

## International Harvester

The business career of Cyrus McCormick provides penetrating insights into the forces which transformed American agriculture from an activity employing 75 percent of the labor force in 1820 to a capital intensive industry employing 5 percent of the labor force in 1968. McCormick played a major role in the revolution through his contributions to agricultural mechanization. His invention of the reaper and, more importantly, his ability to market and manufacture the machine on a mass scale helped to set in motion the process which changed the United States from an agrarian society into an industrial power. Some historians have even speculated that McCormick's invention of the reaper may have helped the North win the Civil War by making it possible for large numbers of farmers to join the Union forces without there being a consequent drop in agricultural production. In any event, this ability to move labor off of the farm into industrial and service jobs while maintaining high rates of agricultural output was the key to the nation's economic success.

### The Early Years

Cyrus McCormick was born on February 15, 1809 on a farm in the Valley of Virginia, 18 miles away from the little town of Lexington. His father, Robert McCormick, was a very successful farmer who owned and operated a 532 acre farm. "Except for a few luxuries, the McCormick estate was self sufficing. Flax, hemp, and sheep furnished the fiber and wool for spinning wheel and loom. Robert's cattle and hogs yielded the yearly meat supply for brine barrel and smoke-house, the tallow for candles, and the oil for soap. The hides were taken to a nearby tannery and made ready for shoes and harnesses. His grain became flour at his own grist-mill or whiskey at his own distillery. When lumber was needed his sawmill could cut it from timber felled on his own land. His mechanical skill found expression at the forge and anvil of his smithy..."[1]

The senior McCormick was fascinated by machinery and had at an earlier point in his life attempted to invent a mechanical harvester without success, earning only the derision of neighbors who said such a thing was impossible. Nevertheless, Robert encouraged his son's attempt to succeed where the father had failed and in 1831 Cyrus built a small experimental harvester. The machine successfully cut six acres of oats and, although the grain was not cut perfectly, the machine did incorporate for the first time in history all of the mechanical principles of the modern reaper. At the age of twenty-two, Cyrus McCormick had achieved an historical breakthrough but not a single one of the 850 newspapers in the United States carried mention of the invention, nor did anyone rush to purchase a machine from McCormick.

Recognizing that his invention required much more development before it would be a commercial success, McCormick set to work to make the numerous modifications that together would make the machine work well under most conceivable harvest conditions. An improved model harvested fifty acres of wheat in 1832 and several public trials were conducted. Further refinements were made that winter and in 1833 the new model impressed a number of local farmers with its ability to cut 10 to 12 acres a day. The spectators had to agree that the machine did the work of several men but money was scarce, labor was plentiful, there was considerable fear of breaking with tradition, and the farmers feared that they would not be expert enough to handle the machine. At least one of those farmers considered buying a reaper from McCormick but McCormick himself later said that he did not sell his first machine until 1839.

McCormick had been delaying the act of patenting his reaper until he had improved the machine to the point where he felt ready to manufacture it for sale. In the spring of 1834, he read of a reaper invented the previous year by a man named Obed Hussey and reacted by obtaining a 14-year patent on his own design, thus beginning a decade of rivalry between the two. During the first four years of that rivalry, Hussey was the commercial winner by default since McCormick withheld his machine from the market place. This delay was due in part to McCormick's desire to perfect his machine further and to the fact that, in 1835, Robert McCormick gave his son a 400-acre farm, confronting Cyrus with the necessity of working to make that farm profitable. The delay was also due in part to a decision by the McCormick family to enter the iron furnace business.

The iron business turned out to be a financial disaster for the McCormicks, and in 1839, Cyrus returned to the reaper and began to manufacture the machines for sale. He picked a good time to return to the industry, for prosperity was returning to the farms and there was, consequently, a demand for the reapers. Hussey

had been selling his machines for six years by the time McCormick returned to the business, but Hussey's product was plagued by quality problems and in 1840 he made an unwise alteration of his machine that significantly damaged the Hussey reputation. McCormick's reluctance to enter the market earlier thus gave him an opportunity to achieve a reputation for a superior machine, and this he proceeded to do.

At about this time, a farmer named James Hite cut 175 acres in under eight days and gave McCormick his favorite sales slogan: "My reaper has more than paid for itself in one harvest." McCormick was able to sell sales rights to farmer Hite and several others, thus beginning the job of creating a sales force. Farm papers began to take notice of the machine now known as McCormick's Virginia Reaper and, by 1844 when he was selling fifty machines a year, McCormick found himself faced with the need to expand his production facilities.

