that are of no value in the classroom. In addition, no book on Lowell has been published since 1940.

The present writer has sought to take the outstanding facts of Lowell's history from the few books available on the subject, and to present them in a brief and readable form. The final chapter, which covers Lowell's history from 1941 to 1955, was based largely on newspaper articles and on the report of the New England Committee of the National Planning Association.

CHAPTER I  
IN THE BEGINNING

The geographical position now occupied by the thriving industrial city of Lowell, Massachusetts, has heard the sound of human voices for unknown centuries. Long before the awakening of Europe and the period of discovery and exploration, the Indians of the Pawtucket tribe encamped along the Merrimack River.

In 1605, the Merrimack River was first discovered by the white man. At this time, the northeastern section of what is now the United States, then called Acadia, was part of New France. Under the orders of King Henry IV of France, DeMonts explored the coastal region, and it was he who discovered the mouth of the Merrimack.<sup>1/</sup>

Within a few years, adventurous men explored the river and discovered Pawtucket Falls. It was here that the Indians gathered in the springtime for their tribal council. An estimated twelve thousand Indians lived the year round within a short distance of the falls; while their number was more than doubled during the time of council. The territory of the Paw-  
1/Courier-Citizen Company (Publishers), Illustrated History of Lowell, Lowell, 1897, p. 859.

tucket tribe extended almost as far north as the Canadian border, and south to Cape Cod and Rhode Island.<sup>1/</sup> Undoubtedly, the reason for the congregation at this particular spot was due to its central location on the river, and also because the falls served as a natural barrier to canoes travelling in either direction.

The Merrimack River drops thirty-two feet in elevation at Pawtucket Falls; and before the days of large-scale water pollution, several kinds of fish were abundant there. Also important to the Indian, and to the white settler who came later, was the fact that the soil in the area was very fertile.

By 1635, eight English families had settled in the fertile wilderness and established the small settlement of Wamesit. When these first white pioneers came into the area, they were not troubled much by the Indians. Several years before, the Pawtucket tribe had been severely weakened by a plague which had killed several thousand of its members. In the years after King Philip's War, the Indians of this region, who had for the most part remained at peace with the white settlers during the hostilities, left to join with Canadian tribes.

As the years of the seventeenth century passed, more and more people came to North America to start life anew. As the population grew, so did the number and size of the settlements.

<sup>1/</sup>Charles Cowley, Illustrated History of Lowell, Sargeant and Merrill Company, Lowell, 1868, p. 18.

In 1655, the General Court of the Massachusetts Bay Colony incorporated the townships of Chelmsford and Billerica. It was from these two early towns that the city of Lowell and other neighboring towns were later carved. In 1701, the town of Dracut was incorporated from a part of Chelmsford which was on the northern side of the Merrimack River. In 1734, the town of Tewksbury came into being from a portion of Billerica. The village of Wamesit, which was mentioned previously, became known as East Chelmsford when it was annexed to the town of Chelmsford in 1726.<sup>1/</sup>

In order to gain an understanding of the attitudes of the colonists of the region and of their government towards businessmen and tradesmen as a foundation of the later industrial growth of Lowell, it would be well to look at some of the early relationships between the town and its small local industries.

One year after its incorporation as a town, the Chelmsford council granted thirty acres of land to a weaver on the condition that he would erect a weaving establishment and do whatever weaving work that was necessary in the town. It is quite probable that this is one of the first examples in this country of the encouragement of an infant industry by government. Later in the same year, the town fathers granted land to a man with the provision that he erect a sawmill and provide the town with

1/Courier-Citizen Company, op. cit., p. 859.

boards. Also, the same man was given the right to erect a corn mill, and the town grant for the mill specifically prohibited the erection of any other corn mill in the town. A further example of local government aid to private business occurred in 1669 when the town granted land to three men to erect another sawmill. These men were permitted to "...have full liberty to take from the town common what timber they saw meet to work in the mill."<sup>1/</sup>

As the number of inhabitants increased and the primitive forms of industry developed, communication became essential. The early farms were connected to one another by a system of forest paths. The town built horse and wagon roads to connect its industries and inhabitants. Roads were also constructed to connect with neighboring towns and with the commercial center of Boston.

Charles Cowley, a Lowell historian of the nineteenth century, had this to say concerning the early public aid to private business:<sup>2/</sup>

"The people of Chelmsford, from the earliest period of their local history gave every encouragement to millers, lumbermen, mechanics, and traders, making grants of land, with temporary exemption from taxation, to such as would settle in their town. Accordingly, Chelmsford became distinguished for its sawmills, gristmills, and mechanics' shops of various kinds. Establishments of the same kind arose in Billerica, Dracut, and Tewksbury."

<sup>1/</sup>Courier-Citizen Company, op. cit., p. 100.

<sup>2/</sup>Charles Cowley, op. cit., p.24.

Following the American Revolutionary War, the opening battle of which was fought in Middlesex County, there was a general wave of business prosperity. In the first decade of the new nation's life, a thriving business in wood and lumber was developed from the virgin forests along the shores of the Merrimack. The timber from the Chelmsford area, and the region as far north as the White Mountains of New Hampshire, was transported by way of the Merrimack River to Newburyport at the river's mouth, and to other coastal towns where the ship-building industry was carried on extensively. Thus, the forest lands, which had provided many of the tallest and sturdiest masts during colonial times, were by this time producing the materials which made the New England coastal towns famous for their ships and seafaring deeds.

At this early time, the Pawtucket Falls, which were soon to be the foundation of the manufacturing center of Lowell, were considered a very definite hindrance to the successful carrying on of the outstanding business of the day. It was the general practice to ship the masts and lumber by raft to the sea. The falls and rapids obviously broke the hope of a continuous way.

This obstruction was eliminated five years after the incorporation of "The Proprietors of the Locks and Canals on Merrimack River" in 1792, when the group had completed the Pawtucket Canal which successfully by-passed the falls and

rapids. This canal was one mile and a half in length, and it accomplished the descent in elevation of thirty-two feet by means of four sets of locks.<sup>1/</sup> The reader should bear in mind that the Pawtucket Canal was constructed for the purpose of more economical transportation, and not as a means of supplying mills with waterpower. This canal with its locks was the forerunner of the system of locks and canals which was responsible for Lowell's later reputation as the "Venice of America". If any single factor could be selected from Lowell's background as the more important reason for the city's later outstanding world position in industry, it would probably be the construction of the locks and canals which followed within a few years the completion of the Pawtucket Canal.

In the act of incorporation, the Locks and Canals Company was given the power of eminent domain. This serves as a good local illustration of how the states, and later the federal government, have extended their powers to assist private enterprises -- especially those involved in transportation. At the same time, it would be wrong to believe that price regulation by the government is of recent origin in the United States, as the tolls for passage through the Pawtucket Canal were fixed by the state legislature in 1797.<sup>2/</sup>

The Pawtucket Canal was not a financial success to its

1/Charles Cowley, op. cit., p. 25.

2/Ibid., p. 25.



owners, due to the completion of another transportation canal which better served the businessmen who used the Merrimack. This was the Middlesex Canal which began about one mile above Pawtucket Falls and ended thirty-one miles southeast in Boston. The Middlesex Canal, which went into operation in 1804, was the first canal in the United States to be opened for the transportation of both passengers and freight.<sup>1/</sup> The Erie Canal in New York state, which ushered in the canal-building period of American history, was not completed until 1825; hence Lowell participated in a pioneering work in the progress and development of the arteries of industrial communication. The trip from Lowell to Boston by packet-boat took almost the entire day, and it stands as an interesting contrast to the thirty minute train ride of today.

The principal advantage of the Middlesex Canal over the Pawtucket Canal rested on the fact that it made Boston, a city of great commercial importance, more readily accessible to the forest and agricultural products of the immediate area and of New Hampshire. It was not only cheaper, but safer to ship the various goods by the inland waterway, rather than send them to the sea and down the coast. Even though ships stayed close to shore while moving along the coast, there was a constant danger of shipwreck on the rocks or in storms. The Middlesex Canal operated quite successfully for a number of years. It

1/Charles Cowley, op. cit., p. 27.

finally succumbed to the march of American progress in 1853 when a new era in transportation had become established -- the era of railroads.

In the story of an old American community, the general background of the American nation can be traced. From the coming of the first white settlers into the wilderness home of the Indians to the first decade of the nineteenth century when the principal interest of the American business world was commercialism, the picture on the national level and that on the local level closely resembled each other. By the turn of the century, a new historical period had dawned on Western Civilization. The United States was destined to assume a leading role in the following years as the Industrial Revolution came to its full flower. Before Lowell, as one part of the greater whole, could make its appearance on the industrial stage, much preparation was necessary in Europe and elsewhere in the United States. It is this general preparation that is described in the following chapter.

CHAPTER II  
THE INDUSTRIAL REVOLUTION

In seeking to determine the "why" of the rise of the city of Lowell as a world-important manufacturing center, it is necessary briefly to take note of the events which laid the foundations of the Industrial Revolution. It is essential that this be done; because without these several inventions and developments, Lowell would undoubtedly have remained a small village on the northern border of an insignificant town.<sup>1/</sup>

The practices of carding, spinning, weaving, bleaching, dyeing, and printing cotton, woolen, and linen fabrics have apparently existed in some form since prehistoric times. For about one thousand years previous to the coming of the Industrial Revolution, there had been no change of any great consequence in the methods and tools of these processes. During the years before the Industrial Revolution, most of the manufacturing was performed in the individual homes for the use of the immediate families. In some cases, goods were made in

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<sup>1/</sup>The events presented in this chapter are covered in more detail in the standard United States History textbooks for secondary schools; e.g., Harold U. Faulkner and Tyler Kepner, America: Its History and People, Harper and Brothers, New York, 1950, pp. 406-416, and Ruth W. Gavian and William A. Hamm, The American Story, D.C. Heath and Company, Boston, 1947, pp. 193-201.

the home and sold elsewhere. By the middle of the eighteenth century, the merchant-capitalist had become rather common. Under the system of merchant-capitalism, raw materials were distributed to households for manufacturing. Later, the goods were collected, a commission was paid for the labor, and the finished products were marketed.

John Kay's invention of the "fly shuttle," which was patented in England in 1733, was the first modern device which led to a significant improvement in the process of textile manufacturing. This made it possible to weave wide cloth at a more rapid rate than previously. It is of interest to note that the "fly shuttle" was not introduced into the United States for more than fifty years after its first use in England.

James Hargreaves developed the "spinning jenny" which was actually an improvement of the old spinning wheel, as it spun eight threads instead of only one. The spinning frame, or water frame as it was frequently called, was invented by Richard Arkwright in 1769 to make cotton thread strong enough to be used in the fast-moving machines. Crompton soon afterwards combined the principles of the "spinning jenny" and the spinning frame into a single device called "the mule." The inventions of Hargreaves and Arkwright produced thread faster than it could be woven. It was not until 1785 that the power loom, which wove cloth rapidly, was invented by Edmund Cartwright.

The reader should bear in mind that the early machines

depended principally on running water for power; although occasionally horses were employed in the smaller factories. It was this early dependence on waterpower that the later rise of Lowell rested.

While all of the previously mentioned inventions were the work of Englishmen, at least one early contribution to the development of the textile industry was made by an American. The inventor was Eli Whitney, and his invention was the cotton gin. This device separated the seeds from the cotton fiber, and allowed the southern farmers to raise short-fibered cotton profitably for European factories. Previously, the Europeans had depended upon the long-fiber cotton from India and Egypt. The invention of the cotton gin was a great boon to the raising of cotton in the United States, and it assured the infant republic of an abundant supply of cotton for the future. The large-scale southern cotton production made it possible to develop the northern cotton mills in the succeeding decades.

Another contribution of Whitney, which is probably more important than the invention of the cotton gin, was his application of the principle of interchangeable parts. This principle has been of great importance in all fields of manufacturing, and not merely in the textile industry. It was this principle which laid much of the foundation of America's later greatness in the mass production of manufactured goods.

In 1787, the first machinery for carding and spinning

cotton in the United States was set up at Beverly, Massachusetts. It should be noted that the power used in this early venture in factory cotton production was supplied by horses.

Samuel Slater, who is generally considered to be the father of cotton manufacturing in the United States, set up the first cotton factory in America which used Arkwright-type machinery and waterpower at Pawtucket, Rhode Island in 1793. This was the same year that the first woolen factory in the United States to use modern machinery began operations at Byfield, Massachusetts. The English textilemen had sought to prevent the sale of cotton-spinning machinery outside of England; but Slater, an Englishman himself, came to America with the knowledge to make the machines. Thus, the English were deprived of their early monopoly in the textile industry.

As the eighteenth century came to a close, several hundred cotton and woolen factories in England were using modern machinery. At the same time in the United States, approximately one dozen such factories were in operation.

During the colonial period, and for several years following the birth of the United States, the American people relied on imported manufactured goods. Some merchants encouraged a small-scale domestic industry in textiles and in boots and shoes by distributing the raw materials to farmers' wives and later collecting and marketing the finished goods. The reason that no large-scale manufacturing was set up at this time was that

the cost of labor was exceedingly high, and the largest profits were gained from the production of the farm, the forest, and the sea. The profits on these products rose greatly between 1793 and 1807 when the warring nations of Europe bought great quantities of raw materials and foodstuffs from American merchants and shippers. The money thus made was very important in paying for foreign imports.

