TELEPHONE PIONEERS OF AMERICA.

FIRST REUNION HELD AT BOSTON, MASS., LAST WEEK, AND A PERMANENT ORGANIZATION EFECTED.

The Association of Telephone Pioneers of America was formed in Boston on Thursday of last week, at the Hotel Somerset. The idea of this Association originated with Henry W. Pope, Charles R. Truex and Thomas B. Doolittle, all of these gentlemen having been identified with the early days of the great Bell invention. There were about 250 in the convention hall at the Hotel Somerset, when the assembly was called to order by Mr. Doolittle. General Sherwin, chairman of the Board of Directors of the New England Telephone & Telegraph Company, was elected temporary chairman, and H. W. Pope temporary secretary. General Sherwin delivered an address of welcome, following which the following permanent officers were elected:

President:—Theodore N. Vail, Boston.
Vice-Presidents:—Frank H. Betheill, New York; W. T. Gentry, Atlanta, Ga.; B. E. Sunny, Chicago; E. B. Field, Denver.
Secretary and Treasurer:—Henry W. Pope, New York.
Executive Committee:—Thomas D. Lockwood, Boston; John J. Carty, New York; Francis A. Houston, Boston. Two additional members of the executive committee are to be appointed. Mr. Gentry presided during the sessions.

The dues of the Association are $5 annually, and the first gentleman to get his receipt was W. L. Candece, who is a telephone pioneer of the year 1877.

The constitution and by-laws of the Pioneers' Association were adopted, and also plans for annual meetings. All persons who served for five years consecutively in telephone work prior to 1891 are entitled to Pioneer membership in the Association, and Junior Pioneers are made up of those who will have served twenty-one years subsequent to 1891.

During the day addresses were delivered by Alexander Graham Bell, Frederick P. Fish and Thomas D. Lockwood. Professor Bell's address will be found elsewhere in this issue.

On Thursday evening the ladies and gentlemen of the Association were entertained at a theater party as the guests of the New England Telephone Company. On Friday forenoon they visited the main exchange of that company, and on Friday afternoon a very delightful automobile ride was enjoyed to Lexington and Concord. On Friday evening the visitors were tendered a highly enjoyable banquet by the American Telephone & Telegraph Company. Music and the singing of original songs with a telephone turn, written and rendered by Angus S. Hibbard, were participated in, and a magic lantern threw upon a screen many historical pictures relating to the telephone, and also the countenances of many of the men eminent in telephone work. These were received with much applause. Particularly was this the case when photographs of Theodore N. Vail, Edward J. Hall and John J. Carty were presented. Every attendant at the banquet received, with the compliments of the Western Electric Company, a model of Bell's first telephone, a very highly prized souvenir.

A number of letters of regret were read, among them letters from Theodore N. Vail, F. E. Sunny, Frank B. Knight, C. E. Yost and George C. Maynard.

On Friday afternoon a photograph of all those who could be assembled was taken in front of the Hotel Somerset, and is reproduced on pages 379-371.


There were a number of historical exhibits shown at the Hotel Somerset, among them being the following, the exhibits being in charge of N. W. Lillie, who entered the telephone service October 8, 1877, and George K. Thompson, who entered the telephone service 30 years ago.

The original six-line switchboard used at the office of E. T. Holmes, 342 Washington Street, Boston, for connecting banks by telephone.

Magneto bells, battery bells, switches and types of apparatus used in the first days of the telephone business.

The first lists of subscribers issued in Boston, New York, Chicago, Newark, N. J., and other places.

Photographs of the building first used for a telephone exchange at 342 Washington Street, Boston, Mass., and of the building at 518 Broadway, New York. Original circulars distributed in Boston and vicinity describing the uses for which the telephone was adapted.

Photographs of early telephone exchange buildings and many pages of interest.

Exhibit of English New Haven, Conn., telephone directory.

Chinese exchange pictures, San Francisco.

Parts of Bell's original telephone of 1875.

Parts of Bell's Centennial iron-box telephones.

Single-pole membrane telephone.

Bell's figure-seven transmitters.

Bell's figure-seven receiver.

Bell's telephone receiver—early form.

First sample of hard-drawn copper wire.

