(No Model.)

# E. J. O'KEEFE.

## MINER'S LAMP.

No. 564,450. Patented July 21, 1896.

Fig. 1.

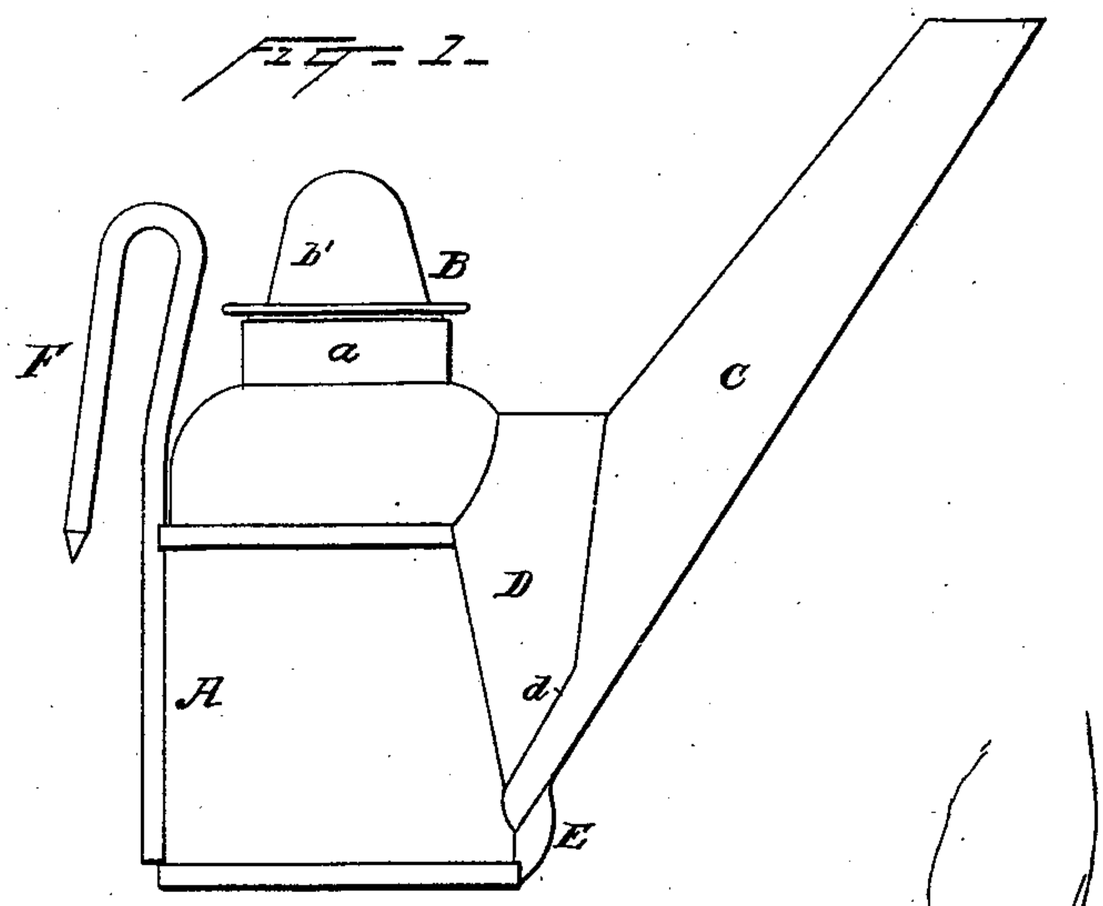
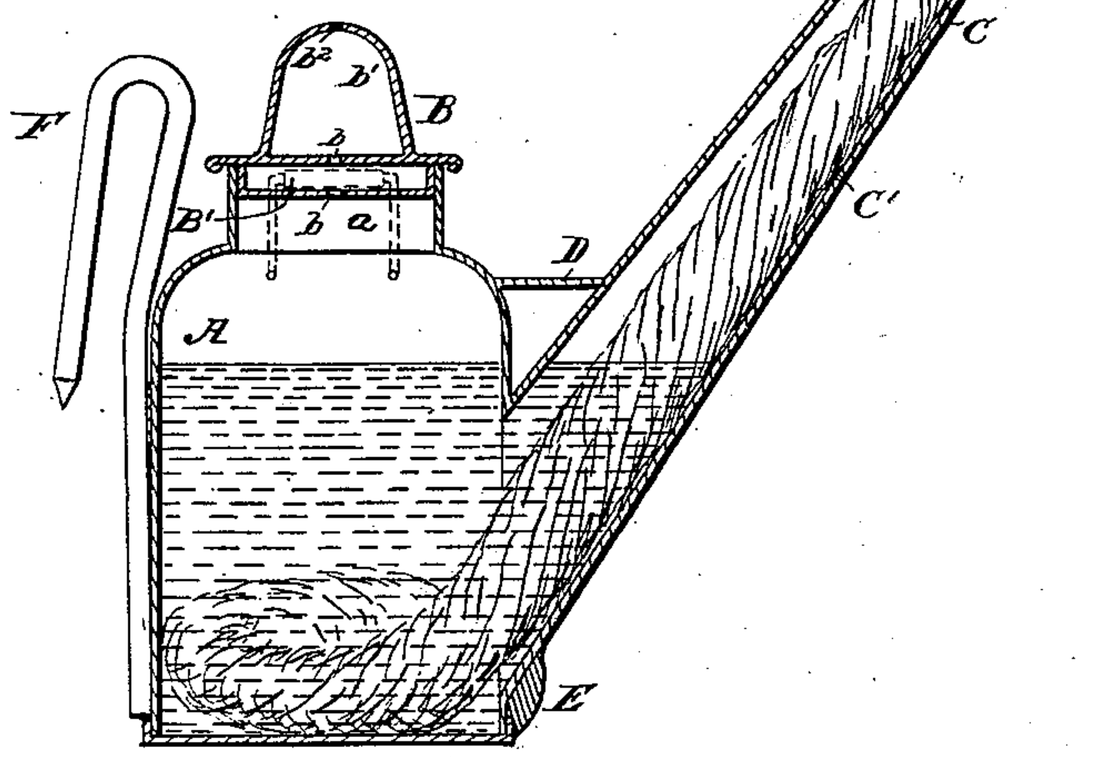



