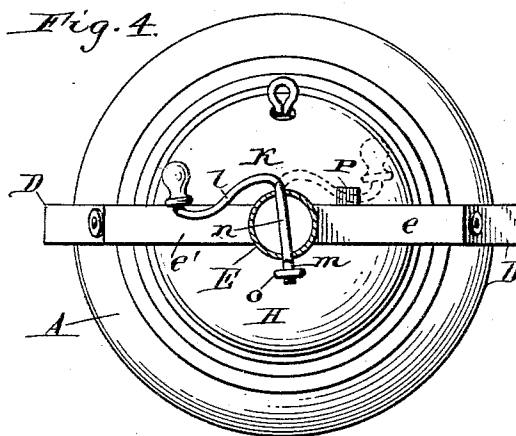
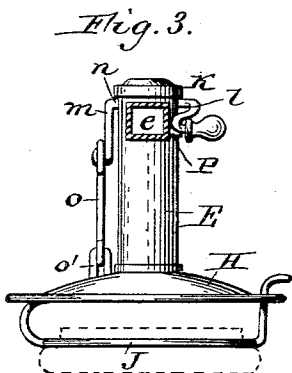
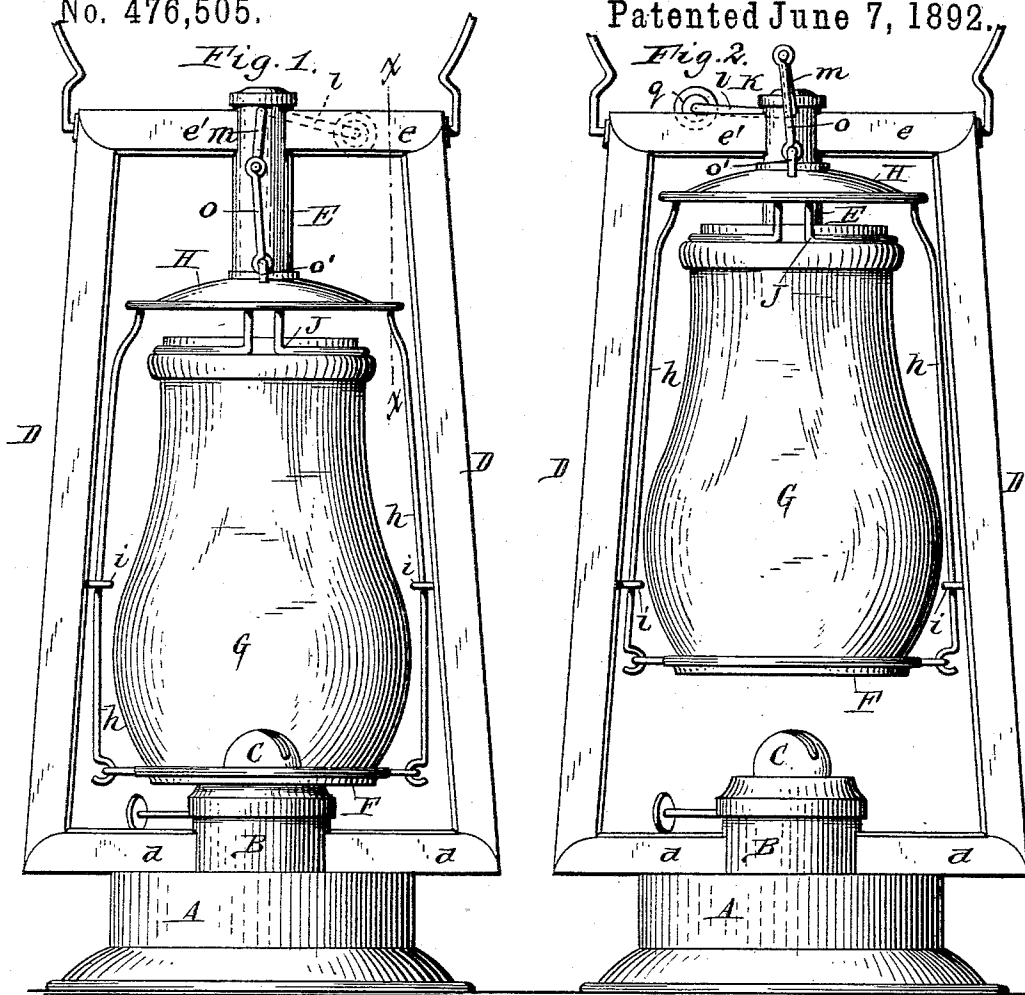


(No Model.)

F. K. WRIGHT.
TUBULAR LANTERN.

No. 476,505.

Patented June 7, 1892.



Witnesses:

Thos. L. Popp.
J. T. Clough.

F. K. Wright, Inventor.
By Wilhelm & Bonner, Attorneys.

UNITED STATES PATENT OFFICE.

FREDERICK K. WRIGHT, OF SYRACUSE, NEW YORK, ASSIGNOR TO THE STEAM GAUGE AND LANTERN COMPANY, OF SAME PLACE, AND THE R. E. DIETZ COMPANY, OF NEW YORK, N. Y.

