

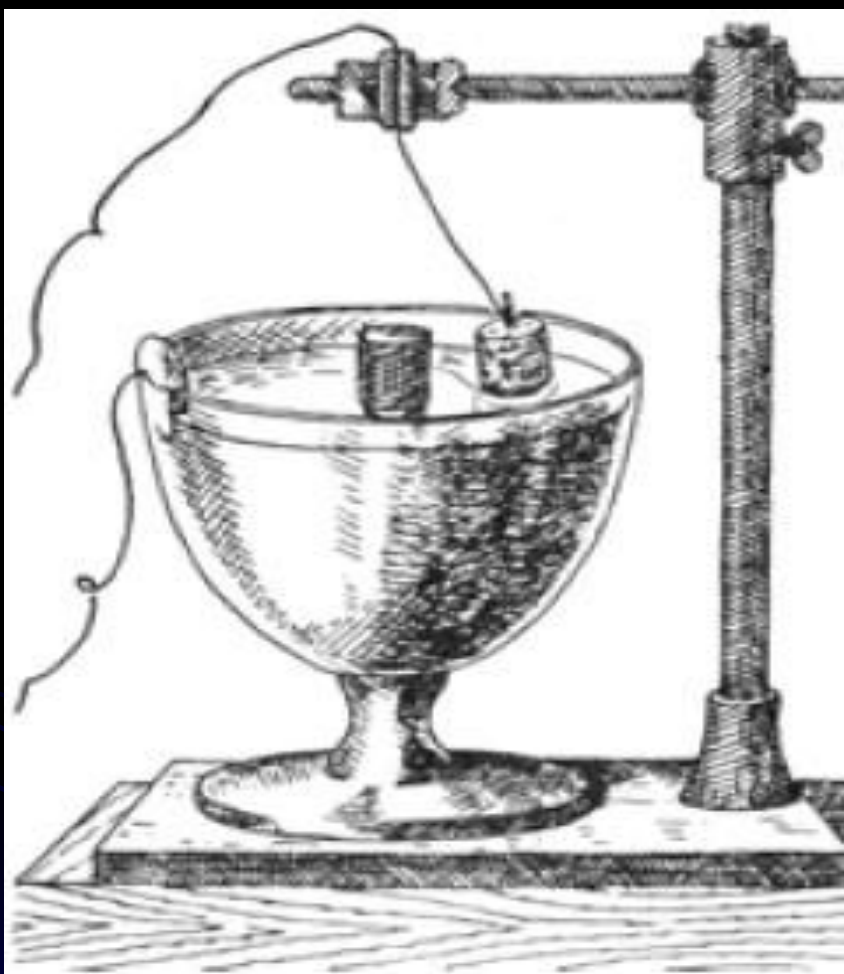
Michael Faraday



- English physicist, chemist, founder of the electromagnetic field exercises
- Member of the Royal Society of London

