R. S. MERRILL.

Lamp.

No. 107,278. Patented Sept. 13, 1870.

Fig. 1.

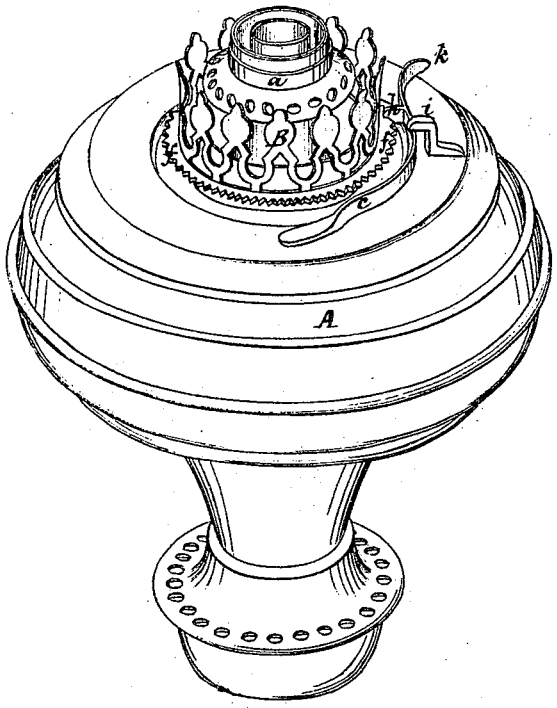
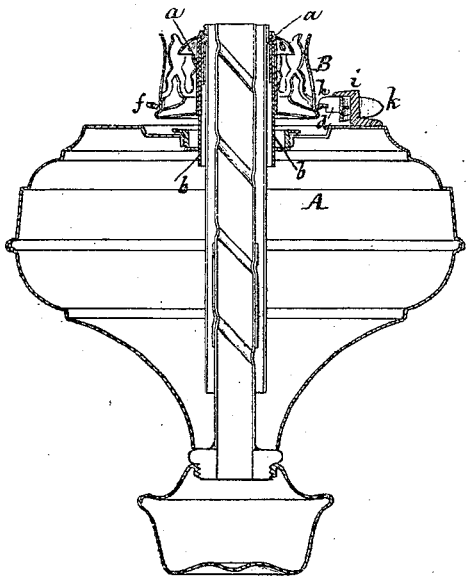


Fig. 2.



Witnesses.

H. Baily

John W. Culkley

Rufus S. Merrill, Inventor.

by his attorney

A. Pollock

United States Patent Office.

RUFUS S. MERRILL, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO HIMSELF, JOSHUA MERRILL, AND WILLIAM B. MERRILL, OF SAME PLACE.

Letters Patent No. 107,278, *dated September* 13, 1870.

IMPROVEMENT IN LAMPS.

The Schedule referred to in these Letters Patent and making part of the same.

To whom it may concern:

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

My invention relates to Argand or round-wick burners, in which the removable portion of the burner is supported upon the wick-tube or a tube surrounding the same, and is so arranged as by its rotation to effect the raising or lowering of the wick.

This arrangement is well understood by lamp-manufacturers, and needs no further description.

As the movable portion of the burner which is thus used to raise or lower the wick rests simply by its gravity upon its supporting tube, and is not held down thereon, nor prevented from rotating thereon, by any positive fastening, it consequently happens, when the lamp is used in any place when it is shaken or jarred for any length of time, for instance, in a railway car, that the shaking or jarring to which the lamp is subjected, will cause the removable part of the burner to rotate, so as to gradually lower the wick, and thus decrease or even entirely extinguish the light; and at times, upon any violent movement, this portion of the burner is liable also to be moved upward and thrown out of position.

My invention is intended to remove these difficulties, and to this end it consists—

First, in combining with the said removable portion of the burner, a spring fastening or other stop engaging with said portion of the burner in such manner as to prevent any upward movement of the same upon its supporting tube.

Second, in combining with the said removable portion of the burner a spring fastening or other stop which engages with said portion of the burner, so as to prevent the same from rotating upon its supporting tube until the fastening or stop is withdrawn.

Third, in the combination, with the said removable portion of the burner, of a stop or fastening, constructed substantially as hereinafter described, so as to prevent both the upward movement and the rotation of said portion of the burner upon its supporting tube.

