

triumphant march, till he was offered the presidency of the institution itself. Shortly after his appointment as assistant he went abroad with Sir H. Davy, on a scientific tour through several countries of Europe. After an absence of over two years he returned to his former position in the laboratory, and from that position advanced till the management of the institution was in his hand. His own researches, began about 1820, A.D., circled mainly, though not wholly, around the subjects of magnetism and electricity, and closed in 1862 amid a halo of victory and honor, and with a record that made all the world wonder that one mind could fancy and fathom so much. The great discovery of his life was the production of electricity from magnetism. From the time when he considered magnetism "an occult power, affecting only a few bodies," his researches were continued till he saw it influencing all bodies and possessing an intimate relation with all forces. There is something majestic in the conception of those lines of force as Faraday saw them, looping themselves around every atom as their centre, —lines which had "gone out into all the world."

In 1812 Faraday gave up trade and took to science. His spare minutes and spare money, had, even before that time, been turned to account in scientific experiment. In after life when his laboratory was crowded with the best apparatus of the world, much of it of his own designing, it must have amused him to look back at his first battery. Seven discs of zinc, seven half-pence and six pieces of paper soaked in a solution of muriate of soda, formed the instrument. His first contributions to science were published in 1816. For ten years he worked mainly along chemical lines, and some of his discoveries have been of great use, but he turned ever to physics, and in that realm the great work of his life belongs. The limits of vaporization and experiments in optics and acoustics occupied his attention for a while. The years 1830 to 1834 were filled with a series of experiments that immortalized his name and showed him possessed of a wondrous power of endurance. He was a great scientist. He loved to read in the book of nature and to