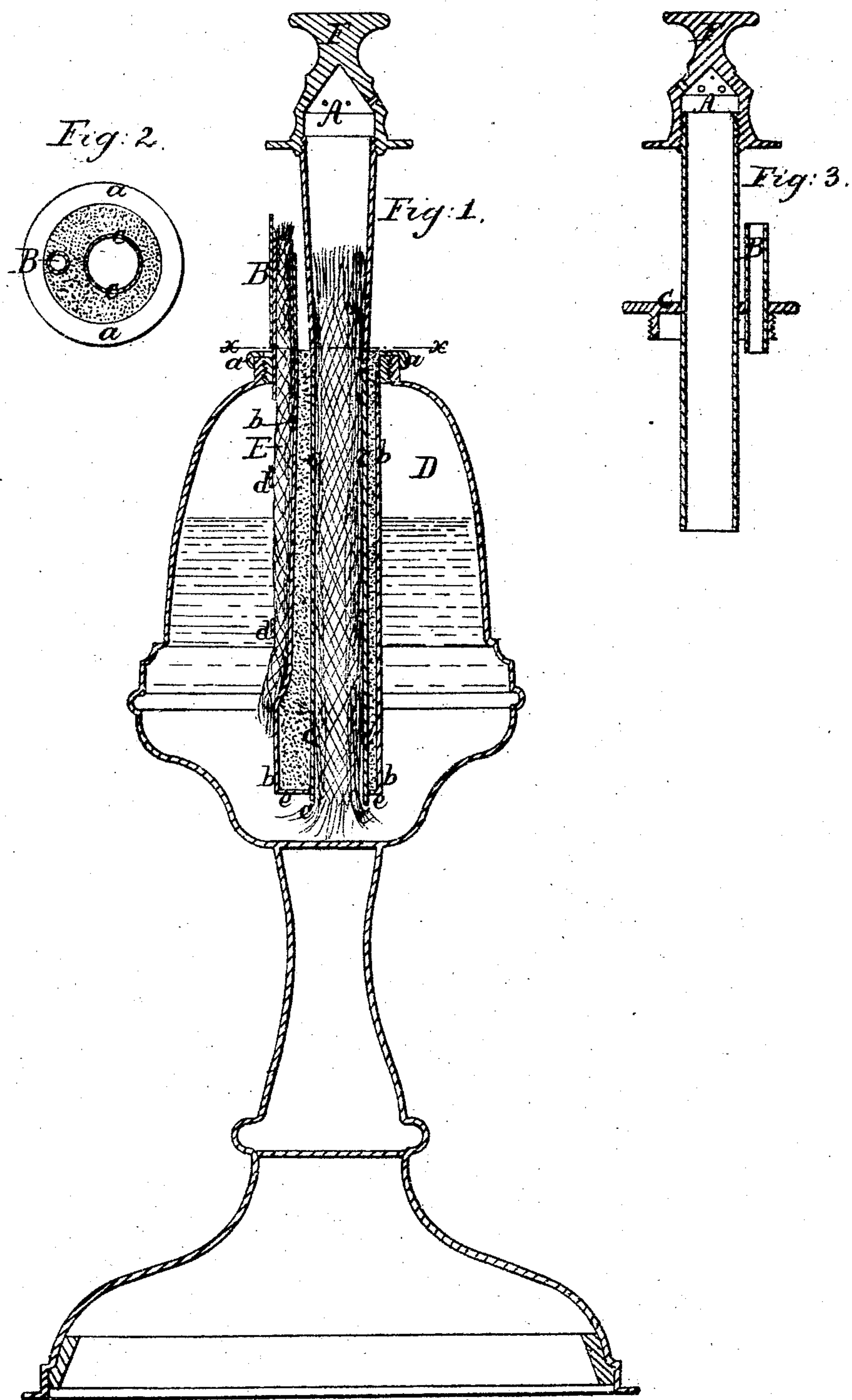


No. 16,379.

PATENTED JAN. 13, 1857.

M. B. DYOTT.  
BURNING FLUID LAMP.





# UNITED STATES PATENT OFFICE.

M. B. DYOTT, OF PHILADELPHIA, PENNSYLVANIA.

## BURNING-FLUID LAMP.

Specification of Letters Patent No. 16,379, dated January 13, 1857.

