

Bell (Alex. G.)

*With the Compliments of the Author.*

UPON A

METHOD OF TEACHING LANGUAGE

TO A

*Author*

Very Young Congenitally Deaf Child.

✓  
BY ALEXANDER GRAHAM BELL, PH. D.

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## METHOD OF TEACHING LANGUAGE

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[A FEW months ago Mr. Denison, Principal of the Primary Department of the Columbia Institution for the Deaf and Dumb, called the attention of the editor of the *Annals* to a new member of his class who possessed a remarkable command of language. His attainments in other respects were not extraordinary; but he used the English language with a freedom and accuracy quite exceptional in a congenital deaf-mute. His education was begun and carried on for three years by Professor Alexander Graham Bell. For several years past he had had no teacher. Inquiry of Professor Bell as to the method by which results so unusual had been attained led to the preparation of this paper. We are sure the narrative will prove no less interesting to our readers than it was to Mr. Denison and the editor, and we trust it will not only afford encouragement and aid to parents in beginning the education of deaf children at home, but will also have a stimulating and inspiring effect upon every teacher who reads it. Much of the method described is no less applicable to a class of pupils than to a single pupil; and we have no doubt that in the hands of capable and devoted teachers it would go far toward solving the great problem of the mastery of the English language by the congenitally deaf.—ED. ANNALS.]

*To the Editor of the American Annals of the Deaf and Dumb:*

SIR: You have been kind enough to express the opinion that the readers of the *Annals* would be interested in knowing the method I adopted in educating a very young congenitally deaf child, who became my pupil in 1872, and who has since acquired

a vernacular knowledge of the English language in its spoken and written forms.

This boy was only about five years old when his education was commenced, and the results obtained in his case during the first two years indicate that the education of congenitally deaf children might profitably be commenced at home, and that they might even acquire a vernacular knowledge of English—at least in its written form—before being sent to school.

The value of early home training in language cannot be overestimated. Our pupils, as a rule, do not enter school until after the age when children most readily acquire language. If they could commence their school course with even an imperfect and rudimentary knowledge of English, the labor of the teacher would be enormously reduced and the progress of the pupil immensely accelerated.

In the autumn of 1872 I became interested in the boy whose education forms the subject of this paper, and the following extract from one of my note-books will give an idea of the general plan which guided my first steps:

“October 1st, 1872.

“Master George S——, aged 5 years, became my pupil this morning.

“He was born totally deaf, and has never spoken a word in his life. He has never been to school, but has received private instruction for three weeks from Miss Fuller, principal of the Boston School for the Deaf and Dumb.

“He seems a fine, bright, intelligent boy, and there is no apparent defect in his vocal organs.

“For my own guidance, and for the information of friends, I shall briefly sketch out the course I intend to pursue with him.

“It is well for a teacher not to burden himself with too many rules, but rather to grasp *general principles*, and to leave the details of instruction to be worked out by experience.

“I propose to divide his education into two great branches—one relating to articulation, the other to mental development.

“The method of teaching articulation has been explained at length in the *American Annals of the Deaf and Dumb for January, 1872*.

“The general principle is this: *The pronunciation of words*

*and sentences is not to be attempted until the vocal organs have been well drilled on elementary sounds and exercises.\**

“While, then, the mouth is being brought under control by the use of the visible speech symbols, the mind is to be educated by ordinary letters. The pupil must learn to read and write.

“I believe that George Dalgarno (in his work entitled ‘*Didascalocophus, or the Deaf and Dumb Man’s Tutor,*’ published in 1680,†) has given us the true principle to work upon when he asserts that *a deaf person should be taught to read and write in as nearly as possible the same way that young ones are taught to speak and understand their mother tongue.*

“We should talk to the deaf child just as we do to the hearing one, with the exception that our words are to be addressed to his eye instead of his ear.

