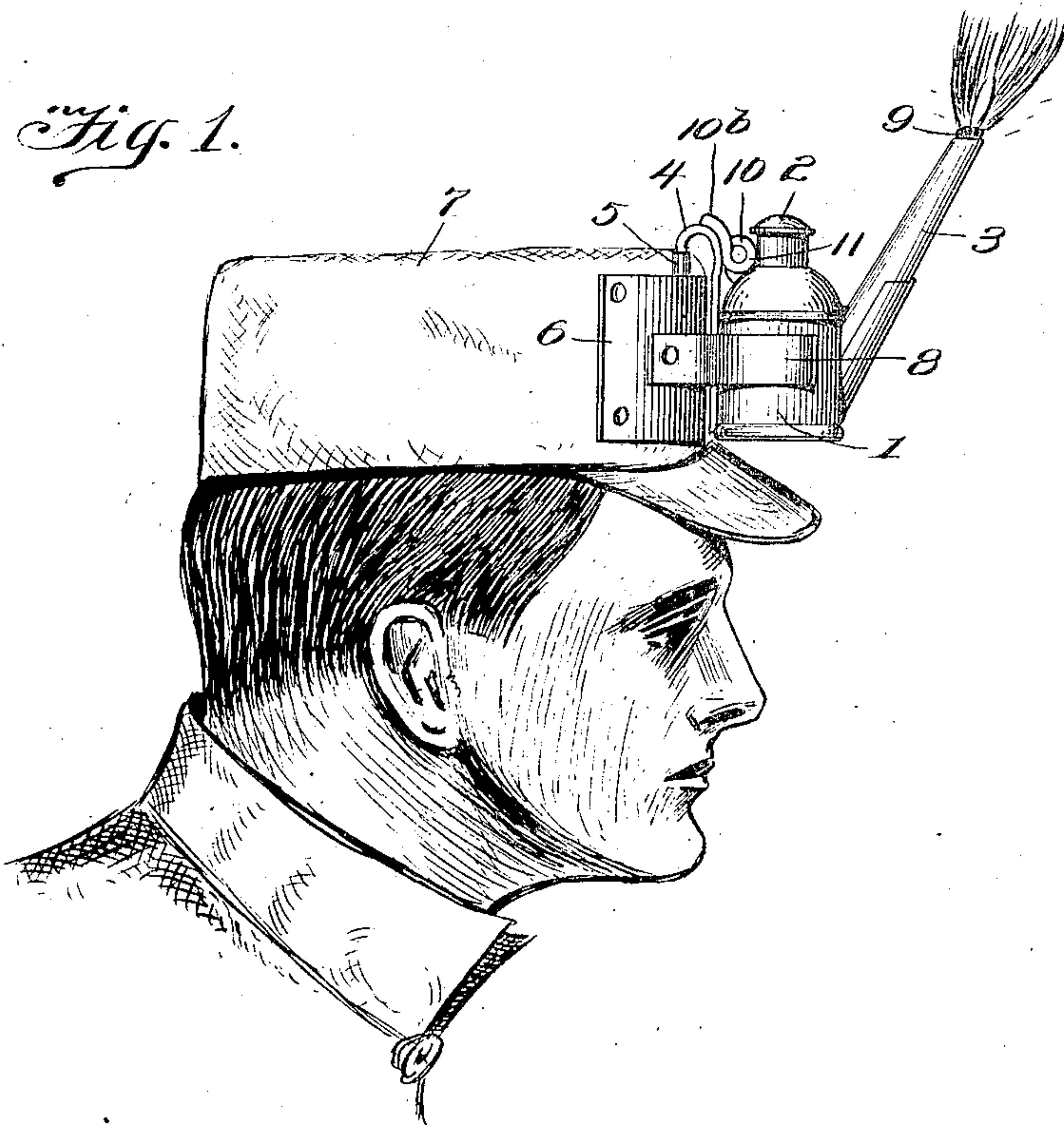


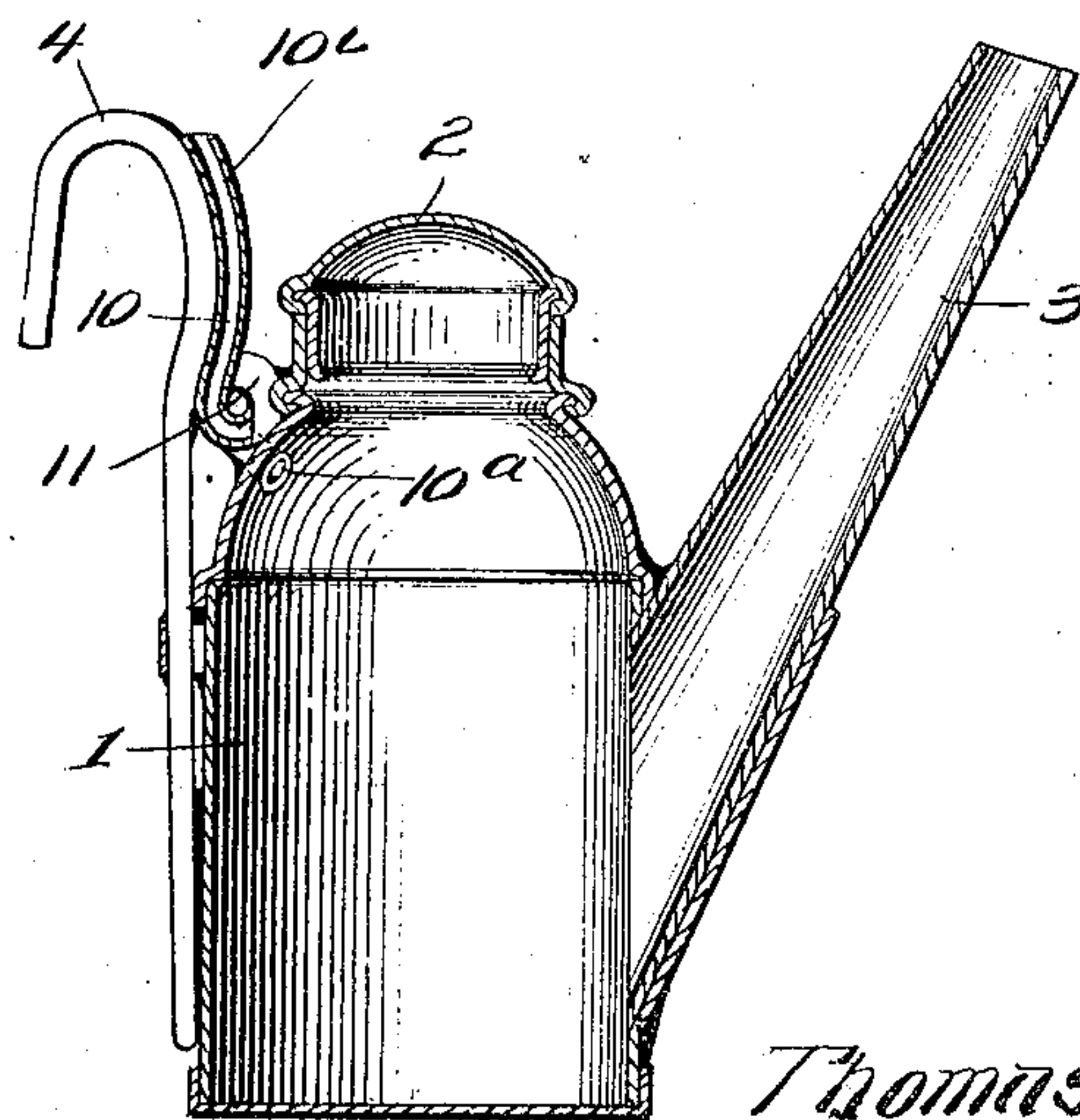
T. A. BLACK.  
MINER'S LAMP.  
APPLICATION FILED APR. 2, 1909.

944,171.

Patented Dec. 21, 1909



*Fig. 2*



Witnesses

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# UNITED STATES PATENT OFFICE.

THOMAS A. BLACK, OF SHAMOKIN, PENNSYLVANIA.

## MINER'S LAMP.

944,171.

Specification of Letters Patent.

