Sept. 9, 1952 E. BERG 2,609,544

EAR MUFF

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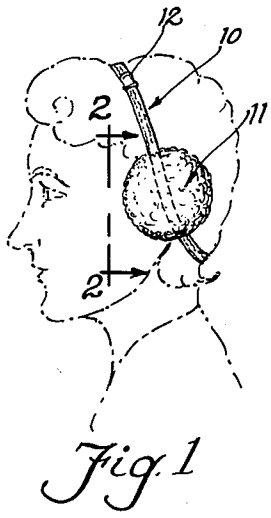

Fig. 1

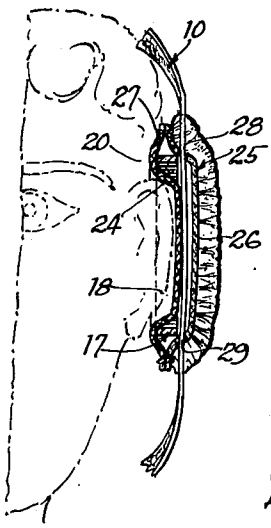

Fig. 2

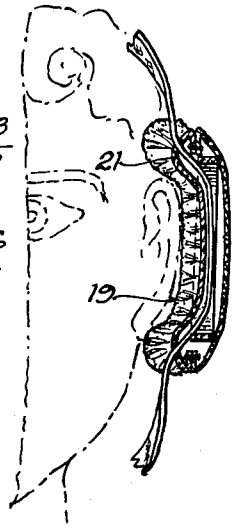

Fig. 3

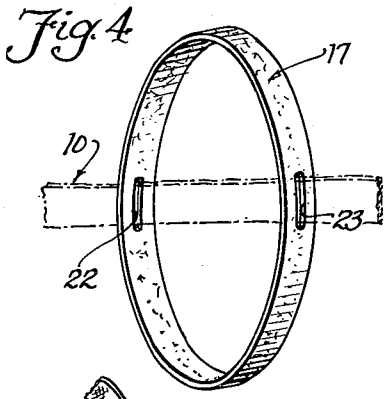

Fig. 4

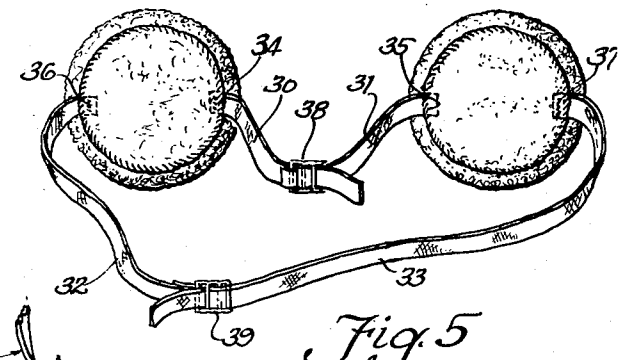

Fig. 5

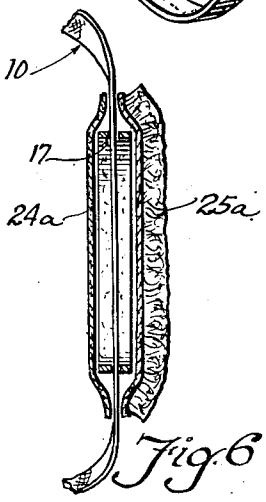

Fig. 6

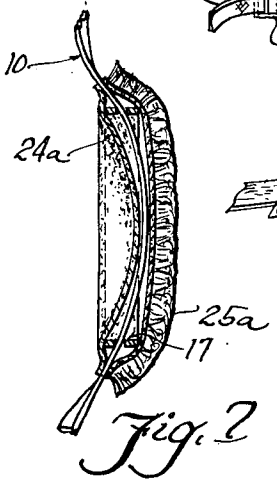

Fig. 7

Fig. 8

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EAR MUFF

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8 Claims. (Cl. 2—209)

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The present invention relates to ear muffs, and is particularly concerned with an improved construction of ear muffs, the securing means for which is also adapted to keep the hair out of the face of the wearer.

