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WELDER'S EAR GUARD

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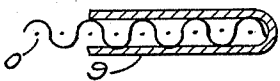


Fig. 4.

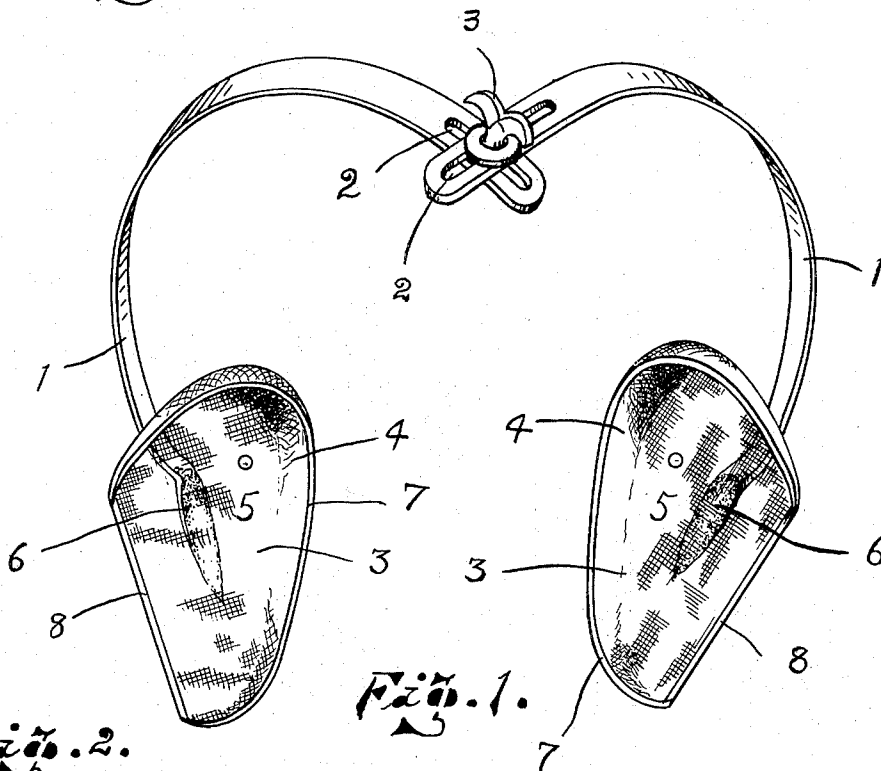


Fig. 1.

Fig. 2.

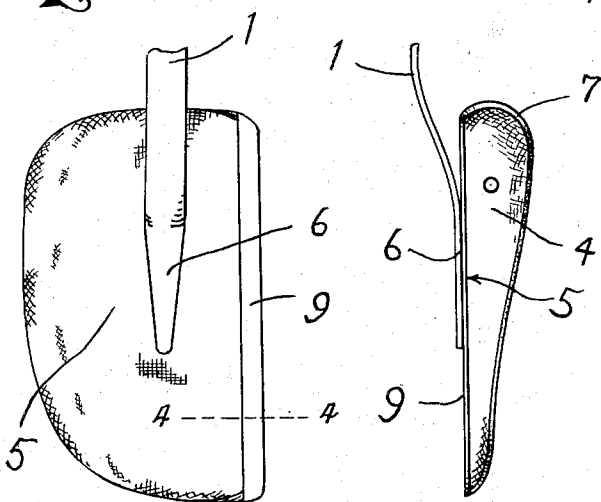


Fig. 3.

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WELDER'S EAR GUARD

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4 Claims. (Cl. 128—151)

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This invention relates to improvements in ear guards such as are worn upon the head of one engaged in the art of welding wherein the artisan's ears are subjected to danger from flying sparks, hot metal fragments, or the like.

This danger is well known to be quite prevalent in instances where such workmen are engaged in overhead or elevated welding jobs without the use of fully equipped helmets. Even when such helmets are used some danger still exists due to the lack of sufficiently close fitting guards about the ears to prevent rebounding, glancing or ricocheting sparks and the like from finding their way through unguarded openings about a common helmet. In fact, it was at the time of such a circumstance and unguarded moment that applicant experienced what has resulted in the total loss of hearing in one ear thus augmenting the instant desire to produce a practical efficient and dependable guard which may be individually shaped to suit varying circumstances to insure maximum safety.

One of the principal objects of the instant invention is to provide a simple ear protector which, while giving efficient protection from flying sparks, objects and the like, will not interfere in any way with the work of the wearer.

It is well known that with ear muffs such as are on the market today, sounds are usually distorted and also that the ability to distinguish the direction from which a sound is coming is practically nil. To overcome this deficiency without the loss of efficiency in protection is another object of the invention.

Another object is the incorporation of a pliable sheet of metal or other non-combustible material along at least the cheek engaging portion of the guards which may be readily shaped to conform to the wearer's facial features to prevent flying objects from entering the ears between the guard and the wearer's face.

