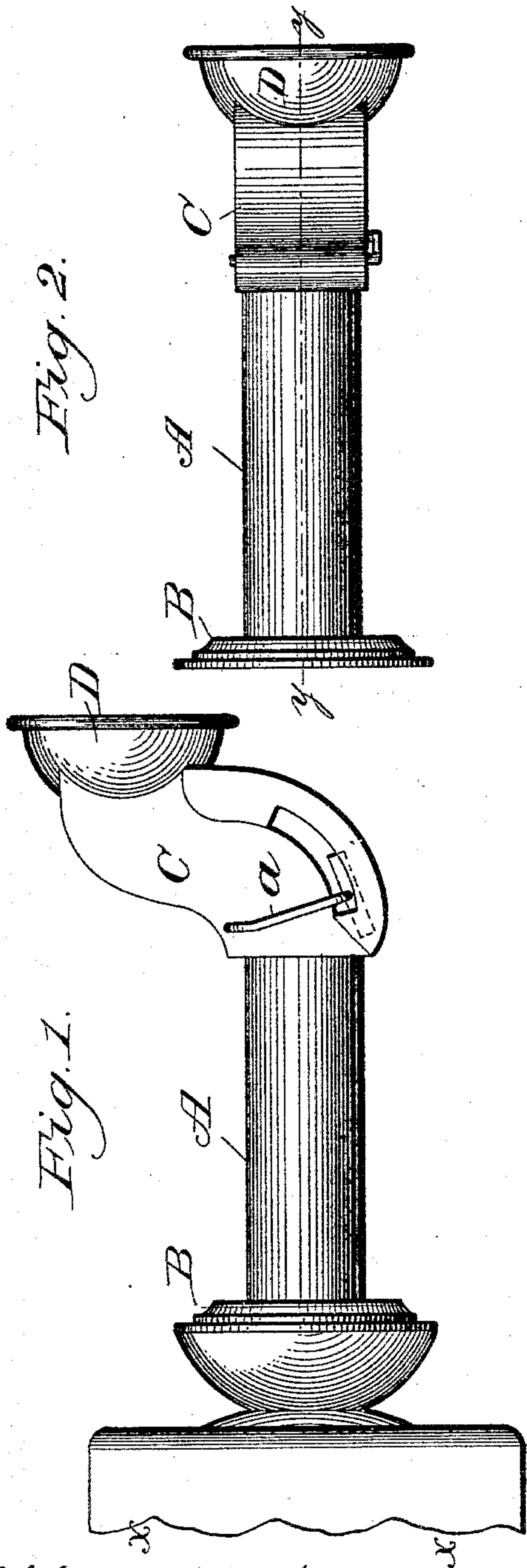


(No Model.)

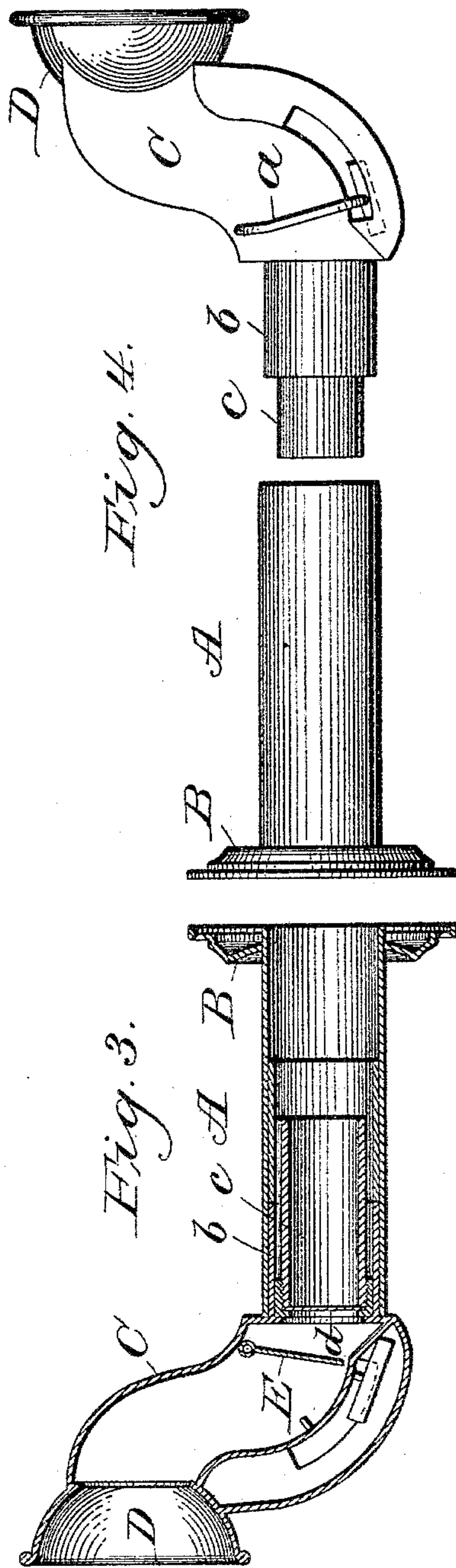
R. BLAKE.
SOUND TRANSMITTER.

