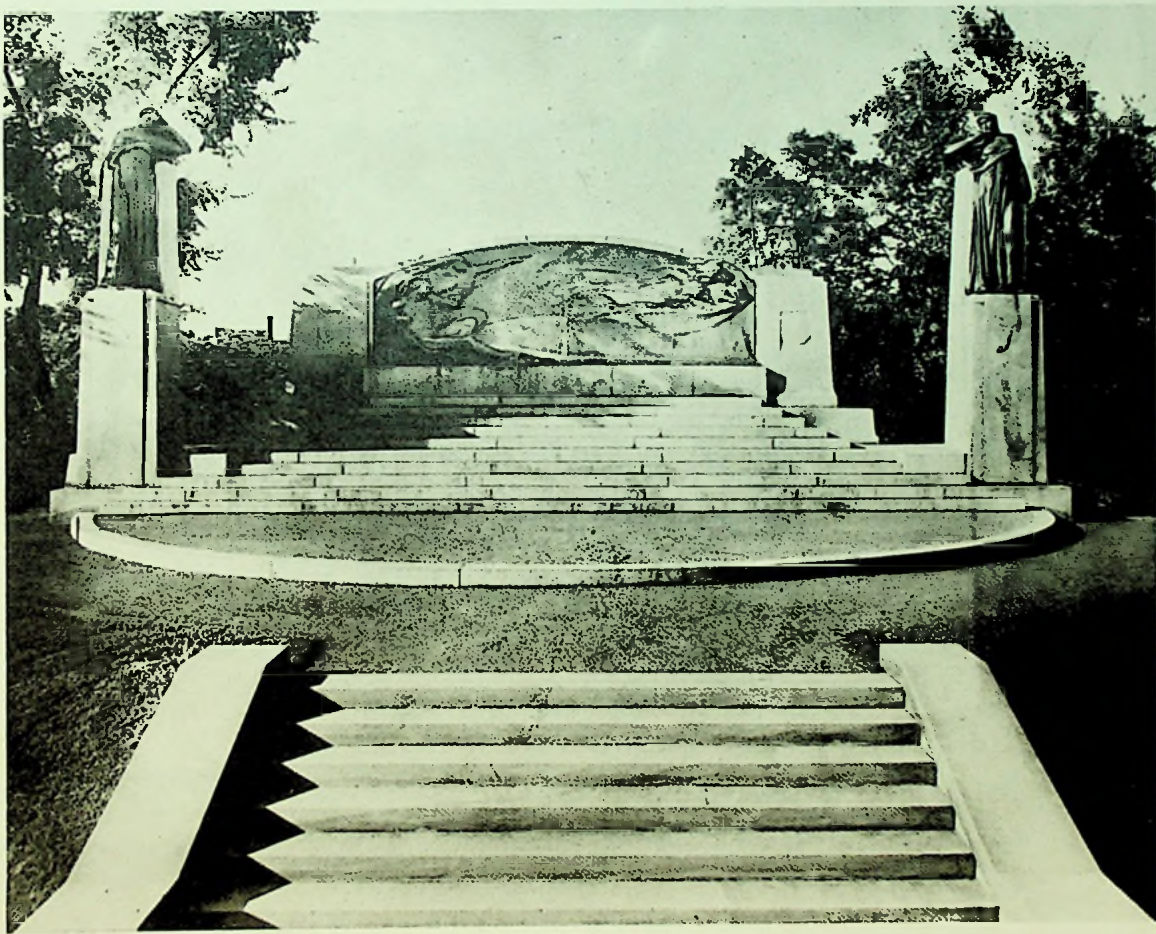


Brantford Honours

Alexander Graham Bell



Bell Memorial, Brantford

1874 - 1974

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Address by ALEXANDER GRAHAM BELL

on the Occasion of

the Unveiling of the Bell Memorial,

October 24, 1917.

Your Excellency, Ladies and Gentlemen:

There are some things worth living for, and this is one of them. I came to Brantford in 1870 to die; I was given six months lease of life, but I am glad to be alive today to witness the unveiling of this beautiful memorial that has been erected in the City of Brantford. As I look back upon it, visions come to me of the Grand River and of Tutela Heights and my dreaming-place upon the heights where visions of the telephone came to my mind. I little thought in those days that I should ever see a memorial like this, -- a memorial that is not only gratifying to me personally as an appreciation of my own personal effort to benefit the world, but is an appreciation of the invention itself.

I cannot claim what you know as the modern telephone. It is the product of many, many minds. All I did was to initiate the movement of the transmission of speech by electricity. It was initiated here. Much of the experimental work of the development of the apparatus was done in Boston, still I am glad to be able to come forward and say that the telephone was invented here.

