M. B. DYOTT

Lamp.

No. 1,742. Patented Aug. 25, 1840.

FIG. 3.

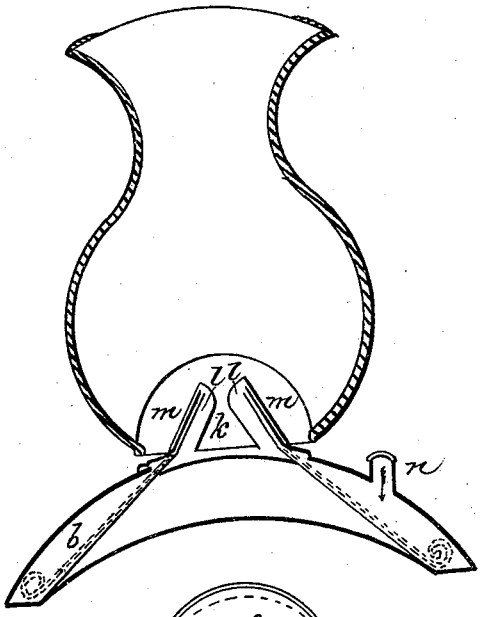


FIG. 2.

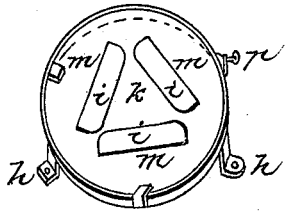
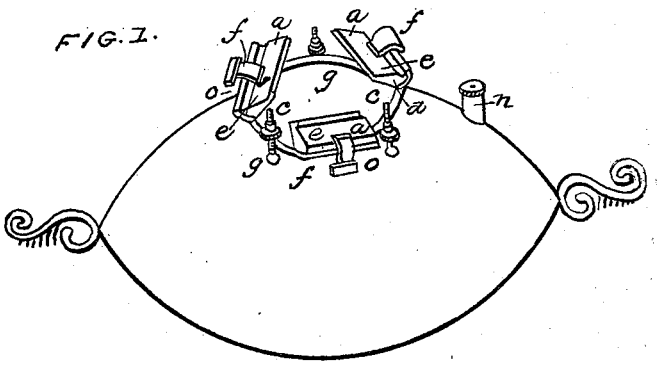


FIG. 1.



N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

MICHAEL B. DYOTT, OF PHILADELPHIA, PENNSYLVANIA.

CAMPHENE-LAMP.

Specification of Letters Patent No. 1,742, dated August 25, 1840.

To all whom it may concern:

Be it known that I, MICHAEL B. DYOTT, of the city of Philadelphia and State of Pennsylvania, have discovered and invented a new and Improved Method of Constructing Lamps for Consuming Camphene-Oil; and I do hereby declare that the following is a full and exact description of the construction, operation, and mode of using the same, reference being had to the annexed drawings, forming a part of this specification, in which—

Figure 1, is a perspective view of the whole lamp, the regulating plate being taken off, which is represented by Fig. 2. Fig. 3 is a section or a representation of a lamp cut directly in half, showing the internal construction, the situation of the wick, which is shown by the red lines, and the exact position of the regulating plate in relation to the burners.

The nature of my invention consists in the application of a movable plate, effecting the draft on the out as well as on the inside of the flame by the same movement, by which means I am able to obtain a more acute draft, a thinner flame, consequently a more brilliant light, and can burn the flame one-third higher without producing smoke, than by any other means that has been heretofore used or known.

To give the public a correct and definite knowledge of my invention, I will proceed to describe the whole construction and operation.