No. 412,234.

Patented Oct. 8, 1889.



Witnesses:
S. Lewis Moody.
Fred. W. Harford



Inventor:
Robt Blake.
By W. W. Scribner
His Atty.

UNITED STATES PATENT OFFICE.

ROBIE BLAKE, OF CORNISH, MAINE.

SOUND-TRANSMITTER.

SPECIFICATION forming part of Letters Patent No. 412,234, dated October 8, 1889.

Application filed March 29, 1889. Serial No. 312,657. (No model.)

To all whom it may concern:

Be it known that I, ROBIE BLAKE, a citizen of the United States, and a resident of Cornish, in the county of York and State of Maine, have invented certain new and useful Improvements in Sound-Transmitters, of which the following is a specification.

The object of my invention is to provide a means whereby sound transmitted between two points through any medium—as by a current of electricity, by a column of air in a tube, or by means of a wire or cord drawn to a tension, or by other similar means—will be made more clearly audible and intelligible.

I do not claim improved general transmission by the current of electricity, column of air, or tense wire or cord within the mediums of transmission; but I do claim an improved delivery of the sound to be so transmitted by any of the mediums named, and by such improved delivery to make the sound more clearly audible.

In speaking against a vertical sensitive diaphragm, opposite or nearly opposite the mouth of the speaker, such of the sound as is reflected by the diaphragm is thrown back toward the mouth of the speaker, the angle (if any) between the lines of incidence and of reflection is very small, and the effect of the reflected sound is thus lost by misdirection. To save this waste in the volume of sound by giving the right direction to the reflected current of sound, and to throw such current upon the medium of transmission by means of other sensitive diaphragms, is the function of my device, and which secures the object above described.

My invention consists of the device described in the following specification and illustrated by the accompanying drawings, which are hereby made a part of this application, in which—

Figure 1 is a vertical side elevation of my device as seen when it is attached to the transmitter of a telephone, the broken lines $x\ x\ x$ showing the outlines of the telephone-transmitter. Fig. 2 is a top plan view of the device embodying my invention. Fig. 3 is a vertical longitudinal section of my device, the section being upon the dotted lines $y\ y$,

Fig. 2. Fig. 4 is the same view as in Fig. 1, but with the two parts separated to show the sleeve arrangement, by means of which a telescope movement of the body A is provided.

Same letters show like parts in all figures. 55

My invention consists of the tube A, which is provided with the circular plate B, by means of which the device may be attached to the transmitter of the telephone. At the outer end of A—that is, the end next the user—is the offset C of rectangular section, and upon the end of the offset is the mouth-piece D. 60

At E is shown a sensitive diaphragm hung and readily movable in an arc upon the pivoted arm a , as shown. This diaphragm E is within the offset C, and its movement upon the arm a presents it at varying angles as the movement is made to the sound-current from the voice of the speaker as he speaks into the mouth-piece D. 70

The tube A is made up of three distinct parts—viz., that part shown at A, Fig. 1, b , and c , as shown in Fig. 4, all of these parts being tubular and successively smaller in the order named—viz., A, b , and c —so as to fit closely each within the other, but to allow a telescope movement in the direction of their length. The part c also contains a sensitive diaphragm, as shown at d , Fig. 3. 80

The operation of my invention is as follows: The device is attached to the mouth-hole of the transmitter of a telephone by means of the circular plate B, through which screws may pass into the wooden front of the transmitter, and the device thus held firmly in place. The speaker, with his mouth at the proper distance from the mouth-piece or trumpet D, and with the fingers grasps the pivoted arm a , upon which is the sensitive diaphragm E, and by inquiry of the person with whom he desires to communicate, and at the same time placing the diaphragm at different angles with the sound-current of his voice, ascertains at what angle of the diaphragm his own voice is most clearly audible at the other end of the line of communication. If it is found that the best results are not produced, a further adjustment of the parts b and c of A by the telescope movement 100

in the direction of their length, as hereinbefore described, in connection with the adjustment of E, will produce the result desired of a greatly-increased audibility and clearness
5 of the transmitted sound.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. In a sound-transmitter, the radially-
10 movable sensitive diaphragm E, in combination with the tube A, and the interiorly-movable parts *b* and *c*, and the offset C, all in the manner and for the purposes set forth.

2. The sound-transmitter, as described, consisting, substantially, of the tube A, having 15 the offset C, mouth-piece D, and radially-movable sensitive diaphragm E, substantially in the manner and for the purposes described.

ROBIE BLAKE.

Witnesses:

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