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INCEPTION OF ELECTRICAL SCIENCE AND THE EVOLUTION OF TELEGRAPHY.

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Six hundred years B.C., Thales of Milete noted the electrical phenomena developed by friction upon Amber; two hundred years later Plato theorized upon Electricity; and A.D. 1522, Martinigo (a Venetian), the engineer in defence of Rhodes, applied one end of a drum head at the end of his counter mine, to discover the vicinity and direction of the enemy's underground galleries, and thus, by utilizing the molecular disturbance of the earth in sound waves, conceived the basis of telephony. It was not, however, until A.D. 1690, that Von Guerick made the first machine for generating frictional electricity, nor until A.D. 1726, that Wood recorded the fact that frictional electricity would pass through a considerable length of wire, and could therefore be utilized for the transmission of signals. To Wood of England is therefore due the honor of first suggesting the feasibility of electric telegraphy.

A.D. 1745. Murschenbrok, Germany, invented the Leyden jar, by which means frictional electricity could be stored for experimental purposes. A.D. 1747, Dr. Watson, England, erected the first telegraph line between Shooters Hill and London; and A.D. 1753, C.M. (believed to be the initials of Charles Mathews) published the manner in which he had indicated the letters of the alphabet through a system of 26 wires, by frictional electricity. During the latter half of the eighteenth century inventors of all nations endeavored, by means of two or more wires and *frictional* electricity, to transmit intelligence between distant places; but it was not until A.D. 1800, when Volta proclaimed his own and Galvani's prior experiments in the production of *chemical* electricity, that electric telegraphy, as now developed, became practicable.

A.D. 1819. Oersted (Denmark) discovered that a freely suspended magnetized needle would move to the right or left, in accordance with the polarity of a current of electricity through an adjacent wire.

A.D. 1820. Arago (France) discovered that when a bar