C. F. MARTINE.

Lamp.

No. 50,019. Patented Sept. 19, 1865.

Fig. 3

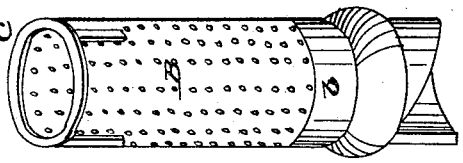


Fig. 2

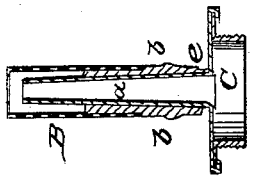
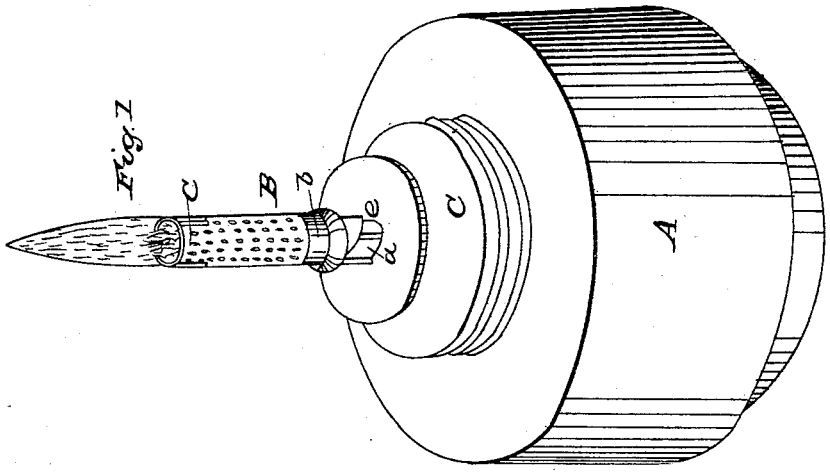


Fig. 1



INVENTOR

Chas. F. Martine

WITNESSES

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UNITED STATES PATENT OFFICE.

CHARLES F. MARTINE, OF DORCHESTER, MASSACHUSETTS.

IMPROVEMENT IN LAMPS.

Specification forming part of Letters Patent No. **50,019**, dated September 19, 1865; antedated September 10, 1865.

To all whom it may concern:

Be it known that I, CHARLES F. MARTINE, of Dorchester, in the county of Norfolk, and State of Massachusetts, have invented an Improvement in Lamps, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of a lamp having my improvements applied thereto. Fig. 2 is a vertical section through the wick-tube and the attachment which constitutes my improvement. Fig. 3 is an enlarged view of the attachment.

My invention relates to that class of lamps which are used without a chimney, and which, from the imperfect combustion of the kerosene or other fluid used, are liable to smoke. To obviate this and to insure more perfect combustion, the wick-tube has been surrounded with a perforated cylinder, the heat causing the air to rush up between it and the wick-tube into contact with the flame.

My invention has for its object to still further improve the combustion, and consists in attaching a flange or flat ring to the upper end of a perforated cylinder which surrounds the wick-tube, the flange extending inward and forming a shoulder, against which the air strikes and is deflected against the lower portion of the flame, thus more effectually aiding the combustion and preventing the escape of smoke or gases, when used in combination with a base or support of wood or other non-conducting material which fits snugly over the wick-tube, and to which the perforated metal cylinder is attached, by means of which the heat is prevented from being transmitted to the wick-tube, and all danger of explosion thus avoided. This base may also be made adjustable, so as to regulate the height of the flange or flat ring above the top of the wick-tube.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A is the lamp; *a*, the wick-tube, over which is fitted a short cylinder, *b*, of wood or other suitable non-conducting material, which serves as a support or base for the perforated cylinder or tube B, which encircles the wick-tube *a* and extends a little above it, as seen in Fig. 2. The cylinder B is of somewhat greater diameter than the wick-tube, and is provided at its upper end with a flange or flat ring, *c*, which forms a shoulder, against which the air strikes as it passes up between the outer cylinder and wick-tube, and is deflected against the base of the flame which rests on the top of the flange *c*, instead of coming into contact with the wick-tube, which is thus prevented from becoming heated, and the supply of air thus thrown into the flame greatly aids the combustion of the smoke and gases and prevents them from escaping into the apartment. The heat of the perforated cylinder B is also prevented from being transmitted to the wick-tube by the wooden base *b*, and the wick-tube is thus kept perfectly cool, and all danger of explosion thereby prevented.

To obtain the best results, the flange *c* should be a little below the top of the wick, and to effect this the cylinder B, with its base, is made adjustable in height by means of a notch in the base *b*, into which fits an inclined projection, *e*, secured to the cap C, by means of which, as the base is turned in one direction or the other, it is raised or lowered, as may be required; or, instead of this device, the base *b* may be simply made to fit the wick-tube with sufficient friction to remain in place when adjusted to the required height.

It is evident that the form and dimensions of the perforated cylinder B may be varied, it being sometimes preferable to make it flat or oval instead of round, as shown, the wick-tube being made of a corresponding form; and it is also evident that the cylinder may be made of other material through which the air will pass, such as wire-gauze, without departing from the spirit of my invention, so long as the flange or ring *c* be retained; but the construction here shown is that which I prefer.

A lamp having the above-described attachment will burn with a clear, steady flame of great size and brightness, and can be carried about the house without being extinguished by currents of air.

With my attachment the heavier kinds of benzine or the lighter descriptions of kerosene may be used without danger of explo-

sion. My attachment is also applicable to the ordinary fluid-lamp, and can be furnished at an extremely small cost.

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

The perforated cylinder B, with its flange or ring *c*, in combination with a non-conducting base or support, *b*, to which the perforated cylinder is attached, operating substantially as set forth, for the purpose specified.

CHAS. F. MARTINE.

Witnesses:

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