

(Model.)

J. W. CULBERTSON.
ARTIFICIAL EAR DRUM.

No. 270,284.

Patented Jan. 9, 1883.

Fig. 1.

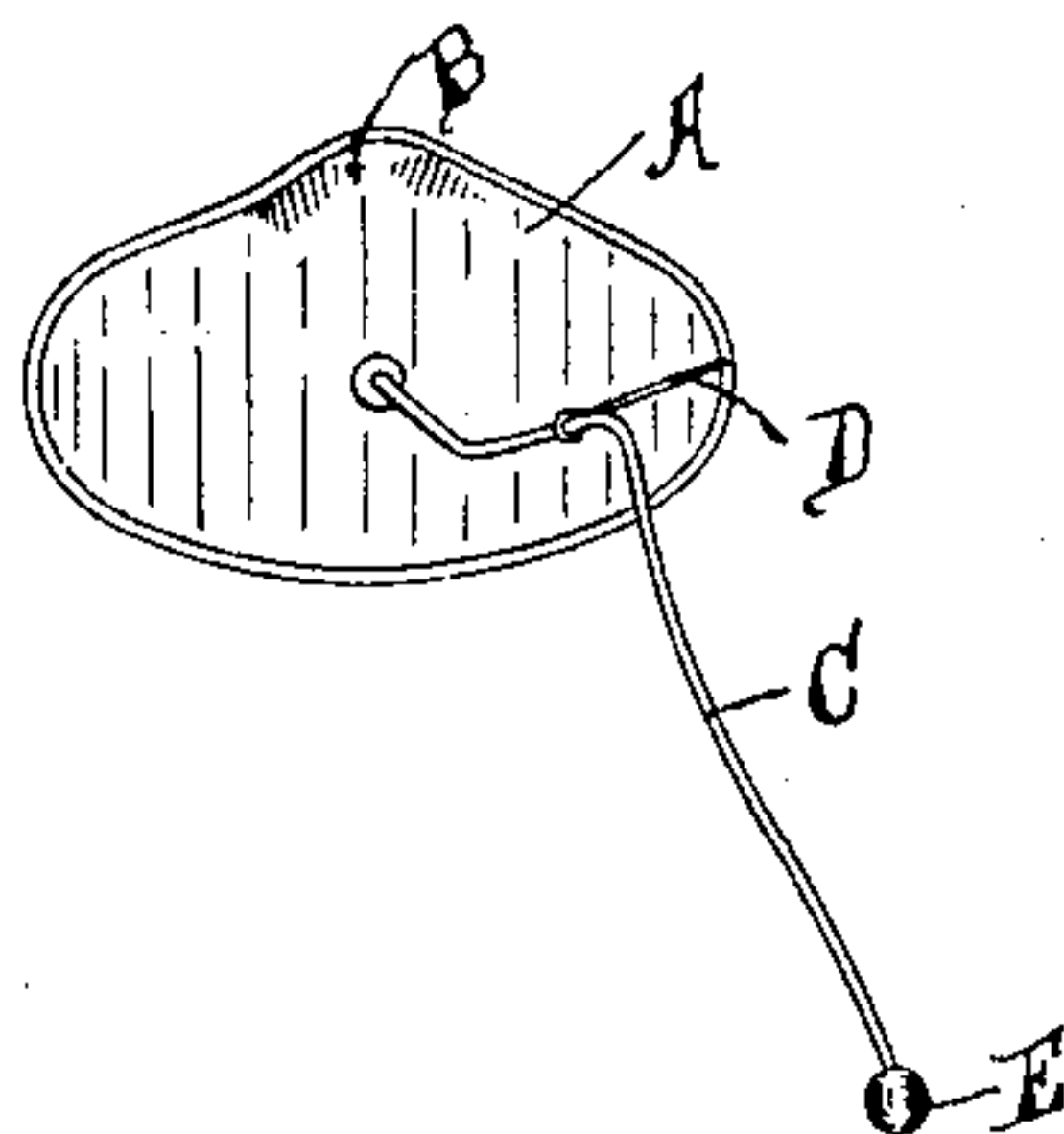


Fig. 2.

