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L. PLOTSKY

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EARMUFFS

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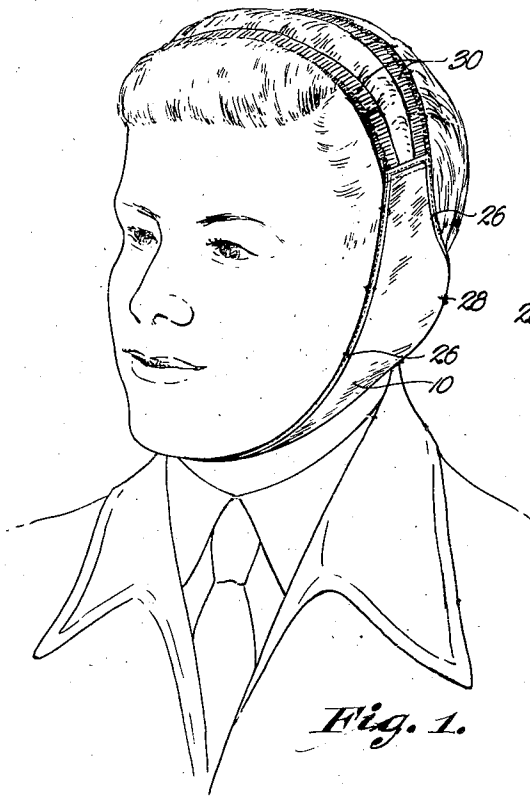


Fig. 1.

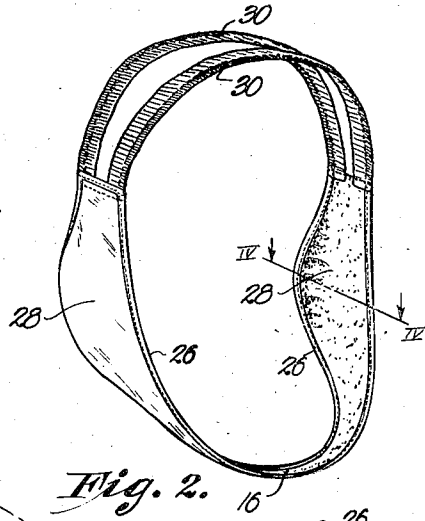


Fig. 2.

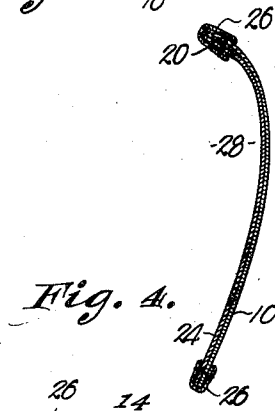


Fig. 4.

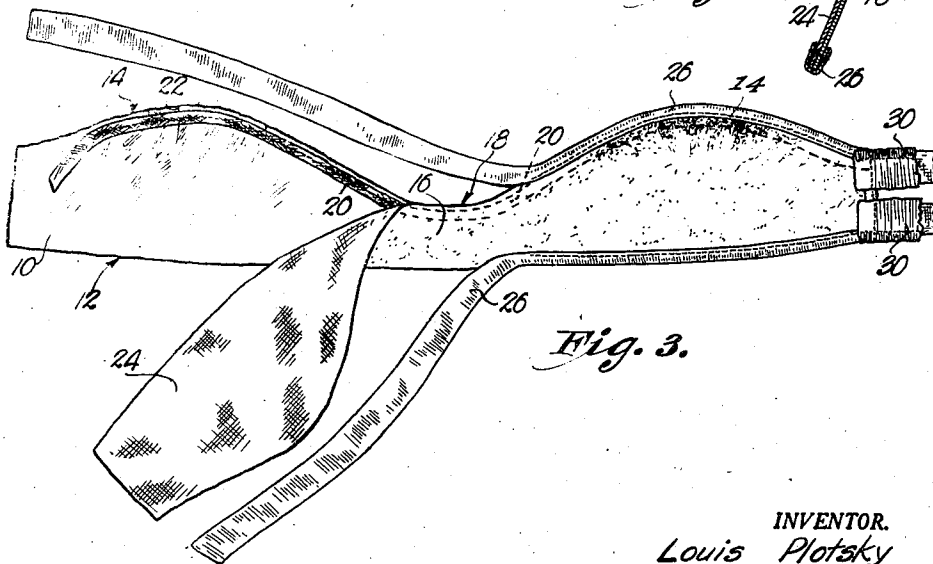


Fig. 3.

INVENTOR.  
Louis Plotsky  
BY *[Signature]*  
ATTORNEY.

