

Dec. 20, 1932.

R. E. M. FROHDER

1,891,806

ILLUMINATED FIREMAN'S HELMET

Filed March 8, 1932

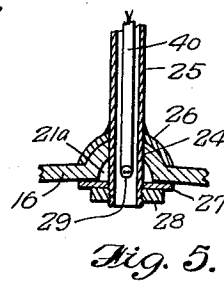
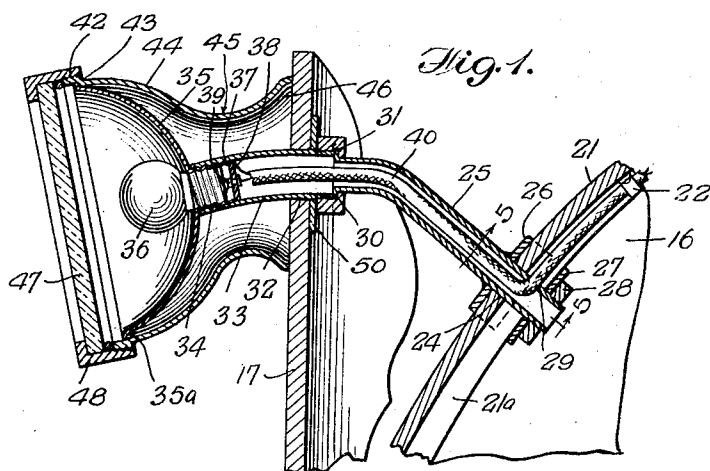


Fig. 2.

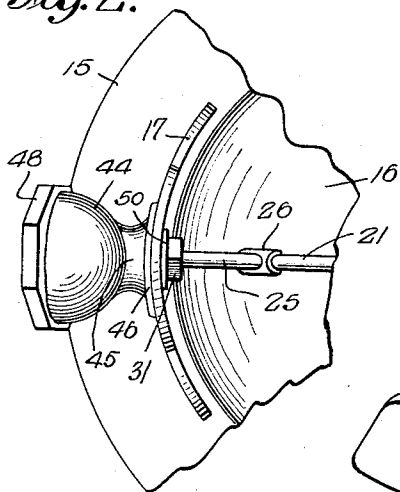


Fig. 3.

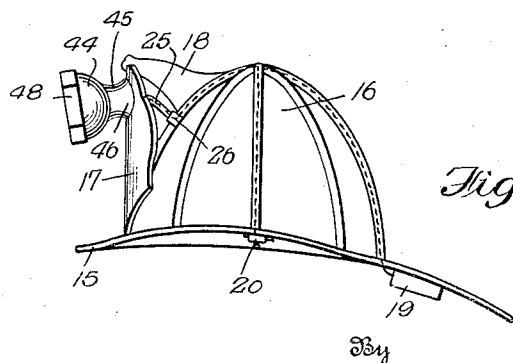
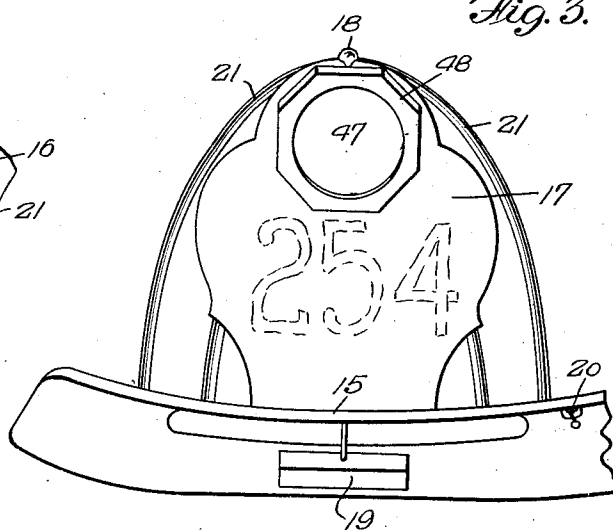


Fig. 4.

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ILLUMINATED FIREMAN'S HELMET

Application filed March 8, 1932. Serial No. 597,577.

The object of my invention is to produce a lamp that can be mounted on the front of a fireman's helmet to aid the fireman to proceed in the dark and through dense smoke to efficiently rescue lives and save property without unnecessary injury to himself in performing his required duties.

With the above and other objects in view, as will be brought out hereinafter, reference will be had to the accompanying drawing forming a part of this specification and wherein:—

Fig. 1 is a vertical sectional view of the invention showing the specific manner of applying the same to a fireman's helmet, only fragments of the latter being illustrated.

Fig. 2 is a top plan view of the invention applied to a fragment of a fireman's helmet.

Fig. 3 is a view in front elevation of a fireman's helmet equipped with the invention.

Fig. 4 is a view in side elevation of a fireman's helmet with the invention applied, and

Fig. 5 is a sectional view taken on line 5—5 of Fig. 1.

In the drawing, reference numerals 15 designate the brim, 16 the crown and 17 the shield or emblem plate of a standard fireman's helmet, and the emblem plate 17 may be supported at its top by the usual eagle head 18 or otherwise as in standard constructions. Suitably mounted upon the bottom of the brim 16, preferably at the rear thereof, is an electric cell 19, and upon the lower face of one side of the brim, preferably the right hand side so as to be within convenient reach, is mounted a circuit breaker 20 of standard design.