Bell's receiver for educational purposes.

Fac-simile of Blake's original transmitter.

Blake's transmitter, first commercial form.

Blake's transmitter, final commercial form.

Cross-section model of standard bipolar receiver.

Cross-section model of solid-back transmitter.

Early form of telephone insulator bracket.

Telephone Despatch Company. List of subscribers, Boston and vicinity and many other lists of subscribers of early days.

Russian Telephone Service.

The telephone service in Russia is maintained partly by the Government and partly by private companies. The emestovs are also exploiting the telephone service in sixty-nine counties. Last year the Government maintained ninety-nine urban telephone lines and four long-distance lines. Besides this a telephone service was carried on between thirty cities by means of telegraph lines. The receipts from the Government's telegraph system amounted to $1,370,855, and the expenditures to $774,393, yielding a profit of $596,462. A telephone service was also maintained in fifty-five cities by private companies, and the Government's revenue, derived by means of a tax of three per cent levied upon the gross income of these companies, yielded $77,466.
LEFT HALF OF GROUP, TELEPHONE PIONEERS OF AMERICA.
THE INVENTION OF THE TELEPHONE.

ADDRESS OF ALEXANDER GRAHAM BELL
BEFORE THE TELEPHONE PIONEERS,
GIVING EARLIEST FACTS NEVER BEFORE
PUBLISHED—DELIVERED AT BOSTON,
NOVEMBER 2, 1891.

Mr. Chairman and Gentlemen: This is a great day for me—the first meeting of the Telephone Pioneers of America and a great day for the telephone and the telephone company. It gives me great pleasure to meet with you all today; and yet, there is a feeling in me that speaks about it. I am the first telephone pioneer, and my memory goes back to the very beginning; and I miss the faces of the old pioneers, whom I wish were here today. The Association is fortunate that one of these great inventors is at the head of matters today—Mr. Theodore N. Vail, the great organizer that provides over the destinies of the telephone system of America. I feel it is a great honor to speak to the little telephone system that I look upon—what is it compared to the mighty system that goes throughout the whole of one's life? It is to you that this great development is due, and I feel that it behooves me to speak very modestly of the little beginning that led to this great end. I cannot tell you anything about the telephone. I can only speak to you about the patents. The current, instantaneous current, and pulsatory current, I belong to the past, you belong to the present, and the beginning of the telephone is now the present.

The period that the mark of the invention of the telephone to which you refer, and some of the notable events of the past that preceded the commercial organization and development of the telephone. This is a matter upon which I can give you information; that is the point on which many of you may be weak. You know all about me, but my experience is limited to the past in the telephone. Perhaps the most useful feature of my address today might be to call upon you to remember some of the events of the past that preceded the commercial organization and development of the telephone.

When was the telephone invented? It was invented in 1874, during my visit to my father's home. The current, instantaneous current, and pulsatory current. I belong to the past, you belong to the present, and the beginning of the telephone is now the present.

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I could not possibly stay any longer than that, being due to the 4th of my examinations. So I went down to Philadelphia, growing all the time at this interruption to my promised appearance of that day. I arrived in Philadelphia on Sunday, the 25th. I was an unknown man and looked around upon the ceiling, where there were many and beautiful pigeons perched around after the judges at the exhibition while they examined this exhibit and that. I was not sure if the exhibit came last. Before they got to that it was announced that the judges were too tired to make any further examinations, and they said that the exhibition would be examined another day. That meant that the telephone would not be seen, for I was scheduled to go back on the second day. I was going right back to Boston.

And that was the way the matter stood — when suddenly it was brought upon the ears of the judges who happened to remember me by sight. That was no less a person than His Majesty the Emperor of Brazil. I had shown him what we had been doing in teaching speech to the deaf. And now my dear friend the Emperor of Brazil, told him that what it was. I then showed him the mouth of the deaf and shook hands, and said: "Mr. Bell, how are the deaf mute of Brazil?" I said they were very well and told him that the next exhibition was to be held by the Emperor. "Come along," he said, and he took my arm and walked off with me — and, of course, whenever I walked in that way the judges followed. And the telephone exhibit was saved!

