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EAR-CAP

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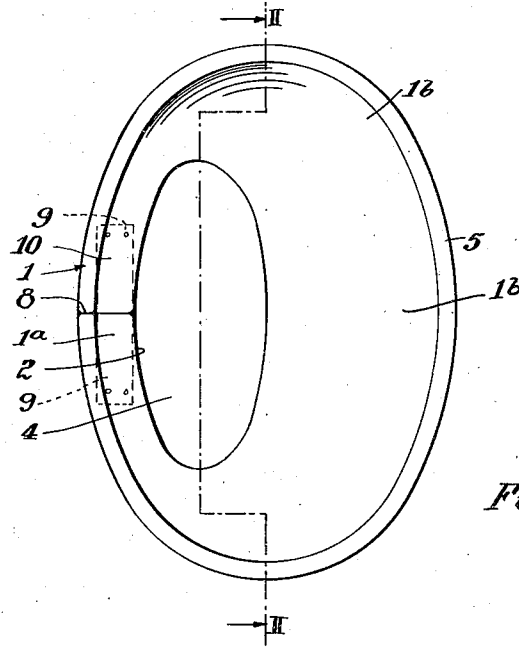


Fig. 1

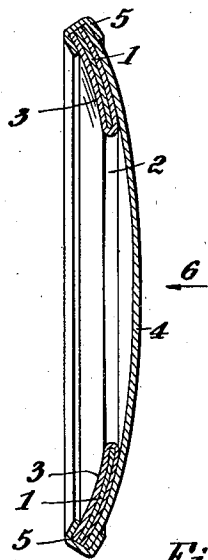


Fig. 2

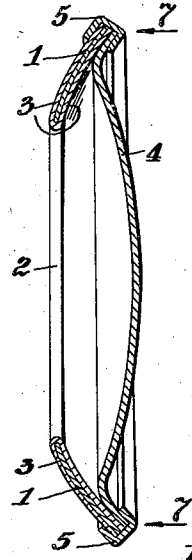


Fig. 3

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The known types of ear muffs for protecting the ear against cold are held on the head either by an adjustable band extending over the head or by a spring worked into each of the two ear-muffs. In the latter case, the spring presses round the root of the ear and thereby holds the ear-muff. However, the ear-muffs provided with a band have the disadvantage that the band must pass under the hat or the like of the wearer, whereas the ear-muffs without a band, which are held by springs worked into each of the two ear-muffs, exert an unpleasant pressure upon the root of the ear, if the spring is to give a secure hold.

In order to obviate these disadvantages, the ear-muff according to the present invention comprises a shell adapted to be bent inwardly and consisting of thin vulcanized fibre, hard cardboard, artificial resin, Celluloid, or the like, the shell having an opening for introducing the ear and being provided with a flexible covering material, such as cloth, moss rubber (a kind of sponge rubber, but with finer pores), or the like, loosely covering the opening of the ear-shell. This construction makes it possible to easily attach the ear-muff to the ear without causing an unpleasant pressure on the ear, the latter lying between the curved shell of the ear muff and the cloth covering.

The opening in the shell of the ear-muff for introducing the ear is arranged eccentrically, and the narrow strip of this shell, formed by such opening and preferably constituting the shell portion designed to be placed over the root of the ear, is cut through. The severed ends of this narrow strip are connected by a rubber band, a spring, or the like. In this way, the material of which the resilient shell is made is prevented from breaking, because the elastic connection permits the narrow strip to expand when the shell is bent.

A constructional example of the article forming the subject of the present invention is illustrated in the accompanying drawing, in which:

Fig. 1 is an interior view of the ear-muff;

Fig. 2 is a section on the line II-II of Fig. 1; and

Fig. 3 is the same section in the position in which the ear is introduced in the ear-muffs.

