R. S. MERRILL.

Lamp.

No. 163,505. Patented May 18, 1875.

Fig. 2.

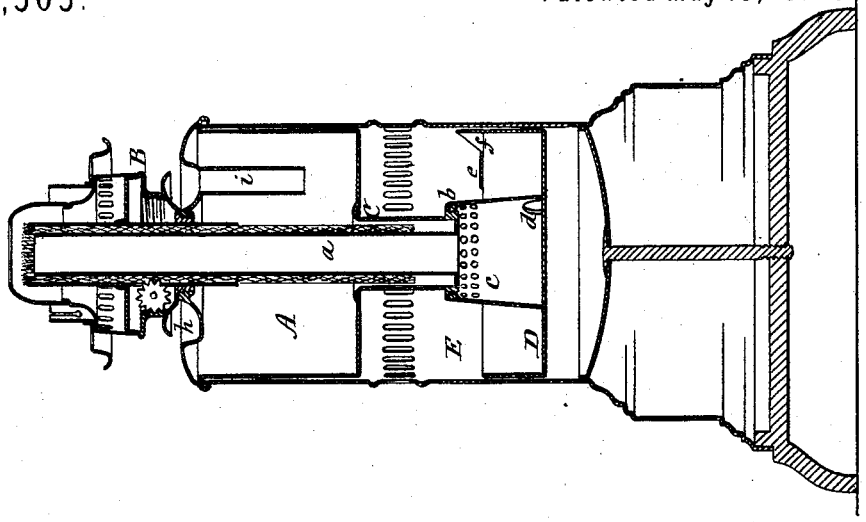


Fig. 3.

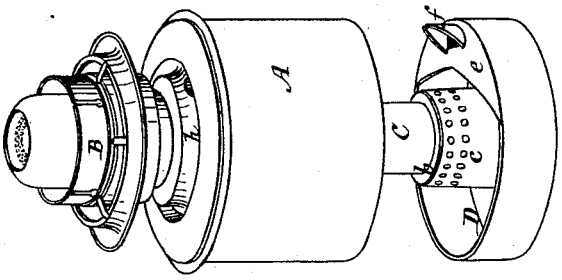
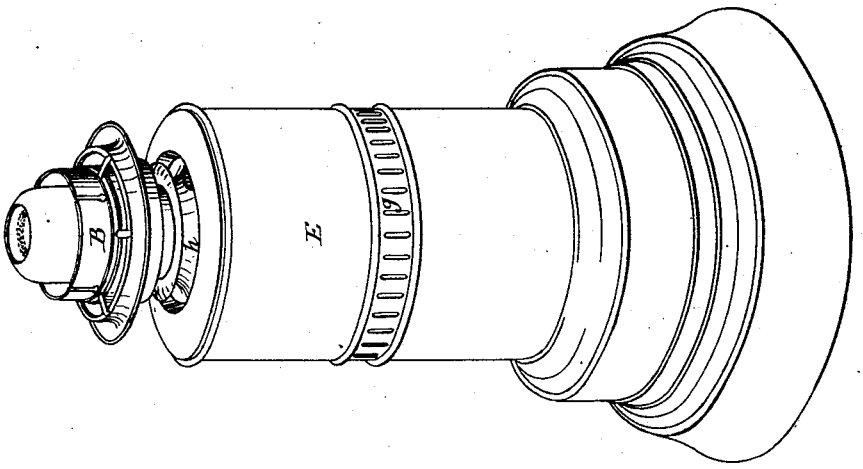


Fig. 1.



Witnesses:

Ewellasock

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Inventor:

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UNITED STATES PATENT OFFICE.

RUFUS S. MERRILL, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO HERMAN G. MOEHRING, OF PHILADELPHIA, PA., RUFUS S. MERRILL, WILLIAM B. MERRILL, AND JOSHUA MERRILL, OF BOSTON, MASS.

IMPROVEMENT IN LAMPS.

Specification forming part of Letters Patent No. **163,505**, dated May 18, 1875; application filed May 1, 1875.

To all whom it may concern:

Be it known that I, RUFUS S. MERRILL, of Boston, Massachusetts, have invented certain new and useful Improvements in Lamps, of which the following is a specification:

The lamp in which my invention is comprised is an Argand lamp. I combine the lamp proper with a shell, in which it fits, and from which it can be removed, when necessary, for any purpose.

