

(No Model.)

J. LOWTH.
TELEPHONE.

No. 312,366.

Patented Feb. 17, 1885.

FIG. 1.

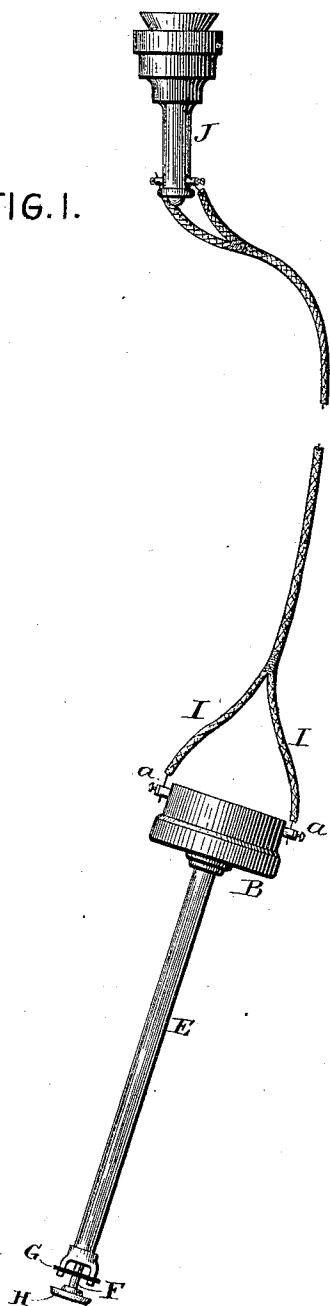
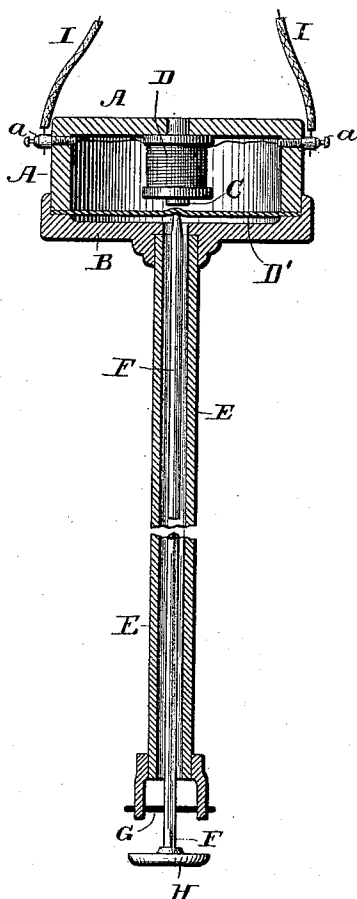


FIG. 2.



ATTEST.
J. Henry Kaiser.
Harry L. Amer.

INVENTOR.
James Lowth.
By *J. V. McDutrie*
Att'y.

UNITED STATES PATENT OFFICE.

JAMES LOWTH, OF CHICAGO, ILLINOIS.

TELEPHONE.

SPECIFICATION forming part of Letters Patent No. 312,366, dated February 17, 1885.

Application filed August 8, 1884. (No model.)

To all whom it may concern:

Be it known that I, JAMES LOWTH, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful

Improvements in Telephones; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this application.

My present invention relates to certain new and useful improvements in the construction of telephones.

In other applications by me now on file in the United States Patent Office are shown and described telephones of both the magneto and electric type, adapted to work according to the mode of operation peculiar to the kind of telephonic apparatus made the subject of this case; but in my said other cases (of one of which this is a division) the subject-matter of the claims relates to the alleged novel mode of operation, or the new method of operating a telephone, while in this case my invention consists in the novel features of construction and in the combinations of devices, which will be hereinafter more fully explained, and which will be particularly pointed out in the claims of this specification.

