

(No Model.)

T. FITZGERALD.  
KEROSENE LAMP BURNER.

No. 377,195.

Patented Jan. 31, 1888.

FIG. 1.

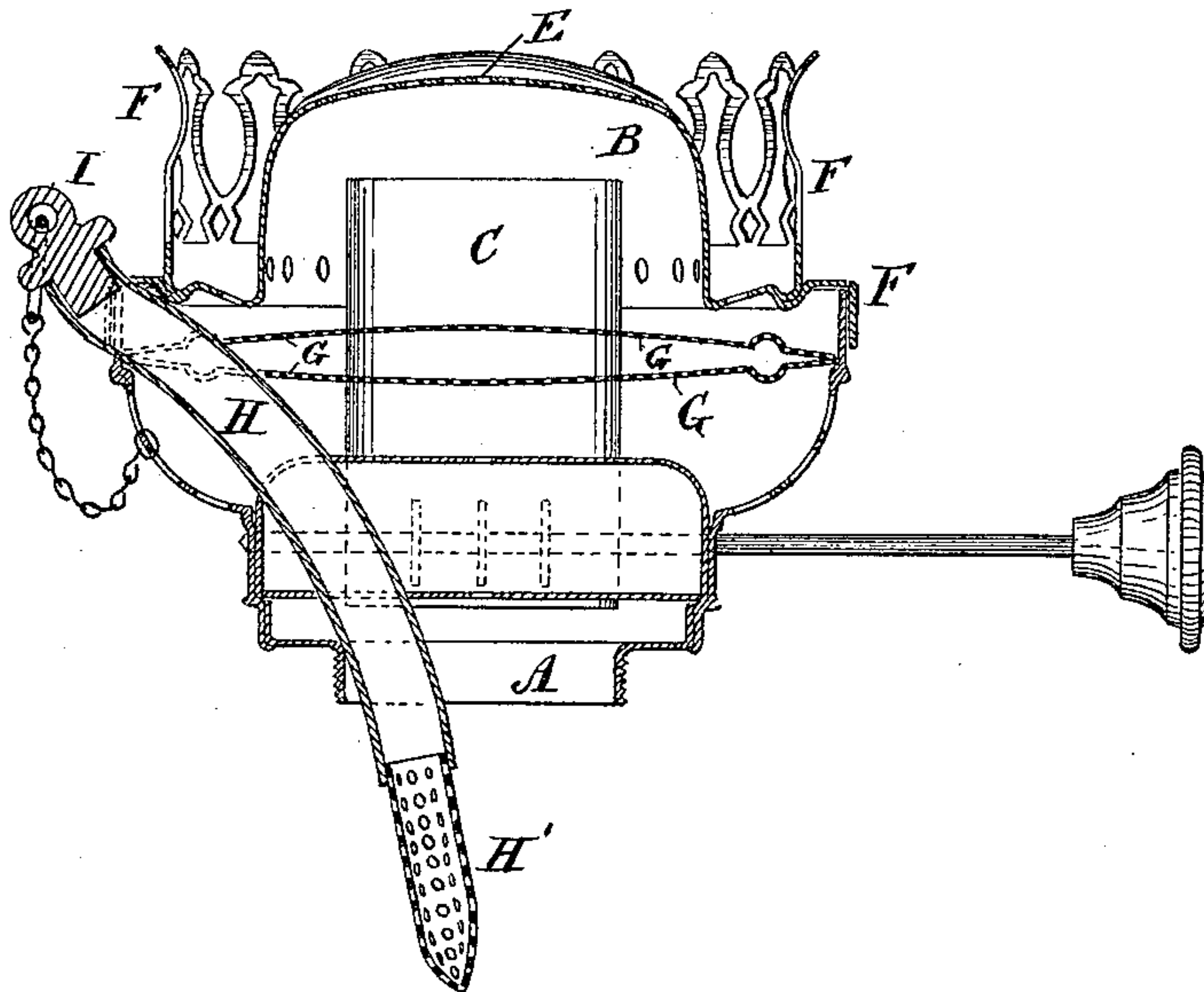


FIG. 2.

