



42 ALEXANDER GRAHAM BELL

1847 - 1922

Alexander Graham Bell, the inventor of the telephone, was born in Edinburgh, Scotland, in 1847. Although he had only a few years of formal schooling, he was well-educated by his family and himself. Bell's interest in the reproduction of vocal sounds arose quite naturally, since his father was an expert in vocal physiology, speech correction, and the teaching of the deaf.

Bell moved to Boston, Massachusetts, in 1871. It was there, in 1875, that he made the discoveries leading to his invention of the telephone. He filed a patent claim for his invention in February 1876, and it was granted a few weeks later. (It is interesting to note that another man, Elisha Gray, had filed a patent claim for a similar device on the same day as Bell, but at a slightly later hour.)

Shortly after his patent was granted, Bell exhibited the

telephone at the Centennial Exposition in Philadelphia. His invention aroused great public interest, and received an award. Nevertheless, the Western Union Telegraph Company, which was offered the rights to the invention for \$100,000, declined to purchase it. Bell and his associates therefore, in July 1877, formed a company of their own, the ancestor of today's American Telephone and Telegraph Company. The telephone met with prompt—and enormous—commercial success, and AT&T eventually became the largest private business corporation in the world. (It has since been broken up into several smaller companies.)

Bell and his wife, who in March 1879 owned about 15 percent of the shares in the telephone company, seem to have had little idea of just how fantastically profitable the company would be. Within seven months, they had sold the majority of their stock at an average price of about \$250 a share. By November, the stock was already selling at \$1,000 a share! (Back in March, when the stock was selling at \$65 a share, Bell's wife had pleaded with him to sell immediately, since she feared the stock would never go that high again!) In 1881, they unwisely sold off one-third of their remaining stock. Nevertheless, by 1883 they were worth about one million dollars.

Though the invention of the telephone made Bell a wealthy man, he never discontinued his research activities, and he succeeded in inventing several other useful (though less important) devices. His interests were varied, but his primary concern always was to help the deaf. His wife, in fact, was a deaf girl whom he had formerly tutored. They had two sons and two daughters, but both boys died as infants. In 1882, Bell became a United States citizen. He died in 1922.

Any estimate of Bell's influence rests upon the degree of importance one ascribes to the telephone. In my view, this is very great, since few inventions are so widely used and have had such a tremendous impact upon everyday life.

I have ranked Bell below Marconi because the radio is a more versatile device than the telephone. That is, a conversation conducted over the telephone could, in principle, be conducted by radio instead, but there are many situations (such as com-

munication with an airplane in flight), in which a telephone could not possibly replace a radio. Were that the only factor involved, Bell would be ranked a *lot* lower than Marconi. However, there are two other points to be considered. First, although an *individual* phone conversation could be conducted by radio, it would be extremely difficult to replace our entire telephone *system* by an equivalent network of radio communication. Second, Bell was the first person to devise a method for reproducing sounds; furthermore, that method was later adapted and utilized by the inventors of the radio receiver, the record player, and various similar devices. I therefore consider Alexander Graham Bell to have been only slightly less influential than Marconi.

Bell opens the telephone line between New York and Chicago in 1892.

