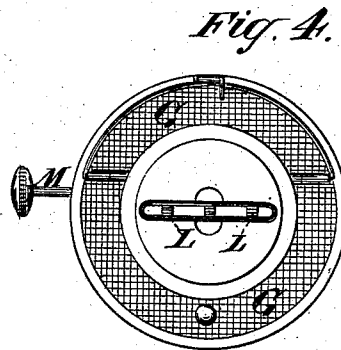
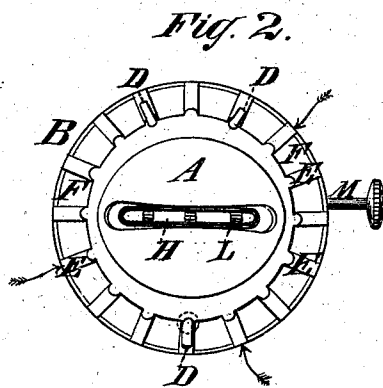
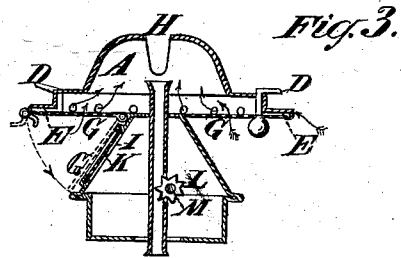
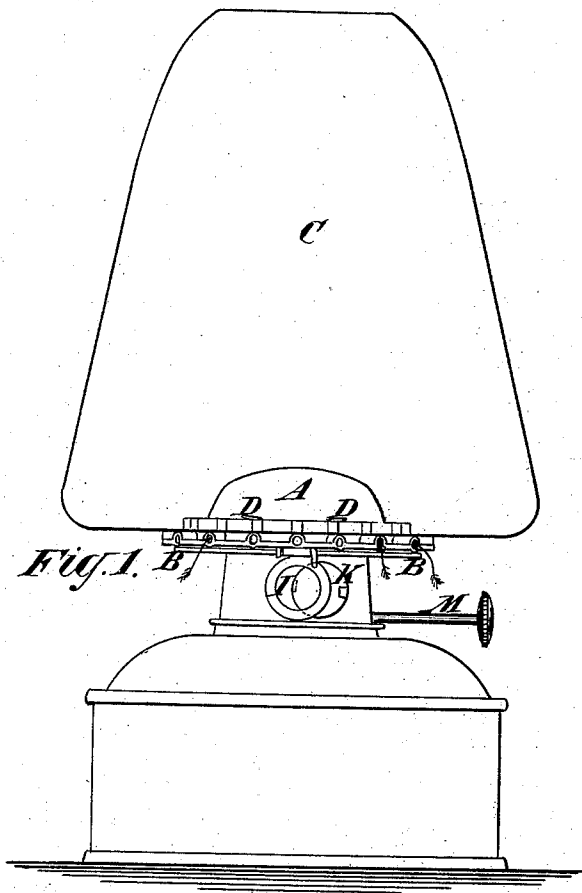


J. LEWTAS.

LAMP.

No. 187,764.

Patented Feb. 27, 1877.



Witnesses
John Recker
Fred Haynes

John Lewtas
by his Attorneys
Brown & Allen.

UNITED STATES PATENT OFFICE

JOHN LEWTAS, OF MANCHESTER, ENGLAND.

IMPROVEMENT IN LAMPS.

Specification forming part of Letters Patent No. **187,764**, dated February 27, 1877; application filed January 22, 1877.

To all whom it may concern:

Be it known that I, JOHN LEWTAS, of Manchester, in the county of Lancaster, England, lamp-manufacturer, have invented certain Improvements in Lamps, of which the following is a specification:

My invention has reference to lamps adapted for burning heavy hydrocarbon oils, and other oils and spirits, with safety, and in which lamps large flat wicks may be used for the purpose of producing great illuminating power, and also, in some cases, great heat, available for domestic and other uses. The description of lamp referred to is one in which a heated chamber is formed immediately over the flame of the wick, by means of a globe of suitable shape, closed at the base, with the exception of an aperture fitting over a dome at the top of the burner, through which the flame issues, such globe having also a suitable aperture at the top for the requisite draft and the escape of vapors from the said chamber. By the use of such globe an internal chimney is dispensed with, and a flame of greatly-increased width can be produced.