Patented Dec. 21, 1909.

Application filed April 2, 1909. Serial No. 487,396.

*To all whom it may concern:*

Be it known that I, THOMAS A. BLACK, a citizen of the United States, residing at Shamokin, in the county of Northumberland and State of Pennsylvania, have invented new and useful Improvements in Miners' Lamps, of which the following is a specification.

This invention relates to an improvement in miners' lamps of that type giving an exposed flame or naked light, and particularly to an improved construction of ventilating device for lamps of this character.

The object of the invention is to provide a lamp having a ventilating tube of novel form to afford perfect ventilation, while preventing the escape of the oil therethrough, under all conditions of service.

A further object is to provide a ventilating tube which braces and reinforces the lamp supporting hook and is so arranged that it cannot be heated from the flame and impair the draft, while it will more effectually serve to prevent escape and waste of the oil and the dangers resulting therefrom.

The invention consists of the features of construction, combination and arrangement of parts, hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a side view of a miner's lamp embodying my invention, showing the same applied to a cap. Fig. 2 is a central vertical section through the lamp.

Referring to the drawing, 1 designates the body or font of a miner's lamp of the type described, provided with a lid or cover 2, a wick tube 3, and a suspending hook 4, the latter being adapted to engage a socket 5 on a bracket or support 6 attached to the front of the miner's cap 7, which bracket or support is also provided with a pair of spring clamps 8, one of which is shown, to receive and engage the lamp body. A wick 9 is fitted in the tube 3 and extends into and takes up oil from a supply in the font 1, the outer end of the wick being ignited to produce the light flame.

Lamps of this type are usually ventilated through a hole punched in the lid or cover, or a ventilation tube extending therethrough. This hole or tube is thus arranged far enough forward to permit of the escape of oil when the miner stoops or assumes other than an erect position, or suddenly moves his body or head. As a result, a waste of

oil occurs, a source of danger to the miner, and the sloshing of the oil through the hole or tube impairs ventilation to a material extent, often to such a degree as to cause explosion of the lamp. The particular purpose of my invention is to provide a construction and arrangement of tube which obviates these objections.

As shown, the tube 10 is disposed between the upper rear portion of the lamp body and the upper end of the shank of the hook, its lower end soldered to and communicating with the interior of the body, as at 10<sup>a</sup>, while its upper end 10<sup>b</sup> extends well above the top of the body and is soldered or otherwise secured to the hook, by which it forms a brace between the lamp and hook to stay and strengthen the latter. The portion of the tube between the body and hook is provided with an offset or crook, preferably in the form of a coil or worm 11, constituting an obstructing member, element or trap in the line of the tube.

By the described arrangement of the tube, it will be observed that said tube is disposed at the highest and rearmost portion of the lamp, so that, irrespective of other considerations, the miner may incline his head forward to a greater degree with less liability of causing escape of oil through the tube than if the tube were arranged farther forward, as in constructions commonly in use. In addition, the offset, coil, worm, trap, or obstructing device 11 retains and prevents the escape of any oil which may, through any violent motion of the miner, find its way into the tube, so that it will run back into the lamp and waste be thus prevented. As this passage of oil into the tube will seldom occur and as the coil does not obstruct the tube against the free inlet of air and exit of gases, thorough and effective ventilation of the lamp is insured and liability of explosion prevented. The strength and durability of the lamp is also increased by reason of the fact that the tube forms a brace between the lamp and supporting hook.

Having thus described the invention, what I claim, is:—

1. A miner's lamp comprising a body having a supporting hook arranged in rear of the top portion thereof, and a ventilation tube communicating at one end with the upper rear portion of the body and having its other end extending upwardly and fas-



tened to the hook, the intermediate portion of said tube being formed with a coil.

2. A miner's lamp comprising a body having a suspending hook, and a vent tube communicating therewith at one end and projecting upwardly and rearwardly therefrom and fixed at its upper end to the hook, said tube being provided at a point interme-

mediate of its ends and below its upper outlet end with a bent portion forming a trap. 10

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

THOMAS A. BLACK.

Witnesses:

JOHN H. SEMMONS,  
FRED B. MOSER.