To enable others skilled in the art to understand and use my invention, I will now proceed to describe the manner in which the same is or may be carried into effect, by reference to the accompanying drawing, in which—

Figure 1 is a perspective view of a lamp made in accordance with my invention.

Figure 2 represents a vertical central section of the same.

The lamp-body or reservoir A is of any suitable shape and construction, and is provided with tubes for producing the internal draught, and for supporting the wick, as is common in Argand lamps.

The removable part of the burner, consisting of the chimney, gallery, spring, &c., is represented at B.

This removable part is provided with a sleeve, *a*, which fits and rests upon a supporting tube, *b*, surrounding the wick-tube, and is arranged to engage with the wick-raising tube or device, so that the rotation of said portion of the burner will cause the wick to be raised or lowered, as desired.

The construction and operation of these parts are understood by lamp-manufacturers, and need no further explanation.

In order to prevent any jar or sudden motion from causing the sleeve *a* to rotate, or have any upward movement upon the supporting tube *b*, I provided a spring stop or fastening fixed to the lamp and arranged so that when in its normal position it will press against, or otherwise engage with the burner, so as to prevent any movement of the same.

In the present instance, the fastening device consists of a spring, *c*, one end of which is made fast to the lamp, while the other and free end extends toward the burner.

The latter end of the spring has affixed to it a notched locking piece, the lower portion, *d*, of which engages with a series of notches or teeth, *f*, arranged around the lower part of the removable burner.

The upper part *h* of the locking piece projects beyond the lower part *d*, and is pressed by the spring *c*, so as to extend over the flange or projecting rim upon which the notches *f* are formed.

The spring also presses up the detent *d*, so as to cause it to engage with which ever one of the notches *f* is opposite to it.

The spring moves back and forth under a holding piece, *i*, which prevents it, and the locking device which it carries, from having any upward movement.

The upper edge of the locking piece *h* is beveled, so that when the burner is slipped on its supporting tube it will be enabled to press back the spring until the locking piece clears the rim of the burner. The spring will then be released, and will throw forward the locking piece, so that the part *d* will engage with one of the notches *f*, and the part *h* will lap over the rim or flange of the burner, thus preventing the latter from having any rotary or upward movement.

By pressing on the thumb-piece *k*, the spring can be forced back so as to disengage the locking-piece from the burner, and allow the wick to be raised or lowered. When this is done, the spring is released, and will throw forward the locking piece into its normal position.

In the arrangement just described, the fastening device has two offices; it arrests the rotation of the burner and prevents its vertical movement; but it is manifest that the stop *d* is not necessary in case it is desired to prevent vertical movements only of the

burner, while, on the other hand, if the object is simply to prevent the burner from rotating upon its supporting tube, the stop *d* alone is sufficient, and the other stop, *h*, can be dispensed with. Either stop, therefore, may be used without the other, although I much prefer the use of the two conjointly.

It is also manifest that the particular means by which the locking-device is forced up to the burner may be greatly varied without departure from the principle of my invention. For instance, the locking device, instead of being upon the end of a spring, such as shown, may be formed on or attached to a bolt or pin, arranged radially upon the top of the lamp, and so as to slide toward or away from the burner, being forced up into contact therewith by means of a spring.

Many other modifications will readily suggest themselves, all that is necessary being that the locking device, whether intended for holding down the burner or for preventing its rotation, or for both of these purposes, should have a spring pressure upon the burner so as to remain engaged upon the same, until withdrawn by hand, in order to admit of the removal or adjustment of the burner, or the raising or lowering of the wick.

Having now described my invention, and the manner in which the same is or may be carried into effect,

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

1. In an Argand or round-wick lamp, in which the removable portion of the burner, used to effect the adjustment of the wick, fits, and is supported upon a tube surrounding the wick-tube, the combination, with the said portion of the burner, of a spring locking-device engaging with the same, substantially as described, so as to prevent any upward movement of said portion of the burner upon its supporting tube.

2. In a lamp such as specified, the combination, with said removable portion of the burner, of a spring locking-device for preventing the rotation of said portion of the burner upon its supporting tube, substantially as herein shown and set forth.

3. A spring locking-device, constructed and combined with the said removable portion of the burner, substantially in the manner shown and described, so as to prevent both the upward movement and the rotation of said portion of the burner upon its supporting tube.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

RUFUS S. MERRILL.

Witnesses:

EDM. F. BROWN,

M. BAILEY.