Dec. 12, 1933. J. C. HOWARD 1,938,660

SAFETY HAT

Filed July 14, 1932

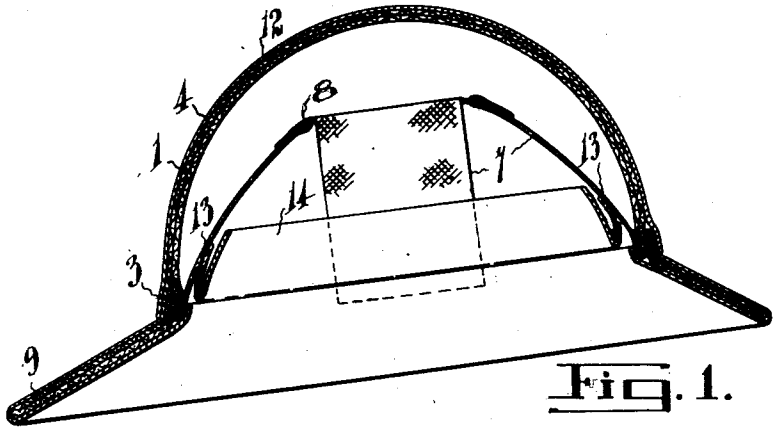

Fig. 1.

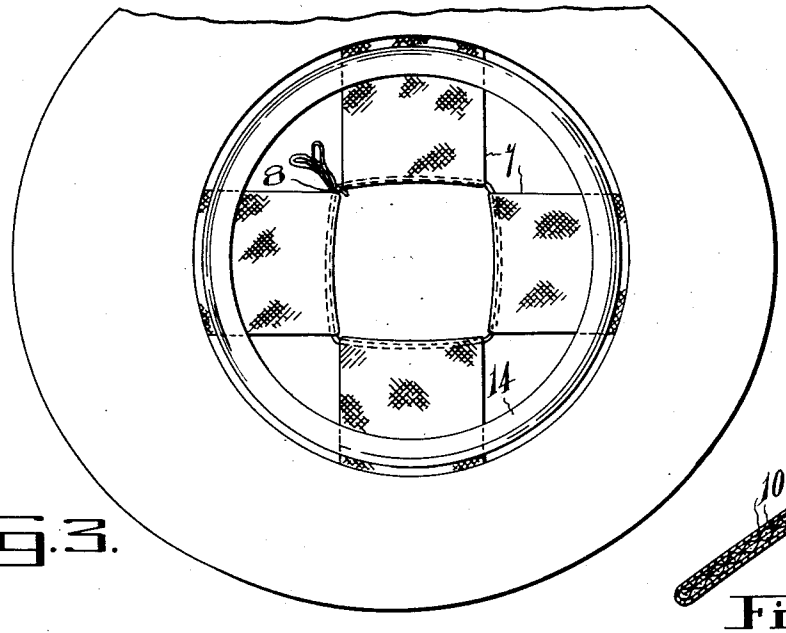

Fig. 3.

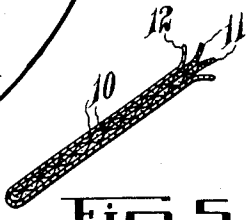

Fig. 5.

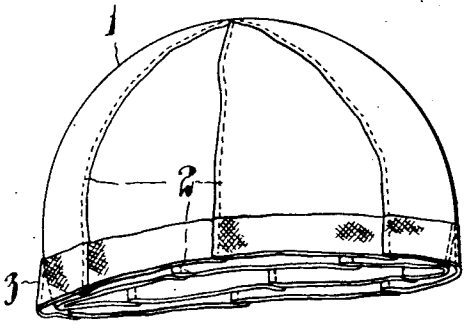

Fig. 2.

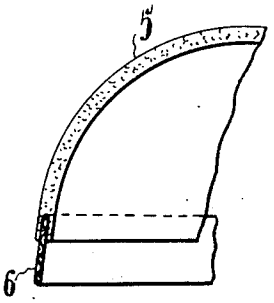

Fig. 4.

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Patented Dec. 12, 1933

1,938,660

UNITED STATES PATENT OFFICE

1,938,660

SAFETY HAT

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Application July 14, 1932. Serial No. 622,488

3 Claims. (Cl. 2—3)

This invention relates to hats of the safety type such as used by miners and others as a protection against being injured by falling objects.

My object is to devise a hat possessing a sufficient degree of rigidity to protect the wearer and still light enough to be worn without discomfort; and at the same time the crown is of such a construction that the securing of the brim, the sweat band, the support or lining and other parts thereto is facilitated.

A further object is to devise an improved method of supporting the sweat band to provide for the better ventilation of the hat, and at the same time to provide a convenient arrangement whereby the same hat may be used for several head sizes by simply varying the size of the sweat band.