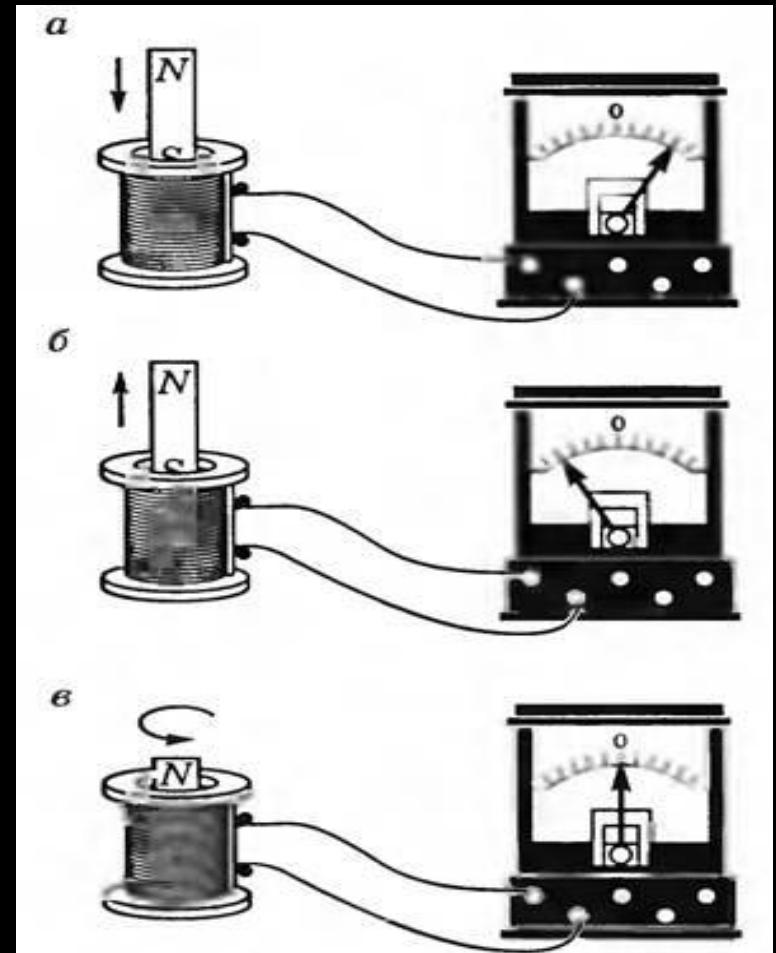
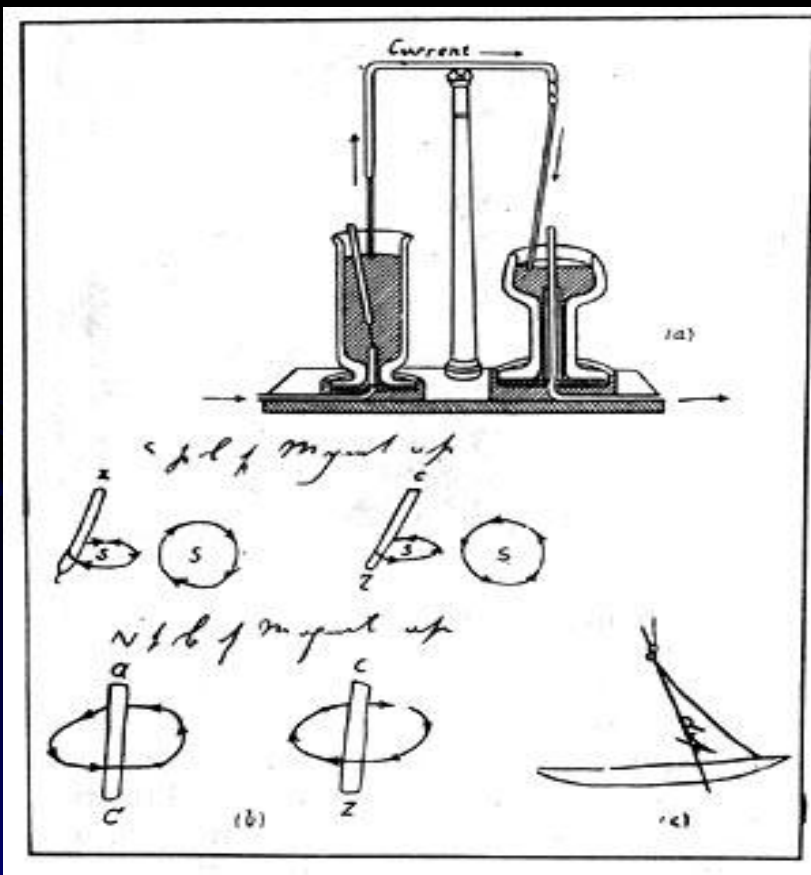
Michael Faraday
(1791-1867) was born in London . He studied independently. In 1813 he became an assistant H. Davy (English chemist and physicist, one of the founders of electrochemistry) at the Royal Institution in London in 1825 - the director of the laboratory of the Royal Institute , succeeding G. Davy, in 1833-1862 - Professor of Chemistry .

