

T. SILVER.
LAMP-BURNER.

No. 187,987.

Patented March 6, 1877.

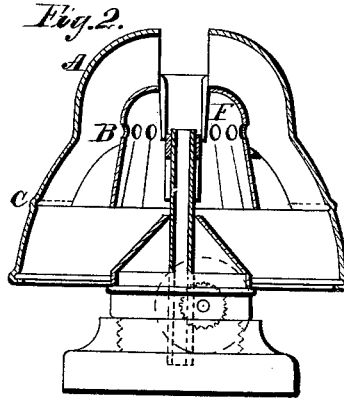
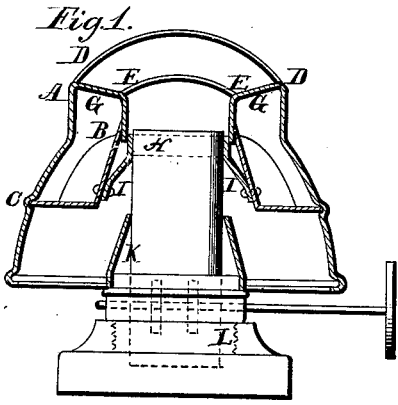


Fig. 3.

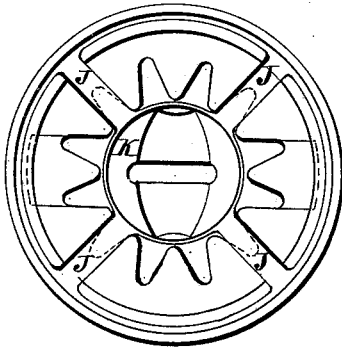


Fig. 4.

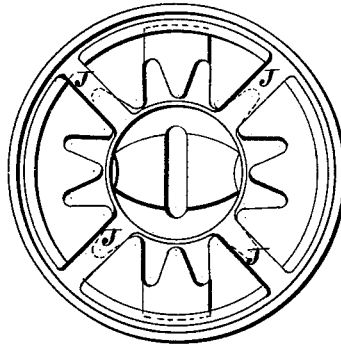


Fig. 5.

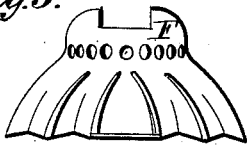
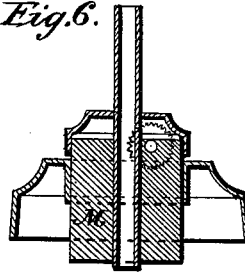


Fig. 6.



Attest:

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN LAMP-BURNERS.

Specification forming part of Letters Patent No. 187,987, dated March 6, 1877; application filed December 5, 1874.

To all whom it may concern:

Be it known that I, THOMAS SILVER, of Nyack, Rockland county, State of New York, have invented a new and Improved Method of Constructing Burners for Lamps; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My said invention relates to that description of burners designed for consuming hydrocarbon and other oils used for giving light or heat, and so constructed as to obviate the necessity for the use of glass chimneys to insure perfect combustion, and may be used with either a circular or flat wick-tube, provided with the ordinary contrivances within a box or cylinder for operating the wick, which is screwed or otherwise inserted in the collar of the reservoir for containing the oil to be consumed.

Figures 1 and 2 are cross-sectional elevations, and Figs. 3 and 4 are cross-plans of the same. Fig. 5 is a perspective view of a heat-deflector; and Fig. 6, a sectional view of the wick-tube, showing one method of inserting the box which holds it in the collar of the reservoir.

A, of Figs. 1 and 2, represents a conical or bell-shaped cover, made of brass or other suitable material. B of the same figures represents Fig. 5, or the deflector, which may be corrugated or of plain circular shape within A, supported at C in any most suitable way. Both A and B terminate in domes having oblong slots or openings for the flame to pass through, said slots extending, respectively, from D to D and E to E. F are holes perforated around the dome of the deflector B, to regulate the volumes of air passing either surface of the deflector B to the apertures or slots of both domes. G G are inclined plates or flame-deflectors, shaped from the material pressed from the slot of either dome, or may be inserted of separate strips of metal, and should, by preference, be extended a little downward by the narrow side of the wick-tube. H is a band surrounding the top of the wick-tube fitting the same, and supported upon the de-

flector B by the strips of metal I I, the latter serving to return the heat from the deflector B to the band H, for the purpose of vaporizing the oil on its passage to the flame. J J J J are cross-bars having a ring at their outer extremities, which is secured to the cover A, and a socket, K, at the center fitting the wick-case which forms the support, instead of screwing the wick-tube into the collar of the reservoir, as shown at L, Fig. 1.

Fig. 6 shows a plug, M, made of wood, or any suitable non-heat-conducting material, which is firmly fixed in the bottom of the wick-case, and wedges into the collar of the oil-reservoir; or, instead of this arrangement, the wick-case may terminate in a plug of its own material, and a lining of non-heat-conducting material may be inserted in the collar of the reservoir, in the manner that bottle-necks are frequently lined for holding the stopples.

It will be seen from the foregoing explanation that the flame comes first in contact with (sufficiently so to heat it) the deflector B, which, in turn, throws off its heat to the air that enters at the bottom of A, and causes it to impinge more forcibly upon the flame, while the inclined plates or flame-deflectors G G prevent the direct contact of the air with the edge of the flame, forming a partial vacuum over them. The action of the air in filling this vacuum spreads the flame to the full extent of the slots or apertures, and introduces thereby a greater supply of oxygen into the flame, and insures perfect combustion of the oil.

My invention is also applicable to gas-burners and to heating and cooking purposes.

What I claim, and desire to secure by Letters Patent as my invention, is—

In the construction of lamp-burners with domes or covers placed over each other, the combination therewith of the inclined plates or deflectors G G, for the purposes herein expressed.

THOMAS SILVER.

Witnesses:

FRANK H. HAY,
SAML. AUGS. HAYWARD.