A still further object is to provide such a device which is not bulky or cumbersome and which may be comfortably worn by one who is working without interfering with the work being done, it being well known that the average person will not wear any safety device which is awkward, uncomfortable or cumbersome.

These and other objects and advantages will become more apparent as the description of the invention proceeds.

In the accompanying drawing forming a part of this application:

Fig. 1 is a perspective front view of a pair of guards embodying the invention that have experienced practical use.

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Fig. 2 is a somewhat enlarged outer side elevational view of a slightly modified form of guard assembly, and

Fig. 3 is a front elevational view of Fig. 2.

Fig. 4 is an enlarged sectional view on the line 4—4 Fig. 2.

In the drawing, the reference numerals 1—1 represent the two like, relatively thin flat strips of somewhat spring metal suitable as a support from the head of the wearer of the guards, the two strips being adjustably united to permit of ready fitting to different individuals, the union of the parts comprising a slot 2 in the upper end of each strip and a bolt through said slots having a wing-nut 3 to permit of adjustment thereof.

The ear guard or body portions 0—0 of the device are made preferably of brass or other suitable fine mesh pliable wire and are shaped so as to conform closely with the shape of an ear so as not to be too bulky and cumbersome to the wearer. Each body portion is somewhat wedge-shape in front elevational view as well as in transverse section due to the flanged portions 4 which overlap the edges of the ear to prevent flying sparks, metal, or other objects from entering the ear around the edges of the guard, and the side face 5 of each body portion is substantially flat as shown.

The ear guards or body portions 0—0 are fixed to the lower ends of the head support strips 1—1 as at 6 by soldering or the like, the point of union being substantially centrally of the side surface 5 in order to positively bias the guards toward covering the entire ear, and the strips 1—1 are arched away from the upper portion of the guards 0—0 before being bent back to form the head engaging support or band, this also aids materially in providing the correct bias for the guards to keep them in place on the ears.

The flanged portions 4 of each guard have their outer edges closed or beaded as at 7 with preferably pliable solder in order not to have any rough edges which may be uncomfortable.

It is to be noted that the forward or leading edge 8 of the guards are not flanged and are straight. This leading or cheek engaging edge is thus formed to better prevent flying objects from entering the ear and is pliable or yieldable so that it may be readily formed to fit the contour of one's head adjacent the ear simply by pressure thereagainst when the device is initially put on. This pliable leading edge may be formed with a soldered bead as shown in Fig. 1 of the same type as that on the flanges 4, but is preferably formed of a piece of thin brass or other pliable metal 9 which is doubled over the screen

body portion 0 along the leading edge 8 thereof as shown in Fig. 2.

With the leading edge of each guard formed as shown with no flange and of a pliable material, flying particles coming from forwardly thereof (which will almost always be the case as a workman will be looking toward the work he is doing) will glance off of the straight side surface 5 which is held at approximately the same angle as one's ear and therefore the particles will glance away from the wearer. Any particles which land adjacent the leading edge of the guard will be prevented from entering the ear due to the leading edge being shaped to the wearer's individual needs, and the supporting members being so arranged as to bias the guards closely against the wearer's head, especially adjacent the leading edge thereof.

As pliable material is used for the leading edge and the body portions or guards of the device, it will be seen that the same may be readily shaped to meet the individual requirements of different wearers without embodying bulky, cumbersome, or uncomfortable means to accomplish such adjustability.

It is deemed apparent that a workman equipped with the instant screen mesh ear guards will be able to distinguish sounds which occur in his vicinity and also to determine their direction just as readily as if he were not wearing same, thereby adding to his safety in that he will be able to hear warnings which may be shouted or other sounds of impending danger.

Having thus described my invention, what I claim is:

1. As a new article of manufacture a device for protecting ears from flying objects comprising a supporting member adapted to be applied over the head of the wearer and a pair of like

pliable guard portions carried substantially centrally thereof at the ends of said supporting member, said guard portions being made of wire mesh and each comprising a side surface to which said supporting member is fixed, a substantially straight pliable leading edge, and flanged portions projecting inwardly from said side surface on all sides except said leading edge to overlap the corresponding portions of an ear.

2. A guard for an ear comprising a body portion composed of fine mesh screen and having a substantially flat side surface, a formative leading edge for said guard, flanged portions projecting inwardly from portions of said side surface to overlap corresponding portions of said ear, and means fixed substantially centrally of said side portions for holding said guard in position on said ear.

3. The structure as set forth in claim 1 and said leading edge comprising a piece of relatively thin sheet material doubled back upon itself so as to contain a portion of said guard portion therebetween.

4. The structure as set forth in claim 2 and said leading edge comprising a piece of relatively thin sheet material doubled back upon itself so as to contain a portion of said body portion therebetween.

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

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