

R. CHRISTY.

Lamps.

No. 141,763.

Patented August 12, 1873.

Fig. 1.

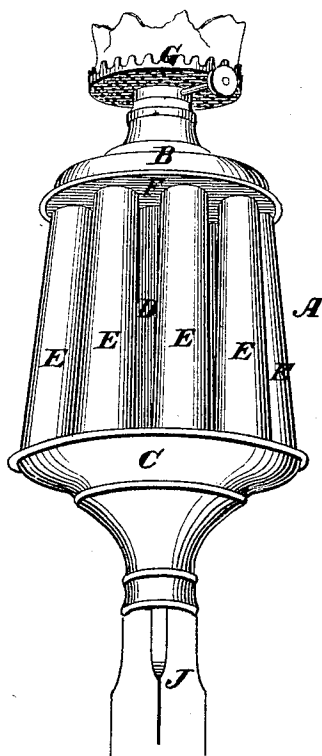
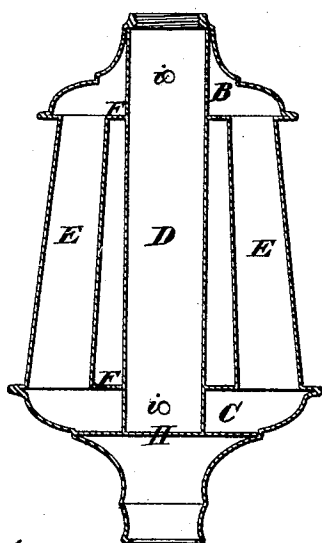


Fig. 2.



WITNESSES.

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UNITED STATES PATENT OFFICE.

ROBERT CHRISTY, OF MANSFIELD VALLEY, PENNSYLVANIA.

IMPROVEMENT IN LAMPS.

Specification forming part of Letters Patent No. **141,763**, dated August 12, 1873; application filed June 27, 1873.

To all whom it may concern:

Be it known, that I, ROBERT CHRISTY, of Mansfield Valley, in the county of Allegheny and State of Pennsylvania, have invented a new and Improved Lamp; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings forming part of this specification, in which—

Figure 1 is a perspective view of a lamp constructed in accordance with my invention, and Fig 2 is a vertical section of the same.

Similar letters of reference in the accompanying drawings denote the same parts.

My invention has for its object, to provide an improved lamp for general use in burning hydrocarbon oils, whereby the generation of gas within the lamp, by heat or agitation of the oil, is prevented, and the danger of explosion from this cause avoided.

To this end the invention consists in constructing the lamp-reservoir in the form of a series of tubes communicating with each other at the top and bottom.

By this construction the bulk of the oil is separated into several small columns, surrounded by the atmospheric air, which keeps the oil cool while the lamp is burning, and prevents it from shaking sufficiently to generate gas.

The lamp is, of course, applicable to the use of other oils, but, as above stated, is more especially designed for hydrocarbon oils.

In the accompanying drawings, A is the lamp-reservoir, composed of the upper and lower oil-chambers B C, connected together by the central vertical tube D and the exterior series of tubes E. The central tube extends entirely through the diaphragms F F, which form the proximate surfaces of the upper and lower chambers B C, so that its upper end shall connect with the orifice which receives the burner G, while its lower end rests upon the bottom H of the lower chamber. The exterior tubes terminate within the two diaphragms F, and communicate directly with the two chambers, as shown.

By this construction the reservoir is divided into two separate oil compartments or chambers, having no communication with each other excepting through the small openings *i i* in the side of the central tube, near the top and bottom respectively.

Oil is supplied to the reservoir through the central tube D, forming the first oil-compartment, from which it flows through the lower orifice *i* into the second oil-compartment, formed by the chambers B C and the exterior tubes E. The upper orifice *i* in the central tube permits the escape of air from the second compartment as the oil rises in the exterior tubes and upper chamber in the process of filling. The bulk of the oil within the lamp is, therefore, separated into a number of small columns by the several tubes, and each tube being surrounded by air the oil is kept cool and prevented from generating gas to any considerable extent. The smallness of the tubes also prevents the oil from shaking to generate gas when the lamp is handled or moved from place to place.

By this means the danger of explosions by the formation of gas within the lamp is entirely avoided.

The reservoir is attached to a foot or pedestal, J, in the usual or any convenient manner, and may be constructed in a variety of forms and styles to suit the trade.

Having thus described my invention, what I claim as new is—

A lamp for burning hydrocarbon and other oils, composed of an upper and lower chamber, a central vertical tube provided with openings *i i* at its upper and lower ends, and a series of exterior tubes, whereby the oil is separated into a number of small columns surrounded by atmospheric air, substantially as described, for the purpose specified.

ROBT. CHRISTY.

Witnesses:

WM. HILL,
W. S. BELL.