The largest potential market for the reaper was in the "West" in such states as Illinois, Indiana, and Missouri where the land was flat, farms were cheap, but labor was scarce. Cyrus McCormick sensed this opportunity and in 1844 he traveled to Ohio, Michigan, Wisconsin, and Missouri to demonstrate his reaper. Several manufacturers in Wisconsin, Missouri, Indiana and Ohio contracted to produce his machine and pay him a royalty, but none of these agreements worked out very well. The Wisconsin sub-contractor failed to fulfill the contract; the Missouri contractor sold only a few machines and failed to pay McCormick. Machines were abandoned in fields because farmers did not know how to use them; and other machines went unsold because they arrived too late for the harvest.

McCormick was deeply disappointed by this first experience in the "West", but he had learned a lesson. As Hutchinson put it:

Neither errors in his plan of campaign nor defects in the principles of his implement could be fairly charged with the collapse of his hopes. His agents had canvassed enough orders, the press had usually been friendly and generous with its space, and self-reproach on the score of lack of energy was unwarranted. The failure of his manufacturers to fulfill their contracts, the poor construction of the machines they had succeeded in building, and the tardiness with which this defective output was placed upon the market, summed up the causes of the season's discontent...

...Before the McCormick reaper could become as familiar as the plow on every grain-growing farm in the land, it would be necessary to erect a big factory at a spot where grain, transportation facilities, and building materials met, and personally guarantee both the quality of the product and the timeliness of its delivery. [2] During the following two years the system of sub-manufacturing fared better, particularly in the cases of McCormick licensees in Brockport, New York and in Illinois. In the harvest of 1847, over 500 McCormick reapers were sold and Cyrus made almost \$9,000 in profit. But by this time Cyrus McCormick was well along with his plans to build his own factory in the "West" and in 1848 he moved to Chicago where his new factory had been erected.

#### Expansion and Development

Chicago had a population of about ten thousand when McCormick arrived in 1846. Detractors said it was more of a swamp or mud hole than a city; there was one school, one fire engine, and a police force of six men. To obtain the money and credit necessary to begin operations, McCormick formed what was to be a short-lived partnership with the mayor and leading citizen of Chicago, William B. Ogden. With \$25,000 given by Ogden for a half interest, McCormick built his first plant near Lake Michigan on the north bank of the Chicago River. The factory was on the site where John Kinskie built the first house in 1804 and 150 feet from the future site of the world headquarters of the International Harvester Company, a firm which McCormick's heirs would eventually build on the foundation of his accomplishments. The partnership ended when McCormick bought out Ogden in 1849. Both men realized that they were too independent by nature to work together as partners.

The first year of mass production was 1848. It was also the year that the original patent ran out. An application for extension was hung up in litigation and eventually disapproved, probably due to the effective lobbying of competitors who finally realized the potential of the reaper. With his manufacturing plant set up, McCormick concentrated on sales and developed a system of company agents with machines on hand. He

was one of the first manufacturers to offer his product at a fixed price with a written guarantee. The farmers were asked to pay \$30 down and \$90 later if the machine lived up to the claim of being able to cut 1 ½ acres an hour. Such a use of credit and guarantees was unusual at that time. McCormick also continued his practice of entering his machines in competition against the products of other companies. He ran full page advertisements with testimonials stating exactly when and where a feat had been accomplished.

The infant industry became a booming one in 1849 when the gold rush made labor even more scarce in the West. The rush to California also served to make Chicago a central location rather than a spot on the frontier. McCormick increased his advertising to remind farmers of coming labor scarcity and gave the names and addresses of 92 proud owners of his machines. He had machines sent to warehouses where he thought they would be needed since he knew farmers would wait until harvest time before deciding to buy a McCormick Reaper. A competitor filed suit at that time claiming that McCormick "flooded the country with his machines." He bound his agents to him by exclusive contracts, gave them almost complete control over their territories, and judged them on the basis of their sales records. McCormick was careful to keep the loyalty and good-will of the farmers. In 1848, he said, "I have never yet sued a farmer for the price of a Reaper." He was always quite liberal in cases of natural disaster such as the drought that hit Kansas and South Dakota early in the history of the company.

