

(No Model.)

F. M. BLODGETT.

MICRO-AUDIPHONE.

No. 333,724.

Patented Jan. 5, 1886.

Fig. 1.



Fig. 2.

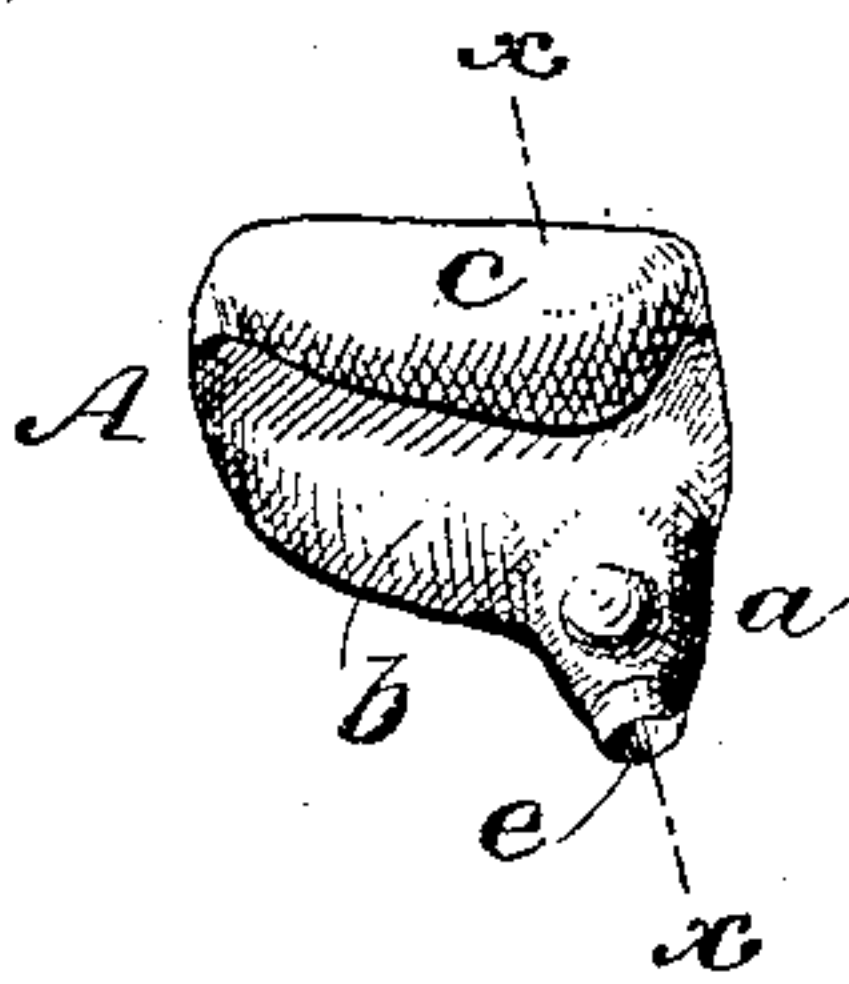
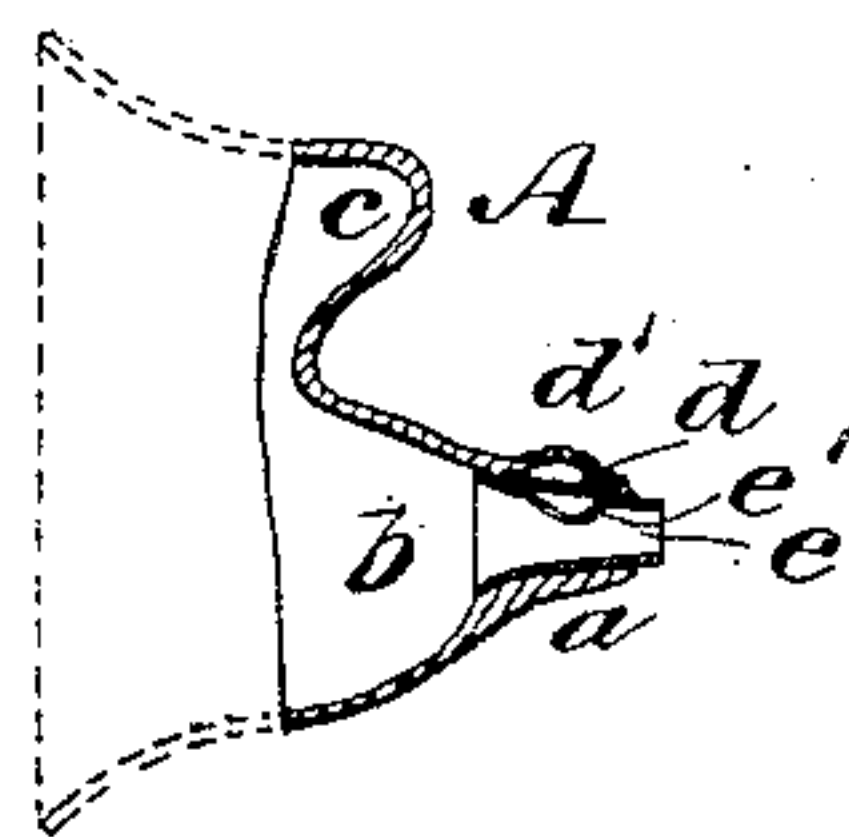


