May 28, 1957 W. H. MORGAN 2,794,075

HEARING AIDS

Filed Aug. 19, 1953

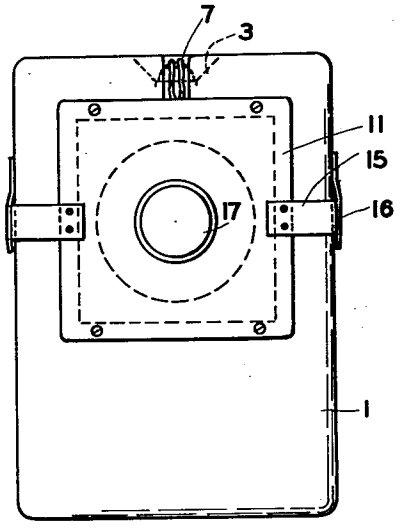


FIG. 1

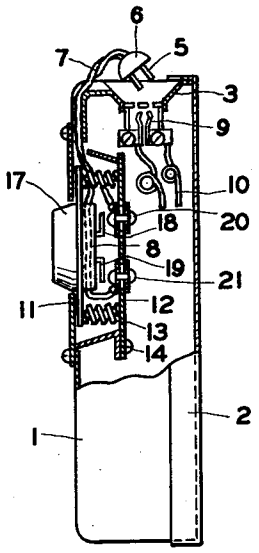


FIG. 2

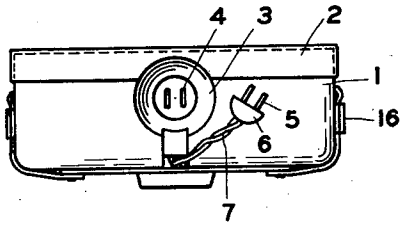


FIG. 3

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2,794,075
Patented May 28, 1957

2,794,075

HEARING AIDS

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Application August 19, 1953, Serial No. 375,288

1 Claim. (Cl. 179—107)

This invention relates to new and useful improvements in hearing aids and it is among the objects thereof to provide a hearing aid that is self-contained without the need for extension cords and the like and which may be conveniently used by placement to the ear.

The invention further contemplates the use of a hearing aid in which the acoustical device is replaceably mounted in a battery case and spring biased to constitute the ear contacting element a yielding member when applied for use.

The invention will become more apparent from a consideration of the accompanying drawing constituting a part hereof and in which like reference characters designate like parts and in which:

Fig. 1 is a front elevational view of a hearing aid embodying the principles of this invention;

Fig. 2 is a side elevational view partially in cross section of the device shown in Fig. 1; and

Fig. 3 is a top plan view thereof.

With reference to the several figures of the drawing, the numeral 1 generally designates a conventional hearing aid case with only the essential elements shown, the case being provided with a flanged cover 2 for accessibility to the conventional acoustical device and batteries (not shown) in the interior thereof. The wall of the case 1 is contracted at the top as shown at 3 and perforated with slots 4, Fig. 3 to receive the terminals 5 of an attachment plug 6 having a cord 7 extending to an acoustical device generally designated by the numeral 8. Terminals 9 within the case, for example, for making electrical contact with the terminals 5 are electrically connected by leads 10 to the batteries not shown. The acoustical equipment 8 is mounted on the plate 11 which is resiliently mounted by springs 12 to a partition 13 secured to the casing wall by screws 14. The plate 11 is provided with ears 15 that interact with catches 16 so that the plate and the acoustical equipment carried thereby may be removed from the casing 1 when the terminal plug 6 is lifted out of the receptacle in the manner shown in Fig. 2.

The acoustical equipment is provided with an ear piece 17 which may be made of plastic or other material, which by virtue of the coil springs 12 will yield when contacted with the ear. Terminals 18 and 19 are provided to contact terminals 20 and 21 when the ear piece is depressed against coil springs 12 to connect the ear piece in the circuit of the hearing aid case through terminals 5.

In the use of the device which is of a small compact form, it may be conveniently carried in the pocket and placed to the ear when a hearing aid is required. It is free from the hook-up cord that exists when the acoustical element is placed in the ear in conventional forms of hearing aids. It is also evident that hearing is aided in the use of the present device by virtue of the cupping of the element in the hand as it is applied to the side of the head in the same manner as when the hand is cupped to aid hearing without the use of a hearing aid. By removing the plug 6 from receptacle slots 4 and inserting the standard ear plug cord terminal, not shown, the device may be used in the conventional manner by placing the case 1 in a garment pocket.

Although one embodiment of the invention has been herein illustrated and described, it will be evident to those skilled in the art that various modifications may be made in the details of construction without departing from the principles herein set forth.

I claim:

In combination with a conventional hearing aid of an auxiliary acoustical device comprising a plate having an acoustical element with an ear phone mounted on a partition wall of said hearing aid, springs disposed between said plate and partition wall to yieldingly urge the ear phone into an extended position beyond the wall of said hearing aid, terminals on said partition wall and terminals on said auxiliary acoustical device in alignment with said first-named terminals to contact therewith upon pressure being exerted by pressing on the ear phone, said terminals having conductors connected to an outlet plug for connection with an outlet in a wall of the hearing aid, said auxiliary acoustical device and terminal plug being removable from the hearing aid device as a unit.

References Cited in the file of this patent

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