

(No Model.)

2 Sheets—Sheet 1.

J. BURNET, Jr.

LAMP.

No. 324,747.

Patented Aug. 18, 1885.

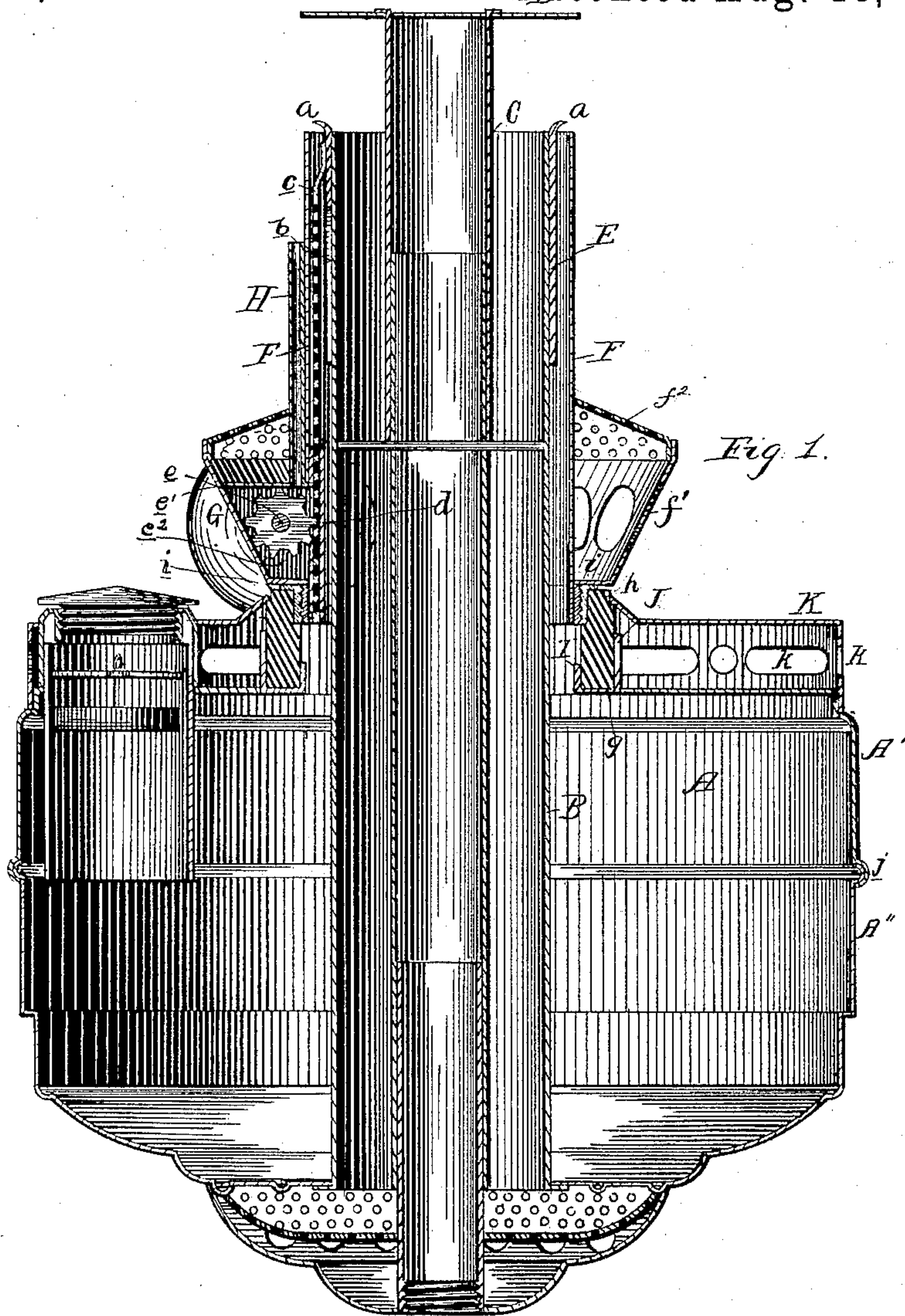
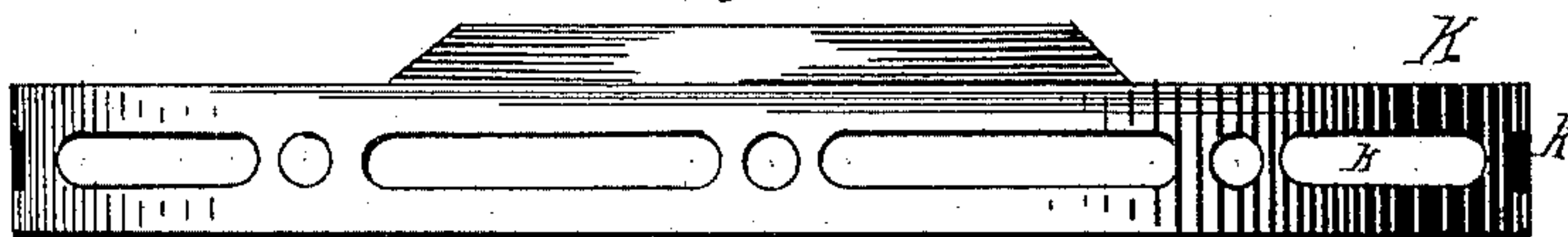


