June 17, 1941. S. BARITZ ET AL 2,246,031

EAR MUFF FRAME

Filed Nov. 3, 1939

Fig. 1.

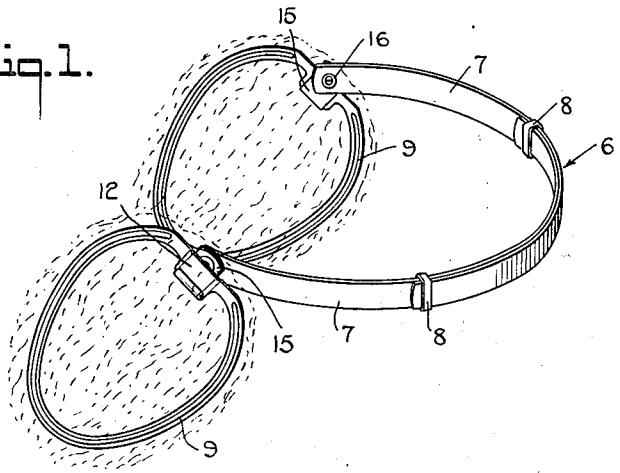


Fig. 2.

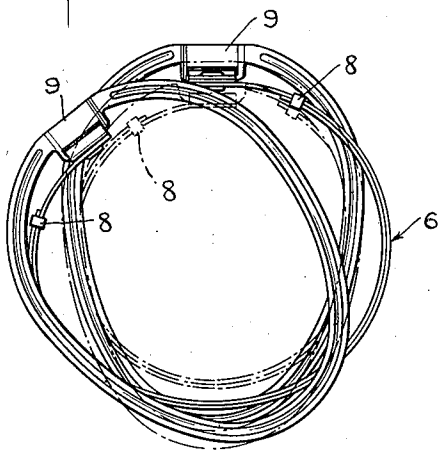


Fig. 3.

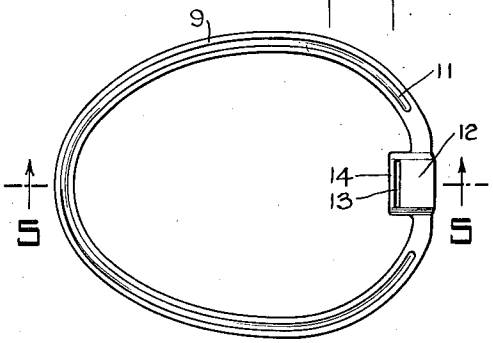


Fig. 5.

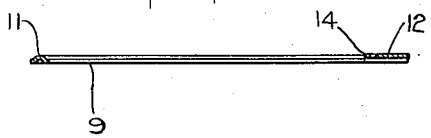
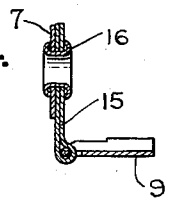


Fig. 4.



INVENTORS
SIDNEY BARITZ
STEPHEN LERMA

BY Harry Sherman

ATTORNEY

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2,246,031

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EAR MUFF FRAME

Sidney Baritz, Great Neck, and Stephen Lerma, Flushing, N. Y., assignors to Handy Button Machine Co. of N. Y. Inc., a corporation of New York

Application November 3, 1939, Serial No. 302,640

5 Claims. (Cl. 2—209)

Our invention relates to ear muffs and relates more particularly to an improved frame construction for ear muffs.

In ear muff frames of this type, as heretofore commonly constructed, the ear pieces were made of wire bent into oval shape with the edges fused or soldered together or held together by a clip. These ear pieces have a relatively short life for the wire thereof is flexed in use causing the soldered edges to part or the clip holding the edges to break away therefrom.

Another factor which contributed to lower considerably the efficiency of these ear pieces was the result of the ease, relatively speaking, with which the wire thereof bent from their original form when in use for but a short space of time.

It is an object of this invention to provide an improved ear piece construction for ear muff frames which will be free from the above-mentioned and other disadvantages, and which will be especially simple and durable in construction and efficient in operation.

In one aspect, our invention comprises the provision in an ear muff frame of an ear piece made of flat metallic material. The employment of flat metallic material permits of the manufacture of the ear piece in integral form which can be suitably reinforced to make the same extremely durable.

Other objects of this invention, together with certain details of construction and combinations of parts, will appear from the following detailed description and will be particularly pointed out in the claims.

