

(No Model.)

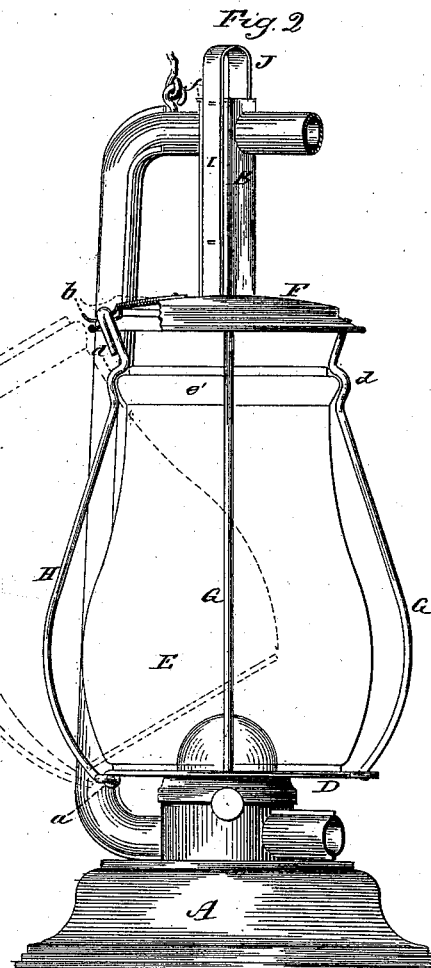
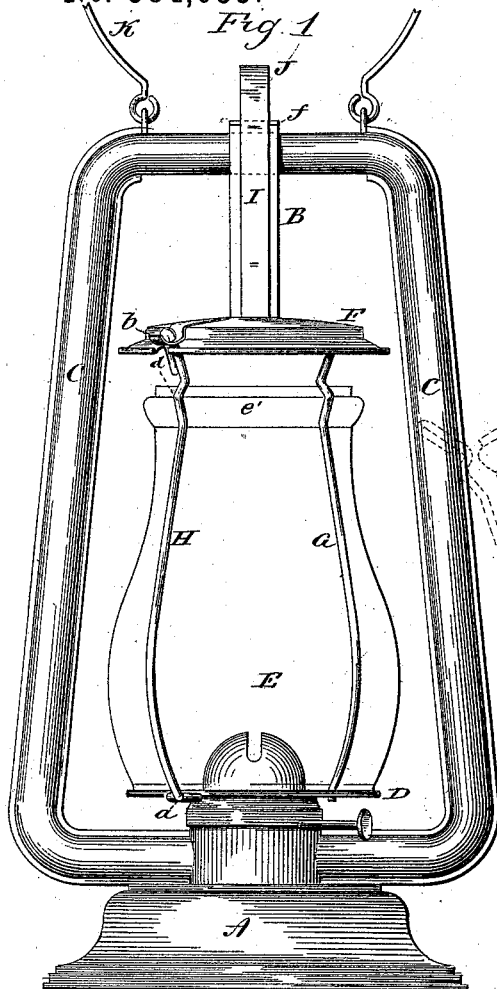
2 Sheets—Sheet 1.

H. A. MATTHEWS & D. M. IRELAND.

LANTERN.

No. 384,053.

Patented June 5, 1888.



Witnesses,
J. H. Shumway,
Fred. C. Eard.

Henry A. Matthews,
David M. Ireland,
By atty. Inventors,
J. M. Child.