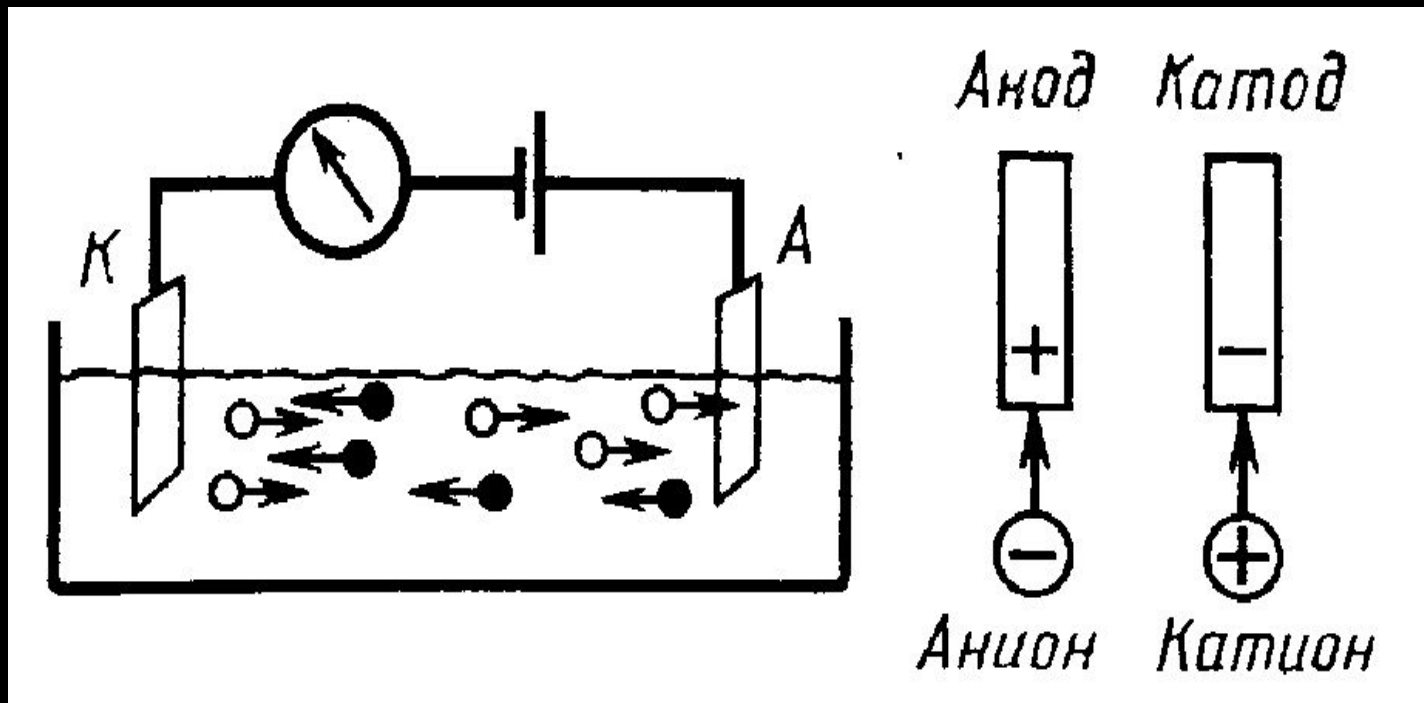




In 1821 Faraday first realized the rotation of the magnet around a conductor with a current and a current carrying conductor around the magnet , creating a laboratory model of the motor. In this experiment clearly revealed the connection between electrical and magnetic phenomena . It is no coincidence that in the same year, Faraday set myself goal is " to turn the magnetism into electricity ."

In 1831 he discovered the phenomenon of electromagnetic induction - the occurrence of an electric current in a conductor when the magnetic flux through the wire loop. In subsequent years, the scientist studied in detail the discovery of the phenomenon and established the laws of electromagnetic induction, discovered (1835) extra- after closing and opening and established their direction.