“Indeed, George Dalgarno carries his theory so far as to assert that the deaf infant would as soon come to understand written language as a hearing child does speech, ‘had the mother or nurse but as nimble a hand as commonly they have a tongue!’

“The principles inculcated by Prendergast (in his ‘*Mastery of Languages,*’ 1864,‡) and by Marcel (in his ‘*Study of Languages, or the Art of Thinking in a Foreign Language,*’ 1869,‡) would, if applied to deaf-mutes, point to the same result and to the same method of teaching.

“The principles of Froebel’s Kindergarten method of teaching are applicable to deaf-mutes.

“Froebel believes that *the natural instinct of the child to play should be utilized in his education.*

“His ideas would seem to indicate that the successful teacher must appeal to the faculties of *imagination and imitation,* and encourage *self-activity* in his pupil.

“*I propose, then, to blend the principles of Dalgarno and Froebel—to familiarize the child with written language by means of play.*”

In pursuance of this plan the school-room was converted into a play-room, and language lessons were given through the instrumentality of toys and games.

I was fortunate in securing the co-operation of a very excellent

\* Experience and reflection have led me to modify this principle.

† Reprinted in the *Annals*, vol. ix, pp. 15-64.

‡ Reviewed in the *Annals*, vol. xiv, pp. 193-204.

teacher—Miss Abbie Locke, now Mrs. Stone, of St. Louis—with whose assistance George's education was carried on.

Every toy was labelled with its proper name. The different parts of the room, the articles of furniture, and the various objects in the room were also all labelled, so far as possible. Each window had pasted upon it a piece of paper on which was written the word "window;" so with the doors, mantel-piece, table, black-board, etc., etc.

The words were written in ordinary script characters, with the letters slightly separated. Against one wall was a card-rack arranged to display from one to two hundred little cards, each about one inch square.

Upon these cards were written from time to time the names of his toys, and of all the different objects for which he had invented sign-names. Most of his playthings were kept locked up, and were only produced one or two at a time, so as to afford constant variety.

#### *Word Exercises.*

1. Our exercises would commence somewhat as follows: George would make his appearance in the morning anxious for play—making vigorous signs for some of his most valued toys. For instance, he would fold his arms and beat his shoulders rapidly with his hands. This was his sign for "doll." The doll was accordingly produced, and his attention was directed to the word "doll" pasted upon the forehead. We compared this word with the words written upon the cards, to see who would first find that card with the word "doll" upon it. Of course in the beginning—much to his chagrin—I would generally be the successful searcher. Having found the proper card, we would play with it a sort of game of hide-and-seek, which interested him exceedingly. He would turn away or shut his eyes while I replaced the card in the rack in some place to him unknown. The game consisted in finding it again.

Doll in hand, he would search for the card, comparing each written word with the word on the doll's forehead. He would shake his head gravely at each wrong word, and nod vigorously when he thought he had found the correct one.

When he made a mistake I pointed out the proper card and made fun of him. He was very sensitive to ridicule, and was generally ambitious to try again and again until he succeeded

without my assistance. He was also much interested in my (pretended) unsuccessful efforts to find a card placed by him in the rack while my back was turned.

George seemed to enjoy this game exceedingly, but we rarely continued it for more than a few minutes at a time, and even then we constantly varied the names sought for, so as to avoid monotony.

In the beginning the cards were all blank, and the first day I filled in about half a dozen names, but required him to find only one card. Next day we sought not only for that card, but for one or two of the others. After the lapse of a few days he became pretty familiar with all the names, and then each day two or three new names were added, until he had quite an extensive collection of words at command.

2. When he became familiar with a few names I would get him to seek for the proper card without first consulting the label upon the toy. He would pick out some card and then compare it with the word pasted upon the toy. Great was his mortification when the two did not correspond, and great also was his triumph when they did.

I made a mental note of the names he learned by heart in this way, and then pretended not to understand his signs for the corresponding objects.