As often happens in wartime, neutral shipping rights were not respected by the fighting powers. At the request of President Jefferson, Congress passed the Embargo Act in December of 1807. This prohibited virtually all American exports to foreign nations. By this act, Jefferson hoped to compel the warring Europeans to respect American rights. Jefferson's desire was not fulfilled. The act resulted in hard times for many Americans, especially New Englanders. It nearly wiped out American commerce, and national revenue from tariffs dropped to an insignificant amount. This was the first boost to the establishment of manufacturing in the United States.

A second, and more important impetus to American manufacturing was the War of 1812. This war completely shut off European imports. If Americans needed particular goods, they were forced to make them themselves, or do without. The great shift in business interest from sea-going commerce to manufacturing was virtually assured by the War of 1812. After the conflict with England began and importation was stopped, a large amount of Amer-



ican capital was available and the merchant-capitalists were anxious to find new fields for investment. As a result, many mills and factories were set up throughout what was then the United States. Of these, the largest number of mills were erected in Massachusetts. The abundance of waterpower, nearness to the principal arteries of transport and communication, a favorable climate for both workers and materials, early experiments in manufacturing, the stability of the state and local governments, and a potential supply of labor combined with the concentration of capital in the hands of the merchant class to give Massachusetts an early lead in manufacturing.

In 1814, Francis Cabot Lowell first combined the processes of spinning and weaving under one roof in his mill at Waltham, Massachusetts. Later, he added the processes of dyeing and printing. Lowell, like Slater, gained his knowledge of the machines by studying closely their operations in English mills. He built them from memory in Waltham. This new set-up by Lowell marked the beginning of the modern factory system.

With the end of the War of 1812, the new American industries which had grown without foreign competition during the war years found their continued existence threatened. The English manufacturers were determined to regain their lost American markets by driving the new industries out of business. They planned to do this by glutting the market with goods, and selling below cost if necessary. The Congress of the United



States came to the aid of the American interests. They assured the continued existence of American industry by passing the Tariff Act of 1816. This established the protective principle for American industry and provided the principle of minimum valuation, whereby foreign goods could not be sold below the price of American goods.

Thus the stage was set for the future developments of industry in the United States. The several inventions which caused the Industrial Revolution, the War of 1812, and the passage of the Tariff Act of 1816 may be considered as the fundamental soil in which the seeds of American industry sprouted. The nutrient to the young plant was a compound of the geographical surroundings, a young and energetic people with an ambitious and business-minded leadership, and a favorable amount of available capital. It was in this soil that Lowell began, and the conception and birth of this industrial community on the Merrimack will be traced in the next chapter.

CHAPTER III  
THE TOWN OF LOWELL

As the two preceding chapters have shown, world, national, and local events were rapidly setting the stage for the advent of the industrial community with which this work is primarily concerned. In this chapter, the happenings in the environs of what was destined in a short time to become the city of Lowell will be described.

In the years during and immediately following the War of 1812, several industrial enterprises were begun in East Chelmsford. While a powder mill, and several sawmills and gristmills were started, the most important new industry was a cotton mill set up by Phineas Whiting and Josiah Fletcher in 1813. This mill was purchased by Thomas Hurd in 1818 and converted into a woolen mill which manufactured satinets on hand looms. After the mill was destroyed by fire in 1826, Hurd rebuilt his factory, and also constructed a canal which made it possible for him to use waterpower in manufacturing satinet. A flannel mill was erected in 1818 at Wamesit Falls in the Belvidere section by Winthrop Howe. Hand looms were employed here also until 1827, when the mill changed ownership and waterpower, the more modern

method of industry, was used.<sup>1/</sup>

The mill established at Waltham under the direction of Francis Cabot Lowell became highly successful, and it put to use all of the available waterpower in the vicinity. Because of the success of the Waltham plant, Nathan Appleton and Patrick Jackson, who became the leaders of the company after Mr. Lowell's death in 1817, sought another suitable area to build new mills. Appleton and Jackson had been closely associated with Francis Cabot Lowell in the Boston Manufacturing Company at Waltham.

In 1821, the two men traveled about southern New Hampshire and northern Massachusetts seeking a site with sufficient waterpower to run a new manufacturing enterprise. At the time, they were unaware of the waterpower available at Pawtucket Falls. The manner in which these men learned of this area was somewhat roundabout. Paul Moody, who was also connected with the Boston Manufacturing Company, told his friend Ezra Worthen that his company was looking for additional waterpower. Worthen remembered the Pawtucket Falls from his boyhood, and he suggested that the company buy the Pawtucket Canal, and thus gain plenty of space plus the power of the Merrimack. After studying the falls and the canal, Moody and Worthen convinced Jackson that this area would be ideal for the establishment of new mills. The next move was to buy all of the shares of stock in the Locks

<sup>1/</sup>Samuel A. Drake, The History of Middlesex County, Massachusetts, Estes and Lauriat, Boston, 1880, v. I, p. 377.

and Canals Company.

Jackson failed to obtain most of the shares at a price below par as he had hoped.<sup>1/</sup> As more money was needed to purchase the stock, Appleton and Kirk Boott joined with Jackson to buy the entire stock of the company. They also purchased the adjacent properties in order to have land enough for mills to make full use of the available waterpower.

In February of 1822, Patrick Jackson, Nathan Appleton, Kirk Boott, Warren Dutton, Paul Moody, and others were incorporated as the Merrimack Manufacturing Company. Dutton was the first company president, Boott was made treasurer and agent, and Worthen became superintendent. This company is still functioning today within view of the Lowell High School. The new company began by constructing a dam across the Merrimack at Pawtucket Falls. Also, the Pawtucket Canal was widened and deepened, the old locks were replaced with new ones, and another canal was dug to run laterally between the Pawtucket Canal and the river. It was along this lateral canal that the Merrimack Company's mills were erected. The company's first mill was completed and put into operation in September of 1823.

The reader should keep in mind that the enterprise being erected in this farming area was much larger than the labor supply of the immediate vicinity. The village of East Chelmsford

1/The Pawtucket Canal was not a profitable business at the time due to the more favorable transportation route provided by the Middlesex Canal.

was equipped to serve a farming population of about 250. Rather obviously, if the plans of the company's founders were successful, there would eventually have to be a community of several thousand people. The manner in which the Merrimack and the other companies which soon located in the area solved their labor-supply problems in the face of a rather hostile public opinion will be discussed in more detail in Chapter VI.

When the Merrimack Manufacturing Company was incorporated, it owned the charter of the old Locks and Canals Company. The latter controlled all of the Merrimack River waterpower in the Chelmsford area, and also much of the land which was adjacent to the river. It was evident that the power which was available through the canals plus the property then owned by the Merrimack Company was sufficient for several independent manufacturing enterprises.

The owners of the Merrimack Company decided that it would be most advantageous to all concerned if they reorganized the Locks and Canals Company. They set it up as an independent organization in 1825. The old charter was amended in order that the company could hold control of the water supply, and buy, sell, hold, or lease real estate. The first move of the new Locks and Canals Company was to buy all of the property of the Merrimack Manufacturing Company. Then, they resold or leased to the Merrimack Company those facilities which were needed to carry on its manufacturing. This move opened the door for a large-scale

investment of capital and for the development of a large number of new manufacturing concerns. If the owners and managers of the Merrimack Company had not done this, it is easily imaginable that the town of Lowell would have remained but one of the many small one-mill New England communities. To a large degree, the success of both the Merrimack Company and the new Locks and Canals Company was due to the efforts of Kirk Boott, who served as agent for both firms until his death in 1837.<sup>1/</sup>

From the beginning of operations by the Merrimack Manufacturing Company in 1823, the tiny village in East Chelmsford grew rapidly. As the number of mills increased, many young men and women moved in from the neighboring towns and villages.

The Hamilton Manufacturing Company, which was incorporated in 1825, was the second organization to locate here and purchase waterpower from the Locks and Canals Company. This gave an added boost to the increasing population and to the growing industrial importance of the area.

By 1826, many of the inhabitants of East Chelmsford felt that it was time to be a separate township. Moves were made to sever the ties which had bound the village of Wamesit to the town of Chelmsford one hundred years before. A petition to be incorporated as a town was sent to the state legislature with the request that the town be called Merrimack. As far as the name of the town was concerned, two men of influence had dif-  
1/Courier-Citizen Company (Publishers), Illustrated History of Lowell, Lowell, 1897, p. 160.

ferent ideas. Kirk Boott sought to have the town named Derby, after the English cotton-manufacturing town where his family had lived. Nathan Appleton won the day when he exerted his influence sufficiently to have the name of Lowell adopted as a tribute to Francis Cabot Lowell. The town of Lowell was incorporated on March 1, 1826 with an area of 2874 acres and a population of approximately two thousand people.<sup>1/</sup>

During 1827 and 1828, a general business depression seriously affected many of the manufacturing concerns in the United States. The satinet mill of Thomas Hurd, which was mentioned earlier in this chapter, was liquidated. The Merrimack and Hamilton organizations were strong enough to weather the economic storm. Largely due to the firmness of these two concerns, the new town continued to grow in population and valuation despite the depression. When the Lowell Bank was established in 1828, the way was opened for a much greater increase in the business facilities of the town. This was followed a year later by the incorporation of the Lowell Institution for Savings, a bank that is still doing business in Lowell.

In 1828, the pause in the expansion of the industry of the new town caused by the depression came to an end. During that year, two major concerns located in Lowell. They were the Appleton Company, which manufactured cotton cloth, and the Lowell Manufacturing Company, which is reputed to be the first

<sup>1/</sup>Charles Cowley, Illustrated History of Lowell, Sargeant and Merrill Company, Lowell, 1868, p. 72.



company to weave woolen carpets on power looms.<sup>1/</sup>

As the years of the single decade of Lowell's existence as a town passed, several other corporations of considerable size were established in Lowell. Not all of the mills manufactured cotton goods, as a few of them produced woolens. However, it was cotton that was to be most important to the economic life of Lowell during the nineteenth century.

The Middlesex Company, incorporated in 1830, manufactured woolen products in its three mills and dyehouses. In 1831, the Suffolk Manufacturing Company erected two cotton mills. During the same year, two other cotton concerns began their operations in the town. These were the Proprietors of the Tremont Mills, and the Lawrence Manufacturing Company. Another matter of importance to the industrial growth of Lowell which occurred in 1831 was the digging of the Suffolk and Western Canals. These canals supplied waterpower to the mills of the Suffolk, Tremont, and Lawrence companies.

In any community specializing in a particular field of industry, it is inevitable that small auxiliary firms will be established. Lowell's first important auxiliary industry was incorporated in 1832. This was the Lowell Bleachery. Actually, the Bleachery did more dyeing than bleaching; but this little business played an important role in Lowell's industrial progress for nearly one hundred years.

<sup>1/</sup>Lowell Courier-Citizen, Centennial Edition, June 30, 1936, p.2a.



The Lowell corporation, which until 1954 was the most famous nationally, was the Boott Mills. They began operations in 1836 -- the same year that Lowell rose to the higher status of a city.

CHAPTER IV  
THE GROWTH OF A CITY

There has been some confusion concerning the exact date that Lowell became a city. The Massachusetts General Court issued a city charter to the Town of Lowell on April 1, 1836. This is accepted by some people as the date of the change of status. However, it should be borne in mind that it takes more than an act of the state legislature to change a town to a city. On April 11, 1836, the citizens of Lowell met in town meeting, and voted to accept the city charter as it was passed by the legislature. The final town meeting was held on April 21, 1836, at which time the government was turned over to the newly-elected city officers. Thus, the third incorporated city in the Commonwealth of Massachusetts (Boston and Salem were the first and second) was born on April 21, 1836.<sup>1/</sup>

In 1837, Martin Van Buren was the President of the United States. He is probably best remembered in history in connection with the panic of 1837. During the 1820's and the early 1830's in this nation, there had been much industrial expansion. This expansion had been made chiefly on borrowed money rather than on actual cash. In May of 1837, this overexpanded credit struc-  
1/Lowell Courier-Citizen, Centennial Edition, June 30, 1936, p.38.

ture collapsed, throwing the nation into an economic depression from which it did not completely emerge until 1843. When banks failed, manufacturers either discharged their employees or lowered their wages. Although Lowell was affected to some degree by the depression, the local corporations were able to carry on. However, the wages of the mill operatives were reduced.

The last of the major corporations to locate in Lowell before the Civil War was the Massachusetts Cotton Mills which incorporated in 1839. The Prescott Manufacturing Company, a moderately-sized firm which was established in Lowell in 1844, was consolidated with the Massachusetts Mills about one year later. Consequently, the importance of the Prescott Mills as an independent corporation is very small.

In 1845, another important auxiliary industry was incorporated in Lowell. This was the Lowell Machine Shop, which made much of the manufacturing machinery and the machinists' tools that were used in Lowell. In later years, some of the machinery of this company was used in mills elsewhere in the United States and was exported to several foreign countries.