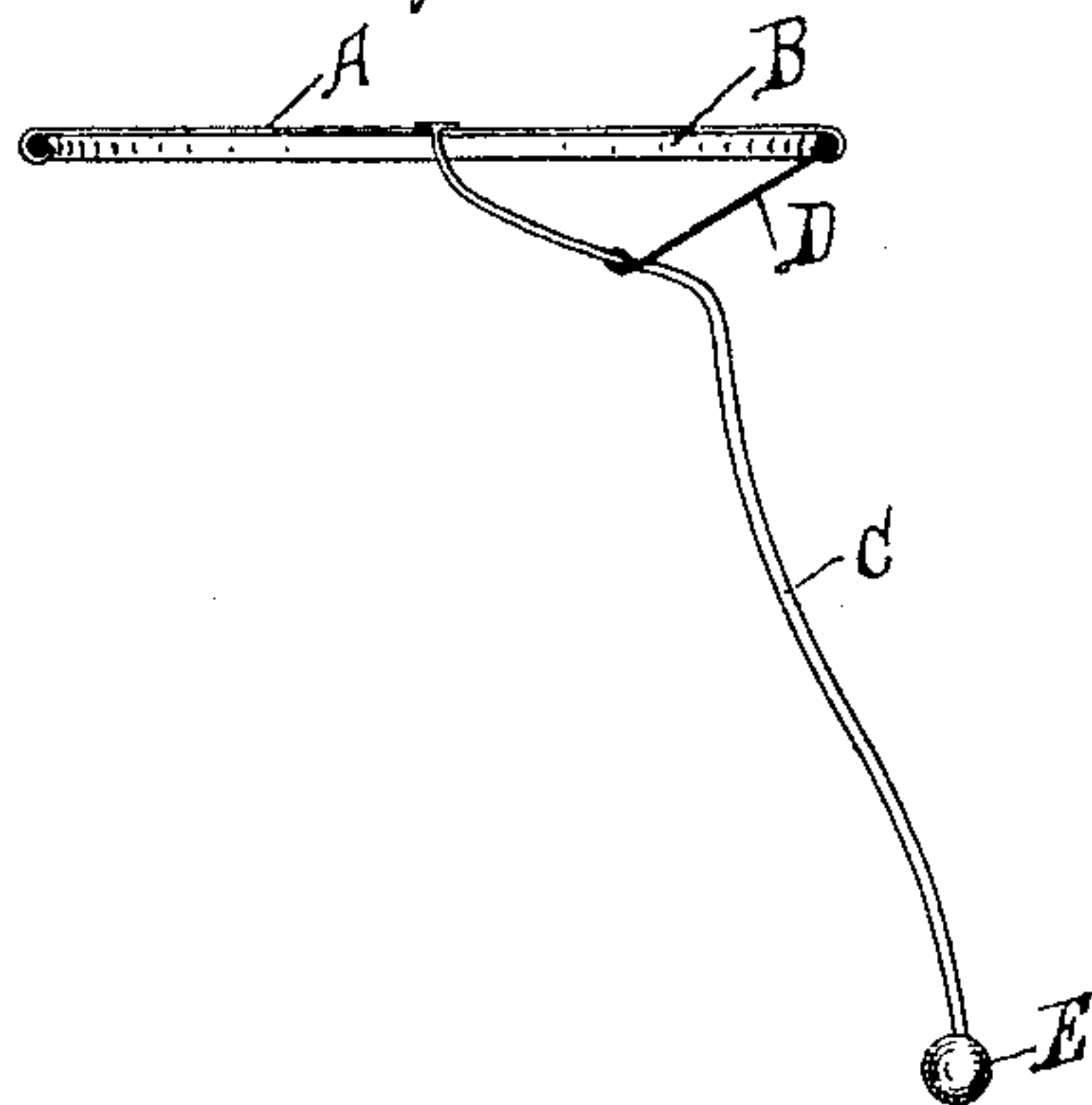


Fig. 3.

