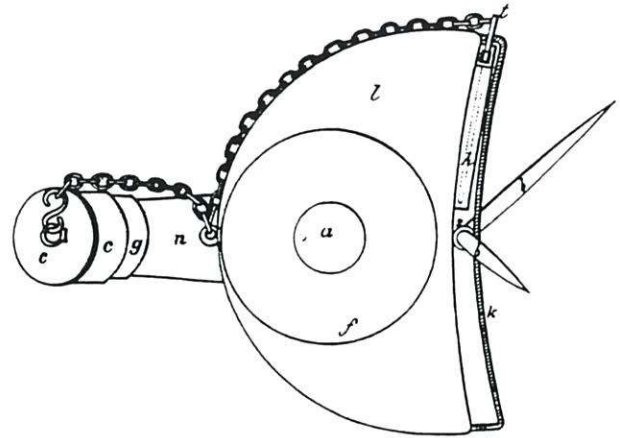
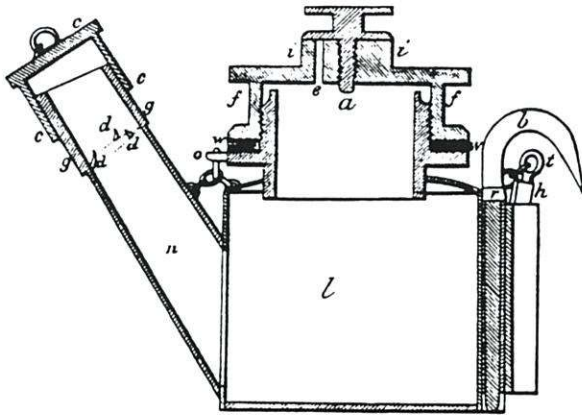


An Unusual Miner's Oil Lamp

by Wendell Wilson



AN IMPROVED MINING LAMP FOR ENGINEERS.*

BY DR. PERSIFOR FRAZER, PHILADELPHIA.

THE accompanying diagrams represent a lamp provided with certain improvements which render it more serviceable for the use of the engineer or other mining official who is often compelled to visit several mines a day remote from each other, and may be called on to use the magnetic needle in any or all of them.

These requirements demand that the material of which it is made should be copper, and that it should be capable of being closed oil-tight, for emptying and refilling the lamp at each mine would be a less expeditious as well as a less cleanly process, and transporting a lamp of the ordinary kind over rough roads on horseback or in wagon, would result in spilling the greater part of its contents.

The general form of the lamp, including the false back to keep the heat from the head, is the same as that sold for some years by Heller and Brightly.

The following is a nearer description of its parts :

- a. Screw, with milled head and flange, opening or closing
- c. Air-vent.
- c. Cap, fitting on a, which it surrounds loosely.
- i. Collar, to give bearing to screw closing air-vent.
- f. Large screw cap for filling lamp, bearing on
- w. Washer of leather or rubber.

- o. Ring in front to which are attached chain to cap and chain to
- t. Trimming needle.
- h. Sheath of latter, lying between
- k. False back, and
- l. Main body of lamp, which contains the oil.
- a. Socket between k and l, on which turns
- b. A piece of stout brass wire, forming at the upper end a hook for attachment to the hat or projections of rock, etc. The plane of this hook is at right angles to the lower end of the wire, which forms a spike for driving into "dig," timbers, etc.
- r. Collar on the upper part of b, to prevent vertical movement.
- g. Cylindrical brass ring, attached to the upper end of
- n. Conical copper spout.
- d. Three small wire points inclined upwards to prevent the wick descending.

The writer used this lamp in its developing stages during the superintendence of several mines in Virginia, which were remote from each other. A preliminary note, written hastily before his departure for Europe, in October, 1881, was kindly interpreted and published by the Secretary of the Institute. Since then the lamp has been examined and favorably criticised by the writer's friends and former professors in the Mining School at Freiberg, Saxony, at which town a dozen were manufactured by one of the best tinsmiths and sent by freight to Philadelphia, in order to test the comparative cost of manufacture here and abroad.

The lamps made in Freiberg are light, weighing about seven ounces each. They are of copper fitted with brass.

M. Daubrée, member of the French Institute and director of the School of Mines in Paris, expressed also a favorable opinion of the lamp.

* Read at the Virginia Meeting, May, 1881.

The above article was published in Transactions of the American Institute of Mining Engineers (1882, vol. X, p. 498-500). Considering that a dozen examples were actually made, in copper with brass fittings, in addition to earlier prototypes which the author says he used, it seems possible that at least one may have survived. Has anyone seen such a lamp? It should make quite an attractive display piece.