One of the objects of the present invention is the provision of an improved ear muff construction which is adjustable upon its securing means so as to be located to engage the ears of any and all persons who may wear the ear muffs.

Another object of the invention is the provision of an improved ear muff construction which is reversible, although the ear muff provides a pocket on one side for receiving the ear, the other or outer side being substantially smooth in contour until it is reversed, when opposite conditions prevail.

Another object of the invention is the provision of an improved ear muff construction which is very simple, and which requires a minimum amount of labor or stitching while still providing a pocket for receiving the ear, and providing a relatively firm structure surrounding said pocket for engaging the side of the head of the wearer about said ear to exclude cold air from the ear.

Another object of the invention is the provision of an improved ear muff having a suitable frame of sufficient depth to form a cavity for the ear, and a loosely fitting covering in which the cupping of the loosely fitting material surrounding the frame provides a cavity for the ear.

Another object of the invention is the provision of an improved ear muff construction which is ornamental in appearance, which is characterized by the absence of metal or other parts that are cold or rigid and uncomfortable to wear, and which is adapted to have its securing means so located that it keeps the hair of the wearer in a position backwardly of the forehead and eyes, or prevents the hair from being blown about by the wind, in case the wearer prefers not to wear a hat.

Other objects and advantages of the invention will be apparent from the following description and the accompanying drawings, in which similar characters of reference indicate similar parts throughout the several views,

Referring to the single sheet of drawings accompanying the specification,

Fig. 1 is a side elevational view showing the wearer's head in dotted lines and illustrating a set of ear muffs embodying the invention;

Fig. 2 is a fragmentary sectional view of the left ear muff of Figure 1, taken on the plane of the line 2—2 of Figure 1, looking in the direction of the arrows;

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Fig. 3 is a view similar to Figure 1, showing the same ear muff in a reversed position with the furry or fuzzy covering on the inside;

Fig. 4 is a view in perspective of the forming ring of the ear muff in its preferred form, showing also in dotted lines the location of the securing band;

Fig. 5 is an inside elevational view of a modification in which the muffs are not adjustable on the band, but the lengths of the two band portions are adjustable to adjust the relative positions of the muffs;

Fig. 6 is a fragmentary sectional view taken through an ear muff on a diametrically located plane showing the arrangement of the securing band in its preferred form when it passes through the slots in the forming ring and through unsecured portions of the seam;

Fig. 7 is a view similar to Figure 6, showing the relation of the parts shifted to form the cup on the fabric side of the ear muffs; and

Fig. 8 is a side elevational view of the adjustable portion of the head band.

Referring to Figure 1, the present ear muff assembly preferably includes a securing band 10, which is provided with a pair of similar ear muffs 11, slidably mounted on the band so that they may be adjusted upward or downward upon both side portions of the band to fit over the ears of any wearer.

The band 10 is preferably a relatively wide strap of tape or fabric which is provided at one end with a flat buckle 12, through which the other end is threaded and secured to adjust the length and relative tightness of the band about the head.

The band 10 is preferably made of elastic fabric of the type having threaded covered strands of rubber etxending longitudinally so that after an approximate adjustment of length has been obtained the ear muffs may be put on or removed by stretching the band. The necessary or desired tightness is achieved by the resilient nature of the band.

In some embodiments of the invention the band may be drawn tight merely by adjustment of the band in its buckle without necessarily being resilient.

Referring to Figure 8, this view shows the band provided with a buckle 12 to which one end of the band is secured by a stitched loop 13, the fabric then extending to an oval, rigid sliding link 14, through which it passes and goes back through the buckle 12.

The rigid, oval link 14 has the other end of the band passed through it and secured by stitching

a short loop at 15. The relatively long loop 16 between buckle 12 and link 14 permits adjustment of the tension or stretch of the band about the head.

The ear muffs 11 preferably include a substantially rigid forming ring 17, comprising a closed annular member which may be entirely rigid in some cases, but which may also be resilient and bendable, provided it is sufficiently rigid to maintain the form of the ear muff.

Ring 17 may be made of leather, rigid but bendable fiber, such as indurated cardboard, moldable plastic, or it may be cut from thin walled tubes of sufficient size.