In past years I have tried to approximate the date of that invention and have given, in vague terms, the summer of 1874. But a few days ago it occurred to me that it was possible to make a closer approximation to the date of the conception than that. My dear father kept a diary, a little pocket diary, in which occasionally he jotted down remarkable occurrences. I resided in the States and used to come to Brantford for my summer vacation and for the Christmas Holidays, and when I came home, of course I would talk to my father of all the great ideas that were in my mind. I remember in those days I had a conception of an electrical motor, the details of which I have long since forgotten, but I was full of this motor in the summer of 1874, at the time that I devised the telephone. Of course I explained these things to my father, and in his diary under date of July 26, 1874, occur these words, "Motor" -- and in brackets -- "Hopeful". "Electrical Speech" -- with a big query mark in brackets, but it goes to show that on July 26, 1874, the telephone had been invented and had been described to my father, but he did not think it quite as good as the electrical motor.

In the autumn of 1874, the telephone was described with drawings to a large number of people in Boston and the vicinity. In 1875, the telephone was made - the Brantford telephone was made in Boston. In June, 1875, the telephone acquired a

physical existence in Boston, and it was that telephone that was invented the year before at Tutela Heights in Brantford, Ontario.

I am very grateful for the assistance that has been rendered to me in my initial effort on behalf of the telephone both in Brantford and in Boston. A great deal has been said, and very truly, connecting Boston with the appearance of the telephone. Too little has been said in the States concerning the connection of Brantford. I have looked very carefully over the history of the telephone with the object of seeing just what had been done in Brantford and what had been done in Boston, and I am prepared to state that Brantford is right in claiming the invention of the telephone here. The telephone was conceived in Brantford in 1874 and born in Boston in 1875.

I wished to ascertain further whether, in the practical development of the telephone, there were any points that really could be claimed by Brantford, because so much of the development has been done in the States. I found another thing that is very worthy of remembrance in the practical application of the telephone.

In 1875 and 1876 the experiments with the telephone were parlor experiments. We would have one instrument in one room and another instrument in another room in the same building. We

would telephone from one room to another, and then put articles of resistance in between, then we would surmise the telephone would speak if on the other side of the Atlantic, but we did not have an opportunity of trying it.

The first opportunity to try the telephone on a long distance line came in July 1876 in Boston, but the transmitting and receiving telephones were in adjoining rooms of the same building. We had a line from Boston to Rye Beach and return, and for a time we imagined that the voice had gone through the transmitting instrument to Rye Beach and back and was heard on the receiver, but Lord Kelvin, who was then Sir William Thompson, was present on one of these occasions, and he said: "You cannot assume that the voice has gone to Rye Beach and back on that line. It might have come through the ground connection, and the only way for a satisfactory demonstration is to place the transmitting and receiving instruments miles apart."

The first time that instruments were placed miles apart and speech successfully transmitted from one place to the other was here in Brantford in August 1876. It was really a very historical occasion, the 10th of August, 1876, when experiments were instituted between Brantford and Paris. The transmitting instrument was placed in Brantford, the receiving instrument in Paris, and the batteries used were in Toronto, so that made a

pretty long circuit. I was in Paris at the receiving end listening. Mr. W. H. Griffin, who I am glad to know is still alive with us today, was in charge of the Dominion Telegraph Office in Brantford, at the transmitting end, and there were various persons present who spoke and sang into the transmitting instrument, and sounds were received in Paris. These were the first experiments in the world in which sounds were received at a distance of many miles.

There were also other experiments that some of these older residents of Brantford may remember, in which the receiving instrument was placed on the porch of my father's house at Tutela Heights, and attempts were made, successfully, to transmit speech and singing from Brantford to Tutela Heights. The trouble was there were no telegraph wires to my father's house. There was a telegraph wire that went up past Mount Pleasant, but it was some distance from the Mount Pleasant Road to my father's house, and there was no wire there. However we tried a very unique and daring experiment to connect with Tutela Heights. We could not get telegraph wires or beautiful poles to put the insulators on, but we got stove-pipe wire in Brantford. We cleaned up all the stove-pipe wire in Brantford, and tacked it along the fences from the corner of the Mount Pleasant Road to Tutela Heights - and it worked. I do not know of any other

telegraph or electrical instrument that would have worked. But it worked, and we heard music and singing on my father's porch by quite a large number of the citizens of Brantford, and that was the first public exhibition of the possibilities of speaking from a distance by telephone. So you have two things that you can justly claim - the invention of the telephone here and the first transmission of the human voice over real live wires.

But don't go too far, because there are those who claim - and claim rightly - that the first conversation ever held over a telephone wire was held in Boston.