For instance, I remember that one morning he came down stairs in high spirits, very anxious to play with his doll. He frantically beat his shoulders with his hands, but I could not understand what he meant. I produced a toy-horse; but that was not what he wanted. A table; still he was disappointed. He seemed quite perplexed to know what to do, and evidently considered me very stupid. At last, in desperation, he went to the card-rack, and, after a moment's consideration, pulled out the word "doll" and presented it to me. It is needless to say that the coveted toy was at once placed in his possession. I always pretended to have great difficulty in understanding his signs when we were anywhere near the card-rack, so he soon became accustomed to pick out the words for any objects he desired.

3. The same plan was pursued at meals. A little card-rack was prepared for the dinner-table, so that he might have written words at hand for everything he required to eat or drink.

4. Another word exercise, pursued for a few minutes each day,

consisted in the recognition of such words as "stand," "sit," "walk," "run," "jump," etc., which were written upon the blackboard and illustrated by standing, sitting, walking, running, and jumping.

*Sentence Exercises.*

The greater portion of our time was taken up—even from the first day—with the recognition of complete sentences, instead of single words.

The exercises appeared under two forms: (1) impromptu written conversation, and (2) regular sentence exercises.

1. The impromptu conversation was going on all the time. I constantly asked myself the question, "If George could hear, what would I say to him now?" and whatever came into my head I wrote. I kept on writing to him all the time until the blackboard was covered with writing and my arm ached.

I emphasized words to his eye, and grouped them together on the board as I would have grouped them in utterance, leaving gaps here and there where one would naturally pause in speaking. In a word, *I tried to exhibit to his eye all the relations that would have met his ear, could he have heard my speech.*

I believed thoroughly in the principle announced by Dalgarno that *it is the frequency with which words are presented to the mind that impresses them upon the memory*, and hence aimed at *much writing* as the accompaniment of everything we did.

I followed up my blackboard conversation by a liberal use of pantomime, bearing always in mind the general principle that I had formulated for myself, viz., that *the use of pantomime is to illustrate language, not to take its place.* In carrying out this principle, therefore, I always wrote first and acted afterwards—avoiding the converse.

As an example of these impromptu exercises, I will give an imaginary conversation just as I might have written it upon the board:

Specimen of Impromptu Conversation.

Now George I wouldn't whip that poor horse if I were you.

You should be kind and gentle to it.  
Please don't whip it any more.

You will be naughty if you go on whipping it like that.

You **Mustn't** whip it any more.

Now be a good boy  
That's right.

and give the poor horse something to eat  
Kiss it.

You're a good boy to pat the horse so gently  
Give the doll a ride on the horse's back.  
Take care! — or the doll will fall off!

&c., ad libitum.

2. Regular sentence exercises. These exercises formed a regular daily game, which could be varied *ad libitum*. A number of directions were written upon the blackboard which were to be acted out. The game consisted in distinguishing one direction from another.

For example, the following sentences might have been written:

Walk *very slowly* to the window.  
 Give the doll a drink of water.  
 Run round the table.  
 Go and look out of the window.  
 Make the doll dance.  
 Put the doll to bed.

We would then act out the sentences, one by one, and afterwards I would take a pointer and indicate one of the sentences at random for him to act out without assistance. Of course he would make frequent mistakes. For instance, when I pointed to the sentence, "Run round the table," he might proceed to give the doll an imaginary drink of water! Under such circumstances I would laugh at him, and write somewhat as follows: "No; that's not right; you are giving the doll a drink of water!!" I would then point to the sentence, "Give the doll a drink of water," and write "That's what you did," and make fun of him.

This exercise would be varied by George playing the master while I became his pupil.

I would test his knowledge by occasionally acting out the wrong sentence, and it gave him great delight to correct me.

In this way he learned very readily to distinguish about half a dozen different sentences, partly from their position on the board, partly by their differences in length, and partly by the recognition of individual words.

