(No Model.)

W. G. PRICE.

MINER'S LAMP.

No. 541,948. Patented July 2, 1895.

Fig. 1.

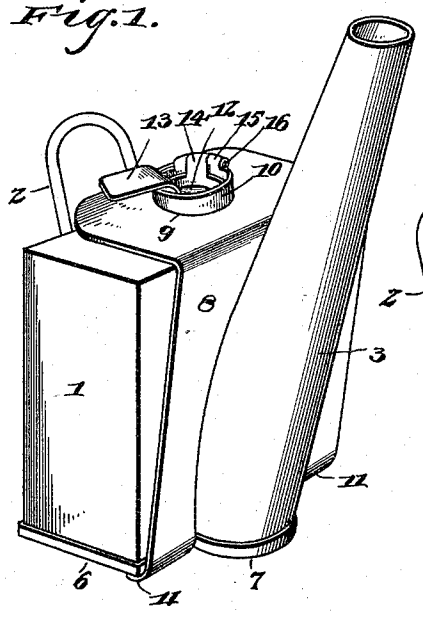

Fig. 2.

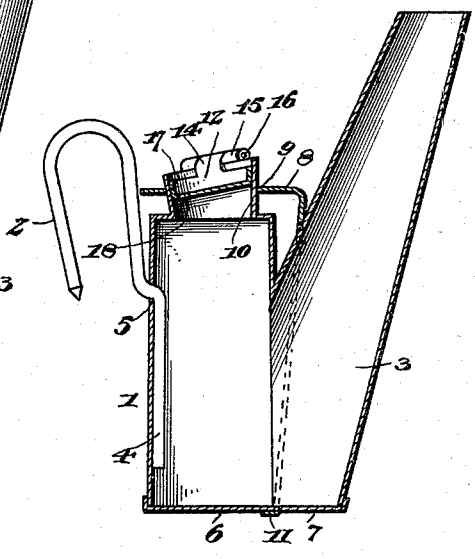

Fig. 5.

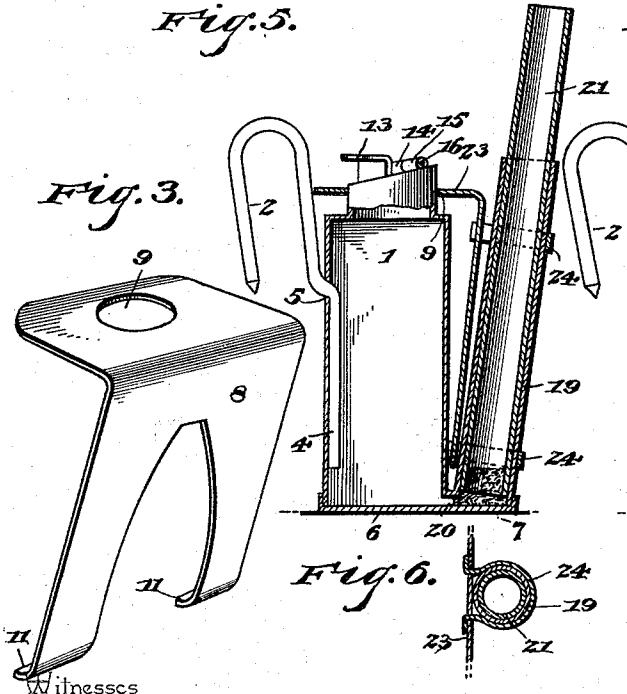

Fig. 4.

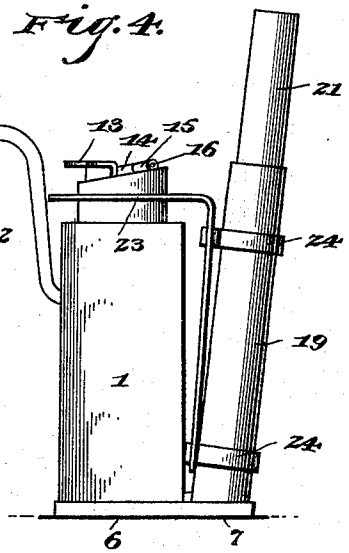

Fig. 3.

Fig. 6.

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UNITED STATES PATENT OFFICE.

WILLIAM G. PRICE, OF FRACKVILLE, PENNSYLVANIA.

MINER'S LAMP.

SPECIFICATION forming part of Letters Patent No. 541,948, dated July 2, 1895.

Application filed June 14, 1894. Serial No. 514,561. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM G. PRICE, a citizen of the United States, residing at Frackville, in the county of Schuylkill and State of Pennsylvania, have invented a new and useful Miner's Lamp, of which the following is a specification.

The invention relates to improvements in miners' lamps.

The object of the present invention is to improve the construction of miners' lamps, and to provide a simple and inexpensive one, which will readily maintain itself in a perpendicular position, which will prevent the flame from coming in contact with a miner's face, and in which the body of the lamp will be protected from the flame.

A further object of the invention is to enable animal or hydro-carbon oils to be successfully burned.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a miner's lamp constructed in accordance with this invention. Fig. 2 is a central vertical sectional view of the same. Fig. 3 is a detail perspective view of the detachable shield. Fig. 4 is an elevation of a miner's lamp, illustrating a modification of the invention, and showing a construction designed for burning hydro-carbon oils. Fig. 5 is a central vertical sectional view of the same. Fig. 6 is a detail sectional view, illustrating the manner of securing the shield by bands.

