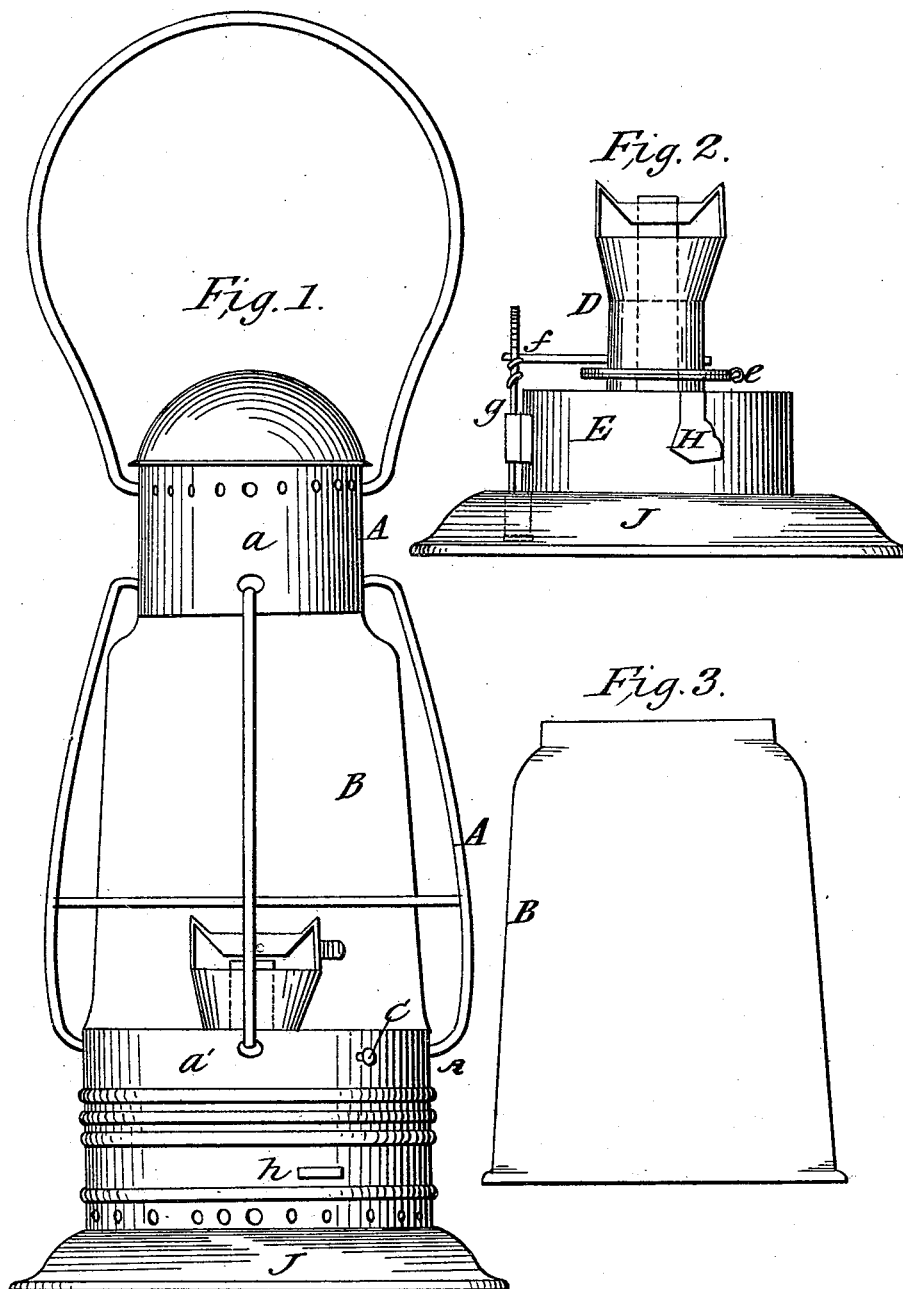


R. M. MERRILL.

Lantern.

No. 50,725.

Patented Oct. 31, 1865.



Witnesses:  
*Geo. C. Merrill*  
*Hugh Thyle*

Inventor:  
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# UNITED STATES PATENT OFFICE.

RUFUS M. MERRILL, OF CHICAGO, ILLINOIS.

## IMPROVEMENT IN LANTERNS.

Specification forming part of Letters Patent No. 50,725, dated October 31, 1865.

