

(No Model.)

D. & E. R. DARRAH.
SOUND CONDUCTING DEVICE.

No. 566,145.

Patented Aug. 18, 1896.

Fig. 1.



Fig. 2.

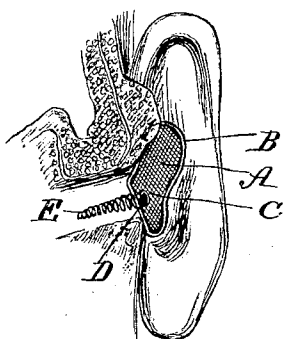
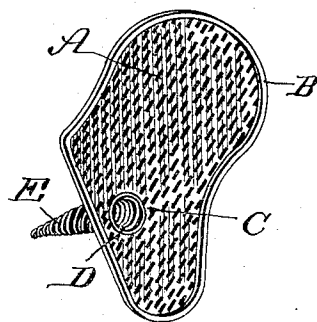


Fig. 3.



Witnesses.

Jos. A. Ryan
Chas. E. Brock

Inventors
David Darrah
Eugene R. Darrah
R. W. P. Lacey
Attorneys.

UNITED STATES PATENT OFFICE.

DAVID DARRAH AND EMMA R. DARRAH, OF ST. CLAIRSVILLE, OHIO.

SOUND-CONDUCTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 566,145, dated August 18, 1896.

Application filed December 24, 1895. Serial No. 573,196. (No model.)

To all whom it may concern:

Be it known that we, DAVID DARRAH and EMMA R. DARRAH, of St. Clairsville, in the county of Belmont and State of Ohio, have
5 invented an Improved Auropbone, of which the following is a specification.

This invention is an improved auropbone or device to aid in hearing.

The object of this invention is to provide a
10 cheap and simple device which can be placed in the ear without inconvenience and which is so constructed as to transmit the sound-vibration to an ear-drum, and while it is intended for the use of persons with defective
15 ear-drums it can be applied to the ears in which the drums are sound or good, for the purpose of aiding the transmission of sounds such as would ordinarily not affect the tympanum or ear-drum.

20 With this object in view and such others as may hereinafter appear the invention consists, broadly, in a reticulated or foraminous metallic body adapted to be held in the outer ear and the vibrating spring connected with
25 the body and adapted to be projected into the channel leading to the ear-drum, which body and spring are caused to vibrate and intensify the sound-waves before they reach the ear-drum.

30 The invention consists also in certain details of construction and combination of parts, all of which will be first described, and then pointed out in the claims.

35 In the drawings forming a part of this specification, Figure 1 is a view showing our improved device in use. Fig. 2 shows in section the location of the various parts when arranged for use. Fig. 3 is a detailed view of the device detached from the ear.

40 This auropbone can be used either singly or in pairs, according to whether one or both ear-drums are defective, and the metallic body will be so shaped as to fit the ear, and in general practice we construct the same of
45 such general shape and size as to fit the average ear. However, in some cases it may be necessary to make special sizes or forms.

50 In carrying out our invention we employ a metallic reticulated or foraminous body A, which may be in the form of a perforated plate or a wire-gauze fabric, as preferred, the metal being of such a character as will readily transmit sound, and in practice we prefer to use silver or platinum.

As before stated, this body is made substantially the shape of the outer ear and is adapted to fit therein, and for the purpose of strengthening the body we construct the same with a rim or border B, so that the same can be readily handled without injury to either
60 the body or the ear.

At a suitable point C an opening D is produced in the body, and secured in said opening is one end of a spirally-coiled spring E, which spring is also composed of silver or
65 other highly-conductive metal, which spring is adapted to project into the channel leading to the ear-drum, the inner end of said spring resting adjacent to but not touching said ear-drum.

70 Now in operation the auropbone is readily inserted in the ear and requires no auxiliary appliances for holding it in place, and it will be readily understood that all vibrations which strike the body will be intensified and
75 communicated to the coiled spring, which being located in the channel leading to the ear-drum will increase the sound in said channel and thereby bring sufficient force to act upon the defective ear-drum, and in cases in which
80 the ear-drum is not defective sounds which would ordinarily not affect said healthy ear-drum will affect it, and thus the natural efficiency of the ear-drum is increased for the purpose of hearing sounds minute in their
85 character or traveling very long distances.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. An improved device to aid the hearing, consisting of a reticulated or foraminous body, and the coiled wire spring connected therewith, substantially as shown and described.

2. An improved device to aid the hearing, consisting of a reticulated or foraminous body
95 shaped to fit the outer ear, and having a coiled wire spring attached thereto, and adapted to project into the channel leading to the ear-drum, substantially as shown and described.

100 In testimony whereof we affix our signatures in the presence of two witnesses.

DAVID DARRAH.
EMMA R. DARRAH.

Witnesses:

T. M. ADAMS,
A. A. CLARK.