The dentaphone: a new scientific invention, which enables the deaf to hear by the sound-vibrations conveyed through the medium of the teeth, and the deaf and dumb to hear and learn to speak.

#### **Contributors**

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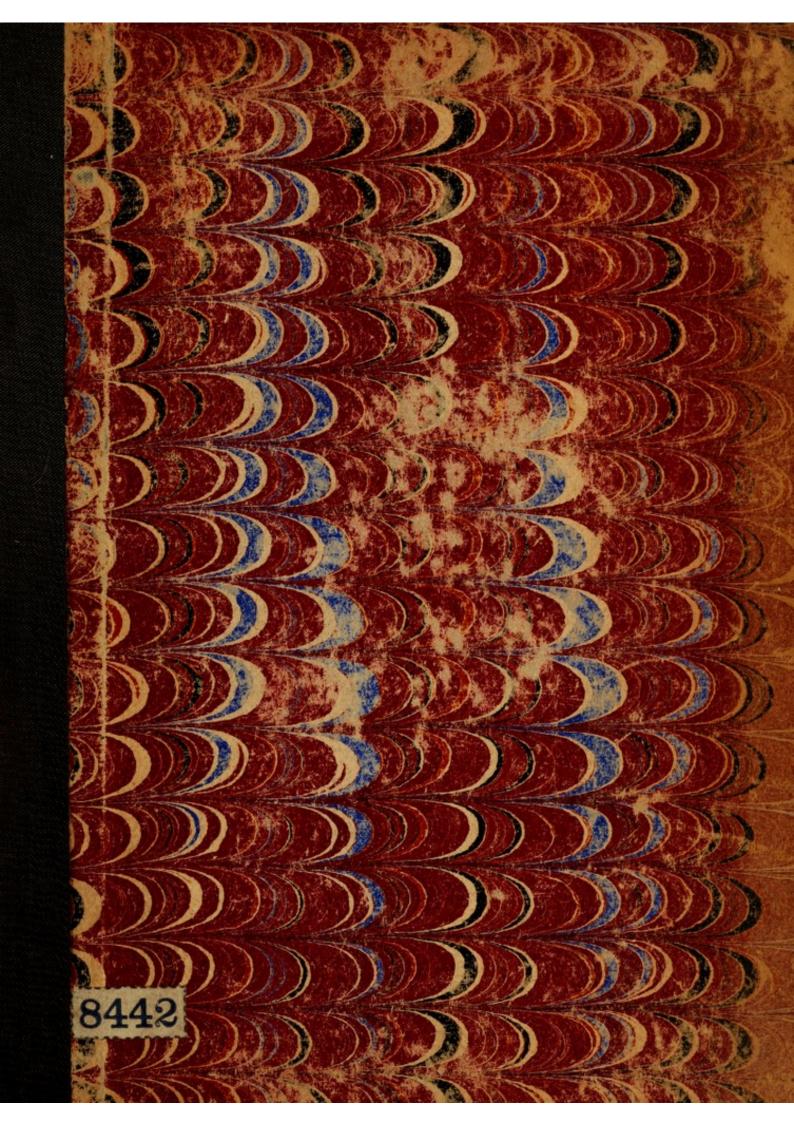
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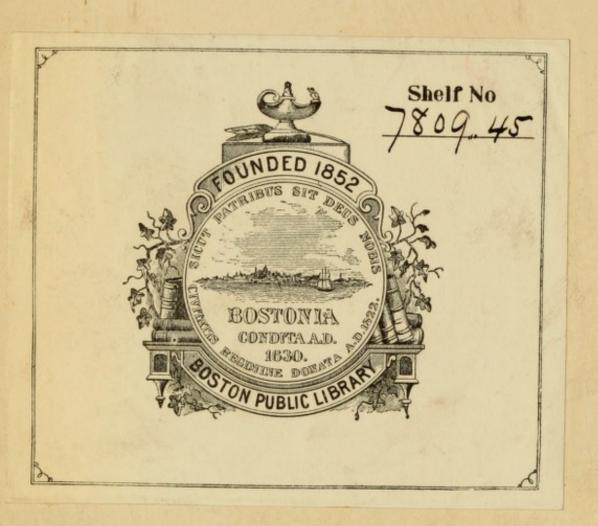