*To all whom it may concern:*

Be it known that I, RUFUS M. MERRILL, of Chicago, in the county of Cook and State of Illinois, have invented a new and Improved Lantern; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a vertical or front view of my invention. Fig. 2 is a representation of the lamp detached from the lantern-frame. Fig. 3 represents the globe or protector detached from the lantern.

Similar letters of reference indicate corresponding parts in the several figures.

The nature of my invention consists in, first, the peculiar construction of a lantern globe or protector in which the diameter of its base or lower part is equal to or greater than that of any other parts of the same, so as to admit it to be inserted in position within the frame or casing by passing it through the casing, and at the same time completely fill the circumference of the same without the appliance of any other device or material; second, in a novel device whereby the lamp or oil-reservoir may be securely and readily attached to or disconnected from the lantern by a partial rotary movement of one part upon the other; third, in a novel arrangement whereby the height of the flame within the lantern may be regulated from the outside without removing the lamp for the purpose.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents frame or casing of the lantern, constructed in the usual manner, the upper part, *a*, and the lower part, *a'*, being connected securely by the guard-wires, by soldering, or otherwise.

B is the glass globe or protector, and is made of such a form that its greatest diameter does not exceed that of the bottom or lower part thereof, so that when inserted through the casing *a'* to its position in the frame it will fill the entire circumference of said casing without the interposition of any device or material to complete the connection between them, and also admit of being readily detached from the

frame when desired. The globe is held in its position within the frame by the screw C or an equivalent device, or projections may be made in the casing inward and corresponding depressions molded in the glass, so that when the globe is in position a slight turn will securely fasten it in its place.

D is the burner or wick tube, and is held in its position upon the oil-reservoir E by the hinged collar *e* in such a manner that it can have no material lateral motion, and thus guard against the accidental disconnection of the toothed wheel from the worm-wheel hereinafter described.

*f* is the wick regulator, and to the end of this is secured a toothed wheel, which engages with the worm on the spindle *g*. This spindle is secured in a vertical position by bearings attached to the oil-cup, and extends downward through the bottom flange, J, of the lamp and terminates with a button, so that the height of the flame within the lantern may be regulated by simply turning the button.

To the two opposite sides of the oil-cup are soldered the springs H, extending down and outwardly a suitable distance, and corresponding slots or apertures *h* are made in the case *a'*, into which the springs engage and securely connect the parts together. The lower ends of the springs are sloped toward one side, so that a partial rotation of the lamp upon the casing causes the springs to leave the slots, and thus disconnect the parts without the use of thumb-pieces or any direct pressure upon the springs. When turned in an opposite direction the form of the ends of the springs will prevent them from passing the slots after they have entered them, as the square end of the spring will strike against the metal at the end of the aperture and prevent further movement in that direction; or, if preferred, the springs may be made of wire bent to the proper form and attached to the lamp and operated in connection with a pin secured to the casing.

By this arrangement of parts and the use of the described globe many advantages are obtained, a few of which are the ease with which the globe can be removed from the frame for the purpose of cleaning or to insert a new one in case of breakage, together with the exceeding cheapness of construction of the frame or

casing. There is also much less danger of breakage or accidental displacement than when a more complicated arrangement is used, and no change is required in the frames as usually made to adapt them to be used with this adjustable globe.

The simplicity of the springs and the ease with which they are operated, together with their perfect security, give many advantages.

The device for regulating the height of the wick, owing to the absence of springs or movable bearings, is not liable to derangement of any of its parts by usage.

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

1. As an article of manufacture, the within-described lantern globe or protector, having its maximum diameter at its base or lower part, substantially as and for the purpose shown and described.

2. The globe or protector B, in combination with the frame or casing of a lantern, and a device for holding it in position, substantially as shown and described, and for the purpose set forth.

3. Operating the connecting-springs of a lan-

tern by a partial rotary movement of one part of the same upon the other, substantially in the manner shown and described, and for the purpose set forth.

4. In combination with a spring or springs secured to one part of a lantern, the slots *h* or their equivalents on the other part, so that the two parts may be firmly locked together, or released from their connection by a partial rotary motion of one part upon the other, substantially as and for the purpose herein described and shown.

5. Attaching the burner to the lamp by means of a hinged collar, *e*, or its equivalent, in such a manner that it can have no material lateral or rotary motion in its collar, substantially as shown and described, and for the purpose set forth.

6. In combination with the burner D and regulator *f*, the worm-wheel and its spindle, arranged and operating substantially as described, and for the purpose set forth.

RUFUS M. MERRILL.

Witnesses:

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