The width of the ring from edge to edge is sufficient to form the frame for an ear cavity, such as that indicated at 18, in Figure 2, or 19 in Figure 3, of sufficient depth to receive all parts of the ear without unduly compressing the ear when the edges 20 or 21 of the ear muff engage the side of the head.

For example, the ring 17 may be made of material ⅜ to ½ inch or more in width. The circumference of the forming ring 17 is preferably sufficient so that the cavity 18 or 19 formed in the ear muff is large enough to receive ears of average size, although larger size ear muffs may be made for especially large ears.

In the preferred embodiment of the forming ring it is provided with a pair of diametrically opposite slots 22, 23, for passing the band 10 so that the pull of the band is at all times exerted on some part of the forming ring instead of being impressed only upon the fabric.

Various ways of stitching together or otherwise securing the fabric or other discs may be employed.

The ear muff covering may be formed of two different types of fabric, such as an inner layer of wool or cotton felt 24, and an outer layer of nap covered fabric or natural lamb's wool 25, the lamb's wool being carried by the hide or leather 26 which forms its base.

The two cover members 24 and 25 are in the form of circular discs which are sufficiently larger relative to the forming ring 17, so that either of the covers 24 or 25 may be pulled over on the outside of the forming ring while the other is depressed into the forming ring.

This is permitted by the oversize of the ear muff cover, which has a clearance between the forming ring and the seam or line of stitching 27, that extends all the way around the ear muff in the embodiments of Figures 2 and 3.

In these embodiments the forming ring 17 is not slotted, but the band 10 passes through slots 28, 29 in the lamb's wool cover 25, on the outside of the forming ring 17. The slots 28, 29 are diametrically opposite and of sufficient length to pass the band 10. The pushing of one side of the loosely fitting covering into the ring draws the other side of the loosely fitting covering over the edges of the ring; and this forms a lined cavity in the ring, which keeps the stitched edges of the disc toward the cavity side, as shown in Fig. 7.

Referring to Figure 6, this shows a further improved construction over Figures 2 and 3, in that the securing band 10 passes through the slots 22, 23 in the forming ring 17, and through slots between the covers 24*a* and 25*a*, which are formed by a lack of stitching at the points where the band 10 emerges. These points are again preferably diametrically opposite to each other.

The embodiment of Figure 6 has the advantage that the pull of the band is exerted upon the forming ring at all times, whether the pocket is formed in the fabric side or the fur side, but the band may in Figure 6 exert some pressure upon the ear in the pocket since the band is located half way between the edges of the forming ring.

The embodiment of Figure 2 has the advantage that the band is wholly outside the ear, exerting force on the forming ring rather than the ear, but when reversed, as shown in Figure 3, the band must be made more loose because it encompasses or traverses the ear in the pocket.

Referring to Figure 5, this is a modification in which the securing band includes four pieces of the band material, indicated at 30, 31, 32, 33, all of which are stitched to the ear muffs along the same line of stitching which secures the two parts of the ear muff together at 34, 35, 36, 37, respectively.

The band portions 30 and 31 are preferably shorter, being intended to go about the lower rear part of the head, and they are secured by an adjustable buckle 38; the band portions 32 and 33 which pass over the top of the head are preferably longer and are secured by a suitable flat, adjustable buckle 39.

Thus adjustment of the position of the ear muffs on the head may be attained by means of band portions stitched to the ear muffs, while utilizing suitable lengths and adjustable buckles without the muffs sliding on the bands. This modification has the advantage that after a suitable adjustment of the buckle of an elastic band in each case, the ear muffs cannot get out of adjustment for any particular wearer.

The method of making the ear muffs is preferably as follows:

Blank circular discs of the inner fabric 24 and the outer fur piece 25 are blanked or cut out of the fabric and fur, respectively, in circular form and provided with the band slots, if such slots are to be used. The discs for both sides of the ear muff may be the same size and shape; but when one side is pushed into the ring, as shown in the drawings, which were made from actual devices, they may appear to be of different sizes.

The forming ring is placed between the two layers 24 and 25, and the slack or clearance between the edges and the forming ring is sufficient to permit the edges of the two layers to be stitched together by any type of sewing machine.

