

## Coal Oil Lamp.

Patented Dec. 2, 1862.



witnesses  
Charles S. Foster  
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# UNITED STATES PATENT OFFICE.

JOSEPH M. HANCOCK, OF PHILADELPHIA, PENNSYLVANIA.

## IMPROVEMENT IN COAL-OIL LAMPS.

Specification forming part of Letters Patent No. 37,080, dated December 2, 1862.

*To all whom it may concern:*

Be it known that I, J. M. HANCOCK, of Philadelphia, Pennsylvania, have invented an Improvement in Coal-Oil Lamps; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists of a certain arrangement and construction of parts forming a coal-oil lamp, the flame of which is caused, by the aid of a supplementary lamp, to burn with brilliancy and unaccompanied with the usual smoke.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation.

On reference to the accompanying drawings, which form a part of this specification, Figure 1 is a vertical section, and Fig. 2 a plan view, of my improved coal-oil lamp.

A is the dish shaped base of the lamp, and in the center of this base is a small reservoir, B, containing a supply of coal-oil, and having a detachable wick-tube and wick, the whole forming a supplementary lamp, the flame of which may be of very limited dimensions.

This lamp is surrounded by a tapering tube, E, (larger at the bottom than at the top,) which rests on the dish-shaped base A, the upper end of the tube terminating at a point a short distance below the top of the main reservoir D, which is secured to or forms a part of another tapering tube, F, the upper end of the latter being connected by strips *m m* to the top of the tube E, and fitting snugly at its lower end to the same tube, there being an air-space between the two tubes, for an object described hereinafter. The main reservoir D is provided with two flat wick-tubes, G and G', inclining toward each other, so that their upper ends nearly meet. Between these tubes is a hollow tapering cap, H, covering the opening on the top of the tube E, the opening at the top of the cap being situated midway between the two wick-tubes G G', and in proximity to the latter. The lower end of the tapering tube E is hinged to the base A at the point *a*, and is held down in

its proper position by a rod, H', one end of which is attached to the tube near the bottom of the reservoir D, the other end being connected to the edge of the base A. On detaching one end of this rod the tube E, with its reservoir and other apparatus, may be moved to an inclined position, thereby allowing access to be had to the wick-tube C of the supplementary lamp.

The flame of this lamp causes the air to rush through openings *x x* into the tube E, and upward through the opening in the cap H, on passing through which the air impinges against the wicks in the tubes G G' with such force and in such a quantity as to cause the flames to burn with brilliancy and unaccompanied with the usual smoke, the ordinary glass chimney being dispensed with.

In order that too great a heat may not be imparted to the reservoir D, air is allowed to pass through openings *y y* into the space between the tubes E and F, this air meeting (at the cap H) the volume of air which passes through the tube E. The reservoir D is thus maintained comparatively cool by a supply of cold air, which is constantly passing through the space between the two tubes.

Although I prefer the use of the two wick-tubes, as described, one wick-tube only may be employed. It is important, however, whether one or two wicks be used, that the opening in the top of the cap H should bear the position illustrated in the drawings in relation to the upper end of the wicks—that is, the opening should be some distance below the top of the wick, and the wick-tube should be so inclined or curved that the upper end of the wick may be directly over the said opening.

I do not desire to claim, broadly, the use of a supplementary lamp situated beneath the main lamp, so that the flame of the latter may be increased in brilliancy by an artificial draft caused by the supplementary lamp; but

I claim as my invention and desire to secure by Letters Patent—

1. Any suitable reservoir, D, in which is a tube forming an air-passage, the latter being surmounted by a cap, H, and said reservoir having one or two wick-tubes, G and G', when the latter are formed and arranged in respect to the opening in the top of the cap substan-

tially as specified, and when a supply of air is transmitted to the cap through the aforesaid tube by the agency of supplementary lamp.

2. The tube E and its reservoir D, when the former is hinged to a suitable base, A, and is arranged to inclose a supplementary lamp, B.

3. The arrangement of the tube E, tube F, reservoir D, and cap H.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOS. M. HANCOCK.

Witnesses:

JOHN WHITE,  
CHARLES HOWSON.