Now, let me tell you what was done here. We had the transmitting instrument in Brantford and the receiving instrument in Paris, so that you could talk from Brantford to Paris, but you could not talk back. We had to telegraph back by another line. That was the condition of affairs, so you must not claim too much. It was the first transmission at a distance, but it was not the first reciprocal conversation over a line. That was held in Boston on October 9, 1876.

There is another thing in this connection: The wonderful telephone industry of today has been built up by others. I cannot claim to be any more than the one who initiated the whole movement. But this great industry must base its success upon a patent. Now, that patent - the most valuable patent ever granted

by the Patent Office - was not written by the Patent Office Solicitor, it was written by me. The specification was written by me, and the first draft of that specification was made in Brantford, in September 1875, and it is that same application that afterwards became the patent upon which the telephone industry was based.

I have with me in Brantford duplicates of the first telephones that were used in the Brantford experiment of August 1876. I hope to have the opportunity of showing these tonight in this building. First of all there is a facsimile of the original telephone made in Boston in June, 1875, and it is exactly the same as the telephone conceived and described and pictured in Brantford in 1874. These old relics are preserved in the United States National Museum, and I was fortunate in having them loaned to me and in bringing up here three or four instruments that will be of interest to you. The receiver, I think, is the very same instrument that was used in Paris in that first experiment. It is a little dilapidated, but it was a good instrument and shows the character. The transmitter is one of those used in the Centennial Exhibition in Philadelphia, and there was a triple mouthpiece which I discovered in the National Museum that was actually used in 1876 here, and was made in Brantford. It was for the purpose of demonstrating the

important fact that a number of voices could be switched through the telephone at the same time without confusion.

I only venture to take up so much of your time because we are under shelter.

I wish to say on behalf of the Bell Telephone Memorial Association I have great pleasure in presenting to His Excellency a silver telephone, and I hope that in using this, he will remember that the telephone originated in Brantford, and that the first transmission to a distance was made here between Brantford and Paris.

Also speaking on that memorable occasion were:

The Duke of Devonshire, Governor General of Canada.

W. F. Cockshutt, M.P., President of Bell Memorial Association.

Gilbert Grosvenor, Son-in-law of Alexander Graham Bell.

J. W. Bowlby, Mayor of Brantford.

From

The unveiling of the Bell Memorial at Brantford, Ont.

October 24, 1917, p. 15-22.

Brantford First in Sequence of Events Prepared

by Alexander Graham Bell, Inventor

of the Telephone.

Synopsis of telephone chronology in Mr. Bell's handwriting, written at the time of dedication of the Bell Memorial at Brantford, Canada, and given to Catherine Mackenzie, writer of his noted biography.

SYNOPSIS OF EVENTS

Events	Where	When
The invention of the telephone at Tutela Heights.....	Brantford	Summer, 1874
First telephone constructed, and speech and sound heard.....	Boston	June, 1875
First draft of the telephone patent specifications prepared.....	Brantford	Sept., 1875
Complete sentences first clearly understood by telephone.....	Boston	Mar.10, 1876
The telephone exhibited at the Centennial Exhibition.....	Philadelphia	June 25, 1876
The first attempts to transmit speech over telegraph lines.....	Boston	July 7,9 and 12, 1876
First successful attempt to transmit speech over a telegraph line.....	Brantford	Aug., 1876
First public demonstration of ability to speak over a telegraph line.....	Brantford	Aug., 1876
First transmission of a number of voices simultaneously over a telegraph line.....	Brantford	Aug., 1876
First conversation by telephone over a telegraph line.....	Boston	Oct., 9, 1876
First long-distance conversation over a telegraph line (143 miles).....	Boston	Dec. 3, 1876
First newspaper dispatch sent by telephone.....	Salem	Feb.12, 1877
First telephone line opened.....	Boston	April 4, 1877

(Note by reviewer of book. - The term "first conversation" as applied to Boston means speaking both ways; in the earlier Brantford experiments it was only possible to speak one way.)

From. Whitaker. A.J. Bell Telephone Memorial and Bell Homestead.
Brantford: (Hurley Printing Co. Ltd; 1951)

Brantford Courier Old Boys and Sixtieth Anniversary Number.
Christmas 1899.

A LETTER FROM THE FAMOUS INVENTOR.

Prof. Alexander Graham Bell will not be here for the Re-union.

HE GIVES SOME INTERESTING DATA ABOUT THE FIRST TELEPHONE.

Writing to Mr. Geo. Hately, secretary of the Board of Trade, under date of December 4th, Prof. Alexander Graham Bell says:

My Dear Sir, -

Will you please express to the Board of Trade my sincere thanks for the cordial invitation they have extended to me and to my father to visit Brantford, the Telephone City, on the occasion of the approaching re-union of the Brantford Old Boys.

