

J. R. COLE.
Lamp Burner.

No. 94,811.

Patented Sept. 14, 1869.

Fig. 1

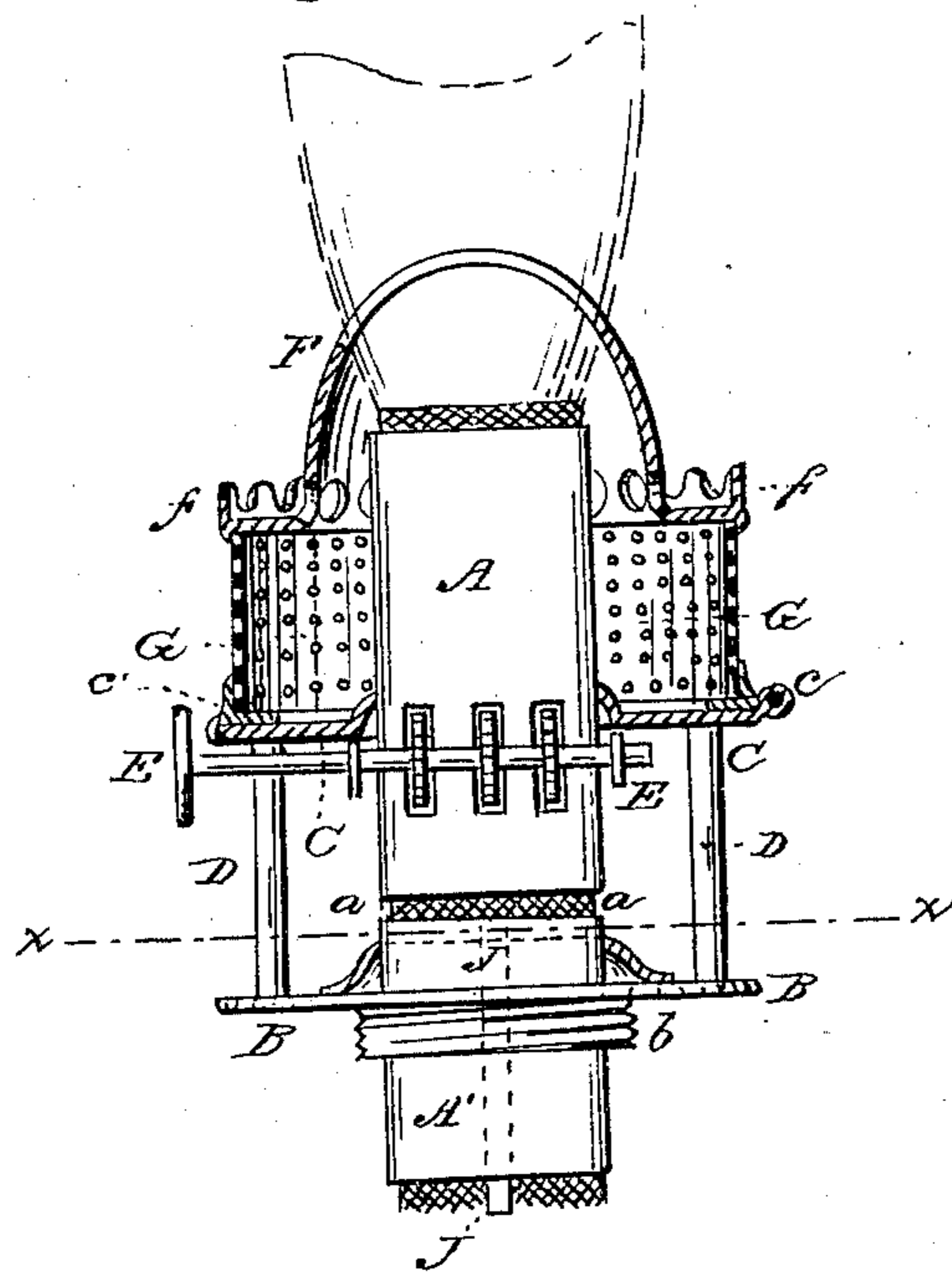
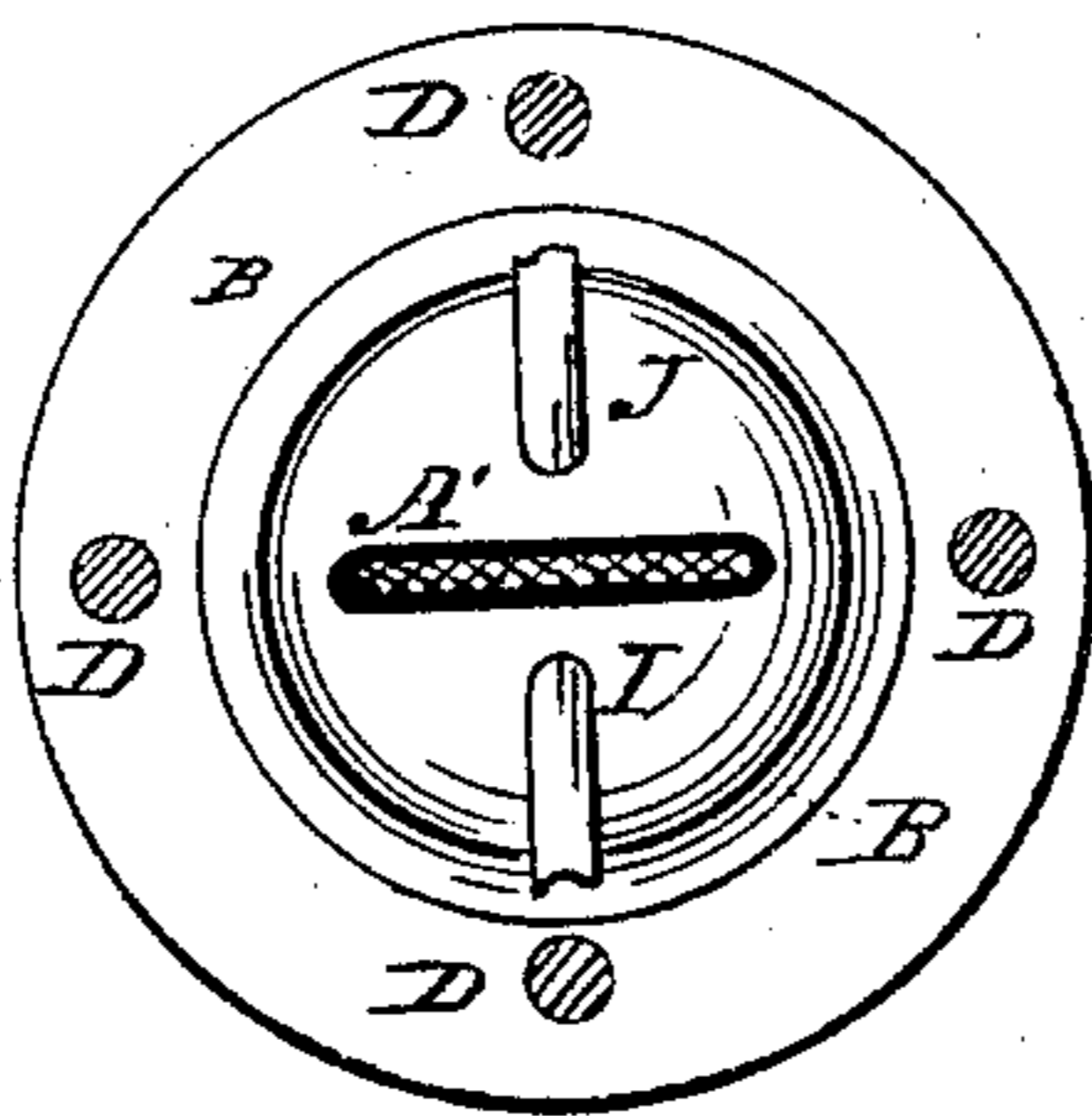


Fig. 2



Witnesses
G. A. Pettit
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Inventor
J. R. Cole
By *[Signature]*
Attorneys.