# UNITED STATES PATENT OFFICE

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EAR MUFF

Louis Plotsky, Kansas City, Mo.

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4 Claims. (Cl. 2—209)

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This invention relates to wearing apparel and particularly articles of manufacture in the nature of ear muffs formed of fabric material and contoured through the employment of uniquely disposed and inter-related parts, to the end that the ear-receiving areas assume a concavo-convex condition permitting quick application, immediate and snug adjustment, and assurance that a normal position will be maintained through the period of use.

One of the important aims of this invention is to provide ear muffs of the aforementioned character, having in combination, unique reinforcing elements associated with elastic securing sections and serving to maintain the contour of the ear engaging areas to insure a snug fitting against the head, both in front of and behind the ears.

A further aim of this invention is to provide ear muffs formed in a unique manner, from initially flat fabric through the employment of specially disposed reinforcing tape to make a pair of concavo-convex areas that will conform to the shape and contour of the wearer's ears to effectively seal them against blasts of air.

Other objects of the invention will appear during the course of the following specification, referring to the accompanying drawing wherein:

Fig. 1 is a perspective view of ear muffs embodying this invention, showing the same in place to protect the ears of the wearer.

Fig. 2 is another perspective view of the ear muffs from a different angle and illustrating the same entirely removed from the operative position.

Fig. 3 is a fragmentary stretch-out plan view of the body section of the ear muffs, illustrating the manner in which the parts are assembled; and

Fig. 4 is an enlarged fragmentary sectional view through one of the concavo-convex areas of the ear muffs, taken on line IV—IV of Fig. 2.

It has heretofore been a problem of substantial concern to produce ear muffs that will snugly conform to the contour of the wearer's head and yet completely shroud the ears so that no blasts of air will pass beneath the edges of the ear muffs. Pre-formed, rigid or semi-rigid ear containing pockets in ear muffs are objectionable because of the vast range of different physical characteristics that are encountered, and therefore, a flexible, self-conforming area has been found desirable. Likewise, the use of rigid or semi-solid securing means for the ear muffs are objectionable for many reasons, and therefore, the use of elastic bands disposed in a particular fashion

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and where they may be easily applied, are desirable.

This invention, therefore, provides ear muffs that not only present an answer to the problems encountered in the art, but makes provision for the inexpensive construction of ear muffs from fabric of any desirable color, texture or material.

In the drawing, the numeral 10 designates an initially flat piece of fabric having a straight longitudinal edge 12 and a longitudinal marginal portion along the opposite longitudinal edge formed to present two spaced apart arcuate lengths 14, the proximal ends whereof merge into an intermediate stretch 16 that is relatively narrow and has a concave edge 18 which snugly fits beneath the chin when the article is completed and worn.

After the initially flat piece of fabric 10 is cut from selected material, the tape 20 is applied along the arched marginal edge by stitching the same to one side of piece 10. This stitching is specially performed in that gathers 22 are created in the convex widest portion.

After tape 20 is applied, a lining of soft fabric 24 is superimposed upon piece 10 and stitched thereto along the longitudinal and transverse marginal edges through the medium of binding 26. Binding tape 25 extends throughout the length of piece 10 and lining 24, and serves to present a smooth edge, which incidentally, may be established by serging as is now conventional practice in the construction of fabric garments or the like.

Before the lining 24 is stitched to the piece 10 it is gathered along the convex widest portion in the same manner as piece 10 to insure the formation of two concavo-convex areas 28 that are substantially diametrically opposed when the ear muffs are completed and that engage the ears of the wearer, as illustrated in Fig. 1.

From the above it will be clear that the length of the arched edge created by edges 14 and 18, is initially greater than the length of tape 20, for tape 20 is not gathered along the convex arcuate portion of the said edge, and therefore, when the article is applied to the head of the wearer, areas 28 become self-conforming as the contour engaged requires.

An elastic section comprising two strips of yieldable material 30 is established when these strips are stitched to the ends of the body of the ear muffs comprising piece 10, tape 20, lining 24 and binding 26. The stitching, indicated by dotted lines in Figs. 1 and 2, that fastens the ends of one strip 30 to the ends of the body of the

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ear muffs, passes through the lining 24, into the ends of tape 20 and thence through piece 10 for the purpose of imparting a longitudinal pull thereupon that tends to straighten tape 20 and thereby draw the same taut against the head of the wearer behind the ears. Similarly, the ends of the other strip 30 are stitched to tape 26 by stitching that passes through the entire body of the ear muffs, which tape 26 forms the binding for the straight longitudinal edge 12, and therefore, this binding 26 and its embraced marginal edges of piece 10 and lining 24, are likewise drawn taut and snugly against the face of the wearer in front of the ears and below the chin.