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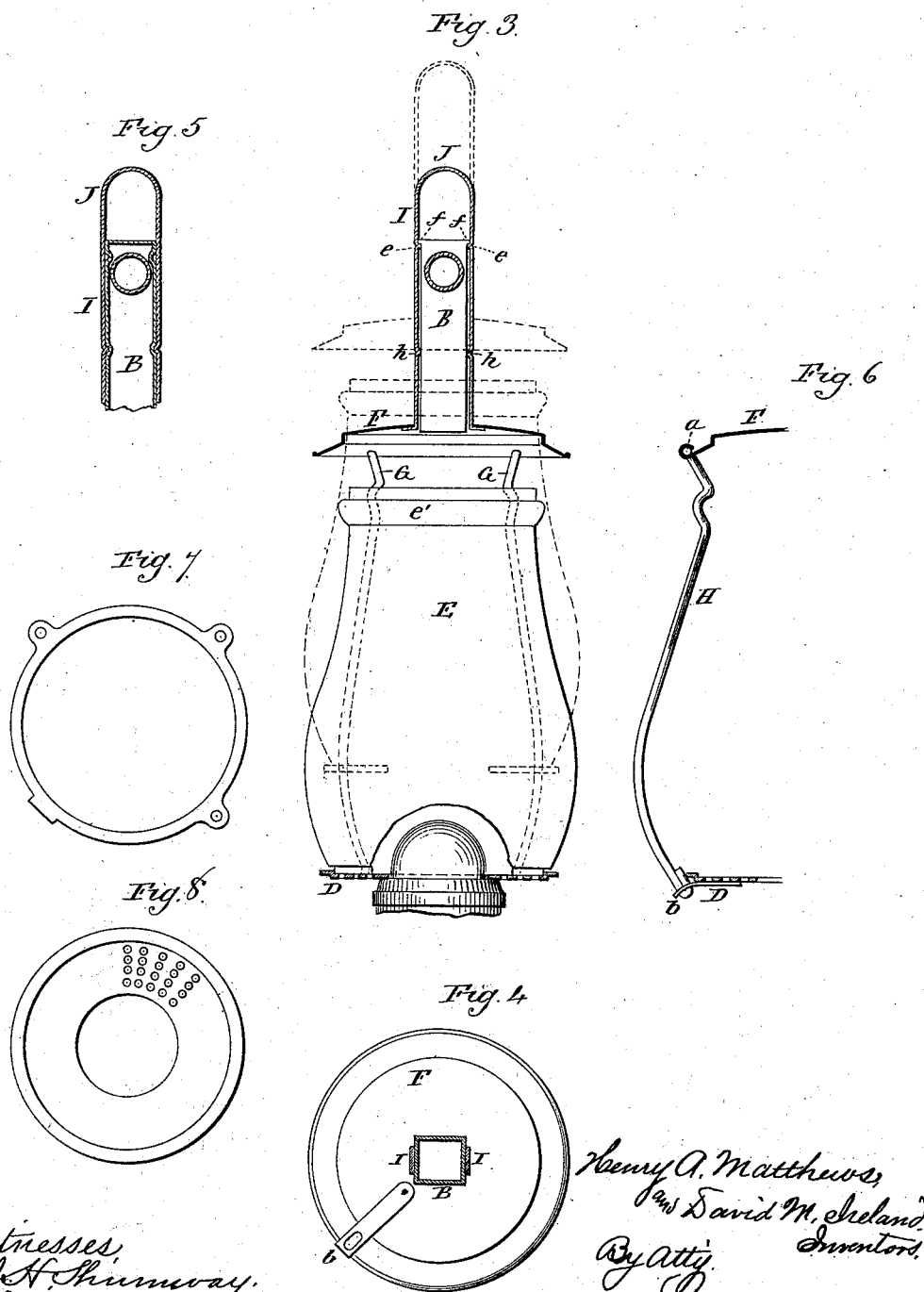
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and David M. Ireland,
Inventors.
By Atty.
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UNITED STATES PATENT OFFICE.

HENRY A. MATTHEWS AND DAVID M. IRELAND, OF WATERBURY,
CONNECTICUT.

LANTERN.

SPECIFICATION forming part of Letters Patent No. 384,053, dated June 5, 1888.

Application filed February 16, 1888. Serial No. 264,368. (No model.)

To all whom it may concern:

Be it known that we, HENRY A. MATTHEWS, and DAVID M. IRELAND, of Waterbury, in the county of New Haven and State of Connecticut, have invented new Improvements in Lanterns; and we do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view of the lantern; Fig. 2, a view of the lantern turned partially around, with a portion broken away for the convenience of illustration; Fig. 3, a vertical central section at right angles to the plane of the tubes C C; Fig. 4, a horizontal section above the cap-plate, looking down; Figs. 5, 6, 7, and 8, modifications.

This invention relates to an improvement in that class of lanterns in which the air delivered to the burner to support combustion is led from within the globe through a tube opening from the cap at the top of the globe, and from which branches extend downward outside the globe and into the burner below, this class of lanterns being commonly called "tubular lanterns."

The object of the invention is to provide a guard for the globe which shall extend from the bottom of the globe to the cap above, so as to form a protection for the entire globe, but yet so that while the globe shall be firmly held in place it may at the same time be easily removable, and also to provide a simple device by which the globe may be raised for lighting or trimming purposes and be held firmly in either such raised or in the down or closed position; and the invention consists in the construction hereinafter described, and particularly recited in the claims.

A represents the base of the lantern; B, the tube which leads from the upper end of the globe, and C C the tubes which lead from the tube B to the burner below, as in the usual construction of this class of lanterns.

D represents a perforated plate, upon which the globe E rests. The plate D is adapted to

rest upon the burner, as in the usual manner and as shown.

F represents the cap, which is arranged upon the tube B in a plane above the top of the globe, and preferably so as to slide vertically on the tube B, as from the position seen in Fig. 3 to that shown in broken lines in the same figure.

From the plate D guard-wires G extend outside the globe E to the plate F, and are firmly united to both plates, so as to secure them together. Preferably three guard-wires, G, are thus made fast to the two plates.