To enable those skilled in the art to which my present invention relates to make and use telephones containing the same, I will now proceed to describe the latter, referring by letters of reference to the accompanying drawings, forming part of this specification, and in which I have shown my invention carried out in that form in which I have so far successfully practiced it.

In the drawings, Figure 1 is a side view of my improved telephone; and Fig. 2 is a vertical longitudinal central section through that part of the apparatus wherein lies more particularly my invention, and showing well the relative position of the diaphragm and the magnet connected therewith.

The same reference-letters indicate the same parts in the different views.

A represents a small box, and B is a cap or lid applied thereto.

C is a magnet located in the box A, and D is a helix, one end of which is carried to a binding-post, *a*, and the other end of which

is carried to the binding-post *a'*, both binding-posts being applied to the said box, and the helix being applied in the usual manner.

D' is a vibrating diaphragm located in the box A, and just out of contact with the magnet C.

E is a tube entering the cap B, and F is a vibratory rod passing freely through the cap B. The inner end of the vibrating rod F is pointed, and this small point enters either a depression or a puncture in the diaphragm D'. By this means the inner end of the vibrating rod F is retained in place relatively to the diaphragm D', as will hereinafter more fully appear.

G is a small strap or band, of rubber or other sufficiently flexible material, extending across the outer end of the tube E, and through which passes and by which is retained yieldingly and out of contact with said tube the vibrating rod F.

H is a button or head on the outer end of said vibrating rod F.

I I are wires forming a metallic circuit passing from the binding-posts *a* and *a'*, respectively, to two binding-posts on a receiver, J, as indicated in Fig. 1.

To use my novel device for the purpose for which it is intended—viz., to transmit articulate speech by the action on the diaphragm of the transmitter of the vibrations of exterior parts of the body—the speaker holds it in his hand and places the button or head H lightly against his throat, and the person to whom the words are spoken holds the ordinary receiver (at the other end of the line) to the ear in the usual manner. The spoken words or message will thus be very clearly and distinctly transmitted or repeated to another at a great distance from the speaker. It is to be understood that both a transmitter and a receiver may be employed at each end of the circuit, that the circuit either may or may not operate in connection with a battery, and that other mere modifications may be made, according to circumstances.

It will be perceived that the box A and its cap or lid B so inclose the diaphragm D' as to prevent it from being disturbed otherwise than by the vibrations imparted to it by the vibrating rod F, and that hence the latter vibrations

will be received and repeated distinctly and without that confusion of sounds which might occur were the diaphragm D' not inclosed, as shown. It will also be seen that the tubular
5 device or extension E, while it serves to surround and protect the vibrating rod F, and to support the strap G or other means for holding rod F in place, also answers the purpose of a handle by means of which the person
10 using the contrivance may most conveniently hold against the proper part of the body in an operative manner the head H of the said vibrating rod.

Having now so fully explained the nature of
15 my improvements in telephones that those skilled in the art can make and use my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In combination with a telephonic trans-
20 mitter, a vibratory rod arranged, substantially as shown, in operative contact at one end with the vibratory element or elements of the telephone, and projecting at its other end from the latter to receive the muscular vibrations of
25 exterior portions of the speaker's body, as set forth.

2. The combination, with the diaphragm, magnet, helix, and other necessary parts of a transmitter, of a vibratory rod arranged and operating to move said diaphragm, and a cover,
30 B, to protect the said diaphragm against any material influence upon it by sound-waves that might otherwise act perceptibly on it through the medium of the atmosphere.

3. The combination, with the case and other
35 usually necessary parts of the transmitter, of a vibratory rod which bears directly on the diaphragm, as described, and a tubular extension, E, that serves the double purpose of a surrounding protection of and support to the
40 said rod, and which also answers as a handle for the convenient use of the transmitter whenever said rod is to be placed in contact with the body of the speaker, all as set forth.

In testimony whereof I have hereunto set
45 my hand this 4th day of August, 1884.

JAMES LOWTH.

In presence of—

W. D. EWART,
J. B. HALPENNY.