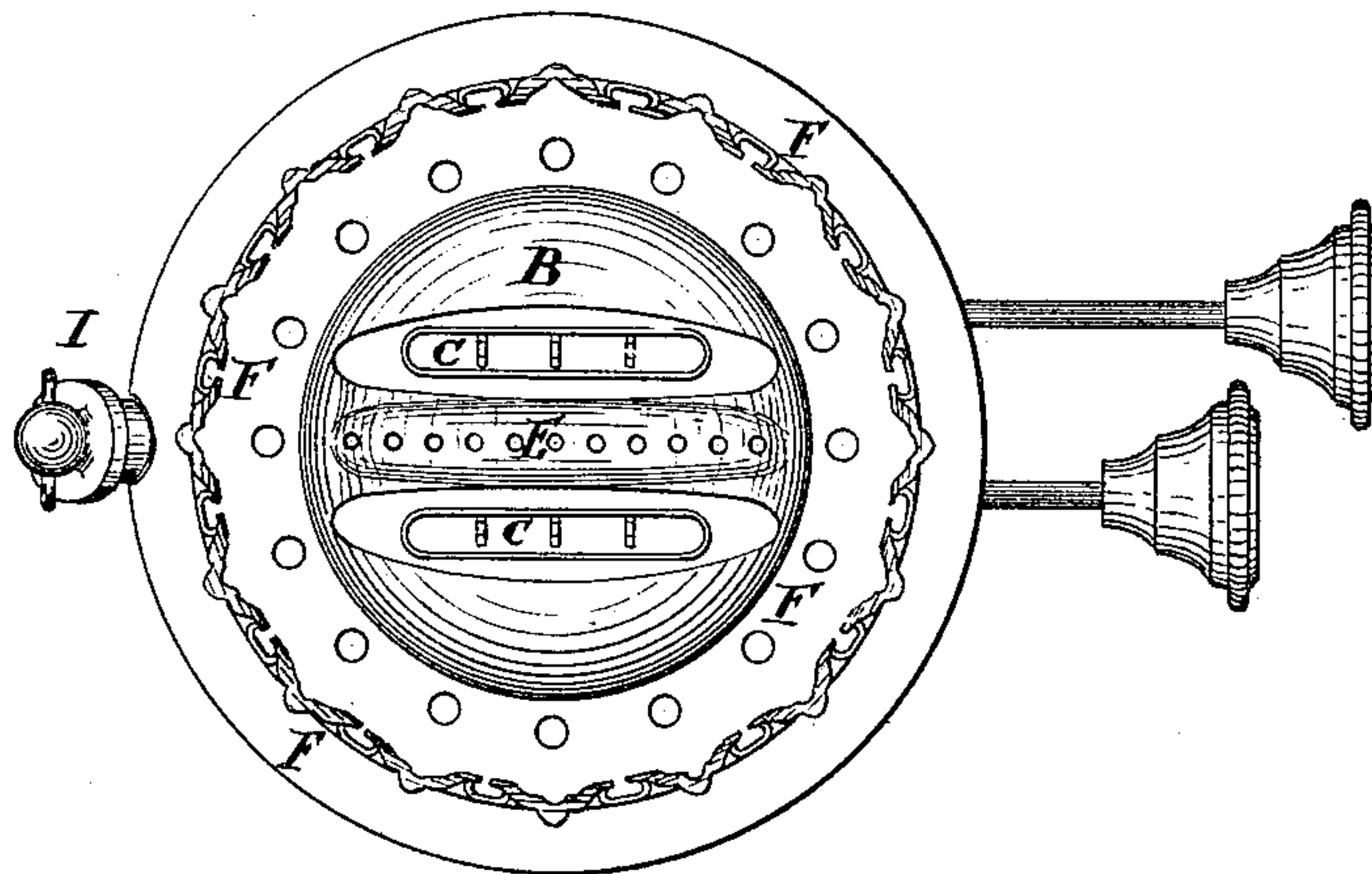
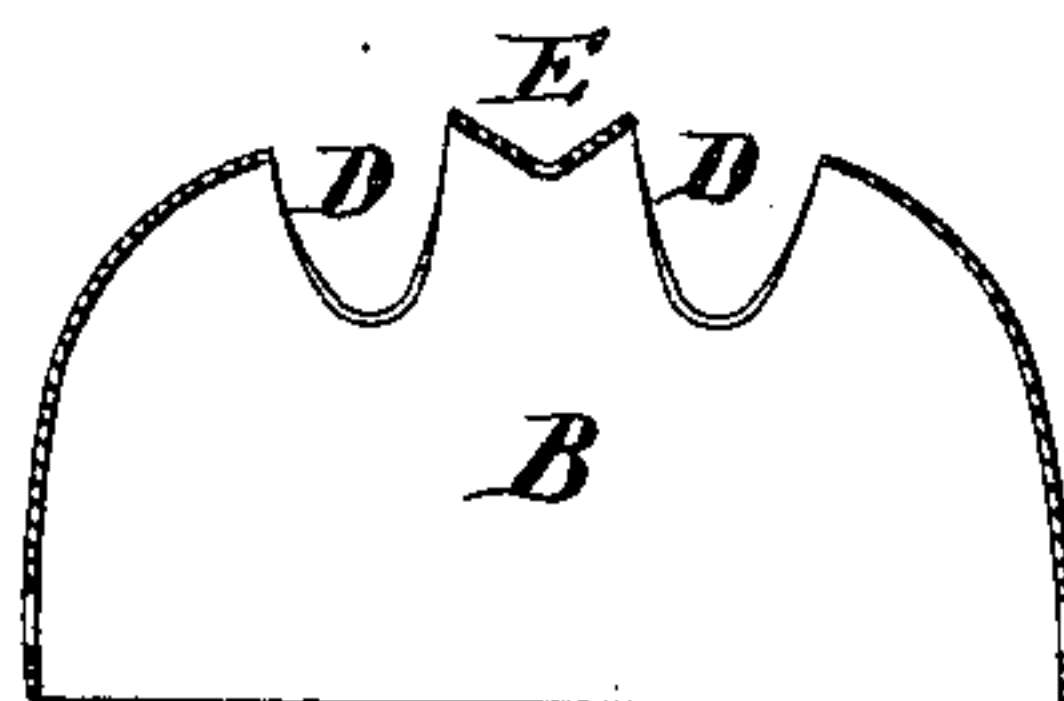


