FARADAY AND THE FIRST DYNAMO

Michael Faraday, a London newsboy, the son of a blacksmith, became the inventor of the dynamo, and prepared the way for the wonderful electrical inventions of the nineteenth century. He began his career as a book-binder's apprentice, employing his spare moments in reading the books he was binding. One of these books led him to make some simple experiments in chemistry. He also made an electrical machine, first with a glass bottle, and afterward with a glass cylinder.

While an apprentice he wrote to his young friend, Benjamin Abbott: "I have lately made a few simple galvanic experiments, merely to illustrate to myself the first principles of the science. I was going to Knight's to obtain some nickel, and bethought me that they had malleable zinc. I inquired, and bought some—have you seen any yet? The first portion I obtained was in the thinnest pieces possible. It was, they informed me, thin enough for the electric stick. I obtained it for the purpose of forming disks with which and copper to make a little battery. The first I completed contained the immense number of seven pairs of plates!!! and of the immense size of halfpence[56] each!!!!!! I, sir, I my own self, cut out seven disks of the size of half pennies each! I, sir, covered them with seven halfpence, and I interposed between them seven, or rather six, pieces of paper soaked in a solution of muriate of soda (common salt). But laugh no longer, dear A., rather wonder at the effects this trivial power produced."

This tiny battery made of half pennies with zinc disks and salt solution would decompose a certain solution which Faraday tested. A larger battery made of copper and zinc disks with salt solution would decompose water from the cistern. When the wires from the larger battery were put in the cistern-water he saw a dense white cloud descending from the positive wire, and bubbles rising from the negative wire. This action continued until all the white substance was taken out of the water.

Because of his interest in science, young Faraday attracted the attention of a Mr. Dance, a member of the Royal Institution and a customer of his master, Mr. Riebau. Through the kindness of Mr. Dance he heard four lectures by Sir Humphry Davy. He took notes on the lectures, wrote them out carefully, and added drawings of the apparatus. These notes he sent to Davy with a letter expressing the wish that he might secure employment at the Royal Institution. In a short time, after a warning from Sir Humphry that he had better stick to his business of book-binding, that "Science is a harsh mistress," his wish was granted, and we find him cleaning and caring for apparatus in the Royal Institution and assisting Davy in preparing for his lectures.