

W. C. WINFIELD.
TUBULAR LANTERN.
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914,688.

Patented Mar. 9, 1909.

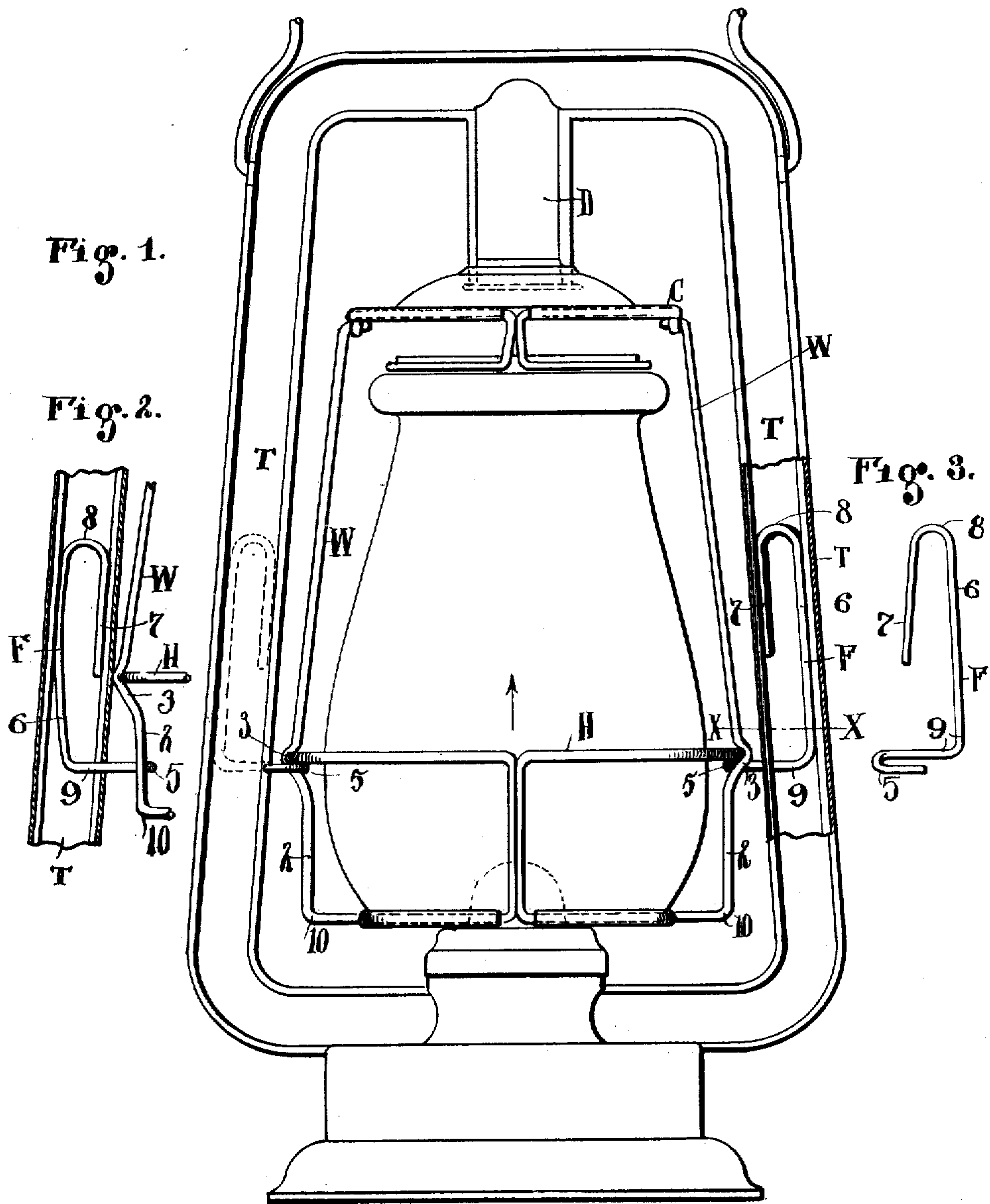


Fig. 1.

