(No Model.)

# F. M. BLODGETT.

## MICRO AUDIPHONE.

No. 345,025. Patented July 6, 1886.

*Fig. 1.*

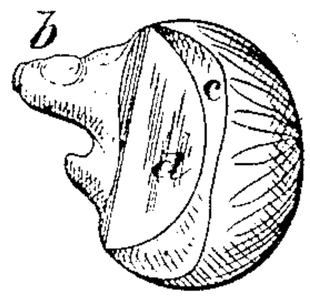



*Fig. 2.*

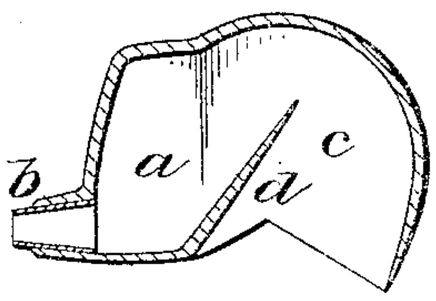



*Fig. 3.*

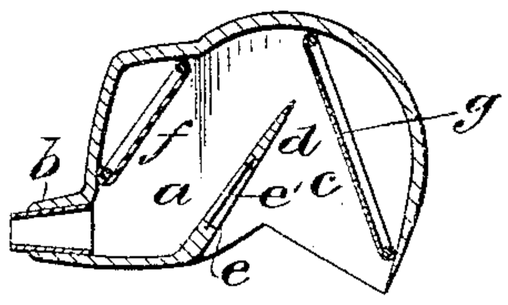



*Fig. 4.*

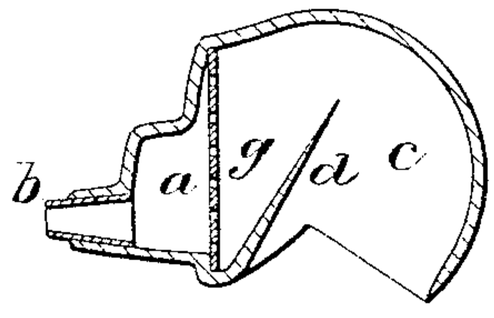
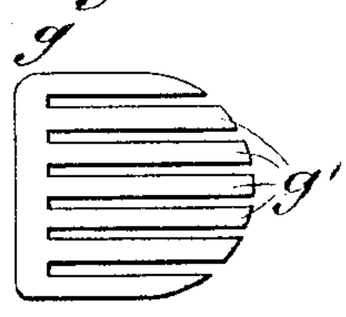



*Fig. 5.*




WITNESSES:

Donnell 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. 345,025, dated July 6, 1886.

Application filed April 28, 1886. Serial No. 200,438. (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.

This invention is an improvement upon my patent dated January 5, 1886, and numbered 333,724; and the improvement consists in the construction and arrangement of parts, as will be hereinafter described and claimed.

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

Figure 1 is a front elevation of my new and improved micro-audiphone. Fig. 2 is sectional elevation of the same. Fig. 3 is a sectional view showing the micro-audiphone provided with diaphragms. Fig. 4 is a sectional view showing a reed placed in the inner chamber, and Fig. 5 is a plan view of the reed.

*a* represents the inner chamber of my improved micro-audiphone; *b*, the tube that enters the ear-orifice.

*c* represents the outer chamber, and *d* represents the deflecting-plate, which reaches into the chamber *c* and divides it from the inner chamber, *a*, as shown clearly in Fig. 2. The walls of the chamber *c* are circular and concaved, and it is open at the front to receive the sound-waves, which, entering the chamber, will be collected at the back thereof and deflected to the ear-orifice *b*. The plate *d* is slightly inclined, so that any sound-waves striking it will be deflected toward the center of the chamber *c*, and from thence be deflected into the orifice *b*. In Fig. 3 the plate *d* has an opening, *e*, formed in it, in which is fitted a diaphragm, *e'*, of animal tissue or other thin material, which will vibrate to the action of sound-waves striking upon it and transmit the sound directly through the plate to the inner chamber, *a*, from whence they will reach the ear. Within the chambers *a* and *c* are placed the diaphragms *f g*, respectively. These are of animal tissue or other material stretched upon a wire, and the latter secured by cement or otherwise within the micro-audiphone, so the sound-waves will strike them and cause them to vibrate, so they will augment the sound and improve the efficiency of the device. In the form shown in Fig. 4 within the inner chamber, *a*, is placed a reed, *g*. This is, by preference, made of a thin metal plate slotted to form the narrow strips or fingers *g'*, which vibrate when sound-waves strike them and augment the waves that enter the tube *b*.

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

1. The micro-audiphone comprising the inner chamber having the tube *b*, the outer chamber, *c*, having an opening at right angles to that of the tube, and the inclined plate or deflector *d*, extending from the bottom of chamber *a* toward the top of the chamber *c*, a narrow passage being left between the end of the deflector and the top of chamber *c*, substantially as set forth.

2. The micro-audiphone comprising the inner and outer chambers, *a c*, having orifices at right angles to each other, the inclined apertured deflector *d*, having the diaphragm *e'*, and the diaphragms *f g* in front and rear of the deflector *d*, substantially as set forth.

3. The deflecting-plate *d*, reaching into the chamber of the micro-audiphone, and provided with diaphragm *e'*, substantially as described.

4. The micro-audiphone provided with a reed, *g*, to augment the sound-waves, substantially as described.

FRANK M. BLODGETT.

Witnesses:

GEO. C. T. SALOMON,

H. A. WEST.