At first, however, the sentences were not recognized independently of their position on the board, and, as a general rule, by next day he had forgotten their meaning, excepting when they had been left on the board over night, so that they occupied the same relative positions as before.

*Writing.*

He was extremely fond of these sentence exercises; but when he played the master, he was not contented with merely pointing at sentences that I had written—he wished to write them himself! This desire was forced upon my attention one day in the following manner: He took the chalk and scribbled all over the board, and *then made signs for me to act that out!* After consideration of the subject, I came to the conclusion that this was a clear indication that the time had come to teach him to write. The great difficulty in the way of doing this lay in the fact that at this time he did not know a single letter of the alphabet—he recognized words and sentences only as wholes.

I determined to make the experiment of teaching him to write sentences as wholes, and the result was as surprising as it was gratifying.

I commenced by writing on the board some direction he wished me to act out. After partially erasing this, so as to leave the writing faintly visible, I placed the chalk in his hand and allowed him to trace over what I had written.

It is true that his first attempts resulted in rather ludicrous caricatures of the originals; but *he never forgot the meaning of a sentence he had traced over in this way a few times.*

The attempt to imitate my writing forced him to observe minutiae that had hitherto escaped his attention, so that sentences began to be recognized quite independently of their position on the board, and were remembered from day to day.

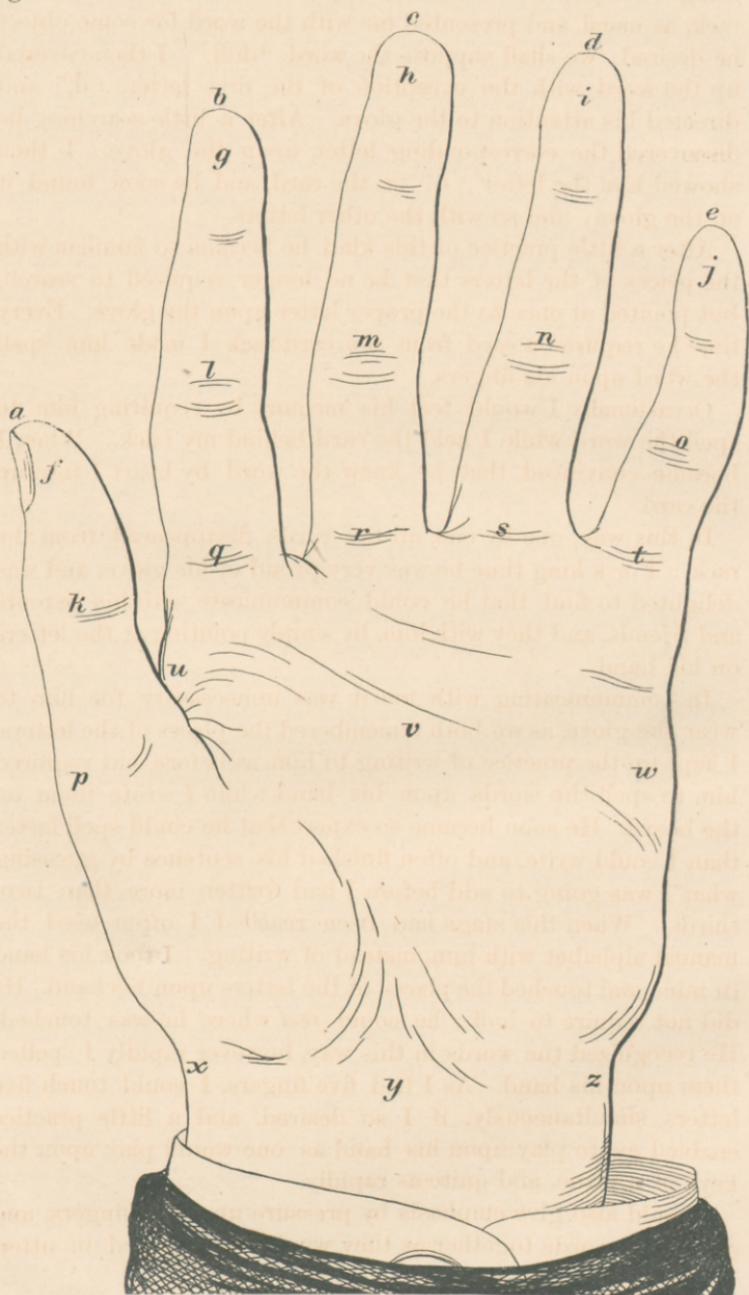
His imitation of my writing improved with practice, and soon became quite legible. I observed also that his comprehension of my impromptu writing seemed to improve at the same time, and he evidently experienced a desire to use words in his communication with others. He had not progressed sufficiently to be able to write without tracing, but he would often come into the school-room out of school hours for the purpose of taking cards from the card-rack to give to servants or friends to make them understand what he wished.