FIG. 3.



Witnesses.

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# UNITED STATES PATENT OFFICE.

THOMAS FITZGERALD, OF REVERE, MASSACHUSETTS.

## KEROSENE-LAMP BURNER.

SPECIFICATION forming part of Letters Patent No. 377,195, dated January 31, 1888.

Application filed July 16, 1884. Serial No. 137,834. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS FITZGERALD, a citizen of the United States, residing at Revere, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Kerosene-Lamp Burners, of which the following is a specification.

My invention relates to certain improvements in lamp-burners in which two separate wick-tubes are used in connection with a single cone having two openings corresponding with the wick-tubes, and known as "duplex burners."

In the Patent No. 234,762, granted to me November 23, 1880, I have shown a single cone or hood having two openings with a partition attached to the under side of the central top of the cone and extending downward between the wick-tubes. I have also shown in the said patent a filling-tube which passes down through the base of the burner, and having a plug or stopper attached to the cone, so that in filling the lamp it was necessary to raise the cone to uncover the filling-tube.

In my present invention I dispense with the partition between the wick-tubes and make a groove lengthwise of the strip that separates the openings in the cone, and further make a series of perforations in the bottom of the said groove.

Referring to the accompanying drawings, Figure 1 is a vertical section of a burner embodying my invention. Fig. 2 is a top view of the same, and Fig. 3 is a section of the cone or hood.

A is the cap to be secured to the lamp.

B is the cone or hood attached to the frame and chimney-supporter F, which latter is fitted to the perforated base F'.

C C are the wick-tubes.

G G are perforated diaphragms in common use.

D D are the openings in the cone B, arranged over the wick-tubes C C.

E is a division or partition between the openings D D, and is formed with a depression or groove lengthwise of its center for the purpose of directing the air toward the inner side of the flame of each wick, so as to cause a brighter and more steady light. In order to still further add to the brilliancy and steadiness of the flames, I make a series of perforations in the division or partition E. By having the perforated partition on or about on a level with the

tops of the openings D the space between the flames is supplied with heated air.

When in use, a current of air is drawn up through the combustion chamber or cone, is heated, and then divided at the upper ends of the wick-tubes by the partition E, and fed equally to the two flame-openings, whereby one flame, if it be stronger than the other, will not draw a greater quantity of air to itself and so tend to weaken the other flame; also, the free admission of air through the partition E, between the planes, supplies with heated air the vacuum which would otherwise exist over the partition between the flames, and so prevents the flames from uniting, as they otherwise would do. A more perfect and uniform combustion takes place from the even distribution of heated air to and between the two flames, thereby causing them to burn with greater brilliancy without smoke or flickering.

H is a filling-tube, the upper end of which extends through the edge of the base portion F' and the edge of the upper frame, F, outside of the chimney-support. The mouth of the tube is covered by a plug, I, or a screw-cap may be used. The tube H extends down into the lamp to a point below the bottom of the wick-tubes, and is provided at its lower end with a perforated tube, H', closed at its lower end for the purpose of preventing any liability of flame communicating with the contents of the lamp through the escaping gas in case of the loss or misplacement of the cap or plug. In fact the lamp can be filled while lighted without danger of explosion.

Instead of the perforations in the division or partition E, a narrow slit extending the length of the same may be made.

What I claim as my invention is—

In a kerosene-lamp burner, the single cone B, provided with the openings D D and the grooved and perforated division or partition E, the latter being on a level, or nearly so, with the tops of the openings D D, in combination with the wick-tubes C C, as and for the purposes set forth.

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

THOMAS FITZGERALD.

Witnesses:

J. H. ADAMS,  
E. PLANTA.