The type of stitching employed for sewing fur may also be used and this provides a protection against ravelling of the inner layer of fabric.

When the band is to be stitched to the ear muff by the same line of stitching, the ends of the band are, of course, located between the two covers and simultaneously stitched in place.

If the muff is to be slidably mounted on the band, then the band is passed through the slots provided for it after the stitching has been accomplished. The stitching having been completed, the slack between the forming ring and the stitching is then taken up by pushing one side or the other of the cover into the forming ring to form the ear cavity 18 or 19.

The covers may be made of different color or different materials, one being suitable for sport wear and the other suitable for more formal occasions. Some may prefer to have the native lamb's wool directly engaging the ear and the head, and this is permitted by the reversible feature, while others may prefer to have the ornamental appearance of the lamb's wool on the outside with the felt fabric engaging the ear.

All kinds of fabrics may be employed, such as silks or flannels, which are preferred by some persons in contact with the skin, and the present ear muffs are thus adaptable to the taste of practically any purchaser.

The band of elastic material draws the edge 20 or 21 of the cup tightly against the head about the ear, the cup providing a clearance for the ear inside the muff and excluding the exterior air.

The upper portion of the band tends to keep the hair of the wearer from blowing in the wind and is another advantageous feature for those who prefer not to wear any other head covering.

It will thus be observed that I have invented an improved ear muff construction which is adjustable to all sides of heads, and which is also reversible in construction to permit selection of different fabrics used on opposite sides of the muff.

The present muff construction is simple, may be economically manufactured, and utilizes a minimum amount of material, requiring a minimum amount of labor. It may thus be manufactured at a cost which is within the reach of children and students who prefer to wear such ear muffs to the exclusion of other head coverings, but it may also be made in more expensive fabrics to suit all tastes.

While I have illustrated a preferred embodiment of my invention, many modifications may be made without departing from the spirit of the invention, and I do not wish to be limited to the precise details of construction set forth, but desire to avail myself of all changes within the scope of the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States, is:

1. An ear muff assembly comprising an endless band of sufficient width and diameter to form an ear accommodating cavity and to surround an ear in relation to its respective depth, width, and length, and a loosely fitting covering enclosing said band and extending on both sides of the cavity and being sufficiently loose so that one side of the covering may be depressed into the cavity to form a recess for receiving the ear, the other side of the covering being drawn over the outside surface of the band, and the first-mentioned side of the covering engaging the inside of the other covering and engaging the inside surface of the band to provide a lining for the band about the ear, and means retaining the assembly in ear engaging position.

2. An ear muff assembly comprising an endless band of sufficient width and diameter to form an ear accommodating cavity and to surround an ear in relation to its respective depth, width, and length, and a loosely fitting covering enclosing said band and extending on both sides of the cavity and being sufficiently loose so that one side of the covering may be depressed into the cavity to form a recess for receiving the ear, the other side of the covering being drawn over the outside surface of the band, and the first-mentioned side of the covering engaging the inside of the other covering and engaging the inside surface of the band to provide a lining for the band about the ear, the said covering being formed of a pair of discs of warm material stitched together about their respective peripheries, and means retaining the assembly in ear engaging position.

3. An ear muff assembly comprising an endless band of sufficient width and diameter to form an ear accommodating cavity and to surround an ear in relation to its respective depth, width, and length, and a loosely fitting covering enclosing said band and extending on both sides of the cavity and being sufficiently loose so that one side of the covering may be depressed into the cavity to form a recess for receiving the ear, the other side of the covering being drawn over the outside surface of the band, and the first-mentioned side of the covering engaging the inside of the other covering and engaging the inside surface of the band to provide a lining for the band about the ear, the said covering being formed of a pair of discs of warm material stitched together about their respective peripheries, one of said discs comprising a fabric, and the other of said discs comprising a fur, and the muff being reversible by merely depressing one or the other of said discs into the cavity, and means retaining the assembly in ear engaging position.

