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2,698,945

PROTECTIVE CAP

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Fig. 1

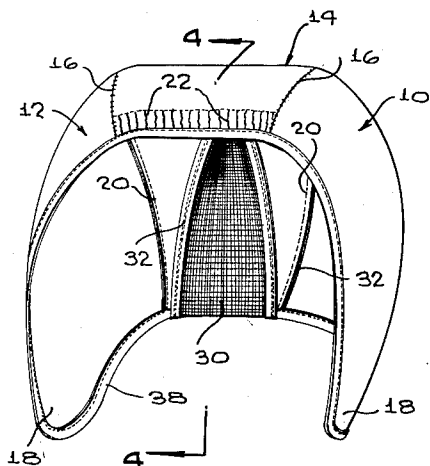


Fig. 2

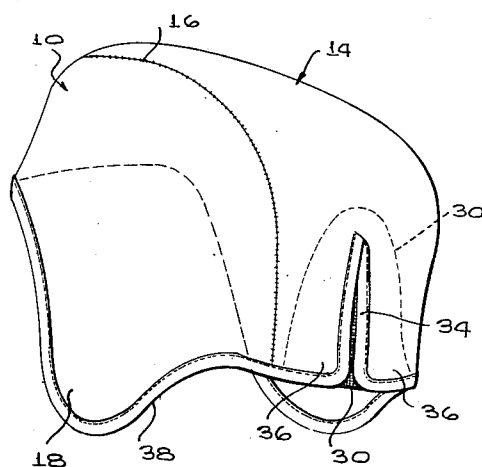


Fig. 3

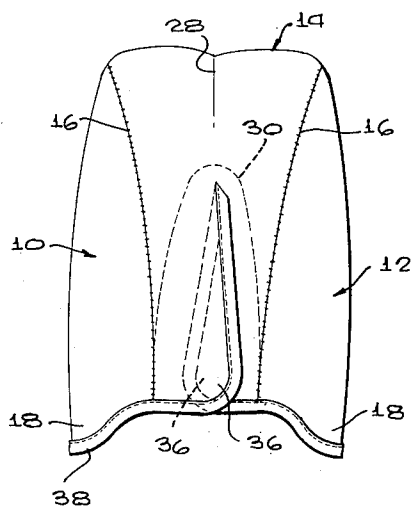
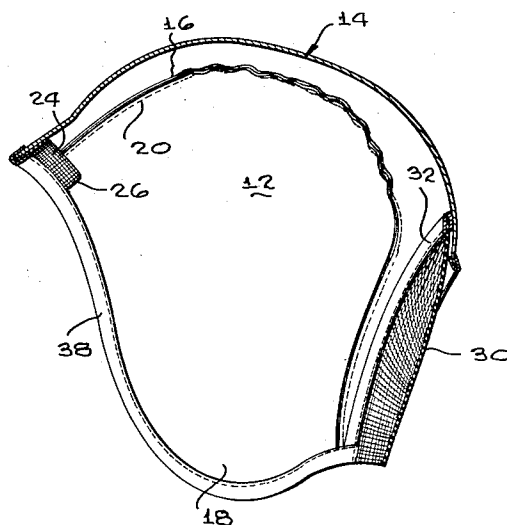


Fig. 4



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PROTECTIVE CAP

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1 Claim. (Cl. 2—197)

This invention relates to head gear, and more particularly, has reference to a cap adapted to be fitted snugly on the head, in a manner to protect effectively the areas covered thereby.

The need for protective caps is well appreciated in various industries. For example, welders are in constant danger from flying sparks, which in many instances enter the ears and damage the ear drums. Further, sparks may fly against the back of a workman's neck while he is performing welding or other operations in the vicinity of sparks produced by another workman. Welders, for the purpose of protection, wear protective helmets, but these do not protect the base of the neck or ears.

Accordingly, it is the main object of the present invention to provide a protective cap which is so formed as to fit snugly upon the head of a wearer, the cap being designed to permit a conventional welder's helmet to be applied thereover.

Another important object is to provide a cap as stated which is formed of a plurality of connected panels so shaped and joined as to cover the ears and other, ordinarily exposed portions of the head, in such a manner as to fit snugly against said ordinarily exposed portions without, however, rendering the wearer uncomfortable or affecting adversely the sense of hearing.

Yet another object of importance is to provide a protective cap as described which can be manufactured at relatively low cost, and can be applied to or removed from the head with complete ease.

Still another important object is to provide a cap so designed as to permit it to be worn not only by welders or similar workmen, but also by persons who may desire to protect the head and ears after washing their hair, or during house-cleaning.

Yet another object of the invention is to provide a cap formed of a plurality of panels that will be of flexible, non-elastic material, with flexible elements being provided at the front and back of the cap and being so arranged as to be capable of contraction or expansion without adverse effect upon the head-protecting characteristics of the panels.

Other objects will appear from the following description, the claim appended thereto, and from the annexed drawing, in which like reference characters designate like parts throughout the several views, and wherein:

Figure 1 is a front perspective view of a protective cap formed in accordance with the present invention;

Figure 2 is a rear perspective view;

Figure 3 is a rear elevational view; and

Figure 4 is a sectional view taken on line 4—4 of Figure 1.

The cap constituting the present invention includes, in its preferred embodiment, three panels designated generally by the reference numerals 10, 12 and 14 respectively. The panels 10 and 12 are side panels, and are so shaped as to be fitted snugly against and protectively overlie the sides of the head and ears of a wearer. The middle panel is interposed between the side panels, and extends from the forehead to the base of the wearer's neck, when the cap is worn.

