



Alessandro Volta

1745-1827

Volta is said to have been one of the greatest and most brilliant experimenters of his time.

His first major contribution to physics was the invention of the electrophorus, in 1775. It consisted of a disc made of turpentine, resin and wax. The electrophorus could be electrically charged by wiping it with a fox's tail. Once charged, the apparatus produced sparks for months.

Volta showed that electric current did not need the presence of animal tissues, as Galvani and others had supposed. He produced the famous *voltaic electric pile* consisting of a column of alternating zinc and silver discs separated by porous cardboard soaked in brine. His invention was the first available source of constantly flowing electric current. Its principle is still used in batteries.

Alessandro Giuseppe Antonio Volta was born in Como, Italy, on February 18th, 1745, the youngest son of a noble family, which served the church. His father, the Lombard nobleman, Filippo Volta of Como, and his mother, Maria Maddalena Inzagi, were not blessed by fortune. Apart from financial difficulties three of their nine children died in infancy. Alessandro was about seven years old when his father died. His uncle, the canon, took charge of his education. Apparently he received his first knowledge at home, and at the age of 15 he was sent to the city's Jesuit school to study philosophy and law.

In the 1760s all Europe was fascinated by electricity or 'electric fire' and Volta also turned his attention to electricity and began his experiments.



Volta invented the first battery



Owing to his inventions Volta was promoted, in 1775, to the position of Professor of Physics at Como, and later took a similar appointment at Pavia University. In 1795 he became the Rector there.

It is known that in 1800 Napoleon invited Volta to Paris to demonstrate his pile. The Emperor awarded Volta a gold medal and pension, and made him a Count.

Although Volta came from a religious family, he was not ascetic in his life. It is said that he was a large, vigorous man, who 'understood a lot about the electricity of women'. **According to his biographies, he had a long love affair with a famous singer, Marianna Paris.** But his religious brothers, all his family, and the emperor himself did not allow the marriage because the profession of singer was not of good repute. Instead he married Teresa Peregrini, a rich woman and twenty years his junior. The marriage was a happy one. The three sons whom she bore him were his pride and joy.

Volta had a remarkable keen eye for detail. Once, when rowing with friends on Lago Maggiore, he poked a stick into its muddy bottom and saw bubbles rise to the surface. He trapped the gas in a bottle and began to study its properties. Thus, he discovered the gas of **methane**.

He retired at the age of seventy four to his estate in Como where he died in 1827. The unit of electric potential was named the **volt** in his honour.



The electric pile fascinated Napoleon