

E. G. Hyde,

Acoustic Auricle.

N^o 12,951.

Patented May 29, 1855.

Fig. 2.

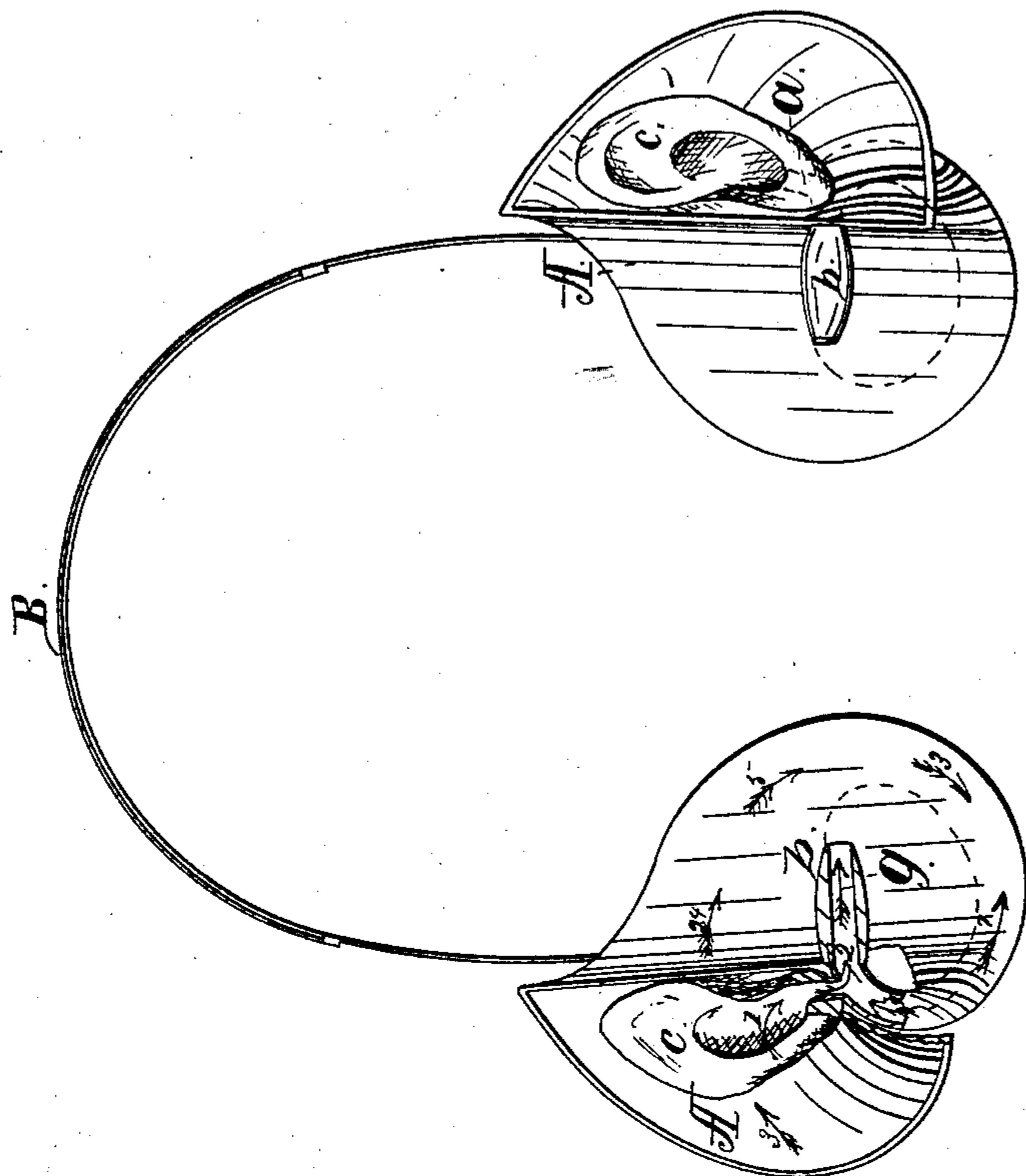
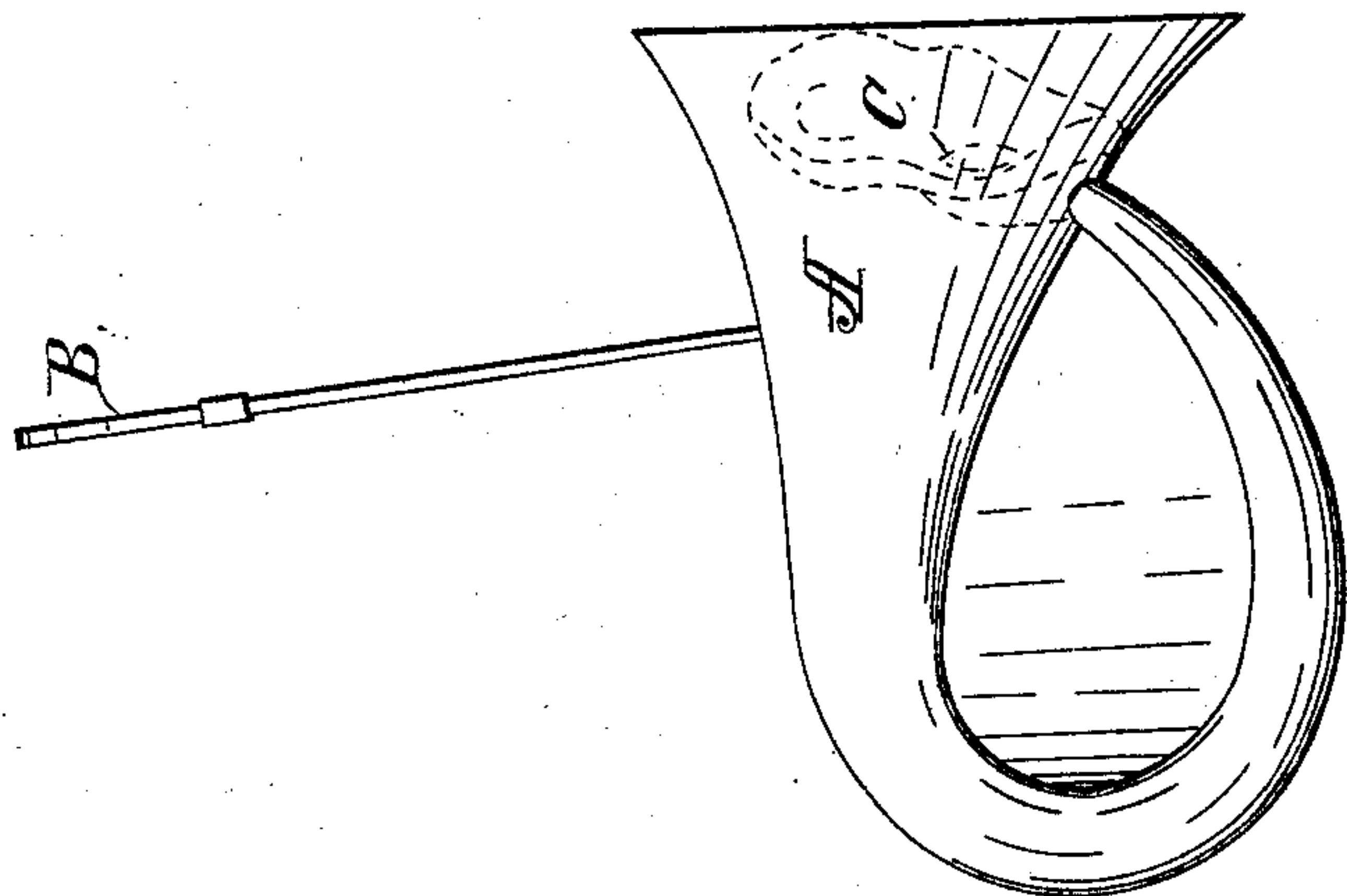