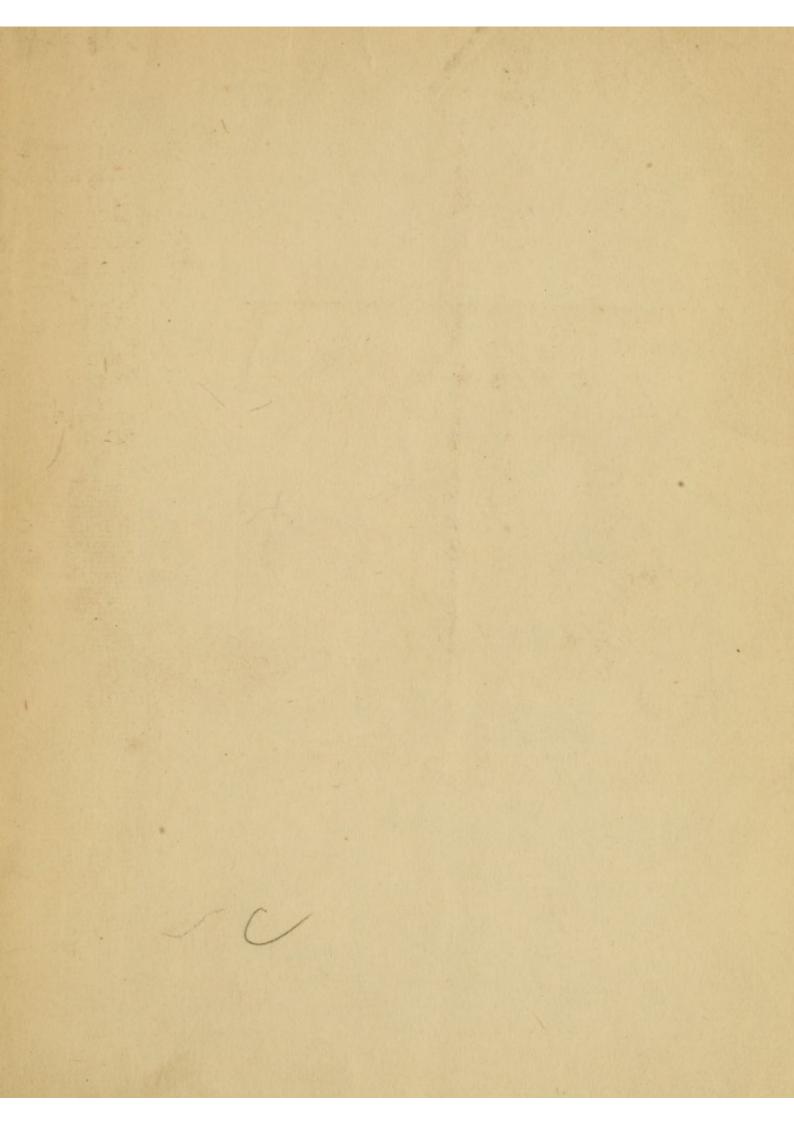
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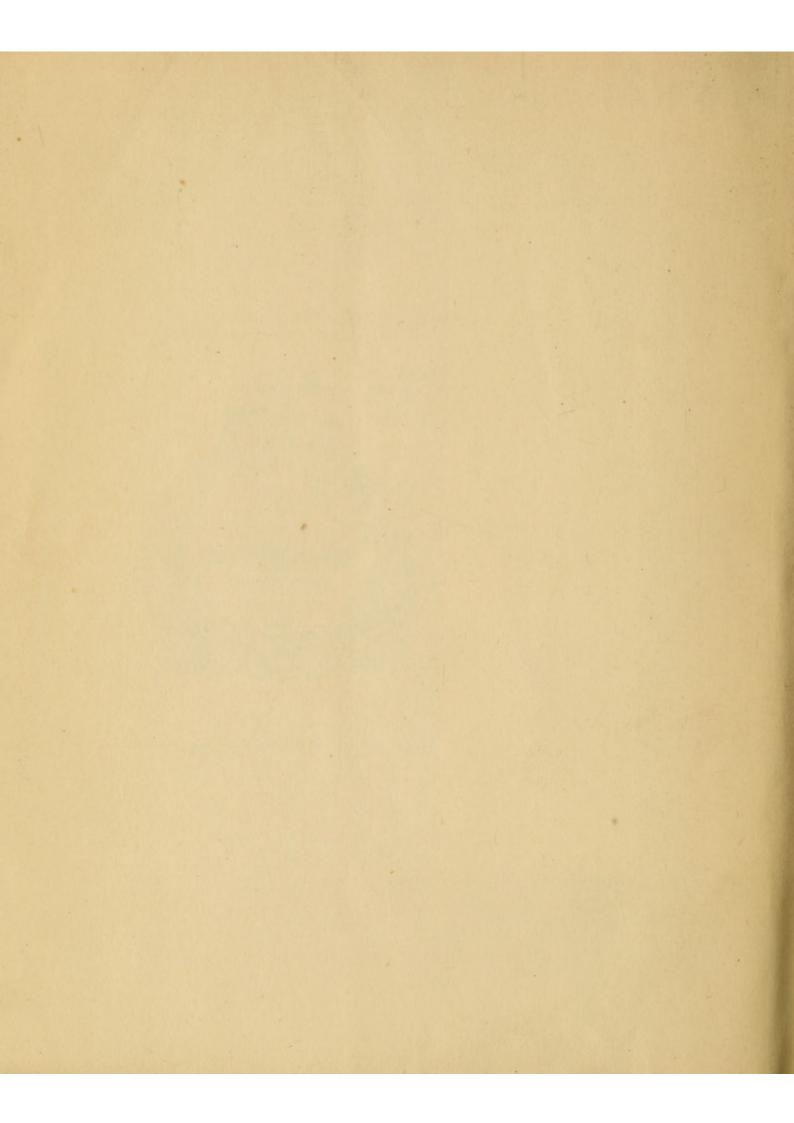


