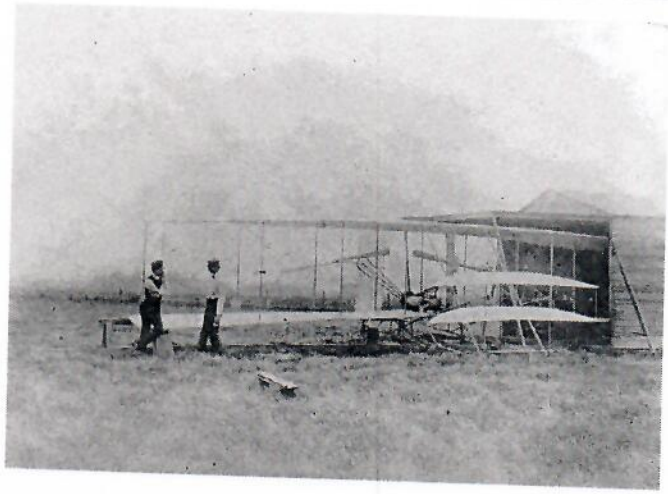
The Airplane



On December 17, 1903, the Wright brothers showed the world that man could fly. Their invention of the airplane astounded everyone. At first flying was a sport or hobby, like other inventions of its time, because of how dangerous it was. Through various twists and turns, the airplane was able to become a great success in the 1920s and even became one of the most important inventions of the 1920s.

During the early 20s, airplanes had been used in World War I for reconnaissance and attacks, but its high instability and poor control made it less glamorous as other weapons of World War I. So it was tossed aside as an impractical invention. After World War I, the airplane started to become a hit again. At local carnivals and fairs, airplane pilots would fly around in the air doing various tricks and stunts to entertain an audience. Gradually, the airplane stunts at local carnivals became commonplace throughout America.

Although the airplane had become used more throughout America, it was never taken seriously by anyone until the federal government developed the idea of Air-Mail. The idea of using airplanes to transport mail quickly caught on. Instead of receiving long-distance mail in a few weeks, one could receive it in only a few days. Air-Mail quickly became a great success. As Air-Mail became more popular, other industries began turning to the airplane as air freighting was much faster than land based transportation.

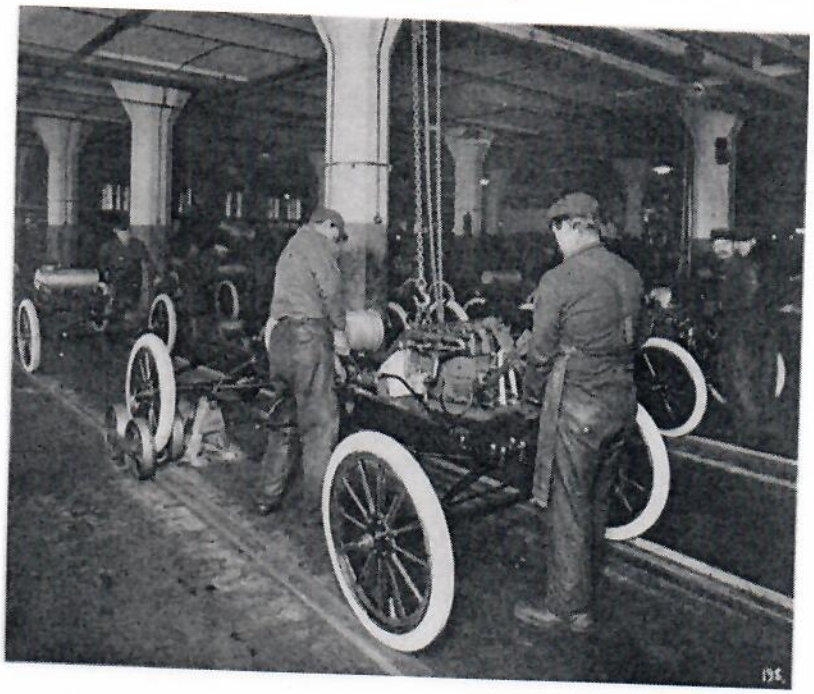
After using airplanes to transport freight became commonplace, the idea of airplanes carrying people quickly took hold. A few airplane companies began to offer flying people from one place to another, for a price though. Usually it was costly and only upper-class people could afford it. But as flights became more common, prices fell, and it almost reached a point where upper-middle class people could afford flights.