I construct my lamp with any convenient numbers, but adopt as having the handsomest appearance, three burners, placed in a triangular position (see Fig. 1, letter *a*); the body of the lamp or oil chamber is composed of two cylinders of tin or other metal, the inner cylinder may be 2, 3, or 4 inches long, 6, 8 or 10 inches in diameter at the bottom and from 2 to 5 inches in diameter at the top; the outside cylinder may be of equal length, a half an inch larger in diameter at the top and may vary in size at the bottom in proportion to the quantity of oil necessary to supply the burners, these two cylinders are joined together at the bottom forming a chamber for the oil (see Fig. 3, letter *b*); on the top of said chamber or body of the lamp is placed three burners (see Fig. 1, letter *a*), which project above the top of said chamber from three-eighths to five-eighths of an inch, they being as long as the diameter of the oil chamber will admit of, leaving a space between the corners of the burners of about one-half an inch (letter *c*, Fig. 1); the burners are formed of 2 pieces of metal that meet at the top within a one-thirty-second part of an inch or the thickness of whatever substance may be used for wick, at the bottom they are apart from each other about one-fourth of an inch, the inner piece (letter *d*, Fig. 1) is stationary, the outside one is fixed upon a hinge at the bottom (see letter *e*, Fig. 1) (said hinge being attached to the upper part of the oil chamber) opening as a door or lid to the burner, being the most convenient mode of access through which the wick may be inserted into the oil chamber; said lid, or outer part of burner, is kept shut, by a spring (letter *f*, Fig. 1), which presses upon the outside of it, confining the wick at the top between the edge of the two above described pieces of metal or the burner, which said pieces form (see Fig. 1, red lines in the top of burner that represent the wick) the remaining openings that are not covered by the burners, in the top of the oil chamber, must be closed (with tin or other metal) leaving no openings in the oil chamber, except through the burners and the passage (letter *n*, Figs. 1 and 3), through which the chamber is filled with oil; there are 3 wires fixed near the top of the oil chamber upon which screws are cut and a small round brass nut placed upon each (see Fig. 1, letter *g*), for the purpose of raising and lowering the regulating plate represented by Fig. 2, said plate having 3 pieces of metal projecting from it with holes in each of them, of sufficient size to admit the wires (letter *g*, Fig. 1) through them. (See letter *h*, Fig. 2). This is a round plate of metal about the same diameter as the top of the oil chamber, having holes cut in it three-eighths of an inch wide and one-quarter of an inch longer than the burner (see Fig. 2, letter *l*), these holes should be cut in such a manner as to leave a space between the part of the plate regulating the outer draft (see letter *m*, Figs. 3 and 2) and the outside edge of the wick of about one-sixteenth of an inch, and a space between the part of the plate (letter *k*, Figs. 3 and 2) that regulates the inner draft and the inside edge of the wick of about a quarter of an inch. (Space shown by letter *l*, Fig. 3) the wick which is represented by the red ink lines in Fig. 3 is a

piece of Canton flannel with as short knap as can be procured, or a piece of cotton drilling a quarter of an inch narrower than the length of the burner, and from 6 inches to a quarter of a yard long, the wick being placed in the middle of the burner, would leave an open space at each corner of the burner of one-eighth of an inch long, which is filled up with a piece of tin or metal equal in thickness to the wick, which is to prevent the gum which arises from the oil, from collecting in the corners of the burners, which it would otherwise do. To put the wick into the lamp take the spring (letter *f*, Fig. 1) out of its place, one end of it being placed in a small opening in the upper part of the oil chamber (letter *o*, Fig. 1) open the lid or outside part of the burner then with a strip of tin, or a knife, put the wick down to the bottom of the oil chamber, with the exception of a small piece of the end of it, which should be retained above the top of the burner, close the burner, replace the spring (letter *f*, Fig. 1) that keeps the burner shut and holds the wick in its proper place, then cut the wick off, within the thickness of a ten cent piece of the top of the burner; the corners of the wick should be cut off close to the burner for about an eighth of an inch; when all the burners are thus trimmed put the regulating plate (Fig. 2) in its place, the projections of said plate (letter *h*, Fig. 2) resting upon the brass nuts which are placed upon the wires (Fig. 1, letter *g*); put the glass upon this plate and secure it in the ordinary way or by a small screw (Fig. 2, letter *p*), raise the plate by turning the brass nuts (Fig. 1, letter *g*), to the right, then light the lamp by passing a match up the center of the lamp. To increase the light raise the plate upon which the glass rests, by means of the nuts, as above directed, and diminish the light by turning them to the left or, lowering the plate; the distance necessary to raise the plate will vary in proportion to the height of the glass. The lamp should be trimmed every day, first cleaning off the gum which has collected on the burners with a knife or a pair of scissors, then pull up the wick, with the fingers or a pair of scissors, and cut off what has been soiled the previous evening, leaving the wick above the top of the burners about the thickness of a ten cent piece; when the wick becomes too short to reach to the bottom of the oil chamber, it should be renewed, in the manner as above described of putting the wick in the lamp.

What I claim as my invention, and desire to secure by Letters Patent, is not any exact proportion or number of burners, or the particular mode of disposing or placing them in any peculiar form or situation, but I claim—

The mode described of regulating the draft by means of a movable plate, which sustains the glass chimney, and otherwise (Fig. 2), being constructed and operating as set forth and described in the above specification.

MICHAEL B. DYOTT.

Witnesses:
P. CHRISTIAN,
JOHN SCOTT.