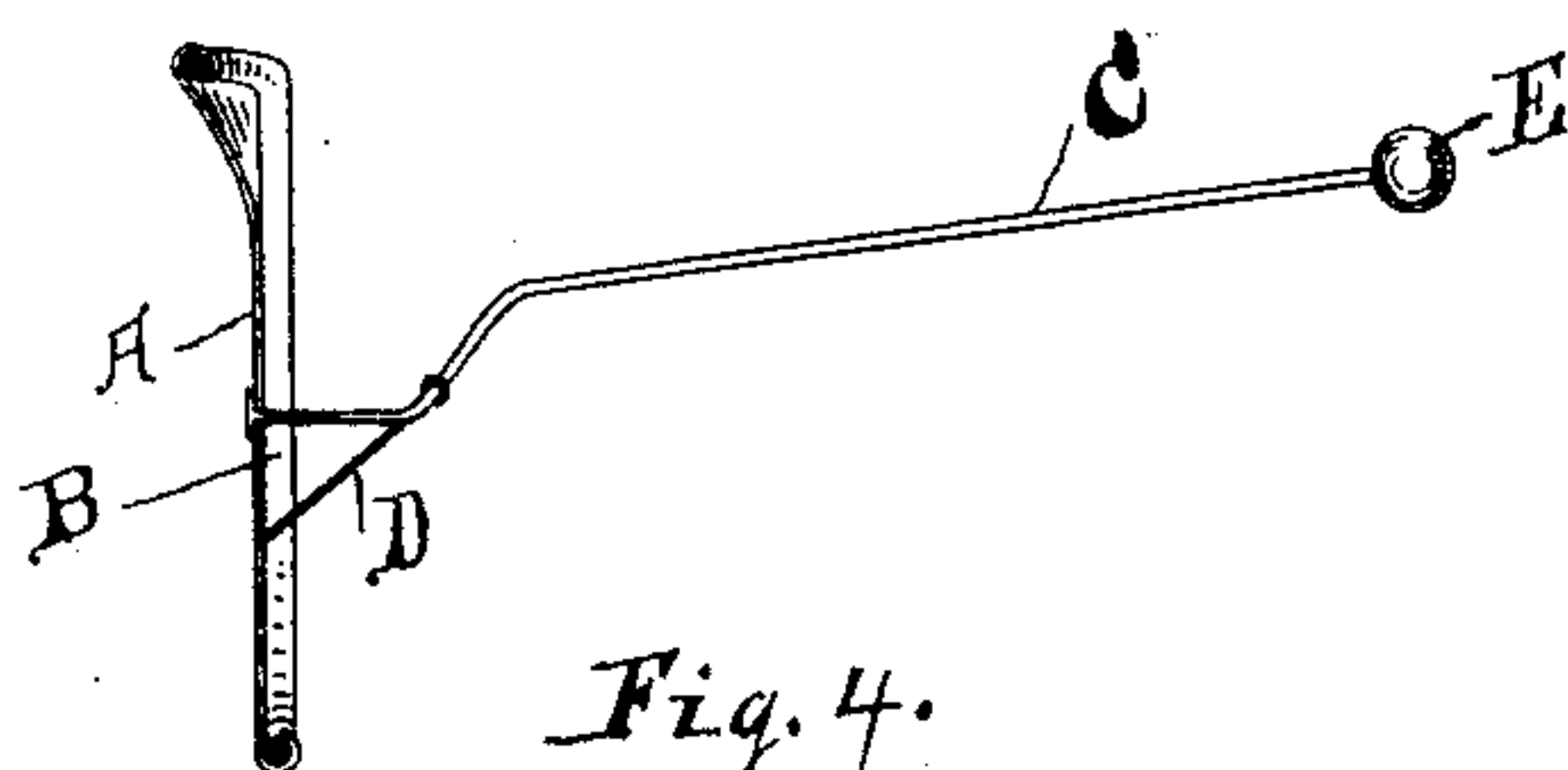
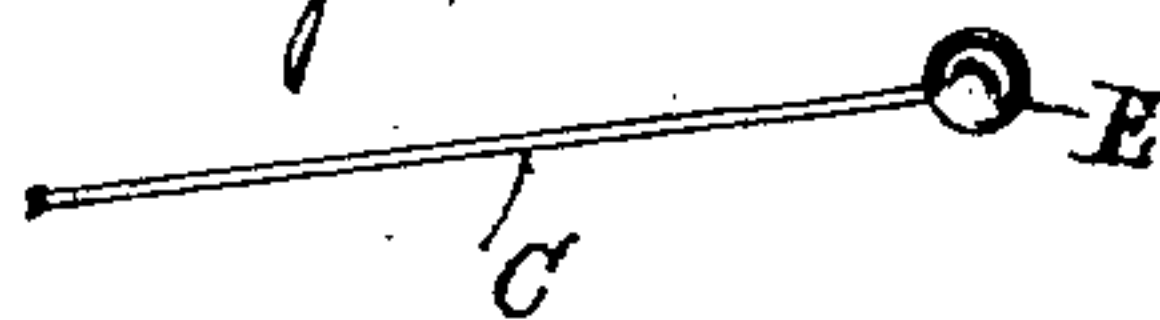


