C. W. BERGENER.

TUBULAR LANTERN.

APPLICATION FILED OCT. 31, 1912.

1,067,964.

Patented July 22, 1913.

2 SHEETS—SHEET 1.

Fig. 1.

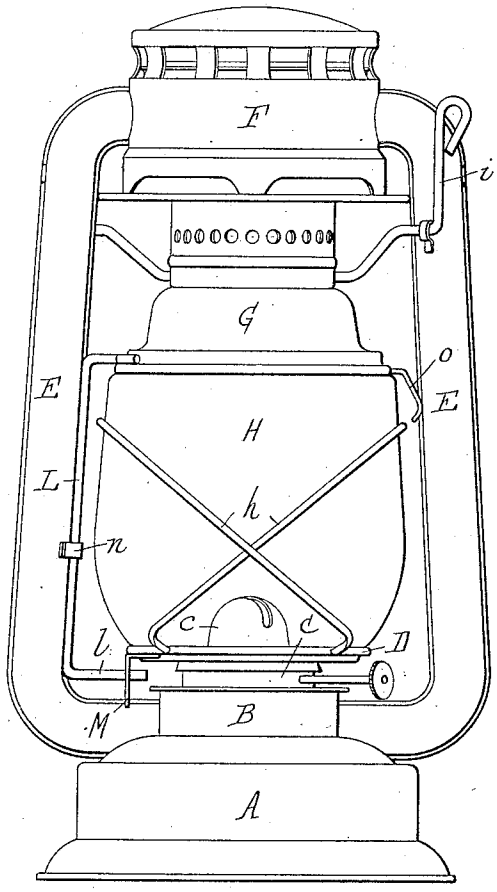
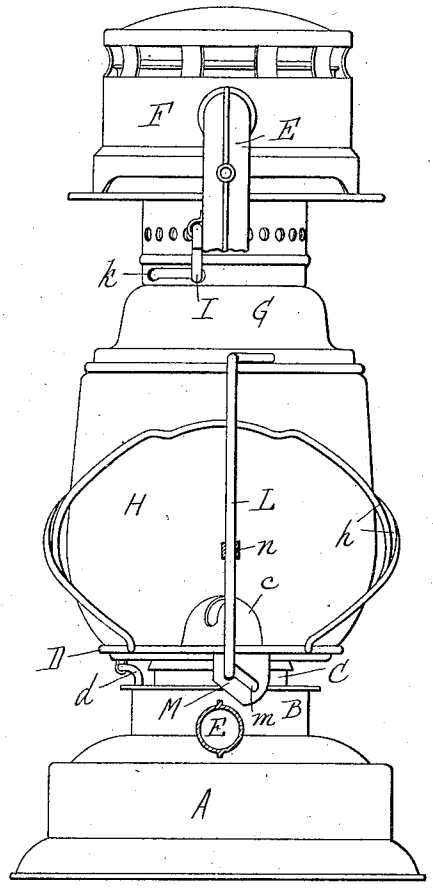


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

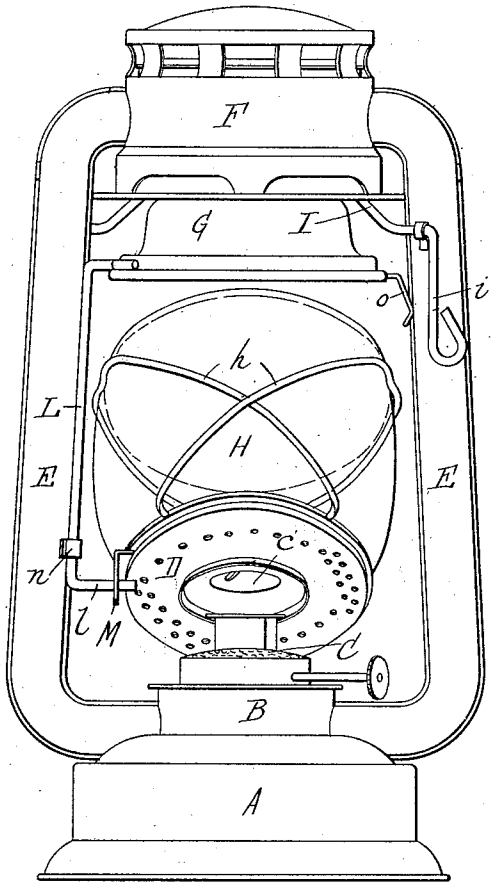


Fig. 4.