*Spelling.*

The moment he evinced the independent desire to communicate with others by written words, I felt that the time had come to give him a means of forming written words for himself by teaching him his letters and a manual alphabet.

For this purpose I adopted the plan, recommended by George Dalgarno, of writing the alphabet upon a glove. The arrange-

ment of the alphabet I adopted is shown in the following diagram:



This glove I presented to him one morning as a new plaything. He put it on his left hand, and then went to the card-rack, as usual, and presented me with the word for some object he desired; we shall suppose the word "doll." I then covered up the word with the exception of the first letter, "d," and directed his attention to the glove. After a little searching he discovered the corresponding letter upon the glove. I then showed him the letter "o" on the card, and he soon found it on the glove; and so with the other letters.

After a little practice of this kind he became so familiar with the places of the letters that he no longer required to search, but pointed at once to the proper letter upon the glove. Every time he required a card from the card-rack I made him spell the word upon his fingers.

Occasionally I would test his memory by requiring him to spell the word while I held the card behind my back. When I became convinced that he knew the word by heart I tore up the card.

In this way, one by one, all the cards disappeared from the rack. For a long time he was very proud of his glove, and was delighted to find that he could communicate with his parents and friends, and they with him, by simply pointing at the letters on his hand.

In communicating with me it was unnecessary for him to wear the glove, as we both remembered the places of the letters. I kept up the practice of writing to him, as before, but required him to spell the words upon his hand while I wrote them on the board. He soon became so expert that he could spell faster than I could write, and often finished his sentence by guessing what I was going to add before I had written more than two-thirds. When this stage had been reached I often used the manual alphabet with him, instead of writing. I took his hand in mine and touched the places of the letters upon his hand. He did not require to look; he could *feel* where he was touched. He recognized the words in this way, however rapidly I spelled them upon his hand. As I had five fingers, I could touch five letters simultaneously, if I so desired, and a little practice enabled me to play upon his hand as one would play upon the keys of a piano, and quite as rapidly.

I could also give emphasis by pressure upon the fingers, and group the words together as they would be grouped in utter-

ance, leaving pauses, here and there, corresponding to the pauses made in actual speech.

The more I used with him this means of communication the more I rejoiced in the fact that I had decided to employ an alphabet addressed to the sense of touch, instead of sight. It left his eye free to observe the expression of my face and the actions and objects which formed the subject of our conversation.

The general principle upon which I was working was to speak to him by written words, as I would have spoken to a hearing child by speech, and I believed (with George Dalgarno) that he would in time come to understand written language by the same process that children learn to understand their mother tongue.

It seemed to me that hearing children, in acquiring their vernacular, derived great assistance from the free use of the eye as an interpreter of words addressed to the ear, and that therefore my pupil would derive similar assistance from his eye, as the interpreter of words addressed to the sense of touch.

In addition, therefore, to the "regular sentence exercises" and "impromptu written conversation," I would talk to him a great deal upon his hand.