The ear-muff consists of a shell 1 curved outwardly and made of thin vulcanized fibre, hard cardboard, artificial resin, Celluloid, or the like, the curving of which may be bent inwardly. The shell 1 has an opening 2 and is covered on the side adjacent the head or on both sides with a suitable material 3, such as cloth, felt, moss

rubber, or the like. A cloth 4 loosely covers the opening 2 of the shell 1. The cloth 4, covering the opening, as well as the covering 3 of the shell 1, are bordered by an edge braid 5 which is sewn together with the covering 3, as well as with the cloth 4. But it is also possible to glue the covering 3, the cloth 4, and the braid 5 together and onto the shell 1, and to provide a braid consisting of rubber instead of the edge braid 5, so that the rubber braid, when being stretched, will hold the cloth 4 and the covering 3. In addition, there may be attached to the entire inside surface a strip of sponge rubber, felt, friezed cloth, or the like, assuring a close fit between the head and the circumferential edge of the ear-muff. The covering 3 and the cloth 4 may also consist of moss rubber, the cut surfaces of which are turned towards the head, these surfaces being glued together at the circumferential edge by means of a rubber braid or being vulcanized together. By covering the shell 1 with moss rubber, a completely tight closure is obtained so that no moisture can reach the ear. In addition, moss rubber is a particularly good insulator for warmth.

Specifically referring to Figs. 2 and 3, it will be seen that the shell 1 may assume, with respect to the cloth 4, either a position of substantially convex configuration or a position of substantially concave configuration. If the position of the shell is of substantially concave configuration then the flexible material 4 will loosely cover the shell and will define with the same a pocket. On the other hand, if the shell 1 is bent into a position of convex configuration, with respect to the flexible material 4, the latter will be stretched over the shell.

When using the ear-muffs in accordance with the invention, the shell 1 of suitable resilient material is bent or snapped into a position of concave configuration with respect to the flexible covering 4 as for instance shown in Fig. 3. The ear is then inserted through aperture 2 into the pocket formed by the shell and the covering of flexible material. Pressure is then applied, as, for instance, with the fingers, and preferably at diametrically opposed points in the direction of the arrow 7. This pressure in the direction of the head will cause the shell 1 to snap from the concave into the convex position shown in Fig. 2. In this latter position the flexible covering 4 being stretched over the shell 1 defines with the shell a clamp holding the ear therebetween. The pressure upon the ear, now clamped between the curved shell 1 and the flexible covering 4, is

but relatively slight. The clamping action may be released at any time by bending or snapping the shell back into the concave position shown in Fig. 3.

As will be seen from the drawing, the aperture 2 is eccentrically located thereby defining on the shell 1, a narrow portion 1a and a crescentic portion 1b. The narrow portion 1a is cut through at 8, the severed ends being preferably held together by a piece of elastic material. The cloth 4 if desired may be an elastic cloth of for instance knitted material or the like. An edge braid 5 may be provided. The cut ends of the narrow strip 1a are then elastically connected by a rubber band. Owing to this construction, the shell 1 may be stamped out of a flat plate, the ends of the narrow strip being spaced from each other. By drawing together the ends of the strip and the rubber band 9, the curving of the shell 1 is obtained. The elastic connection by means of the rubber band 9 has the advantage that the material, of which the shell 1 is made, is prevented from breaking, when being bent, because the rubber band 9 will then expand, so that the shell 1 will jump from its curving on the right side into the therewith congruous curving on the left side.

What is claimed, is:

1. In an ear muff construction the improvement comprising a piece of resilient concavo-convex material returnably snappable to either of its congruous positions, a substantially flexible material attached to said piece and stretching in one of said positions over the convex surface thereof to form a snap action releasable ear clamp, and an ear admitting aperture in said piece.

2. In an ear muff construction the improvement comprising a piece of resilient concavo-convex material returnably snappable to either of its congruous positions, an eccentrically located ear admitting aperture in said piece defining thereon a narrow portion and a crescentic portion, and a substantially flexible material attached to said piece and stretching in one of said positions over the convex surface thereof to form with said crescentic portion a snap action releasable ear clamp.

3. The improvement in accordance with claim 2 in which said narrow portion is cut through and in which the resulting severed ends are held together by elastic means.

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