Fig. 2.

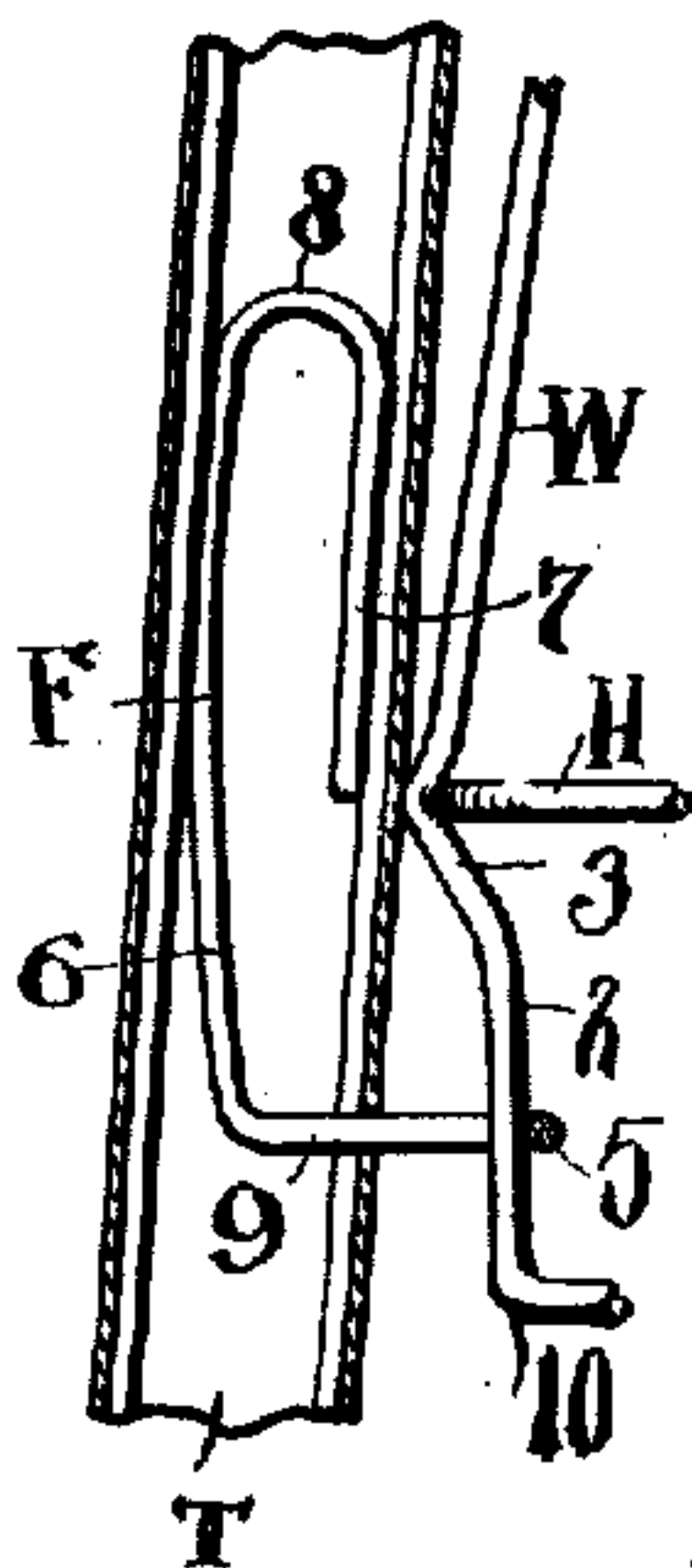


Fig. 3.

