

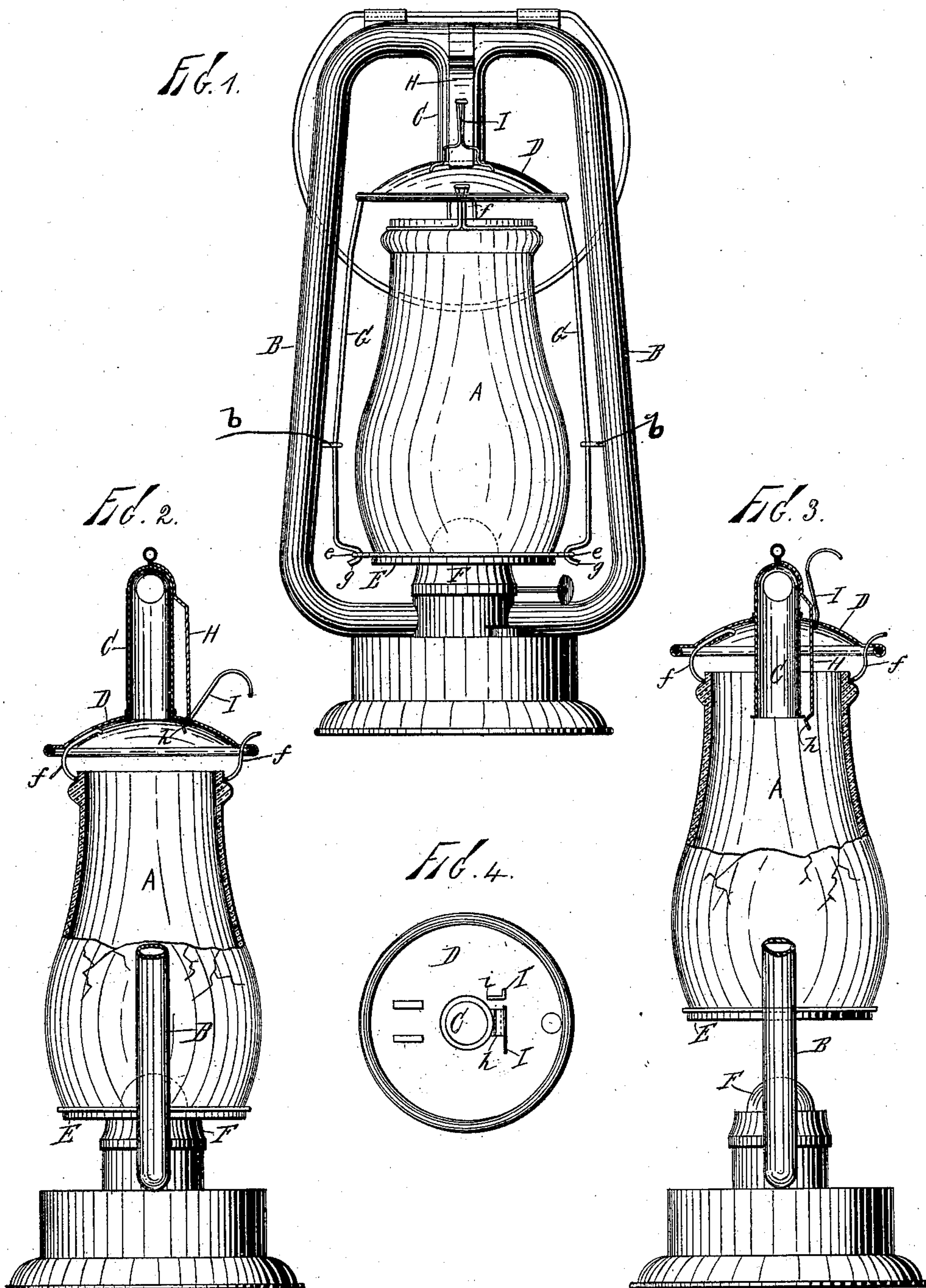
(No Model.)

2 Sheets—Sheet 1.

F. DIETZ.
TUBULAR LANTERN.

No. 373,056.

Patented Nov. 15, 1887.