The lamp has been devised with special reference to the burning of heavy oils, such as "mineral-sperm" oil, one of the heavier products of the distillation of petroleum; but my improvements in great part are applicable as well to lamps in which the lighter oils are used.

The nature of my improvements can best be explained and understood by reference to the accompanying drawings, in which—

Figure 1 is a perspective view of a lamp embodying my improvements. Fig. 2 is a vertical central section of the same. Fig. 3 is a perspective view of the lamp proper, removed from its supporting-shell.

The lamp I have here represented follows in its external configuration the "moderator" pattern of lamp.

A is the oil-reservoir or lamp body, into a collar in the top of which screws the screw-threaded base of an Argand burner, B, of suitable structure. The center draft-tube, or that tube which supports the annular wick, and conveys air to the interior of the flame, is shown at *a*. It is attached to the lamp-body, and not the burner.

In burning heavy oils, it is difficult, by the capillary action of the wick, to carry the oil to any great height. I therefore make the lamp-body comparatively shallow, as seen; but in order to adapt the lamp to carry a long annular wick, which can be used for a considerable length of time without requiring renewal, I provide the lamp-body at its bottom with a central extension or well, C, to the lower end of which is fastened the center draft-tube *a*. By the combination of these parts *a* C there is thus formed an annular chamber of considerable depth, which receives the lower part of the annular wick. The parts *a* C are united by collar *b*, which is screw-threaded on its exterior, and is designed to screw into a tubular perforated stem, *c*, projecting centrally from the base D. Through this perforated stem the air for the central draft enters the central tube *a*, and in it is received the drippings of oil which pass down the center tube. The stem *c*, at its base, has an aperture, *d*, through which this oil can find its way into the base D, which is formed to receive and hold it, and in effect constitutes the drip-cup. On one side of said drip-cup is a shield, *e*, and spout *f*, for emptying the drip-cup; in doing which the latter should first be unscrewed from the lamp.

The lamp thus made is designed to fit, as shown, in a shell or case, E, of proper size and shape, to receive the same, and the perforations *g*, in its sides, for the passage of the air required for the central draft. This shell or case is provided with a heavy or weighted base. To trim or clean the lamp, it should be removed from the shell E. When it has been removed the drip-cup serves as a base upon which the lamp will stand.

For filling the lamp, I prefer to use the arrangement shown, which consists of an annular oil-receiving recess or groove, *h*, formed in the metallic top of the lamp, around the lamp-collar, from which groove or recess lead one or more tubes, *i*, each of which extends nearly to the bottom of the oil-reservoir.

This, with the oils of the character for which the lamp is particularly designed, is a convenient arrangement. No stoppers are required for the tube. The oil in the reservoir is not liable to escape or splash on a sudden movement of the lamp. The lamp can readily be filled at any time without even removing the burner, and there is no liability of overflow.

I prefer to make all parts of the lamp of metal; but other material can be used.

Having described my improvements, what I claim, and desire to secure by Letters Patent, is as follows:

1. The annular oil-receiving recess, formed in the top of the metallic lamp-body around the lamp-collar, in combination with an oil

conducting tube or tubes, leading from said recess into the lamp-body, as shown and set forth.

2. The lamp-body or oil-reservoir, in combination with an extension or well projecting below the bottom of, and communicating with, the oil-reservoir, and a central draft-tube, which, with said well, forms an annular chamber for reception of the lower portion of the tubular wick, substantially as shown and set forth.

3. The lamp-body, and the annular wick-receiving chamber, projecting below the bottom of said body, and formed by the union of the central draft-tube, and an outer enveloping jacket, as described, in combination with a drip-cup, constituting the base of the lamp, and provided with a tubular perforated stem, which is detachably connected with the lower end of the annular wick-receiving chamber, substantially as shown and set forth

4. The lamp-body, the detachable drip-cup, constituting the base of the lamp, and the tubular connecting stem, through which air is admitted to the central draft-flue of the lamp, in combination with an outer perforated shell or receptacle, into which the lamp fits, and from which it is removable, substantially as set forth.

5. The detachable drip-cup, formed to constitute a base for the lamp, when the latter is removed from the outer shell or jacket, and provided with a discharge-spout and shield, and a central perforated stem, having at its base an opening, through which the drip may pass into the cup, substantially as set forth.

In testimony whereof I have hereunto signed my name this 19th day of April, A. D. 1875.

RUFUS S. MERRILL.

Witnesses:

EWELL A. DICK,

HENRY R. ELLIOTT.