We would go to the window and chat by the half hour at a time about what was going on in the street. At night also I would frequently visit him in his bed-room for the purpose of satisfying myself that I could communicate with him as readily in the dark as by day.

His progress now became very rapid, and he commenced to talk to me by words, instead of signs. I placed no other pressure upon him than my pretended difficulty in understanding his gestures, and allowed him to express himself in any way he chose.

From the moment we commenced to employ the manual alphabet I myself abstained from the use of any other gestures than those I would have employed in talking to a hearing child under the same circumstances. My pretended difficulty in understanding his signs increased from day to day, so as to force him more and more to attempt to express his thoughts by English words. I would assist him in this by translating his signs for him from time to time and making him repeat the sentence independently upon his fingers.

In all our conversations I was careful to employ natural and complete sentences, but his first attempts at independent expression (like the first independent utterances of a hearing child) consisted of isolated words.

The use of the glove alphabet was so little noticeable that I could talk to him very freely in a crowd without attracting the attention of others. I took him to Barnum's museum and talked to him all the time the lions were being fed, and I am sure that no one among the spectators had the slightest suspicion that the boy was deaf.

From the moment he learned the alphabet I gave him regular writing lessons, so that he should form his letters properly and write with ease. I then made him keep writing materials about him, and encouraged him to use them constantly in communicating with friends.

Before six months had elapsed I frequently found the floor littered with scraps of paper that he had used in this way, and I am sorry that it did not occur to me at the time to preserve them for future reference. It was not until late in 1873 that I made the attempt to collect a few scraps of this description, and those that are preserved in my note-book possess great interest.

I shall conclude this paper by the following specimens of his composition, which will show that at little more than six years of age this congenitally deaf boy had acquired a vernacular knowledge of the English language sufficient to enable him to communicate by writing with hearing persons.

*Specimens of Composition.*

1. *July 1st, 1873.* Scrap found upon the floor in his father's house in Haverhill :

Gurdon is sick to Haverhill in the other Room in the sofa.

2. *August 14th, 1873.* Letter to his mother, written from Brantford, Canada :

Dear Mama

The small cat loves the large cat. Mary will go to Haverhill. Grandma S— will go to Haverhill. I will go home in the train and let I will sleep in the cars. Mama and Nat and I will drive in Haverhill. The many flags is in Haverhill. I will go upstairs in Haverhill to flags. Richards and John and nurse and I and Mr. Bell will go home. After breakfast I will go to see Freddy. is sleep. I will Eat fast. I love Gurdon and auntie.

3. *November 3d, 1873.* Scrap found upon the floor :

Are these mine? there to see the letters? if you please? Yes Dear Mr. Bell.

4. *November 4th, 1873.* Two scraps containing a conversation between George and myself :

*First scrap.*

*Mr. Bell.* I think you are tired and *hot* now, so we will be *quiet* and *rest* now. What does "rest" mean?

*George.* "Rest" means stop.

*Mr. Bell.* Yes, dear. It means "stop" or "still."

*George.* Or "wait."

*Mr. Bell.* Yes.

*George.* Please may I put a your handkerchief and be like an old woman.

*Note in my record-book:* "After playing for a while he remembered that his grandmamma had made fun of him for pretending to be a woman, so he wrote:"

*Second scrap.*

I am not put on my towel on my head and be like an old woman and Grandma said not now Grandma will be so very *sorry* now.