The side panels 10 and 12 are of identical, though opposite formation, and are preferably formed from a flexible, non-elastic material. Obviously, any material having these characteristics can be used, as for example soft leather, plastic, or woven fabric.

As will be noted from Figures 2 and 4, the side panels 10 and 12 have arcuate top edges 16. The bottom edges

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of the side panels are also of arcuate formation, but have downwardly curved intermediate portions that define ear flaps 18. The ear flaps 18 are so proportioned as to completely cover the ears of a wearer when the cap is being worn. However, although the ear flaps protectively overlie the wearer's ears, they still leave sufficient open spaces at their edges to permit one's hearing to be unimpaired while the cap is worn.

Along their arcuate top edges 16, the respective side panels are connected, by stitching 20, to the side edges of the middle panel 14.

The middle panel, in blank, would be of substantially rectangular shape, with approximately parallel sides. Further, as will be seen from Figure 4, the middle panel extends fully from the forehead to the back of the wearer's neck, extending over the top of the head and spacing the side panels apart throughout their lengths.

The front end edge of the middle panel 14 would extend over the forehead of a wearer, and is formed with gathers 22, said gathers resulting from the provision of an elastic band 24 at the front end of the middle panel. The elastic band 24 extends transversely of its associated end of the middle panel, along the end edge, and has its ends 26 projected beyond the lines of stitching 20 for connection to the adjacent portions of the side panels 10 and 12 (see Figure 4). The elastic band will normally exert a contractile force on the middle panel at the front end thereof, tending to contract the middle panel along lines extending transversely thereof. When, however, the cap is being worn, the elastic band would be expanded, thus to cause a widening of the front end of the middle panel and thereby permit the cap to be fitted snugly upon the wearer's head.

Preferably, the middle panel is provided with a fold line 28 (Figure 3) extending longitudinally and centrally thereof. This fold line permits the middle panel to be folded longitudinally upon itself when the cap is not being worn, thus to permit the cap to be stored in a flat condition in a relatively small area.

At its rear end, the middle panel is provided with a triangular elastic element 30, said element (see Figure 1) having its base aligned with the rear end edge of the middle panel, and having its apex spaced from said rear end edge. Stitching 32 is employed to connect the substantially triangular elastic element 30 along its side edges to the middle panel.

The elastic element 30, like the band 24, normally exerts a contractile force on its associated end of the middle panel, tending to reduce the width of the same. When, however, the cap is being worn, the element will expand width-wise, thus to cause the rear end of the middle panel to be fitted snugly over the back of the wearer's neck.

In forming the protective cap, I cut the middle panel inwardly from its rear end, as at 34, the slit or cut 34 being arranged longitudinally and centrally of the middle panel. The provision of this slit defines, at opposite sides thereof, protective neck flaps 36.

The elastic element 30, as seen from Figures 2 and 3, has its apex disposed just above the inner end of the slit or cut 34, and when the element is in its contracted position, it will draw the neck flaps 36 toward one another to such an extent as to cause said flaps to be partially overlapped from end to end thereof. This is particularly well shown in Figure 3, this figure of the drawings illustrating the cap as it appears when not being worn.

The cap is illustrated as it appears when worn in Figure 2, the element 30 being in its expanded condition. In this condition of the elastic element 30, the neck flaps 36 are drawn out of their partially overlapped position, and will be disposed in side by side relation, with their side edges in contact throughout their lengths.

As a result, the expansion of the element 30 will not cause the neck flaps to be drawn away from one another to such an extent as to leave a gap therebetween and therefore, the material of which the cap is formed will still protectively overlie the full area of the back of the wearer's neck.

It is to be understood that when the several panels are connected in the manner referred to above, a peripheral hem 38 will be extended about the bottom edge of the

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cap, said hem being continued through the side edges of the neck flaps 36.

It may be noted that although the cap is particularly adapted for use under the ordinary welder's helmet, it can also be used for other purposes. For example, it may be worn by any one to protect the hair and ears. Also, one might desire to wear the cap after washing the hair. In still another instance, one might use the cap while cleaning or dusting, to prevent dirt from entering the hair and ears.

It is believed apparent that the invention is not necessarily confined to the specific use or uses thereof described above, since it may be utilized for any purpose to which it may be suited. Nor is the invention to be necessarily limited to the specific construction illustrated and described, since such construction is only intended to be illustrative of the principles of operation and the means presently devised to carry out said principles, it being considered that the invention comprehends any minor change in construction that may be permitted within the scope of the appended claim.

What is claimed is:

In a protective cap, two similar side panels each having a lower edge, an upper edge and a forward edge, a single center panel located between the side panels and having side edges secured to and extending coextensively along said upper edges of the side panels, said center panel having a forward edge substantially aligned with the forward edges of the side panels, said center panel having a rear edge substantially aligned with the lower

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edges of the side panels at their rearward ends thereof, said center panel being provided with a single vertical slit having an upper closed terminal end spaced upwardly from the said rear edge of the center panel and an open lower end opening through the rear edge of the center panel, said slit being laterally spaced from the side edges of the center panel so as to define flaps extending along opposite sides of the slit, said flaps having free laterally inward edges, and an elastic element covering said slit and extending laterally beyond the opposite sides of the slit, said elastic element having side edges secured to the flaps at points laterally spaced from their free edges at such distances that the flaps are yieldably held in mutually overlapping relation when the cap is unexpanded and the free edges of the flaps are close together and the flaps are in protective relation to the head of a wearer when the cap is expanded on the head of a wearer.

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