I have delayed answering until the present time in the hope that I might be able to assure you of the presence of my father and myself, as I can assure you of our great interest in the meeting. I have just returned from Washington, where I talked with my father regarding the matter, and regret to report that on account of his advanced years it would be inadvisable for him to go north at that season of the year. I should be glad to join the citizens of Brantford upon the occasion but for the fact that engagements in Washington demand my presence at that time.

It will be interesting to you to know that the first successful experiments made with the telephone upon a real telegraph line were in Brantford. I recall three experiments, all of which preceded similar attempts upon real lines in the United States. One experiment was made between Mount Pleasant and Brantford, on the lines of the Dominion Telegraph Company. The instruments employed were only intended for use one way. The transmitter was placed in Brantford, and was operated by my uncle, Prof. David Charles Bell, and others, while I listened at the receiving instrument in Mount Pleasant.

In another and public experiment the Dominion Telegraph Company's line on the Mount Pleasant Road was connected with my father's house at Tutela Heights by means of stovepipe wire tacked on the fence along the roadside. A large number of ladies and gentlemen were at my father's house, and they

listened one by one to the receiving instrument there, and heard distinctly songs and recitations from Brantford, where the transmitting instrument was operated by Prof. David Chas. Bell and others, in the office of the Dominion Telegraph Company.

In the third experiment that I recall the transmitter was operated by Prof. David Bell and others in the Dominion Company's office at Brantford, and I observed the effect on a receiving instrument in Paris, Ontario.

Telegraphic communication between Paris and Brantford was kept up by another line, by means of which I communicated with Brantford, so as to control the experiments.

In all these cases a battery was used upon the circuit, and the battery employed, I understand, was in Toronto, sixty miles away. The telephonic transmitter and receiver employed were not well adapted for reciprocal communication, so that communication by word of mouth was carried on only in one direction, and in the Paris experiment answers were sent by telegraph by another wire.

The first experiments with the telephone upon a real telegraph wire of miles in length, in which reciprocal communication was established - communication being carried on in both directions by the same instruments - occurred at a subsequent date in the United States on a line extending from Boston to Cambridgeport.

Yours very truly,

(Signed) Alexander Graham Bell.

Historic Sites in Brantford and Brant
County Relating to A.G.Bell.

Bell Homestead

The Bell Homestead is situated on Tutela Heights overlooking the Grand River. In 1870, the home was purchased by Melville Bell after he had emigrated from Scotland with his family. The Bell family made Tutela Heights their home until 1881, and Alexander Graham Bell spent his summer vacations here. It was during his vacation in 1874 that Alexander Graham Bell spoke to his father of his conception of the telephone. During 1876, while spending his vacation at Tutela Heights, Bell tested one way transmission of speech between Brantford and Paris. The Bell family sold the home and moved to Washington, in 1881.

The Bell Telephone Memorial Association, formed in 1906, purchased the Bell Homestead in 1919. It was to be maintained as a museum run by the Brantford Parks Board. The Telephone Pioneers of America have aided in maintaining the property. The Homestead was marked as a National Historic Site by the Canadian government on September 12, 1953.

The Bell Homestead is now maintained by a Homestead Committee including representatives of the Brantford Parks Board and the Telephone Pioneers of America.

Bell Memorial

The Bell Telephone Memorial Association was organized in 1906 by an Act of the Legislature of Ontario. The purpose of the Association was to commemorate the invention of the telephone in Brantford.

Through donations, the Association obtained \$65,000 and in 1908 sculptors were invited to submit models to a designs committee. Mr. W. S. Allward of Toronto was awarded the project, which was to be completed by 1912. However, the memorial was not completed until 1917.

The Bell Memorial was unveiled October 24, 1917. The Duke of Devonshire, Governor-General of Canada, unveiled the memorial and received a commemorative silver telephone from Alexander Graham Bell.

The memorial is located in a small triangular park, the Bell Memorial Gardens, at the intersection of West, Wellington and King streets. The Bell Memorial is constructed of white granite and is faced by a large bronze casting. The inscription reads:

"To Commemorate the Invention of the
Telephone by Alexander Graham Bell, in
Brantford in 1874."

Henderson Home

The Reverend Thomas Henderson of Paris, Ont. was a friend of the Bell family. When Mr. Henderson retired from the ministry in 1877, he accepted Alexander Graham Bell's offer to help establish the telephone business in Canada. He moved to Brantford and set up the first telephone business office in his home. In 1880, Mr. Henderson moved with the Bell Telephone Company to Montreal and remained with the company until his death in 1887. The Henderson Home, situated on Sheridan Street, was in the possession of Mr. William Burles for forty years. In 1969, Mr. Burles donated the home to the City of Brantford and it was transferred to the Bell Homestead site. The ground floor of the Henderson Home is now a telephone museum.

