

J. H. IRWIN.

Lantern.

No. 86,548.

Patented Feb. 2, 1869.

Fig: 1.

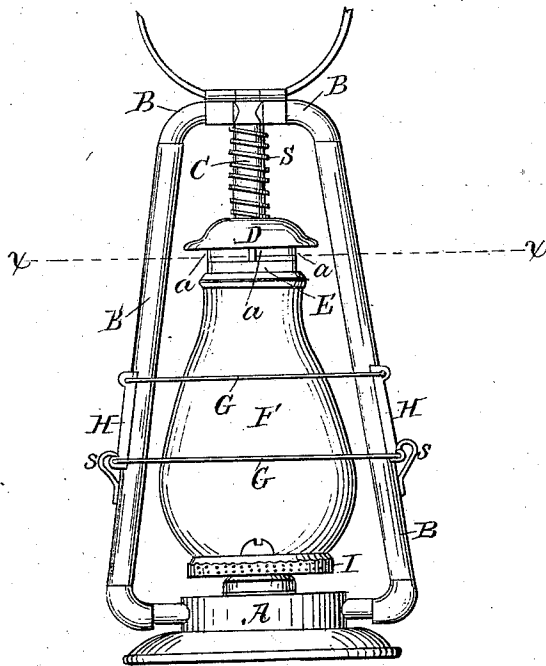


Fig: 2.

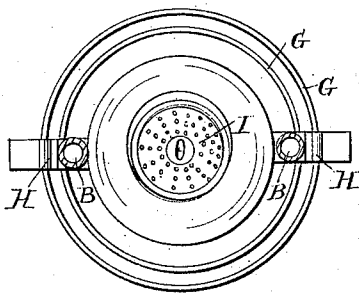
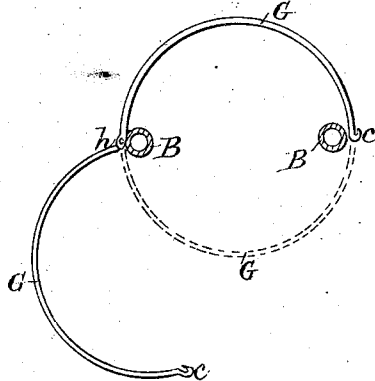


Fig: 3.



Witnesses  
H. Bruns.  
E. C. Hooper.

Inventor  
John H. Irwin  
Goburn & Mans

# UNITED STATES PATENT OFFICE.

JOHN H. IRWIN, OF CHICAGO, ILLINOIS.

## IMPROVEMENT IN LANTERNS.

Specification forming part of Letters Patent No. 86,548, dated February 2, 1869.

### *To all whom it may concern:*

Be it known that I, JOHN H. IRWIN, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Lanterns; and I do hereby declare and make known that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and the letters and figures marked thereon, which form part of this specification.

My said invention relates to an improvement upon lanterns, in which the upper part thereof is secured to the base holding the glass shade or globe in place by means of tubes passing from a funnel-shaped top down to the base, to convey air to the burner by the action of the heat generated by the burner, as herein shown; and it consists in a novel mode of securing a guard upon said tubes and around the glass globe to protect said globe, whereby said guard can be readily removed or opened to permit the globe to be taken out and cleaned, or to be replaced with another glass when broken, as hereinafter more fully described.

To enable those skilled in the art to understand how to construct and use my said invention, I will proceed to describe the same with particularity, making reference in so doing to the aforesaid drawings, in which—

Figure 1 represents a side view of my said invention. Fig. 2 is a plan section taken at the line *x* in Fig. 1, and Fig. 3 shows a plan of the guard, constructed so as to open upon one side.

Similar letters of reference in the several figures denote the same parts of my invention.

A represents the base of the lantern, containing the oil-pot, which is surrounded by an air-chamber, into which the air-tubes B B open, so that the air-currents generated and sustained by the heat of the flame of the lamp, which pass up through the tube C and down through the tubes B B, are evenly distributed about the base of the burner to supply the flame with the requisite amount of oxygen to support a perfect combustion.

Inasmuch as the globe F is held by means of a ring, E, surrounding its top, its lower end resting upon a suitable supporting-plate, I, in order to remove the globe to clean the same and replace it, or to replace it with a new globe when broken, the ring E is attached, by

means of arms *a*, to the inverted funnel D, which has a sliding movement upon the tube C, being held down upon the globe to hold the same firmly in place by means of a spring, S, one end of which rests upon said funnel D and the other end upon the shoulders formed by the branching tubes B B, as shown, so that, although the spring S acts to hold the rim E down firmly upon the top of the globe to secure it in place, it will yield to the upward pressure required to raise the ring E from the globe when desired.

If desired, however, the globe may be plastered in, in which case the guard hereinafter described may be permanently secured in place upon the tubes, instead of being made so as to be removable therefrom.

G G represent two wire rings, the upper one being of a less diameter than the lower one, to conform to the flaring of the tubes B B, upon which they are designed to fit, said rings being connected at the opposite points, where they come in contact with said tubes, by a metallic strap, H, so as to hold the wires together at the proper distance apart and form the guard in one piece. If desired, more than two guard-wires may be used.

The aforesaid strips of metal H may be curved slightly, so as to adapt them to the convex configurations of the tubes, and there may be, if desired, spring-catches *s s* upon the tubes, so that when the guard is pressed down upon the tubes to the proper position said catches will spring over a shoulder upon the lower end of the strips H, or over the wire ring, to secure the guard in place. Any other suitable catch may be used for the same purpose instead of the spring-catches *s*, or catches may be entirely dispensed with, as the guard will generally retain its position without any device for fastening the same.

By this construction and arrangement it will be seen that the guard G G can readily be removed by raising the same off from the top of the lantern, and replaced by passing the same down over the tubes, as shown.

Should the tubes B B be made vertical, suitable shoulders could be formed upon the same to support the guard, or spring-catches *s s* would answer the same purpose, and also secure the guard, as before described.

If the tubes flared out from below upward, the

guard could be placed upon the tubes and removed therefrom at the bottom of the lantern, in which case suitable movable catches would be necessary to support the guard in place.

In Fig. 3 is shown another mode of securing the guard upon the tubes, so as to permit the globe to be removed therefrom, which consists in securing a semi-guard firmly to the tubes upon one side and hinging a corresponding semi-guard at one end to one of the tubes, so that it may open, as indicated in the full lines, to allow the removal of the globe, and be closed, as shown in dotted lines, to complete the guard, being held in place by means of a suitable catch, *c c'*.

Having described the construction and op-

eration of my said invention, I will now specify what I claim and desire to secure by Letters Patent.

1. I claim, in combination with a lantern constructed with tubes B B, as described, a guard, G H, arranged and operating substantially as specified and shown.

2. I claim, in combination with a lantern constructed substantially as described, a sectional guard, G G', arranged and operating substantially as specified and shown.

J. H. IRWIN.

Witnesses:

W. E. MARRS,

W. BURNS.