A fourth guard-wire, H, is hinged at one end—say the lower end—to the plate D, as at *a*, and at its upper end it is adapted to pass under a spring-latch, *b*, by which it will be engaged with the plate F, and so that when so engaged it forms a guard-wire like the wires G. Each of the said wires is constructed with a bend, *d*, near its upper end corresponding to the bead *e* around the upper edge of the globe, so that the said bends of the several wires will grasp the globe at its upper end.

To introduce the globe, the hinged guard-wire H is detached from its spring-latch and then turned away, as seen in broken lines, Fig. 2, leaving a space between the guard-wires at each side through which the globe may be introduced and set upon the plate D or removed therefrom, as the case may be, and as indicated in broken lines, Fig. 2. When the globe is set in place, the hinged guard-wire is returned and re-engaged with its latch, which holds that wire firmly in the closed position. The several wires form a practical guard for the entire globe, and by their engagement with the globe at their upper ends the guards also serve to hold the globe firmly in its place.

The plate F being movable vertically on the central tube B, as before described, and the plate D firmly connected therewith, it follows that when the plate F is raised the plate D and the globe will necessarily rise with it, as indicated in broken lines, Fig. 3, and so as to leave the burner exposed below the globe for lighting or trimming.

The tube B is made of rectangular shape in transverse section, as seen in Fig. 4, or so as

to present two opposite flat sides. To the cap F a metal strap, I, is attached, of inverted-U shape. The two sides or legs of the strap lie close against opposite sides of the tube B. The bend J of the strap is above the tube B, so as to form a convenient loop or handle, as shown, and so that by taking hold of the bend or loop J the strap may be moved up or down on the tube B and take with it the plates and globe, as before described. The strap is somewhat elastic, and is constructed with inward projections *e e*, which are adapted to engage a corresponding shoulder, *f*, on the tube B when the globe is in the down position, and as seen in Fig. 3, and so as to hold the globe firmly in such down position, and the strap is also constructed with like inward projections, *h*, at points below, but which projections *h*, when the strap is raised, will pass over the shoulders *f* and engage the tube above, as indicated in broken lines, Fig. 3, so as to support the globe in the up position. These projections *e h* are best produced by making indentations upon the outside of the strap, which forces the metal correspondingly inward, as represented in Fig. 3.

Instead of making two projections, *e h*, in the strap and one projecting shoulder, *f*, on the tube, the tube may be constructed with two notches and the strap with a corresponding indentation, as represented in Fig. 5, and accomplish the same result.

As it is not positively necessary that the strap should be provided with means for holding the globe in the up position, the notches and projections for this purpose may be omitted.

The lantern is provided with the usual bail, K, or any other known equivalent device for carrying or hanging the lantern.

While we prefer to hinge the guard-wire at its lower end and provide the latch at the upper end, this order may be reversed, as seen in Fig. 6, the guard hinged at the upper end, and the latch arranged at the lower end.

While we prefer to make the perforated plate D, which closes the lower end of the globe, a permanent part of the support for the globe, it may be made detachable, as seen in Figs. 7 and 8, Fig. 7 representing a ring, to which the guards are attached and upon which the plate, Fig. 8, may set; but this ring and plate together form substantially the perforated

plate for the bottom of the globe, to which the guards are attached. We wish, therefore, by the expression "the guards are attached to the perforated plate" to be understood as including this modification or any substantial equivalent therefor.

It will be understood that any desirable number of guards may be employed, and that, if desirable, more than one of said guards may be hinged; but in practice we find that four such guard-wires equidistant from each other are practically sufficient, in which case it is only necessary to hinge one of the wires.

It will be understood that the strap J, with the shoulders and projections adapted to engage with the tube B, may be employed to advantage in other lanterns of this class, in which the cap-plate is made vertically movable and adapted to carry the globe with it.

We claim—

1. In a lantern substantially such as described, the combination of the perforated plate D, adapted to rest on the burner below, the cap-plate F above, the globe G, seated upon the plate D and below the plate F, two or more guard-wires extending from the plate below outside the globe to the plate above and rigidly secured to the said plates, and one or more guard-wires hinged at one end to one of said plates and extending outside the globe, detachably secured by the other end to the other plate, substantially as described.

2. In a lantern substantially such as described, the combination of the perforated plate D, adapted to rest on the burner below, the cap-plate F above, the globe G, seated upon the plate D and below the plate F and constructed with an annular bead around its upper end, two or more guard-wires extending from the plate below outside the globe to the plate above and rigidly secured to the said plates, and one or more guard-wires hinged at one end to one of said plates and extending outside the globe, detachably secured by the other end to the other plate, the said wires constructed with bends corresponding to and adapted to embrace said bead on the globe, substantially as described.

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Witnesses:

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EDWIN H. WILLIAMS.