Thomas Edison’s Place in Electric History
Shannon Matuszny
May 3, 2012
Andrew Bell

**Introduction**

Thomas Alva Edison had a creative, inquisitive mind from being a young boy to just before death. He invented and improved upon many things. The most well known of his inventions is the light bulb. Edison has also obtained seemingly countless patents. He may still be remembered today through the existence of General Electric.

**Early Life**

Originally from Holland, the Edison family came to the United States around 1730. During the American Revolution, the Edison family’s farm and land in New Jersey was confiscated because they remained Loyalists. The family was forced to migrate to Nova Scotia and eventually settled in Ontario. After Edison’s father resettled in Milan, Ohio with his new wife, Thomas Alva Edison was born on February 11, 1847 in the family’s home. When the inventor was young, a “story is told of how he tried – unsuccessfully – to solve the mystery of hatching eggs by sitting on them himself, in his brother-in-law’s barn” (Venable, n.d.). Formal schooling ended at the age of 12, which was followed by his mother undertaking the task of educating such an inquisitive mind. Edison developed his business skills young, by first becoming a newsboy on a train and then becoming “a middle-man for fresh vegetables and fruit, buying from the farmers along the route” (Venable, n.d.). Also during this period, Edison learned telegraphy from a station agent. The station agent’s young boy was saved from a moving freight car by Edison. This is ultimately what led this great inventor to have such an interest in electricity (Venable, n.d.).

At only the age of seventeen, Thomas Edison was a telegrapher traveling all over the Midwest. In his spare time, he experimented to “improve the crude telegraph apparatus of the era” (Venable, n.d.). Edison invented some new items, but mostly just improved the things that were already in existence. Some of his early inventions include an electrical vote recorder, a universal stock ticker, and a carbon telephone transmitter button. The most well-known of Thomas Edison’s invention is the incandescent light bulb (Venable, n.d.).

**Incandescent Light**

Many people think of Edison as the sole inventor of the light bulb, which is not entirely true. Historians believe that although Edison was not the inventor of the first light bulb, he was the creator of the first commercially viable one in 1879 (“Thomas,” n.d.). His purpose was really striving to create a lamp to be used inside a home, known as an incandescent lamp. An incandescent lamp “makes light by using electricity to heat a thin strip of material until it gets hot enough to glow” (“Light,” 2007). There were many other inventors who attempted to create an incandescent electric lamp and failed. These inventors tried to “sub-divide electric light or make it smaller and weaker than it was in the existing electric arc lamps, which were too bright to be used for small spaces” (“Light,” 2007). Some of these men included Sir Humphrey Davy, Warren De la Rue, James Prescott Joule, and James Bowman Lindsay (“Light,” 2007).

A durable incandescent material, a better vacuum in the bulb, and a filament material of high resistance were all factors that significantly contributed to his success. Before success, many of his experiments dealt with testing many different metal filaments (“Thomas,” n.d.). Edison tested Platinum, which was not only expensive and too low in resistance but also proved to be difficult to work with because of its “prone to being weakened by heating and oxygen attack” (“Thomas,” n.d.). Finally finding success, Edison filed for a patent for an electric lamp using “a carbon filament or strip coiled and connected … to platina contact wires” (“Thomas,” n.d.). Within a year of this patent, Edison and his team found that a carbonized bamboo filament could last 1200 hours, and began manufacturing them (“Thomas,” n.d.).

 Thomas Edison actually invented “seven system elements that were critical to the practical application of electric lights as an alternative to the gas lights that were prevalent in that day” (“The inventions,” n.d.). These developments included the parallel circuit, a durable light bulb, an improved dynamo, the underground conductor network, the devices for maintaining constant voltage, safety fuses and insulating materials, and light sockets with on-off switches (“The inventions,” n.d.). With each of these developments, Edison gained an increasing number of patents. “Of 1,097 United States patents granted to Edison during his lifetime – by far the greatest number ever granted to one individual – 356 dealt with electric lighting and the generation and distribution of electricity” (Venable, n.d.).

**Inventions after the Incandescent Light**

Edison continued to create and improve upon existing items. In 1883, he came up with what is known as the “Edison effect,” which was the first application in the field of electronics. This was a “phenomenon by which an independent wire or plate, when placed between the legs of the filament in an electric bulb, serves as a valve to control the flow of current” (Venable, n.d.). He also accrued more than eighty patents on improvements to the cylinder phonograph and the dictating machine. Edison also eventually applied for a patent on the motion picture camera, which he invented in 1891 (Venable, n.d.). By inventing and perfecting the steel alkaline storage battery, Edison easily made another one of his inventions a commercial success although it was short lived (Beals, 1996). Lastly before his death in 1931, Thomas Edison was able to produce rubber from goldenrod grown in his experimental gardens in Florida. This enabled the United States to be independent of foreign sources for rubber, which was an essential item the United States lacked in World War I (Venable, n.d.).

**Electric Companies**

Thomas Edison had various electric companies that continued to grow until 1889, when they were combined to form Edison General Electric. Although the company used Edison’s name in its title, he never actually controlled it. Eventually, Edison General Electric merged with its leading competitor Thompson-Houston and the new company’s name changed to General Electric. Bankers such as J. P. Morgan had to become involved with the company because of the amount of capital needed for the incandescent industry to continue growing (“The inventions,” n.d.). At one point, Thomas Edison and George Westinghouse formed the Board of Patent Control, which was a “joint arrangement between General Electric and the Westinghouse Company to defend the patents of the two companies in litigation” (“Light,” 2007). Over 600 lawsuits for patent infringement filed proved that this decision was wise and beneficial for both companies that seemingly monopolized the industry (“Light,” 2007).

**Conclusion**

Thomas Alva Edison had a huge impact on the world even as we know it today. This can be easily remembered today by seeing anything with a General Electric logo. Starting his career as a newsboy and soon after a telegrapher easily enabled him to become interested in and begin experimenting with electricity and other machines. Although he is most known for the invention of the light bulb, Edison also created and improved upon many other things like the phonograph, motion camera, and the “Edison effect.” Thomas Alva Edison may be remembered most for the incandescent light bulb, but he has made many other contributions worldwide.

References

Beals, G. (1996). Thomas Edison's inventions. *Thomas Edison Home Page*. Retrieved May 2, 2012, from http://www.thomasedison.com/Inventions.htm

Light bulb history - invention of the light bulb. (2007). *The Great Idea Finder*. Retrieved May 2, 2012, from http://www.ideafinder.com/history/inventions

The inventions of Thomas Edison. (n.d.). *Inventors*. Retrieved May 2, 2012, from <http://inventors.about.com/library/inventors>

Thomas Edison lightbulb. (n.d.). *Thomas Edison Muckers*. Retrieved May 2, 2012, from http://www.edisonmuckers.org/thomas-edison-lightbulb/

Venable, J. D. (n.d.). A brief biography of Thomas Alva Edison | Thomas Edison Muckers. *Thomas Edison Muckers*. Retrieved May 2, 2012, from http://www.edisonmuckers.org/thomas-edison-biography/