H. L. HOWSE.

Oil Cook-Stove Lamp.

No. 200,913. **Patented March 5, 1878.**

Fig: 1.

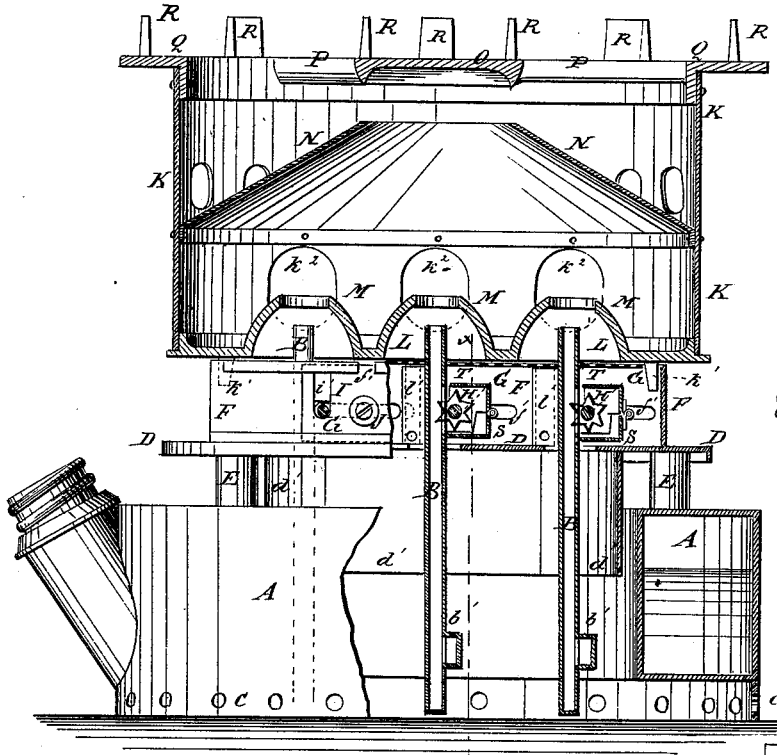


Fig. 3.

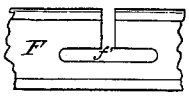


Fig. 4.

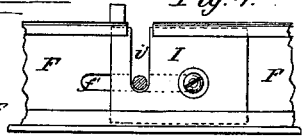
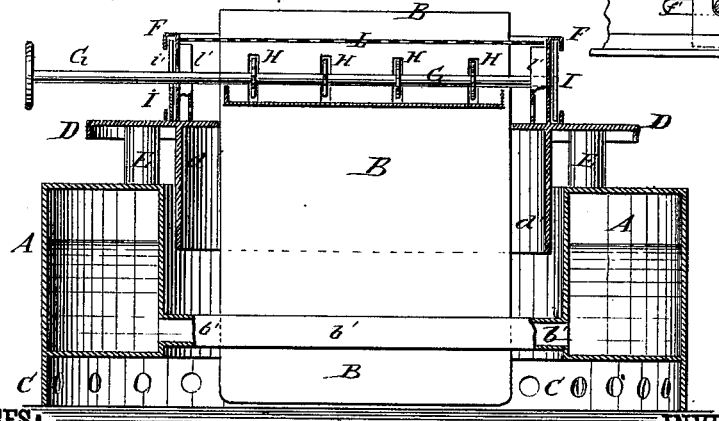


Fig: 2.



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HENRY L. HOWSE, OF SACRAMENTO, CALIFORNIA.

IMPROVEMENT IN OIL COOK-STOVE LAMPS.

Specification forming part of Letters Patent No. **200,913**, dated March 5, 1878; application filed August 18, 1877.

To all whom it may concern:

Be it known that I, HENRY L. HOWSE, of Sacramento, in the county of Sacramento and State of California, have invented a new and useful Improvement in Oil Cook-Stove Lamp, of which the following is a specification:

Figure 1 is a side view, partly in section, of my improved device. Fig. 2 is a detail section of the lower part of the same, taken through the line *x x*, Fig. 1. Fig. 3 is a detail view of the slotted frame; and Fig. 4 shows the plate and bolt connected therewith.

Similar letters of reference indicate corresponding parts.

The object of this invention is to improve the construction of oil cook-stove lamps, so as to make them more effective in operation and more convenient in use.

The invention will first be described in connection with the drawing, and then pointed out in the claims.

A represents the oil-reservoir, which has a round opening formed through it to receive the wick-tubes B. The wick-tubes B are made thin, a little narrower than the opening through the reservoir A, and extend down to or a little below the bottom of the said reservoir A. The lower parts of the wick-tubes B are connected with the oil-reservoir A by short tubes *b'*, through which the oil passes into the said wick-tubes.