Witnesses:
John Buckler,
L. H. Osgood,

Frederick Dietz,
Inventor.
By North Osgood,
Attorney

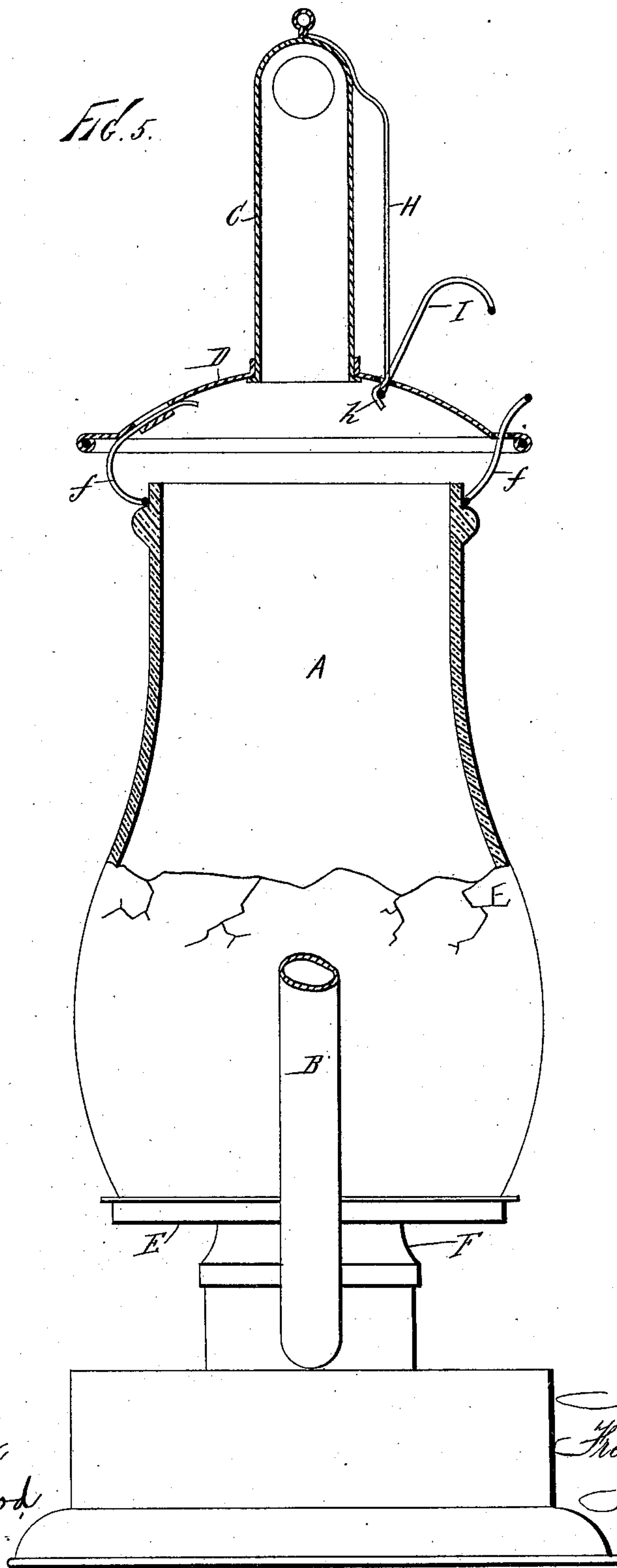
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UNITED STATES PATENT OFFICE.

FREDERICK DIETZ, OF NEW YORK, N. Y., ASSIGNOR TO THE R. E. DIETZ COMPANY, OF SAME PLACE.

TUBULAR LANTERN.

SPECIFICATION forming part of Letters Patent No. 373,056, dated November 15, 1887.

Application filed May 18, 1887. Serial No. 238,580. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK DIETZ, of New York city, county, and State of New York, have invented certain new and useful Improvements in Tubular Lanterns, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

10 My invention has relation to tubular lanterns or lamps, and especially to those whereof the globe is made vertically movable or adjustable, so as to expose the burner for lighting, extinguishing, trimming, cleaning, &c.

15 The object of my invention is to provide a simple, compact, convenient, and efficient means for elevating the globe and holding it in elevated position, which means will also operate as a safety-lock for securing the globe in
20 its proper working position against accidental disarrangement, and which will not be liable to become damaged during ordinary use of the lantern or lamp, or subjected to unnecessary wear. To accomplish all of this my improvements involve certain new and useful peculiarities of construction and relative arrangements or combinations of parts, as will be
25 herein first fully described, and then pointed out in the claims.

30 In the accompanying drawings, forming part of this specification, Figure 1 is a front elevation of a tubular lantern having my improved globe lifter, holder, and lock applied thereon in accordance with my invention, the globe being shown as locked down or in working position, so as to hold the cone and burner in proper place. Fig. 2 is a partial section and elevation upon a plane at right angles to that of Fig. 1, and passing through the spring
35 holder and lock, the globe being in same position as in Fig. 1. Fig. 3 is a view similar to Fig. 2, but showing the globe in elevated position. Fig. 4 is a plan view of the under side of the dome, showing one manner of securing the hinged thumb-piece and lifter, so that it will maintain a proper position with respect to the spring holder and lock. Fig. 5 is a partial section and elevation, like Fig. 2, but upon an increased scale.