Fig. 3.



WITNESSES:

John H. Deemer
C. Sedgwick

INVENTOR:

F. M. Blodgett
BY *Munn & Co.*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

FRANK M. BLODGETT, OF NEW YORK, N. Y.

MICRO-AUDIPHONE.

SPECIFICATION forming part of Letters Patent No. 333,724, dated January 5, 1886.

Application filed October 10, 1885. Serial No. 179,510. (No model.)

To all whom it may concern:

Be it known that I, FRANK M. BLODGETT, of the city, county, and State of New York, have invented a new and Improved Micro-Audiphone, of which the following is a full, clear, and exact description.

My invention relates to a device to be worn in the human ear to assist hearing; and the invention consists, principally, in providing the tube of the device or the part that enters the ear-orifice with a membrane or diaphragm, arranged to be vibrated by sound-waves that enter the device, to magnify or augment them, and thus render hearing more distinct.

The invention also consists of the special construction of the device, all as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 shows the device as it appears when placed in the ear. Fig. 2 is a perspective view of the device; and Fig. 3 is a sectional elevation taken on the line $x x$ of Fig. 1.

The micro-audiphone A is made of hard rubber or other suitable material, and is formed to fit the ear—that is, it is formed with the tubular portion a , that enters the ear-orifice, the lower main concaved portion, b , that fits the concha of the ear, and the upper concaved portion c , that fits over the anthelix, so that the device when placed in the ear will remain securely in place without the use of holding devices or attachments.

In the tube a is placed a thin membrane or diaphragm, d , of very thin rubber or skin, held by the edges in or over an orifice or small chamber, d' . The diaphragm d is by preference guarded by a small metal thimble, e , placed

in the tube, and formed with an opening, e' , to expose the membrane or diaphragm d to the action of the sound-waves that pass through the tube a . The action of the sound-waves on the diaphragm d causes it to vibrate so that the diaphragm has a “sounding-board” effect, and magnifies or augments the waves and renders the sound more audible.

In some cases I shall form the device with a tubular portion to be held to the ear by the hand, and in others shall form it with an extending flaring portion, (shown in dotted lines in Fig. 3,) to cause the device to collect the sound-waves, like an ear-trumpet and direct them to the tube a ; and the tube a may be either straight or curved, as desired.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a device for assisting the hearing, the combination, with the tube that enters the ear-orifice, of a thin membrane or diaphragm placed at one side of the tube, substantially as described.

2. As a new article of manufacture, the micro-audiphone A, formed of thin material, and shaped to fit the human ear, and formed with the tube a , to one side of which is secured the thin diaphragm or membrane d , substantially as and for the purpose set forth.

3. The micro-audiphone A, formed with cavities $b c$, and tube a , and a chamber, d' , in combination with the diaphragm d and thimble e , formed with orifice e' , to expose the diaphragm d , substantially as and for the purposes set forth.

FRANK M. BLODGETT.

Witnesses:

C. SEDGWICK,

EDWD. M. CLARK.