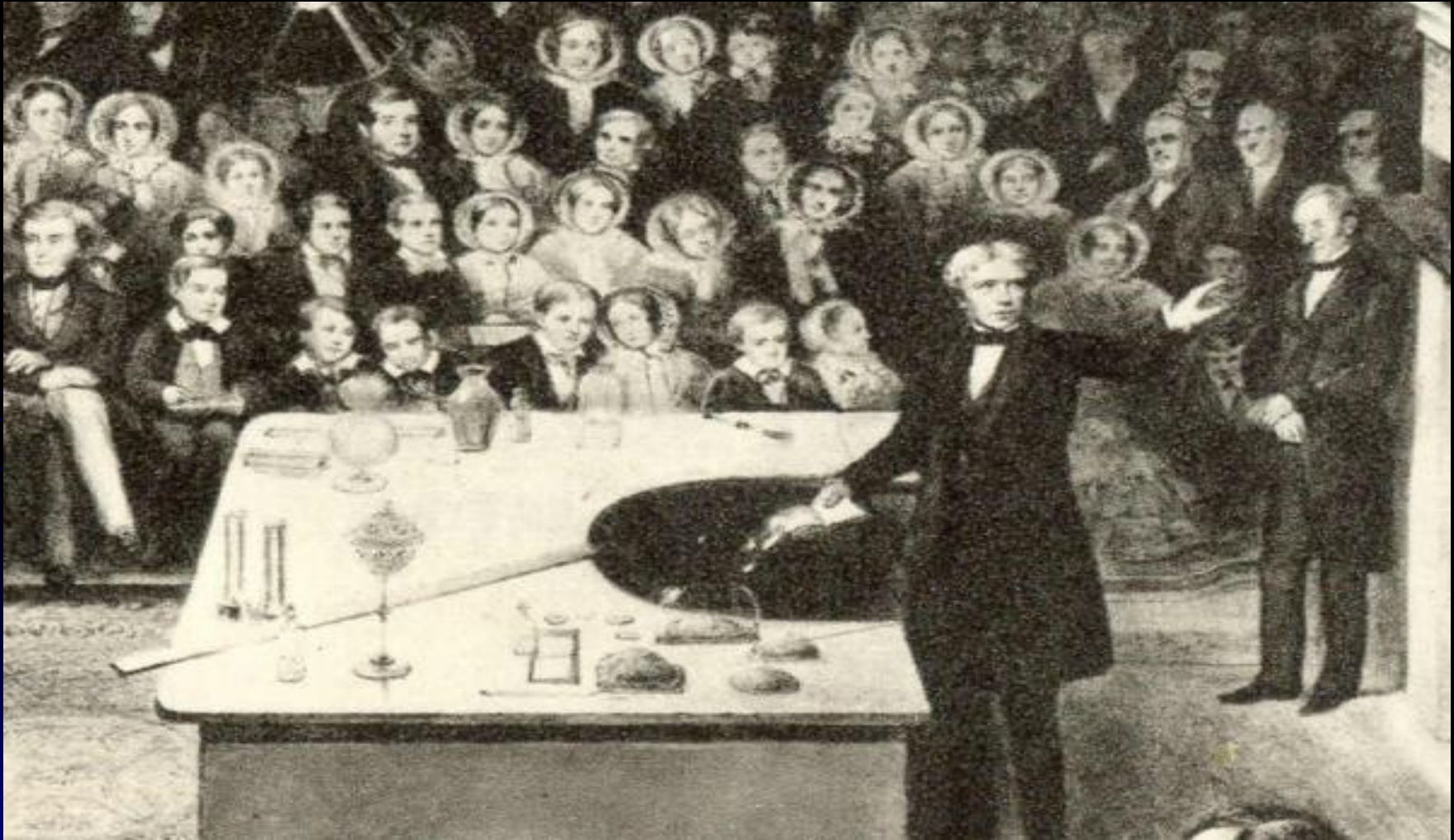


Using extensive experimental material, Faraday proved the identity of the then known forms of electricity, "animal", "magnetic", thermoelectricity, electricity generated by friction, galvanic electricity. The desire to clarify the nature of the electric current led him to experiment on the current passing through the solutions of acids, salts and alkalis.