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN W. CULBERTSON, OF INDIANAPOLIS, INDIANA.

ARTIFICIAL EAR-DRUM.

SPECIFICATION forming part of Letters Patent No. 270,284, dated January 9, 1883.

Application filed June 20, 1882. (Model.)

To all whom it may concern:

Be it known that I, JOHN W. CULBERTSON, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented a new and useful Artificial Ear-Drum or Microphone, of which the following is a specification.

My invention relates to a microphone or artificial ear-drum consisting of a diaphragm or surface of suitable material stretched across the outer ear (or held by a properly-curved support) to receive the sound-waves that are conducted by a rod to the bulb resting on the bottom of the external ear, and conveying the sound-vibrations to the essential organs of hearing; and the object of my invention is to provide a device for relieving deafness and to intensify sound-vibrations. This object I accomplish by the device illustrated in the accompanying drawings, in which—

Figure 1 represents a bottom view of the vibrating membrane with the rod and bulb. Figs. 2 and 3 represent side or sectional views of Fig. 1; and Fig. 4 represents a side view of the rod and bulb.

Similar letters refer to similar parts throughout the several views.

A represents a ring of wire or other suitable material, having attached to it a diaphragm, B, and to the central part of said diaphragm B is connected the rod C. On the extreme end of the rod C is a fluid or solid bulb, E.

D represents an adjustable support for adjusting the rod and bulb to the ear. The bulb

E is inserted in the ear and brought in contact with the tympanic membrane, or used in place thereof when said membrane is destroyed by disease, thus forming an artificial membrane, by means of which sound-vibrations are communicated to the tympanum or to the conducting apparatus of the organs of hearing. Said fluid or solid bulb and rod, when used alone, may be inserted and used as an artificial tympanic membrane when the natural one is ruptured or destroyed.

The operation of my device is as follows: When the diaphragm B is vibrated its motion is conveyed to the bulb E by the rod C, and the vibrations of the bulb E are communicated to the organs of hearing.

In some cases the adjustable rod D may be used as a support for holding the rod C in position; but it may be dispensed with.

What I claim as new, and desire to secure by Letters Patent, is—

1. In combination with the diaphragm B, the rod C and solid or fluid bulb E, as and for the purpose specified.

2. In combination, the diaphragm B, rod C, solid or fluid bulb E, and adjustable support D, as shown and described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN W. CULBERTSON.

Witnesses:

GEO. H. RENNETT,
AUGUSTUS B. YOUNG.