

(No Model.)

C. H. HOBSON.
MINER'S LAMP.

No. 567,099.

Patented Sept. 1, 1896.

Fig. 1.

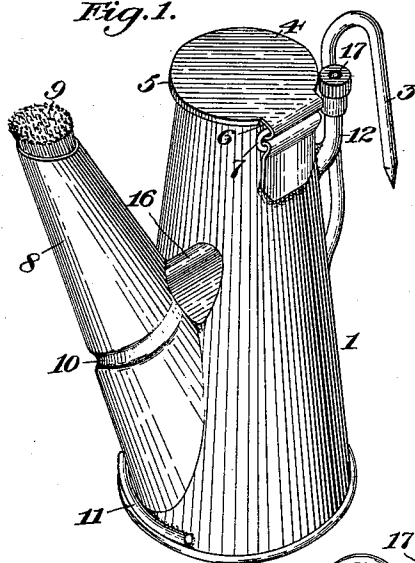


Fig. 2.

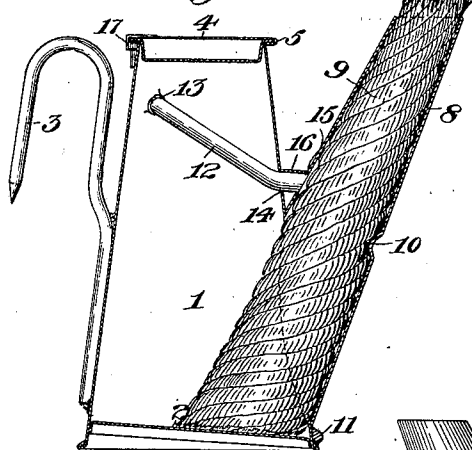


Fig. 3.

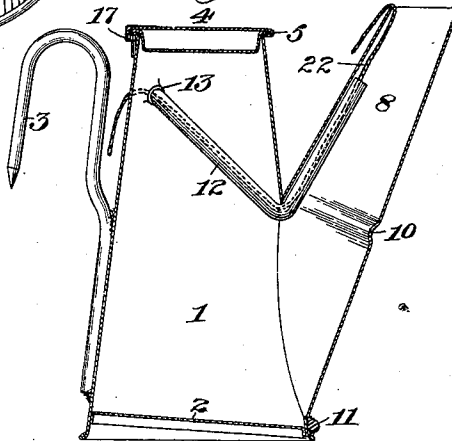


Fig. 4.

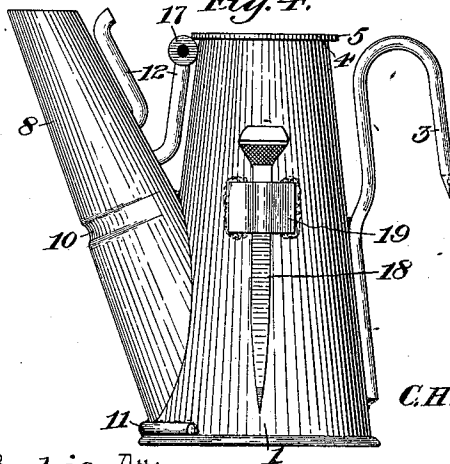
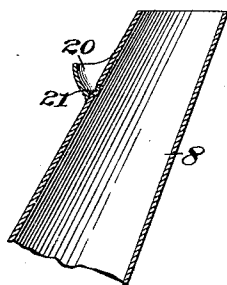


Fig. 5.



Witnesses

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By his Attorneys.

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UNITED STATES PATENT OFFICE.

CHARLES H. HOBSON, OF MOUNT CARMEL, PENNSYLVANIA, ASSIGNOR OF
ONE-HALF TO WILLIAM S. THIRLWELL, OF SAME PLACE.

MINER'S LAMP.

SPECIFICATION forming part of Letters Patent No. 567,099, dated September 1, 1896.