*To all whom it may concern:*

Be it known that I, M. B. DYOTT, of the city and county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Gas or Generating-Fluid 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, making a part thereof, in which—

Figure 1, represents a vertical section taken through the center of one of my lamps. Fig. 2, represents a horizontal cross section at the red line  $x, x$ , of Fig. 1. Fig. 3, represents the common way of constructing these kinds of lamps, and is here shown to more fully illustrate the difference between the old plan, and that now proposed by me.

To enable others skilled in the art to make, and use my invention, I will proceed to describe the same, and point out wherein it differs from all other lamps for a similar purpose.

In gas, or generating fluid lamps, as heretofore constructed, the burner A, and auxiliary burner B (Fig. 3,) pass through a metallic top C, which covers the bowl of the lamp. The use of the auxiliary burner B, is to heat, and start the generation of gas in the main burner A—said burner A, after being thus started, generating its own gas, and the auxiliary burner is dispensed with, until the lamp is to be again started. Now the difficulty in such a construction is this, that, the two tubes A, B, being in close proximity to each other, and connected together by the metallic plate C, which is a strong conductor of heat, the tube or burner A, reconveys its heat to the auxiliary burner B, and generating gas in B, causes it to burn; or it becomes so heated that it can not be put out.

The object of my improvement is to overcome this difficulty, and I have accomplished it in a manner to be hereafter described.

The nature of my invention consists in removing the metallic connection and in interposing some non-conducting material, between the main and auxiliary burners of a generating fluid lamp, so that the auxiliary burner can be extinguished, when it has accomplished its purpose, and not be subject to the heat of the main burner.

In Fig. 1, D, may represent any ordinary fluid lamp with the usual opening at the

top, into which fits a ring  $a$ , instead of a cap or plate C, as shown in Fig. 3. To this ring  $a$ , is fastened a tube  $b$  which extends down into the bowl of the lamp, to near its bottom. Within the tube  $b$ , is a smaller tube  $c$ , which extending down to the bottom of the tube  $b$ , is united thereto by a plate  $e$ ; and between the two tubes  $b, c$ , is a space which may be filled by plaster of Paris, or any other non conducting material. I have shown the entire space from top to bottom of the tubes, as occupied by nonconducting, or bad conducting material. Less space may be used of course, or such nonconducting substance may be confined to the top part alone.

The wick E, that passes up through the auxiliary burner B (in Fig. 1) may lie in a groove swaged into the tube  $b$ , and held there by supports  $d, d$ ; and the burner itself is secured in the ring  $a$ , which removes it farther from the burner A, and the nonconducting material surrounds it. The burner A is a prolongation of the inner tube  $c$ , and has its metallic support, only in the plate  $e$ , far removed from the flame and heat, and being surrounded by the nonconducting substance cannot impart its heat to the auxiliary burner B. Consequently the auxiliary burner can be extinguished at any time, and there is no danger or liability of its being lighted from or by the heat or flame of the main burner.

The top portion of the burner F, may be the same in all respects as the ordinary fluid lamps and need not be more fully described as it is clearly shown in the drawing.

The important feature in my invention is the removing of the metallic connection between the main and auxiliary burner, so far from the heat and flame, and interposing nonconducting substance between them, as that the main burner shall not heat the auxiliary burner, while the latter can accomplish its purpose, and be readily extinguished at any time.

The metallic connection between the two burners at  $e$ , together with the nonconducting material interposed between them, makes the whole abundantly rigid and strong—the plaster or other material serving to brace and support the tubes, while the plate  $e$ , is so far remote from the flame and heat, as not to serve as a conductor of heat from one tube to the other.

Having thus fully described the nature of

my invention, I would state that I do not claim the thermo insulation of the burner, as this has heretofore been done, but what I do claim herein as new and desire to secure by  
5 Letters Patent is—

Removing the metallic connection between the main and auxiliary burner of a fluid lamp so far from the flame or heat and interposing a non, or bad conducting, material  
10 between the burner and lighter as that the

heat of the main burner shall not be transmitted to the auxiliary, while the efficiency of the latter is in no wise impaired, substantially for the purpose, and in manner described.

M. B. DYOTT.

Witnesses:

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