The oil-reservoir A is provided with a downwardly-projecting flange, C, which serves as a foot for said reservoir, and has numerous holes formed through it to allow air to pass to and around the wick-tubes.

D is a plate or shield, which is connected with, and supported from, the top of the reservoir A by means of short posts E, so as to leave an air-space beneath it. The shield D has wide slots formed through it, through which tubes B pass, so that the air may pass up upon both sides of said tubes B.

To the lower side of the shield D is attached a ring-flange, *d'*, which is made of such a diameter as to pass down into the cavity of the oil-reservoir A, and leave a space all around between it and the inner wall of the said reservoir A, to cause the air to pass downward before it passes up to the flames, and thus insure a steady combustion, and prevent the flame from being affected by cross-currents of air. To the upper side of the shield D is attached the frame F, in the sides of which are formed right-angled slots *f'* to receive the ratchet-rods G. To the rods G are attached a number of ratchet or toothed wheels, H, which project through slots in the sides of the wick-tubes B, to adjust the wicks in said tubes. The ends of the rods G project, and have buttons or knobs attached to them, for convenience in operating them.

The ratchet-rods G are secured in place adjustably and detachably by plates I, which slide in ways upon the outer sides of the side bars of the frame F, and have vertical slots *i'* formed in them to receive the rods G, so that when the plates I have been slid along to bring their slots *i'* opposite the vertical arms of the slots *f'* in the bars of the frame F, the said ratchet-rods G may be lifted out or detached. When the ratchet-rods G have been inserted in the vertical slots of the frame F and plates I, and the said plates I have been slid along said frame F, the rods G will be carried into the horizontal arms of the slots *f'* in the frame F, and will be securely held in place.

The plates I are secured in place, when adjusted, by clamping-bolts J, passing through holes in the said plates I and through the horizontal arms of the slots in the frame F. This construction also enables the ratchet-rods G to be moved toward or from the wick-tubes B, to adjust the ratchet-wheels H to work accurately with wicks of any thickness.

K is the draft-chimney, the bottom of which is made of cast-iron, and rests upon the top of the frame F, and has projections k^1 formed upon its lower side, which enter the corners of the frame F, and thus keep the said chimney in place.

Beneath the bottom of the chimney K is placed a plate, L, of wire-gauze or finely-perforated sheet metal, which has slots formed in it for the passage of the wick-tubes B, and which rests upon the upper ends of short vertical hollow studs *l'* attached to the frame F. The studs *l'* have holes formed in them to allow air to pass in and out. The gauze L prevents the flame from passing down, while it allows the air to pass up freely.

In the bottom of the chimney K, at the sides of the frame F, are formed a number of holes, to allow a portion of air to pass up into the chimney. In the bottom of the chimney K are formed long and narrow guides or cones M, to receive, and rise a little above, the tops of the wick-tubes B, to guide the ascending currents of air and cause them to strike the flames in the proper direction. In the chimney K, directly opposite the edges of the wick-tubes B, are formed holes k^2, in which are secured plates of mica, so that the condition of the flames can be readily inspected.

To the middle part of the chimney K is secured the lower edge of the conical shell N, to contract the ascending currents of hot air and guide them more directly against the radiator O, which is a circular plate of iron, having a circular recess formed in its lower side, and having its edges beveled. From the radiator O arms P extend to the ring Q, which rests upon the top of the chimney K. The radiator O, arms P, and ring Q are cast in one piece, and form a rack for a vessel to rest upon.

In the chimney K, just above the point where the conical shell N connects with it, are formed holes for air to pass through to come in contact with the outer surface of the cone N and be heated.

Upon the top or rack O P Q are formed projections R for a vessel to stand upon to allow the heated air to escape. To the wick-tubes B, just below the slots through which the ratchet-wheels H work, are secured boxes S, to receive any oil that may escape through said slots, and which are provided with hinged covers T, as shown in Figs. 1 and 2.

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

1. The combination of the shield D with the oil-reservoir A, the wick-tubes B, and the frame F, substantially as herein shown and described.

2. The frame F, having angular slots f' formed in its side bars to receive the ratchet-stems G, the plates I, provided with the slots i' to receive the ratchet-stems G, and the clamping-bolts J, for securing them adjustably to said frame, substantially as herein shown and described.

3. The combination of the ring-flange d' with the shield D, the oil-reservoir A, and the wick-tubes B, substantially as herein shown and described.

4. The combination of the drip-boxes S, provided with the covers T, with the wick-tubes B, substantially as herein shown and described.

5. The combination of the plate L, of wire-gauze or finely-perforated sheet metal, and the hollow studs l' with the frame F, the wick-tubes B, and the cast bottom of the chimney K, substantially as herein shown and described.

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