

MAY 1934 ELEC. ENGR.

## Alexander Graham Bell

(Associate 1884, Member 1884)

President 1891-92

Edison Medalist 1914

John Fritz Medalist 1907

ALTHOUGH he did much other important scientific work in various fields Alexander Graham Bell has been known the world over as the inventor of the telephone, and thus may be said to have made one of the most revolutionizing contributions to modern civilization to date.

Doctor Bell was born in Edinburgh, Scotland, in 1847, the son and grandson of teachers of vocal physiology and the laws of speech, and this, in addition to the fact that 2 members of his immediate family were deaf, undoubtedly was responsible for his interest in all matters pertaining to the human voice. At 14, he was sent to London for instruction in elocution and phonetics by his grandfather. Later he returned to Edinburgh to study at the University, and in a short time he was assistant to his father who had obtained a post as lecturer in elocution at University College, London. There he met Wheatstone and Ellis and became interested in Helmholtz's work on the electromagnetic control of tuning forks.

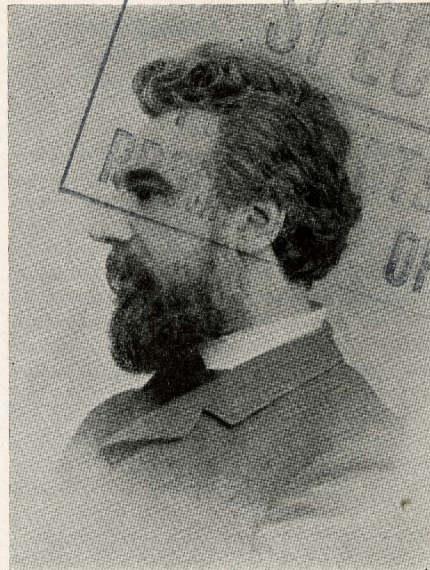
When he was 23, the Bell family emigrated to Canada, and the next year Doctor Bell was appointed instructor at the first

school for the deaf and dumb in Boston. He was a very successful teacher and later taught at both Boston and Oxford universities. In inventing the telephone he was first seeking some way, perhaps by registering graphically on paper, to show his pupils the variations in tones and the inflections of the human voice. Into the poorly equipped electric shop of Charles Williams, typical of that period when a "laboratory" was unheard of, Doctor Bell took his first problems and ideas of the "harmonic telegraph," "harp telephone," and speaking telephone.

By 1875, after continuous experimentation, he was at work upon the specifications of the patent for the telephone, and in 1876 it was granted. The Centennial Exhibit at Philadelphia in 1875 did much to convince business men that the instrument was practical, and soon thereafter a 2-mile line was installed between Boston and Cambridge over which ordinary reciprocal conversation was carried on. By 1887 long-distance conversations between New York and Boston were possible.

Doctor Bell was an active researcher until the time of his death in 1922. Besides the telephone he invented the photophone, a device which transmitted speech by light beams, induction balance and telephone probe, and helped to develop the graphophone. He constructed a number of tetrahedral aeroplanes and experimented with propellers.

He was a charter member of the Institute,



a member of many American and foreign societies and the recipient of honors from governments and learned institutions, including the decoration of the Legion of Honor from France, Volta Prize (1880), Albert Medal of the Society of Arts (London, 1902), Hughes Medal of the Royal Society of England, and Elliott Cresson Medal of the Franklin Institute.