The crown of the helmet is provided with conventional hollow ribs 21 in the channels 21a of which the conductor wires are laid and secured as by cleats 22. An aperture 24 is provided through the front central portion of the helmet crown including the front rib thereof, and the rear end of a conduit section 25 is passed through this aperture. This conduit section is provided with a saddle plate 26, welded or otherwise secured thereto and when in proper position, this saddle plate embraces the outer surface of the helmet

rib 21 and closely conforms to the curving contour thereof. The extreme rear end of this conduit section is threaded and receives thereon a washer 27 and nut 28, the latter taking the threads of the conduit section and clamping the section tightly in place on the helmet, with an outlet opening 29 which is provided in the conduit aligned with the channel 21a.

The forward part of the conduit section 25 extends upwardly and outwardly at an inclination perpendicular to the part of the helmet crown to which it is attached, and before reaching the emblem plate 17 is bent substantially perpendicular to the said plate. The forward end of the conduit section is flanged at 30 to confine a coupling nut 31 on the conduit sections.

An aperture 32 is provided in the central upper portion of the emblem plate, and through this is inserted the rear threaded end of a second conduit section 33. This section is bent downwardly at a slight angle and is threaded interiorly at its forward end to receive a threaded neck 34 provided on the rear of a reflector 35 as a socket to receive an electric light bulb 36. The rear end of the neck 34 is flanged inwardly at 37 to retain a fibre disk 38, the latter being provided with a central contact 39 that is engaged by the central contact on the light bulb, and the latter is threaded into the neck or socket 34. One side of the battery is in direct circuit with the socket 34 through one strand of a conductor 40, while the other side of the battery is in circuit with the central contact 39 through the circuit breaker 20. The conductor 40 in making this circuit follows the ribs of the helmet as much as possible in the channels of which it is laid, and in passing through the helmet crown to the lamp, is threaded through the opening 29 which aligns with the channel of the front central rib 21.

A lamp housing comprising a threaded rim 42, shoulder 43, body 44, neck 45 and base 46 is provided to receive and house the forward end of the conduit section 33, reflector 35, lamp 36 and appurtenances, as well as a lens 47 which is secured against the forward

edge of the rim 42 by a lens ring 48 threaded onto said rim.

The outer rim of the reflector 35 has a flange 35a that seats against the shoulder 43 to resist the pull of the coupling nut 31 when the conduit sections 25 and 33 are coupled together. In other words, the coupling nut 31 and its associated washer 50 engage the inner face of the emblem plate 17 while the forward edge 35a of the reflector bears against the housing shoulder 43, clamping the housing, whose rear edge is shaped to the contour of the emblem plate 17, tightly against said plate. At the same time, the coupling nut 31 draws the conduit section 25 tight against the conduit section 33, providing a brace for the emblem plate and permitting elimination of the eagle 18.

All the wiring and electrical connections that may be affected by water are enclosed either within conduits or within the helmet in a manner not to become short circuited.

Of course it will be understood that minor changes may be made as fall within the scope of the appended claims.

What is claimed:

1. The combination with a head piece having a rigid crown and plate-like emblem member spaced therefrom, a conduit section passing through and secured to the crown, a second conduit section passing through the plate-like member, a coupling for the conduit sections, and a lamp on the second conduit member clamped against said plate-like member by said coupling.

2. The combination of a head-piece having a rigid ribbed crown and plate-like emblem member spaced therefrom, a conduit passing through the crown and provided with a saddle embracing the exterior of one of the ribs of the crown, a clamping member on the conduit section within the crown for securing the crown between said saddle and clamping member, said conduit passing through the plate-like member and a lamp on said conduit exterior of the plate-like member.

3. The combination of a headpiece having a rigid crown, a plate-like emblem member spaced therefrom, a conduit secured to the crown and passing through said plate-like member, a lamp mounted upon the forward end of the conduit and engaged with the front face of the plate-like member, and means on the conduit between the crown and plate-like member clamping the plate like member between said means and lamp.

4. The combination of a head-piece having a rigid crown and plate-like emblem member spaced therefrom, a conduit secured to the crown and passing through said emblem member, a lamp housing bearing against the outer face of the emblem member, a reflector secured to the conduit and holding the housing against the emblem member, and means engaging the rear face of the emblem member

for clamping the latter between itself and the lamp housing.

5. The combination of a head-piece having a rigid ribbed crown and plate-like emblem member spaced therefrom, a conduit passing through the crown, a saddle secured to the conduit and embracing the exterior of a rib of the crown, a nut on the conduit engaging the interior face of the crown, a second conduit passing through the emblem member, a reflector secured to the latter, a lamp housing between reflector and emblem member engaging both, and a coupling for the two conduits engaging the rear face of the emblem member and serving to clamp the emblem member between said coupling and lamp housing.

In testimony whereof, I affix my signature.

RAYMOND E. M. FROHDER.