Bell Telephone Building

The large seated likeness of Alexander Graham Bell at the front of the Bell Telephone Building, Market Street, Brantford, was executed by the Toronto sculptor Cleeve Horne. The statue was commissioned in 1949 by the Telephone Pioneers of America and cost \$10,000.

Mr. Horne chose to execute a bronze portrait of Dr. Bell dressed in academic robes. The statue was bronzed at the Roman Bronze Works in New York City.

On the left of the statue - "In grateful recognition of the inventor of the telephone". A scroll inside reads "Dr. Alexander Graham Bell was a resident in or nearby Brantford at the time of the invention."

Dr. Alexander Graham Bell and his relationship to Brantford

In 1867, Alexander Graham Bell became an assistant to his father, Alexander Melville Bell, who had originated the "visible speech" system for teaching the deaf.

Bell was a partner in his father's speech therapy practice in London from 1868 to 1870. During this time his brothers died of tuberculosis and Bell's heavy schedule was taxing his own health. Alexander Melville Bell gave up his practice and moved his family to Brantford, Ontario, Canada, where the better climate soon restored his son to excellent health.

In April 1871 Alexander Graham Bell went to Boston and began teaching visible speech to instructors for the deaf. He opened a class of vocal physiology in Boston, and became professor of vocal physiology at Boston University.

During this time, Alexander Melville Bell and his family continued to live at Tutela Heights near Brantford, and Alexander Graham Bell spent his summer vacations with his parents.

In the summer of 1874, the idea of the telephone was conceived in Brantford at the Bell home overlooking the Grand River. At the unveiling of the Bell Memorial in Brantford; October 24, 1917, Alexander Graham Bell reminisced about that summer of 1874.

"Of course I explained these things to my father, and in his diary under the date of July 26, 1874, occur these words "Motor" --- and in brackets -- "Hopeful." "Electrical speech"--- with a big query mark in brackets, but it goes to show that on July 26, 1874, the telephone had been invented and had been described to my father, but he did not think it quite as good as the electrical motor." (1)

When Bell returned to Boston in the autumn of 1874, he began experimenting with a harmonic telegraph which he had developed in trying to send several telegraph messages over a single wire at the same time. He had not previously been

(1) The Unveiling of the Bell Memorial in Brantford, Ontario on October 24, 1917. P. 16-17.

attempting to transmit speech, but after the thought he had given to the possibility while in Brantford, he began construction of a "telephone". The first instrument transmitted recognizable voice sounds between Bell and his assistant Watson in June 1875. This was the telephone conceived in Brantford in 1874 and built in Boston in June 1875.

Bell began to write out patent specifications and received his first patent in March 1876, just three days before the telephone carried its first intelligible sentence. In June 1876, Bell exhibited his telephone at the Philadelphia Centennial Exposition.

However, the telephone had not yet been tested over a long distance. While spending the summer of 1876 at his parents' home on Tutela Heights, Bell accomplished several important experiments. On August 10, 1876, the telephone was tested over the Dominion Telegraph lines between Brantford and Paris, a distance of eight miles. The transmitter of the telephone was placed in the Dominion Telegraph Company Office in Brantford. Bell took the receiver to Paris, to the boot and shoe store of Robert White, which was also the telegraph agency. While people sang, talked and laughed into the transmitter in Brantford, Bell listened in Paris. At first the voices from Brantford were obscured by interference on the line. Bell telegraphed to Brantford on another line, asking for a change in the arrangement of the coils, and the singing and speech became clear, so clear that Bell recognized his father's voice on the line. The battery for this first long distance transmission of speech was located in Toronto. Transmission of speech was also accomplished between Brantford and the porch of the Bell home on Tutela Heights. The connection was made on the telegraph line between Brantford and Mount Pleasant and Bell completed the circuit by connecting his father's house to the Mount Pleasant telegraph with stove-pipe wire which he himself strung up. During that summer, several other successful connections were made, with Burford, Hamilton, and other points. It was in Boston, later that year, that the first conversation, or two-way transmission of speech by telephone, was accomplished.

In 1881, the Bell family moved to Washington but left many friends in Brantford who had been involved in the telephone experiments. No steps were taken to commemorate the invention

and experiments with the telephone in Brantford until 1906. W. F. Cockshutt, M.P. took up the matter, and through his efforts, a banquet was held at the Hotel Kerby, March 9, 1906, at which Dr. Bell was an honoured guest. The Bell Telephone Memorial Association was formed the same year, and on October 24, 1917 the city of Brantford dedicated the Bell Memorial in the presence of Dr. Bell and the Duke of Devonshire, Governor-General of Canada.