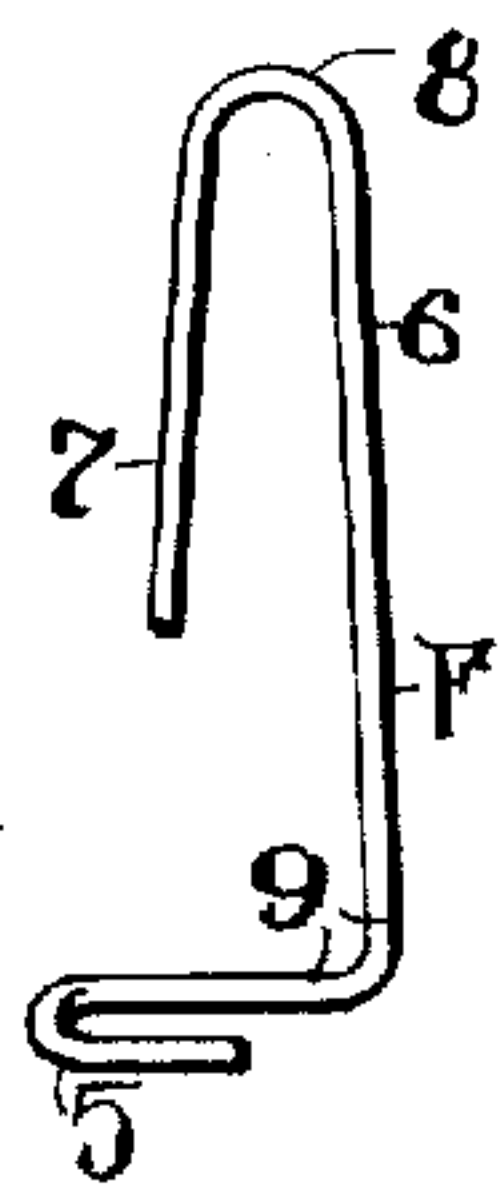
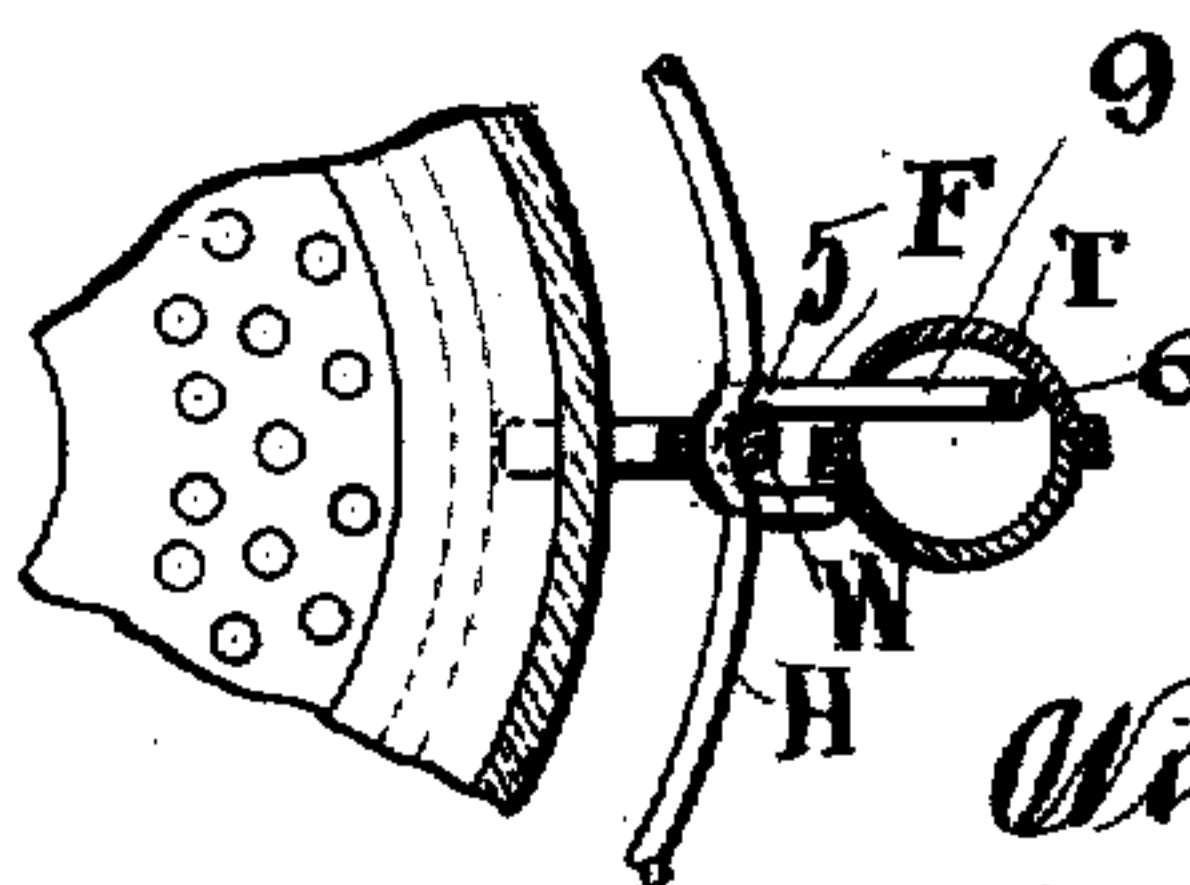


