
Francis Cabot Lowell

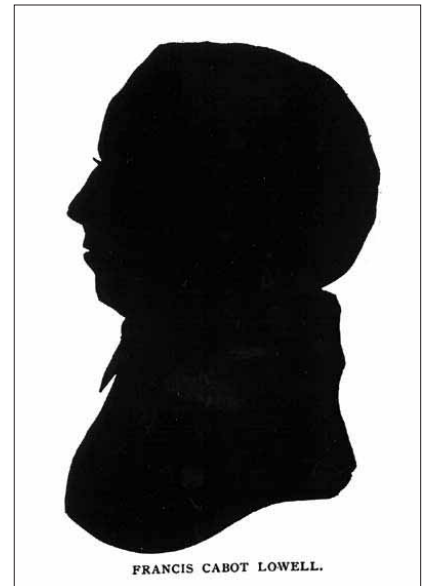
Many individuals, past and present, have influenced the economic history of Massachusetts. In the early 19th century, one such person imported innovative technology that underpinned the development of the textile industry in Massachusetts; he also introduced elements of the modern corporate system. This individual was Francis Cabot Lowell.

Francis Cabot Lowell was born in Newburyport, Massachusetts, on April 17, 1775, to the Honorable Judge John Lowell and his wife, the former Susanna Cabot. While Judge Lowell had gained prominence as a successful lawyer, Susanna Cabot was the daughter of Francis Cabot, a wealthy shipping merchant in Salem, Massachusetts. Upon his graduation from Harvard in 1793, young Francis Cabot Lowell became a partner in the trading firm of his uncle, William Cabot. By the time of his father's death in 1802, Francis Cabot Lowell had become a successful and wealthy businessman.

From Trade to Textiles

Maritime trade, the basis for Lowell's wealth, was inherently risky. Ships could be lost to storms or even pirates. When goods arrived safely, they might sell for less than anticipated. But during Lowell's era, both the risks and the opportunities were especially large. The American Revolution disrupted traditional trading relationships with Britain, but new trade routes were established with China, India, and Russia. In addition, war between Britain and France created new opportunities for trading with Europe, albeit at considerable risk. Britain and France attempted to cut off each other's supplies by seizing enemy ships; ships of neutral countries were also vulnerable to seizure. But high freight rates and high prices for traded goods meant huge profits for successful voyages.

Many New England shippers and traders met the challenges and prospered. Over time, however, tensions with Britain mounted. Americans were particularly outraged that some American seamen on seized vessels were forced to serve on British ships. In 1807, the U.S. Congress responded by enacting an embargo on all U.S. foreign trade; then in 1812, war broke out between Britain and the United States. The embargo and hostilities with Britain had severe repercussions for New England's trading business, even as they drove up the prices of imported manufactured goods, like cotton textiles.



Silhouette of Francis Cabot Lowell.
(Illustration courtesy of Lowell National
Historical Park)

Lowell's health suffered from these stresses. Heeding the advice of his doctor, he took a trip to England in 1810 to recuperate. While in England, he began to visit textile mills in Lancashire. These visits were an eye-opening experience as he saw textile technology not then available in New England.



Early view of Lowell. Painting by Benjamin Mather, 1825. (Courtesy of Lowell Historical Society)

Realizing the edge that English textile mills had over his American counterparts, Lowell sought to bridge the gap by bringing English technology to America. Because England did not permit the transfer of mill technology to other nations, Lowell memorized the design of the textile machinery and, in particular, the power loom. In this manner, Lowell would successfully bring British mill technology to America.

Samuel Slater Is First

A similar transfer of technology had been accomplished 20 years earlier by Samuel Slater. Born in 1768 in Derbyshire, England, Slater had apprenticed with Jedediah Strutt, a partner of Richard Arkwright, the inventor of a machine that could card, draw out, and spin cotton in a continuous flow. Although successful in England, Slater decided to immigrate to America, where the skills of modern manufacturing were lacking. Here, he believed, he could make a fortune. Slater settled in New York in 1789 and supported himself by working in a number of small New York mills.