I attain my objects by forming the crown of the hat with a base of fabric or other fibrous material and impregnating the major part of said base with a hardening material such as an organic condensation product or synthetic resins, a portion around the edge, however, being left unimpregnated and flexible to facilitate the securing of the brim, sweat band, lining and the like thereto.

The sweat band is mounted in spaced relation to the crown of the hat being carried by means of supporting members of webbing, the ends of which are connected by a cord or lace which may be of any desired length to provide for adjustment to suit the individual wearer.

The improved hat is hereinafter more specifically described and illustrated in the accompanying drawing in which

Fig. 1 is a longitudinal section of a hat constructed in accordance with my invention;

Fig. 2 a perspective view of the crown;

Fig. 3 a plan view of the inside of the crown showing the supporting means;

Fig. 4 a sectional view illustrating a modified form of crown; and

Fig. 5 a sectional detail of part of the brim.

In the drawing like numerals of reference indicate corresponding parts in the different figures.

The crown of the hat is formed with a fabric base 1, preferably of two or more thicknesses. Each ply is preferably formed of a plurality of sections shaped and stitched together, but may be formed by folding or pleating a flat piece of fabric. In assembling the plies the lines of stitching or folding lines 2 in the one ply are preferably arranged in staggered relationship to the lines of the other ply.

The base so formed with the exception of a narrow portion 3 about its periphery is then impregnated and coated with a hardening material 4, and this coating may be applied in any convenient manner such as by brushing; spraying, dipping or the like.

The impregnated and coated base is then placed in a suitable mould and subjected to heat to bake the impregnating and coating material to the necessary stiffness.

Any suitable material may be used for impregnating and coating the base so long as it possesses the necessary rigidity and toughness to withstand hard blows or shocks without damage. I find a very suitable material answering these requirements to be an organic condensation product or synthetic resins, although I do not desire to limit myself to the use of this material.

It will thus be seen that a stiff crown is thus formed, having a flexible fabric margin, which I utilize to secure the lining, sweat band, brim, and the like thereto.

In Fig. 4, I show a modified arrangement in which the main part 5 of the crown is formed of an organic condensation product or synthetic resins with fibrous material incorporated therein, but adjacent its margin having a fabric band 6 extending into the organic condensation product or synthetic resins for only part of its width, thus leaving a flexible fabric margin just as in the construction shown in Fig. 3.

The brim 9 may also, if desired, be constructed in a manner similar to the crown. As will be seen from Figs. 1 and 5, it is formed of a plurality of plies of fabric 10 impregnated with an organic condensation product or other suitable material, with the exception of its inner margin which is left unimpregnated to provide a flexible portion 11 to permit its stitching to the flexible margin of the crown. The brim may be provided with a covering 12 if desired in a manner similar to the crown.

Referring now to Fig. 1, secured within the crown is a support preferably formed of bands 7 of webbing, one end of each of which is secured to the flexible margin of the crown, and the other end of which is provided with a loop through which is threaded a lace or cord 8, the ends of which are tied together to complete the support and space the bands from the crown. The sweat band is preferably formed of a band 13 of fairly heavy flexible material, the upper

edge of which is stitched to the bands 7 at a distance above the lower edge of the crown, and a facing 14 of lighter material stitched to the lower edge of the band 13. It will be seen from Figs. 1 and 3 that a space is thus provided between the outside of the sweat band and inside of the crown for the passage of air to the interior of the crown.

From the above description it will be seen that I have devised a safety hat which will satisfactorily attain the object of my invention as set out in the preamble of this specification.

What I claim as my invention is:

1. The combination with a hat crown of supporting spaced members of flexible material, each having one end secured to the edge of the crown and its other end connected with an opposite similar member; and a sweat band secured to and supported by said members in spaced relationship to the inside of the edge portion of the crown, said sweat band comprising a band secured along its upper edge to said spaced members above their points of attachment to the edge of the crown, and a facing secured to the lower edge of said band and extending up in front of the latter.

2. The combination with a stiff rigid hat crown of supporting means therefor comprising a plurality of spaced bands diametrically positioned in pairs and each secured at its lower end to the edge of the crown and connected at their upper ends to hold them spaced from the interior of the crown; and a sweat band secured to the said supporting bands above their points of attachment to the edge of the crown, the lower edge of the sweat band being spaced from the edge of the crown.

3. The combination with a stiff rigid hat crown of supporting means therefor comprising a plurality of spaced bands diametrically positioned in pairs and each secured at its lower end to the edge of the crown and connected at their upper ends to hold them spaced from the interior of the crown; and a sweat band secured to the said supporting bands above their points of attachment to the edge of the crown, the lower edge of the sweat band being spaced from the edge of the crown, the sweat band being U-shaped in cross section, the outer part being connected with the supporting bands adjacent its upper edge, while the upper edge of the inner part of the sweat band is free.

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