Application filed April 24, 1895. Serial No. 547,020. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. HOBSON, a citizen of the United States, residing at Mount Carmel, in the county of Northumberland and State of Pennsylvania, have invented a new and useful Miner's Lamp, of which the following is a specification.

This invention relates to an improvement in miners' lamps.

10 The object of the present invention is to simplify and improve the construction of portable lamps, such as are used by miners, engineers, and others, and to provide a compact and convenient lamp constructed in such
15 manner as to afford a greater and more satisfactory light, produce less smoke, and be capable of being quickly and easily regulated without the necessity of using a picker to raise the wick.

20 Other advantages and points of superiority will appear in the course of the subjoined description.

To accomplish the objects above enumerated, the invention consists in certain novel
25 features and details of construction as herein-after fully described, illustrated in the drawings, and finally embodied in the claims.

In the accompanying drawings, Figure 1 is a perspective view of a lamp constructed in
30 accordance with this invention. Fig. 2 is a vertical section through the same, showing the interior construction. Fig. 3 is a similar view illustrating a slight change in the form and arrangement of the air-tube. Fig. 4 is
35 a side elevation of the lamp, showing different forms and arrangements of air-tubes. Fig. 5 is a vertical section through the upper portion of the spout of the lamp, showing a modification in the means for admitting air
40 thereto.

Similar numerals of reference designate corresponding parts in the various figures of the drawings.

Referring to the drawings, 1 designates the
45 main body of the lamp, which may be of any preferred form and construction, being shown in the form of a conical or tapering metallic vessel, larger at the base than at the top, and adapted to receive a supply of illuminating-
50 oil. The body or vessel 1 is provided with an inclined bottom 2, which inclines downwardly toward that side of the vessel upon which the spout is located and where the

wick enters, by means of which arrangement the oil is fed to said wick as long as any re- 55
mains within the body of the lamp.

3 represents the usual pointed inverted-U-shaped hook, by means of which the lamp may be secured to the hat, belt, or clothing
60 of the user.

The upper end of the body of the lamp is closed by means of a hinged top or cap 4, which fits snugly within said upper end and is provided with an annular flange or top plate 5, overlapping the upper edge of the
65 body 1. The top or cap 4 is made to fit snugly and tightly within the opening at the upper end of the body, so as to form a perfectly airtight joint, and at one side is provided with a loop or eye 6, by means of which said cap
70 is hinged to a similar loop attached to the exterior wall of the body of the lamp through the medium of an interposed link or loop 7 of wire. The hinged connection described
75 permits the cap or top 4 to accommodate itself perfectly to the upper opening in the lamp-body.

8 designates an inclined spout connected with the main body of the lamp at or near the base thereof, as shown, and 9 is a lamp-
80 wick passing through said spout and having its lower end arranged within the body 1. In order to retain said lamp-wick in position, the spout is creased to form an inwardly-projecting annular ridge 10, which engages
85 said wick and prevents accidental displacement thereof. Just beneath the spout 8, and at the forward lower edge of the body 1, a stout piece of wire 11 is soldered or otherwise
90 secured, the object of which is to reinforce the lamp at this point and form a projection, enabling the miner to strike said projection against any convenient point and thereby to
95 throw the lamp-wick up or down, thus doing away with the necessity for lamp-wick-adjusting devices and rendering the lamp simpler and less expensive in construction.