About the same time, Moses Brown, a prominent Quaker merchant, set out to establish a textile factory in Pawtucket, Rhode Island. Plagued with problems stemming from the use of antiquated machines and lack of water-power, Brown found it impossible to produce and market quality cloth. Chance brought Samuel Slater to Brown's mill. Slater immediately proposed scrapping all the machines at the mill and replacing them with new spinning frames. Slater's intervention turned the mill around to profitability and proved so successful that, by 1793, the first water-powered textile manufacturing mill was constructed in Pawtucket, Rhode Island.

Slater's efforts earned him recognition as the father of the American industrial revolution and laid the foundation for the textile industry in New England. Two decades later, Francis Cabot Lowell expanded on this foundation, introducing more sophisticated machinery, new labor and management practices, and an expanded scale of operations. Lowell also pioneered a new form of financing, essentially founding the modern-day corporation.

Decisions about Machinery and Financing

With the workings of England's textile machinery firmly embedded in his mind, Lowell returned to New England in 1812 and pursued his goal of establishing a textile mill using the new technology. To help him, he turned to Paul Moody, a skillful mechanic. Moody was able to recreate the design of the textile machines that Lowell had memorized. Moody developed machines that not only would improve the quality of cloth produced in America, but also made it possible to carry out in one building all operations involved in converting raw cotton into cloth, setting the stage for the development of an integrated American textile mill industry.

Design of the machines was not the only problem confronting Lowell. Although wealthy, he needed money to construct his mill. Lowell estimated he would need approximately \$400,000—\$100,000 to build and equip the first mill, and \$300,000 for operational costs and expansion in the future. To obtain these funds, Lowell devised a plan that would allow him to sell shares in the mill to others and organize his business in a joint-stock arrangement. This novel plan would generate the capital he needed to establish what became the Boston Manufacturing Company.

In 1813, Lowell began to raise the initial \$100,000 by selling shares in the Boston Manufacturing Company. Lowell and his brother-in-law, Patrick T. Jackson, invested \$20,000 each. Lowell then turned to wealthy investors Nathan Appleton, Benjamin Gorham, and Uriah Cotting. These men agreed to invest between \$5,000 and \$10,000 apiece. Seven other individuals became members of the Boston Manufacturing Company by purchasing fewer shares. In all, Lowell was able to sell 100 shares at \$1,000 per share to raise \$100,000, the capital he needed to build the first mill. This first mill was constructed on the Charles River in Waltham, Massachusetts. It was fully operational by 1815.

Lowell continued selling shares in Boston Manufacturing Company to raise the remaining \$300,000, a feat he accomplished within five years. Investors were attracted to the plan because they could buy shares in increments, observe the growth of the company, and evaluate its success. If the company did well, they would receive dividends on the amount they had invested. If they liked how the company was performing, they could invest additional money. If they wanted to end their investment, they could sell their shares to others. They could also bequeath their shares in their wills.

The joint-stock arrangement gave Lowell's business an advantage over individual proprietorships and partnerships, the predominant business structures in American and British textile firms at that time. Proprietorships

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and partnerships could raise new capital only if existing owners could work out a way among themselves to invest more or to admit additional partners. In Lowell's plan, through the sale of new shares, capital could be raised independent of existing shareholders. The life of a proprietorship or partnership was generally limited. If a partner or owner died, the business would likely fold. Lowell's plan allowed the business to carry on in the event of a shareholder's death or the sale of shares to a new owner. In either case, the company's capital would remain intact. This flexible plan devised by Lowell is the foundation upon which present-day corporations are based.



Young woman tending a loom. Winslow Homer woodcut. (Photo Courtesy of Lowell National Historical Park)

Three More Decisions

Having resolved the design of the machinery and the financing of the company, Lowell faced three additional concerns: what kind of product should be manufactured; what should be the means of marketing and selling the finished product; and what system of labor should be used to produce the product.

Lowell knew that the market for textiles was very competitive. He believed that the American consumer was not looking for fancy goods, but rather, cheap, durable material. With its new production techniques, Boston Manufacturing Company was well suited to producing this kind of cloth.