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# PAMPHLET

--- DESCRIPTIVE OF----



PHONE

A NEW

Scientific Invention,

--- WHICH ENABLES

# The Deaf to Hear

THROUGH THE MEDIUM OF THE TEETH,

AND

THE DEAF S DUMB TO HEAR S LEARN TO SPEAK.

PUBLISHED BY
THE AMERICAN DENTAPHONE CO.
287 VINE ST., CINCINNATI, 0.



## THE DENTAPHONE.

We submit in this Pamphlet a short Description of the Dentaphone, and its Mode of Action, together with a Sketch of the Mechanism of the Healthy Ear. We have added, besides, Press Notices, selected from leading Secular and Religious Newspapers in various Parts of the Country, with Testimonials from Professional Men of High Standing in their several Professions and in the Community at large.

A careful Perusal of the following Pages will give the Reader some Conception of the Great Merits of this Remarkable Invention, though, to realize fully its Immense Importance to a Large Class of Sufferers, it must be seen in Operation, enabling the Deaf to Hear Distinctly, and the Deaf and Dumb to Hear and Learn Spoken Language.

### PRICES OF DENTAPHONE.

Ordinary Conversational Size, - - \$8.00 Large Size, for Operas, Concerts, Etc., - 12.00

The Conversational Dentaphone, which is the one commonly used, in Size and Shape very much resembles an Old-fashioned Silver Watch. It weighs less than Two Ounces, and when not in use is very conveniently carried in an ordinary Watch-pocket.

The Dentaphone of either Size is sent by Mail or Express, Prepaid, to any part of the United States or Canada, on Receipt of Price.

Parties who desire to Order by Express, C. O. D., are required to pay all Express Charges.

Owing to its small Size and Weight, the Dentaphone is most conveniently sent by Mail.

Send Money by Post-office Order, Registered Letter, Draft, or Express. Give your Name and Post-office Address in Full.

Address

### THE AMERICAN DENTAPHONE CO.,

287 Vine Street,

CINCINNATI, O.

## THE

# DENTAPHONE,

A New Scientific Invention,

WHICH ENABLES

THE DEAF TO HEAR BY THE SOUND-VIBRATIONS
CONVEYED THROUGH THE MEDIUM OF THE
TEETH, AND THE DEAF AND DUMB TO
HEAR AND LEARN TO SPEAK.

PATENTED.

THE AMERICAN DENTAPHONE COMPANY, 287 Vine Street, CINCINNATI, O.

B. H. mar. 13, 1894

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# THE DENTAPHONE.

### INTRODUCTION.

For many years various inventors have been engaged in devising some means whereby the deaf could be relieved from their infirmity, and enabled to hear spoken words and readily carry on conversation with those around them. One device has succeeded another, each only leaving the sufferer more disappointed than the last, until finally he has given up all hopes of relief, or, as in certain cases, is compelled to fall back on the use of the clumsy, old-fashioned ear-trumpet. In a large number of instances, however, even the ear-trumpet could not be used, as the defect in the hearing was of such a nature that the sound vibrations, however intensified by an ear-trumpet or other device, could not be transmitted through the ear to the nerves of hearing. Under these circumstances no advance seemed possible in the way of enabling the deaf to hear, and those who best understood the difficulties to be overcome could give no hopes of success.

The wonderful accuracy with which the Phonograph and the Telephone registered and reproduced the human voice, taken in connection with the fact that the nerves of hearing could be reached directly through the teeth and bones of the face and head, led to the conclusion that if some instrument could be devised sensitive enough to gather up the delicate sound-vibrations that make up spoken words, and convey them to the teeth, this problem of enabling the deaf to hear would be solved. The Dentaphone is the final result of a long series of experiments in this direction; and

that it is a complete success is at once evident, not only to the deaf using it, but also to any other person who will, for the time, render himself deaf by muffling the head, or closing the ears and standing at a long distance from the speaker.

