J. J. WEINEL.

MINERS' LAMPS.

No. 188,705. Patented March 20, 1877.

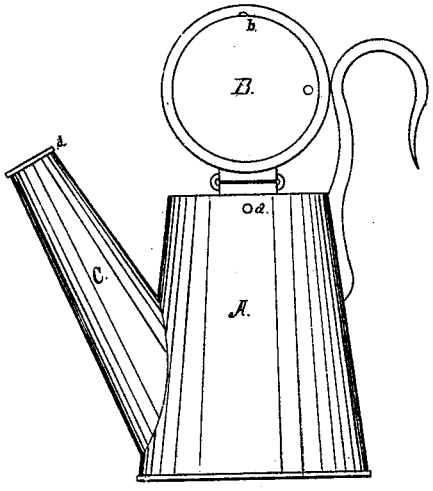

Fig. 1

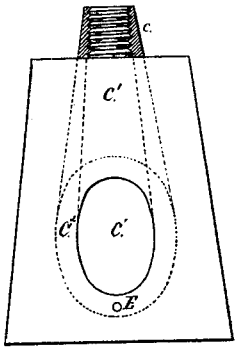

Fig 2

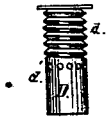

Fig. 3

Witnesses

J. Harvey Stevenson

Charles Bickel.

Inventor

Josiah J. Weinel.
by D. C. Anderson
Attorney

UNITED STATES PATENT OFFICE.

JOSIAH J. WEINEL, OF ALLEGHENY TOWNSHIP, WESTMORELAND COUNTY, PENNSYLVANIA.

IMPROVEMENT IN MINERS' LAMPS.

Specification forming part of Letters Patent No. **188,705**, dated March 20, 1877; application filed July 26, 1876.

To all whom it may concern:

Be it known that I, JOSIAH J. WEINEL, of Allegheny township, Westmoreland county, Pennsylvania, have invented a new and useful Improvement in Miners' Lamps, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing.

Similar letters of reference indicate corresponding parts.

A free current of air is conveyed to the burner of the lamp through the perforation *d'*, and a surfeit of oil through attraction to the burner is prevented from loss by its return to the oil-chamber of the lamp through perforations *d'* and E.

In the drawings, Figure 1 shows a side view of a miner's lamp; Fig. 2, a transverse longitudinal section of the same, and Fig. 3 a view of my burner.

A is the body of a common miner's lamp; B, lamp-lid; *b*, fastening for lamp-lid; C, a lamp-spout; c^1, an opening into the spout C from the oil-chamber. c^2 is an air-chamber around the spout C. *c* is the screw-thread of the spout C for fastening the burner D. *d* is the screw part of the burner D. *d'* are perforations in the burner D. E is the air-aperture at base of the spout C. *a* is an indentation for admission of the fastening *b*.

To the ordinary miner's lamp, within the spout C, I use a tube extending from the bottom of the spout to a point near the upper end of the same. At the lower end of this spout I make a perforation, E, through which air can pass up along the external surface of the tube c^1 and inner surface of the spout C, and then out through the perforations *d'*, and into the main wick-tube c^1, thus supplying the burner D with air. It will be seen that the air has thus unobstructed passage from the oil-chamber to the burner D.

The burner D has the screw-thread *d* for securing a close fastening of the burner D into the spout C at *c*. This burner D, when thus screwed into the spout C, passes down on the exterior side of the tube c^1, fitting closely thereon, and thus forms a perfect tube from the bottom of the spout C up through the same to the top at *d*.

The burner D has the perforations *d'*, and when it (the burner) is screwed down into the spout C, the perforations are above the tube c^1, so that air in passing up the chamber on the outside of the tube, being chamber c^2, may pass out of chamber c^2 into the tube c^1 and to the burner D.

It will be seen that in case of a flow of oil up the tube c^1, and its return impeded by a close fitting of the wick in the tube, that a return of the surplus oil may be effected out through the perforations *d'* into the chamber c^2, and from thence down to the aperture E into the air-chamber, thereby saving a quantity of oil which would otherwise be lost.

In the construction of my lamp I use ordinary materials.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a miner's lamp, the burner D, having the thread *d* for securing the same in the spout C at *c*, and the perforations *d'* for supplying air to the burner, substantially as described and shown.

2. The chamber c^2, formed by the walls of the spout C, and tube c^1 as an air-chamber, in combination with the perforations E and *d'* and the burner D, substantially as described and shown.

3. In a miner's lamp, the combination of the burner D, perforations *d'* and E, tube c^1, with the lamp-spout C, substantially as described and shown.

In witness whereof I have hereunto set my hand at Leechburg, Pennsylvania.

JOSIAH JAMES WEINEL.

Witnesses:

EDWIN B. FAIR,

W. R. DUFF.