40 In all these figures like letters of reference, wherever they occur, indicate corresponding parts.

A represents the globe; B B, the side tubes; C, the central air-tube communicating with the side tubes; D, the dome over the globe; E, 55 the perforated bottom plate connected and made movable with the globe, and F the burner-cone, upon which the perforated bottom plate rests when the globe is down to working position, holding the cone and burner in 50 place.

Two side guide-wires, G G, are connected with the dome D and extend down to the perforated bottom plate, E, having loops or hooks *g g* at their lower ends, which enter eyes *e e*, 65 formed in the marginal stiffening-wire applied to the bottom plate or otherwise connected with said plate, the object being to connect the bottom plate with the dome and to provide hinges on which the bottom plate may turn, so that the globe may be easily detached and inserted, if required. A spring, *f*, connected with the dome presses upon the upper part of the globe and holds the latter to its seat on the perforated bottom plate, except when the 75 spring is elevated, at which time the globe may be detached, as will be readily understood.

At some point near the top of the structure, as upon the horizontal connection between the central and side tubes, I firmly secure the end 80 of my spring holder and lock H. This holder and lock is preferably made of flat metal, the better to resist horizontal strains; but it may be made of round metal, if desired. It passes through a slot cut for it in the dome, and is 85 bent at the lower end, as at *h*, and at such a point that when the globe is down to its final position the bent portion will spring out and over the upper surface of the margin of the slot in the dome, thereby locking the dome, and 90 through it the globe, bottom plate, burner-cone, and burner, all in proper place.

I is the lifter or thumb-piece applied upon the dome. It is hinged or made movable thereon, in the example shown passing through 95 the dome, the ends being bent on the under side to prevent its displacement. One end, as *i*, is bent back far enough or made long enough so that it will prevent the lifter from falling too far away from the spring lock and holder when 100 not required for use. The lifter is mounted in front of the spring lock and holder, and in such relation thereto that when pulled upwardly it will bear against the spring, pushing

or crowding the latter back sufficiently to release the lock or bent end thereof, and the further lifting or pulling upwardly will elevate the dome and globe, as will be readily understood. As soon as the thumb-piece is released the spring presses against the margin of the slot in the dome, causing sufficient friction to hold the dome and globe in elevated position. To readjust the globe, all that is necessary is to press down upon the dome. It will be observed that the spring is not movable up and down, and does not extend above the horizontal air-pipe connections. The thumb-piece or lifter is short, and also does not extend above the horizontal air-pipe connections.

The operator has only to place the finger upon the top of the lantern structure and the thumb beneath the lifter, (or the reverse,) and move one toward the other, the top of the structure affording a rigid point of bearing. The side wires, G G, pass through loops, as *b b*, upon the stationary tubes B B, wherein the wires are guided. Heretofore these side wires have been bent so as to press hard against the loops, producing friction for holding the globe up and rendering it difficult to remove the globe.

A lifter has heretofore been applied to the dome, and made of such length as to project beyond the top of the lantern, where it is exposed to being bent by reason of the lantern falling or by reason of other accident, and especially by use in lifting or depressing the globe, and it often becomes broken off. When bent, it does not work freely or properly in the guide provided for it, frequently permits the globe to move down of its own weight after it has been once raised, and fails to guide the globe accurately to its proper seating.

My improved spring lock and holder might be released by other means than by the lifter; but the lifter is a valuable adjunct, and it is preferred to hinge it so that it will release the spring lock and holder, as above explained. The side wires and central air-pipe guide the dome, and thus the top of the globe, accurately in all its movements, and the spring is not exposed to being broken.

I make no claim herein to the before-mentioned previous forms of construction; but,

Having now fully described my invention, what I do claim as new, and desire to secure by Letters Patent, is—

1. In a tubular lantern or lamp, the combination, with the globe, slotted dome, bottom plate, and connecting side wires, of the spring lock and holder secured at its upper end to the upper part of the structure, passing through a slot in the dome, and arranged to bear upon said dome, substantially in the manner and for the purposes set forth.

2. In a tubular lantern or lamp, the combination of the spring lock and holder secured at its upper end to the upper part of the structure, the movable slotted dome and the globe connected therewith, and the hinged lifter arranged to bear against and release the spring lock and holder, substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of two witnesses.

FREDERICK DIETZ.

Witnesses:

JOHN BUCKLER,
WORTH OSGOOD.