TUBULAR LANTERN.

SPECIFICATION forming part of Letters Patent No. 476,505, dated June 7, 1892.

Application filed December 1, 1891. Serial No. 413,696. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK K. WRIGHT, a citizen of the United States, residing at Syracuse, in the county of Onondaga and State of New York, have invented a new and useful Improvement in Tubular Lanterns, of which the following is a specification.

This invention relates to a tubular lantern in which the globe is mounted in a frame which can be moved vertically in the tubular-lantern frame for the purpose of exposing the burner for trimming and lighting the wick, &c.

The object of my invention is to provide a simple device whereby the globe-frame can be easily raised and lowered and held in either position.

In the accompanying drawings, Figure 1 is a rear elevation of a tubular lantern provided with my improvement, showing the globe-frame in its lowered position. Fig. 2 is a similar view showing the globe-frame in its raised position. Fig. 3 is a vertical transverse section in line *x x*, Fig. 1. Fig. 4 is a top plan view of the lantern with the top portion of the central tube cut away.

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

A represents the oil-pot of the lantern, B the air-chamber, C the burner, D the upright portions of the air-tubes, *d d'* the lower and *e e'* the upper horizontal branches thereof, and E the central depending tube, forming together the rigid tubular-lantern frame. F represents the perforated plate which surrounds the burner and upon which the globe G rests. H represents the bell, arranged above the globe and made vertically movable on the depending tube. The bell and globe-supporting plate are connected by upright wires *h*, which pass through guide-loops *i*, secured to the upright portions of the tubes. The globe is firmly held upon the supporting-plate F by a spring J, secured to the bell. The perforated plate, the bell, and the upright wires form the vertically-movable frame in which the globe is mounted. All of these parts may be of any ordinary or suitable construction.

K represents an elbow lever or crank, whereby the globe-frame is raised and low-

ered. This lever consists of a long or free arm *l*, which is provided with a thumb-piece for manipulating it, a short arm *m*, which is arranged nearly at right angles to the long arm and connected with the movable globe-frame, and a horizontal wrist or shaft *n* connecting these arms. The wrist of the lever passes horizontally through openings in the upper portion of the central tube and the arms of the lever are arranged, respectively, on the rear and front sides of this tube.

O represents an upright link, which connects the short arm of the lever with the bell, the latter being provided with an eye *o'*, to which the link is attached. Upon swinging the lever or crank in one direction the globe-frame is raised from the burner and upon swinging it in the opposite direction the globe-frame is lowered upon the burner.

P represents a stop projecting from the front side of the upper tube *e* and limiting the downward movement of the long arm of the lever. The wrist of the lever is arranged in the central tube obliquely with reference to the upper horizontal tubes, as shown in Fig. 4, which permits the long arm of the lever to pass downwardly along the front side of the upper tube *e* in lowering the globe-frame, but causes the lever to strike upon the top of the upper tube *e'* when the lever is swung in the opposite direction. The stops P on the front side of the upper tube *e* and the top of the upper tube *e'* serve as stops to limit the movement of the lever in either direction, and the latter is permitted to make a trifle more than half a revolution in swinging from one stop to the other. When the globe and its frame are in their normal or lowered position, the free arm of the lever rests upon the stop P, and the point of connection between the short arm of the lever and the link is arranged out of the center line in a direction opposite to that in which the free arm of the lever projects, as represented in Fig. 1. Any upward pressure applied to the globe-frame therefore presses the free arm of the lever downwardly against the stop, and the latter resists the upward movement of the globe-frame, thus securely holding the globe-frame in position upon the burner. When

the globe-frame is in its raised position, as represented in Fig. 2, the free arm of the lever rests upon the top of the upper tube *e'* and the point of connection between the lever and link lies out of the center line on the side on which the free arm of the lever projects, which causes the weight of the globe and its frame to hold the free arm of the lever firmly upon the upper tube *e'*, thereby securely locking the globe-frame in an elevated position.

I claim as my invention—

1. The combination, with the tubular-lantern frame and the vertically-movable globe-frame, of an elbow-lever composed of a wrist pivoted in the upper portion of the tubular-lantern frame, arms projecting from opposite ends of said wrist on the front and rear sides of the tubular frame, a link connecting the globe-frame with one of said arms on one side of the tubular frame, and stops formed on the opposite side of the tubular frame and limit-

ing the movement of the other arm, substantially as set forth.

2. The combination, with the tubular-lantern frame provided with a vertical central tube and horizontal branch tubes and the vertically-movable bell guided upon the central tube, of an elbow-lever composed of two arms and a horizontal connecting-wrist pivoted obliquely in the central tube and a stop on the tubular frame, whereby the free arm of the lever is caused to pass downwardly along the side of one of the tubes and to strike said stop in lowering the globe-frame and strike the top of the other tube in raising the globe-frame, substantially as set forth.

Witness my hand this 25th day of November, 1891.

FREDERICK K. WRIGHT.

Witnesses:

ROBERT W. GOERS,
P. L. SALMON.