5. *November 23d, 1873.* Letter written by George to his mamma in Haverhill. No person saw this letter until it was finished. Everything in it, even to the emphasizing of certain words, is his own. The omission of capital letters can be traced to the too frequent use of the manual alphabet in place of writing:

"this is *sunday* to-day & to-morrow will be Monday. the people are going to *church*. Mary and Nat are *grown* by and bye.\* *john* is not sick now. I *love* daniel now. I am going to *bed* bye and bye. the kitten is alive.† *Mr. Bell* is *reading the book* but papa and mama are *not* coming to be glad and I *matched* the lamp on fire. I looked at my little watch from my ka.‡ we will not drive with Mr. Bell. I will say please may I be excused.§ grandpa is tired to drive very fast home. we are walk very fast and go to franks horse and drive the colt on wednesday to see the eggs and hens and kitten and hay and cracker are on dog is not eat the kitten fall to die to the grave. and I am well and I think that Mr. Bell is sick to be tired and go to Boston to the house to go to bed to die to lie down

\* Mary and Nat (his brother and sister) will grow up by and by.

† The kitten had been crushed behind a book-case and nearly killed.

‡ "Ka" was the children's name for George's nurse.

§ He had just been taught to use this expression when he wished to leave the dinner-table before the others had finished.

on on my pocket to put the pretty to keys.\* I looked at the kitten fast asleep on my straw. dan is going to the cow milk on Monday.

your loving

from George

6. *December 14th*, 1873. Another original letter from George to his mamma:

Salem

Sunday Dec. 14

“ My Dear Mama

“ I think that Mr. Bell is sorry that I wrote that to say My Dear Mama.†

“ I am sorry that papa and mama are not coming back now. I think that Dan is going to church on sunday with Ellen and Maggie now. By and bye Ellen and Maggie and Dan will come after church. Maggie will stay here with the house. Dan and I went out to the cow milked at the fair. It was dark and it is light. grandma is afraid but I will not go but tomorrow. Ellen is not afraid to see the cow too. I may not kick the cow with be sorry not glad to be still on sunday but bye and bye mary and nat is going to bed. Bye and bye Dan will cut.‡ but grandma is reading on sunday. I think that grandma has gone to church with Mr. Bell. Mr. Bell's beard is coming now.§ is like are the calendar. I am the deers in Boston.¶ The snow is stopping. The rain is not well but rain is sick but the snow is well. Mr. Bell is reading too. Grandma is not reading but after dinner it is the sun too. Haverhill is very far away over here. are papa stay in Haverhill.

7. *March 26th*, 1874. Letter to Mrs. H——, written without any assistance:

Salem, Mass

March 26th 1874

My Dear Grandma H——

I have been to the stable. I am very Glad that Mary will come back tomorrow. I loves Grandma H——. I love Grandpa H—— too and I have finished school before dinner. I have new wheel barrow and there

\*This referred to some incident with which I was not acquainted. He went through a pantomime about it, showing that there was some definite idea he wished to express, but no one could understand what he meant.

† When George had written “ Salem, Sunday, Dec. 14,” he attracted my attention, that I might see he was going to write a letter. As he seemed in doubt to whom to address it, I suggested that he should begin “ Dear Mr. Bell;” but he wrote “ My Dear Mamma.” Upon which I looked very sorry, pretended to cry, and went out of the room, much to his amusement. When he was about half through his letter I returned and read a book till he had finished.

‡ “ Will saw firewood.”

§ George had seen me before I had shaved.

¶ He had been pretending to be a deer.

is Grandma's pig in the stable. Maggie is not going to church but maggie is going to church on Sunday. Mr. Bell is writing to you, but I am busy to write to you too. I have a new doll. The dolls are sitting in Mary's chair here. Nat has a old bird and the new piano.\* Mr. Bell has a new piano in Boston and play with me and Lilly † I am laughing at you. I am not laughing at Grandpa H——. I have been the ladies last night and many days. ‡ I love Maggie. I love Maggie dear pet. I must not go near the horse because the horse is large and I may go near the cow. slept in the train from Canada. but now I am in Salem. I will go to Haverhill in a few days. Isa is upstairs sewing. She is not finished sewing.

Your loving  
George T. S——.”

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\* A toy bird and a toy piano.

† Mr. Bell had a new piano in Boston *a long time ago* and played for me & Lilly.

‡ “There were a number of ladies here a few days ago.”



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