Since Dr. Bell's death, there have been several occasions when Brantford has commemorated his association with the city. The Bell Homestead was declared a National Historic Site in 1953; the Henderson Home was moved to the Bell Homestead and opened as a museum in 1969; the Brant County Museum mounted an excellent display on Dr. Bell. The exhibit includes material donated by Bell Canada and incorporates artifacts owned by the museum. A local committee, headed by Wm. Mowle, mounted the display, opened October 29, 1969.

With the cooperation of Bell Canada Ltd., the Bell Centennial Committee, is going ahead with extensive plans for the celebration of the centennial of the invention of the telephone in Brantford in 1874.

ALEXANDER GRAHAM BELL

In Edinburgh, Scotland, at 16 South Charlotte Street, a grey stone house bears an historical plaque that would have meaning for a passer-by from almost any part of the world. Its inscription reads:

```
*****
*                                     *
*   ALEXANDER GRAHAM BELL           *
*                                     *
*   Inventor of the Telephone       *
*   Born here 3rd March 1847.      *
*                                     *
*****
```

Aleck was the second of three sons born to Alexander Melville Bell and Eliza Bell. The background of his family and his early education were to influence profoundly the nature of Aleck's interests and the course of his genius as an inventor. His father was a noted teacher of speech and a researcher into the problems of the deaf. He designed a phonetic alphabet called Visible Speech which, by means of pictures, instructed a pupil how to use his vocal chords and tongue to produce an exact sound, even if, being deaf, he had never heard it. His mother, a talented and gracious woman, was herself deaf. Aleck's affection for his mother and his collaboration with his father in his work led him into a life-long concern for helping the deaf overcome their isolation.

At the age of twenty-three, an ailing Alexander Bell agreed to emigrate with his parents to Canada. The elder Bell would lecture in the United States and the more invigorating climate would be beneficial to them all. Ties with Scottish friends, the Reverend Thomas Henderson and his family, in Paris, Ont., brought them to the vicinity of Brantford. In 1870 the Bell family purchased the comfortable house at Tutela Heights, on the bluff overlooking the Grand River. Aleck and his father set up a small laboratory for their experiments in sound in one of the rooms. This little workshop at Tutela Heights has an honoured place in the history of technology.

His health improved, Bell went to Boston, on invitation, to work with deaf children. He found joy in this work. It was to

prove a continuing and life-long satisfaction. Throughout his life Alexander Graham Bell would proudly count himself above all else a teacher of the deaf. Using the Visible Speech theory he was able to demonstrate that deaf children could be taught to speak - and thus to communicate.

One of his pupils was Mabel Hubbard. When she was a bright little girl of five she had been left totally and permanently deaf from scarlet fever. Her education was extensive but it was through her instruction with Alexander Graham Bell that she became fluent in speech. Mabel Hubbard was a brilliant and original woman and her marriage to Alexander Graham Bell in July 1877 was a source of life-long happiness to them both.

At night, after his teaching day was over, Bell pursued his growing interest in electrical experiments concerned with the transmission of sound. He worked unremittingly, with Thomas A. Watson as a loyal assistant.

The talents, training and interests which up until now had occupied Bell's life seem to have all combined to help him succeed in inventing the telephone. His mind was instinctively inventive. He was second to none in his understanding of the organs of speech and the production of speech sounds.

The secret of transmitting speech he felt centred on a vibrating, magnetized reed that would induce a fluctuating current in an electro-magnetic coil. His thoughts were on this in Brantford in July, 1874, when he sat in what he called his "dreaming place" on the bluff and experimented in the workshop at Tutela Heights. So it was that in later years Bell said the idea for the telephone had been conceived in Brantford.

On June 2, 1875, came the "break" in telephone history. It happened in Bell's Boston workshop. Bell was at one end of the line, and Watson at the other, in a different room. Bell distinctly heard the vibrations of a plucked reed. Bell now knew he was on the right path. The very next day the primitive instrument transmitted the sound of Bell's voice to Watson. Not words, just recognizable voice sounds.

In Brantford, in September 1875, Bell wrote the patent specifications for the telephone.

Back in Boston, continuing his experiments with all his energy, Bell heard on March 10, 1876, the telephone carry its first intelligible communication.

"On that evening, Bell and Watson were about to try out a new liquid transmitter. Watson went to the other end of the line, in Bell's bedroom, and put the receiving telephone to his ear. Almost at once he was astonished to hear Bell's voice saying, "Mr. Watson, come here, I want you!"

Watson rushed down the hall into Bell's room, shouting, "Mr. Bell, I heard every word you said -- distinctly". (1)

One-way communication by voice had been achieved!

In June, 1876, Bell exhibited both magnetic and variable resistance telephones at the Philadelphia Centennial Exposition. It was called by one of the far-seeing judges "the most wonderful thing in America".