Fig. 2.



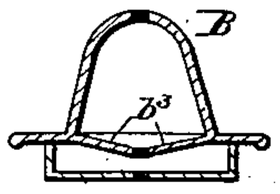




Fig. 3.

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

# UNITED STATES PATENT OFFICE.

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## MINER'S LAMP.

SPECIFICATION forming part of Letters Patent No. 564,450, dated July 21, 1896.

Application filed July 30, 1895. Serial No. 557,574. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD J. O'KEEFE, a citizen of the United States, residing at Vandling, Lackawanna county, State of Pennsylvania, have invented a certain new and useful Improvement in Miners' Lamps, of which the following is a specification.

My invention relates to an improvement in miners' lamps, and has for its object to provide a more efficient and durable lamp than those heretofore in use. To this end means are provided whereby the lamp will have ample ventilation at the top, such top being nevertheless so sealed that when the miner carrying the lamp is in a stooping position the oil will not be permitted to escape through the vent-apertures.

A further object, made desirable and necessary by the fact that oil escaping from the spout of the lamp frequently ignites upon the exterior of the fount and spout, and thereby renders the lamp useless by the melting of the solder by means of which the spout is secured to the fount, is to provide the junction of the spout and fount with a shield or air-chamber surrounding the joint and preventing the melting of the solder at that place. Again, it has been a common practice among miners to adjust the wick in the lamp-spout by striking the lower edge of the fount near the spout against a resisting object. This practice in time destroys the lamp by causing it to leak at the point where it is struck. In the present invention this difficulty is obviated by providing the fount of the lamp with an outward projection, which receives the blow, takes the strain off the fount, and thereby adds to the useful life of the lamp as a whole.

