No. 803,282. PATENTED OCT. 31, 1905.

J. R. GAULT.

MICROCOUSTIC OR DEVICE TO ASSIST THE HEARING.

APPLICATION FILED DEC. 1, 1903. RENEWED APR. 14, 1905.

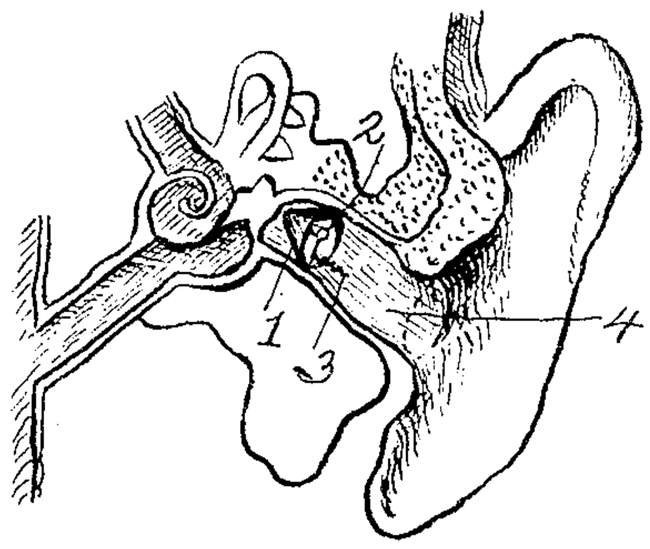

Fig. 1

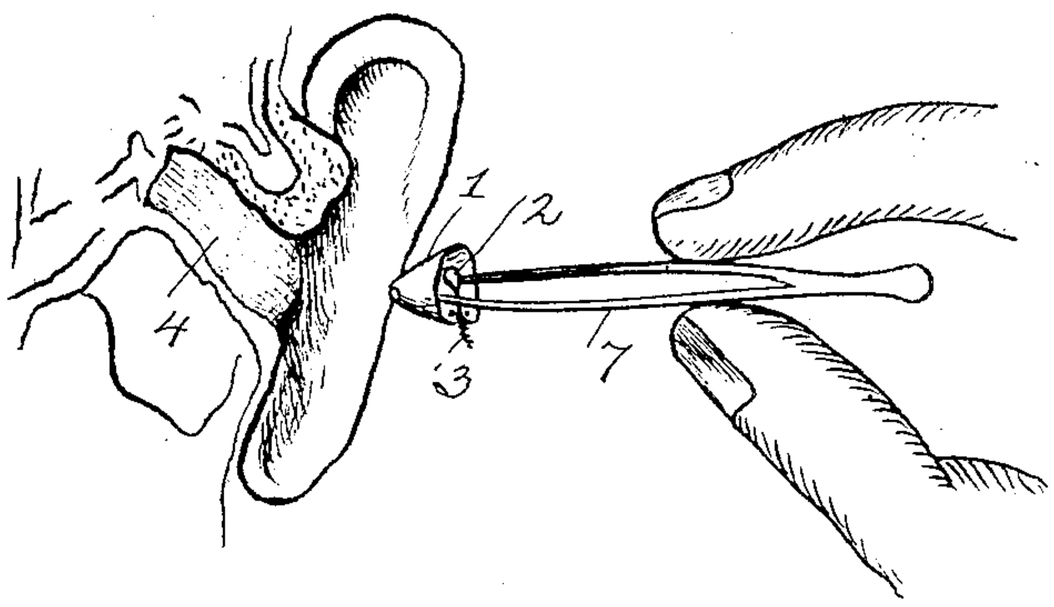

Fig. 2

Fig. 4

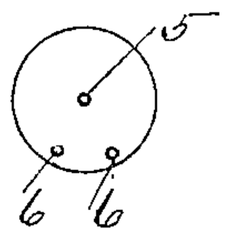

Fig. 3

Witnesses:
M. Hunton
R. A. Lowry

Inventor:
John R. Gault
By O. D. Lowe
Atty.

UNITED STATES PATENT OFFICE.

JOHN R. GAULT, OF MONTOOTH, PENNSYLVANIA, ASSIGNOR TO CHARLES C. WILLIAMS, OF PITTSBURG, PENNSYLVANIA, AND THE GAULT DRUM-A-PHONE COMPANY, OF PITTSBURG, PENNSYLVANIA, A CORPORATION OF DELAWARE.

MICROCOUSTIC OR DEVICE TO ASSIST THE HEARING.

No. 803,282. Specification of Letters Patent. Patented Oct. 31, 1905.

Application filed December 1, 1903. Renewed April 14, 1905. Serial No. 255,631.

To all whom it may concern:

Be it known that I, JOHN R. GAULT, a citizen of the United States, residing at Boggston avenue, Montooth, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Microcoustics or Devices to Assist the Hearing, of which improvement the following is a specification.

This invention relates to an improved microcoustic or device to assist the hearing; and it consists in a thin diaphragm having a small orifice formed in the center thereof and folded and secured in a conical form, together with certain other details of construction, as will be fully described and claimed hereinafter.

In the accompanying drawings, Figure 1 is a sectional view of the ear, showing my improved microcoustic adjusted to position, the same being constructed and arranged in accordance with my invention. Fig. 2 is a similar view of the ear, showing the manner in which the device is inserted. Fig. 3 is a perspective view of the device removed from the ear. Fig 4 is a face view of the blank from which the device is formed.

To construct a microcoustic instrument in accordance with my invention, and thereby provide a simple means for assisting the hearing, I form from thin, soft, and flexible rubber a disk of a suitable size, having a small central orifice or perforation 5 and two other perforations 6, the one separated from the other and located near the circumference of the disk. By means of a short piece of thread passed through the perforations 6 that portion of the rubber between is drawn into a loop 2 and the disk into a conical shape, the said loop forming a passage larger at the front than at the apex and a portion 3 of the thread left, which affords a means whereby the device may be withdrawn from the ear.

In operation the device is inserted in the channel 4 of the ear by means of small forceps 7, as shown at Fig. 2 of the drawings, and the device moved back to the ear-drum, as will be seen by reference to Fig. 1 of the drawings. The device may be withdrawn from the ear by grasping the thread 3 with the forceps 7. The sound-waves are caught and transmitted through the opening 2 and concentrating the same in close proximity to the auditory nerves.

Among the many advantages of my invention are: It requires but little skill in setting, it will last for a long period without perceptible wear, does not heat the ear, and is not felt when once in position, and it is light, soft, and in harmony with the membrane and nerves of the ear.

Slight modifications and changes may be made in the details of construction without departing from the spirit of the invention. Therefore I wish to claim the same broadly.

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

1. An instrument for assisting the hearing, consisting of a thin disk of soft flexible material, folded and secured in conical form, whereby a conical passage is formed through the same.

2. In a device for the purpose described, the disk 1, having a central orifice 5 and perforations 6, the thread 3 passing through said perforations and drawn to bring the one perforation close to the other, whereby the intermediate portion will form a conical passage 2, as and for the purpose described.

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

JOHN R. GAULT.

In presence of—
MAX W. KURNIKER,
M. HUNTER.