It remained to be seen whether the telephone could transmit words distinctly over considerable distances. Wires must be used to carry the sound of the message spoken into the membrane transmitter to the person listening at the iron-box receiver end. Bell believed that telegraph wires could carry the sound. By this time, a network of telegraph wires connected populated districts in Ontario for the sending of messages by telegraphic code. These were the wires Bell would use.

On July 24, 1876 Bell returned to his parents' Brantford home at Tutela Heights, and continued his experiments:

"On August 3 Bell drove with his equipment in a hired buggy to the quiet village of Mount Pleasant and set up a telephone receiver in the general store, which served also as local office of the Dominion Telegraph Company. Some of the townspeople gathered in the store that evening to hear snatches of the prearranged transmission from the Brantford Office, five miles away, over the telegraph line. With the iron-box receiver pressed to his ear, Bell recognized the rich voice of his Uncle David declaiming into the membrane transmitter at Brantford, and he was able to understand occasional words. The human voice had been

transmitted intelligibly over a distance of several miles, farther than ever before by any medium. Others took their turn, those at Brantford singing or speaking, those at Mount Pleasant listening. Now Bell knew that "my undulatory current can be used upon telegraph lines".

Bell arranged a still more impressive demonstration for August 10. By courtesy of the Dominion Telegraph Company, Bell connected his iron-box receiver to the line at Paris, Ontario, while the triple-mouthpiece transmitter was connected at Brantford, eight miles away. As Bell listened at the receiver amid the crowd of excited Paris townspeople jamming the telegraph office that evening, he at first heard "perfectly deafening noises...explosive sounds like the discharge of distant artillery...mixed up with a continuous crackling noise of an indescribable character." After a pause, came what sounded like the voice of his father, who had not been expected there. At Bell's telegraphed inquiry, the answer came that he had guessed right; his father had indeed walked to town and joined the group. By the time the fascinated listeners at Paris and the exhilarated performers at Brantford were content to stop, three hours instead of the allotted one had passed." (2)

Back in Boston, Bell unremittingly continued his experiments aided by Thomas Watson - for the next goal was two-way conversation. This was achieved on Friday, October 6, 1876 in Boston, when Bell and Watson held history's first two-way telephone conversation. Bell is quoted as saying, "I know that complete and perfect success is close at hand".

"For more than 45 years after inventing the telephone, Bell and his wife lived a vigorous and creative life, most of it in Washington and at their summer home, BEINN BHREAGH (the "Beautiful Mountain"), on Cape Breton Island, Nova Scotia. He gave years of unselfish service in behalf of the deaf. He became tremendously interested in aviation, foresaw its importance, and did much to foster its progress. His mind was ever-enquiring, and his range of interests wide." (3)

Alexander Graham Bell's many inventions.

Alexander Graham Bell's dream was to overcome the solitude of those shut away from all sound - the deaf - and his great achievement, the telephone, changed the way all people communicate with each other, thus bringing the human family closer together.

Alexander Graham Bell died at his beloved home on Cape Breton Island in 1922 and he is buried there. On Cape Breton Island, overlooking his home, BEINN BHREAGH, the Canadian Government built the Alexander Graham Bell Museum and opened it to the public in 1956. It displays many documents, sketches and models of equipment developed by Bell in his lifetime of experiment and discovery.

- (1) Alexander Graham Bell, Bell Canada, p.9.
- (2) Robert V. Bruce. Bell: Alexander Graham Bell and the Conquest of Solitude. Boston: Little, Brown, 1973.pp.201-203
- (3) Alexander Graham Bell. Bell Canada, p.12.

Alexander Graham Bell's many inventions.

Telephone

developed method of making phonograph records on wax discs.

developed an electrical apparatus to locate bullets or other metal in the body - for which he was awarded honorary M.D. by University of Heidelberg.

perfected an electric probe which was used in surgery before the X-ray was discovered.

proposed a device having the same purpose as today's iron lung.

advocated a method of locating icebergs by detecting echoes from them.

worked to make fresh water from vapour in the air for men adrift at sea.

directed breeding experiments in attempts to develop a strain of sheep that would have more than one lamb at a time.

conducted experiments with man-lifting Kites.

developed a hydrofoil.

worked with three-bladed propellers set in metal rings and launched vertically began helicopter rotor.

developed an air cooling system for hot days.

with C.A.Bell and Sumner Taintor invented the graphophone 1883.

founded and endowed the Volta Bureau for the increase of knowledge relating to the deaf. 1887.

founder of American Association to promote Teaching of Speech to the Deaf.

influential in founding magazine Science, 1880

in Halifax in 1907 formed the Aerial Experiment Association with J.A.D. McCurdy and Casey Baldwin. Silver Dart flown by McCurdy at Baddeck, N.S. February 23, 1909.