Although the airplane did not catch on as quickly as other inventions of the 1920s did, it still caught on. During the 20s, many people began to do airplane stunts to entertain themselves and the public. Various people would climb onto an airplane wing and start dancing the Charleston, or try flying around in circles for a whole day. Airplane fads even managed to produce an American hero, Charles A. Lindbergh, when he crossed the Atlantic Ocean by himself in an airplane. The success of the airplane surely makes the airplane one of the most important inventions of the 1920s.

The Assembly Line

An assembly line is a manufacturing process in which parts (usually interchangeable parts) are added to a product in a sequential manner to create a finished product much faster than with handcrafting-type methods. The assembly line developed by Ford Motor Company between 1908 and 1915 made assembly lines famous in the following decade through the social ramifications of mass production, such as the affordability of the Ford Model T and the introduction of high wages for Ford workers.

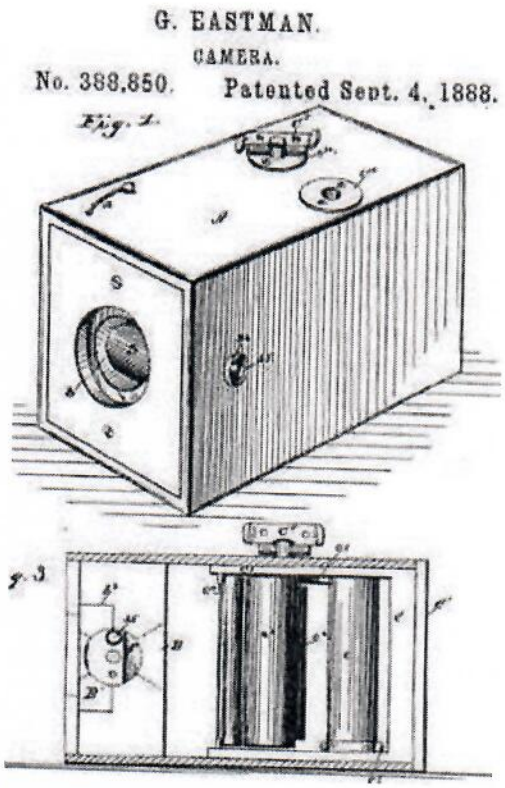
Henry Ford was the first to master the moving assembly line and was able to improve other aspects of industry by doing so (such as reducing labor hours required to produce a single vehicle, and increased production numbers and parts. Ford was the first company to build large factories around the assembly line concept. Mass production via assembly lines is widely considered to be the catalyst which initiated the modern consumer culture by making possible low unit cost for manufactured goods.



The Kodak Camera

"You press the button, we do the rest" promised George Eastman in 1888 for his Kodak camera.

Photography was invented in the early 1800's but it was an expensive and difficult process. It required chemicals and a long difficult process to shoot and develop the film. George Eastman wanted to simplify photography and make it available to everyone, not just trained photographers. In 1883, Eastman announced the invention of photographic film in rolls. Kodak the company was born in 1888 when the first Kodak camera entered the market.


G. EASTMAN.
CAMERA.
No. 388,850. Patented Sept. 4, 1888.

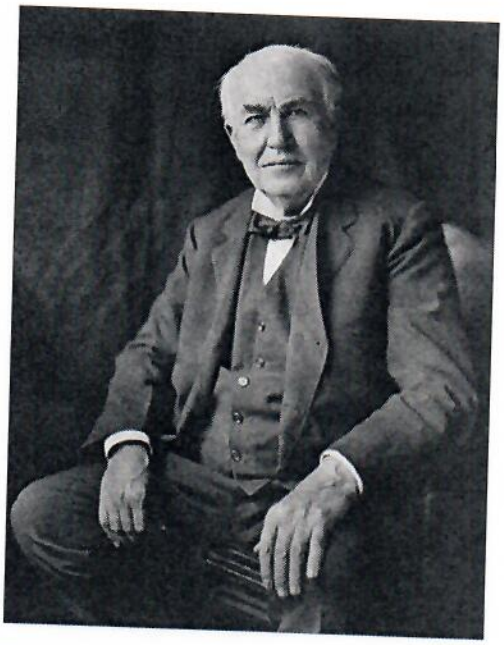
The Kodak camera was pre-loaded with enough film for 100 exposures, or pictures. The camera could easily be carried and handheld during its operation, something that was unheard of at the time. After the film was exposed (all the shots taken), the whole camera was returned to the Kodak company in Rochester, New York, where the film was developed, prints were made, and new photographic film was inserted. Then the camera and prints were returned to the customer through the mail.