12 designates an air-tube, one end of which is located preferably adjacent to the top opening in the body of the lamp and upon
100 the outside thereof, from whence said tube extends through an opening 13 in the lamp and into the interior of the oil-chamber, passing out again through an opening 14 at the front of the lamp, extending thence horizon-
105 tally to and entering a perforation 15 in the

inclined spout 8, as shown. By reason of the tube 12 passing through the body of the lamp said tube is supported and at the same time protected against injury and does not detract from the appearance of the lamp. Where said air-tube extends between the body 1 and spout 8, it is covered and protected by means of a metallic sheath 16, soldered over and around said tube. Where said air-tube passes through the oil-chamber, it inclines downwardly, as shown, and at its upper end it is provided with a screw-cap 17, which is centrally perforated to admit air to said tube, and which may be removed when it is desired to admit a greater supply of air through the tube. By means of the construction above described fresh air is passed through the air-tube and supplied to the wick-tube or spout, and passing upwardly and out through said spout causes a more brilliant light and has the effect of decreasing the amount of smoke, which is so objectionable in this class of lamps. The fresh air admitted through said tube gives new life to the flame and produces a much more satisfactory light.

18 indicates a pointed picker for adjusting the wick should it get out of order or bind within the spout, said picker being supported within a small bracket in the form of a loop 19, secured to the exterior wall of the lamp.

In Fig. 3 I have shown the tube for admitting the air to the spout or wick-tube 8 passing downwardly through the oil-chamber and upwardly through the communicating-opening between the main body of the lamp and the inclined spout, instead of passing said air-tube through openings therein and across the space between the lamp and spout or wick-tube, as in Figs. 1 and 2.

In Fig. 4 I have shown how the air-tube may be located entirely without or upon the exterior of the lamp-body with one end entering a perforation in the spout or wick-tube.

Fig. 5 shows a modification in the means for supplying fresh air to the spout or wick-tube, consisting of a small cup 20, partially embracing the spout, a perforation 21 in said spout being arranged at the base of said cup, the latter being thereby adapted to catch any oil which may escape through said perforation and to prevent the same from running down said spout and gumming up the lamp.

From the foregoing description it will be apparent that by reason of the air-tight cap or cover a sort of vacuum is produced in the upper portion of the lamp-body, the effect of which is to impede the flow of oil through the wicking in the spout or tube 8. The inflow of fresh air through the air-tube will serve to freshen up the flame, and the latter will draw the oil from the oil-chamber according to the requirement of the flame, thus economizing the oil, drawing the latter only as it is needed, and thereby preventing the oil from escaping from the spout or wick-tube and preserving

the lamp in clean condition. Should the air-tube become clogged with oil, the perforation therein may be cleaned and rendered free by means of a cord 22, which extends entirely through said tube and sufficiently beyond either end thereof to permit the same to be grasped by the fingers and reciprocated, which will have the effect of removing any accumulation therein and freeing the air-passage.

It will be apparent that changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. In a miner's lamp, the combination with the main body thereof forming the oil-receptacle, of a spout or wick-tube communicating with said receptacle at or near the base, and an air-supply tube connected with the lamp and passing from the body of the lamp into the wick-tube or spout in such manner as to serve the double purpose of a brace for the spout and a conduit for supplying fresh air to the flame, substantially as described.

2. In a miner's lamp, the combination with the main body of the lamp, of a spout or wick-tube communicating therewith, and an air-supply pipe or tube attached thereto and communicating with the spout or wick-tube, said air-tube being provided with a perforated and removable screw-cap whereby the amount of air admitted through said tube may be regulated, substantially as specified.

3. In a miner's lamp, the main body thereof, and a spout or wick-tube communicating with said body, in combination with an air-tube passing through the oil-chamber and extending between the body of the lamp and said spout or wick-tube, and a protecting-sheath covering said air-tube, substantially as described.

4. In a miner's lamp, the combination with the main body thereof, of a spout or wick-tube connected therewith, and a reinforcing-wire secured to the body of the lamp beneath said spout or wick-tube and above the plane of the lower edge of said body, for the purpose and substantially as described.

5. In a miner's lamp, the main body thereof, and a spout or wick-tube communicating therewith, in combination with an air-tube communicating with said spout or wick-tube and a cleaning device for said air-tube in the form of a string passing through said air-tube, substantially in the manner and for the purpose described.

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

CHARLES H. HOBSON.

Witnesses:

S. FORRESTER,
G. G. WHITE.