United States Patent Office.

JAMES R. COLE, OF DEMOPOLIS, ALABAMA.

Letters Patent No. 94,811, dated September 14, 1869.

IMPROVEMENT IN LAMP-BURNERS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JAMES R. COLE, of Demopolis, in the county of Marengo, and State of Alabama, have invented a new and improved Kerosene-Burner; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side view, and

Figure 2, a horizontal section through line *xx* of fig. 1.

The object of this invention is to prevent the danger of explosions arising from the heating of the wick-tube and the generation of gas in the upper part of the lamp. This object is accomplished by providing means for such gas to escape from the lamp without doing any damage, and by so constructing the lamp that the heat will not be so readily transmitted or conducted from the upper to the lower end of the wick-tube, while the wick will not be so liable to fall from the tube into the lamp when accidentally turned down too far.

In the drawings—

A A' is the wick-tube, consisting of two parts, separated, as shown at *a*.

The lower part, A', is attached to the plate B, which screws into the lamp, at *b*.

The upper part, A, is supported by a plate, C, which rests upon posts D D, projecting up from the plate B.

The wick-ratchet E is supported by the upper plate, and operates in connection with the part A of the tube.

F is the cap or cone that surrounds and steadies the flame, its base-flange *f* supporting the chimney in the usual manner.

Between this base-flange and the plate is a ring, G, of finely-foraminated metal, attached firmly to the base-flange, but connected to the plate C only by a hinge, *c*, and catch *c'*, so that the whole cap (including the foraminated ring, which substantially forms a portion of the cap) can be turned back on the hinge, away from the flame.

There is no opening of any kind through the plate C, so that there can be no communication between the flame and the space below the upper plate.

Two (or more) bent tubes I J are provided, which

extend through the lower plate B, connecting the interior of the globe with the open air, so as to allow the inflammable vapor that may form in the lamp to escape, and fresh air to take its place.

To facilitate the escape of the gas, the tubes are made of different lengths, whereby a slight circuit or current of air into the globe through one, and out through the other, is established by the well-known operation of heat upon the air in the globe, and by the difference between the density and specific gravity of air and of inflammable vapor or gas produced from common hydrocarbons, which causes the air to expel the gas, and take its place.

The whole device is exceedingly simple and inexpensive in construction and operation, and is safer than any other heretofore introduced into public use. The flame cannot be communicated to the oil, or to gas in the upper part of the lamp. Even if gas were rising around the ring G, and there were a flame inside of said ring, the gas could not be set on fire, for the reason that the flame could not ignite it through the small holes of the ring. If the wick should be turned down too far, so as to escape from the ratchet, it would not fall from the tube, in consequence of the want of continuity in the walls of the tube, at *a*. For the same reason, the heat cannot be communicated from the upper part of the burner to the plate B and lower part of the wick-tube, so that there is very little generation of inflammable vapor in the body of the lamp.

I do not claim any specific part of the above-described device as my invention when considered independently of the other parts; but

What I do claim, and desire to secure by Letters Patent, is—

A lamp-burner constructed with the divided wick-tube A A', the plates B C, the latter being air-tight, the two tubes I J, of different lengths, the foraminated ring G, the cap F, the ratchet-wheel E, the posts D D, the hinge *c*, and the catch *c'*, all arranged and operating in the manner and for the purposes described.

To the above specification of my improvement, I have set my hand, this 13th day of January, 1869.

JAS. R. COLE.

Witnesses:

JNO. W. DEREEN,
J. S. HARWELL.