## DESCRIPTION OF THE DENTAPHONE.

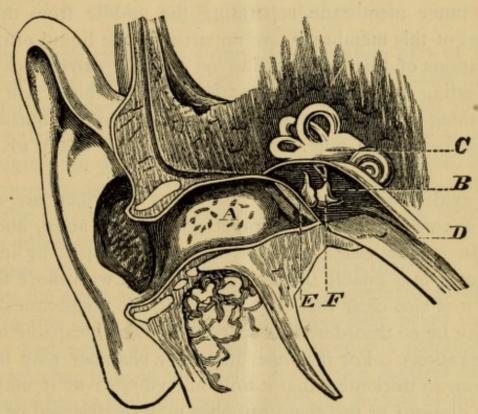
The Dentaphone, like other important inventions, is comparatively simple in its details, though yielding such remarkable results. In size and shape the instrument very much resembles an old-fashioned silver watch, and weighs but little over an ounce and a half. It consists, in brief, of a chambered box, in which is secured an exceedingly delicate, easily vibrating diaphragm. The size and shape of the chambers, the material and construction of the diaphragm, etc., have been determined by experiment, as, indeed, has every detail pertaining to the instrument. In the diaphragm and chambers consist the essential parts of the Dentaphone, all other points being of minor importance.

Sounds caused by the human voice, musical instruments, etc., etc., impinge on the delicate diaphragm of the Dentaphone and throw it into vibration, exactly as the same sounds would cause the drum of the healthy ear to vibrate. These vibrations of the diaphragm are increased in intensity by the peculiar construction of the chambers of the instrument, and are then conveyed to the mouth-piece in contact with the teeth. From the upper teeth the vibrations are conveyed through the bony framework of the head to the auditory nerve inclosed in the inner ear, thus producing the sensation of hearing.

Just as the Phonograph or Telephone records or transmits every sound with the utmost accuracy, so the Dentaphone receives and transmits every modulation of the speaker's voice, until it is heard as clearly as by the ordinary healthy ear.

### THE HEALTHY EAR.

In order to thoroughly understand the working of the Dentaphone, it is desirable to give a short sketch of the healthy ear, and the ordinary process of hearing. The perfect ear consists of three chambers or divisions, called respectively the outer, middle and inner ear, and marked A, B and



SECTIONAL DIAGRAM OF THE THREE CHAMBERS OF THE EAR.

C in the accompanying diagram. The outer ear is about an inch and a quarter long, and communicates directly with the outside air. Between the outer and the middle ear is a thin partition or membrane called the ear-drum (E). To the inside of the ear-drum is attached the first of a series or chain of small bones (F) which run across the middle ear or chamber, from the ear-drum to a similar thin membrane which separates the middle

from the inner ear. The outer and middle divisions or chambers of the ear contain air, and the middle ear communicates with the upper and back part of the throat by a small tube marked D in the diagram. The inner chamber of the ear, which is firmly imbedded in the bony structure of the skull, contains a thin, watery liquid in which are floating the fine ends or filaments of the auditory nerve, which is the nerve of hearing. Now, in the process of hearing, when a sound is made, the vibrations of the outside air strike against the ear-drum and set it in vibration. This vibration is communicated to the chain of small bones in the middle ear and from them to the inner membrane separating the middle from the inner ear. The vibrations of this membrane, are imparted to the liquid of the inner ear, and the vibrations of this liquid acting on the fine extremities of the auditory nerve floating in it, constitute hearing. From this it will be seen that hearing is nothing more nor less than the vibrations of the outside air, which are communicated to the outer and inner ear, and finally to the auditory nerve.

Now it is evident that if any of these parts described are diseased, the sound-vibrations will be conveyed imperfectly or not at all, and deafness is the result. In certain cases, the use of an ear-trumpet, by increasing the sound-vibrations, may enable them to be conveyed with more force through the ear; but it is also clear that, in other cases, the membranes, bones, etc., of the ear may be so disordered as to render them incapable of conveying any sound-vibrations. For instance, the outer chamber may be closed up; or the ear-drum so thickened that it will not vibrate; or it may be entirely destroyed by disease; or the chain of bones may be diseased or removed; or the tube leading to the throat may be closed; in all these cases constituting forms of disease in which the hearing may be much impaired or entirely lost.

The success of the Dentaphone in all these and similar cases depends on the fact that the sound-vibrations, instead of being conveyed by the diseased ear to the liquid in the inner chamber containing the auditory nerves, are conveyed directly from the teeth through the bones of the head. As the instrument gathers up the sound-vibrations on its delicate diaphragm and conveys them to the teeth, and, as there is a solid bony connection between the teeth and the inner ear, all sounds, including spoken words, are conveyed to the auditory nerve and heard just as clearly as by the healthy ear. As the ear has nothing to do with the process, it is plain that the degree of deafness has little effect on the readiness with which every thing is heard.