Fig. 4.



ATTEST
C. M. Fisher
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UNITED STATES PATENT OFFICE.

WILLIAM C. WINFIELD, OF WARREN, OHIO, ASSIGNOR TO THE WINFIELD MANUFACTURING COMPANY, OF WARREN, OHIO, A CORPORATION.

TUBULAR LANTERN.

No. 914,688.

Specification of Letters Patent.

Patented March 9, 1909.

Application filed August 20, 1908. Serial No. 449,516.

To all whom it may concern:

Be it known that I, WILLIAM C. WINFIELD, a citizen of the United States, residing at Warren, in the county of Trumbull and State of Ohio, have invented certain new and useful Improvements in Tubular Lanterns, and do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in tubular lanterns, and the invention consists in means for holding the globe guard and globe at any desired elevation so that the lantern may be lighted, all substantially as shown and described and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of a lantern embodying my invention with one of the side tubes partially in section and showing the globe guard down on its seat. Fig. 2 is a vertical sectional elevation of a portion of one of the side tubes and one of the friction engaging devices for the globe guard and a portion of a side wire of said guard engaged by said device and held as occurs when the globe is raised from its seat, as hereinafter fully described. Fig. 3 is a detail of one of the said friction engaging devices, and Fig. 4 is a plan view on line $x-x$, Fig. 1.

The invention is comprised in the parts thus shown and described and particularly in the means for frictionally engaging the side wires W of the globe guard or frame and thus supporting the said guard with the globe at any preferred elevation above its seat, assuming that such elevation or lift is sufficient to enable one to light the lantern with a match or taper. The said side wires W have a slight lateral or outward bend or depression 3 of approximately V shape in their lower portions adapted to engage the horizontal wire H of the globe guard on their inside, and said side wires are straight and parallel or substantially parallel with each other from said bends 3 downward to the right angled bend 10, as seen in Figs. 1 and 2, and which straight portion is indicated by numeral 2. At their upper ends the said side wires W connect with the edge of the canopy C by pivot as usual, and said canopy is slidably mounted upon the central draft tube D .