Well, I cannot tell you how much about a telephone, although it was the pivotal point on which the whole telephone turned in those days, if you didn't have the exhibition there, it was very doubtful whether the condition of the telephone would be today as it is. Probably one of the first one to bring that situation about, at that time. I went off to my transmitting instruments in another part of the building, and a little iron box receiver — you probably all know what it was from diagrams — was placed at the ear of the Emperor, who told him to hold it to his ear, and then I heard afterwards what happened. It was not presented at that time of the line, I went to the other end and was rectifying "To be or not to be, that is the question," and so on, keeping the Emperor informed. And then, a few days later, I heard, a few days later, from my friend, William Hubbard, that the Emperor had it up and it was a very important thing, and then I wrote down the incident and started and said: "My God! It's true!" And he put it down; and then Sir William dropped in too, but they didn't get it up, as they did another in the crowd took it up and listened. I was in another part of the building and was interested in the membrane telephone that was the transmittal. Suddenly I heard a noise of people stamping heavily, very heavily, approaching, and there was Don Pedro, rushing along at a very un-Emperoralike gait, followed by Sir William. He told me that there was a night, a number of other things to see what I was doing at the other end. They were very much interested. But I had to get back to Boston and couldn't wait any longer.

Now, it so happened that, although the judges had heard speech emitted by the telephone, and all of the receiving instruments, they were not quite convinced that it was really produced. Someone had what may be termed the case of the threethread telegraph, the lovers' telegraph, as it was known in those days, and they were talking about it, and they were mechanics transmitted along the line to the other end, and the judges asked permission to remove the apparatus from that location I said: "Certainly, you may do it."

as they construed it that did not interfere with the patent for metallic nature, and the patent was saved.

That brings me up to July 12, 1876. That was the summer exhibition of the Telephone Exposition up to Brantford, Ontario. I prepared a whole lot of apparatus, telephones with cords of different kinds, some iron, some khaki, some collars and low-resistance coils, some long coils and short coils, and I carried them up to the Exhibition, and I continued my experiments and continued attempts to get in touch with long-distance lines. The Dominion Telegraph Company of Canada offered me the use of its wires, and I look upon one experiment there as of very great importance. That was an experiment made in August, 1876. The transmitting instrument was in Paris, Ontario; the receiving instruments were in Brantford, at a distance of eight miles from Paris; and the battery on the circuit was in the Walworth about sixty miles away. So we had a circuit of somewhere from sixty to seventy miles. The transmission went on and on and on, speeches were transmitted, and that was the first time that the telephone was transmitted between persons at a distance of several miles. But it was only of one of the wires. There was no number, that attracted attention were made on the wires of the Dominion Telegraph Company. There was a telephone to Brantford and Mt. Pleasant, a distance of five miles or something, and then a year after that we had a telephone to the nearest telephone line. We got a lot of stovepipe wire, cleaned the town out of stovepipe wire, and they thought that they could make telephones with the wires that would reach from my father's house to the corner of the Mt. Pleasant road, and then catch them to the telephone wire running into Brantford. Then I had some friends in Brantford who spoke, sung, and recited into the membrane telephone, while a large number of guests at my father's house at Tuteo Heights listened to the transmission. And so one day that occasion also three voices were transmitted simultaneously. I had three mouthpieces for the membrane telephone, and three persons sang to the same telephone.

So those experiments at Brantford were the first experiments that had happened in a couple years. That was the first time inaudible in transmitting speech from one place to another at a distance, but they were all successful.

The first reciprocal communication occurred about my return to Boston in October 1876. On October 9th, the machine occurred the first conversation by telephone between persons separated by miles of space. This was on the Boston Manufacturing Company's line, connecting its factory in Cambridgeport with the office in Boston. It was not a matter of distance, probably two and one-half miles, but free of charge was carried on, and I think that was an historical occasion. Mr. Watson was at one end of the line and I was at the other, and we kept a record of what passed. I noted that I said and I noted what I thought he heard. They were reported in the newspapers, especially in the Boston Advertiser, October 19. I think that was the first occasion that had been filled. The conversation had actually been carried on between two persons separated by miles of space. The first conversation, however, was quiet, it was less than half; it was only about two and one-half miles.