# THE DEAF AND DUMB-CHILDREN WITH DEFECTIVE HEARING.

The results of the experiments quoted in another part of this pamphlet from the New York Herald, Cincinnati Enquirer, etc., show that the Dentaphone will be extensively used in educating the deaf and dumb to understand spoken language. By beginning with simple words, and in every case encouraging the deaf and dumb person to repeat them, it is surprising what rapid progress is made in a few days' practice. One of the most intelligent of the pupils of the Franklin Street School, on hearing the word George pronounced through the Dentaphone, for the first time, attempted to repeat it, and gave with clearness and distinctness the sound Aurge, being exactly the same as George with the G imperfectly given. When we reflect that in this case, the sounds had never been heard before, and the vocal organs had never been trained, the success is extremely surprising. Any person who has noticed the facility with which the deaf and dumb learn to understand what is said, by merely watching the lips of the speaker, can readily comprehend the wonderful results obtained by the use of the Dentaphone.

In a great many instances children, whose hearing is defective, hear words imperfectly, consequently, do not learn to speak, and are mistakably supposed to be deaf and dumb. In such cases the Dentaphone is successfully used, and the greater distinctness with which every thing is heard, enables the child to readily understand and use spoken language.

### WHAT IS HEARD THROUGH THE DENTAPHONE.

Though an excellent substitute for an ear-trumpet, and one which will inevitably displace every form of the latter very inconvenient instrument, the Dentaphone is a great deal more than this. The Dentaphone not merely receives the sounds spoken into it, but it gathers on its sensitive diaphragm and transmits to the auditory nerves sounds coming from a distance, such as ordinary conversation, the voice of public speakers, the music of concerts, operas, etc., etc., and, in short, is a complete substitute for the healthy ear.

Indeed, no one familiar with the construction of the ear can fail to be struck by the close likeness which the Dentaphone, with its sensitive diaphragm, chambers and mouth-piece, bears to the outer and middle ear, the ear-drum and its attached chain of bones. In this, as elsewhere in our most important discoveries, we often come at last to find that we have but

been imitating the methods of Nature.

#### ARTIFICIAL TEETH.

Many persons fear that the Dentaphone can not be used with artificial teeth. This mistake arises from a misconception of the manner in which the sounds are conveyed from the teeth to the ear. With this process the nerves of the teeth have nothing whatever to do, the vibrations being transmitted entirely through the bony framework of the face and head; and hence, so long as artificial teeth are properly in their place, they conduct the sounds just as well as would the natural teeth.

### USING THE DENTAPHONE.

In using the Dentaphone the deaf person simply holds the instrument in the hand, and it is of no importance whether it is held close to the mouth or with the hand resting on the knee, or in any other convenient position, as the conductor connecting the mouth-piece may be so lengthened or shortened as to allow the instrument to be held wherever it is most comfortable for the person using it. Thus it will be seen that, in addition to its small size, which makes it convenient to carry in an ordinary watch-pocket, the ease and comfort with which the Dentaphone is used render it entirely unobjectionable to many persons who would be too sensitive to carry an ordinary ear-trumpet.

# TESTIMONIALS FROM MEMBERS OF THE LEADING PROFESSIONS.

We insert here a few testimonials which have been selected mainly on account of the high social and professional standing of the gentlemen giving These, with the newspaper extracts which follow them, will, we believe, enable the intelligent reader to form a just estimate of the great merits of this new scientific discovery.

### From Rev. ISAAC ERRETT, Editor of The Christian Standard.

OFFICE OF THE CHRISTIAN STANDARD, October 4th, 1879.

Allow me to say that the experiments and tests made with the Dentaphone satisfy me that it is all that it is claimed to be.

The deaf will find in it a means of relief which they have never enjoyed from the use of the ordinary ear-trumpet. I am, Yours respectfully,

ISAAC ERRETT.

### From Dr. WM. A. ROTHACKER, Professor of Anatomy in Cincinnati College of Medicine and Surgery, and Pathologist to Cincinnati Hospital.

408 RACE ST., CINCINNATI, September 26th, 1879.

I have had the pleasure of observing the experiments made with the Dentaphone, and I have used the instrument myself. It acts by conduction of sound through the teeth and bones of the face. When a person speaks, even at the distance of twenty or thirty feet away, the sound causes a vibration of the diaphragm of the instrument, which vibration is communicated to the teeth through the mouth-piece. When I stopped my ears so that I could not even hear the voice of the speaker, I heard distinctly every thing that was said when using the Dentaphone.

I have no doubt that the Dentaphone will in time supersede every form of that

very inconvenient instrument, the ear-trumpet, and I believe aurists can make use of it

in diagnosis of diseases of the ear.