From.

Encyclopedia Americana. New York, 1971 Vol. III p.503-504

Awards & Honours Received by A.G.Bell.

Volta Prix - French Government 1880
London Society of Fine Arts - medal 1902
Royal Albert medal
Elliott Cresson medal
John Fritz medal 1907
Royal Society of Arts, London - Hughes medal 1913
Edison medal 1914

Bell was also awarded medals by:

Franklin Institute, Philadelphia.
Royal Cornwall Polytechnic Society.
American Institute of Electrical Engineers.
French International Exposition 1878.

Bell was:

Founding member of the National Geographic Society, and
the society President from 1898 to 1903.
Regent of the Smithsonian Institution 1898.
Edinburgh - honourary burgess and guild brother 1920.

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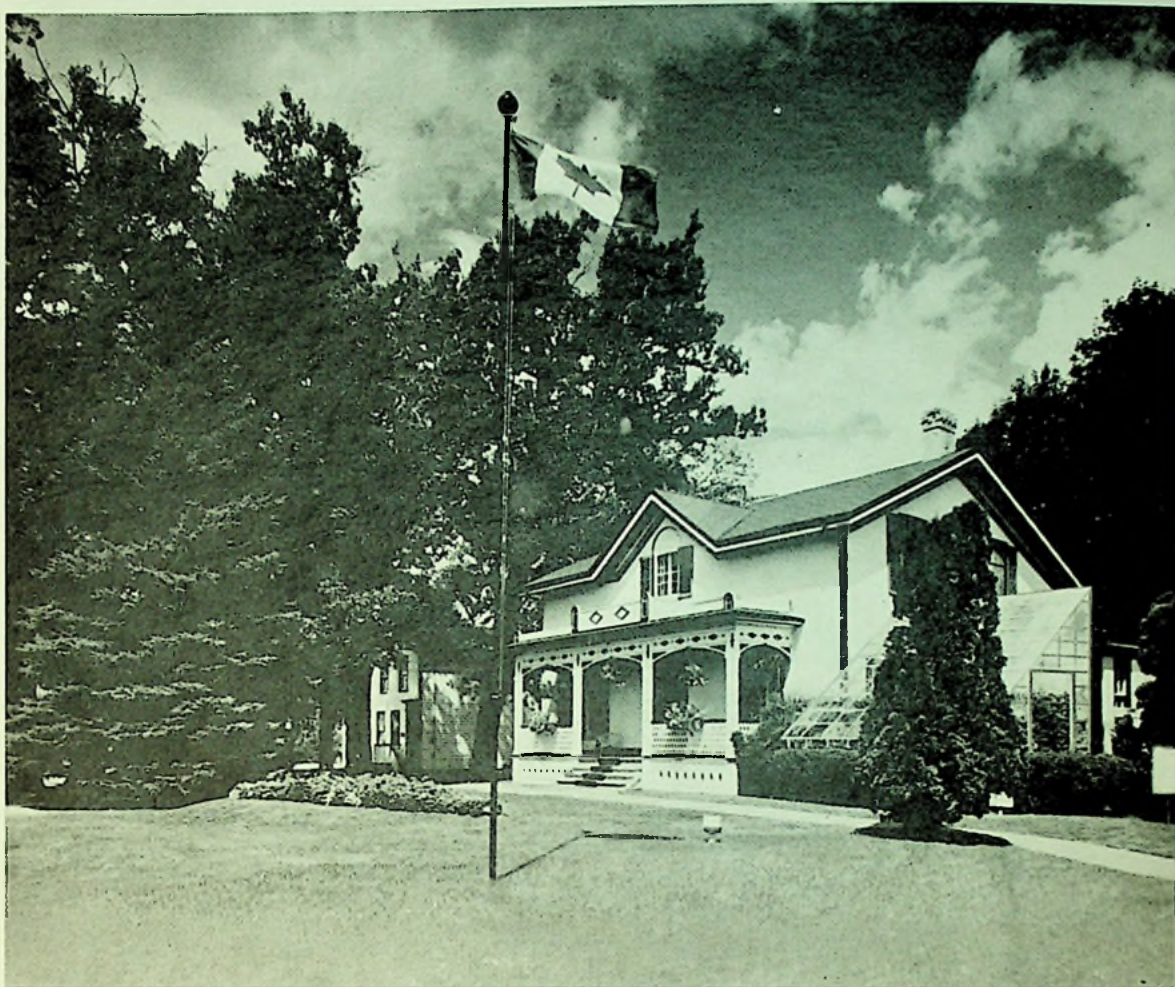
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Speech by Robert Spencer, Bell Canada Historian. March 7, 1974.
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AV-ETV Department.)

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