Fig. 2.



WITNESSES:

WITNESSES.  
H. J. Robertson

Wm Turner

INVENTOR

Jacob Burnet, Jr

BY *T. W. Robertson*

ATTORNEY

(No Model.)

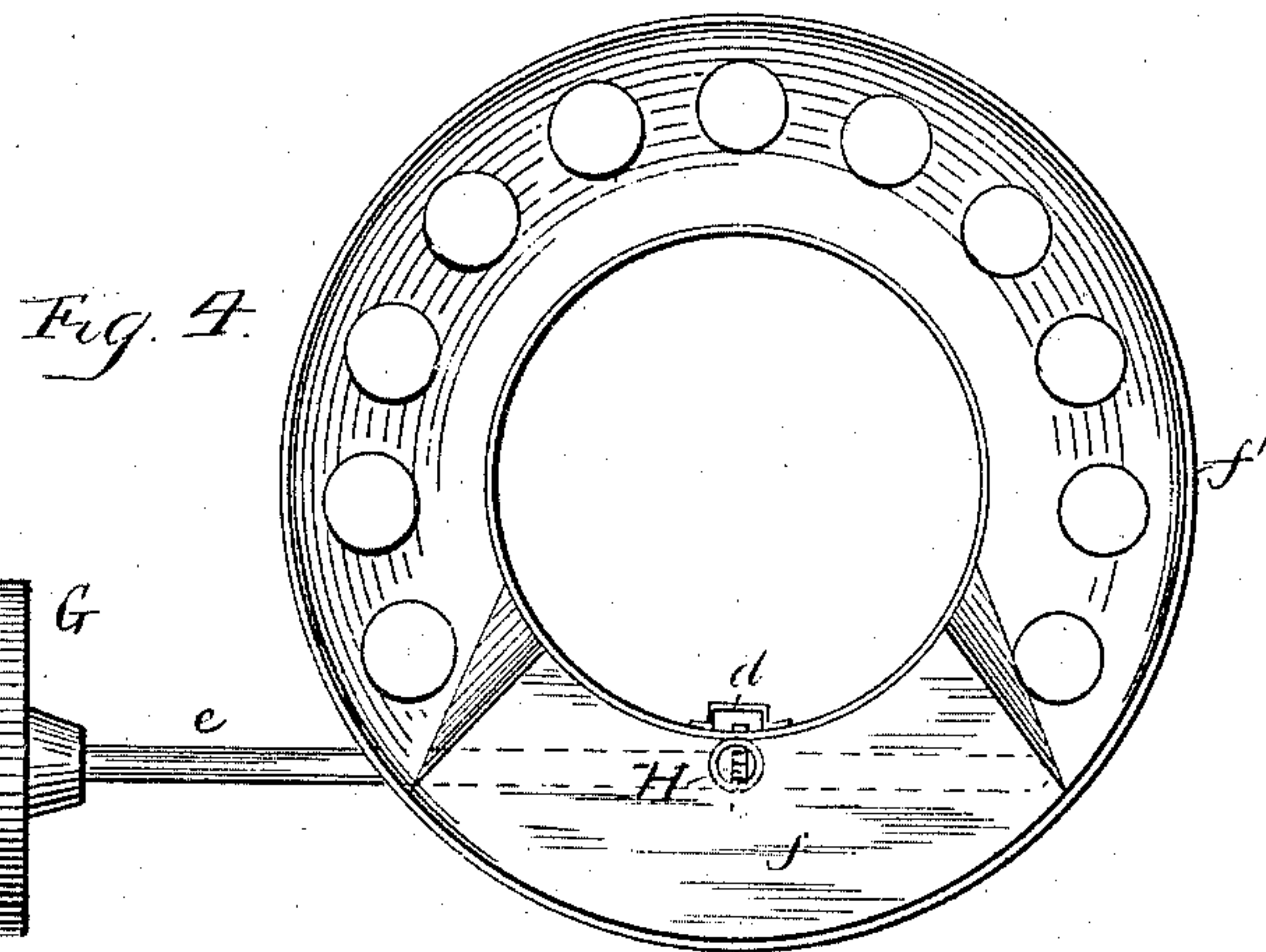
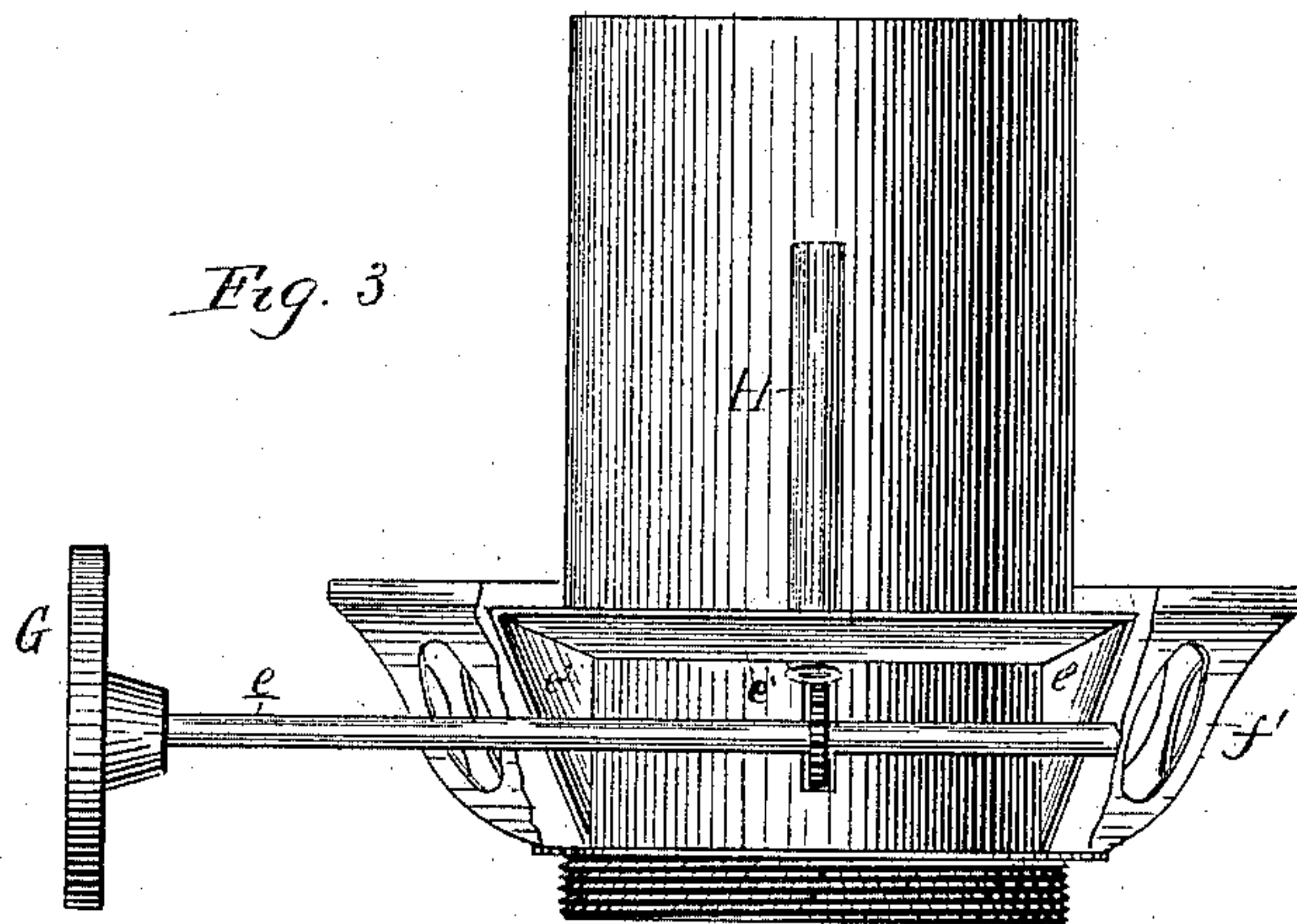
2 Sheets—Sheet 2.

