

L. W. COGSWELL.
MINER'S CAP AND LAMP.
APPLICATION FILED MAY 9, 1910.

985,660.

Patented Feb. 28, 1911.

2 SHEETS—SHEET 1.

Fig. 1.

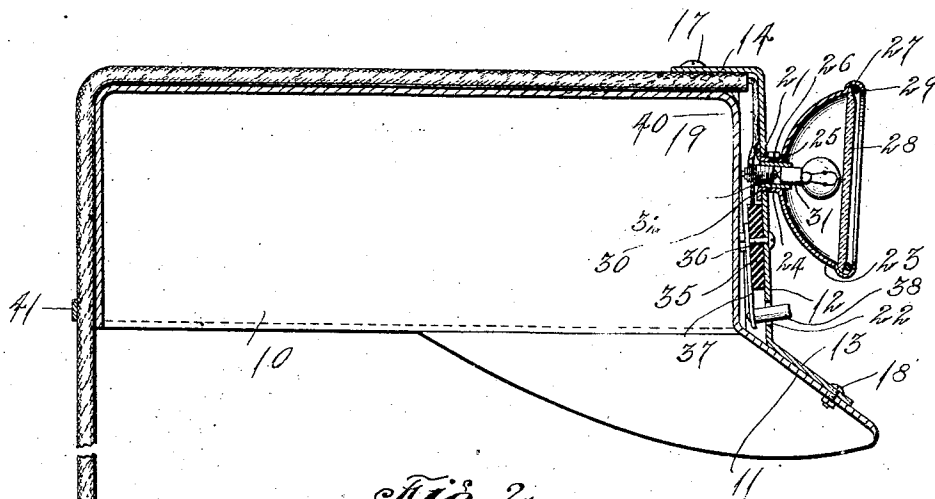
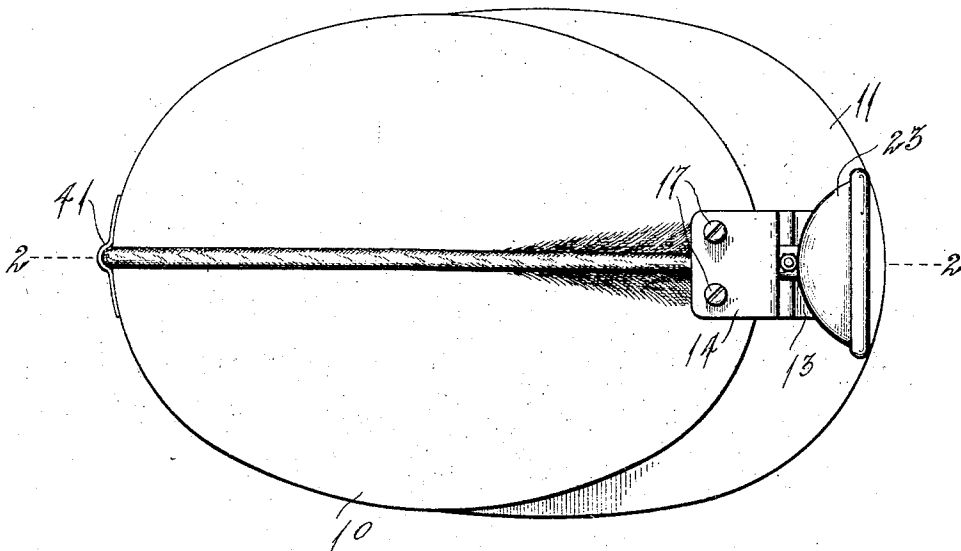
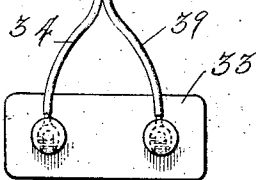


Fig. 2.