George Eastman was one of the first American industrialists to employ a full-time research scientist. Together with his associate, Eastman perfected the first commercial transparent roll film which made possible Thomas Edison's motion picture camera in 1891.

He was a major philanthropist, establishing the Eastman School of Music, and schools of dentistry and medicine at the University of Rochester and in London; contributing to RIT and the construction of MIT's second campus on the Charles River; and donating to Tuskegee and Hampton universities. In addition, he provided funds for clinics in London and other European cities to serve low-income residents.

In his final two years Eastman was in intense pain caused by a disorder affecting his spine. He had trouble standing, and his walk became a slow shuffle. On March 14, 1932, Eastman committed suicide at age 77 with a single gunshot to the heart, leaving a note which read, "To my friends: my work is done. Why wait?

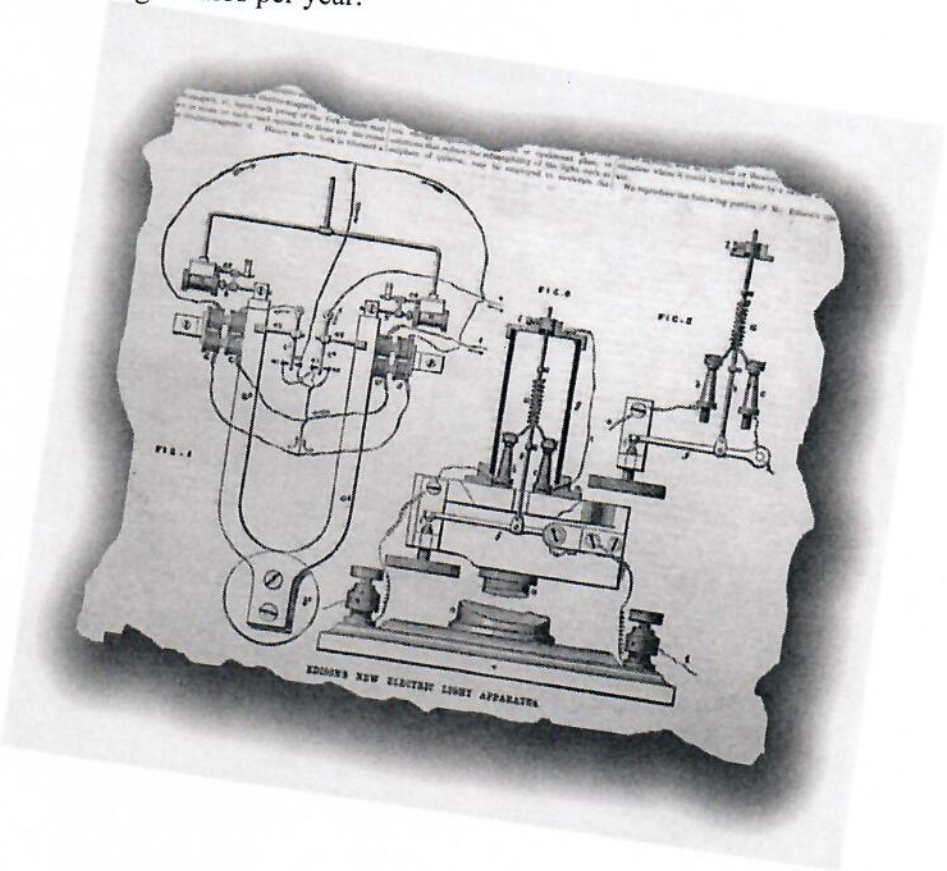
The Light Bulb



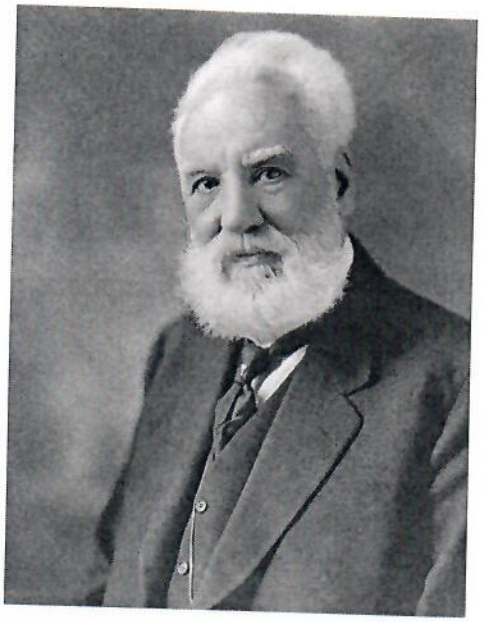
The one inventor credited with the greatest achievement concerning electricity was Thomas Edison. Edison's most famous invention was practical electric lighting. While others had already created electric light sources, they were often too bright or flicker for home and business use. Edison is credited with figuring out how to make a light bulb that produced a safe and steady source of light in 1879.

Edison had always had a desire to invent practical things. "Anything that won't sell, I don't want to invent," he said. In 1876, Edison set up his own workshop in Menlo Park, New Jersey. There he thought up hundreds of ways to use electricity and during one five year period, he took out a new patent almost every month.