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WITNESSES  
*W. J. Robertson*  
*Nute Colman*

INVENTOR  
*Jacob Burnet, Jr.*  
By *his Attorney*  
*J. W. Robertson*



# UNITED STATES PATENT OFFICE.

JACOB BURNET, JR., OF CINCINNATI, OHIO.

## LAMP.

SPECIFICATION forming part of Letters Patent No. 324,747, dated August 18, 1885.

Application filed August 19, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, JACOB BURNET, Jr., a citizen of the United States of America, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Lamps, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention pertains to Argand lamps, and is designed as an improvement upon the lamp described by me in my application No. 118,620, filed January 24, 1884; and the objects of the invention are, first, to provide means for carrying off vapor from the font and burning it; second, to isolate the metal of the burner from the metal of the font; and, third, to provide a false top provided with means of ventilation, all as more fully hereinafter described and claimed. I attain these objects by the devices illustrated in the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a vertical section through the center of the font and burner. Fig. 2 is a side view of a false top detached. Fig. 3 is a side view of the burner detached, partly broken away to show the housing. Fig. 4 is a plan of the same detached.

Referring to the drawings, A represents the font, through the center of which extends vertically the wick-tube B, forming a central air-draft. Within this tube B is secured in any convenient manner the accelerating-tube C, on the top of which I place the button D.

E is the wick-carrier, provided at its upper edge with teeth *a* to engage the wick, as will be readily understood. This carrier is slotted on one side, as shown at *b*, and secured to the carrier directly above this slot is the rack-bar *c*. On the inside of the burner-tube F is soldered or otherwise secured a guide, *d*, for the rack-bar *c*.

G is a thumb-piece secured to the rod *e*, which carries a ratchet-wheel designed to engage with the holes in the bar *c*, and thus raise or lower the wick.

