

Continuum of Greatness

*The Hall of Fame for Great Americans
at Bronx Community College , CUNY*



Thomas Alva Edison

1847 -1931

“Genius is 1 percent inspiration and 99 percent perspiration”

Hall of Fame Facts

Thomas Alva Edison (1847-1931)

- Elected into Hall of Fame: 1960
- Edison was among the three persons to be elected into the Hall of Fame in 1960
- Edison received 108 out of 141 votes.
- Sculpture by: Bryant Baker, 1961.

Thomas Alva Edison

February 11, 1847— October 18, 1931



Thomas A. Edison was an exceptionally prolific inventor whose curiosity, ingenuity, and perseverance led him to dozens of inventions and a total of 1093 patents. Thomas Alva Edison was born in Milan, Ohio. As a child, Edison did not speak until he was four and when he finally did was always full of questions. He was deemed to be a hyperactive child with an “addled brain” by his teacher. His mother, Nancy Edison who was an accomplished educator herself, withdrew Thomas Alva from the school and home schooled him herself. She encouraged young Thomas Alva to explore his interest in the sciences to the point that he set up his first chemical lab in the cellar of his home when he was ten years old!

When he was 21, Edison came out with his first patented invention of the electrical vote recorder, which was rapidly followed by vastly improved versions of the stock ticker and telegraph. Edison improved on the telephone invented by Alexander Graham Bell by testing nearly two thousand materials for better reception. Finally, Edison found that a carbon transmitter greatly improved the reception, an extremely important step in making the telephone a practical instrument.

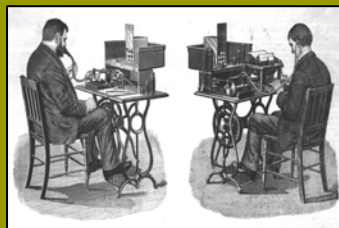
Edison’s continued fascination with sound led him to the invention of a sound recording device, namely the phonograph. The phonograph consisted of a cylinder covered with a tinfoil, a movable arm with a mouthpiece at one end and a needle at the other, and a crank for turning the cylinder. To test it out, Edison recited “Mary had a little lamb...” into the mouthpiece. These sound vibrations were transmitted to the needle that traced the pattern on to the tinfoil of the cylinder and when the needle was made to re-trace the grooves on the tinfoil, the needle vibrated in much the same way as it did while recording and the vibrations reproduced the original sound recording of Edison’s voice! We owe our CD listening experience to Edison’s invention of the phonograph in 1877. The Next year, Edison moved on from sound to light.

In 1878 he invented, the kinetograph, a machine that could do for images what the phonograph could do for sound. He realized that when images were moved quickly, the eye could be tricked into seeing motion. Coupled with a kinoscope and a projector that was also invented by Edison, here was the beginning of the motion picture! Edison, did in fact construct the first motion picture studio to film and show his short motion pictures making West Orange, NJ the birthplace of the motion picture.

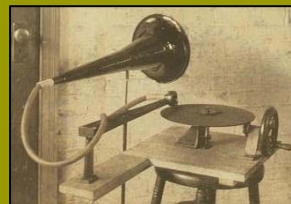
1877 - Thomas A. Edison builds the first phonograph.



1880’s—The phonograph cylinder dominates the recorded sound market for dictation and transcription.



In 1888, Emile Berliner invents the gramophone disc, a simpler way to record sound.



1889— Berliner markets the Berliner Gramophone, the first record label and company to produce gramophone records, which were made of rubber.



In 1879, Edison was the first to invent a commercially practical incandescent light bulb. He tested 3000 filaments before he came up with his safe and long lasting version of the electric light bulb that used a tungsten filament.

