June 2, 1925. 1,540,345

F. KOWASIK

MINER'S CAP

Filed Oct. 29, 1923

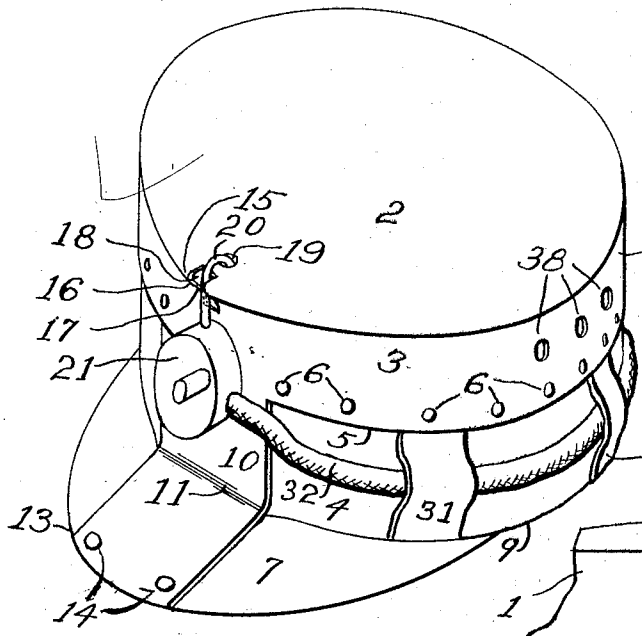

Fig. 1.

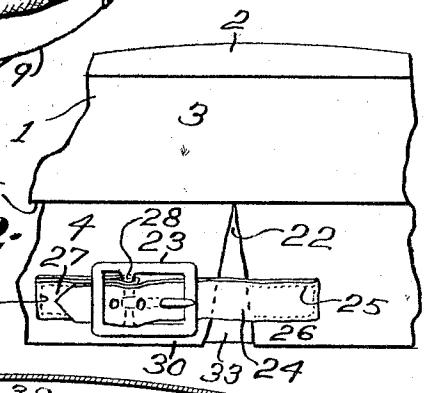

Fig. 2.

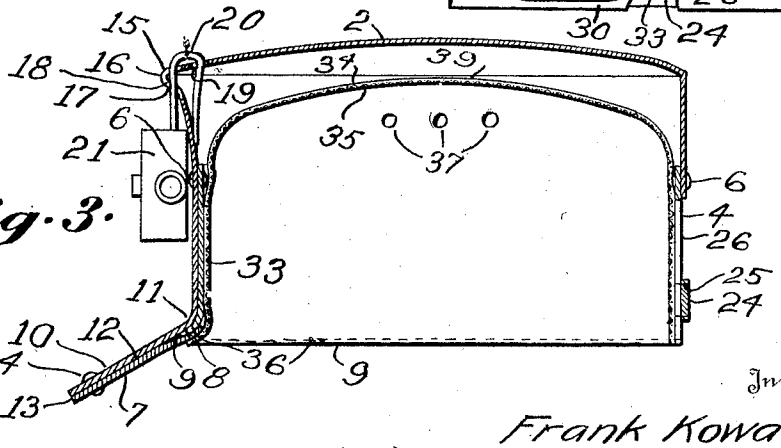

Fig. 3.

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UNITED STATES PATENT OFFICE.

FRANK KOWASIK, OF HIAWATHA, UTAH.

MINER'S CAP.

Application filed October 29, 1923. Serial No. 671,367.

To all whom it may concern:

Be it known that I, FRANK KOWASIK, a citizen of Austria, residing at Hiawatha, in the county of Carbon and State of Utah, have invented certain new and useful Improvements in Miners' Caps, of which the following is a specification.

This invention relates to caps to be worn by miners or other persons employed underground, and one of its principal objects is to provide means for protecting the head of the wearer against accidental impact with overhanging timbers or other obstructions, and also to afford protection against falling objects, such as lumps of coal, stone, and so forth.

Another object is to provide insulating means whereby the wearer is protected against shock should the cap accidentally come into contact with live overhead trolley wires or the like.

Another object is to provide a cap which shall possess great durability and yet not be unduly heavy.

Another object is to provide a cap capable of adjustment as to size, so as to be readily fitted to any head, whereby the necessity of manufacturing the caps in more than one size is obviated, so that a dealer is not compelled to carry many sizes; and whereby a cap will be retained on the head of the wearer in all the postures he may assume and under various adverse conditions normally tending toward the accidental removal of the ordinary cap.

Another object is to provide means for holding either a tube or cord for conveying gas or electric current respectively from a reservoir or battery borne on the back of the user and leading to the lamp on the cap.

A further object is to enhance the appearance of the cap and provide greater neatness of construction by eliminating the usual separate unsightly lamp-holder.

Other objects and advantages will be apparent as the description proceeds.

