(No Model.)

J. A. BLANKLEY & C. H. TALLMAN.

LANTERN.

No. 363,581. Patented May 24, 1887.

Fig. 1.

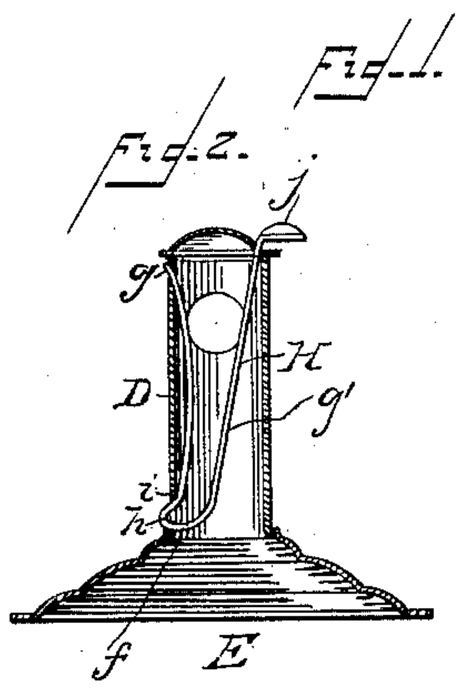


Fig. 2.

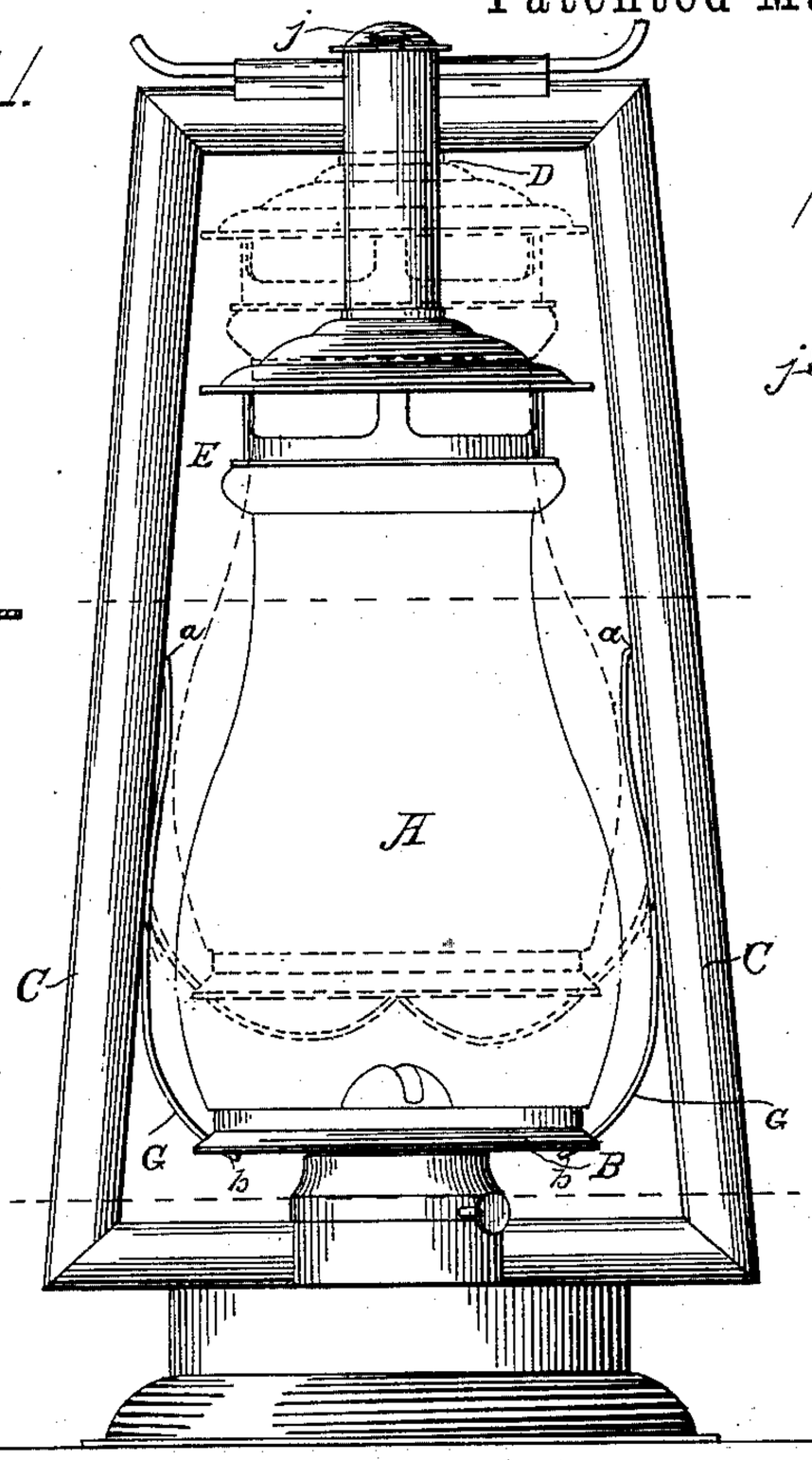


Fig. 3.

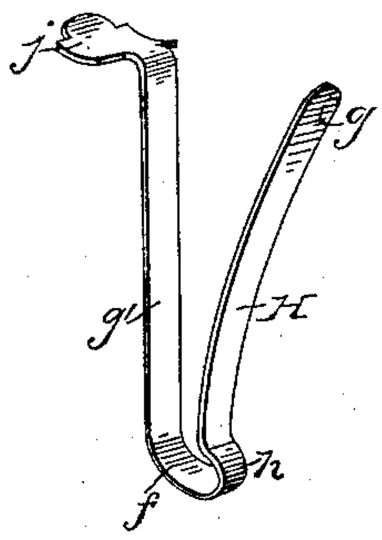


Fig. 4.

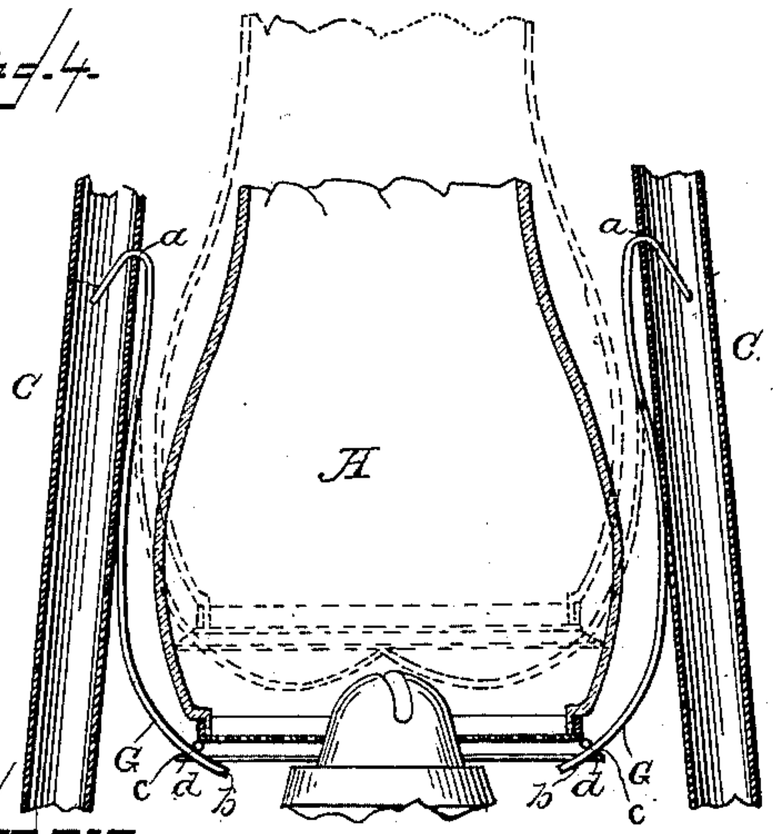


Fig. 5.