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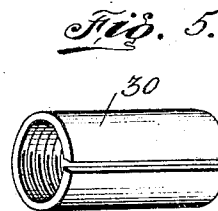
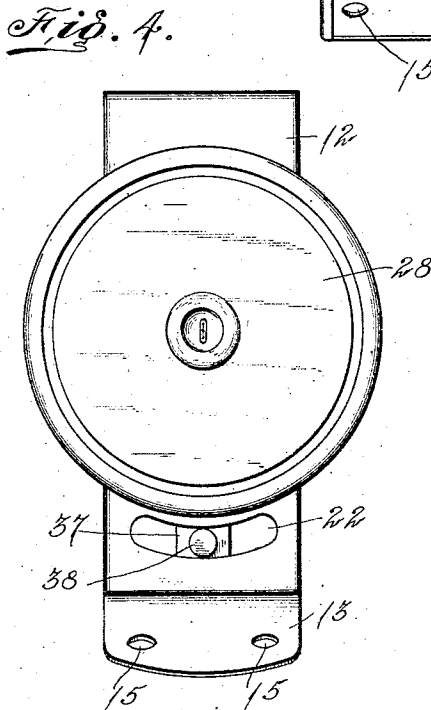
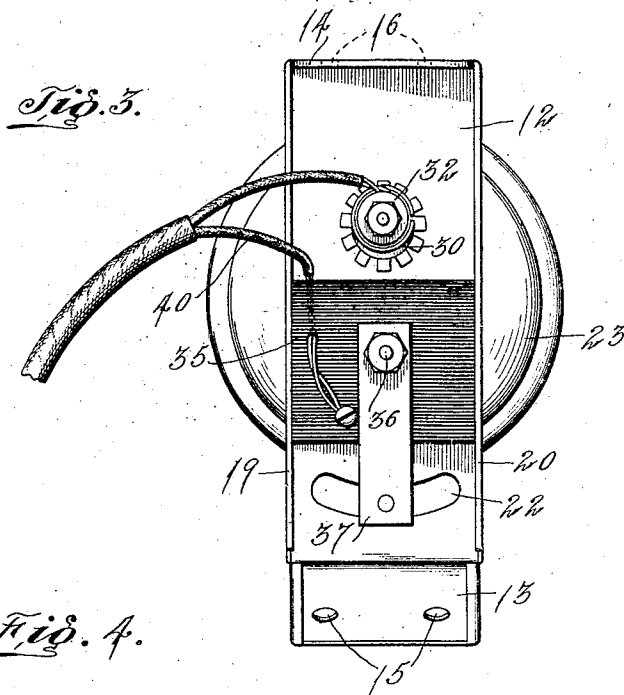
Attorney

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UNITED STATES PATENT OFFICE.

LEWIS W. COGSWELL, OF TAYLORVILLE, ILLINOIS.

MINER'S CAP AND LAMP.

985,660.

Specification of Letters Patent. Patented Feb. 28, 1911.

Application filed May 9, 1910. Serial No. 580,219.

To all whom it may concern:

Be it known that I, LEWIS W. COGSWELL, a citizen of the United States, residing at Taylorville, in the county of Christian, State of Illinois, have invented certain new and useful Improvements in Miners' Caps and Lamps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to miners' caps and lamps.

The object of the invention resides in providing a miner's cap with an electric lamp whereby the possibility of explosion of gas, as far as such explosions are due to the lamps used by miners, is obviated.

A further object of the invention resides in a new and improved means for securing the electric lamp and its reflector to the cap and in so mounting the electric lamp that same may be adjusted with respect to the reflector that the rays of light issuing therefrom may be diffused over a large or small area as desired.

A still further object of the invention resides in providing a switch for controlling the passage of the electric current through the lamp and in so locating said switch that same may be easily and quickly operated by the wearer without removal of the cap.

With the above and other objects in view the invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully described and set forth in the appended claim.

In describing the invention in detail reference will be had to the accompanying drawings wherein like characters of reference denote corresponding parts in the several views, and in which:

Figure 1 is a plan view of a miner's cap and light constructed in accordance with the invention; Fig. 2, a section on the line 2—2 of Fig. 1; Fig. 3, a rear elevation of the light support detached from the cap. Fig. 4, a front elevation of what is shown in Fig. 3; and, Fig. 5, a detail view of the adjustable lamp carrying sleeve.