Fig. 1.



UNITED STATES PATENT OFFICE.

EDWARD G. HYDE, OF CAMPTOWN, NEW JERSEY.

IMPROVEMENT IN THE CONSTRUCTION OF EAR-TRUMPETS.

Specification forming part of Letters Patent No. 12,951, dated May 29, 1855.

To all whom it may concern:

Be it known that I, EDWARD GOODRICH HYDE, of Camptown, in the county of Essex and State of New Jersey, have invented a new and useful improvement in acoustic instruments for the use of deaf persons or to aid persons of ordinary hearing capacity in hearing far-off sounds; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side view of a double acoustic auricle constructed according to my invention, and Fig. 2 a front view of the same partly shown in section.

Similar letters of reference indicate corresponding parts in both figures.

My improvement consists in intersecting the tube of an ear-trumpet or acoustic instrument near where it enters the ear with a passage communicating with an artificial ear, which resembles or approximates to the form of the human ear and is so arranged as to lead such vibrations as fall on it to unite the vibration passing around through the tube. The improvement enables the person using the instrument to hear the utterances of others or other sounds, especially at a distance, with greater distinctness and without the rumble and confusion of sounds that accompanies the instrument without the improvement.

A A are two metal tubes which resemble, substantially, common ear-trumpets; but they are made somewhat different from the usual form in order that they may fit snugly to the sides of the human head. Their mouths are nearly of semi-elliptical form, the flat side being intended to fit next the head; but, receding from the mouths, they diminish and gradually approach to a circular form, in

which form they return, gradually diminishing, to a point near the mouth, and from thence bend inward nearly at right angles to the ear of the wearer. The ends which enter the ears are each furnished with a small ear-piece *b*, of conical or bulbous form, made of ivory or some material that may give ease to the wearer. The tubes A A are connected together by a sliding spring B, which passes over the head to support and keep them in place.

C C are the artificial ears, which may be made of vulcanized india-rubber or gutta-percha or of very light metal or of other durable material. They are placed within the mouths of the trumpets or tubes A A, so as to occupy a position corresponding as nearly as possible to that of the natural ears, and *a a* are the passages leading downward therefrom to intersect the tubes A A at or near the points where they bend inward to enter the ear. The intersection of one of the passages *a a* is shown at the left hand of Fig. 2, where the artificial ear C, the tube A, and the passage *a* are all shown partly in section. The course of the vibration falling on the artificial ear is indicated by arrows 1 2, and that of the vibration passing around and through the tube A by arrows 3, 4, 5, 6, 7, and 8. The arrow 9 represents the course of the united vibrations into and toward the ear.

The ear C is of course applicable to a single as well as to a double auricle.

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

The artificial ear C, applied to an acoustic auricle or ear-trumpet substantially as and for the purpose herein described.

EDW. G. HYDE.

Witnesses:

MOSES R. KING,
A. M. PRENTISS.