

## Thomas Edison (1847-1931)

Thomas Alva Edison was, perhaps, the most successful inventor of all time. At his death, he had 1,093 patents. He had only about three months of formal education, but his mother, who was a teacher, taught him at home. He loved to learn and joined the public library even though it cost him two days' wages. Edison wrote down so many of his ideas that they eventually filled more than 3,000 of his notebooks!

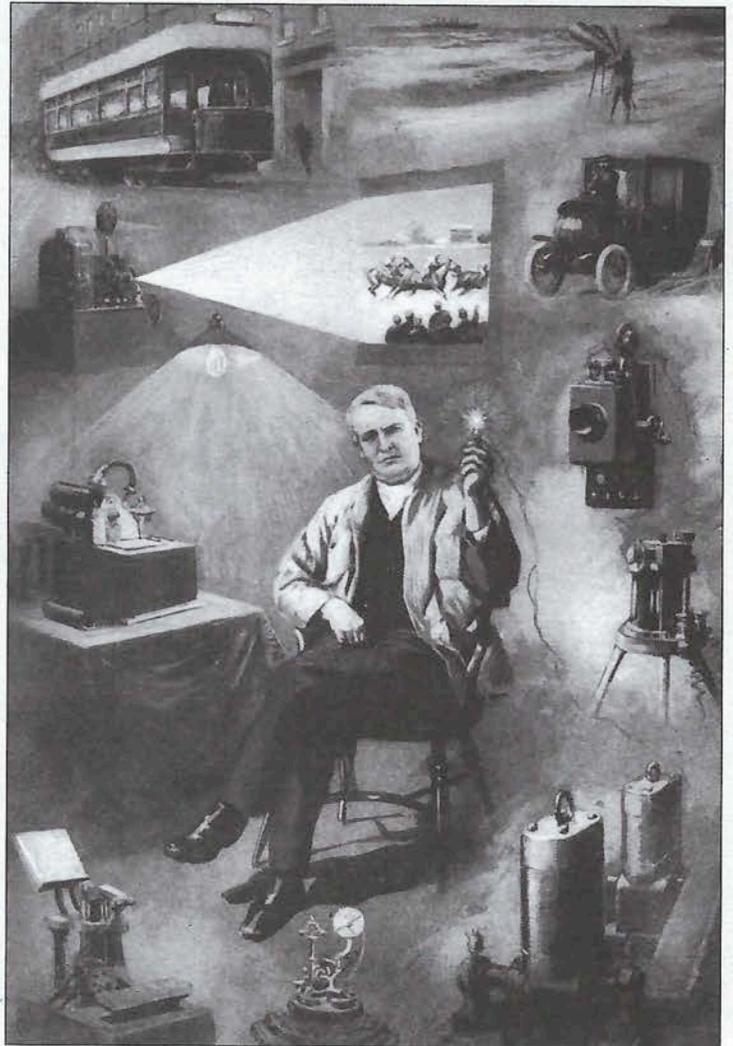
Edison established a laboratory that used many skilled assistants who were experts in different fields. In this laboratory, they invented devices that brought light through electrical power (the first **electric lightbulb**), created recorded music (the **phonograph** in 1877), and invented **motion pictures**.

For many years, scientists and inventors had tried to create an electric light. The first electric lights were noisy and smoky, and required a lot of attention to work. They were used mostly for streetlights and lighthouses.

Edison used other scientists' findings to create the first successful electric lightbulb. He did this by electrically heating a **filament** (a thin material that can conduct electricity and glows when electricity passes through it) inside a glass bulb. Edison was the first to produce **carbon fibers** while he was experimenting with filaments for his lightbulbs. Today people use carbon fibers for bicycle frames and tennis racquets.

In October 1879, Edison made a filament from cotton thread, and the bulb burned for forty hours. In 1882, he opened the first large-scale source of electricity to generate **electric power for public use**. Today people use lightbulbs for advertising and decorating, not just for light.

Lewis Latimer, an engineering expert, worked with Edison on the lightbulb and cowrote the first book explaining how to use electric light. Latimer was born in Massachusetts in 1848. His parents were slaves who had escaped. Latimer studied drafting and drew the patent drawings for Bell's telephone. He invented a way to make **carbon filaments** for an incandescent (white, glowing light with intense heat) lamp, and in 1881, he supervised the installation of electric lights in four major cities including New York and London.



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