The practicality of railroads as a more rapid and economical means of shipping goods had been generally acknowledged by businessmen throughout the United States by 1845. In the eastern section of the country, stage coaches had become very scarce; whereas about ten years earlier, they had been the principal means of passenger transportation. Transportation

canals had also begun to decline in importance. The railroad was prepared to dominate the American transportation scene for many decades to come.

The Boston and Lowell Railroad had started in 1835. The Nashua and Lowell Railroad began carrying passengers and freight between the two rapidly growing communities in the Merrimack Valley in 1838. The Stony Brook Railroad, incorporated in 1845, began its operations between Lowell and Groton Junction in 1846. This railroad line made it much easier to carry on trade with other western Massachusetts towns. It also made sections of upper New York state accessible to trade. Another railroad was established in 1846. This connected Lowell with the new manufacturing town of Lawrence.

Lowell and Lawrence had more in common than a railroad. The Essex Company, which was formed in 1845 and which became the backbone of Lawrence, had on its board of directors two of the men largely responsible for the founding of Lowell. These men were Nathan Appleton and Patrick Jackson. The industrial experience gained in the rise of Lowell was quickly put to use by the Essex Company. Many less-remembered men from Lowell mills were also active in the early Lawrence textile corporations.<sup>1/</sup>

The industrial activities in Lawrence had a rather important effect upon Lowell in 1847. With the construction of each new dam on the Merrimack River, the number of fish in that stream

<sup>1/</sup>Maurice B. Dorgan, History of Lawrence, Massachusetts, Published by the author, 1924, pp. 24-25.

was reduced. The first dam on the Merrimack had been built at Pawtucket Falls in 1822. In later years, two others were erected in New Hampshire. When one was constructed in Lawrence, Lowell's supply of shad and salmon came to an end. Until this occurred, the fish had been an abundant and cheap supply of food for Lowell residents of low income. Following the Civil War, an effort was made by the Massachusetts legislature to restore fish to the Merrimack by requiring fishways to be constructed by the dams. The fishway at the Pawtucket Dam may still be viewed at close range from the Pawtucketville side of the river. Despite the well-intentioned efforts, the fish did not return to the Merrimack. The pollution of the water by the several cities and towns which were situated along the river's banks made it impossible for the shad and salmon to survive.

One of the largest waterpower canals in the United States, the Northern Canal, was constructed in Lowell and put into operation in 1847. The cost of building this canal was put up by the corporations of Lowell which benefited by it. The Northern Canal is about one mile long, one hundred feet wide, and eighteen feet deep. By means of this very large canal, the Locks and Canals Company could retain a much greater amount of water in the several canals which directly served the mills, and thereby provide additional horsepower.<sup>1/</sup>

Lowell was growing rapidly, and more banks were needed to  
1/Charles Cowley, Illustrated History of Lowell, Sargeant and Merrill Company, Lowell, 1868, p. 136.

keep pace with the increasing flow of money. From 1847 to 1854, five banks were incorporated in the city. The Appleton Bank was incorporated in 1847; the City Institution for Savings began in the following year; the Prescott Bank was established in 1850; the Wamesit Bank began business in 1853; and the Mechanics Bank was organized in 1854. Of these, only the City Institution for Savings remains in operation today. This bank was set up principally for workers who did not have sufficient funds to purchase corporation stocks, but who desired to save a part of their earnings with little risk of loss.

The year 1848 is most memorable in United States history for the Mexican War and the California Gold Rush. Lowell's most outstanding contribution in the Mexican War was probably the gunpowder manufactured by Oliver Whipple in his powder mill on the Concord River. This powder mill had been started in 1818 by Moses Hale, an ambitious businessman of that time. It was purchased by Whipple in 1829, and he operated the mill until 1855 when the production of powder was discontinued in Lowell.

When news of the gold discovery in California reached Lowell, it caught the imagination of many of the working people, especially the young men. Here was a chance to get rich quickly, to travel, and to experience adventure. Several hundred people actually did leave Lowell with the hope of gaining quick wealth. From this time on, there was an increasing number of Lowell people who left to start life anew in the young West. Despite

this small exodus, the population continued to increase.

Thus far in this chapter, the larger business concerns have been emphasized in connection with the early growth of the city. As important as the great corporations have been to United States history, it would be unfair to neglect the contributions made by the smaller businesses and industries. They, too, in their combined capacity have played a major role in the prosperity and success of the many American communities, and of the United States as a whole.

Like other growing American cities and towns, Lowell had its share of carpenters, blacksmiths, harness-makers, dyers, machinists, and the like. These small businesses were situated throughout the city. As the city grew, so did the number of these small establishments.

Several small manufacturing firms, which used waterpower, congregated in the southern section of Lowell along the Concord River. After the large corporations had gained a monopoly of the waterpower of the Merrimack, Oliver Whipple bought the lands bordering the Concord River. From 1846 until the Civil War, Whipple leased his properties only to independent manufacturers. The section of the city then owned by him was known as Whipples Mills. Among the businesses situated there in the two decades preceding the Civil War were dyers, worsted spinners, carpet makers, cloth printers, and a wire-fence manufacturer. During and after the Civil War, the Whipples Mills section was broken



up and sold to several concerns. The Wamesit Power Company, which bought the major portion of Whipple's former holdings in 1865, continued to lease waterpower to small businesses.<sup>1/</sup>

In 1843, the Dr. James C. Ayer and Company had started its manufacture of patent medicines. By the end of the Civil War, the Ayer Company was successfully distributing its products throughout the world. The success of this business was a product of the times. This was the era of "cure-all" patent medicines, when a dollar bottle would supposedly remedy anything from baldness to whooping cough. With the progress made by medical science in more recent years, the Ayer Company along with most of the other patent medicine firms either modernized or passed from the scene.

By the time of the Civil War, most of the original corporation owners and managers had either died or retired. During earlier unfavorable economic times, their mills had continued operations by having a back-log of orders, wage-cuts, or additional building. In the Civil War, the supply of raw cotton was cut off. There was apparently little effort to gear the mills to the war, and nine of the eleven large corporations ceased to operate. When they resumed their operations, they were compelled to hire much inexperienced help, because most of the skilled operatives had been scattered.<sup>2/</sup>

<sup>1/</sup>Charles Cowley, op. cit., p. 63.

<sup>2/</sup>Ibid., p. 61.



During its first twenty-five years as a city, Lowell had almost doubled its population, and had expanded its area by annexing the Centralville section in 1851. The producing capacity of the mills had more than doubled since 1845, and the possibilities for future expansion seemed to be without limit.

CHAPTER V  
BUSINESS MANAGEMENT

At this point, it would be wise to interrupt the chronological treatment of Lowell's history, so that the reader may view two important aspects of the Lowell scene as units. In this chapter, the practices of the business management of Lowell corporations through its history will be discussed. The changing conditions of the laboring men and women of Lowell will be presented in the following chapter.

In the preceding chapters, the reader has seen that Lowell came into being because men who had vision and capital to invest found here the waterpower and land necessary for the development of factories. These men, who were soon joined by a few others, were not local residents. Neither were the mills of Lowell their sole interest. Their investments were spread throughout New England, and their headquarters were mainly in Boston. As a group, they were known as the Boston Associates.

This group of men, who controlled many of the mills in New England, also had large amounts of money invested in ships, real estate, banks, insurance companies, and railroads. For this reason, they always took a keen interest in politics, because the powers of the national and state governments could

directly affect their profits. Some of them served in Congress and the state legislatures, so that the governments would be less likely to fall into unfriendly hands.

As the industry which the Boston Associates controlled grew, so did their need for additional capital. In order to obtain more capital rapidly, they sometimes allowed a few more wealthy merchants into their manufacturing hierarchy, took large cash dividends out of their older corporations, or when that was not possible they "watered" the stock by issuing stock dividends. Also, they gradually sold stock in the older corporations to the public, which usually consisted only of members of their families or close friends. If the investor was unable to produce cash for the shares, he could get a loan from one of the Boston banks or insurance companies controlled by the Associates.<sup>1/</sup>

The methods of financial manipulation employed by the Boston Associates do not appear particularly startling today, but they were quite new in the early nineteenth century. While the advantages of this policy of exclusiveness might appear at first to rest most heavily with the Associates, it should be remembered that it also benefited the country as a whole. The methods they used served to develop an important part of American industry with American capital when no other means appeared to be available to accomplish the task.

<sup>1/</sup>Hannah Josephson, The Golden Threads, Duell, Sloan, and Pierce, New York, 1949, p. 112.

The influence of the methods of the Boston Associates in industrial and corporate processes has continued to affect the American economy. They were among the first to explore the potentialities of large corporations with millions of dollars of capital dominated by a small clique of financiers who minimized competition by interlocking directorates. This soon became common practice in other American industries. They were also among the first to delegate the actual management of their plants to agents. This is known as absentee ownership, and it is practiced by virtually every large dispersed modern corporation today. Another contribution to modern industry was made by the Boston Associates. Following the example of Francis Cabot Lowell, they concentrated every phase of the manufacture of their products at one site, and later under one roof. From this innovation have developed the great mass-production industries which are a characteristic feature of present day American industry.

The Associates were not mere gamblers or speculators who enjoyed taking risks with their wealth. Everything they did was carefully planned in advance. Sometimes, however, their profits were greater than they anticipated. They were men who were quick to seize upon the opportunities presented by the industrial revolution in a country with vast natural resources. They joined together, "... closed up their ranks, held off outsiders and newcomers. There was an exclusiveness, a sense of the real-

ities of class power, an assumption of aristocratic privilege  
...."<sup>1/</sup> among themselves that gave them virtual control of New  
England life for nearly fifty years. Though the Associates did  
not own all of the mills, banks, insurance companies, and rail-  
roads within their domain, they were, as a group, stronger than  
individual companies or any rival group. By their weight, they  
were in effect monopolists.

When the first mill of the Merrimack Manufacturing Company  
was in operation in East Chelmsford, there were enough people  
to require the basic community services. Chelmsford Center was  
several miles away from the mill village, and the town select-  
men were apparently glad to surrender some of the governmental  
functions of that area to the Merrimack Company. The latter  
had the money and the will, at first, to provide the services.  
The Merrimack Company built a school and paid its expenses for  
one year. This was probably done for the sake of favorable  
employer-employee relations, rather than out of a sense of dis-  
interested benevolence, because the company soon sought to  
shift the expense to the town. The same was true with fire pro-  
tection. The company bought a fire engine and then requested  
that the town provide firemen. St. Anne's Episcopal Church was  
built by the Merrimack Company, but the mill operatives were  
taxed for its support, regardless of their own religious faith.<sup>2/</sup>  
They were obliged to attend services there until their own

1/Ibid., p. 113.

2/Ibid., p. 46.

congregations were formed.<sup>1/</sup> By 1830, the town of Lowell had assumed from the corporation the complete burden of schools, streets, and fire department.

During the 1830's and early 1840's, the corporations owned nearly three-quarters of the land in Lowell. This resulted in at least two things that were not in the best interests of the city. While they held so much land, and since much of it was unused in the early years, the corporations vehemently opposed any higher taxes. In 1836 when Lowell was incorporated as a city, plans were projected for a courthouse, a jail, a market house, sewers, parks, and a hospital. These were slow to come into being, due to the corporation policy on taxes. The land which remained for business and residential growth in the city was much too small for planning or order. The reader should remember that only the more prosperous citizens could afford to live in the suburbs. As it was explained in Chapter III (p. 19), the Locks and Canals Company held much of the land of Lowell, but it sold tracts to the mill corporations as they were chartered. When the Prescott Manufacturing Company began operations in 1844, all desirable mill sites had been allocated. After that, the Locks and Canals Company sold some of its land holdings, but the congested pattern of the city was to remain for decades to come.

<sup>1/</sup>When a person was hired by the corporations in Lowell before about 1850, the employee understood that he or she would be discharged if considered "morally reprehensible." Failure to attend church services generally put a person in this category.