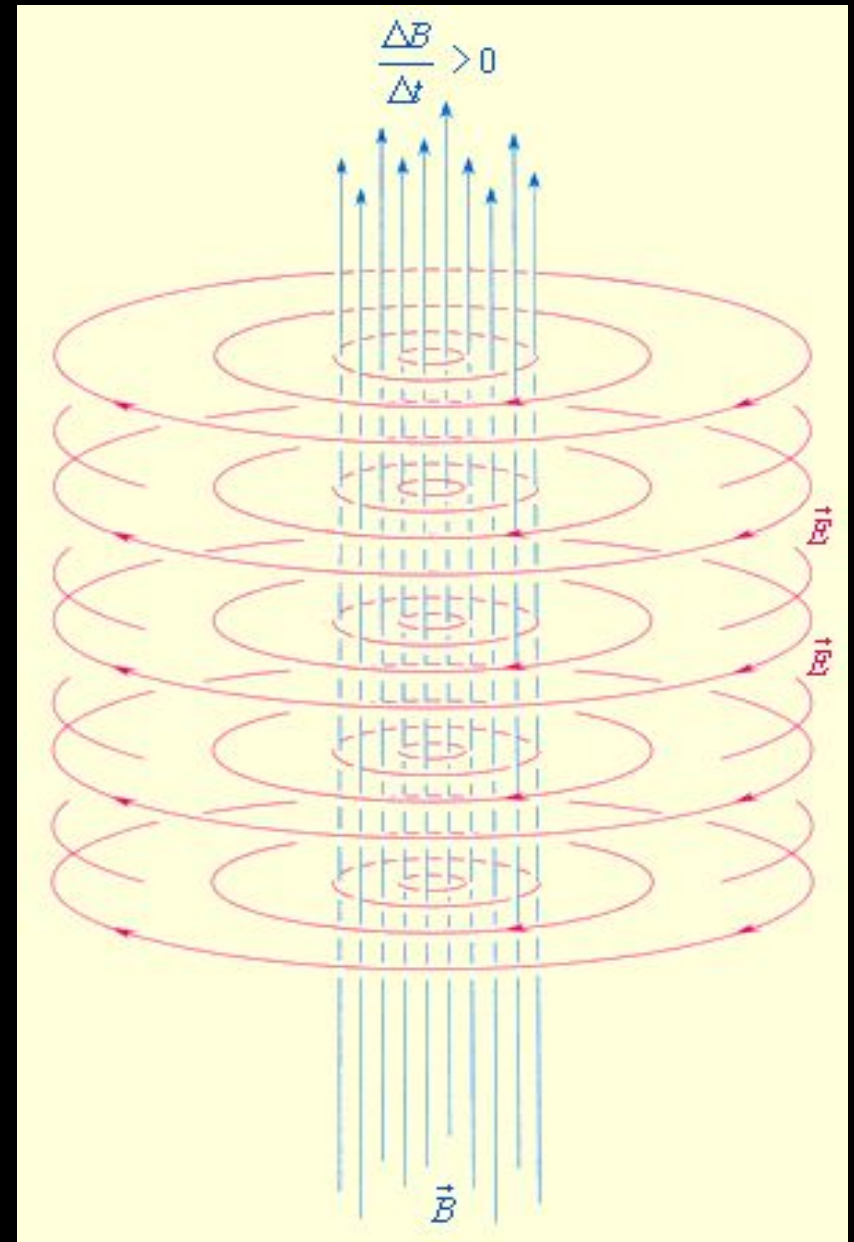
Faraday introduced the concept of mobility (1827) , a cathode , an anode , ions , electrolysis , electrolytes , electrodes (1834) ; invented voltmeter (1833) ; in 1845 he discovered diamagnetism , and in 1847 - paramagnetism .