This invention was followed by Edison's greatest achievement – setting up of the first model of a complete power station. The first central power plant, called the Pearl Street Station in lower Manhattan began generating electricity in September 1882. Pearl Street had one generator and it produced power enough to run 800 electric light bulbs. With the success of Pearl Street Station, Edison created the Edison Company for Isolated Lighting in May 1883 to build and sell electric power stations, like the Pearl Street Station, to towns and cities throughout the United States. By 1890, Edison merged all his businesses to form the Edison General Electric, which was to become the General Electric Company in 1892 in which he was a major shareholder.

Edison finally slowed down in the late 1920's, although he still worked from home and met with his friends Henry Ford and Marie Curie among others. He received a patent even as late as 1931, the year of his death. A few months before his death, the Lackawanna Railroad implemented suburban electric trains in New Jersey, a project that was developed and conducted under the guidance of Edison.

The man who gave us sound, light, and power, defines genius in his own terms: “Genius is 1 percent inspiration and 99 percent perspiration”.

Consulted Sources:

Dooling, Michael *Young Thomas Edison*, Holiday House, New York, 2005

Israel, Paul. *Edison: A Life of Invention*, John Wiley and Sons, New York, 1988

Nirgiotis, Nicholas. *Thomas Edison*, Children's Press, Chicago, 1994.

Stross, Randall E. *The Wizard of Menlo Park: How Thomas Alva Edison Invented the Modern World*, Crown Publishers, New York, NY. 2007



Menlo Park, where Thomas Edison made many of his inventions, is in West Orange, NJ. The Menlo Park Laboratory has been designated as a national historic site.

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1931

↓
The stereo system is invented by Alan Blumlein of EMI records.

1950's

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Long playing records or LPs made of vinyl reach the market.



1940

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The first surround sound system called *fantasound* is used in Walt Disney's film *Fantasia*.



1981

↓
The first CD to be released is the "The Visitors" album by ABBA.

1993

↓
The first digital surround sound system is used in the production of *Jurassic Park*.



1998

↓
DJ Red Alert from the Bronx is recognized as the most famous turntablist in pioneer of hip hop music. Turntablism is the art of creating music by touching, moving, and scratching phonograph records while manipulating the output using a DJ mixer.



Edison the Inventor

List of major Inventions:

- Electrical Vote Recorder, 1862
- Universal Stock Ticker, 1869
- Multiplex Automatic Telegraph, 1872-76
- Carbon Telephone Transmitter, 1876
- Phonograph, 1877
- Commercially viable incandescent light bulb, 1879
- Sockets, Switches, and Insulation tape, packing tape 1879
- Magnetic ore separator, 1880
- Electric Railway for freight and passengers, 1880
- Pearl Power Station, 1882
- Wireless Telegraph, 1885
- Motion Picture Camera, 1891
- Giant roller machine to powder rocks 1891-1900
- Fluoroscope, 1891-1900
- Alkaline Storage Battery, 1900-1909
- Dictaphone, 1905
- Kinetophone or the Talkies 1912
- Telescribe, 1914

Edison the Entrepreneur:

List of major Entrepreneurial Ventures:

- Printed and published "The Weekly Herald" 1862.
- Private Telegraph Line Business, 1868
- Partner in business making stock tickers
- Incandescent lamp factory in Menlo Park, NJ 1880
- Incandescent lamp factory in Harrison, NJ 1881
- Manufacture of dynamos, switches, sockets, 1881
- Central Power Station, 1882
- Iron Ore Enterprise, 1891-1900
- Commercially sold alkaline storage batteries, 1909
- Production of Carboic Acid, 1914
- Chemical production for textile and rubber plants
- Manufacture of records, 1910-1914

Useful Edison Websites:

- For a virtual tour of Edison's birthplace and an account of his early inventions:
<http://www.tom Edison.org/index.html>
 - For a virtual tour of Edison's Menlo Park inventions
<http://www.nps.gov/edis/index.htm>
 - For a well rounded biography of Edison
<http://www.thomasedison.com/>
- <http://www.borntoexplore.org/>

For parents and teachers dealing with curious children that don't conform:
<http://www.borntoexplore.org/>