To market his product, Lowell turned to Nathan Appleton for help. Recognizing that the market was already well established, Nathan Appleton offered a commercial firm, B. C. Ward and Company, the exclusive right to sell all Boston Manufacturing Company cloth. B.C.Ward would sell the cloth to an auctioneer who would, in turn, auction the material for a small commission. By selling material in this way, Boston Manufacturing reduced the number of agents and risks involved in selling its cloth. This efficient method of selling goods would prove very successful.

Only the issue of a labor force remained. Early manufacturers tended to hire farmers and their children. Boston Manufacturing Company decided to tap into a new labor force— young, single girls from rural areas. They were readily available, reliable, and could be paid lower wages than men— but still more than they could earn elsewhere. The company offered the new recruits housing in a chaperoned boardinghouse and church on Sundays. The girls were expected to work 12 hours or more a day, six days a week. Some skilled male workers were also hired. They too worked long hours, but were paid a higher wage.

With these three decisions made—to produce a cheap, but durable cloth; to experiment with an innovative system of selling the cloth; and to use a new, economical labor force—Boston Manufacturing Company began to thrive. In 1816, almost a year into its operation, the Waltham mill generated sufficient profits to pay dividends to investors.

A second mill was built in 1818 near the original mill building. Output increased from 100,000 yards per year to more than 250,000 yards. In addition to producing cotton cloth, the second mill diversified its income by selling machinery to other textile manufacturers.

Merchants Seek Tariff Protection

The conclusion of war between the United States and Britain exposed U.S. markets to a flood of imported cloth. Many New England textile manufacturers were forced to cut back drastically or shut down completely. Aggrieved mill owners called on Congress to impose high tariffs to stop the inflow, but representatives from southern states exporting cotton were reluctant to antagonize Britain, an important customer. Lowell was successful in devising a strategy that seemed to meet their concerns. The tariff of 1816 was structured in such a way as to fall most heavily on the lower quality cloth from India and China that competed most directly with the New England product. Higher quality British cloth would be less affected. In fact, the tariff appears to have provided protection against British cloth as well: After an initial surge, imports from Britain remained well below their pre-war levels, while New England textile production grew rapidly.

Continued Success for Lowell's Company

Lowell died in late 1817, but his company continued to prosper. Management passed into the hands of Patrick Jackson, who eventually shared responsibility with Nathan Appleton. These transitions were a true testament to the strength of the joint-stock management system that Lowell had devised.

Jackson and Appleton worked well together in running Boston Manufacturing Company. In 1820, the company produced half a million yards of cloth, with sales in excess of \$260,000. A much-needed third mill was opened. Even during inflationary periods and while other mills were taking out loans or falling into bankruptcy, the two men were able to raise capital by adding new shareholders to the business. The largest new shareholder, Christopher Gore, bought 40 shares of the company. By 1821, the company listed fourteen shareholders and capital of \$600,000.



Tariff reform newspaper advertisement.
(Illustration courtesy of New Hampshire
Historical Society)



Francis Cabot Lowell Mill, Waltham, Massachusetts. (Photo courtesy of the Charles River Museum of Industry, Waltham, Massachusetts)

Overall, the mills in Waltham were successful and turned Waltham from a village into a modern community. As the town's population rapidly increased, so did the need for schools and other public buildings. In 1816, two schools and a library were established, a meeting house and a church were expanded, and a new church was built. The library is still in use today. In 1817 and 1818, Waltham acquired a fire engine and fire station.

Eventually, further expansion of manufacturing in Waltham was impossible as the mills had fully utilized the river's water power. In 1821, a new mill site was found near the Merrimack River. Boston associates named the site after Francis Cabot Lowell. Using the model that had brought success to the Waltham site, the Lowell mills were developed. By 1840, the population of Lowell exceeded 20,000, making it the second largest city in Massachusetts. The city was home to nine textile firms, with a combined capital of approximately \$8 million and total employment of 6,000 women and 1,800 men.

Conclusion

Francis Cabot Lowell played a central role in establishing New England as a manufacturing center. Textile mills, many owned by Lowell's associates and their descendants, spread throughout the region. These associates established many of the region's financial institutions and civic organizations. Lowell's method of raising capital also proved highly successful and laid the foundations for the modern corporation.

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Federal Reserve Bank of Boston, July 2003

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