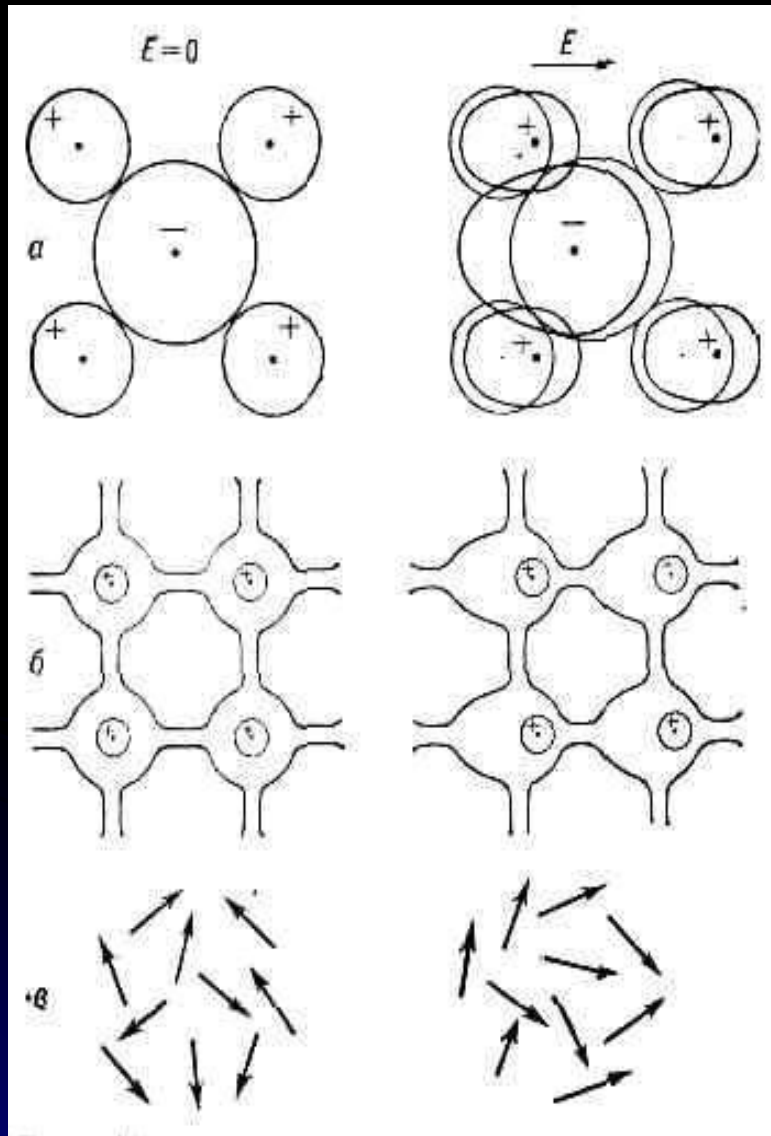


In Faraday's work on electromagnetism as important is the concept of field . He was the first in the 30 of the 19th century introduced the concept of the field , in 1845 used the term "magnetic field" , clearly formulated his concept in 1852 . According to Albert Einstein's opinion, the idea of the field was the original idea of Faraday , the most important discovery since Newton .

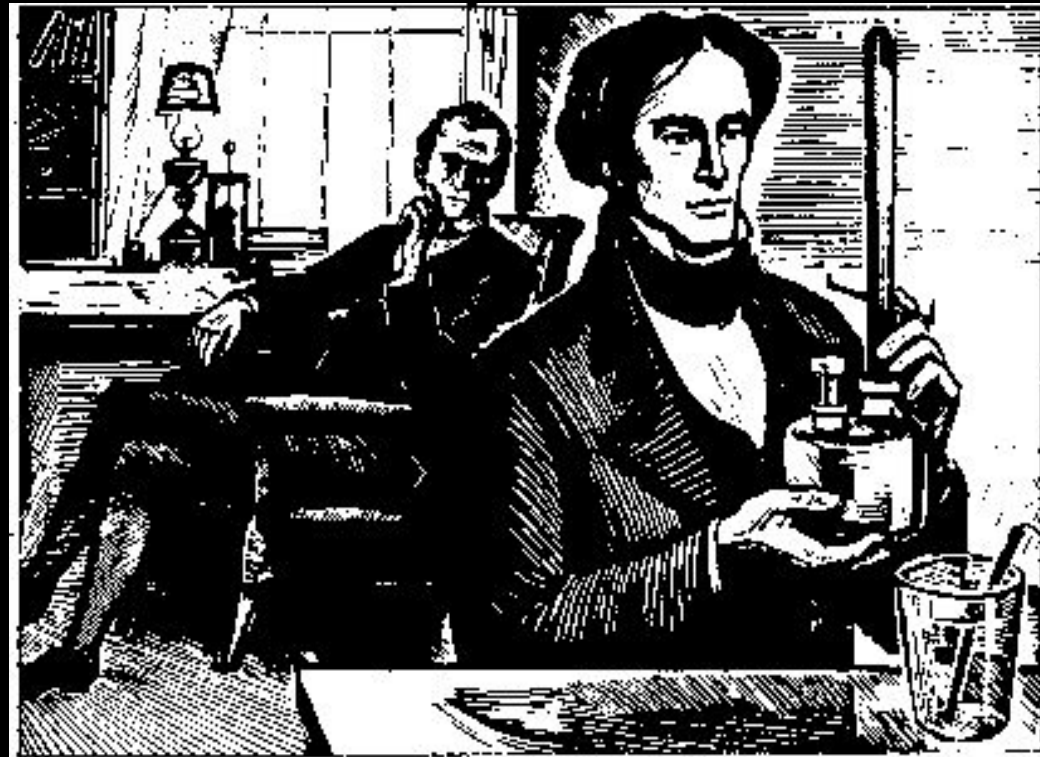


For a description of the electrical and magnetic phenomena Faraday introduced the idea of the electric and magnetic field lines , which he, however , any real thought . He also is the creator of the electromagnetic field exercises . In 1846, in " Thoughts on the radial oscillations of " Faraday expressed the idea of the electromagnetic nature of light .

