

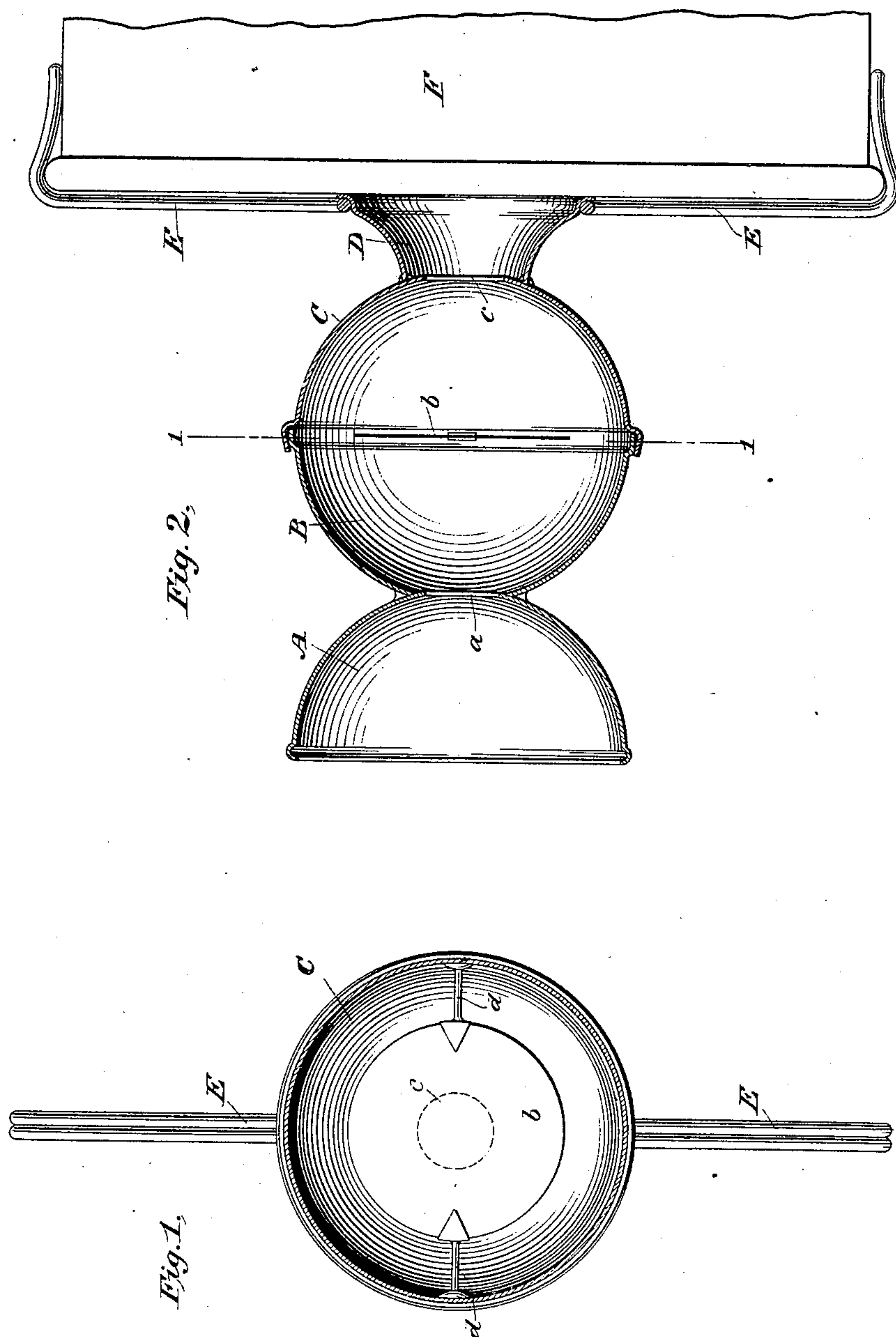
(No Model.)

M. H. ALLISON.

AUDITORY TRANSMITTER FOR TELEPHONES.

No. 370,230.

Patented Sept. 20, 1887.



Witnesses

Geo. W. Dreck,
Carrie C. Ashley

Inventor
M. Herbert Allison,
By his Attorneys
Fowler & Fowler

UNITED STATES PATENT OFFICE.

M. HERBERT ALLISON, OF XENIA, OHIO.

AUDITORY TRANSMITTER FOR TELEPHONES.

SPECIFICATION forming part of Letters Patent No. 370,230, dated September 20, 1887.

Application filed March 2, 1887. Serial No. 229,411. (No model.)