4. An ear muff assembly comprising an endless band of sufficient width and diameter to form an ear accommodating cavity and to surround an ear in relation to its respective depth, width, and length, and a loosely fitting covering enclosing said band and extending on both sides of the cavity and being sufficiently loose so that one side of the covering may be depressed into the cavity to form a recess for receiving the ear, the other side of the covering being drawn over the outside surface of the band, and the first-mentioned side of the covering engaging the inside of the other covering and engaging the inside surface of the band to provide a lining for the band about the ear, the said covering being formed of a pair of discs of warm material stitched together about their respective peripheries, and a supporting tape passing through said ear muff assembly for supporting the ear muff on the head, said tape emerging between the two discs of material at their outer peripheries at a pair of diametrically opposite points.

5. In an ear muff assembly, the combination of an adjustable tape of sufficient length to pass over the top of the head, across the ears, and below the head at the rear of the neck, and a pair of ear muffs slidably mounted on said tape, the tape passing through the ear muffs and drawing the ear muffs tightly against the head, each ear muff comprising a peripheral frame consisting of an endless band of sufficient width and diameter to form an ear accommodating cavity and to surround the ear in relation to its respective depth, width, and length, and a loosely fitting covering enclosing said band and extending on both sides of the cavity, the said covering having one side depressed into the cavity to form a recess for receiving the ear when the band is drawn against the head, without placing pressure on the ear.

6. In an ear muff assembly, the combination of an adjustable tape of sufficient length to pass over the top of the head, across the ears, and below the head at the rear of the neck, and a pair of ear muffs slidably mounted on said tape, the tape passing through the ear muffs and drawing the ear muffs tightly against the head, each ear muff comprising a peripheral frame consisting of an endless band of sufficient width and diameter to form an ear accommodating cavity and to surround the ear in relation to its respective depth, width, and length, and a loosely fitting covering enclosing said band and extending on both sides of the cavity, the said covering

having one side depressed into the cavity to form a recess for receiving the ear when the band is drawn against the head, without placing pressure on the ear, the said covering comprising a pair of discs of warm material stitched together at their peripheries and positioned outwardly from the periphery of said band.

7. In an ear muff assembly, the combination of an adjustable tape of sufficient length to pass over the top of the head, across the ears, and below the head at the rear of the neck, and a pair of ear muffs slidably mounted on said tape, the tape passing through the ear muffs and drawing the ear muffs tightly against the head, each ear muff comprising a peripheral frame consisting of an endless band of sufficient width and diameter to form an ear accommodating cavity and to surround the ear in relation to its respective depth, width, and length, and a loosely fitting covering enclosing said band and extending on both sides of the cavity, the said covering having one side depressed into the cavity to form a recess for receiving the ear when the band is drawn against the head, without placing pressure on the ear, the said covering comprising a pair of discs of warm material stitched together at their peripheries except at two diametrically opposite portions forming slots and positioned outwardly from the periphery of said band, the said tape emerging from the ear muffs at said slots.

8. In an ear muff assembly, the combination of an adjustable tape of sufficient length to pass over the top of the head, across the ears, and below the head at the rear of the neck, and a pair of ear muffs slidably mounted on said tape, the tape passing through the ear muffs and drawing the ear muffs tightly against the head, each ear muff comprising a peripheral frame consisting of an endless band of sufficient width and diameter to form an ear accommodating cavity and to surround the ear in relation to its respective depth, width, and length, and a loosely fitting covering enclosing said band and extending on both sides of the cavity, the said covering having one side depressed into the cavity to form a recess for receiving the ear when the band is drawn against the head, without placing pressure on the ear, the said covering comprising a pair of discs of warm material stitched together at their peripheries and positioned outwardly from the periphery of said band, one of said discs comprising a flannel fabric, and the other of said discs comprising a fur covered member, and the muffs being reversible by merely depressing one or the other of said discs into the cavity to form the said recess.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
352,798	Barnes	Nov. 16, 1886
953,623	Keller	Mar. 29, 1910
1,150,526	Leitheiser	Apr. 27, 1915
1,312,493	Theis	Aug. 5, 1919
1,914,252	Gorman	June 13, 1933
2,444,251	Goldman	June 29, 1948
2,456,167	Arkus	Dec. 14, 1948