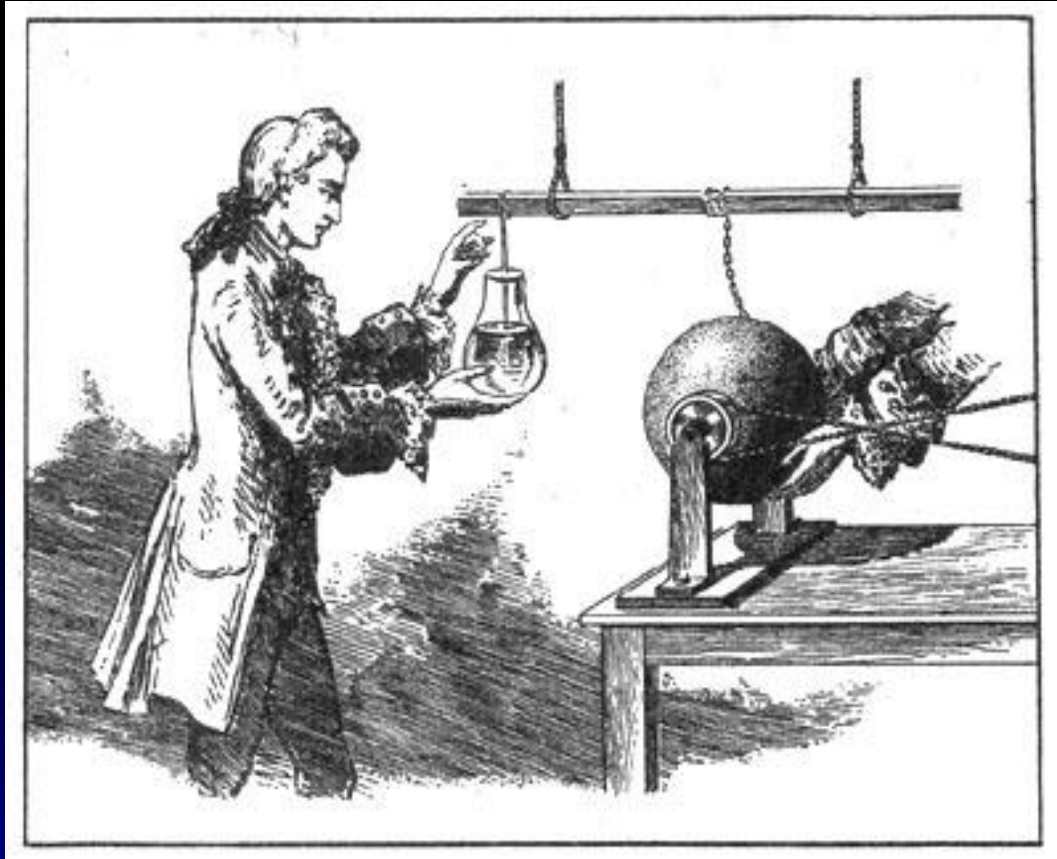




In 1837 , scientists discovered the effect of dielectrics on electric interaction (the polarization of dielectrics) and introduced the concept of the dielectric constant ; He suggested distributing electric and magnetic interaction through an intermediate medium



