

(No Model.)

W. G. A. BONWILL.
EAR TRUMPET.

No. 473,865.

Patented Apr. 26, 1892.

FIG. 1.

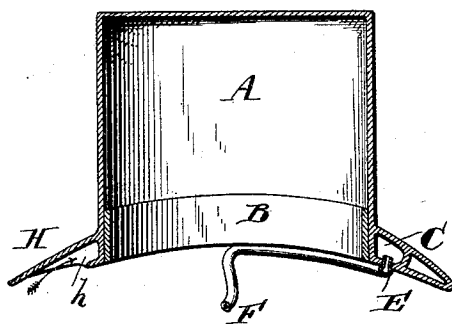
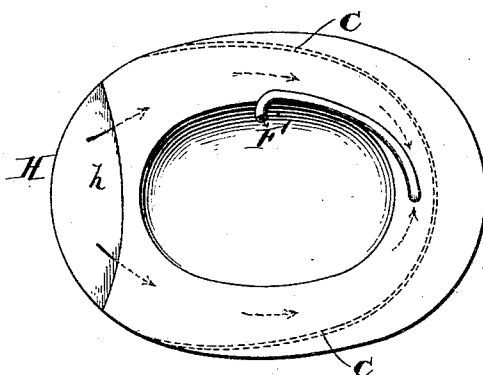


FIG. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM G. A. BONWILL, OF PHILADELPHIA, PENNSYLVANIA.

EAR-TRUMPET.

SPECIFICATION forming part of Letters Patent No. 473,865, dated April 26, 1892.

Application filed March 10, 1891. Serial No. 384,395. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM G. A. BONWILL, of the city and county of Philadelphia, and State of Pennsylvania, have invented an
5 Improvement in Ear-Trumpets for Deaf Persons, of which the following is a specification.

My invention has reference to ear-trumpets for deaf persons; and it consists of certain improvements which are fully set forth in the
10 following specification and are shown in the accompanying drawings, which form a part thereof.

My invention comprehends the formation of an ear-trumpet out of the structure of the hat
15 itself, so that the sound-waves may be received by the hat and transmitted to the ear through the tube or passage-way while the hat is upon the head of the wearer.

I am aware that it has been proposed to
20 place an ordinary ear-trumpet in a cap or head-covering, with a tube leading therefrom to the ear and with openings in the body of the hat communicating with the ear-trumpet. In my invention, however, I do not propose
25 to employ an ordinary ear-trumpet, but to so construct the hat itself that the ear-trumpet is formed in the ordinary structure thereof without materially changing or modifying the appearance of the hat.

In carrying out my invention I form a portion of the interior of the hat structure tapered or inclined to constitute an ear-trumpet and provide the hat with apertures or openings to the large end of the tapered portion, through which the sound-waves are received and transmitted to an opening or orifice at the small end of the tapered portion, the hole being formed by the hat structure itself. By means of a tube leading from the
40 orifice at the small end of the tapered portion the sound may be transmitted to the ear while the hat remains upon the head. The tapered portion which constitutes the bell-mouth or body of the ear-trumpet is formed
45 in the brim, the lower portion thereof being left open to receive the sound-waves.

Referring to the drawings, Figure 1 is a sectional side elevation of a hat embodying my invention. Fig. 2 is an inverted plan view
50 of the same.

A is the hat-body, and B is the ordinary hat-band.

C is the bell or tapered part of the hat, which constitutes the ear-trumpet. This bell
55 or tapered part communicates with the out-

side atmosphere through the aperture *h* in the side or crown of the hat-body.

E is a small outlet from the bell or tapered portion, and to it is connected a pipe or tube F, preferably of flexible material, which terminates slightly below the rim of the hat, so as to be inserted in the ear of the wearer. If desired, there may be one of these tubes F for each ear; but ordinarily one of such tubes will suffice. The tubes F may be detachable or capable of being pushed out of sight when not in use. The bell or tapered portion which constitutes the ear-trumpet is formed integral with the hat structure. The hat may be formed of sheet metal, paper, or other equivalent material and may be covered with felt or cloth. The bell or tapered passage-way C is formed in the brim of the hat, with the front portion open to receive the sound-waves and the rear or contracted portion connected to a tube which may be led around to the ear of the wearer.

H represents the brim of the hat, which is made double, forming the compartments C, leading from the front around both sides to the rear, where a tube F connects at the opening E. The front portions of these compartments are open, as at *h*, to receive the sound-waves, as indicated by the arrows.

While I prefer the minor details of construction which have been shown, I do not limit my invention to them, as it is apparent that they may be modified without departing from it.

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

1. As an article of manufacture, a hat having a sound-receiving chamber formed in its brim and made to open to the atmosphere at one end and terminating at the other end in a tube leading to the ear of the wearer.

2. As an article of manufacture, a hat having a sound-receiving chamber of gradually-reduced area formed in its brim and made to open to the atmosphere at its larger end, arranged in the front of the hat and terminating at the other or smaller end at the rear of the hat in a tube leading to the ear of the wearer.

In testimony of which invention I have hereunto set my hand.

WM. G. A. BONWILL.

Witnesses:

GEO. W. REED,
GEO. B. LAUER.