Bell, Alexander Graham, 1847–1922, American scientist, inventor of the telephone, b. Edinburgh, Scotland, educated at the Univ. of Edinburgh and University College, London; son of Alexander Melville Bell. He worked in London with his father, whose system of visible speech he used in teaching the deaf to talk. In 1870 he went to Canada, and in 1871 he lectured, chiefly to teachers of the deaf, in Boston and other cities. During the next few years he conducted his own school of vocal physiology in Boston, lectured at Boston Univ., and worked on his inventions. His teaching methods were of lasting value in the improvement of education for the deaf.

As early as 1865, Bell conceived the idea of transmitting speech by electric waves. In 1875, while he was experimenting with a multiple harmonic telegraph, the principle of transmission and reproduction came to him. By Mar. 10, 1876, his apparatus was so far developed that the first complete sentence transmitted, "Watson, come here; I want you," was distinctly heard by his assistant. The first demonstration took place before the American Academy of Arts and Sciences in Boston on May 10, 1876, and a more significant one, at the Philadelphia Centennial Exposition the same year, introduced the telephone to the world. The Bell Telephone Company was organized in July, 1877. A long period of patent litigation followed in which Bell's claims were completely upheld by the U.S. Supreme Court.

With the 50,000 francs awarded him as the Volta Prize for his invention, he established in Washington, D.C., the Volta Laboratory, where the first successful sound recorder, the Graphophone, was produced. Bell invented the photophone, which transmitted speech by light rays; the audiometer, another invention for the deaf; the induction balance, used to locate metallic objects in the human body; and the flat and the cylindrical wax recorders for phonographs. He investigated the nature and causes of deafness and made an elaborate study of its heredity.

In 1880 the magazine Science, which became the official organ for the American Association for the Advancement of Science, was founded largely through his influence. Bell was president of the National Geographic Society from 1898 to 1903 and was made a regent of the Smithsonian Institution in 1898. After 1895 his interest was occupied largely by aviation. He invented the tetrahedral kite. The Aerial Experiment Association, founded under his patronage in 1907, brought together G. H. Curtiss, F. W. Baldwin, and others, who invented the aileron principle and developed the hydroplane.