Because of Edison's invention, electric lighting quickly began to replace gaslights in homes and businesses across the United States. By In 1882, New York City's buildings were glowing with electric light. the end of the 1880's, Edison's factory produced about a million light bulbs per year.



The Telephone



Alexander Graham Bell was born in Edinburgh, Scotland in 1847. However, he eventually moved to Canada and then to the United States, where he settled in Boston. It was in Boston where Bell began his career as an inventor.

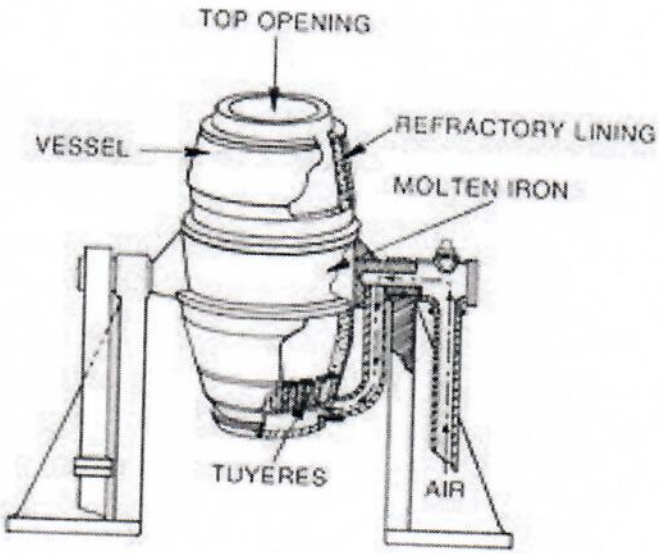
At the time, the telegraph had been an established means of communication over long distances for about 30 years. Although it was revolutionary at the time,, the telegraph could only transmit dot-and-dash Morse code and could only send or receive one message at a time. Bell wanted to try sending multiple messages over the same wire at the same time. Although the idea of a multiple telegraph had been in existence for some time, Bell offered his own musical or harmonic approach as a possible practical solution. Throughout his life, Bell had been interested in the education of deaf people. Together with his assistant Thomas Watson, his interest lead him to invent the microphone and, in 1876, his "harmonic telegraph" or "electrical speech machine." This machine went on to become what we now call a telephone.

The communications potential of being able to "talk with electricity" far outweighed anything that could be done with telegraph lines. News of his invention quickly spread throughout the country, even throughout Europe. By 1878, Bell had set up the first telephone exchange in New Haven, Connecticut. By 1884, long distance connections were made between Boston, Massachusetts and New York City.