From the conception of the first mill in Lowell, the financiers realized that there was not an abundant supply of manpower in the immediate vicinity. They determined to carry on and enlarge the use of boardinghouses for the workers as they had been devised by Francis Cabot Lowell and his associates in Waltham. As the number of men in the area available for mill work was relatively small, Lowell and his partners quickly realized the potential of womanpower, since most of the jobs in a mill were not strenuous physically. It would not be easy, they knew, to attract hundreds of Yankee women and girls from the rural villages and farms of central and northern New England. Women had not yet been "emancipated" and the moral order of the period was strict. The well-regulated boardinghouse was the answer of the mill owners. The regulations for the behavior of the girls who came to work in the mills were not rules dreamed up by the owners, but rather they were simply a compliance with the morality of the day. This was clear thinking on the part of the Boston Associates, for the people of New England soon came to feel that the mill towns were not the beds of evil which they suspected in the beginning. As the number of mills increased, so did the number of farm girls seeking employment in them.<sup>1/</sup>

The policy of apparent benevolence for the workers came to the notice of the country and the world. Lowell became a

1/The female mill operatives are covered in more detail in Chapter VI.



showplace during its first two decades of existence. Many American and European dignitaries visited Lowell. Among the distinguished visitors were: Charles Dickens, President Jackson, President Tyler, President Polk, Henry Clay, Daniel Webster, Abraham Lincoln, and Davy Crockett.<sup>1/</sup> They were treated royally by the mill magnates, and they expressed their gratitude by praising what they had seen. The conditions which they saw in Lowell were in marked contrast to those that some of them had observed in Europe and elsewhere in America. In this period, the spotlight was constantly on the female operatives. To a large degree, these women and girls who had been brought up in the old New England spirit of self-reliance and moral righteousness were not only literate, but quite intelligent. Their work efficiency was high, and their free time was taken up largely by religious and intellectual pursuits. All of this was not lost on the Associates. They used the girls as a selling point for their products, and also as a reason to justify their profits and a higher tariff.<sup>2/</sup>

The services and wages provided by the Lowell cotton companies during the 1820's and 1830's were above those of other industries. Lowell reaped great benefits from the policy of the corporations in those early days. However, it should be noted that the Boston Associates claimed credit for virtually

<sup>1/</sup>Courier-Citizen Company (Publishers), Illustrated History of Lowell, Lowell, 1897, pp. 860-861.

<sup>2/</sup>Hannah Josephson, op. cit., p. 95.



all that was good in the town, whether it resulted from or was in spite of their efforts. An example of this occurred in 1832 when representatives of the corporations vehemently opposed the construction of two new schools. They were aware that their taxes would rise if this were done. Despite their efforts, the schools were built, and for several years they were a model of public education in Massachusetts. In October of 1833, Henry Clay visited the town. The textile magnates sought to give Mr. Clay the impression that the new schools were a result of their disinterested benevolence. Most of the people did not question this myth of disinterested benevolence from about 1823 to 1843 while Lowell was rapidly expanding.<sup>1/</sup>

The corporation owners were also quick to show their ability to create good publicity when President Andrew Jackson visited Lowell in 1833. They were strongly opposed to Jackson and his brand of politics, but they spared little expense to entertain him. The highlight of the President's day in Lowell was a parade of 2500 mill girls, all dressed alike. At the head of each corporation division in the parade, a silk banner was displayed bearing the name of the company and the inscription, "Protection of American Industry." Though they kept the operatives in the spotlight, the management officials made certain that the President was aware of their views on the tariff question.

<sup>1/</sup>Hannah Josephson, op. cit., pp. 55-56.

The years passed by, and the charm and novelty of Lowell began to dim. The cotton industry had leaped ahead and passed beyond its originators' expectations. Lowell had originally been laid out with some idea of good planning, but the city had grown out of proportion and congested sections had appeared by the mid-1840's. The paternalism of the corporations remained static, and the standards which had once been Lowell's pride fell below those of other industries.

The pursuit of greater production and higher profits resulted in a faster work pace. A policy of wage cutting was begun early and continued off and on until the end of the nineteenth century. This was standard practice in times of depression, but it was occasionally done in prosperous years as well.<sup>1/</sup>

Cotton dividends began to fall in the late 1840's, and the period of high dividends subsided with the end of the 1850's. The most commonly expressed theory of the wage and dividend question is that the decline in wages was due to a decline in dividends, which was a result of competition and overproduction. This theory held that competition drove the prices down, and that the corporations could make up the loss only by increasing production. When the fall in prices was enough to lower dividends, the stockholders put pressure on the mill agents and managers to cut wage costs. At the time, wages were the only

<sup>1/</sup>George F. Kenngott, The Record of a City: A Social Survey of Lowell, Massachusetts, The Macmillan Company, New York, 1912, pp. 147-151.

flexible item in manufacturing. With the end of the 1850's and high dividends, it became apparent that many repairs and replacements of obsolete machinery and plants could no longer be postponed. In the opinion of Josephson, a modern historian of early Lowell, "It was not competition and overproduction that brought about this state of affairs as much as poor business practices."<sup>1/</sup> Thus it was that shortly before the Civil War, the myth of the infallibility of the Boston Associates came to be challenged, and the mill operatives became more restive under the increasing pressure on their wages and standards.

When anti-slavery agitation was carried on before the Civil War, the Associates adhered to a "hands off" policy. They were interested in a continual flow of cotton, and they did not wish to have it disrupted. During the war, a few of the mills ran part time, but most of them were idle until the end of the conflict when cotton was once again available.

By the end of the Civil War, the majority of the original stockholders had died. Most of their holdings were passed on to relatives. For the most part, the latter knew nothing and cared less about mill operations. Fortunately, however, there were exceptionally capable mill agents and managers in Lowell for about 25 years after the Civil War, and although progress was not as dramatic as it had formerly been, it was reasonably steady until the panic of 1893.

Hannah Josephson, op. cit., p. 215.

Criticism of the system of absentee ownership mounted in the last quarter of the nineteenth century and in the early years of the twentieth century. In a speech delivered at the semi-centennial celebration of Lowell in 1876, General Benjamin F. Butler, a resident of Lowell and a former congressman, praised the foresight and integrity of the founders of Lowell, but complained that the city's prosperity had been retarded because:<sup>1/</sup>

"With the exception of the early investment of capital in mills and machinery, not a tenth of what they now represent, very little money has been brought to Lowell. Our city has been a hive of industry, and as a rule the honey has been gathered by others .... The great drawback upon the prosperity and growth of our city without which it would be safe to assume that we should have doubled our present wonderful increase has been that the owners of our mill property here, did not live here, and give our city the advantage of their expenditure, their public spirit, and the investment and reinvestment of the money earned by our citizens under their own eye, in the place where it is earned."

In 1912, George F. Kenngott, a local minister and a sociologist, asserted that if more of the corporation owners were Lowell residents, "...there would doubtless be a better state of affairs in the city."<sup>2/</sup> Lowell's situation under absentee ownership had been noticed elsewhere in 1911. In a study of the cost of living in the United States, the London Board of Trade noted the following about Lowell:<sup>3/</sup>

1/Proceedings in the City of Lowell. At the semi-centennial celebration of the incorporation of the town of Lowell. March 1, 1876, Penhallow Printing Establishment, Lowell, 1876, p. 41.

2/George F. Kenngott, op. cit., p. 157.

"The importance of the city is directly derived from its manufactures, its commercial and financial activities being of small account. The control of the largest enterprises is exercised almost entirely from Boston, and it is from that city that the goods manufactured are sold and distributed."

Major trouble over the early wage-cutting policy had been avoided by the departure from the mills of most of the Yankee farm girls. They were replaced by a large influx of Irish immigrants who left their homeland after the Irish potato famine in 1845. The Irish were largely succeeded by French-Canadians who came to Lowell in great numbers after the Civil War.

Until World War I, the supply of cheap labor for the mills was replenished by thousands of immigrants who came from about twenty European countries. The boardinghouse system, which had been set up primarily for the unmarried Yankee women and girls, stood up under the strain of the first wave of immigrants, but broke down under the succeeding waves. By 1917, virtually all of the old corporation paternalism had disappeared.

Following the panic of 1893, business conditions were generally poor. This situation continued, with slight ups and downs, until 1900 when business picked up considerably. Sometimes, dividends were paid at the expense of the mills themselves. This practice served to exhaust some of the mills, and no dividends could be declared for long periods of time. The oldest corporation in Lowell, the Merrimack Manufacturing Company,

3/London Board of Trade, *Cost of Living in American Towns*, London, 1911, p. 231.

weathered this period, but it paid only a few dividends. The Appleton Company was reorganized in 1898 after five years with no dividends. The last decade of the century was moderately prosperous for the Tremont and Suffolk Mills, but they had difficult times after 1905. That was the same year that the Boott Mills corporation, which could no longer pay dividends, was sold for a small fraction of its capital stock valuation. The Massachusetts Cotton Mills paid off reasonably well, and in 1910 its capital stock was increased in order to erect new mills in Lowell. It may be of interest to note that the latter corporation also ran a successful mill in Georgia which contributed to its profits.<sup>1/</sup>

In the decade preceding America's entry into World War I, Lowell enjoyed moderate prosperity, although the Middlesex Manufacturing Company ceased operations and the Bigelow Carpet Company left the city. During the conflict, the city's industries were geared to the war effort, and Lowell reached its peak at the end of the war.

Following the war, there was a boom in the textile industry; and production, employment, and profits ran high until 1923. By the following year, the textile industry of the nation was having a difficult time. During the late 1920's, the situation became very serious and several companies liquidated. The Hamilton Manufacturing Company went into receivership in 1926 and discon-  
<sup>1/</sup>George F. Kenngott, op. cit., pp. 162-163.



tinued production. Soon afterwards, the Appleton Company moved to South Carolina. After 1929, a general depression gripped the country, and company after company collapsed. By 1931, only <sup>1/</sup>three of the original corporations remained in operation.

For the most part, corporation owners and managers were powerless to stem the tide of economic disaster. A few moved to the South with the hope that lower costs would keep them in business. Others liquidated, while the sturdiest corporations weathered the storm. Several new companies located in Lowell during the 1930's, but they were not enough to make up the loss of the large older corporations.

The severity of the depression relaxed somewhat several times, but Lowell's prosperity was not considerable until World War II. Again, Lowell's industries produced goods for war. Since the end of World War II, Lowell has experienced economic ups and downs. The general picture has been one of considerable unemployment. In 1955, New England textile corporation managers fought to retain a high protective tariff, and they sought to promote federal legislation which they believed would equalize the differentials between the northern and southern industries.

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<sup>1/</sup>Margaret T. Parker, Lowell: A Study of Industrial Development, The Macmillan Company, New York, 1940, p. 106.

CHAPTER VI  
LOWELL AND LABOR

In the foregoing chapter, it was shown how the men who owned and ran the mill corporations of Lowell put their ideas and their wealth to work to build an industrial community. In this chapter, the changing conditions of Lowell's working people will be considered.

During the eighteenth century, there was little, if any, need for organization of labor in the United States. This was due to the fact that many of the manufactured goods, and especially textiles, were made in the homes. The coming of the Industrial Revolution changed this situation. With the inventions of many large and complicated power-driven machines came the building of factories. From the factory system grew a large group of people who soon became completely dependent on the factories for their livelihood.

In the early 1800's, laboring conditions in the United States were considered to be quite good generally, though they deteriorated in most areas as the century passed. Farmers and merchants made up the bulk of the population in this period, and factory work was a new experience. At the time, there was no surplus of adult males to work the machines, but there were



two sources of labor supply which most of the mill owners tapped. These were women and children. It soon became apparent that hundreds of women and girls were eager to leave the drudgery of farm life and become economically independent.

After observing the poor conditions of the English textile workers, Francis Cabot Lowell determined that such conditions could not be permitted with his proposed enterprise in Waltham. To do otherwise, he realized that it would be difficult, if not impossible, to attract enough women to work in his mill. The moral order of the time was a rigid one, and it was not then economically necessary for the women to leave the farms and rural villages to seek employment. As it was pointed out in the chapter on business management, Mr. Lowell and his associates in Waltham erected boardinghouses for the female mill operatives. The boardinghouses were supervised by matrons who watched over the girls to see that they were well cared for and that they were on their good behavior. When Nathan Appleton and others who had been associated with Mr. Lowell founded the Merrimack Manufacturing Company in East Chelmsford, they believed it was necessary to have boardinghouses there also.

New England had been settled to a large degree by English religious dissenters. Many of them had been weavers and spinners of cloth from the East Anglia section of England. In the beginning, both the operatives and the investors had this common racial and cultural background. The differences between

the two groups were largely economic. Thus the Yankee farm girls who came to work in the mills possessed the early agrarian spirit of independence and a sense of equality. They resisted any attempts to "proletarianize" them. When wage cuts or new restrictive regulations occurred, they were quick to revolt, though their rebelliousness usually accomplished nothing. The disturbances which they caused up to the 1840's were without organization and appear to have been mostly outbursts of indignation.<sup>1/</sup>

As a group, the girls were apparently quite intelligent, efficient, and industrious. Their spare time was usually occupied by sewing, reading, studying, shopping, visiting, and attending lectures and church meetings. They wrote and published a literary magazine, The Lowell Offering. In this, poems and stories written by some of the Lowell mill girls were presented.<sup>2/</sup>

Early Lowell became a showplace of New England industry. The most outstanding attraction for visiting dignitaries was the female mill operatives. They made up nearly two-thirds of the labor force in the mills during the first two decades of Lowell's history. In general, the girls were well taken care of in the early years. This was probably done because labor

<sup>1/</sup>Hannah Josephson, The Golden Threads, Duell, Sloan, and Pierce, New York, 1949, pp. 94, 228.

<sup>2/</sup>Samuel Drake, The History of Middlesex County, Massachusetts, Estes and Lauriat, Boston, v. II, p. 77.

was not in abundant supply, and the mill girls made a good selling point for the products.