In the accompanying drawings forming part of this specification, in which like numbers of reference denote like parts wherever they occur,

Figure 1 is a perspective view of the improved cap of this invention;

Figure 2 is a fragmentary rear view thereof; and

Figure 3 is a vertical central sectional view through the cap, extending from the front to the back, the lamp being shown in elevation.

The cap comprises a crown 1 of rigid material, preferably aluminum, having a top 2 and a side 3, and a band 4 of flexible material, preferably leather, secured to the bottom 5 of the crown side 3 by means of rivets 6. A vizor 7 is secured by sewing at 8 to the bottom edge 9 of flexible band 4. An extension 10 is formed by a continuation from the bottom edge 5 of aluminum crown 1 and extends past the flexible band 4 to its junction with the vizor 7, whence it bends at 11 to follow the top side 12 of the vizor 7 to its edge 13, where rivets 14 secure the extension 10 to the vizor 7. The extension 10 inforces or stiffens the flexible band 4 between the crown 1 and the vizor 7, and so maintains the rigidity of the front portion of the cap.

At the front portion of the cap the top 2 projects at 15 beyond the side 3 and then turns down at 16 and recedes at 17 to the side 3, where it continues down to form the side 3 as at the other portions of the crown. Projection 15 has a vertical slot 18, and top 1 has an aperture 19 immediately behind the slot 18 adapted to receive the conventional wire hanger 20 of the usual lamp 21.

As best shown in Figure 2, flexible band 4 has a slit 22 at the back of the cap, which slit 22 may be contracted or expanded by means of a buckle 23 and a strap 24. Strap 24 is secured to the band 4 by sewing 25 at one side 26 of the slit 22, and buckle 23 is held by strap 27 looping around its pivot bar 28, the said strap 27 being secured by sewing at 29 to the band 4 at the opposite side 30 of the band 4, so that buckle 23 at all times rests on the band 4 and is not over the slit 22. The thickness of the band 4 is thus interposed between the buckle and the head of the wearer, thus cushioning the pressure of the buckle against the head of the wearer and making for greater comfort. This construction permits of adjusting the cap to the head of the wearer, and prevents the cap from being accidentally displaced therefrom.

Vertical straps 31 secured to the band 4 in any suitable manner, preferably by sewing, serve as means for holding a flexible cord 32 to conduct electric current from a battery on the back of the wearer and lead-

ing from the back of the cap through the straps 31 to the lamp 21, or a flexible tube for gas, leading from a generator on the back of the wearer to the lamp, in case gas is used for lighting the lamp 21.

A lining 33 of insulating material, preferably thin rubber sheeting 34 reinforced by a fabric base 35, is secured by sewing at 36 to the bottom edge 9 of band 4 and protects the wearer from shock should the cap come into contact with live trolley wires and the like. The lining 33 has ventilating apertures 37, which preferably are juxtaposed to similar apertures 38 in the crown side 3. Lining 33 closes the slit 22 in band 4 and folds upon itself when the slit 22 is contracted, so that the edges of the slit do not make direct contact with the head of the wearer.

The hat is of such depth that the top of the cap crown can never touch the head, but is always spaced therefrom, the head and inside of the cap preferably contacting together at the band 4, and held there by the proper adjustment of the buckle 23 and strap 24. It is obvious that any blow on the top of the cap will not be transmitted directly to the head, because of the space between the top of the cap and the top of the head, but will be transmitted to the entire rim, so that the skull can not be crushed, but only gradual slippage can occur at the line of contact of the rim of the cap with the head. As an additional precaution, the top 39 of lining 33 is preferably spaced at a safe distance from the top 2 of the crown, so that top 2 can not possibly rest on the head even though the buckle 23 and strap 24 be not tightened.

Having thus described this invention, I hereby reserve the benefit of all changes in form, arrangement, order, or use of parts, as it is evident that many minor changes may be made therein without departing from the spirit of this invention or the scope of the following claims.

I claim:

1. In a cap, an integral metallic portion including a top having a depending skirt perpendicular throughout except at the front portion, the upper part of said skirt at the front being curved forwardly and the top being extended forwardly to conform therewith thereby producing a forwardly extending lip, said lip having a vertical notch centrally thereof and extending through the top and skirt, the top having a hook receiving opening immediately behind said notch.

2. In a cap, an integral metallic portion including a top having a depending skirt perpendicular throughout except at the front portion, the upper part of said skirt at the front being curved forwardly and the top being extended forwardly to conform therewith thereby producing a forwardly extending lip, said lip having a vertical notch centrally thereof and extending through the top and skirt, the top having a hook receiving opening immediately behind said notch and a lining for the metallic portion of flexible material having a top portion spaced below the top of the metallic portion, a band portion extending downwardly from the top and terminating below said skirt, and a visor projecting forwardly from the lower front portion of the liner, the skirt having at its front a downwardly projecting extension terminating in a forwardly projectory end secured to the visor.

In testimony whereof I hereunto affix my signature.

FRANK KOWASIK.