Like numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a rectangular lamp body provided at its inner or rear side with a hook 2 and having at its front a wick tube 3. The hook is constructed of wire, or other suitable material, and its shank 4 is extended through a perforation 5 of the back of the body of the lamp and soldered, or similarly secured, within the lamp body to the inner face of the back thereof, thereby preventing any liability of the hook being accidentally melted off by the flame of the lamp. The shank of the hook is outwardly offset to form a shoulder which is located at the perforation, and which relieves the solid portion of strain. This manner of attachment makes the hook absolutely safe, and its durability over those soldered on the exterior of the body is vastly increased, as the point of attachment is not exposed.

The bottom 6 of the rectangular lamp body is provided with a forward extension 7, which forms a seat for the wick tube, and the latter communicates with the lamp body through an opening in the front wall thereof; and it is brought more closely to a vertical position than is possible where the wick tube is secured directly to the front of the lamp body, above the bottom thereof.

The wick tube is extended considerably above the body of the lamp without making the lamp top heavy, owing to the closeness or near proximity of the tube to the body; and the entire front and top of the body is protected from the flame by a removable shield 8. The height of the wick tube and its particular arrangement, also serves to keep the flame of the lamp out of the face of the wearer, to prevent burning him, or singeing his hair or filling the eyes of the wearer with smoke.

The shield is substantially L-shaped in side elevation. It extends over the front and top of the lamp body, and it is provided at its top with a circular opening 9, to receive the flange 10 surrounding the filling opening of the lamp body. The front of the shield is bifurcated, and the opposite sides formed by the bifurcation straddle the wick tube 3 and terminate in flanges 11, which engage under the bottom of the lamp body at opposite sides of the extension 7, whereby the shield is detachably and securely fastened to the lamp. The shield is separated from the top and front of the lamp body to provide an intervening air space, whereby all liability of heating the lamp body to a dangerous degree is prevented.

The annular flange 10 consists of a short tapering tube, and receives a hinged dished cover 12 provided at one side with a flange or handle 13, and having at an opposite point an eye 14, arranged between opposite eyes 15 of the tapering tube 10, and receiving a pintle 16, whereby the parts are hingedly connected without employing solder. The eyes of the tube 10 are disposed at a slight angle to that of the cover, and the pintle, which passes

through all of the eyes, is slightly bent at each end, thereby preventing any liability of its accidentally becoming displaced.

The cover consists of a circular portion and a surrounding upwardly extending tapering flange 17, which fits within the tapering tube 10. It is located below the upper edges of the tube; and it is adapted to receive and convey back to the body of the lamp any overflow, a perforation 18 being provided for that purpose. The tapering tube and the cover have a slight rearward inclination—that is, the front of the tube 10 is higher than the rear edge—in order to bring the cover and the top of the tube in an approximately horizontal position in use. The inclined cover, and the perforations thereof, cause any oil accumulating in the dish-shaped cover, through the jolting of the lamp or otherwise, to drip back into the lamp to avoid getting the oil on the clothes of the wearer.

In Figs. 4 and 5 of the accompanying drawings, is illustrated a modification of the invention, and a construction is shown especially designed for burning petroleum or hydro-carbon oil, the previous construction heretofore described being designed for burning animal oil, or what is known as miners' oil. The tube 19 shown in Figs. 4 and 5, is cylindrical. It communicates at the bottom by a narrow opening 20 with the body of the lamp; and it contains a removable wick tube 21, which is adapted to be withdrawn from the stationary tube 19 for adjusting or applying a wick. The bottom of the wick tube is designed to be provided with a partial filling of fabric, which is closely packed, and which is designed to check the flow of oil from the lamp body to the tube 19, in order to permit only a saturation of the wick, and to prevent any liability of such oil running out of the wick tube when the latter is in a more or less inclined position.

The shield 23 is detachably secured to the lamp body and to the wick tube 19 by means of bands 24, each constructed of a single strip of metal having its ends passed through slits in the front of the shield and bent laterally against the inner face of the shield, thereby effecting a fastening of the bands without employing solder or the like. The top of the shield is provided with an opening to receive the tube of the filling opening.

The flat rear face or back of the lamp body, is adapted to slide freely laterally on a cap to cause the lamp to assume a perpendicular position whatever be the position of the wearer; and this construction obviates the necessity of employing particular forms of connections for permitting such a swinging movement.

It will be seen that the construction is simple and inexpensive, that it possesses great durability, and that it renders the lamp economical, as it prevents any waste of the oil.

It will also be apparent that the tapering tube of the filling opening greatly facilitates the insertion of cotton or other filling employed to check the flow of oil from the body or reservoir of the lamp to the wick tube. The body of the lamp is protected from the flame, thereby enabling the lamp to be used in passages where there is a strong current of air.

Changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

What I claim is—

1. A miner's lamp provided with an approximately L-shaped shield, extending over the front and top of the body of the lamp, and forming an intermediate air space between it and the front and top of the lamp, which space is open at the sides, said shield being detachable and interlocked with the lamp at the top and bottom thereof, substantially as described.

2. A miner's lamp provided at its top with an annular flange, combined with an approximately L-shaped shield having at the top a circular opening to receive the annular flange, and provided at its front with a bifurcation to receive the wick tube, and having at its lower edges at opposite sides of the wick tube, flanges engaging under the bottom of the lamp, substantially as described.

3. A miner's lamp having a filling opening and provided with a tapering tube secured at its lower end within the opening, combined with a dish-shaped cover hinged at one side to the tube and having the upper edge of its flange located within the tube below the upper edges thereof, substantially as described.

4. In a miner's lamp, the combination of a lamp body provided at the top with an opening, an inclined tapering tube secured in the opening of the lamp body and extending above the top of the same and having its front edge higher than the rear edge, and the tapering dish-shaped cover arranged at an inclination in the tube and hinged to one side thereof, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM G. PRICE.

Witnesses:
H. K. WESTON,
JOSEPH SCHEAFFER.