WILLIAM A. ROTHACKER.

# From J. WM. JOHNSON, Attorney-at-Law, of Moulton, Johnson and Levy, Lawyers.

CINCINNATI, October 2d, 1879.

I am glad to express my satisfaction with the result of the experiments made with the Dentaphone.

Being compelled myself to use a speaking tube or trumpet, I am able to form a

better comparison than one whose hearing faculties are unimpaired.

Though the Dentaphone you had was an imperfect one [Note.—This testimonial was written before the Dentaphone was perfected, the instrument used being a rude model of wood.] I could hear as well with it as with the trumpet, and its more convenient form and size commend itself to favor upon sight.

I would certainly advise all deaf persons to obtain one, whether they use a trumpet or not, and doubtless it will prove serviceable where, in many instances, the trumpet

would not. Very respectfully yours,

J. WM. JOHNSON.

# From Professor R. P. MacGREGOR, Principal Deaf Mute School.

Franklin Street School, Cincinnati, October 1, 1879.

The very interesting experiments made with the Dentaphone on the pupils of my

department resulted as follows:

The majority of them could hear sounds and described them as differing from one another in intensity. Some of them who had learned to speak before losing their hearing attempted to repeat the sounds as conveyed to them by the instrument, and with fair success.

As a means to enable the deaf to hear the Dentaphone is of great efficacy, etc., etc.

R. P. MACGREGOR.

### From Dr. ED. S. McLEOD.

CORNER STATE AND JACKSON STS., CHICAGO, October 1st, 1879.

I am highly pleased with the Dentaphone which you were kind enough to send me. The experiments made with it are sufficient to satisfy the most skeptical that not only the deaf and partially deaf can be made to hear, but that congenital mutes may be taught by spoken words instead of by signs. The small size and neatness of your instrument render it a very convenient substitute for the clumsy ear-trumpet which it is sure to displace. No other invention with which I am acquainted can confer such a benefit upon any portion of humanity as your invention places within reach of the deaf.

Very truly,

ED. S. McLEOD, M. D.

### From Dr. JOHN M. SHALLER.

533 SYCAMORE St., CINCINNATI, October 10th, 1879.

In the experiments which I had the pleasure of witnessing in the Deaf and Dumb School a few days ago, I observed that those who could never hear or distinguish sounds of any kind, immediately perceived the different sounds produced by different words, but of course could not recognize them, never having heard them before. The deaf mutes whose hearing had been lost within a few years, could hear and distinguish words quite readily. Those who could not hear unless spoken to very loudly close to the ear could, with the Dentaphone, readily hear the ticking of a watch, and at a distance of twenty feet could readily hear and understand ordinary conversation.

This instrument will in a short time displace altogether the clumsy ear-trumpet, and

will be used by all suffering from deafness in every degree.

JOHN M. SHALLER.

# OPINIONS OF THE PRESS.

The following extracts have been selected from a great number of press notices, secular and religious, which appeared in the leading newspapers of the country at the time of the invention of the Dentaphone.

# From THE NEW YORK HERALD, September 28th, 1879. (CINCINNATI GAZETTE, September 25th, 1879.)

Experiments made with a new instrument for conveying sounds to the deaf.

A well-known gentleman of Cincinnati has for some time past been experimenting with a new invention called the Dentaphone, which is intended to supplant the old ear-trumpet for use by the deaf. The Dentaphone consists of a small electro-microphone. \* \* \* The manner of working the instrument is very simple, and can be briefly described as follows: \* \* The theory advanced is that the sound is conveyed through the nerves of the teeth and the bones of the face to the auditory nerve, which, owing to some defection of the ear caused by disease, is not approachable

through the usual channel to the brain. Some very interesting tests of the Dentaphone were made at the Deaf and Dumb Department attached to the

Third Intermediate School yesterday morning. \* \* \*

Among others was one of a bright looking colored girl who was entirely deaf. The experimenter talked to her at a distance of about twenty-five feet, and she repeated after him every thing which he said. Another was a little girl who had been deaf and dumb from birth. Using the mute alphabet, she informed the teacher in charge that she could hear that one statement of the gentleman was made in a louder tone of voice than another, but that she could not understand what he said, never having been able to hear such sounds before.

### From THE HERALD AND PRESBYTER.

(September 17th, 1879.)

It was found that the partially deaf could hear distinctly with the outer ears entirely closed. In one of the experiments a man totally deaf, who had not heard any sounds for forty years, said the sounds were distinct, pleasant and seemed familiar.

### From THE CINCINNATI TIMES.

(September 26th, 1879.)