To render the lamp absolutely safe from any danger of explosion or getting on fire if overheated, instead of extending a tube from the font to the top of the wick-tube, as has been the custom, I form a housing, *f*, over the

ratchet-wheel, which housing forms, through the medium of the guided and ratchet-opening, a vent for the vapor, carrying it out at the ratchet-opening. I then place a short tube, *H*, over the ratchet-opening, and any vapor in the font is conducted through the passage inclosed by the shield *d* to the ratchet-opening, through the ratchet-opening into the housing *f*, and from thence through the tube *H* to the flame, where it is burned. A cap, *f'*, is placed over the ring *f'* to keep dust, flies, moths, &c., from falling into said ring and impeding the flow of fresh air through the openings therein, and also to prevent flickering, which would otherwise occur from drafts, &c. This housing is formed of a piece of metal, *e'*, bent to form a top and two sides, one of which is shown at *e''*. The edges of this piece are curved to conform to the shape of the burner-tube F, and the wall of the flaring ring *f'* is perforated to admit air to the chimney, and is of the ordinary construction, except that that part of it that forms one side of the housing is not perforated. This metal piece *e'* is secured to the burner-tube F and to the ring *f'* by soldering, thus forming a complete housing for the same, as will be readily understood.

To completely isolate the burner from any contact with the metal of the font I secure to the top of the font, preferably by solder, a ring, I, and outside of this ring I secure a similar ring, J, of larger diameter, leaving a channel, *g*, in which I secure a circular block or collar, *h*, of proper size. This collar is made, preferably, of wood, but may be made of any other non-conductor of heat, such as papier-maché or paper-pulp. On the inside of this collar I secure a ring, *i*, of brass or other suitable material, which is threaded to receive the threaded end of the burner-tube F.

The font A is constructed in sections, the part A' being provided with a flange, *j*, adapted to fit over and embrace the edge of the lower section, A<sup>2</sup>. K is a false top designed to rest on the upper section, A', of the font. The object of this false top is to prevent the heat from the flame from heating the top of the font, and thus heating the oil, for the heat that would otherwise pass through the top of the font is carried off by the air underneath,



which, as it becomes heated, escapes through the openings *k* at the edge of the false top, and thus the lower or true top of the font is kept from the heat due to the light above it, and thus the oil never becomes unduly heated, but it is always kept cool. This top is isolated from the burner by the wooden collar *h*, and its outer or depending flange surrounds and fits tightly upon the side of the top of section *A'* and rests on a projecting part thereof, whereby it can be secured in place without soldering, so as to be readily removed, if necessary, to clean off dust or other matters that may accumulate between the two tops. If preferred, however, the false top may be soldered fast.

By this improvement the class of lamps shown in my application before referred to is rendered much safer, as the great heat produced by the intense combustion which produces the brilliant light in these lamps heats the oil, and thus makes the use of oil of low flashing-point dangerous. By means of the ventilating false top, the non-conducting collar, and the tube to carry off the vapor arising from the oil, the difficulty encountered in burning low-grade oils is entirely overcome.

My arrangement of the non-conducting collar between the flanges or rings on the top of the font has the advantages of securely holding the said collar, thus preventing its being turned out of place in screwing or unscrewing the burner and also of preventing the collar from being accidentally cracked or broken, to all of which the collars for this purpose as usually arranged are liable.

I am aware of the Patent No. 190,050, and make no claim to the construction shown therein as forming part of my invention.

I deem it important that the false top fit closely around the non-conducting collar, for the metal of the false top, as well as that of the top proper, is isolated from contact with the burner, so that neither the true top nor the false top can carry the heat from the burner to the oil.

What I claim as new is—

1. The combination, with the lamp-font and the burner and wick-raising device thereof, of the perforated ring *f'*, closed at one side and having the housing *f* covering said wick-raising device and the tube *H* communicating with the housing to form a vent for the vapor, substantially as described.

2. The combination, in a lamp, of the burner thereof and a font having its top provided with two concentric rings, with the non-conducting collar *h* secured between said rings, and adapted to receive the burner, substantially as described.

3. The combination, in a lamp, of the burner thereof, a non-conducting collar, and a font having a top proper and a ventilating false top, both tops being insulated from the burner, substantially as described.

In testimony whereof I affix my signature, in presence of two witnesses, this 15th day of August, 1884.

JACOB BURNET, JR.

Witnesses:

L. L. TOWNLEY,  
JAS. J. MUIR.