Cyrus McCormick pointed the way toward the company's later emphasis on international marketing. He displayed a Reaper in the 1851 industrial exhibition at the Crystal Palace in London. The British laughed at the clumsy looking machine until they saw it at work in a field. Over the following years, a number of reapers were sold in Europe. Thus McCormick helped to make the United States an exporter of manufactured goods as well as raw materials and agricultural products. The value of the reaper in helping to feed the hungry of the world was first demonstrated in the Crimean War when large amounts of wheat were shipped to Europe. By 1855, 2,500 reapers a year were being produced by McCormick and his labor force of 200 men and boys. A year later production jumped to a rate of 4,000 reapers a year and McCormick was about to become a millionaire.

McCormick's first decade in Chicago marked the beginning of a major change in the competitive environment of the reaper industry. With the expiration of McCormick's original patent in 1848, several new competitors appeared and soon became far more significant factors in the industry than Hussey. McCormick had patented several significant improvements in his reaper in the mid 1840s and had hopes of gaining an extension on his original patent. But the extension was denied and the improvement patents did not bar other firms from entering the industry. By 1864, there were more than 50 independent reaper manufacturers in the United States and the consequences of this growth were felt throughout the industry:

The laboratory of the inventor of harvesting implements moved from the workshop of the farm to the machine-shop of the factory. Invention became the tool, and the inventor the employee of the manufacturer. Doubtless mechanical skill was still assisted by inspiration, but to cage a genius within the brick walls of a factory stripped invention of much of its romance. Invention was now a business, and ingenious mechanics were as customary a segment of a big manufacturer's laboring force, as were his moulders and salesmen.

The pressure of competition, translated into a crisp order from the office of the superintendent to the expert at the works, was the chief stimulus to invention. After the battlesmoke of each hectic harvest season had blown away, there often stood revealed some machine which had found favor with the farmer in spite of the ridicule and high pressure salesmanship of its rivals. Common prudence at once dictated that invention should go forward at the factory under forced draft so that an improved implement for next year would compel last summer's "favorite" to retire from the field in shame.

To help toward this end as speedily as possible, McCormick's agent, acting incognito, would purchase and ship to Chicago one of the machines which had been so successful in the harvest just closed. The inventors at the factory then studied it carefully for the purpose of discovering a way whereby the implements in their charge might attain a similar perfection of operation, without making their employer liable to a suit for an infringement of patent-rights. If this could be done, the law still required that the patent should be granted to the expert who had made the invention—but he immediately thereafter assigned all of his interest in the monopoly to his employer. Therefore, the latter gave him a new problem to master, and the process was

repeated. In this fashion the inventor of machinery was himself mechanized. The patrons of this Renaissance overshadowed the artists.

Invention of harvesting implements was not confined altogether to the machine-shop of the industrialist between 1855 and 1885. In fact, the half-dozen most significant of the hundreds of patents for improvements in self-raking reapers, harvesters, and binders during these years were granted to farmers or to small-town mechanics. Nevertheless, the control of these inventions tended quickly to gravitate to the big manufacturers. They, alone, had the capital to exploit a new mechanism. Their scouts, or "patent experts," searched the countryside for valuable devices. These might often be secured for a very small sum." [3] McCormick held his own in the competition as the rivalries successfully moved from the mower to the self rake reaper to the harvester and finally to the harvester-binder. To do so he had to wage a constant battle over patents while maintaining product quality in production and keeping the sales force operating effectively. It was indeed fortunate that the business involved the whole McCormick family. Although Cyrus provided the initiative, decided the crucial issues and traveled widely to promote sales, it was his younger brother Leander who supervised the building of the reapers. Another younger brother, William, handled accounting and purchasing and also served as Cyrus McCormick's replacement when Cyrus left to conduct other business or to fight patent battles.

In 1879, Cyrus McCormick Jr. completed his studies at Princeton and joined his father and uncle Leander in the management of the McCormick Harvesting Machinery Company. As occasionally happens when business and family affairs are mixed, disagreements between Cyrus and his brother Leander led to Leander's departure from active management of the company in 1880. During the next few years Cyrus McCormick helped his son learn the business and, rather rapidly, turned its direction over to him.

The Legacy

Cyrus McCormick died in 1884 and was buried in a Chicago which had grown to sixty times the size it was when he first arrived. McCormick's factories had produced between five and six million harvesting machines. In 1902, the firm was combined with four smaller harvesting machine manufacturers to form the International Harvester Company.

End Notes

1. W.T. Hutchinson. Cyrus Hall McCormick. N.Y.: Da Capo Press, 1968. Pp. 16-17.
2. Ibid, p. 224.
3. Ibid, pp. 362-363.

\*Copyright 1990. The American National Business Hall of Fame. All rights reserved. No portion of ANBHF may be duplicated, redistributed or manipulated without the expressed permission of the ANBHF.