Referring to the drawing, 10 indicates the cap which is provided with the usual vizor 11.

The lamp support consists of a metal plate 12 having its lower end bent forwardly

as at 13 and its upper end rearwardly as at 14; said lower end being provided with apertures 15, while the upper end is likewise provided with apertures 16. When applied to the cap, the upper end of the plate 12 is disposed upon the crown of said cap and is secured thereto by bolts 17, passed through the apertures 16 and through the cap, while the lower end 13 is disposed upon the vizor and is secured thereto by bolts 18 which pass through the apertures 15 and said vizor. The portion of the plate 12 which is disposed between the inwardly and outwardly bent upper and lower ends respectively is provided with rearwardly extending parallel side portions 19 and 20, while a circular aperture 21 is cut through the upper portion of said plate and an arcuate aperture 22 through the lower portion thereof. A reflector 23 provided with the usual rearwardly extending neck 24 is secured to the plate 12 on the forward side thereof by passing the neck 24 through the aperture 21 and then bending the end of said neck against the rear face of said plate and soldering same to the rear face of the plate. The neck 24 is provided on its upper side with a threaded aperture 25 in which is mounted for adjustment a binding screw 26 for a purpose to be presently described. The outer end of the reflector 23 is provided with an annular groove 27 forming a seat for a lens 28; the latter being held in said seat by a split ring 29.

Mounted in the neck 24 for longitudinal adjustment therein is a split sleeve 30 the outer end of which is threaded interiorly for the reception of the socket of an electric lamp 31, while the inner end thereof is threaded interiorly for the reception of an electric terminal 32 adapted to make contact with one pole of the lamp 31. Said terminal being connected with a battery 33 by a conductor 34. Disposed on the inner face of the plate 12 between the aperture 21 and aperture 22 and between the side portions 19 and 20 is a block of insulating material 35 which is connected to the plate 12 by a bolt 36; said bolt also serving as a pivot pin for a switch arm 37 disposed on the inner face of the block 35. A manipulating handle 38 is secured to the free end of the switch arm 37 and projects through the arcuate slot 22 thus enabling said switch to be easily operated by the wearer without necessitating the removal of the cap from the head. An-

other conductor 39 leading from the battery 33 has its terminal 40 secured in the block 35 in proximity to the switch arm 37 so that when said switch arm is moved on its pivot in one direction it will contact with the terminal 40 and close the circuit through the lamp.

The circuit passing through the lamp 31 issues from the battery 33 through the contact 39 bolt 36, plate 12 and then through the filament of the lamp and back to the battery by way of the conductor 34, same being easily broken and closed by the manipulation of the switch arm 37 as will be apparent.

By adjusting the sleeve 30 longitudinally of the neck 24 when the lamp 31 is disposed therein, it will be apparent that said lamp may be moved outwardly and inwardly with respect to the reflector 23 and thus enable the rays diffused thereby to spread over a small or large area as desired. The binding screw 26 serves to positively secure the sleeve 30 in a desired position to effect the proper adjustment of the lamp.

The conductors 34 and 39 are bound together as a single strand and carried over the top of the cap through suitable guides 41,

the ends of said conductors being disposed so as to hang down the back of the cap for ready attachment to the battery 33 which may be easily carried in the pocket.

What is claimed is:

The combination with a miner's cap, of a plate secured thereto provided with an aperture therethrough, an electric lamp mounted on said plate, conductors for connecting said lamp with an electrical generator, a switch for controlling the circuit through said conductors and lamp comprising a block of insulation, a bolt securing said insulation to said plate, an arm pivoted on said bolt having a laterally extending handle projecting through said aperture and constituting a terminal of one conductor, a conductor mounted on said insulation constituting a terminal of the other conductor and adapted to be engaged by said pivoted arm to close the circuit through the lamp when said arm is moved in one direction.

In testimony whereof, I affix my signature, in presence of two witnesses.

LEWIS W. COGSWELL.

Witnesses:

JOHN B. COLEGROVE.

L. B. ROBERTS.