(No Model.)

J. B. STETSON.

TUBULAR LANTERN.

No. 384,546. Patented June 12, 1888.

Fig. 1.

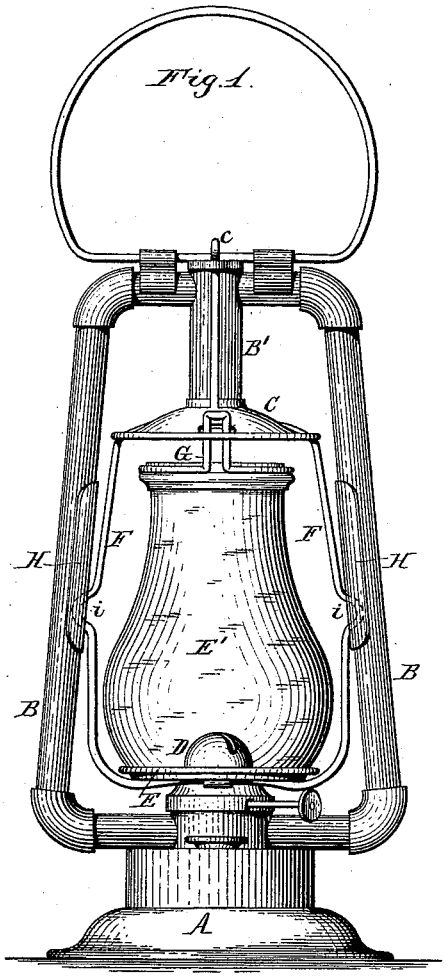

Fig. 2.

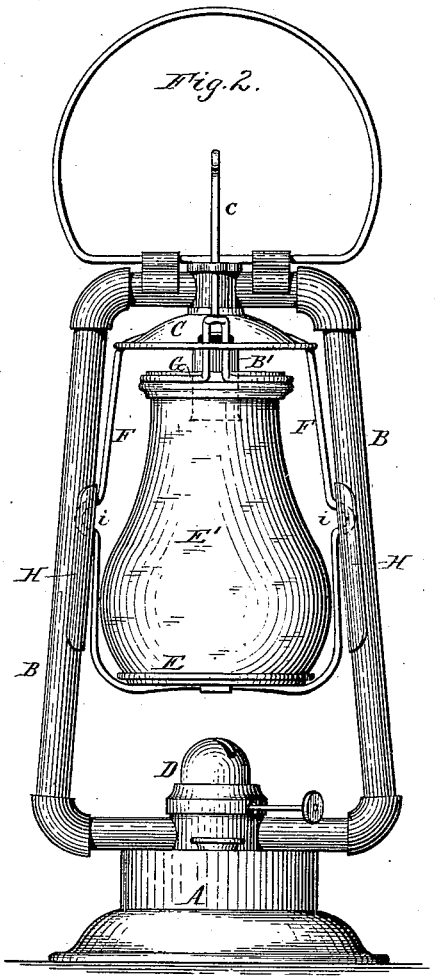

Fig. 3.

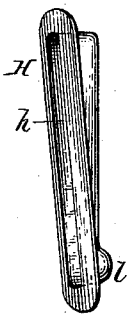

Fig. 4.

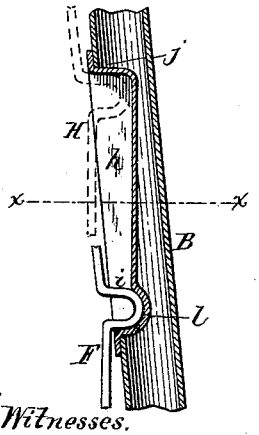

Fig. 5.

Witnesses.
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UNITED STATES PATENT OFFICE.

JOSEPH B. STETSON, OF LINCOLN, MAINE.

TUBULAR LANTERN.

SPECIFICATION forming part of Letters Patent No. 384,546, dated June 12, 1888.