A new invention by a gentleman of this city, has, within the past week, been exhibited at the office of the Herald and Presbyter, of the Christian Standard, at the Franklin Street Public School and at various other places; and has been tried on persons of all degrees of deafness, enabling them in every case to hear distinctly. The Dentaphone, as it is called, consists of a small chambered box, peculiarly made, and containing a delicate vibrating diaphragm. \* \* \* In one experiment in the office of the Herald and Presbyter, on a well-known clergyman, who has been deaf for years, every thing said in the room in an ordinary tone of voice was heard with the utmost readiness and clearness; and it was amusing to observe how quickly he heard and replied to some remarks made about his deafness which were not intended for him to hear. In other cases those who had not heard with distinctness for years, seemed to regain the lost sense perfectly while using the Dentaphone.

### From THE AMERICAN CHRISTIAN REVIEW.

(October 7th, 1879.)

A well-known gentleman of this city has invented a simple instrument which promises to revolutionize our ideas of the mechanism of hearing, and bring comfort and happiness to the many sufferers from deafness throughout the land. By it not only the deaf, and partially deaf, are enabled to hear, but the hearing is even said to improve under the use of the instrument, so as in certain cases to encourage hopes of the final restoration of the sense. Persons of all grades and degrees of deafness have been experimented upon, and in every case with the same result, viz.: that the deaf person could carry on conversation and distinctly hear every thing that was said to him when using the instrument, though ordinarily so deaf that without it he might be unable to recognize the loudest words spoken. object of the inventor has been to make the Dentaphone of such a size that it can be conveniently carried, and so well has this been succeeded in, that the completed Dentaphone measures about two inches across and about an inch in thickness. Being so compact, and much in shape like a watch, it can readily be carried in the vest pocket when not in use; and many of our citizens who have hitherto carried the clumsy ear-trumpet, are rejoicing in the prospect of discarding them for this more convenient, as well as much more effective, invention. \* \*

### From THE CINCINNATI COMMERCIAL.

(September 27th, 1879.)

A gentleman of this city has invented an instrument which has been tested in the office of the Herald and Presbyter, the Christian Standard and the Franklin Street school house, on the deaf and dumb, and with the most surprising results. What spectacles are to the near-sighted the Dentaphone is to the deaf, and enables them to hear every thing spoken in their vicinity in an ordinary tone of voice with wonderful clearness and distinctness. The instrument has been tested in every imaginable way and with uniformly satisfactory results, and clergymen, scientists and physicians, who have seen the Dentaphone in operation, pronounce it the most admirable and useful invention of the age for the relief of the deaf, and immensely superior to any ear-trumpet or other device hitherto used for a similar purpose.

### From THE HERALD AND PRESBYTER.

(September 24th, 1879.)

There seems to be no limit to the number and importance of inventions of the present day. First the phonograph and the telephone, for recording and transmitting sound; then the microphone, for intensifying it; and now the Dentaphone, by which the deaf can hear through their teeth. The Dentaphone is the invention of a gentleman of this city, and was tested a few days ago in the office of the Herald and Presbyter. \* \* \*

The deaf person simply holds the instrument—which is of such a size that it can be readily carried in the vest pocket—in the hand, with the mouth piece against the teeth of the upper jaw, and hears what is said without any aid from the outer ear. Any one can, by closing the ears and standing at a distance from the speaker, test the instrument, the spoken words being heard with remarkable clearness and distinctness. The Dentaphone, as the new invention is called, will be on exhibition in our city in the course of a week or so, and is already exciting much interest, particularly among the deaf and their friends.

### From THE CINCINNATI ENQUIRER.

(September 25th, 1879.)

### Its test in the Deaf Mute School yesterday.

There was an interesting test made yesterday afternoon of the Dentaphone in the room of the deaf mutes in the Franklin Street school. \* \* \*

The sound enters through the instrument on the principle of the microphone, is conducted to the teeth-piece, and thence through the teeth to the auditory nerve. It was the purpose to test the instrument and see whether a sound could be conducted to a deaf mute. \* \* \* These all heard to a greater or less degree, according to the nature of their deafness. In the case of one little girl, who could not distinguish words unless shouted into her ear, the Dentaphone was used with success, and she heard and by signs repeated short words spoken in an ordinary tone of voice. \* \* \* A colored girl, who was entirely deaf, but who was not mute, heard distinctly words spoken in an ordinary tone and repeated them. \* \* \*

### From THE CHRISTIAN STANDARD.

(September 27th, 1879.)

A new invention by a gentleman of this city has been tested in our office this week. By it the deaf are enabled to hear through the medium of the teeth. The principle of the invention is that the vibrations of sound-waves striking on a diaphragm, set it in motion, and this motion is conveyed through the teeth and the bones of the head to the nerves of hearing. The Dentaphone can be made small enough to be carried in a watch fob.