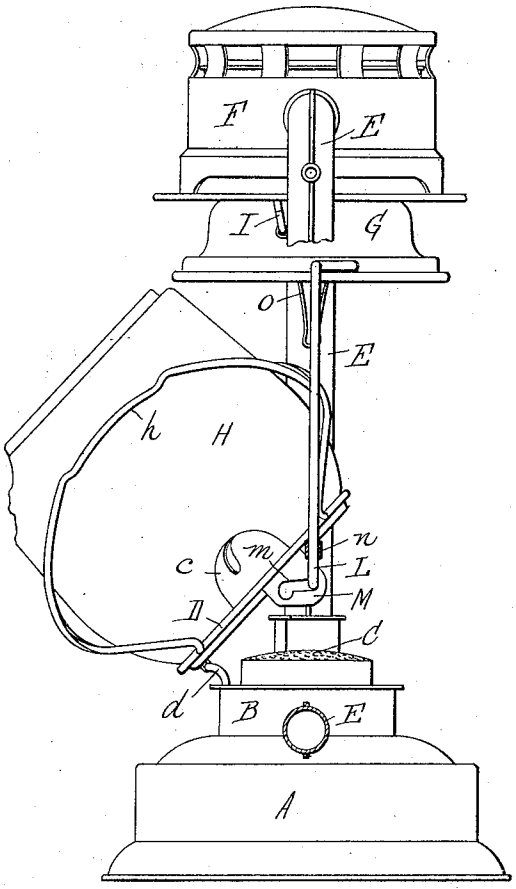
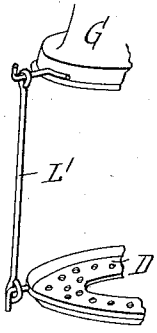


Fig. 5



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TUBULAR LANTERN.

1,067,964. Specification of Letters Patent. Patented July 22, 1913.

Application filed October 31, 1912. Serial No. 728,808.

To all whom it may concern:

Be it known that I, CHARLES W. BERGENER, a citizen of the United States, residing at Rochester, in the county of Monroe 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 that class of tubular lanterns in which the globe rests on a plate or support which is pivotally connected with the lower part of the lantern frame, so that this plate or support can be swung away from the burner together with the globe for exposing the burner, and in which the globe is surmounted by a globe holder or chimney which is movable toward and from the top of the globe. When access is desired to the burner in this class of lanterns the chimney or globe holder is raised from the globe, in order to release the latter, and the globe plate and the globe attached thereto are then swung back or tilted away from the burner. The user is, therefore, required to perform two operations successively in order to remove the globe plate and globe from the burner, and two corresponding operations in the reverse order for restoring the parts to their normal position.

The object of this invention is to connect the globe holder or chimney with the globe plate in such manner that the up or down movement of the globe holder or chimney produces a corresponding swinging movement of the globe plate, thereby causing the globe plate to be tilted or swung automatically by simply raising or lowering the chimney and requiring the user to perform only one operation, the raising of the chimney, for the purpose of exposing the burner, or the lowering of the chimney for restoring the parts to their normal position.

In the accompanying drawings: Figure 1 is a front elevation of a tubular lantern provided with this improvement, the parts being shown in their normal position. Fig. 2 is a side elevation of the same with one tube broken off. Fig. 3 is a front elevation of the lantern showing the chimney raised and the globe plate and globe swung back. Fig. 4 is a side elevation of the lantern with one tube broken off, the parts being shown in this last named position. Fig. 5 is a fragmentary perspective view showing a modified construction of the means for connecting the chimney with the globe plate.