Application filed January 19, 1886. Serial No. 189,098. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH B. STETSON, of Lincoln, in the county of Penobscot and State of Maine, have invented new and useful Improvements in Tubular Lanterns, of which the following is a specification.

This invention relates to a tubular lantern which is provided with a vertically-movable globe-supporting frame or cage, having its side pieces guided in grooves or depressions formed on the inner sides of the tubes, as described and shown in Letters Patent of the United States, No. 323,710, to B. B. Merrill, dated August 4, 1885.

The object of my invention is to improve the construction and operation of this class of lanterns; and my invention consists of the improvements which will be hereinafter fully set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is an elevation of a lantern provided with my improvements with the globe in its lowest or working position. Fig. 2 is a similar view showing the globe raised. Fig. 3 is a perspective view of one of the guides. Fig. 4 is a sectional elevation of one of the guides on an enlarged scale. Fig. 5 is a horizontal section in line *x x*, Fig. 4.

Like letters of reference refer to like parts in the several figures.

A represents the base of the lantern; B B, the side tubes; B′, the central air-inlet tube in the top of the lantern, and C the bell loosely mounted on the tube B′, so that it can be raised and lowered on the same.

c is a bail or thumb-piece attached to the bell C for raising and lowering the same.

D represents the burner-cone, and E the perforated plate, disk, or ring which surrounds the burner-cone and upon which the globe E′ rests.

F F represent the side wires, which connect the plate E with the bell C, and which are arranged between the globe and the side tubes, B. The plate E is preferably hinged or pivoted to the side wires, F, in a well-known manner, so that the plate can be inclined or tilted for applying and removing the globe.

G represents an annular spring or elastic clasp, which is attached to the bell C in a well-known manner, and which embraces the upper end of the globe, so that the latter can be secured or released by engaging the spring with the globe or disengaging it therefrom.

H represents guide-plates secured to the inner sides of the tubes B, and provided with vertical grooves or channels *h*, in which engage projections or bent portions *i*, which are formed on the side wires, F, of the lifting-frame, so as to project outwardly therefrom and into the grooves *h*. The plates H are stamped of tin and secured by soldering in elongated openings or slots *j*, formed in the side tubes, B. The rear walls of the channels or grooves *h* are vertical, or nearly so, to correspond as nearly as practicable with the direction in which the lifting-frame moves in raising and lowering the globe. The front or outer portion of each guide-plate is inclined to correspond with the inclined position of the side tube.

l represents a recess or depression formed in the guide-plate at the lower end of the groove *h*, and made of greater depth than the groove, so that the bent portion *i* of the side wire springs into this recess when the globe reaches its lowest position, and thereby locks the lifting-frame in this position. The bent portions *i* are disengaged from these recesses by pulling upwardly on the bail *c*. The bent portions or projections *i*, entering the grooves *h*, prevent lateral displacement of the lifting-frame during the movements thereof, and always center the plate E properly on the burner-cone when the globe is lowered. The length of the guide-plates H exceeds the length of the lifting movement but slightly, thereby rendering the grooved parts as short as possible. The guide-plates are readily stamped and easily secured in place on the tubes, which enables these guides to be produced at comparatively small expense. Upon removing the burner and lowering the lifting-frame to the lowest possible point the bent portions *i* of the side wires are easily sprung into the grooves *h*. The lifting-frame is then raised and the burner replaced, whereby the lifting-frame is securely connected with the grooved guides.

I claim as my invention—

1. The combination, with the lifting globe-

frame, of a side tube provided with an upright opening, *j*, and a grooved plate, H, secured to the tube over said opening, substantially as set forth.

2. The combination, with the lifting globe-frame having lateral projections *i*, of side tubes provided with upright grooves *h*, having recesses *l* of greater depth than said grooves, in which recesses said projections engage, thereby locking the globe-frame in position, substantially as set forth.

Witness my hand this 7th day of January, 1886.

JOS. B. STETSON.

Witnesses:
GIDEON STETSON,
BERT E. WHITTEN.