To all whom it may concern:

Be it known that I, M. HERBERT ALLISON, a citizen of the United States, residing at Xenia, county of Greene, and State of Ohio, have invented an Auditory Transmitter for Telephones, of which the following is such a full, clear, and exact description as will enable any one skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to devices for improving telephonic communication.

The object of my invention is to intensify, purify, and concentrate the sound-waves more effectually than has heretofore been done upon the diaphragm of a telephone.

The invention consists of a diaphragm arranged anterior to the telephone-diaphragm, having reflecting-surfaces arranged in front of the latter diaphragm for concentrating the sound-waves upon this diaphragm, and reflecting-surfaces, also, between the anteriorly-arranged diaphragm and the telephone-diaphragm. These reflecting devices may be made of globular and hemispherical metal pieces, preferably, or may be made in any other way or shape desired.

In the accompanying drawings, forming part of this specification, Figure 1 is a sectional view of a device embodying my invention, on the plane of the line 1 1 of Fig. 2; and Fig. 2 is a sectional side elevation of the same, showing it placed over a telephone.

The same letters of reference indicate the same parts in the two figures of the drawings.

A represents a hemisphere, which is spun or struck up from sheet-brass, and has a circular opening *a* in it where it joins the hemisphere B, of like form and material. The outer opening of the part *a* communicates with the exterior air. In the part B, at the place where it joins the hemisphere C, making a globe, B C, I suspend a disk of mica, *b*, which is sustained by two hair-like arms, *d d*, which disk constitutes the diaphragm of my apparatus. The use of such a disk is the very essence of my invention. In the globe C is also a circular opening, *c*, which opens into a neck-piece, D, made from sheet-brass, which is designed to be placed over the diaphragm of a telephone, F, to which it is attached by means of arms EE,

made of wire or anything else. The part A constitutes the mouth-piece of the device.

The theory upon which my auditory transmitter is based is that sound is propagated by progressive tremors in the atmosphere, called "sound-waves," and can be reflected and focused the same as light, and when so reflected and concentrated upon the mica disk constituting the tympanum or diaphragm this will in turn vibrate the air confined in the part C and focus the vibrations upon the telephone-diaphragm, purifying the sound, and giving to the voice a clear resonant tone.

The apparatus described has been tested over a distance of sixty miles, and every word at this distance was distinctly heard when the speaker's voice was almost a whisper, showing that the effect is to modify the amplitude of the vibrations and the sound, so that the same will be more distinct and louder.

Of course my device could be used to receive messages as well as to transmit them without departing from the spirit of my invention; but the device is designed more particularly for use as a transmitter. The form of the reflecting-surfaces can be changed without departing from the invention and the proportions varied and still be within the scope of the invention, and the parts changed in various ways that would naturally suggest themselves to any one skilled in the art upon seeing my invention. So, too, some other material might be substituted for mica without in any way avoiding my invention, as I do not limit myself to the material described or construction shown, for the same may be varied without departing from my invention, and I reserve to myself all changes that fall within this limit, and the right to make any changes in the apparatus in practice that are within the scope of what I now desire to claim and secure by Letters Patent, which is—

1. The combination, with a telephone, of a diaphragm arranged anteriorly thereto, having reflecting-surfaces arranged in front of the latter and concentrating the sound-vibrations thereupon, and reflecting-surfaces between the anteriorly-arranged diaphragm and the telephone-diaphragm, for the purpose set forth.

2. The combination, with a telephone, of a vibratory tympanum mounted in front thereof within an inclosing resonator, with a mouth-

piece for said resonator communicating with the exterior air, and a neck-piece or other means for concentrating the vibrations of said tympanum upon the telephone-diaphragm.

5 3. The combination, with a telephone, of a mica disk constituting a tympanum or diaphragm, supported in front thereof by any suitable means within a resonator communicating at one side with a mouth-piece connecting
10 ing with the exterior air and communicating at the other side with a telephone-diaphragm, substantially as set forth.

4. The combination of the resonator or globular body B C, a diaphragm, *b*, supported
15 therein, a mouth-piece, A, communicating therewith at one side, and a neck-piece, D, communicating therewith at the other side.

5. The combination of the reflecting mouth-piece A, communicating with the separable resonator B C, a diaphragm or tympanum at 20 the middle thereof, two arms, *d d*, supporting the same, a neck-piece, D, into which the resonator opens, and means for connecting the same to a telephone.

In testimony whereof I have hereunto set my 25 hand and seal, this 26th day of February, 1887, in the presence of the two subscribing witnesses.

M. HERBERT ALLISON. [L. S.]

Witnesses:

M. C. ALLISON,
A. E. CURRIE.