In the drawings, Figure 1 is a side view of a miner's lamp embodying my improvement. Fig. 2 is a central section thereof, and Fig. 3 is a detail in section illustrating a modification of the cap.

Referring to the drawings, in which similar letters of reference denote corresponding parts, A designates the body or fount of the lamp. This is of the usual construction, except in so far as hereinafter specified, and may be made of any suitable material, such, for instance, as tin. The fount is provided with the neck *a*, and a cap B is provided for the purpose of closing the orifice therein. The cap B is made of two thicknesses of metal having an air-space between them. Each of these thicknesses of metal is provided with a preferably central perforation or vent *b*. The cap is also provided with a dome *b'*, this dome being also provided with a vent or port $b^2$. The cap B is hinged to the fount, as shown at B', Fig. 2, in order that it may be opened to supply the fount with oil and closed after such operation. By means of the vents or ports *b* and $b^2$ the interior of the fount is amply supplied with air, and at the same time provision is made against the escape of oil should the lamp be inclined at such an angle as to permit oil to escape through the ports *b*. If the lamp be so inclined, the oil will, unless the angle is too great, be retained in the dome, and when the lamp is again brought back to its normal position such oil will return through the ports *b* to the interior of the fount.

C designates the spout communicating with the interior of the fount and containing the wick C'. This spout may be secured to the fount in any suitable manner. It has been the custom heretofore to secure the parts by means of solder.

D designates a shield secured along one edge to the fount of the lamp and along the other edge to the spout, this shield extending well downward almost, if not quite, to the lowermost portion of the joint between the spout and fount. The lower edge *d* is also secured to the spout C. The purpose of this construction is, as heretofore stated, to prevent the melting of the solder by means of which the spout is secured to the fount. It has been found in practice that owing to the agitation of the oil in the lamp due to the movements of the miner by whom the lamp is carried such oil will escape from the end of the spout, find its way downwardly upon said spout, and accumulate upon both spout and fount, but particularly at the joint between them. After this oil has accumulated it frequently becomes ignited from the wick-flame, and such ignition frequently results in the melting of the solder by means of which the parts of the lamp are secured together. In the present invention this is ob-

viated, for such oil as escapes from the open end of the spout will, after passing downwardly upon such spout, be prevented from accumulating on the joint by the shield D, which will conduct it downwardly to a point where it may drip from the lamp. If, however, sufficient oil accumulates upon the exterior of the parts, and such oil is ignited, the flame will, by reason of the shield D and the air-chamber, be kept away from the solder at the joint, and in addition to this, as the oil is distributed over a larger space, the ignition is, at best, but momentary.

E designates a projection formed upon the lower edge of the fount and extending to and protecting the joint between the sides of the fount and the bottom. When it is desired to adjust the wick in the spout, the miner, instead of striking the unprotected edge of the lamp-fount, may strike the projection E, whereby the same result as to the adjustment of the wick is secured, while at the same time destruction of the lamp is prevented.

The lamp may be provided with the hook F, of the usual construction, to provide for attachment to the cap of a miner.

In Fig. 3 I have illustrated a modification of the cap B. In this modification the upper thickness of metal, instead of being level, as shown in Fig. 2, is depressed toward and around the central vent $b$ at $b^3$. By means of this construction the return of oil which has escaped from the vent into the dome $b'$ is facilitated.

Having now described my invention, what I claim is—

1. A miner's lamp having a projection extending outwardly and covering, so as to protect, the joint between the bottom and side of the lamp-fount and adapted for contact with an object to adjust the wick in the spout, substantially as set forth.

2. A miner's lamp, comprising a fount, a spout secured to said fount, and a projection extending outwardly and covering, so as to protect, the joint between the bottom and side of the lamp-fount and between the spout and the fount, said projection being adapted for contact with an object to adjust the wick in the spout, substantially as set forth.

This specification signed and witnessed this 25th day of July, 1895.

EDWARD J. O'KEEFE.

Witnesses:

JOHN D. NEALON,

E. D. YARRINGTON.