When the first mills in Lowell began operations, the workers were not driven and the work was not too oppressive. The early operatives worked about twelve hours per day. Each worker tended one loom and was allowed a short rest from time to time. However, in the 1830's conditions began to change. The number of machines per operator was increased and so was the nervous strain. When piece rates were reduced, the operatives had to work faster to equal their former wages. The length of the work day depended on the season of the year. In the summer, they worked about fourteen hours per day. During the winter, the day was about twelve hours long. This went on six days a week, twelve months a year. With pressure constantly, though slowly, increasing, it was to be expected that some form of protest would be made.<sup>1/</sup>

Lowell has had few serious labor difficulties during its history. This is in marked contrast to many other American industrial communities. The first known disturbance in Lowell occurred in 1834 when some of the mill girls protested a reduction of wages, but their efforts were ineffective. They stayed away from their work again in 1836 because of another wage cut, and again they were unsuccessful. In his study of the Lowell labor situation, Kenngott found that workers won only one strike  
1/Hannah Josephson, op. cit., pp. 80-81.

before 1888. This occurred in 1853 when about half of the men and boys in the Mechanics' Planing Mill struck for shorter hours. They won a ten-hour day.<sup>1/</sup>

Agitation for a ten-hour day began in the 1840's. Several petitions were signed by workers and interested persons urging the Massachusetts legislature to enact a ten-hour-day law. At first, the legislature took no action; but in the fall of 1844, it appointed a committee to investigate Massachusetts labor conditions. This was the "...first governmental investigating committee ever to inquire into labor conditions in American history."<sup>2/</sup>

As a result of the formation of this committee, the Lowell Female Labor Reform Association figured prominently in the testimony given before the committee. They urged the enactment of a ten-hour law, and claimed that labor was equal to capital and in fact controlled it.<sup>3/</sup> The Lowell Female Labor Reform Association carried on a vigorous propaganda campaign during the committee hearings and after it had given its decision. The committee declared that it would not discriminate against corporations, and neither would it deprive the worker of his freedom of contract.<sup>4/</sup> The Association and its newspaper, Voice  
<sup>1/</sup>George F. Kenngott, The Record of a City: A Social Survey of Lowell, Massachusetts, The Macmillan Company, New York, pp. 147-148.

<sup>2/</sup>Hannah Josephson, op. cit., p. 256.

<sup>3/</sup>Ibid., p. 256.

<sup>4/</sup>Ibid., p. 256.

of Industry, finally expired in 1848 -- the year of a serious depression, drastic wage cuts, and the beginning of the mass exodus of the Yankee mill girls. Labor agitation also died down in the late 1840's due to lack of leadership and the rising importance of the slavery question in the minds of the people.<sup>1/</sup>

A new state constitution was proposed in 1853, and the corporation owners were opposed to it. In order to induce the voters to defeat the new constitution at the polls, an eleven-hour work day was put into effect. Further reduction of hours was not made until after the Civil War.

Efforts during the early years to organize workers accomplished little. If factory labor became very undesirable to a man, he could quit and head for the West. Most of the unmarried women could return to the farms or rural villages from whence they had come. As a result, there was no permanent factory class before the Civil War.<sup>2/</sup>

The first organization of workers in Lowell was the Middlesex Mechanics' Association, which was formed June 18, 1825. This was a trade guild which admitted to membership only men who practiced a trade. It controlled apprentices, sought to encourage good craftsmanship, and assisted its needy members. To further the education of its members, the Association set up a library and a laboratory for experimentation, and spon-

<sup>1/</sup>Hannah Josephson, op. cit., p. 300.

<sup>2/</sup>Ralph V. Harlow, The Growth of the United States, Henry Holt and Company, New York, 1943, v. I, p. 349.

sored lectures. From its early days, the Middlesex Mechanics' Association was supported in part by the corporations. In 1835, mill agents, overseers, and mill hands who knew no trade were made eligible to join. As the years passed, the functions of the trade guild became obsolete, so the Association came to exist only for its library, laboratory, and lectures. By 1851, any citizen of Lowell was permitted to join. The Middlesex Mechanics' Association, which began as a trade guild, came to an end in 1898 after the general change in the ethnic composition of the population, the increase in the number of fraternal organizations, and the construction of the Lowell Memorial Library.<sup>1/</sup>

Efforts were made in the last half of the nineteenth century to organize the labor force on the national scale. The National Labor Union and the Knights of Labor each had a few years of influence in the national labor field. However, it was not until 1881 that Samuel Gompers founded the American Federation of Labor, an organization of craft unions which is still very active today. The A.F. of L. has had great influence on laboring conditions in the United States, although it is primarily interested in skilled workers.

In Lowell, the Trades and Labor Council was founded in 1889 to promote better working conditions in the city. The Council became affiliated with the Massachusetts Federation of Labor,  
1/George F. Kenngott, op. cit., p. 9.



the state organization of the A.F. of L., in 1891.<sup>1/</sup> The Trades and Labor Council adopted the name of Lowell Central Labor Union in 1934, in order to conform more closely with the general trend of names used by central agencies of the A.F. of L.<sup>2/</sup> Many of Lowell's textile workers are represented in the Central Labor Union by locals of the International Ladies' Garment Workers' Union and the United Textile Workers Union. In addition to the A.F. of L. representation, many other Lowell mill employees belong to the Textile Workers of America, C.I.O., which also has an organization in the city.

Textile unions were very difficult to organize. Marsh and Clark give three reasons why textile labor could not be highly unionized for nearly one hundred years:<sup>3/</sup>

1. More women and children were employed in the mills, and they were not strong trade unionists.
2. The unskilled textile workers who came from many European countries were unfamiliar with American ways and with the languages and customs of the other nationalities. Without common ground, unionization was not practical.
3. Due to the many years of prosperity in the industry,

<sup>1/</sup>Trades and Labor Council, Lowell: A City of Spindles, Lawler and Company, Lowell, 1900, p. 13.

<sup>2/</sup>From unpublished records of the Lowell Central Labor Union.

<sup>3/</sup>Daniel L. Marsh and William H. Clark, The Story of Massachusetts, American Historical Society, New York, 1938, III, p.147.

textiles were rigidly controlled by the capitalists. Since the days of the New Deal, the textile unions, as well as others, have become more highly organized in Massachusetts. They have expended their greatest efforts to promote federal, state, and local legislation which they believe would benefit the laboring people.

On the national level, unions have fought against unre-<sup>1/</sup>stricted immigration as a threat to American wage earners. A continual supply of cheap labor threatened to undermine the living conditions of the established American workers. Lowell's experience with immigrants from many nations may give some idea why unions sought to have immigration restricted.

As it was shown in the chapter on business management, the corporations adopted a policy of wage cutting in times of depression and low dividends. Wage cuts, the general speed-up in industry, and the failure of the ten-hour movement served to drive out much of the Yankee labor. In the 1840's, the employment agencies for the corporations experienced more and more difficulty in getting enough workers for the mills.

This condition was alleviated by the end of the decade when thousands of Irish immigrants came to the United States. Most of them settled in the northeastern part of the country. Since there was already a fair-sized group of Irish in Lowell who had been construction laborers on the mills and canals,

<sup>1/</sup>American Federation of Labor, Legislative Achievements of the American Federation of Labor, Washington, D.C., 1955, p. 5.



it was natural that many of the newcomers came to Lowell to be with relatives and friends. At first, the output per worker dropped, but they were docile and accepted the low wages set during the depression of 1848 without protest.<sup>1/</sup> Unlike their Yankee predecessors, they had no farm-homes to return to. These people had known great misery in their homeland. Most of them had been farmers and had no experience with better industrial working conditions. Public opinion did not support the immigrant; and the corporations did not recognize any standards which they felt obliged to respect, as they had with the New England farm girls earlier. To a large degree, similar conditions held true for the later immigrant groups.

With the passing years, the Irish gained experience with working conditions and grew less subservient. By 1870, they were being rapidly replaced in the mills by waves of French-Canadians who were willing to work for low wages.

Greek immigrants began arriving in Lowell about 1892. In his sociological analysis of Lowell, Kenngott reported that most of the Greeks who came had been unskilled laborers and farmers, and that about thirty per cent of them were illiterate in their own language.<sup>2/</sup> They were first employed in large numbers in the Lowell mills during a strike at the Merrimack Manufacturing Company in 1900.<sup>3/</sup>

<sup>1/</sup>Hannah Josephson, *op. cit.*, p. 296.

<sup>2/</sup>George F. Kenngott, *op. cit.*, p. 32. <sup>3/</sup>*Ibid.*, p. 153.

Following the Greeks came Poles, Portuguese, Swedes, Jews, and many other nationalities. The major influx of non-English-speaking peoples came after 1887, while most of the south Europeans and the few Asians came to Lowell after 1897.<sup>1/</sup> Immigration began to subside after 1914 and became negligible after the three per cent "national origin" act in 1921.

Most of the immigrants received very low wages by American standards and could not afford to own property for many years after their arrival. This meant that they could contribute very little in the form of taxes. An additional strain was put on the city when many of the longer-established people moved to suburban towns or elsewhere in the country.

The most unfortunate result of the coming of thousands of immigrants was the development of large slum areas around the center of the city. The corporation boardinghouses broke down under the weight of the many and different peoples. Cheap, run-down, unsanitary tenement houses became common. In the succeeding years, many of the former slum inhabitants became financially successful enough to move to better living quarters in other sections of the city. During the 1920's and 1930's, Lowell was in poor economic shape and could do little to alleviate the slum congestion. Shortly before World War II, the North Common low-rent housing area was constructed only one block from the city hall with the aid of federal funds. After

1/Ibid., p. 28.

World War II, several low-rent housing areas were constructed in various parts of the city. In 1955, a large slum area on Gorham Street near the heart of the city was razed to make way for a new housing development. These projects would not have been possible without federal and state funds.

Massachusetts has been a pioneer in labor legislation, especially in the field of child labor. In 1842, children under twelve were limited to a ten-hour work day; while in 1866, the state legislature forbade any child under ten to work in a manufacturing establishment. The following year, a law was passed making it necessary for all children between ten and fifteen years of age to attend school at least three months of the year. In 1874, women and children under eighteen were limited to sixty hours of work per week. The Hamilton Company of Lowell challenged the latter law as unconstitutional, but the state courts upheld it. A law passed in 1888 stated that no child under thirteen could be employed, and that older children could not work during public school hours, nor between 7 P.M. and 6 A.M. Two years later, this law was amended so that no woman or minor under eighteen could be employed between 10 P.M. and 6 A.M. The weekly maximum for women and minors was set at fifty-eight hours in 1892. Before the end of the century, the minimum age for working children was raised to fourteen. In 1911, the work week for women and minors under eighteen was reduced to fifty-four hours, while men could be

employed fifty-six hours per week.<sup>1/</sup>

Massachusetts also recognized its laboring people in other ways. A Bureau of Labor Statistics was established in 1869; while the Board of Arbitration and Conciliation was set up in 1886. The latter placed the workers in a stronger position for collective bargaining. One year later, the legislature passed an employers' liability law which benefited the workers.<sup>2/</sup> Massachusetts passed a minimum wage law in 1912 that was the father of minimum wage laws passed later by other states and the federal government.<sup>3/</sup>

These advancements were not without their price. Many of the legislative acts served to raise manufacturing costs in Massachusetts. When the cotton industry slumped in the mid-1920's, Massachusetts was at a disadvantage to most of the southern states which had few labor-protecting laws. The South produced goods more cheaply, due at least in part to the absence of restrictive labor legislation.

The federal government has been much slower than Massachusetts in passing valid laws to regulate labor conditions. The federal laws have sometimes helped Massachusetts in its industrial competition with other states. One of the most helpful federal laws to Massachusetts was the Fair Labor Standards Act of 1938 which set minimum wages and hours for industries engaged

<sup>1/</sup>Kenngott, op. cit., pp. 139-143.      <sup>2/</sup>Ibid., pp. 145-146.

<sup>3/</sup>Daniel L. Marsh and William H. Clark, op. cit., p. 152.

in interstate commerce, and prohibited the labor of children under sixteen. A federal law which all unions in the country have opposed is the Taft-Hartley law. They contend that this law unjustly restricts their activities.

Although the laboring conditions in Massachusetts have steadily improved, the employment situation has not been generally favorable since 1924. While there has been some fluctuation in the employment picture, Lowell's unemployment has been considerable, except during World War II. In 1955, the Lowell City Council requested a local labor survey by the United States Department of Labor. This request was denied due to lack of funds. However, it was announced that Lowell had been classified in the Group 4 area of American cities. This group of cities has a substantial labor surplus. The Labor Department notified government procurement agencies of the cities in Group 4 with instructions to put contracts into these areas when possible.<sup>1/</sup>

The future of Lowell's workers rests in part on the Congress. National legislation can do much to encourage industries in New England by setting higher national labor standards. However, the heaviest burden is on the Massachusetts legislature which should overhaul the state's complicated tax system and devise ways of attracting new industries into the state in order to reduce the large amount of unemployment.

<sup>1/</sup>Lowell Sun, April 22, 1955, p. 1.

CHAPTER VII  
FROM WAR TO WAR

With the advent of the Civil War, Lowell ceased its previously dramatic growth. The combination of military casualties, a business depression, and an increased migration to the West caused a decline in the population of nearly six thousand between 1860 and 1865.