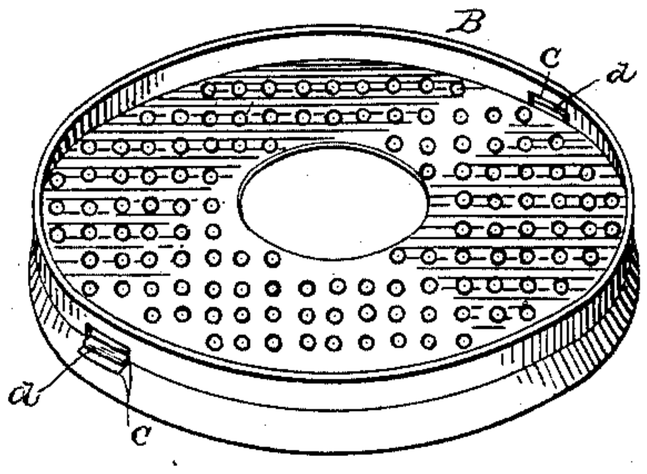
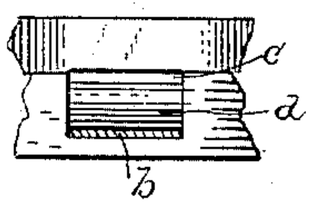


Fig. 6.



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LANTERN.

SPECIFICATION forming part of Letters Patent No. 363,581, dated May 24, 1887.

Application filed January 21, 1887. Serial No. 224,994. (No model.)

To all whom it may concern:

Be it known that we, JAMES A. BLANKLEY and CHARLES H. TALLMAN, both citizens of the United States, residing at Bellaire, in the county of Belmont and State of Ohio, have invented certain new and useful Improvements in Lanterns; and we do hereby declare the following to be 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.

Our improvement relates to means for automatically raising and retaining in a raised position the globes and globe-supports of lanterns, so as to give convenient access to the lamp, and has for its purpose such a construction of the raising and retaining devices as will insure economy in production, durability in wear, efficiency in use, and capacity for adaptation with globes of different lengths. The novelty therein consists in the peculiar construction, arrangement, and combination of the principal operative parts, all as more fully hereinafter described and claimed.

For the better understanding of our improvement reference should be had to the accompanying drawings, in which—

Figure 1 is an elevation of the complete lantern, showing in dotted lines the globe in a raised position; Fig. 2, a vertical section of the top, showing the spring-catch in position; Fig. 3, a separate view of the spring-catch; Fig. 4, a vertical partial section of the globe, its support, and side tubes, showing the lifting-springs in position when the globe is in place, and in dotted lines showing the globe and its support as raised; Fig. 5, a separate view of the globe-support; Fig. 6, a broken section of the globe-support, exhibiting a friction-roller in the same.

Similar letters denote corresponding parts in each figure.

As our improvement is most conveniently adapted for tubular lanterns of the well known types, it will be explained by reference to such a lantern.

A denotes the globe, B the globe support, C C the side tubes, D the center tube, and E the canopy or bell, vertically movable upon the center tube, D. Curved springs G G, preferably made of clock-spring steel, with their upper ends bent at an angle, are firmly secured opposite each other to the inner sides of the side tubes by inserting the bent ends through proper slots, *a a*, in such tubes and afterward firmly securing the upper portions of such parts of such springs as are outside of such tubes to the same, preferably by soldering, although rings or bands or equivalent means may be used. We do not, however, wish to limit our invention in this particular to springs made of clock-steel, or having their upper ends bent at an angle or secured to the side tubes by insertion of such bent ends into slots in said tubes, as other kinds of springs may be employed and secured directly to the side tubes, without inserting their ends through slots in the same, without departing from the spirit of our invention. When thus secured, the free portions of such springs extend downward in line of the tubes, bending inwardly at their bottoms *b b*, and passing through proper slots, *c c*, on each side of the globe-support B.

