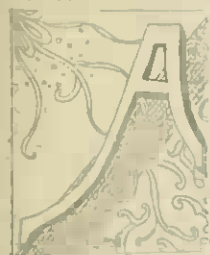


Written for this Paper.

TELEPHONE BELL.

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ABOUT TWENTY years ago a young, olive hued, black-haired Scotchman was experimenting in Boston upon a machine by which the deaf might be made to hear and the dumb taught to speak. In doing so he made a discovery which practically annihilated distance as far as sound is concerned. He discovered the principle of the telephone, and thereby created one of the greatest industries of the world. The capital based upon his invention now amounts to hundreds of millions of dollars. The Duke of Marlborough, a great telephone authority, lately estimated that in 1891 eight hundred million conversations passed over the wires of six of the leading countries of Christendom and there are today in this country more than 230,000 subscribers to the Bell Telephone Company alone. The telephone wires of this company in the United States are 350,000 miles in length—so long that they could go fourteen times around the globe, and it takes an army larger than that of Xenophon to keep its machinery in order. This company received in 1892 more than three and one-half million dollars for the rent of its telephones, and in 1893 it paid its stockholders eighteen hundred thousand dollars in dividends. But this is only one of the telephone companies, and its work is confined to the United States. There are similar companies all over the civilized world, and as many tongues as those of Babel are sent along the avenues of their wires. The creator of this wonderful industry has been in Washington during the past week. I visited him by appointment at his laboratory yesterday, and for three hours chatted with him about his work and the things concerning which he knows more, perhaps, than any other man in the world. I refer to Alexander Graham Bell, one of the best-known and least-known men of the United States. He is best known because every one has heard of him as the inventor of the telephone. He is least known because he seldom talks for the newspapers, because it is impossible to get him to write an article for the magazines, and because his modesty and retiring disposition are such that he does not let the world know of the great work in invention and science that he is constantly carrying on, only a little of which now and then filters out through the patent office, or in his letters to the great scientific societies of the world.

My appointment was to meet him at the Volta Bureau. How many of you have ever heard of it? It is the great institution in the world as regards the scientific study of the deaf. What the Smithsonian Institution is to general science the Volta Bureau is to the science of the deaf. It contains the most complete library upon such subjects in the world, and its collection of statistics regarding the deaf of the United States is more complete and more valuable than any other such collection in the world. Here are to be found the deductions and

the experiments made by Mr. Bell, which have so benefited these unfortunate people. He has shown how to make the dumb speak and the deaf hear, and this bureau was founded by him for the furtherance of this science. It is located in Georgetown, about a mile and a half from the White House. It is a two-story building of Milwaukee brick and stone, about fifty feet wide by one hundred feet long. It has a flat roof, and its architecture makes you think of the houses of Pompeii. It is fireproof, and in its basement for the time is stored Mr. Bell's scientific library, which came so near being burned when the fire broke out in what is now ex-Vice President Morton's house on Scott Circle, but which at that time belonged to Mr. Bell.

The story of how Mr. Bell founded this bureau is an interesting one. Connected with it came the invention of the graphophone, which the courts have lately decided has priority rights over the inventions which make Edison's phonograph now practical. It illustrates one side of Mr. Bell's character; that of his love for science, and also his desire not to take anything unless he can give something in return. He told me the story today.

"The Volta Bureau," said he, "is the outcome of the Volta prize. Napoleon Bonaparte founded this prize when he was Emperor of France in the honor of Volta, the Italian, who invented the voltaic battery and other things in electricity. It consisted of 50,000 francs, or about \$10,000, and was to be voted by the French government on occasion to any one deemed worthy of it as having invented something for the benefit of humanity. It has been awarded only three or four times since Napoleon founded it, and it was voted to me on account of the telephone. It came when the telephone was already a success, and had made me financially independent. Upon receiving the money, I decided to donate it to the improvement of the deaf, and I did it in this way. I had associated with me Mr. Charles Sumner Tainter and my cousin, Mr. Chichester Bell, who is also an inventor. I proposed to them that we take the money and establish a laboratory, each of us putting in our own labor as a part of the capital stock, and the Volta prize to be a fourth part of the company, and to be used as a working fund. With this we were to establish a laboratory with the understanding that in it each of us should devote a part of our time to our special hobby in the way of invention, and at the same time we would work together on some one invention, which would be commercially profitable. This was agreed to, and we went to work. My hobby was the study of the deaf, Mr. Tainter had an invention in optics which he was trying to perfect, the exact nature of which I do not feel at liberty to give, and Mr. Chichester Bell was working on his wonderful experiments in regard to recording speech by means of photographing the vibrations of a jet of water. We looked about for some time for the subject of the invention that was to pay the bills, and concluded to take up and develop the phonograph. The idea had been originated by Mr. Edison, and he had produced a little tinfoil phonograph, which was a screeching, squeaking toy, but of no practical value. The needle made the indentations on the tinfoil, and these were liable to be bulged up or

erased. The result of our work was the invention of the graphophone, by which the record of the sound was cut into a cylinder of wax and a permanent impression made. After we had made the discovery, we attempted to form a combination with the company owning the Edison patents, but Mr. Edison to a certain extent repudiated their claims, and we organized a company independent of them. There is no doubt in my mind of the value of our patents, and I expect to see the graphophone go into general use. Well we organized a company, and I sold the stock represented by the Volta prize for \$100,000. \$25,000 of this I gave to the American Society for Teaching Speech to the deaf, and with the remainder I established the Volta Bureau."

This conversation took place while Mr. Bell and myself were walking together through the libraries of the Volta Bureau. After the above remarks he went on:

"But perhaps you would like to see the place where the Volta Bureau originated. I will take you where no newspaper man has ever been before. We will make a visit to my laboratory."

He then led the way out of the bureau. We crossed the street and stopped at the back of the lot on the opposite corner before a little red brick building of two stories, not more than forty feet square, and looking for all the world like a stable. "This," said Mr. Bell, "is my laboratory. It was my father's stable, and we have turned it into a workshop. Here I have made a great many experiments of late years, and in it I have all of my models." We entered, and, passing through a workshop containing benches and machinery, came into a large room walled with shelves, filled with models and instruments of all kinds, and reminding me much of one of the model rooms of the patent office. In the center, filling up nearly the whole floor, was what at first sight seemed to be a model of a new threshing machine. It was at least 100 feet long, and had a wide inclined plane running up into the air at an angle of forty-five degrees. I asked what it was, and was told that it was a type-setting machine for the instruction of the deaf—a sort of a lino-type as it were, to be used in deaf schools, by which words could be put upon a blackboard and the letters distributed again. On the shelves in the walls at the left were perhaps fifty models of telephones, and among them the first one that Mr. Bell ever made. It consisted of two telephones, as it were, and was exceedingly clumsy in appearance. Beyond this were scores of cylinders used in the experiments upon the graphophone, little bottles of selenium, containing, Mr. Bell told me, the largest quantity of this almost invaluable material in existence in the world today, and which he used in his experiments of telephoning without wires along the beams of a ray of light. There were many scientific instruments, inventions illustrating new and yet unexplained theories as to the property of matter originated by Mr. Bell, and, in short, so many different things that the mere mention of them would fill a page of this newspaper.

As we looked at the original telephone, I asked Mr. Bell if he could remember the time when he first realized that he had inventive power, and if he had a model of the very first invention he had ever made.