Strips 30 are slightly spaced apart at their points of connection with the fabric portion of the article and when in the normal worn position, these strips 30 are spread apart at the top of the head to not only insure the comfort of the wearer, but to preclude displacement and securely hold the concavo-convex areas 28 in a place where the ears of the wearer are fully covered.

The concave edge 18 lies below the chin and against the throat without exerting undue pressure, and because of the snug fit at this point, areas 28 will assume a greater or lesser degree of curvature, as required by the shape of the ears. In any event, the depth of the concavo-convex areas progressively increases as the arched edge 14 is approached from edge 12, all because of the unique manner in which piece 10 is gathered at 22 and the positioning of tape 20, with respect to this gathered marginal edge and the elastic strip 30 to which it is stitched.

Ear muffs made in accordance with this invention are attractive because of the simplicity and ease of manufacture, the minimum amount of material required, the speed with which the same may be moved to and from the worn position, and the possibility of using a wide range of fabric, both with respect to material and color.

Ear muffs having physical characteristics different from those illustrated and described may be made without departing from the spirit of the invention or scope of the appended claims.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. Ear muffs of the character described, comprising an annular fabric body having an elastic section therein for resting against the top of the head; a chin-engaging portion substantially diametrically opposite to the elastic section; and a concavo-convex, relatively wide area integral with the chin-engaging portion at each side thereof, adjacent to the elastic section for receiving the ears of the wearer, said areas each having a straight longitudinal edge and a convex longitudinal edge to create the relatively wide area, the convex edge being gathered to establish the said concavo-convex contour, the marginal portion of the body along the opposite edge of each area being smooth whereby to establish concavo-convex areas progressively increasing in depth as said convex edge of the area is approached.

2. Ear muffs of the character described, comprising an annular fabric body having an elastic section therein for resting against the top of the head; a chin-engaging portion substantially diametrically opposite to the elastic section; and a concavo-convex, relatively wide area integral with the chin-engaging portion at each side thereof, adjacent to the elastic section for re-

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ceiving the ears of the wearer, said areas each having a straight longitudinal edge and a convex longitudinal edge to create the relatively wide area, the convex edge being gathered to establish the said concavo-convex contour, the marginal portion of the body along the opposite edge of each area being smooth whereby to establish concavo-convex areas progressively increasing in depth as said convex edge of the area is approached, said fabric body having a tape along the arcuate edges of the areas to draw the gathered portions thereof against the head of the wearer behind the ears, said tape having its ends stitched to the material forming the elastic section of the body.

3. Ear muffs of the character described, comprising an annular fabric body having an elastic section therein for resting against the top of the head; a chin-engaging portion substantially diametrically opposite to the elastic section; and a concavo-convex, relatively wide area integral with the chin-engaging portion at each side thereof, adjacent to the elastic section for receiving the ears of the wearer, said areas each having a straight longitudinal edge and a convex longitudinal edge to create the relatively wide area, the convex edge being gathered to establish the said concavo-convex contour, the marginal portion of the body along the opposite edge of each area being smooth whereby to establish concavo-convex areas progressively increasing in depth as said convex edge of the area is approached, said elastic section comprising two strips of elastic material in spaced apart relation and having their ends stitched to the ends of the material forming the remaining portion of the body, said fabric body having a tape along the convex edges of the areas to draw the gathered portions thereof against the head of the wearer behind the ears, said tape having its ends stitched respectively to the ends of one of the strips of elastic material.

4. Ear muffs of the character described, comprising an annular fabric body having an elastic section therein for resting against the top of the head; a chin-engaging portion substantially diametrically opposite to the elastic section; and a concavo-convex, relatively wide area integral with the chin-engaging portion at each side thereof, adjacent to the elastic section for receiving the ears of the wearer, said areas each having a straight longitudinal edge and a convex longitudinal edge to create the relatively wide area, the convex edge being gathered to establish the said concavo-convex contour, the marginal portion of the body along the opposite edge of each area being smooth whereby to establish concavo-convex areas progressively increasing in depth as said convex edge of the area is approached, said elastic section comprising two strips of elastic material in spaced apart relation and having their ends stitched to the ends of the material forming the remaining portion of the body, said fabric body having a tape along the convex edges of the areas to draw the gathered portions thereof against the head of the wearer behind the ears, said tape having its ends stitched respectively to the ends of one of the strips of elastic material, the smooth, marginal portion of the body having a binding stitched therealong to form a taut edge, the said binding having its ends stitched respectively to the ends of the other strip of elastic material.

LOUIS PLOTSKY.