COMFORT CUSHION FOR EAR MUFFS, IN PARTICULAR SOUND SHELLS

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A cushion or napkin of cup-shape is resiliently secured inside an ear muff to prevent direct contact between the ear muff and the head of the user. The napkin or cushion is of cup shape and may be made of a moisture-absorbing non-woven material.

6 Claims, 3 Drawing Figures
COMFORT CUSHION FOR EAR MUFFS, IN PARTICULAR SOUND SHELLS

This invention relates to a comfort napkin adapted to be mounted in an ear muff of the sound shell type, where the contact part of the shell surrounding an ear of the user consists of a soft material mounted on a rigid holder part, the napkin when mounted on the shell during utilization thereof preventing direct contact between the shell and the head of the user thereof.

In the use of ear muffs and in particular of the sound shell type inconveniences can be caused by the part thereof in contact with the skin of the wearer around his ear constantly preventing perspiration from vanishing which finally may result in an allergy. In demonstration of industrial plants, for example, sound shells are employed sometimes which are passed from one person to the other. Dirt and perspiration may be deposited on the shells, in particular the contacting portions thereof, and they become unpleasant to use.

Therefore, the main object of the invention is to provide a simple and cheap comfort napkin or collar of single use type by means of which the above-mentioned inconveniences in the utilization of sound shells are avoided.

According to the present invention a comfort napkin, which effectively meets the requirements set forth above, mainly consists of a soft, moisture absorbing material, such as certain types of "non-woven material", and mainly covers the contact part of the shell surrounding the ear, a cup-shaped central part of the napkin being fitted to fit into the portion of the shell intended to receive the ear, the bottom of the cup-shaped part being stiffened in such a manner that a resilient effect is obtained which renders it possible to fix the napkin in the shell by clamping action.

The invention is described more precisely below with reference to a preferred embodiment illustrated in the accompanying drawings, in which:

FIG. 1 is a perspective view of an ear muff made according to the invention with a comfort napkin applied therein;

FIG. 2 is a transverse sectional view taken on a vertical plane extending through the center of the comfort napkin shown in FIG. 1; and

FIG. 3 is a part sectional view, part elevation view of a sound shell having this type of comfort napkin applied thereto, the sectional portion of the view being taken approximately on a horizontal plane extending through the center of the napkin and shell.

The comfort napkin illustrated in the FIGS. 1 and 3 is disposed in a sound shell 2 of a type known per se. It should be observed in this connection that only one sound shell of a pair of sound shells interconnected by a resilient strap is shown. The contact part 4 of the shell 2 which is intended to make close contact about one ear, consists of soft material. In the illustrated embodiment the contact part 4 includes foamed plastic material which is covered by a coating 5 of tighter plastic material and secured to a rigid holder part 6. In another known form of the shell, the coating of plastic material secured to the holder part encloses a predetermined quantity of liquid.

As already mentioned, the comfort napkin or collar 1 according to the invention consists of a soft, moisture absorbing material e.g. a "non-woven material" of the same kind as that which is used as outer cover of diapers. The comfort napkin is shaped as an elongated or oval-shaped cup 7 with an outwardly projecting flange 8, the outer edge portion 9 of which is slightly bent down. The shape of the comfort napkin 1 conforms to the corresponding parts of the shell 2, i.e. the contact part 4 of the shell and the recess-shaped part 10 intended to house the ear. An ear thus ought to be accommodated easily within the cup-shaped part of the comfort napkin 1. The fitting tolerances for the comfort napkin 1 are not critical as far as the napkin part made of the moisture absorbing material is concerned.

In the embodiment shown in FIG. 3, a rigid but slightly resilient oval-shaped member 12 is fixed to the underside of the cup bottom 11, e.g. by gluing or welding. The member 12 may be made of cardboard or polyethylene-coated cardboard, and the lateral projections 13 thereof extend past the cup bottom 11 to engage the shell 2 by snapping action. This is especially evident from FIG. 3, where the lateral projections 13 engage behind the holder part 6 of the shell. In this position the comfort napkin nicely fits the ear accommodating part 10 of the shell 2.

The comfort napkin 1 shown in the figures is especially intended for a sound shell 2 and for this purpose it is formed with a plurality of holes 15. These extend through the bottom 11 of the napkin and the underlying member 12. Due to the holes 15 formed in this way the sound shell retains its impedance for low frequencies.

Modifications of the comfort napkin 1 are possible within the scope of the invention. For example, the member 12 may be disposed on the inner side of the shell bottom 11. In this case it is not necessary to make use of lateral projections 13, but the comfort napkin may be adapted to be clamped in the shell 2 by a forced tight fit, the member 12 over the comfort napkin 1 exerting a pressure against the interior wall 16 of the contact part 4 adjacent the part 10.

It is possible to utilize, instead of the member 12, cup bottoms 11 stiffened in other ways e.g. by means of binders or wiring incorporated in the bottoms 11 so that a spring or resilient effect nevertheless is obtained when clamping the comfort napkin 1 in the shell 2.

Having thus described our invention, what we claim is:

1. A comfort collar adapted to be mounted on an ear muff, and in particular on a muff of the sound shell type having a generally cup-shaped, rigid holder part supporting on its periphery the contact part of the shell which surrounds an ear of the user, said collar mainly comprising a soft, moisture absorbing material having thereon a first part disposed to cover the contact part of the shell surrounding the ear, and having a generally cup-shaped central part formed to fit into said cup-shaped portion of the shell and intended to receive the ear of the user, and means on the bottom of the cup-shaped part of said collar for resiliently and releasably securing said collar to the shell, the collar, when mounted on the shell during utilization thereof, preventing direct contact between the shell and the head of the user.

2. A comfort collar as claimed in claim 1, wherein said means comprises a member of rigid but slightly resilient material fixed to the bottom of the cup-shaped part of said collar, said member having a configuration making it possible to fix the collar by press fit action within the shell.
3. A comfort collar as claimed in claim 1, wherein said means comprises a member fixed to the underside of the cup-shaped bottom of said collar and having formed thereon lateral projections which extend past said bottom to engage behind said holder part of the shell by snapping action.

4. A comfort collar as claimed in claim 2, wherein the cup-shaped part thereof is formed with holes, said holes extending also through said member, the shell thereby retaining its impedance for low frequencies.

5. A comfort collar as claimed in claim 2 wherein said member is made of cardboard and is secured by gluing or welding to the collar.

6. A comfort collar as claimed in claim 1, which is made of a moisture-absorbing, non-woven material.