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E. CAIRNS

2,738,508

HEADGEAR

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FIG. 1.

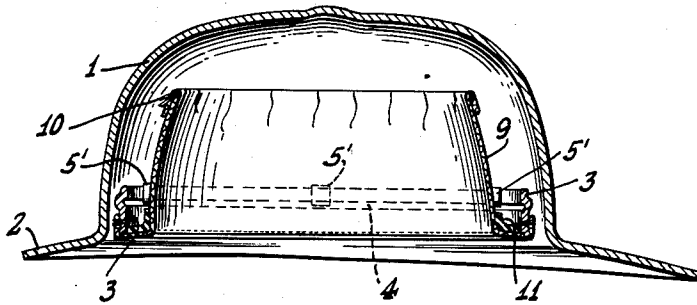


FIG. 2.

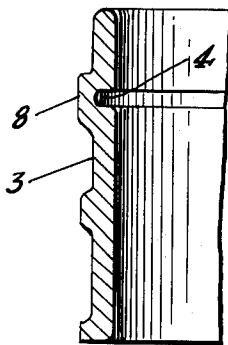


FIG. 3.

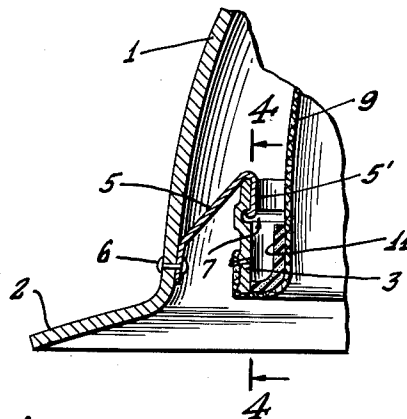
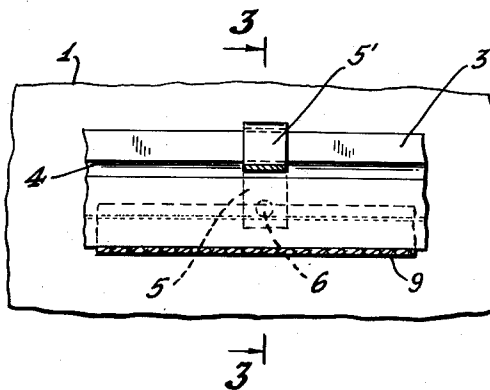


FIG. 4.



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2,738,508

HEADGEAR

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2 Claims. (Cl. 2—5)

This invention relates to protective head-gear, more especially helmets for firemen, soldiers and others employing the same in their occupations.

In my prior Patent No. 2,431,678 of December 7, 1947, there is disclosed a helmet having a replaceable head band and liner members which together constitute a cradle by which the helmet is securely supported on the head of a wearer. Such head band is provided with a series of slots, desirably six in number, that are substantially equally spaced along the periphery of the head band and into which terminal hook or finger elements of sheet metal spring clips, also substantially equally spaced along the bottom of the crown of the helmet, are adapted to be sprung when the hooks and slots are brought into registry to thereby securely but detachably fasten the head band to such crown immediately above its line of juncture with its brim. This patented helmet construction is adapted to accommodate several different head sizes merely by substituting cradles having a head band of a size appropriate to that of the head of a particular customer wearing the same. However, since the slots cannot be appreciably lengthened without weakening the head band to an objectionable extent, each different head size requires a different spacing of the slots in the head bands in order that the same can be brought into registry with the clips on the crown member when the head bands are being mounted therein.

My experience in the art of head-gear manufacture has led to the discovery of a novel head-gear, having a replaceable head band, wherein the necessity, such as above explained, for the accurate registration of equally spaced slots formed in such head band with clip members spotted on the helmet crown is completely eliminated. Furthermore, the head band employed in my novel construction lends itself to being extruded if formed of plastic or, if formed of metal, to being formed by a rolling operation.

My invention is fully set forth in the following detailed description and drawings forming a part thereof in which:

Figure 1 is a vertical section of a preferred example of a fireman's helmet embodying such novel construction;

Figure 2 is an enlarged vertical section of the head band of such helmet with an associated clip member, isolated, the latter being shown in elevation;

Figure 3 is a fragmentary vertical section taken on the line 3—3 of Figure 4; and

Figure 4 is a fragmentary elevation taken on the line 4—4 of Figure 3.

Referring to the drawings and the construction shown therein, the reference numeral 1 designates the crown of the helmet shown therein, the same having an integral curvilinear brim 2 projecting outwardly from the bottom thereof. An endless head band 3, of suitable resilient material, either of metal or plastic, and having an endless

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peripheral groove or channel 4 formed thereon, is removably mounted in the bottom of the crown member by means of angular clips 5 that are fastened at their outer ends to the crown member by means of rivets 6.

Each clip 5 extends obliquely upward to and over the top face of the head band and has a depending portion 5' which is adapted to extend vertically downward across the inner face of the head band to said groove 4 into which a terminal hook 7, carried by said depending portion 5', is adapted to be sprung or snapped automatically when the head band assumes the position shown in Figure 3. An endless re-inforcing rib 8 is formed on said band, during the formation thereof, immediately opposite said groove 4.

A cloth liner member 9, which is shaped to conform generally to the head of the wearer and which together with said head band constitutes a cradle, overlaps the bottom portion of the head band and is stitched thereto. This cradle functions, as does the cradle disclosed in said Patent No. 2,431,678, to comfortably support the helmet on the head. A draw string 10 admits of the adjustment of the top of the liner to suit the head of the wearer. An annular shock-absorbing elastic gasket member 11, desirably of sponge rubber, is firmly stitched at the bottom thereof to the lower portion of the liner. Such gasket serves to effect the snug and comfortable wedging of the bottom of said liner onto the head of the wearer. Any shocks to which the crown of said helmet is subjected will only tend to force the head band against the apices of the angles of the clips, without any substantial strains being transmitted to the terminal hooks 7.

The aforesaid cradle may be readily removed from the helmet, when desired, for replacement by a cradle having a different size of head band or for cleaning purposes, merely by grasping the bottom portion of the head band and tilting the same by moving the bottom portions of the band adjacent each clip radially outward a sufficient distance to release the clips from their engagement with the groove 4.

As will appear from the foregoing description, the fact that the grooved head band does away with the necessity for registration of the clips with equally spaced slots in the head band, such as disclosed in my prior patent, renders it unnecessary to have the clips exactly spotted along the bottom of the crown, as if a hole should be drilled in the wrong location it is wholly immaterial since the clips can be sprung into the groove regardless of their location.

Various modifications of and change in the construction herein described may be made without departing from the spirit of my invention as embraced within the scope of the appended claims.

Having thus described my invention, what I claim and desire to secure by Letters Patent is,

1. A head gear comprising a crown member having a brim projecting outwardly from the bottom thereof, a replaceable cradle unit for supporting the helmet on the head of a wearer, the same including an endless head band member and an attached liner member, said head band having a continuous external channel formed in its inner surface which is located intermediate the top and bottom of the head band and distant from each, angular spring clips firmly fastened at their outer ends to the crown member adjacent the bottom thereof, each of which clips has an upwardly inclined body portion and a depending portion that extends at an acute angle thereto and terminates at its inner end in an offset flange which projects outwardly at about the level of said channel and is

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sprung thereinto so as to have spring engagement therewith, whereby the head band is firmly gripped between the under surface of the top of said inclined body of the clips and said terminal flange members.

2. A head gear as claimed in claim 1, wherein the head band has an endless, re-inforcing bead projecting from the opposite side thereof from that on which the channel is located and which bead lies at the same level from top to bottom of the head band as does said channel.

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