

(No Model.)

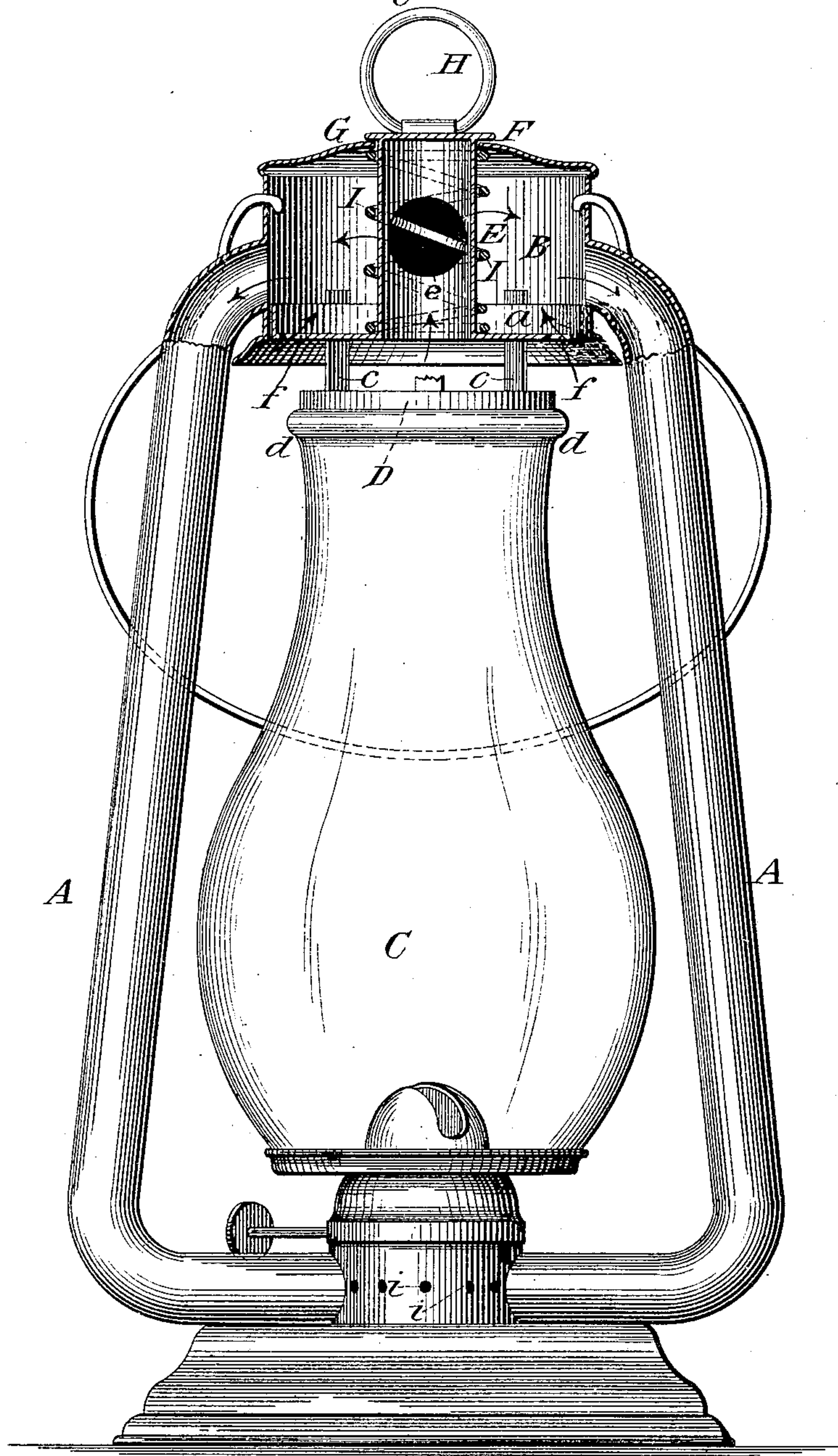
2 Sheets—Sheet 1.

J. H. STONE.  
TUBULAR LANTERN.

No. 273,910.

Patented Mar. 13, 1883.

