

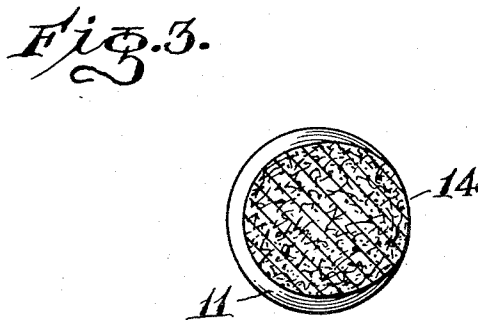
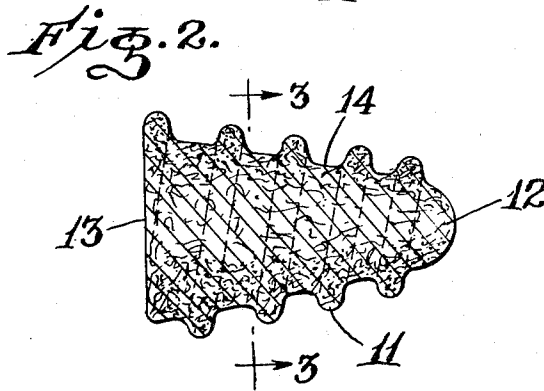
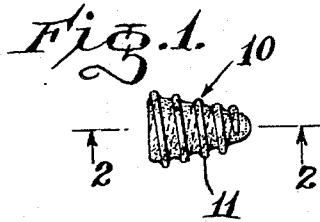
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EAR PLUGS

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EAR PLUGS

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1 Claim. (Cl. 128—152)

This invention relates to ear plugs or inserts, and the main object is the provision of a novel and improved ear plug to be used by persons who are sensitive to or disturbed by excessive noise or certain, particularly high, pitched sounds but who wish, naturally, nevertheless to refrain from impairing their hearing while using the plug.

Another object of the invention is the provision of an ear plug for the purposes mentioned above, which is so made and constructed that it will filter out or substantially diminish disturbing sounds or pitches and yet will freely permit sounds of ordinary life to be heard.

A still further object of the invention is the provision of such an earplug which is readily and easily insertible into the ear or withdrawn therefrom and which, by the nature of its structure, will when inserted readily adapt itself to the size and shape of the ear passage without discomfort to the user.

The above broad as well as additional and more specific objects will be clarified in the following description wherein reference numerals refer to like-numbered parts in the accompanying drawing. It is to be noted that the drawing is intended solely for the purpose of illustration and that it is therefore neither desired nor intended to limit the invention necessarily to any or all of the exact details of construction except insofar as they may be deemed essential to the invention.

Referring briefly to the drawing,

Fig. 1 is a side view of an ear plug embodying the principles of the present invention.

Fig. 2 is a sectional view taken on the line 2—2 of Fig. 1.

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 2.

Referring in detail to the drawing, the numeral 10 indicates the substantially or approximately conical body of the ear plug, which is preferably formed of a unitary mass of somewhat compacted or compressed material

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such as absorbent cotton, pre-shaped into the form shown, including a spiro-helical ridge 11 extending from substantially the apex to the base of the body. In other words, the body 10 and the encircling ridge 11 are unitarily preshaped of the same unitary mass of material. The apex 12 of the body is preferably rounded, and the base 13 is or may be flat or nearly so.

It is obvious that a plug made according to the above specifications, and considering the apex 12 as the entering end, is readily insertible into the ear and, by virtue of the combination of a degree of plasticity and hence moldability of the mass, readily adapts itself to the conformation of the ear passage of the user. Moreover, such a mass also possesses a degree of flexibility, so that it will not only adapt its shape to the shape of the ear passage but will also exert a degree of resilient pressure in a radial direction, thus to maintain the plug in the said passage.

The body of the plug in the ear acts as a cushion to unharmonious sounds and particularly filters out piercing noises, while the spiro-helical passage 14 between the ridges of the continuous ridge 11 serves to permit most sounds to reach the inner ear while at the same time further cushioning them because of the nature of the sound-absorbing qualities of the walls of the said passage, as is obvious.

Obviously, modifications in form or structure may be made without departing from the spirit or scope of the invention.

I claim:

An ear plug comprising a conical sound-absorbing porous body of pre-shaped cotton having the fibers thereof relatively closely compacted, said body including and having integral therewith a spiro-helical ridge extending substantially the distance between the apex and the base of the body on the conical surface thereof, the plug being adapted to be inserted into the ear with said base outermost, said base being substantially flat and unobstructed to permit sound to enter freely into the spiro-helical passage defined by said ridge and be conducted thereby into the ear, the sound-absorbing quality of the walls of the ridge serving to reduce and soften the intensity of the sound during its progress through said passage.

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