Nikola Tesla.

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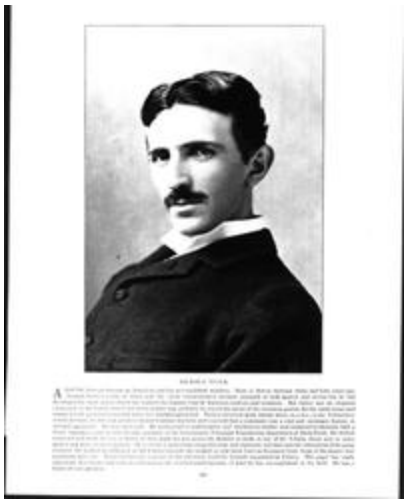
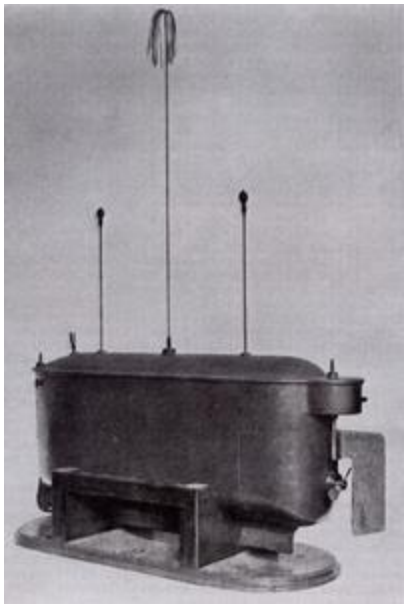
Inventor

- **Born:** July 10, 1856
- **Birthplace:** Smiljan, Austro-Hungarian Empire (now Croatia)
- **Died:** January 7, 1943
- **Place of death:** New York, New York

Nikola Tesla was an inventor of many machines . His most famous invention was the induction motor, which uses alternating currents to generate power.



Nikola Tesla Library of Congress



By Nikola Tesla 1898 (Nikola Tesla Museum, Belgrad)

Tesla was born in Croatia (part of the former country of Yugoslavia) on July 10, 1856, to an Orthodox priest and a homemaker. Growing up Tesla was always interested in technology.

After high school, Tesla first attended the Technical University in Graz, Austria, and later graduated from the University of Prague in Germany in 1880.

During school Tesla began experimenting with alternating currents. During these experiments, he discovered the rotating magnetic field. This field is a magnetic whirlwind made in a motor by two or more currents coming together. The motor uses alternating currents to generate a large amount of electricity in one place.

In 1882 Tesla went to work in Paris, France, for the Continental Edison Company. The company sent him to Germany in 1883 where he developed his induction motor. He used the principles of the rotating magnetic field and alternating currents to make it.

Tesla moved to New York City in 1884 with nothing but four cents and his ideas. He found his first job with the famous

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inventor Thomas Edison , but the two had differing ideas, so he left.

In 1885 he sold the patents for his dynamos, transformers, and motors to inventor George Westinghouse. This caused Tesla's alternating-current (AC) electricity system to be in direct competition with Edison's direct-current (DC) system.

Tesla's system eventually became the accepted one for the electricity generation.

In 1891 Tesla earned his United States citizenship and finally had enough money to set up his own laboratory. In his lab he began experimenting with early forms of x-rays and worked on a carbon button lamp, electrical resonance, and different types of lighting.

The lighting systems Tesla developed were also used in Westinghouse's projects. This led to the company's contract to provide a power system for Niagara Falls, which became the first modern power station and bears Tesla's name and patent numbers.

In 1891 Tesla also invented what is known as the Tesla coil. It is an air-core wire that is used as an electricity transformer at high voltages. This coil is used in radios and televisions. Its invention led to Tesla's early developments of fluorescent lights and radio transmission.

In 1899 Tesla moved from New York to Colorado Springs, Colorado, where he created wireless lamps and generated bolts of lightning. He also discovered terrestrial stationary waves, which are waves in the earth that allow the earth itself to be used as a conductor for electricity.

Tesla returned to New York in 1900 and began to build a wireless world broadcasting tower. This tower would allow communication throughout the world. People would be able to send pictures, messages, weather reports, or stock reports to distant places in a moment.

Tesla found the money to fund his tower from the wealthy banker, J. P. Morgan. However, when Tesla began to have labor problems, Morgan worried and pulled out his funds. The failure of his tower proved to be Tesla's greatest disappointment.

Tesla was granted over two-hundred patents in his lifetime. However, in 1915 he fought Italian inventor Guglielmo Marconi for patent rights to many radio parts. Although he lost the case, in 1943 the United States Supreme Court invalidated the earlier ruling.

Tesla received many honors for his achievements. In 1894 he won the Elliott Cresson Medal. He also won the 1916 Edison Medal, the highest honor given by the Institute of Electrical

Electronics Engineers, and in 1934 he won the John Scott Medal.

The Nikola Tesla Museum was constructed in Belgrade, Serbia, and in 1956 the "tesla" (T) was created by the International Electrotechnical Commission. The tesla is a unit of magnetic flux density. Tesla also was awarded honorary degrees from Columbia and Yale Universities.

Nikola Tesla was known to be eccentric and compulsive. His circle of friends included such famous Americans as Mark Twain. Many people believed he was crazy because he believed he was able to communicate with beings from outer space, that he could split the earth in half, and that he had created a death ray. Tesla died on January 7, 1943, in New York City.

Tesla's Inventions Include:

- induction motor
- carbon button lamp
- lighting systems
- Tesla coil

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By Phyllis Barkas Goldman

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