*Fig. 1.*



Witnesses:

*Salmon P. Seavey*  
*Archdale H. Stone*

Inventor:

*John H. Stone*  
*By W. Bruce*  
*att'y.*

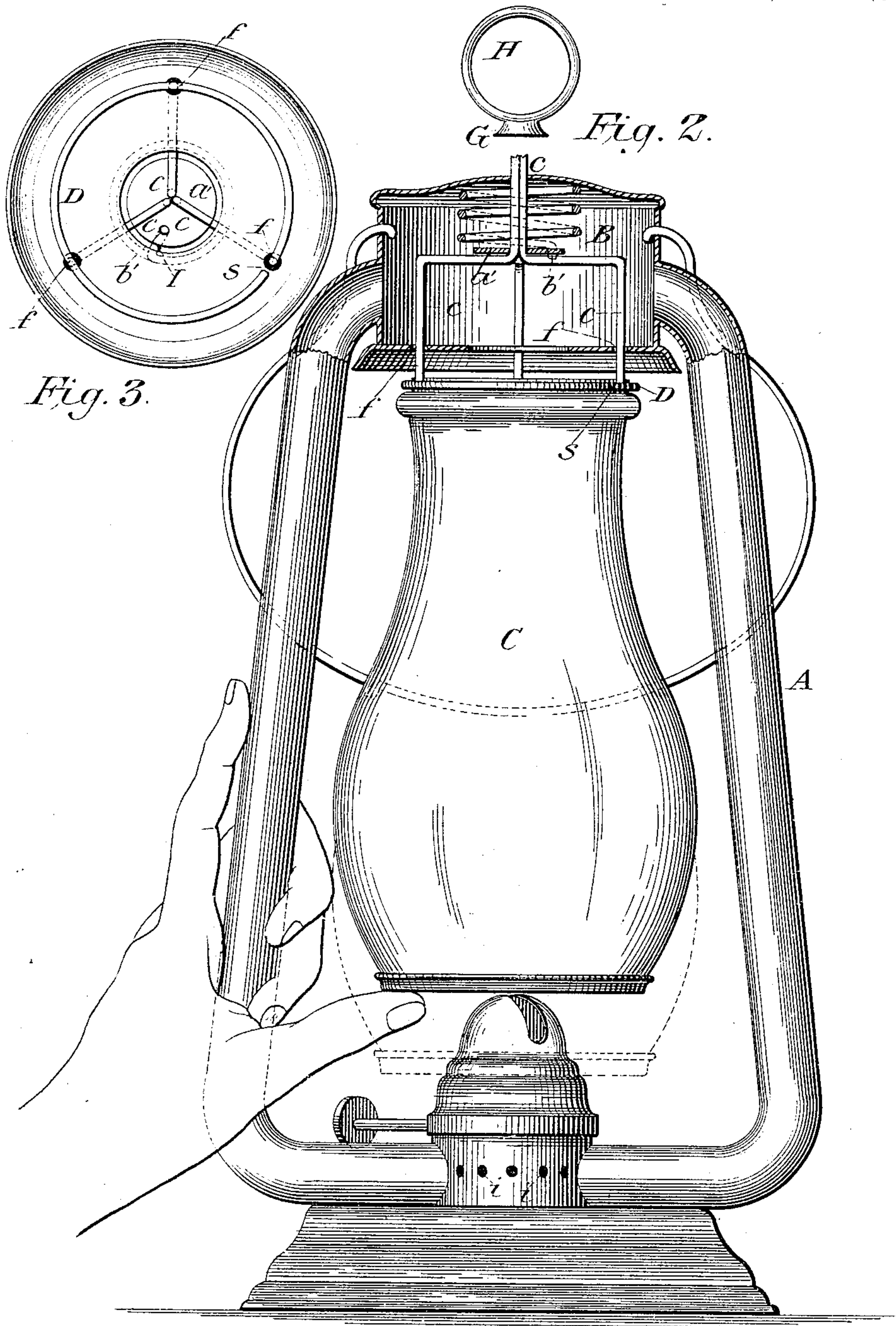
(No Model.)

2 Sheets—Sheet 2.

J. H. STONE.  
TUBULAR LANTERN.

No. 273,910.

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Witnesses:

*Samuel P. Seavey*  
*Orlando Pike*

Inventor:

*John H. Stone*  
*By W. Bruce att'y.*



# UNITED STATES PATENT OFFICE.

JOHN H. STONE, OF HAMILTON, ONTARIO, CANADA.

## TUBULAR LANTERN.

SPECIFICATION forming part of Letters Patent No. 273,910, dated March 13, 1883.

Application filed July 14, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN HENRY STONE, of the city of Hamilton, in the county of Wentworth, in the Province of Ontario, Dominion of Canada, manufacturer, have invented certain new and useful Improvements in Tubular Lanterns; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same.

Heretofore the objection to tubular lanterns was the spring which secured the globe at the top made it difficult to remove the globe and replace it when necessary; and my invention relates to a very handy, convenient, and simple device for securing the globe in its place, and so constructed and arranged that it can be easily and instantaneously removed and replaced, for cleaning and lighting, by the operator simply holding the lantern by one of the tubes and pressing the disk upward which holds the globe, which raises it and disk above the burner, when a match can readily be applied to it for lighting without otherwise removing the globe, as shown at Figure 2, Sheet 2.