It is obvious that instead of the slots *c c* in the globe-support proper notches in the outer edges, or loops or staples secured to such outer edges, may be employed, the only essentials being a support and guides on three sides for the springs C C. To avoid friction of these springs in said slots *c c*, friction-rollers *d d* are placed in or directly above such slots, conveniently pivoted in parts of the metal, which may be turned up at the ends of the slots *c c* in making them; but these rollers are not indispensable.

The spring catch H is composed preferably of flat spring-brass, bent back upon itself and placed with the bend *f* downward wholly within the center tube, D, preferably at right angles to the side tubes, and the upper end of one of its arms *g* is bent outward a little and passed through a slot in the side of the center tube, where it is secured by soldering from the outside, or in any other suitable way. On this fixed arm of said spring-catch, and near the bend *f*, is a stud, *h*, which may be a separate piece secured to said spring-catch, or, preferably, it is an outward bend of the same, and this stud passes through a suitable opening, *i*, in the wall of the center tube. The other or free arm, *g'*, of this spring-catch passes out through the wall of the center tube, preferably

through the top of it on one side, and at its upper end is provided with a finger-piece, *j*, which may be a separate piece properly secured, but preferably is made by an outward bend, slightly widened, of such free arm.

When the lamp is in its normal condition ready for use, the side springs pass through the slots in the globe-support, bending inwardly under the same and exerting a constant pressure inwardly and upwardly by reason of their curves, which pressure is resisted by the stud of the spring-catch. When the finger-piece of the spring-catch is raised, the same movement draws back the bend of the spring and withdraws the stud from engagement with its slot, and the pressure of the side springs throws up the globe-support and the globe, giving free access to the lamp for any of the usual purposes. When it is desired to restore the globe to its normal position, this may be done by pressing downward with the fingers upon the outer edges of the bell, which is always sufficiently cool.

The advantages arising from the use of the flat clock-spring steel side springs are their durability, their long maintenance of elasticity, their adaptability to be firmly secured, as described, and their more perfect and larger bearing in the slots in the globe-support, by means of which the same is raised strongly, rapidly, and evenly. In this action of raising the friction-rollers in such slots have an important effect.

The advantages of the spring-catch consist in its durability, cheapness, and simplicity, by reason of which it is not likely to get out of order, and by reason of its being placed on the inside of the tube the lantern is more sightly, and at the same time the spring is better protected.

It will be observed on inspection that the side springs are adapted for various lengths of globes, operating well with all, and that both the side springs and the latch may be applied to any of the known types of tubular lanterns, and it is believed that they may be applied to various types of single-globe lanterns by the use of mechanical skill alone.

Having thus described our invention, what we claim as new therein is—

1. The combination, with a tubular lantern provided with a vertical movable globe, canopy, or bell, and a center tube, as shown, of the spring-catch H, secured to one side of the center tube and bent down within the same, and provided with a detent-stud and a thumb-piece extending through the walls of such tube, substantially as described.

2. In combination with a tubular lantern, the movable slotted globe-support, the springs G G, each rigidly secured directly to a side tube, with each free end curved against and under the globe-support, substantially as described.

3. In a tubular lantern, and in combination with the globe-support and the side tubes, the curved springs G G, secured to said side tubes and passing through openings in said globe-support provided with friction-rollers, substantially as described.

4. The combination, with a tubular lantern provided with a vertical movable globe, canopy, or bell, a center tube, and a globe-support, as shown, of the spring-catch H, provided with a detent-stud and a thumb-piece, and the springs G G, each rigidly secured to a side tube, with each free end curved inwardly through and under the globe-support, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

JAMES A. BLANKLEY.
CHARLES H. TALLMAN.

Witnesses:
JAMES C. TALLMAN,
W. C. STEWART.