In the accompanying drawing:

Figure 1 is a perspective view of an ear muff frame in accordance with our invention, showing the ear pieces attached to the spring metal bands,

Figure 2 is a view illustrating the ear muff frame of our invention folded in compact form for easy packaging or carrying, the dot-dash lines showing its most compact form,

Figure 3 is a plan view of the ear piece of our invention,

Figure 4 is a sectional view showing the manner of attaching the ear piece to the spring metal band, and

Figure 5 is a sectional view taken on line 5—5 in Figure 3.

Like reference numerals designate like parts throughout the several views.

Referring now to the drawing, the reference numeral 6 generally indicates a support comprising two flat spring metal bands 7, curved to the shape of the head, which overlap each other and each of which has a metal clip 8 fixed to an end thereof. This construction provides for a movement of the metal bands over and relative to each other, the clips 8 preventing the metal bands from separating from each other.

An ear piece 9 is attached to each of the free ends of the spring metal support 6 in a manner which will hereinafter be set forth. The ear piece 9 comprises an oval frame of a size sufficient to cover an ear. It is preferably made by stamping the same in integral form from a flat blank of any suitable material, such as steel. The frame is provided with a reinforcing ridge 11 to give the same additional strength and rigidity. The frame is also provided with an enlarged portion or boss 12 integral therewith. The boss is preferably deformed out of the plane of the ear piece frame. A slot 13 is cut in said boss to form an integral bar 14. An important feature of our invention is that the ear piece frame with its reinforcing ridge 11, boss 12 and slot 13 may be formed in a single die stamping operation, thus eliminating many operative steps in the formation of an ear piece from wire.

The ear pieces 9 are attached to the free ends of the spring metal bands 7 of support 6 by means of a hinge 15 which passes through slot 13 and about bar 14. The hinge is made of a piece of sheet metal folded upon itself. The free ends of the hinge are fastened to the spring metal bands 7 by a rivet eyelet 16 in such a manner that the hinge is free to pivot about said rivet eyelet. As will be readily understood, the ear piece is also adapted to move with respect to the hinge 15.

The ear pieces are normally covered with any suitable textile material such as velvet, felt, fur or pile fabric in a manner well understood in the art. If desired, the spring metal support may also be covered with a tubular member.

In use, the spring metal support is adapted to hold the fabric covered ear pieces the desired distance apart, the support being held in adjusted position by the frictional contact of one metal band with the other. When the device of our invention is placed on the head, the ear pieces are held in the desired position without any discomfort to the ears while giving the latter complete protection against the elements. Moreover, the piece which is deformed out of the plane of the frame itself fits over the rivet eyelet in such a manner that a close fit about the ears is obtained.

The device of our invention may also be used

as ear protectors for preventing water from entering the ears during the shampooing of hair. In this case the ear piece is preferably made out of an easily deformable metal such as aluminum and the central portion of the frame is not cut out but deformed into the shape of a cup, as is shown in broken lines in Figures 3 and 5, which will fit about the ear. The cup shaped ear piece is preferably covered with rubber or a rubberized fabric.

It is to be understood that the foregoing detailed description is merely given by way of illustration and that many variations may be made therein without departing from the spirit of our invention.

Having described our invention, what we desire to secure by Letters Patent is:

1. In a device of the character described, a support and ear pieces carried by said support, said ear pieces comprising a flat metal frame of integral construction having a slotted enlarged portion deformed out of the plane of the flat metal frame and extending into the opening formed by the frame.

2. An ear piece for ear muffs and the like comprising a flat metal frame of integral construction having an enlarged portion in the periphery thereof and extending into the opening formed by the frame, said enlarged portion having a slot therein.

3. An ear piece for ear muffs and the like comprising a flat metal frame of integral construction having an enlarged portion in the periphery thereof and extending into the opening formed by the frame, said enlarged portion having a longitudinal slot therein.

4. An ear piece for ear muffs and the like comprising a flat metal frame of integral construction having an enlarged portion in the periphery thereof and extending into the opening formed by the frame, said enlarged portion having a slot therein, and means for reinforcing said frame, said means comprising a ridge deformed out of the plane of said frame and extending for a substantial portion of the periphery of said frame.

5. An ear piece for ear muffs and the like comprising a flat metal frame of integral construction having an enlarged portion, deformed out of the plane of said flat metal frame, in the periphery thereof, said enlarged portion having a longitudinal slot therein, and means for reinforcing said frame, said means comprising a ridge deformed out of the plane of said frame and extending for a substantial portion of the periphery of said frame.

SIDNEY BARITZ.
STEPHEN LERMA.