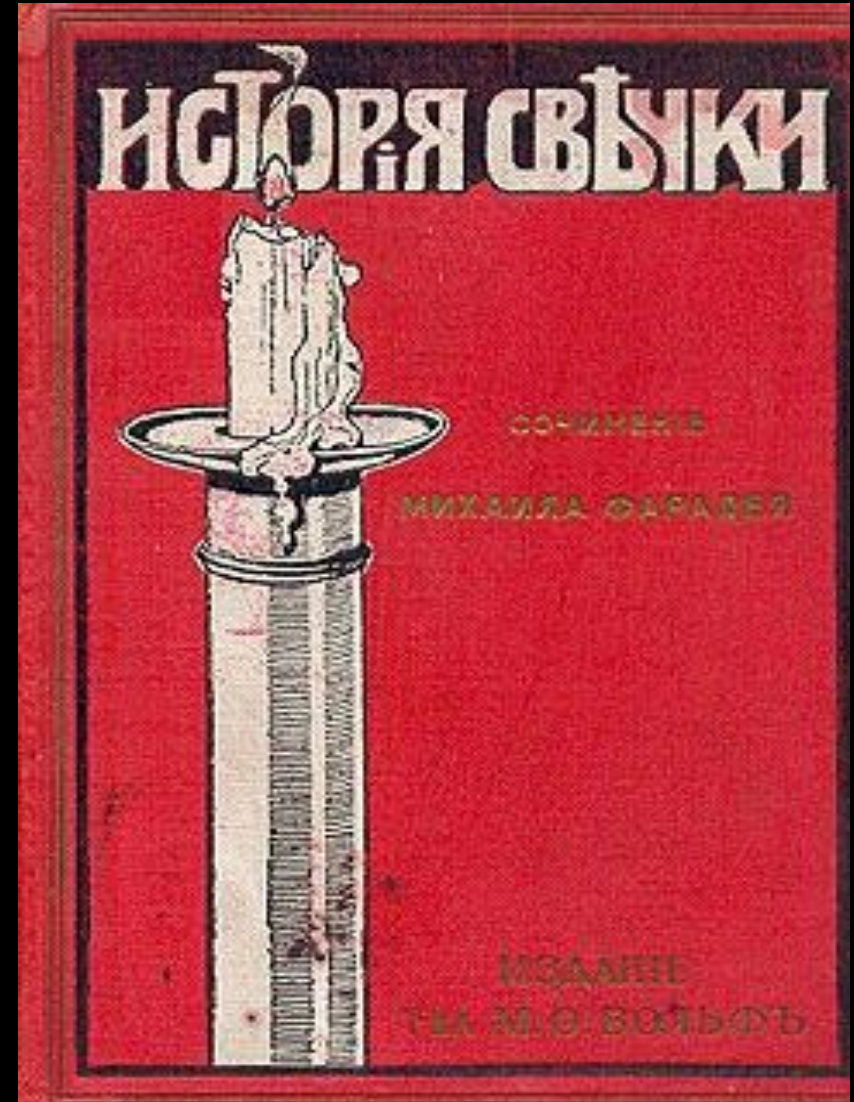
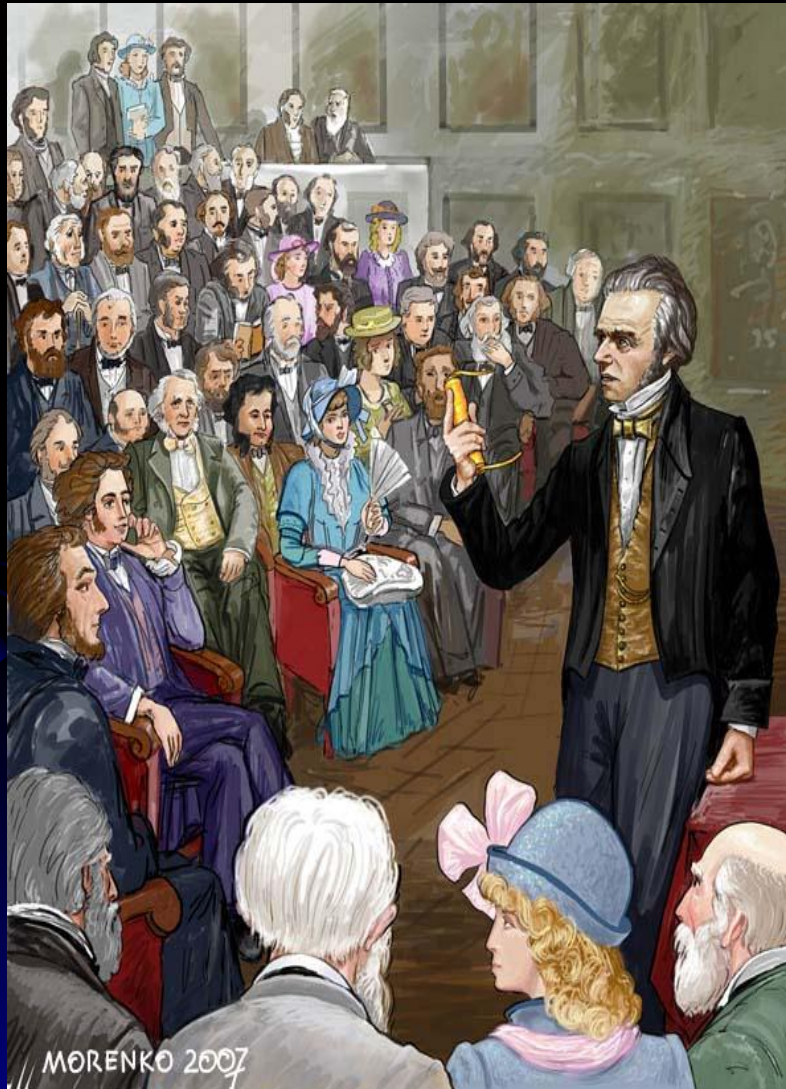
In 1843 Faraday experimentally proved the law of conservation of electric charge . He came close to opening the law of conservation and transformation of energy , having stated in 1840 the idea of the unity of the forces of nature (the various forms of energy) and their mutual transformation .



London
M. Faraday

AUTHOR OF 'CHEMICAL MANIPULATION'

Michael Faraday was a popularizer of physics, in particular his widely known book “History of a Candle”, translated into almost all languages of the world.



Thank you for attention!



Karaulov Artem IU7-41