Like reference characters refer to like parts in the several figures.

A represents the oil font, B the air chamber secured upon the same, C the burner mounted on the air chamber, D the globe plate hinged at the rear side of the lantern to a support *d*, so that it can be swung toward and from the burner, *c* the burner cone which is preferably secured to the globe plate although it may be otherwise supported in any suitable or well known manner; E the tubes; F the lantern top; G the chimney or globe holder which is movable up and down in the lantern top; and H the globe which is attached to the globe plate by any suitable means, for instance by guard wires *h*.

In the normal position of the parts, represented in Figs. 1 and 2, the globe plate rests on the burner, and the chimney or globe holder rests on the globe. The chimney or globe holder is provided with a lifting device of any suitable construction, for instance, a transverse cranked lifter shaft I which is journaled on the tubes and provided at one end with an arm *i* by which it can be manipulated. This shaft passes through the chimney, which is provided with horizontal slots *k* for that purpose. In Figs. 1 and 2 the chimney is shown in its lowered or normal position and in Figs. 3 and 4 in its raised position.

The chimney is connected with the globe plate by a rod L, which is secured at its upper end to the chimney, and a slotted cam plate M which is secured to the globe plate and with which the lower end of the rod engages. This actuating rod L is arranged on the inner side of one of the tubes, on which it is guided in a loop *n*, and is provided at its lower end with an inwardly turned arm *l* which engages in the slot *m* of the cam plate M. The latter is preferably secured to the underside of the globe plate. The chimney is guided on the opposite tube by a guide *o* which straddles the rib on the inner side of the tube.

When the parts are in their normal position, represented in Figs. 1 and 2, the arm *i* of the lifter shaft projects upwardly, the shaft stands in the inner ends of the slots *k* in the chimney, and the arm *l* at the lower end of the actuating rod L stands in the

upper end of the inclined slot *m* of the cam plate M, whereby the parts are securely held in position.

Upon raising the chimney the actuating rod swings the globe plate back on its hinge, as represented in Figs. 3 and 4, thereby swinging the globe from underneath the chimney and exposing the wick tube of the burner, if the burner cone is attached to the globe plate, as shown. By lowering the chimney the globe plate is swung back to its normal horizontal position with the globe standing underneath the chimney, the latter bearing upon the globe and holding the same in position. The slot in the cam plate permits of the necessary play of the globe plate with reference to the actuating rod, which latter is confined to an up and down movement by the guide *n*. The connecting mechanism may, however, be modified in various ways. For instance, as illustrated in Fig. 5, the ends of the actuating rod L′ may be pivotally connected to the chimney and the globe plate, respectively.

I claim as my invention:

1. The combination with a lantern frame, of a globe plate pivoted to the lower portion thereof, a chimney movable up and down in the upper portion of said frame, and connecting means extending from the chimney to the globe plate and causing said plate to be swung on its pivot by the movement of the chimney, substantially as set forth.

2. The combination with a lantern frame, of a globe plate pivoted to the lower portion thereof, a chimney movable up and down in the upper portion of said frame, means for raising and lowering said chimney, and connecting means extending from the chimney to the globe plate and causing said plate to be swung on its pivot by the movement of the chimney, substantially as set forth.

3. The combination with a lantern frame, of a globe plate pivoted to the lower portion thereof, a chimney movable up and down in the upper portion of said frame, a cranked lifter shaft for raising and lowering said chimney, and connecting means extending from the chimney to the globe plate for swinging the latter by the movement of the chimney, substantially as set forth.

4. The combination with a lantern frame, of a globe plate pivoted to the lower portion thereof and provided with a slotted plate, a chimney movable up and down in the upper portion of said frame, and an actuating rod secured at its upper end to said chimney and engaging with its lower end in said slotted plate, substantially as set forth.

Witness my hand, this 29th day of October, 1912.

CHARLES W. BERGENER.

Witnesses:

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C. B. HORNBECK.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."