Before the Civil War began, Lowell was not united in its sentiments on slavery. As the dividends of the cotton industry were dependent upon a steady supply of raw cotton, few who held shares in the mills desired to disturb the flow of the basic raw material. Most of the manufacturers hoped and expected that the trouble would quickly subside. Nevertheless, some precautionary measures were taken. Following the election of Abraham Lincoln, they bought and stored large quantities of raw cotton. After the war had begun, most attempted to continue with "business as usual," but that was impossible. The supply of cotton soon failed, and the mills were affected accordingly.

There had been general confidence that the South would be quickly defeated, but the disastrous Battle of Bull Run in the summer of 1861 shook that confidence. A serious business depression gripped Lowell, and the corporations either were

idle or ran on short time. Many of the unmarried operatives went back to the farms or rural villages where they had come from. Merchants clamored for reductions in their rents without success. By 1862, specie had become so scarce that postage stamps were often used to make change.<sup>1/</sup>

Some of the mills made additions to or rearrangements of their plants. Though this did not give employment to the mill operatives, it did make work for members of the building trades. This helped a little to offset some of the effects of the depression.

When the Lowell Company found that it could no longer make carpets and rugs, it converted its looms to make a "union" of worsted and cotton, and did a moderately profitable business. The Lowell Machine Shop was another Lowell firm that did well during the war. It received many orders for war material, and employed more workers than it had before the war.

A considerable amount of money came into the city during the war years from national and state disbursements for soldiers' pay and aid to soldiers' families. This, plus the fact that when workers were unemployed they frequently went elsewhere to seek jobs, kept the need of funds for poor relief lower than might otherwise have been expected.

On the afternoon of April 10, 1865, the news of General Lee's surrender reached Lowell and the population felt both

<sup>1/</sup>Frederick W. Coburn, History of Lowell and Its People, Lewis Historical Society, New York, 1920, v. I, p. 306.



relieved and elated that the bleak years had at last come to an end. Five days later, Lowell was in mourning for the man who had visited the city in 1848 and who had later become President of the United States -- Abraham Lincoln.

With the war over, business resumed in Lowell and moved along favorably until the panic of 1873 when it was temporarily retarded. Except for the panic of '73, the 28 years from 1865 to 1893 were generally quiet. Progress was steady but not sensational. In 1870, the United States Census showed that the population of the city had grown to 40,928. This more than made up for the drop during the war years. The vigorous initiative and extraordinary achievements of the early decades of Lowell, however, had subsided.

Although criticism of the corporation owners had been rather infrequent before the Civil War, it became common in the succeeding years. One of the outstanding critics of the time was Dr. James C. Ayer, a manufacturer of medicines and a stockholder in Lowell corporations. He severely criticized the Boston financiers for inefficiency and nepotism. Dr. Ayer claimed that they had taken too much money out of the corporations as profits and allowed the mills to deteriorate. He also charged that during the Civil War the workers had been turned out with no provision, although the corporation officials continued to receive full pay. Nothing in particular was changed by Dr. Ayer's complaints, but he probably did give voice to



the opinion of much of the general population of Lowell.<sup>1/</sup>

During the 1870's and 1880's, pessimism of the future of Lowell was common. Frederick Coburn, a Lowell historian of the early twentieth century, claimed that this attitude largely stemmed from:<sup>2/</sup>

"....deterioration of originally inadequate housing facilities for the working class; indifference to city planning for the future; neglect of the welfare of newly-arrived immigrants; ....a spread of coarsening influences in popular amusements and recreations; a new tendency toward vulgarity and ostentation among some of the well-to-do."

This pessimism diminished considerably as the industrial endeavor of the city was broadened, and as several of the older corporations continued to develop and specialize further. An added boost of confidence was given to the city in 1897 when the Lowell Textile School (now known as Lowell Technological Institute) was established. At the school, the technical skills of the textile industry were taught. Since that time, students have come there to learn from all over the United States and from many foreign countries as well.

Probably the outstanding reason for the conservative expansion in Lowell during the three decades following the Civil War was that the older generation of shareholders had died. Their heirs had little or no knowledge or interest in the details of manufacturing. For the most part, they were only interested in the money that their shares brought them. Conse-

<sup>1/</sup>F.W. Coburn, op. cit., pp. 308-309. <sup>2/</sup>Ibid., p. 341.

quently, the financial responsibilities usually fell to the corporation treasurers who had their offices in Boston. For the actual details of mill operations, the judgment of the mill agents in Lowell was almost always relied upon. Fortunately, this was a period of able, though not spectacular or daring, mill agents.<sup>1/</sup>

In 1876, several Lowell mills sent exhibits to the Philadelphia Centennial Exposition and made a favorable showing. Some of the items displayed there were: sheetings, shirtings, drillings, calico flannels, printed calicoes, furniture coverings, and bleached and dyed cambrics. At this exposition, many of the New England manufacturers began to feel that they were in a competitive struggle with the mills of the South, which were also represented in Philadelphia. At that time, there were only a few mills in the South, but they had propagandists at work spreading the word concerning the advantages of locating mills in the cotton-producing area with its abundant supply of cheap labor.<sup>2/</sup> The North had large reserves of capital and the skilled labor needed to produce high-quality fabrics. However, New England mill men would still be concerned about southern competition in the middle of the next century.

During the last quarter of the nineteenth century, the number of spindles in Lowell gradually increased, although many

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<sup>1/</sup>Frederick W. Coburn, *op. cit.*, p. 349.

<sup>2/</sup>George F. Kenngott, *op. cit.*, p. 169.

people expected the cotton industry of the city to decline. Most of the new industries that came to Lowell in this period were related to the textile industry. In 1877, the Shaw Stocking Company was incorporated. Its founder, Benjamin F. Shaw, developed the process for making seamless stockings.<sup>1/</sup> The most important new industry of the period was the Massachusetts Mohair Plush Company which came to Lowell in 1891. This corporation, which is still in operation, was one of the American pioneers in the weaving of Angora wool. Of the eight mills which settled in Lowell before the turn of the century, the majority were concerned with woolen textiles rather than cotton. The business and industrial expansion was retarded by the panic of 1893, and conditions were generally low until 1900 when the situation improved considerably.

To accomodate the growing population, four new financial institutions were set up. The First National Bank was incorporated in 1864; the Central Savings Bank was organized in 1871; the Middlesex Safe Deposit and Trust Company began in 1887; and the Lowell Trust Company was established in 1890. Of these, only the Central Savings Bank remains on the Lowell scene.

This was the time that the modern city was developing in the United States. Within forty years, a drastic change took place in modern communication and convenience, and Lowell moved with the times. Before the end of the Civil War, the Horse Rail-  
<sup>1/</sup>Frank P. Hill, Lowell Illustrated, Huse, Goodwin and Company, Lowell, 1884, p. 55.

road Company began the operation of conveying people between the downtown section and the nearby residential areas. Fire-alarm telegraph was set up in 1871; while the city water works were established the following year. In 1878, the Lowell District Telephone Company was formed, and the Merrimack Manufacturing Company used its first electric lights. The Lowell Electric Light Company was organized in 1881 -- the same year that free textbooks were introduced into the public schools of the city. Two years later, the city library was made free, and standard time went into effect. By 1890, electric trolley cars were in operation. This more rapid form of urban transportation permitted workers to live furthur from the center of the city. The educational position of Lowell was enhanced in 1892 when a new public high school was built, and in 1897 when the Lowell Textile School was opened and the Lowell Normal School (now known as Lowell State Teachers College) was completed.<sup>1/</sup>

The John Pilling Shoe Company came to Lowell from Haverhill in 1888. This was the first shoe company of considerable size to locate in the city. Due to favorable labor conditions, several other shoe concerns followed within a few years. O'Sullivan Brothers shoe store was founded in 1901 across the street from the city hall. One of the O'Sullivan brothers invented the rubber heel.<sup>2/</sup> The shoe industry enjoyed moderate prosperity in 1/Courier-Citizen Company (Publishers), Illustrated History of Lowell, Lowell, 1897, pp. 661-662.

2/Lowell Courier-Citizen, Centennial Edition, June 30, 1936, p.3a.

in Lowell until World War I, when higher-paying industries competed for much of Lowell's labor. The shoe companies usually paid better wages than the cotton mills, but less than other industries.<sup>1/</sup>

In 1896, the Bigelow Carpet Company succeeded the Lowell Manufacturing Company, which had combined cotton manufacture and carpet weaving. Bigelow, the man for whom the new company was named, was the inventor of the power loom for weaving woolen carpets, and he introduced the power looms in the mills of the Lowell Company during the 1840's.<sup>2/</sup>

During the early years of the new century and before World War I, most of the Lowell mill corporations experienced a moderate prosperity. The Tremont and Suffolk Mills had difficult times after 1905, as did the Boott Mills corporation which was sold out in that year. The Lowell Machine Shop combined with a machinery-making company of Saco, Maine to become the Saco-Lowell Shops in 1912. This was the same year that the Middlesex Manufacturing Company ended operations.

The most significant single change on the Lowell scene in the years between the Civil War and World War I was the city's ethnic composition. As the Indians had given way to the farmers, and as the farmers had given way to the artisans under a system of paternalism, the system of paternalism broke down before a

1/Ibid., p. 9a.

2/Charles Cowley, Illustrated History of Lowell, Sargeant and Merrill Company, Lowell, 1868, p. 52.

new social set-up. The Yankees were succeeded by the Irish, and they made way for the French-Canadians, who made room for the Greeks, Poles, Portuguese, and about twenty other nationalities that came to Lowell.

In the decade before the first World War, the native-born Americans of native parents made up approximately twenty per cent of Lowell's population. Immigrants and first generation Americans from English-speaking lands (England, Scotland, Wales, Ireland, and Canada) made up another forty per cent. The remaining forty per cent of the city's populace consisted of non-English-speaking peoples.<sup>1/</sup>

The early waves of immigrants adapted to local conditions rather easily, but some of the later ones had more difficulties. Marked differences in "old country" customs and in language were usually the major barriers to rapid assimilation of the later groups. Public schools have probably been the greatest single Americanizing influence. The children of all ethnic groups have attended them and learned to speak, read, and write English. Also, in American history classes, the children have been taught the American ideals of civil liberties. The churches, especially in the period around the turn of the century, tended to uphold the barriers to quick assimilation not only on religious lines,

<sup>1/</sup>For a detailed analysis of Lowell's ethnic groups in the early twentieth century, see George F. Kenngott, The Record of a City: A Social Survey of Lowell, Massachusetts, The Macmillan Company, New York, 1912. See charts on pp. 28 and 77, particularly.



but also on ethnic lines. Neither did the municipal library help many of the immigrants in this period to learn the American way of life; because the books were in English, and many of the immigrants were illiterate even in their own language. It would be a matter of time, patience, and education before the many alien ways could be absorbed into the American stream of life.

In 1915, the Massachusetts state census showed that Lowell's population had reached 107,978. The area of the city was more than doubled in the period between the Civil War and World War I. The Pawtucketville section was acquired from Dracut in two parts in 1874 and 1879. The Highlands section was taken from Chelmsford in 1874. The old Belvidere section was enlarged in 1874 and again in 1888 with land from Tewksbury. In 1906, the Wigginville section was added to Lowell with land from Tewksbury.<sup>1/</sup>

At the time of America's entry into World War I, Lowell had not quite reached its pinnacle of growth. The city's population had more than tripled since the Civil War, while its area had more than doubled. Its industry and business had also increased considerably. The economic future looked bright indeed, though difficult times were "just around the corner."

<sup>1/</sup>Information provided by the Lowell Chamber of Commerce.



CHAPTER VIII  
THROUGH NORMALCY AND DEPRESSION

When the United States entered World War I, most of Lowell's industries experienced a production boom. Many of the companies produced goods that were used by the American Expeditionary Force and by America's allies. The busy Lowell scene of 1917 was in marked contrast to the bleak Civil War years.

In 1918, the city suffered a serious loss when the Bigelow Carpet Company moved to Connecticut. However, the United States Cartridge Company occupied the space left by the Bigelow Company. This was an important addition to Lowell's wartime economy, but with the end of the war, the cartridge company ceased operations.

During the decade following the conflict, most industries soon readjusted to the peacetime economy and enjoyed moderate prosperity. The textile industries, and especially the cotton industry, continued at a high rate of production, and business was exceptionally good. The Columbia Textile Company used some of the mills abandoned by the United States Cartridge Company; and most of the space of the old Middlesex Company was sold to the Ipswich Mills, makers of hosiery.

Textile prosperity continued until 1924 when business

slackened and the industry experienced a depression. Since Lowell's existence in this period depended most heavily on the textile industry, the city was seriously affected by the nationwide dip in textile business. The cotton industry of New England was hardest hit, largely due to southern competition. The South had low taxes, cheap labor, and virtually no restrictive labor legislation. These factors contributed to making manufacturing costs cheaper in the South, and made it difficult for Massachusetts to compete successfully. Lowell suffered more severely than most New England cities, because in 1923 approximately forty per cent of the city's industry was in cotton.<sup>1/</sup> It seems possible that in the dark years that followed, some of the citizenry concluded that the South had won the Civil War after all.