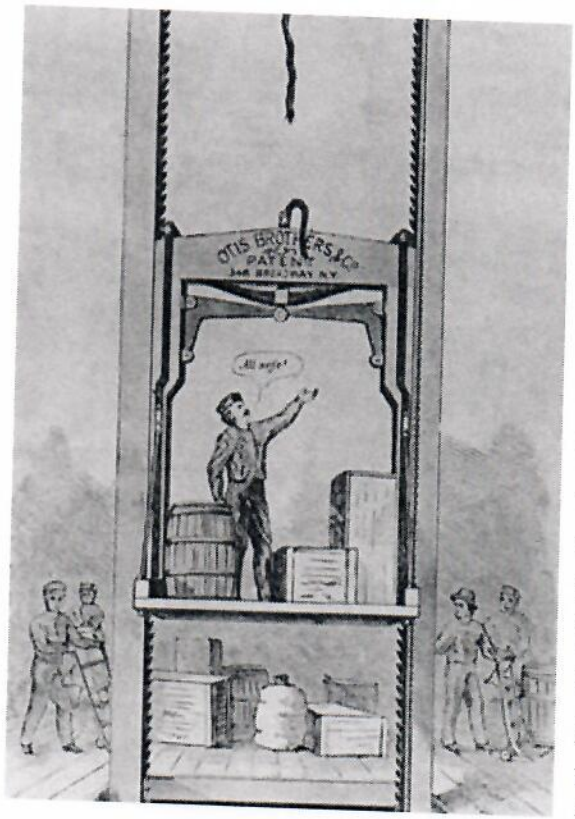
The Bessemer Process

More than anything else, steel moved America into the Industrial Age. Steel is an iron alloy; that is, a mixture of iron and other metal. Steel had been used to make swords, guns, and other objects for years. In the 1850's however, Henry Bessemer developed a new process for making steel that was easier and cheaper than any previous method. He patented his new invention in 1865. It used 1/7 the coal that older processes had used and resulted in steel that was much cheaper. This new "Bessemer Process" resulted in an increased output of steel by 500% between 1867 and 1900.

Steel became used to create skyscrapers in America's cities, barbed wire, plows, and more. However, the main use for this new brand of steel was the expanding railroad industry in America. Without the Bessemer Process, America's rail network would have been much more expensive and thus have taken much longer to build.

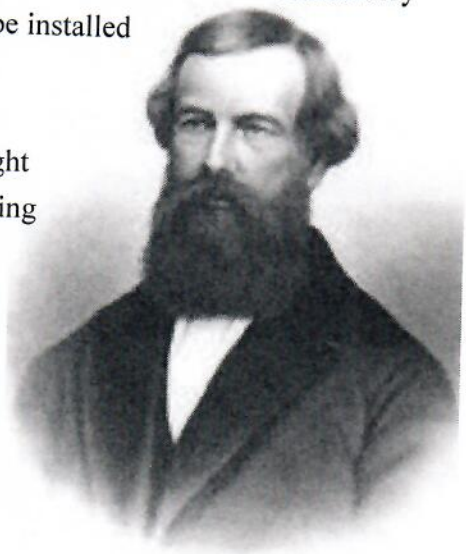


The Elevator



As early as the 3rd Century BC, platforms were raised and lowered in a shaft to transport people and freight. These primitive elevators were usually operated by human, animal, or water wheel power. Almost 2,000 years later, in 1743, a counter-weighted, man-powered, personal elevator was built for King Luis XV connecting his apartment in Versailles with that of his mistress, Madame de Chateauroux, whose quarters were one floor above King Luis.

During the Industrial Revolution, steam-powered elevators were used in factories and mines to lift heavy objects, but these required large engines and could not be brought into more traditional buildings for people to use. Soon, hydraulic machines began to replace the steam-powered elevators and were supported by a heavy piston, and operated by the water (or oil) pressure produced by pumps. These still did not catch on because they were unsafe and could not be installed in most buildings.



In 1853, however, the American inventor Elisha Otis demonstrated a freight elevator equipped with a safety device to prevent falling in case a supporting cable should break. This increased public confidence in the elevator for the first time. Otis established the Otis Elevator Company for manufacturing elevators and patented a new and safer steam elevator in 1861. His brake system is still used in modern elevators, and this invention made skyscrapers a practical reality.