By reference to the drawings, forming part of this specification, it will be seen that Fig. 1 is a side elevation of my tubular lantern, in which A A are the side air-tubes, entering an air-chamber, B, at the top of the lantern. Attached to the movable bottom *a* of said air-chamber, by vertical connecting-pieces *c c c*, is a ring, D, which is made of such a size as to easily slip over the top of the globe C to its head *d* and hold it firmly in a vertical position. E is a movable tube, which is secured at its lower end to the bottom *a* of the air-chamber, and is open at the bottom, and also having the sides perforated with holes, as at *e*. The top of the said tube E projects through an opening, F, in the top of the lantern, and is provided with a flat covering-cap, G, larger than the said opening, and finished with a small ring, H, attached to it, as shown. A spiral spring, I, is placed around the said tube E, (but I do not confine myself to that form.) Its lower part rests upon the movable floor *a* of the air-chamber and its upper part against the roof of the lantern, and presses the said floor *a* and ring D downward as far as the cap G will allow it to go. When the globe requires to be removed, all that is required to be done is simply to raise the tube E by its ring H, which

also raises the annular ring D from the globe and releases it, when it can be removed instantly. It will be observed that *ff* are openings in the sides of the floor *a* of the chamber B, and *e* are holes or perforations in the sides of the tube E, to admit the rarefied air to pass in the air-chamber B, and thence down the tubes A A, leading to the burner. Holes *ii* in the collar under the cone admit fresh air to mix with air descending in tubes A.

Fig. 2 shows the annular ring D, (which surrounds the top of the globe,) of wire, which may be open, as at Fig. 3, to allow for expansion of the globe by heat. Three or more wires, *e*, or sheet-metal strips, pass through the bottom of the air-chamber by the holes *ff*, bent at right angles, and the upper ends uniting and passing up through the top of the lantern, terminating in a ring, H, for raising it. On the lower end of the ring is a flange or cap, G, to prevent the spring drawing it down too far. The said spring I on the air-chamber B surrounds the vertical portion of the wires, and presses down the annular ring B upon the top of the globe C, to hold it in its place. A disk, *a'*, is made to surround the wires at the base of their junction, and affixed thereto and provided with a small opening, *b'*, through which the end of the spring passes, to retain it in its place.

Fig. 3 is a detail view of the upper part of the lantern.

The advantages of my device as above described are:

First. It does away with the spring that has been used heretofore, and which was objectionable in that it was unhandy to remove the globe.

Second. The present device of the spring to secure the globe was also objectionable, inasmuch that if a globe was broken it had to be replaced by one exactly of the same length, or it could not be fixed on the lantern, each glass-manufacturer making globes of a different length from others. By my device globes of varying lengths can be used without trouble.

Third. Globes by my device can be instantly removed without danger of breaking and replaced.

Fourth. By this device of the perforated cylinder we get a better light and one that cannot be put out in any wind.

Having thus described my device, what I claim as my invention is—



1. In a tubular lantern, a perforated movable tube or cylinder, E, inside of an air-chamber, B, at the top of a globe or lantern, the same being affixed to the movable bottom *a* of the air-chamber, and having attached by vertical strips *c c* an annular ring, D, to surround the globe O as a globe-holder, substantially as specified.

2. In combination with the air-chamber B of a tubular lantern, a perforated movable cylinder or tube, E, to which is attached a globe-holder, D, the cylinder being surrounded with a spiral spring, I, inside of air-chamber for the purpose of obtaining pressure on the globe to hold it in its place.

3. In a tubular lantern, the combination of the air chamber B, perforated movable cylinder E, globe-holder D, and spiral spring I inside of air-chamber, with the tubes A and the collar under the cone of the burner, having holes *i*, substantially as and for the purpose specified.

4. The combination, with a tubular lantern, of an air-chamber, B, perforated at top and bottom, a spiral spring inclosed in said air-chamber, a globe-holder, D, wires *c*, and tube E, or equivalent attached thereto, and passing through the perforated top and bottom of said air-chamber, for the purpose of allowing the globe to be pushed up with the thumb of the left hand to light the lantern and put out the same without removing the globe.

5. The wires *c*, (or strips,) composing the globe-holder, passing through the bottom of the air-chamber, and the annular ring D, open at one part of its circumference, as at *s*, to allow for expansion of the globe, substantially as and for the purpose specified.

Dated at Hamilton, Ontario, this 9th day of June, 1882.

JOHN HENRY STONE.

In presence of—

I. B. POLE,  
WM. BRUCE.