And so we went on during 1876 with experiments with wires and cables, trying to improve the telephone line from Cambridge to Boston for transmitting time signals from the Cambridge.
Observatory, and through Professor Rogers I had the chance to live at night, when it was not needed for time purposes. I had it connected with my laboratory, and by night made experiments between the Cam- bridge and Boston. This evening the conversation was carried on between myself, in Boston, at the Eastern Railroad depar- ture house, and Professor A. Watson, in Salem. We had increased the distance to eighteen miles. Then we experimented on a line that took us to the North Conway, 145 miles away, so that Salem was a way station to North Conway. That was a very notable external experiment.

Then we tried varying the coils, trying small wire, thick wire, long coils, short coils, tried it with and without a battery; and as a result of the experiments we gave up the battery and took to the magneto telephone alone in the laboratory.

That takes us up to the end of 1876. There is hardly anything more I can tell you about it before it came into commercial use. On December 26, 1876, I gave a lecture on the subject at the Philosophical Society in Washington. On January 31, 1877, there was an experiment here in Boston that attracted a good deal of attention at the time, although it did not compare with the other experiments in importance. It was a com- munication between the rubber shoe factory and the resident of Mr. Converse in Malton. This attracted a good deal of public attention to the telephone. On Jan- uary 21 there was a public exhibition on the Eastern Railroad, in which no battery was used. Conversation occurred between Boston and Salem; and by and by, at 180 miles, the earphone was used at the end of 1877 or the end of the year 1876, a rather interesting circumstance took place. I had attended a lecture at Boston University by a young Japanese student named Tsawa. He came to me for the purpose of studying the pronunciation of English. Of course, when he heard about the telephone he became very much interested. He said: "Mr. Bell, will this thing talk Japanese?" I said: "Certainly, any language." He seemed very much astonished at that, and said he would like to try it. I said that he could try it, and I would try it. After that, he went on to talk about the telephone and listened; so that Japa- nese was the first foreign language that was talked and listened to on the telephone. That, of course, was the first of the hundreds of thousands of miles of telephone wire that has since been laid.

Aspects of Public Ownership.

Can any line be drawn between those enterprises that should be in pub- lic hands and those that should not? Is there any principle that can be laid down for guidance, or any formula at once explicit and comprehensive enough to serve as a touchstone in all emergencies?

The answer is that no such simple so- lution of the difficulty has been, or probably ever will be, arrived at. But there are certain considerations which when taken together may serve as something more than makeshift direc- tion-posts. The most earnest advocates of public ownership, for instance, admit that a municipality is not justi- fied in attempting to meet any demand which is not sufficiently extensive and constant to keep the necessary plant fully employed. The most ardent oppo- nents of public ownership, on the other hand, admit that in the case of many utilities the balance of advantages points to their municipalization. Thus no one objects to seeing sewerage systems, markets, water works, baths, cemet- ries, and slaughter houses in public hands, while a very strong case, as a rule, can be made out for turning over harbors and docks to the management of the local authorities. In all these cases where municipalization is gener- ally held to be necessary, it appears that there are three conditions usually fulfilled. (1) The enterprise is one which would be a complete monopoly were it in private hands. (2) The services rendered are of great importance to the community at large. (3) The fair price to be paid for the work performed is not readily estimated in advance. When undertaking fulfills these three conditions the argument for bringing it under public ownership, with or without public operation, is so strong as to be practically overwhelming. Every absolute and irrepealable monopoly supplying a community with some essential utility on terms that cannot be regulated beforehand is ipso facto a fit subject for municipalization.

It is rather, however, over those en- terprises that tend to become monopo- lies and that present no insuperable difficulties of public supervision and control—such as gas works, electric lighting, street cars and telephones—that the battle for and against municipalization has chiefly raged. And here the example and experiences of Great Britain are of the first value and importance. No country in the world has plunged so heavily into the policy of municipal trading and none shows its good effects and its bad effects more plainly. The local debt of the United Kingdom amounts to over $3,000,000,000; capital sunk in reproductive under- takings exceeds $1,500,000,000; the average per capita debt of the eig- hteen leading British cities is some $114. —Sidney Brooks, in The North Ameri- can Review.