Lowell had passed through depressions before, and most of the general population expected the situation to improve within a short time. The first jolt occurred in 1926 when the one-hundred-year-old Hamilton Manufacturing Company went into receivership and stopped operations. That was only the beginning. During the next four years: the Columbia Textile Company liquidated; the Suffolk Mills were sold to the Nashua Manufacturing Company; the Tremont Mills were bought by the Merrimack Manufacturing Company; the Massachusetts Mills were sold to the Pepperell Manufacturing Company, which ceased operations in Lowell shortly after the purchase; the Appleton Manufacturing Company moved

<sup>1/</sup>Margaret T. Parker, Lowell: A Study of Industrial Development, The Macmillan Company, New York, 1940, p. 210.

to Anderson, South Carolina; the Ipswich Mills sold out; and the Saco-Lowell Shops consolidated in Maine. By 1931, only three of the eleven original corporations were still operating in Lowell. These were the Merrimack, Boott, and Lawrence companies.

Economic disaster was not reserved for the large corporations, nor for the cotton industry. Though Lowell's woolen and worsted production recovered to a considerable degree in later years, it suffered severe losses also. The Bay State Woolen Mills, the Belvidere Woolen Company, the New England Bunting Company, the local mill of the United States Worsted Company, and the Shaw Stocking Company closed their doors between 1927 and 1932. The Stirling Mills came to an end in 1937.

The Lowell Bleachery closed in 1930 after ninety-eight years of business. The Lowell plant of the United States Bobbin and Shuttle Company and the Kitson Machine Shop also ended operations. Many other small companies were overwhelmed by the economic tide and passed from the Lowell scene.

Some new and smaller companies began to locate in Lowell before the difficult times set in, and continued to operate while other and older companies liquidated or moved. The Gilet Carbonizing Company, which did wool scouring and carbonizing, occupied a section of the Middlesex Company property in 1920. The Lowell Felt Company, the Bagshaw Company, the Merrimack Utilization Company, and the Hy-Carbo Steel Company also operated in buildings of the Middlesex Company along with the Ipswich

Mills until the latter ended in 1936. The former mills of the Bigelow Company were mostly occupied by several small companies also. In 1923, one of the Bigelow mills became a branch factory of the Newmarket Manufacturing Company of Newmarket, New Hampshire. The entire company moved to Lowell in 1929. What happened to the property of the Middlesex and Bigelow companies was to be repeated with the property of some of the other corporations.

The large mills which were left vacant between 1926 and 1930 had less opportunity than the Middlesex and Bigelow properties to be reoccupied quickly. This was due to such large amounts of industrial space being made available within a short period of time. The general depression which gripped the entire nation after 1929 served to discourage new business ventures, although much of the idle space was gradually taken up by manufacturers and commercial enterprises.

The Appleton Company retained ownership of its Lowell property, and rented space to several small concerns. A few of its buildings were demolished. The Lowell Industrial Development Company (not to be confused with the Lowell Industrial and Development Commission) purchased the real estate and power rights on the Merrimack River of the Massachusetts Mills, plus the power rights of the Middlesex Company. This was done in order to rent space and supply power to several tenants. The mills of the defunct Hamilton corporation were sold to several concerns. Among the purchasers were: the Lowell Ice Company,

Lowell Motor Sales Company, Courier-Citizen Printing Company, Middlesex Supply Company, and the Megowan Educator Food Company. The Hamilton's waterpower rights were utilized by the Newmarket Manufacturing Company. The Lawrence Manufacturing Company continued in operation, although it discontinued the manufacture of hosiery; and it sold one of its mills to the Hub Hosiery Company and one to a paper products firm. The Lawrence Company also rented space to two small companies. The Merrimack and Boott corporations did not rent space to others during this difficult period. The Merrimack Company purchased the Tremont Mills, retained the latter's power rights and destroyed most of the buildings.

During the textile boom of 1918-1923, the assessed valuations on real estate were placed high. In the years that followed, there was a rapid deflation of sales values and rents as the heavy industrial losses were incurred. However, there was little reduction in assessed valuations.<sup>1/</sup> This condition produced rather dramatic results as the great depression continued. When taxes could not be paid, buildings and land were seized by the city. When mortgage payments could not be met, the banks took over. Many owners of idle property desired to retain their property, but could not with the high taxes. This dilemma was solved in many cases by destroying the buildings. Thus, the owners' taxes were reduced to a small fraction of

1/Margaret T. Parker, op. cit., p. 169.

what they had formerly been.

When the demolition had subsided in the late 1930's, Lowell did not look the same. New open spaces had appeared in the crowded central section of the city, along the Concord River, and in the outlying sections of the city. The Tremont Mills came down. The former Saco-Lowell Shops left a tremendous gap that has been only partially used in recent years by a municipal parking lot. Parts of the Hamilton and Appleton mills were demolished. Also razed were the Bay State Woolen Mills, Lowell Bleachery, and the New England Bunting Company.

The woolen and worsted industry which was second to cotton in Lowell in 1918 became first by 1936.<sup>1/</sup> Several woolen and worsted companies located in Lowell between 1918 and 1925. They occupied some of the space vacated by the Bigelow and United States Cartridge Companies, and made use of the city's supply of skilled textile labor. Until about 1924, these firms enjoyed a period of prosperity and expansion. During the textile and general depressions which followed, most of the pre-1918 woolen and worsted companies were eliminated, while most of the newer concerns survived. An important exception was the survival of the Massachusetts Mohair Plush Company which came to Lowell in 1891. A moderate economic revival was experienced in 1935 and 1936, the worsted companies expanded, and the working of wool became Lowell's leading industry. This was consistent with a 1/Commonwealth of Massachusetts, Census of Manufacturers, 1936, City of Lowell, Boston, p. 1.



national fashion change from woolens to worsteds.<sup>1/</sup> The woolen and worsted industry in Lowell did not suffer the same fate as cotton. Possible reasons for this include: no serious competition elsewhere in the country, an abundant supply of soft water necessary to process wool, availability of industrial space, nearness to Boston and New York shipping centers, and nearness to the market. The South used much less wool than the North, hence the primary markets were in the North.

Lowell's foundries and machine shops ranked third in importance among the city's industries after 1890. They generally followed the fluctuations in the cotton industry. When the rapid mill expansion in Lowell had ceased, the machine industries began to send their products elsewhere. The Lowell Machine Shop (later called the Saco-Lowell Shops) supplied textile machinery for many mills in the United States and foreign nations. Among its accomplishments, the Lowell shop equipped the first cotton mill in China, sent the first textile machinery to Brazil, constructed the first locomotive for the Boston and Lowell Railroad, and made the turret for the first ironclad ship of the United States Navy, the "Monitor".<sup>2/</sup> Through the years, there was a buildup of a skilled labor supply which helped to attract other machine businesses

<sup>1/</sup>Margaret T. Parker, op. cit., p. 183.

<sup>2/</sup>O.L. Stone, History of Massachusetts Industries: Their Inception, Growth, and Success, S.J. Clarke Publishing Company, Chicago, 1930, p. 736.



to Lowell. By the time Lowell's cotton industry had hit the downgrade, so had the textile machinery business. The removal of the Saco-Lowell Shops was a severe loss to the city, but it would be well to remember several conditions which had developed by the mid-1920's. The demand for the types of machinery produced in Lowell had dropped. Also, this industry suffered from high taxes, high freight rates on its heavy and bulky products, being off the main lines of communication, being far from its sources of raw materials, and being situated away from most of its markets. As the nation had expanded, its center of population had shifted further west. By this period, New England found itself on the edge and far removed from the greatest part of the country. Heavy machinery could be produced cheaper near its sources of raw materials and closer to the center of its potential markets.

The shoe industry made its most important contribution to the Lowell economy in this period. Shoe manufacture was of little consequence in Lowell before 1888. This was the year that the John Pilling Shoe Company arrived in Lowell from Haverhill. Before World War I, several other shoe companies had come to Lowell largely due to labor conditions. The shoe companies paid better wages than the cotton industry, but less than most other industries.<sup>1/</sup> Lowell shoe manufacture declined during and immediately after World War I, due to the high wages

1/Margaret T. Parker, op. cit., p. 202.

paid by the United States Cartridge Company and other firms. After 1923, favorable conditions for the shoe industry once again were present. Boot and shoe manufacture reached its peak in Lowell in 1931 when it was the city's leading industry.<sup>1/</sup> By the following year, other industries revived slightly and began to increase production. Many citizens did not welcome the expansion of the shoe industry, because many of the shoe firms were migratory. However, even the transient companies served the good purpose of employing hundreds who would otherwise have been unemployed during the depths of the depression.<sup>2/</sup>

When this crucial period in Lowell's history came to a close, the foundation of an economy based on diversified industries had been laid. To be sure, many of the new industries were either directly or indirectly related to the textile industry; but there was no longer the heavy reliance on a single industry, as there had been when cotton was king. The majority of the new companies were quite small, and the passing of a single firm would not have the same jolting effect on the city's economy as the collapse of a large corporation.

By 1940, Lowell had travelled a long road down, and a considerable distance up the path of economic recovery. However, the gains had not come close to offsetting the tremendous losses. In her study of Lowell, Parker estimated that forty per cent of

1/Margaret T. Parker, op. cit., p. 202.

2/Lowell Courier-Citizen, Centennial Edition, June 30, 1936, p.9a.

Lowell's population in 1939 received some form of financial aid from the city, state, or federal government.<sup>1/</sup> Many blocks of industrial and residential property had been destroyed to reduce taxes. Many others were still idle. The city's large relief rolls and the destruction of property served to increase the tax rates. The industries were struggling under the tax load, while much real estate was still accruing to the city in lieu of tax payments or to banks in cancellation of mortgages.<sup>2/</sup> However, those who did have jobs in the many industries of Lowell in 1940 made higher wages, and their products sold "...at many times the amount formerly obtained for cotton."<sup>3/</sup>

Lowell was not "out of the woods" in 1940 and 1941; but Europe was aflame with war, and tension was mounting in the Far East. In a short time, the effects of events elsewhere in the world would be felt in the city on the Merrimack.

<sup>1/</sup>Margaret T. Parker, op. cit., p. 5.

<sup>2/</sup>Ibid., p. 6.

<sup>3/</sup>Lawrence Dame, New England Comes Back, Random House, New York, 1940, p. 160.

CHAPTER IX  
THE CITY OF DIVERSIFIED INDUSTRIES

The United States became partially involved in the European conflict when Congress passed the Lend-Lease Act in March of 1941 to aid Great Britain in her fight against Nazi Germany. America's heavy industry began to expand and produce the material of war. While United States ships were involved in an undeclared shooting war in the Atlantic during the latter half of 1941, the tension in the Far East suddenly exploded on the seventh of December when the Japanese bombed Pearl Harbor. Within four days, the United States was in a total and declared war against Japan, Germany, and Italy.

The groundwork of defense production had been laid before America was at war. When the Pearl Harbor bombing occurred, the United States was then producing two thousand airplanes per month, more than one hundred naval vessels were under construction, and thirty ordnance plants were in production. Within six months of the war's beginning, virtually all products considered nonessential to the war effort were no longer made.<sup>1/</sup>

Like industrial cities throughout the country, Lowell

1/Ralph V. Harlow, The Growth of the United States, Henry Holt and Company, New York, 1943, v. II, p. 583.

moved to gear its industry and life to the war effort. The Lowell mills began to speed up their production of war goods. "War clinics" were held in the city by federal officials to assist small plants in obtaining government contracts. By March of 1942, there were serious shortages of houses, gasoline, and bituminous coal.<sup>1/</sup>

The Remington Arms Company, the Atlantic Parachute Company, the United States Rubber Company, and Sylvania Electric Products Inc. operated plants in Lowell during the war years, giving employment to several thousand workers. General Electric Company located a branch plant in the city during the war, and it remains in operation today. Lowell's permanent industries expanded their production and operated steadily through the war.

During the war, the employment situation in Lowell was excellent from the workers' point of view. Though Undersecretary of War Robert Patterson once charged that Lowell kept workers that were needed elsewhere, there were numerous times in the city when there were more jobs available than workers to fill them.<sup>2/</sup>

With the end of World War II, Lowell sought to readjust its economy to peacetime. This was not a simple matter. Several thousand war workers were left unemployed. To add to this, 12,000 men and women of Greater-Lowell had served in the armed 1/Lowell Sun, World War II Supplement, October 20, 1945, p. 50. 2/Ibid., p. 60.

forces; and except for approximately 700 who were killed or missing, they soon returned to their homes.<sup>1/</sup>

In the last half of the 1940's, several new companies located in Lowell. The majority of these concerns were related to the textile or shoe industries. The business of the area continued at a moderate rate, but there were surpluses of labor and industrial space.

