Karl Ferdinand Braun

Karl Ferdinand Braun is rarely known, although one of his inventions had a lasting influence on life: it is the cathode ray tube, which is called 'Braun tube' after him. Its technology is the basis for the renown television sets (CRTs).

Biography

Karl Ferdinand Braun was born on June 6th 1850, son to a public official in Fulda. Between 1864 and 1866, when Braun was still a teenager, he already wrote several long scientific essays for example about water or crystals.

In 1868 he started studying physics, chemistry and math at the University of Marburg. A year later he transferred to the University of Berlin and became an assistant to Heinrich Gustav Magnus until Magnus' death in 1870. Braun continued his training with Professor Quincke, with whom he did his Ph.D. in 1872 with a thesis on vibrating strings. Between 1872 and 1874 he followed Quincke as an assistant to the University of Würzburg. During this time he finished his state examination in Marburg in 1873. Between 1874 and 1876 he worked as a high-school teacher at the 'Thomas-Gymnasium' in Leipzig. In 1877 he accepted an associate professorship for theoretical physics in Marburg until he was offered a professorship in Strasbourg in 1880. Between 1883 and 1885 he worked as a professor in Karlsruhe. After that he accepted a professorship in Tübingen where he worked until 1895.

In 1909 Karl Ferdinand Braun received the Nobel Prize in Physics together with the Italian Guglielmo Marconi for their "contributions to the development of wireless telegraphy."

Between 1895 and 1918 Braun worked as a professor at the University of Strasbourg again.

On April 20th 1918, before the end of the first world war, Karl Ferdinand Braun died in the United States in Brooklyn, New York.

Research/Nobel Prize

Ferdinand Braun was one of the few professors of the century who was working on the scientific and technical development of new discoveries. Heinrich Hertz succeeded in creating electromagnetic waves in 1886, but he did not consider an application for communication purposes. This was done by a young Italian, Guglielmo Marconi. Animated by his success Braun began with the scientific work on this area. He improved the system of synchronizing the frequencies of transmitter and receiver. In doing that he developed the basis for directional radio and the so called wireless telegraphy.

Working and Living in Würzburg

Braun's career was decided by the political course of Bismarck and Würzburg's policy on chair appointments. In 1871 Germany won the war against France and reclaimed Strasbourg, which had been taken over by Louis XIV of France in 1681. The french college was disbanded and a new German university was found. The physicist August Kundt of Würzburg accepted the offer of a chair in Strasbourg and the University of Würzburg hired Quincke, who was granted the right to choose an assistant by contract. This assistant was Ferdinand Braun, who was working on measurements on the conductivity of molten salts.