\* \* In the Standard office the experiment was fairly made, and a person with stopped ears, \* \* \* could hear what was said in an ordinary tone at a distance of thirty feet. This instrument will be on exhibition in this city in a few days, and it is sure to attract general attention. \* \* \*

### From THE CINCINNATI SATURDAY NIGHT.

(September 27th, 1879.)

This wonderful invention is the handiwork of a well-known gentleman of this city. \* \* \* The degree of deafness does not seem to affect the clearness of sound heard through the Dentaphone, as the outer ear is entirely foreign to the process used. Those, who for years have carried an eartrumpet, on testing the Dentaphone, express themselves as highly pleased and are desirous of immediately discarding the clumsy ear-trumpet for this more convenient and effective invention.

### From THE LAFAYETTE SUNDAY TIMES.

(September 28th, 1879.)

The deaf and partially deaf can, when holding the Dentaphone in the hand, hear distinctly what is said to them in an ordinary tone of voice by any person in the room, and carry on conversation so readily that their deafness can scarcely be noticed. In experiments made on the deaf it was found that those who had lost their hearing for years readily heard and understood, and many who have carried ear-trumpets are waiting the completion of this invention to discard them forever. \* \* \*

The preceding pages will, we believe, give the reader as accurate and perfect an idea of the construction and mode of action of the Dentaphone, as it is possible to obtain from any written description. We have taken pains, besides, to collect and present the opinions of well-known professional men, and of the various leading newspapers, and we believe a careful perusal of this pamphlet will furnish the reader with the desired information in almost every case. If there should be any points omitted we will be glad to supply them, and invite correspondence in regard to them at any time.

The directions for using the Dentaphone are very simple, and every instrument sent out is accompanied by full instructions as to its use in all ordinary cases; also, as to the proper mode of employing it in educating children with defective hearing, the deaf and dumb, etc., etc.

We are constantly in receipt of letters containing inquiries as to the size and weight of the Dentaphone, its liability to get out of order, etc. This information the preceding pages will supply, though we may here repeat:

In size and shape the Dentaphone much resembles an old-fashioned silver watch, and weighs less than two ounces. The construction is so simple that it is impossible for it to get out of order unless intentionally injured or broken.

### PRICES OF DENTAPHONE.

Ordinary Conversational Size, -		Name of the last	\$8.00
Large Size for Operas, Concerts, etc.			- 12.00

Either size is sent by mail or express, prepaid, on receipt of price. Parties who desire to order by express, C. O. D., must pay all express charges.

From its small size and weight the Dentaphone is most conveniently sent by mail.

Send money by Post-office Order, Registered Letter, Draft or Express. Write your name and address in full. Address

# THE AMERICAN DENTAPHONE CO., 287 Vine Street, CINCINNATI, 0.

# SPECIAL NOTICE.

The Dentaphone is constantly on exhibition at the office of the AMERICAN DENTAPHONE COMPANY, and is daily seen and tested by Persons of all Degrees of Deafness, as well as by Physicians, Scientists, Members of the Bar and of the Press; and all agree in pronouncing it one of the most valuable inventions of the century for the relief of a large class of sufferers. The Deaf and their friends, as well as the general public, are cordially invited to visit our office and see the Dentaphone in operation.

Persons who are not Deaf can test the Dentaphone by closing the ears with the fingers and standing at a long distance from the speaker, when every word spoken in a low tone of voice is heard with the utmost distinctness. In this way persons who can not possibly visit our office for themselves, can often have the opinion of a reliable friend as to the effectiveness of the Dentaphone.

It is expected that in a few months the Dentaphone will be in extensive use in every part of the country, and persons who have Deaf friends can be assured that in bringing this invention to their notice, they are rendering them a service that should secure life-long gratitude in return.

# THE DENTAPHONE.

The DENTAPHONE displaces Every Form of Ear-Trumpet.

It does so because it is much more convenient to use.

It does so because it is much more effective

It does so because it is more than an Ear-Trumpet, acting perfectly where an Ear-Trumpet is of little or no service.

While the Ear-Trumpet, by intensifying sounds, may so injure the ear that, after a time, a larger and more powerful Trumpet has to be used; with the Dentaphone, on the contrary, the perception of sounds becomes better, and the longer the instrument is used, the more perfectly is every thing heard.

Deaf to Hear, see Reports of Rev. Isaac Errett, of Drs. Rothacker and McLeod, of J. M. Johnson, Attorney-at-Law, who has himself carried an Ear-Trumpet for several years; also of various leading Newspapers, both Secular and Religious.

For experiments on the Deaf and Dumb, see Reports of Prof. MacGregor, Principal of the Deaf-Mute School; of Dr. John Shaller, who was present at these experiments, and also of *Cincinnati Enquirer* and *Gazette*, the latter quoted in the *New York Herald*.