The "cold war" became a "hot war" in 1950 when United States forces entered the Korean fighting. This was not a total war, and the unemployment situation was only partially relieved by added military production and inductions into the armed forces. The war caused an economic boom in many industries and most prices were inflated. The inflation brought added hardship to the textile industry, which was plagued with over-capacity, by increasing its operating costs.<sup>2/</sup> The textile industry in general went into the economic doldrums in 1951. In 1952, there were wage cuts in the cotton and rayon industries. Two years later, wool production had dropped to the lowest point since 1938. By May of 1955, it appeared that the woolen and worsted industry, at least, had begun to emerge from the depression.<sup>3/</sup>

In 1954, Lowell lost two important companies, due to a large extent to the textile depression. The Newmarket Manufac-

1/Ibid., p. 78.

2/Boston Daily Globe, April 19, 1955, p. 16.

3/Lowell Sun, May 5, 1955, p. 1.

turing Company stopped operations when it consolidated with Textron Inc. The building was purchased by McGarry Associates who plan to install several industries in the plant. The Boott Mills were sold in December of 1954 and production was stopped. The Massachusetts Mohair Plush Company has rented some of the space in the Boott Mills for storage purposes.

The city received an economic boost in 1952 when the Raytheon Manufacturing Company opened a branch plant in Lowell. This electronics company employs about 700 people in classified government work. In 1955, the company announced that it would buy its property instead of lease it.<sup>1/</sup> This adds prestige to the city and gives it a strong selling point when trying to interest other precision industries to locate in Lowell.

In 1951, the Lowell Industrial and Development Commission was formed by a legislative act to study the Lowell situation and to seek to interest new industries in coming to Lowell.<sup>2/</sup> The members of this commission are representatives of the city, management, unions, and civic groups.

Under the sponsorship of the Industrial and Development Commission, a group of Lowell businessmen formed the New Industrial Plants Foundation Inc. They laid out Industrial Park in the outer Chelmsford Street area and contributed \$5000 apiece to erect the first new plant. This was sold to CBS-Hytron Inc.,  
1/Lowell Sunday Sun, May 8, 1955, p. 1.

2/Massachusetts Department of Commerce, Town and City Monographs - City of Lowell, Monograph Number 38, Boston, 1954, p. 9.



an electronics firm. The foundation erected a second plant and sold it to the Cambridge Corporation. In May of 1955, two new plants were under construction in Industrial Park. It was expected that another electronics firm would occupy one of the buildings. The city manager envisioned five or six more plants by 1957, and the city was prepared to install water and sewer lines in the extended park area.<sup>1/</sup>

Federal census reports showed that Lowell reached its population peak in 1920 when there were 112,759 residents in the city. Ten years later, there were about 12,500 fewer. The depression years of the 1930's did not encourage population growth, although the number grew to 101,389 by 1940. At the end of World War II, the state census indicated a decline of less than 200 people. From 1945 to 1950, Lowell lost 4700 of its people. Though the unemployment situation has driven many to other parts of the country, most of the city's loss has been picked up by the surrounding towns of the Lowell area. In 1950, this metropolitan area had a population of 133,928.<sup>2/</sup> Since World War II, there has been a building boom in the towns, and many former Lowell people now reside there. This emigration was slowed considerably during the Korean War, due to restrictions on building materials. Lowell's population stood at 95,230

<sup>1/</sup>Boston Sunday Globe, May 8, 1955, p. 33.

<sup>2/</sup>Bureau of Business Research, Community Statistical Abstracts, Boston University College of Business Administration, Boston, 1951, p. 134.

in 1955.<sup>1/</sup>

The story of Lowell in 1955 was essentially the story of New England. The region has slipped from a leading position in the nation's field of manufacturing to a situation where a reappraisal of the area's values must be made and appropriate action taken. A detailed analysis has been made by the New England Committee of the National Planning Association.

The New England Committee asserted that the outstanding resource of New England was its people.<sup>2/</sup> Among the region's principal advantages were: the average New Englander has more schooling than the average citizen of the United States, the New England health record is better than the national average, New England has a greater proportion of working people in its population due to age distribution, and the importance of durable goods in New England has risen while that of nondurable goods has decreased. The major disadvantage was listed as the higher rate of unemployment than other sections of the nation.<sup>3/</sup>

In order to attract more industries into the Commonwealth and to retain those already there, the New England Committee urged that the Massachusetts tax system be overhauled. They claimed that the complex Massachusetts corporation taxes were the highest in the nation, and that some types of corporations

<sup>1/</sup>Lowell Sun, March 24, 1955, p. 1.

<sup>2/</sup>Arthur A. Bright and George H. Ellis, The Economic State of New England, Yale University Press, New Haven, 1954, p. 253.

<sup>3/</sup>Ibid., pp. 291-292.

received preferential treatment. The Massachusetts personal income tax, with its confusing form, was rated one of the poorest in the United States.<sup>1/</sup>

For the greater benefit of cities like Lowell, the New England Committee advised that the Massachusetts arrangements for grants, aids, and reimbursements be simplified and improved. Their study revealed that the unpredictability of revenues from state aid does not permit intelligent planning by municipal officials.<sup>2/</sup>

On the local level, it appears that Lowell has done much to improve its industrial position. However, the city alone cannot create a very attractive situation for new or expanding industries without state legislative help. The most effective type of help will probably be found at the regional level. In recent years, there has been considerable cooperation among the several New England states for their mutual benefit. One of the most important forms of cooperation is the regular meetings of the twelve United States Senators from New England. These meetings are held in Washington to discuss the region's particular problems.<sup>3/</sup> The efforts of the New England bloc can do much to improve the industrial and economic climate of the area without ignoring the national interest.

Textiles have shown themselves to be highly unstable and seasonal economically. They are nondurable and do not generally

1/Ibid., pp. 662-663.

2/Ibid., p. 665.

3/Lowell Sun, May 5, 1955, p. 6.

command a high price per pound. On the other hand, industries which produce more durable goods have been more stable, and their products bring a relatively high price per pound. The hope of Lowell, Massachusetts, and New England would appear to lie with industries that produce electronics equipment or other precision goods. The president of one electronics firm which operates a plant in Lowell expressed his views as follows:<sup>1/</sup>

"....this community offers advantages to our type of manufacturing. Among these are a co-operative attitude on the part of the municipal government and prominent civic groups, and a supply of high-type, intelligent workers who are easily trained for the highly skilled, demanding jobs required by this type of industry."

1/Lowell Sunday Sun, May 8, 1955, p. 7.

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## ABSTRACT

IN THE BEGINNING.-- The area now occupied by the city of Lowell, Massachusetts was a part of the territory of the Pawtucket Indian tribe for unknown centuries. Each spring, the tribal council was held near the Pawtucket Falls. The earliest white settlers came into the region during the first half of the seventeenth century and established the settlement of Wamesit. Chelmsford and Billerica, the "mother towns" of Lowell, were incorporated in 1655; and the village of Wamesit, which later became the center of Lowell, was annexed to Chelmsford in 1726. In 1792, the Pawtucket Canal was constructed so that freight rafts from New Hampshire to the sea could by-pass Pawtucket Falls. The Middlesex Canal, which began operations between the Merrimack River and Boston in 1804, succeeded the Pawtucket Canal in importance.

THE INDUSTRIAL REVOLUTION.-- Before the inception of Lowell can be understood, it is necessary to note the inventions and events which brought the Industrial Revolution to this area. For centuries, the making of fabrics had been principally done in the individual homes. Several English inventions in the eighteenth century laid the foundation of the modern factory system. The most important of these inventions were: the "fly shuttle", "spinning jenny", spinning frame, "mule", and power

loom. The dependence of most of the new machines on waterpower was important to the later rise of Lowell. Three factors which gave strong encouragement to American industry were the Embargo Act of 1807, the War of 1812, and the Tariff Act of 1816. In addition, many of the early American ventures in manufacturing were made in Massachusetts. Thus, the Industrial Revolution, the geographical surroundings, and government protection, plus available capital and good business leadership combined to produce the industrial community of Lowell.

THE TOWN OF LOWELL.-- In 1814, Francis Cabot Lowell and several associates set up in Waltham, Massachusetts the first mill that had all manufacturing processes performed at one site. The company was highly successful; and when Mr. Lowell died in 1817, Nathan Appleton and Patrick Jackson became the leaders of the company. They sought another suitable area for similar mills. After deciding that Pawtucket Falls was the site with the greatest possibilities, they bought the Locks and Canals Company which owned the Pawtucket Canal and much of the land along the Merrimack River. In 1822, Appleton, Jackson, and several others formed the Merrimack Manufacturing Company. They set up the Locks and Canals Company separately, so that it could control the waterpower of the Pawtucket Falls. The second major corporation in the area was the Hamilton Manufacturing Company, founded in 1825. The village of Wamesit in Chelmsford grew so rapidly that it was incorporated as a town

in 1826, and it was named in honor of Francis Cabot Lowell. Lowell was a town for only ten years; but in that time, seven other large corporations began operations.

THE GROWTH OF A CITY.-- Lowell had prospered and grown in its decade as a town. In 1836, Lowell became the third incorporated city in Massachusetts. The new city continued to grow in the period before the Civil War. Two more major corporations were formed. The system of waterpower canals was expanded; and within ten years of the city's incorporation, Lowell was connected with Boston, Nashua, Groton, and Lawrence by railroads. While the several large corporations with interlocking directorates controlled the waterpower on the Merrimack, several smaller independent textile companies settled along the Concord River. Several of the investors in the large Lowell corporations formed the Essex Company, which served as the nucleus of the town of Lawrence a few miles down the Merrimack. The experience gained from the Lowell mills was put to use in setting up the mills in Lawrence.

BUSINESS MANAGEMENT.-- The men who started the large Lowell corporations were not residents of Lowell. They were an exclusive group of financiers known as the Boston Associates. They controlled many New England mills, banks, insurance companies, railroads, and ship companies. Their methods of financial manipulation served to develop an important part of American industry with American capital when no other means appeared

to be available. At first, they were highly benevolent with their Lowell mill workers; but in the 1840's, working conditions began to decline. By the end of the 1850's, the period of high cotton profits had ended. Most Lowell mills were closed during the Civil War due to a lack of cotton. After the war, most of the Boston Associates were dead or retired. Lowell's progress became more conservative than it had been in the early years. Except for the panics of 1873 and 1893, Lowell corporations enjoyed a moderate prosperity until World War I. During and immediately after World War I, the corporations boomed. The textile depression which set in after 1923 and the general depression in the 1930's knocked out all but three of the old corporations. New diversified companies which came to Lowell did not fill the gap left by the older companies.

LOWELL AND LABOR.-- In Lowell's early years, factory work was a new experience. Most of the workers were not completely dependent on their factory jobs, and working conditions were not very bad. As the years passed, conditions deteriorated. The early manpower shortage caused the mill owners to seek women to work in the mills. By erecting boardinghouses and adhering to the strict moral order of the period, they attracted hundreds of farm girls to work in Lowell. Largely due to the mill girls, Lowell was a showplace for industry, and the corporations received much favorable publicity. The good conditions began to decline in the 1840's. No effective labor organizations

existed in the early years. When the New England farm girls left the mills after drastic wage cuts, they were replaced by Irish immigrants. After the Civil War, immigrants of about twenty nationalities settled in Lowell. They provided a cheap labor supply until World War I. Labor has become more highly organized since the days of the New Deal. Since World War II, the rate of unemployment in Lowell has remained quite high.

FROM WAR TO WAR.-- Lowell's dramatic growth stopped during the Civil War. Following the conflict, Lowell experienced a moderate prosperity until World War I, except during the panics of 1873 and 1893. In this period, the modern city of Lowell developed with electric trolley cars, telephones, electric lights, and a city water works. The most outstanding change in Lowell between the Civil War and World War I was in the city's ethnic composition. People from more than twenty countries settled in Lowell, and the city's slum areas expanded greatly. By 1917, only about twenty per cent of the population were native-born Americans with native parents.

THROUGH NORMALCY AND DEPRESSION.-- Lowell's industries boomed during World War I and for several years afterwards. A textile depression set in after 1923, and Lowell was seriously affected. The old Hamilton Company liquidated in 1926; and in the following years many of the other companies liquidated, sold out, moved out of the city, or ceased operations. When the general depression gripped the city after 1929, many of

Lowell's buildings were demolished for tax purposes. The woolen and worsted industry replaced cotton as the city's most important industry, and several shoe companies became very important to Lowell's economy. During this period, many small companies located in Lowell. These concerns laid the foundation for the city's diversification of industry. The many small companies were not enough to utilize all of the space or manpower left idle by the older firms.

THE CITY OF DIVERSIFIED INDUSTRIES.-- Lowell boomed during World War, as most of the companies produced war goods. With the end of the war, Lowell suffered again from a large surplus of labor. The Korean War did little to relieve the unemployment situation. Though the war caused considerable price inflation, the textile industry went into another depression. Since the formation of the Lowell Industrial and Development Commission in 1952, there has been a vigorous and organized attempt to attract producers of durable goods like electronics equipment, rather than makers of nondurable goods like textiles. Through more diverse industries, the commission hopes to bring about a more stable city economy. Though the city has done much to improve itself, it will need legislative help from the state and federal governments before it can make itself very attractive to prospective new industries.