For a lamp of this description the burner is constructed so as to afford a plentiful supply of atmospheric air, admitted in such a manner as to pass in divided streams directly onto the flame, and thereby quicken the combustion, as required.

This improved lamp is illustrated in the accompanying drawings.

Figure 1 is an elevation of the lamp complete. Fig. 2 is a plan or horizontal view of the burner alone; Fig. 3, a transverse section, and Fig. 4 an underneath plan of the same.

A is a burner or chamber, in which the wick is inclosed, and which is constructed in such a manner as to cause a plentiful supply of external air to the said chamber during combustion, such supply of air being caused to enter the said chamber in divided streams through various apertures arranged and distributed as hereinafter described.

For this purpose a gallery, B, is formed for the globe C to rest upon, the fastenings for which (shown at D D) are inside, thereby giving the globe or chamber to expand as required when heated, to prevent breakage. Around the upper surface of the gallery B are

arranged a series of tubes or inlets for air, E E, and the globe, by resting on these tubes, admits air under it through the interstices F F between the tubes. The bottom G of the gallery is also formed by wire-gauze or perforated metal, through which air is admitted to the wick-chamber. This bottom G is hinged, so as to allow of its being let down, as shown in Fig. 3, in order to light or obtain a light from the burner without removing any part of the same. The top of the chamber is dome-shaped and elliptical, with a central oblong aperture, H, over the wick, through which the flame issues. The chamber at the top of the oil-vessel is narrowed at its upper part, as shown in Fig. 3, thereby affording larger access of air through the wire-gauze G. In each side of this chamber is formed an opening, I, to admit air, and to supply oil to the vessel or oil-container at the bottom of the chamber A. The opening I is covered by a slide, K, by withdrawing which air may be admitted to the chamber, if required, thereby keeping the burner perfectly cool. L L are pinions, by means of which the wick may be raised and lowered, as required, by turning the spindle M. The top of the wick-tube is dished or turned outward, and the ends of the aperture through which the wick emerges from the tube are curved or beveled, to suit the size of the burner. The said aperture can be covered, when required, by drawing a plate over it by means of a handle, to prevent vapor arising from the oil-container when not burning. The globe C has an opening at the bottom to fit onto the gallery B, on which it is secured, as before described, in such a manner as to give freedom for its expansion and prevention of breakage. It is also flat at the bottom, and narrowed upward, as shown, and in horizontal section, it may be either circular or elliptical, or of other suitable form.

From the foregoing description it will be evident that the lamp is so constructed as to afford a flame of increased size and brilliant illuminating power, regulated by an abundant supply of air to the flame, so as to support and quicken the combustion, deodorize the oil, and economize the quantity consumed in proportion to the size of the flame, thereby rendering the lamp suitable for burning with

safety heavy mineral oils of great specific gravity, also lighter oils, spirits, or naphtha or gasoline, either with or without a glass globe.

The lamp may also be applied to heating purposes; but when so applied the burner above described is increased in size, in order to produce a flame of the required dimensions, the globe being correspondingly increased in size, and made of metal, to form a chamber or chambers adapted to receive a coil or otherwise, according to the special purpose to which it is applied.

In some cases the globe may be dispensed with, and the wick-tube surrounded by an outer

tube, leaving a space between them for air to pass upward, and also forming an outlet for waste oil.

The lamp or apparatus so constructed is also applicable to various purposes for heating and cooking.

I claim—

The combination of the burner A with the globe C, substantially as described.

JOHN LEWTAS.

Witnesses:

JOHN G. GARNETT,

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