A feature in side wires W to be noted is

that said wires run at an inclination between the canopy and bends 3, while the lower portions 2 of said wires are offset inward somewhat at said bends and stand vertical from that point down to angle or corner 10, thus bringing the two portions of said wires into different vertical planes in side view and causing a distinct pull or draw to be made upon the said friction members F when the globe guard is raised and the said members or devices are forced out of the recesses or bends 3 and into engagement with the straight wire portions 2 below the same. The outward bends or depressions 3 in the side wires therefore serve not only as a point of engagement with and for the horizontal guard wire H , but also as a place of retirement for the hook or loop 5 of the friction spring supporting members F . To this end the said members or devices are preferably made of spring wire fashioned to be bodily inserted into the side tubes T of the lantern and have straight body portions 6, spring stems 7 and U shaped bends 8 connecting body and stem, while the other end 9 is bent at right angles in the plane of stem 7 and projects inward through a hole in the tube T and is formed with a hook 5 outside said tube and engaged over wire W . In point of location said loop or hook comes almost directly opposite depression 3 in the side wire W when the globe is down upon its seat, as in use, and therefore is normally engaged or lies in said depression or bend just below wire H as a place of rest, and at which time its spring action is at its minimum. This appears by reference to Fig. 1, in which the globe is seated and the bodies 6 of said spring devices F are pressed back against the wall of the tubes and their hooks 5 are drawn back into said depressions 3 by the spring action of stem 7 bearing against the opposite sides of said tube. On the other hand when the globe is raised, as presumably in Fig. 2, the main portion 6 of the device is sprung outward somewhat in its lower portion against the resistance of its own spring end 7 and the hook or loop 5 is carried down out of its retirement in bend 3 onto the straight portion 2 of the wire, where the friction is sufficient to hold the globe in raised position. Hence the globe is held higher or lower by the said spring devices at any desired elevation by a sliding contact on a perfectly plain and straight surface. It will be no-

5 ticed that the engagement of loops or hooks
 5 of the said friction sustaining members F
 is with the wires W on the inner side and
 that suspension or support of the globe be-
 10 gins as soon as said hooks or loops 5 leave
 the depressions 3 and enter upon said
 straight portions 2. It is to be noticed, also,
 as a peculiarity of this construction, that the
 15 said spring members F are wholly retired with-
 in the side tube of the lantern and hence
 entirely out of the way mechanically and
 out of sight except in their small and almost
 unnoticeable projecting portions 5. This
 20 both contributes to the attractiveness of the
 lantern in point of appearances and keeps
 the main operating members within cover so
 as to avoid possible injury by accident and
 exposure to the elements.

In the operation the tube D at the top and
 20 the friction members F at the sides in con-
 junction with the side wires W serve as
 guides for directing the said guard in direct
 up and down movements under such fric-
 tional tension by the said members F that
 25 the guard is held up at any point of engage-
 ment on the straight portions 2 of the guard
 wires, and there is no special stopping point
 necessary for the guard.

What I claim is:—

30 1. A lantern having side tubes and a
 globe-guard with vertical side wires, and
 springs within the said tubes having ends
 projecting through the inner sides thereof
 and frictionally engaging said side wires.

35 2. A lantern having side tubes and a guard
 with side wires, and a spring device confined
 within each tube having engagement with
 the corresponding side wire of the guard and
 40 adapted to spring back and forth in the wall
 of the tube.

3. A lantern having side tubes with holes
 through the inner sides thereof and a globe
 guard having side wires next thereto, in
 combination with springs located within said
 tubes having substantially loop shaped por- 45
 tions extending outward through said holes
 and having sliding engagement with the said
 side wires.

4. A lantern having side tubes and a spring
 device confined in each tube having a portion 50
 extending through the tube, in combination
 with a globe guard having vertical side
 wires provided with bends in their lower por-
 tions in sliding relation with said yielding
 portions of said spring devices. 55

5. A lantern having side tubes, a device
 located in each tube having a spring portion
 at one end confined in the tube and a projec-
 tion at the other end extending through the 60
 wall of the tube, in combination with a globe
 guard having side wires provided with out-
 ward depressions and straight portions be-
 neath said depressions operatively engaged
 by said side projections.

6. A lantern having side tubes and a cen- 65
 tral tube at its top, in combination with a
 globe guard and canopy slidably engaged
 with said central tube, and guides located in
 said side tubes having spring stems at one
 end and right angled hook shaped projec- 70
 tions at the other end extending through
 holes in said side tubes and engaging the in-
 ner surface of the side wires of the globe
 guard.

In testimony whereof I sign this specifica- 75
 tion in the presence of two witnesses.

WILLIAM C. WINFIELD.

Witnesses:

E. M. FISHER,
 R. B. MOSER.