

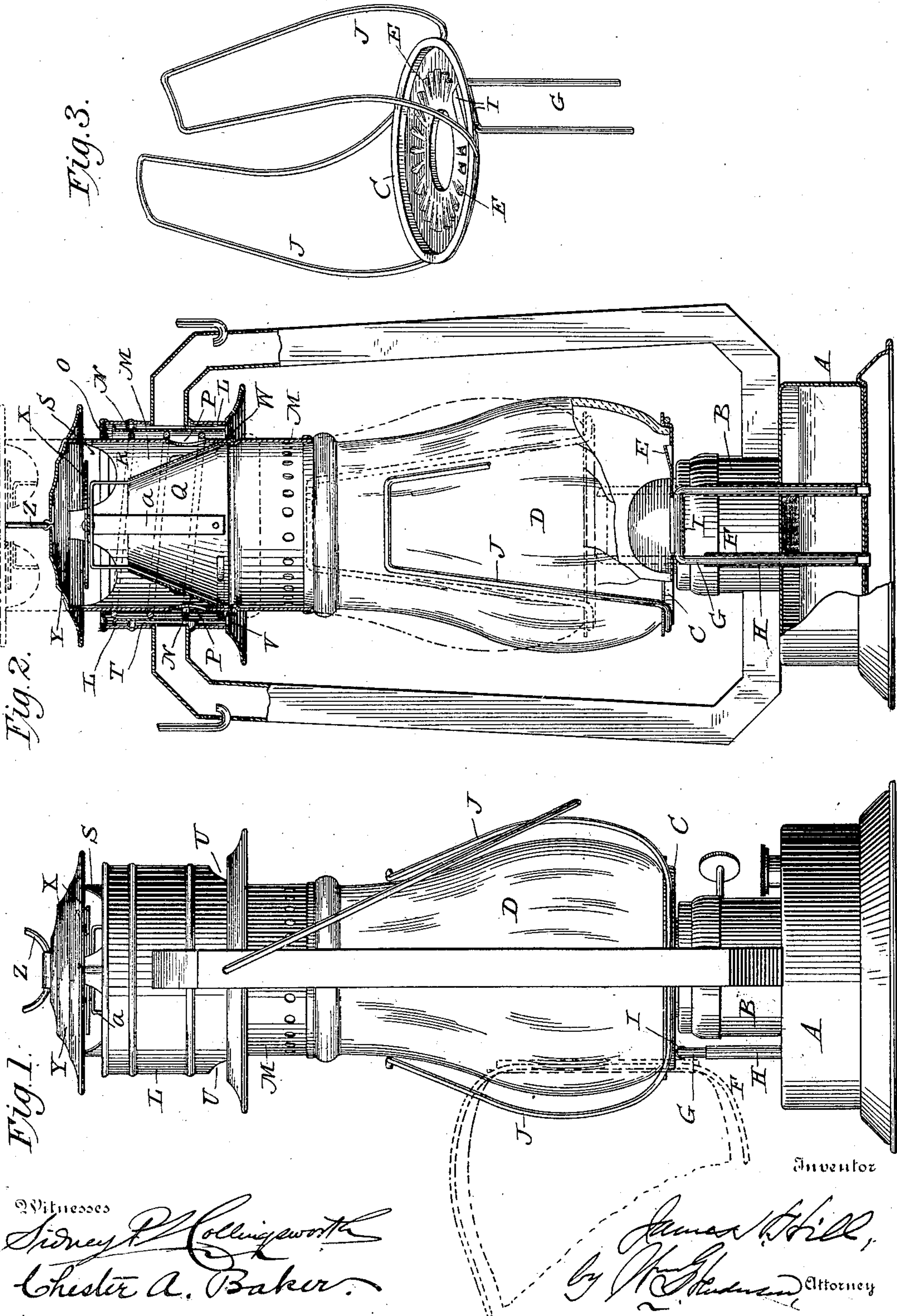
No. 649,452.

Patented May 15, 1900.

J. H. HILL.  
LANTERN.

(Application filed Apr. 14, 1899.)

(No Model.)





# UNITED STATES PATENT OFFICE.

JAMES H. HILL, OF BELLEVILLE, CANADA.

## LANTERN.

SPECIFICATION forming part of Letters Patent No. 649,452, dated May 15, 1900.

Application filed April 14, 1899. Serial No. 712,989. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES H. HILL, a subject of the Queen of Great Britain and Ireland, residing at Belleville, in the county of Hastings and Province of Ontario, Canada, have invented certain new and useful Improvements in Lanterns; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in lanterns—for instance, of the kind illustrated in my Patent No. 628,804, granted July 11, 1899; and it has for its objects to provide an improved construction of globe-plate, whereby the air which passes through the same to the flame will be directed laterally toward the wall of the globe with the view of keeping the glass wall cool, and so as to direct the air-current to the flame from the walls of the globe inwardly to the flame; also, to provide an improved construction, whereby the globe-plate and globe supported thereon may be raised or lifted to allow easy access to the wick in the act of lighting the wick; also, to provide for hinging the globe-plate to the means which permit the plate and globe to be raised, so that, when desired, the globe may be tilted or thrown back to allow free access to the upper portion of the wick, and also to provide an improved construction for protecting or shielding the globe against accidental blows, which would tend to break the globe.

To the accomplishment of the foregoing and such other objects as may hereinafter appear the invention consists in the construction and in the combination of parts hereinafter particularly described and then sought to be specifically defined by the claims, reference being had to the accompanying drawings, forming a part hereof, and in which—

Figure 1 is a side elevation of the lantern, showing in dotted lines the position of the globe when tilted or thrown back. Fig. 2 is a side elevation at right angles to Fig. 1, showing in dotted lines the globe-plate in its elevated position, also the upper portion of

the lantern in section and a part of the lower portion broken away; and Fig. 3 is a perspective view of the globe-plate.

In the drawings the letter A designates the oil-cup, which is provided with the burner-collar B.

The letter C designates the globe-plate, upon which rests the globe D. This plate is formed with fluted openings E, which receive the air from beneath the plate and direct it toward the wall of the globe, so that the incoming cool air will tend to cool or keep down the temperature of the globe-wall around the burner, said air or a portion of it being deflected inwardly toward the space around and above the burner by the curved walls of the globe. The globe-plate is secured to a vertically-movable support F, which is preferably composed of two arms or rods G, which have a telescopic connection with the guides H, supported by the oil-cup, said guides preferably being made in the form of tubes passing through the oil-cup and having the arms or rods G sliding therein. This enables the globe-plate and globe supported thereon to be raised or lifted, so that a match can be applied to the wick to light the same, the plate and globe being pressed upwardly by the thumb and after the wick is lighted dropped into their normal position, and also enables the globe-plate and globe to be detached from the lantern and replaced when necessary without detaching other parts of the lantern, and also simplify as well as cheapen the construction. The telescopic parts mentioned also afford a strong connection between the globe-plate and oil-cup and prevent any lateral shifting or movement of the globe-plate. The globe-plate is preferably hinged to these supporting arms or rods, the hinge preferably being formed by passing a metal strip I around the middle or connecting portion of the rods G, and thence up through a slot in the plate, the ends of the strip being bent in the form of lips to secure the rods to the plate by a hinged connection. This hinged connection permits the globe to be tilted or thrown back when it is desired to have free access to the upper part of the wick. The globe-plate also supports two shields or guards J, arranged to lie on opposite sides of the globe in the space between the opposite



air-tubes, hereinafter described, so that the air-tubes will afford a shield or guard to the globe on two sides and the guards J will afford a shield at the other two sides of the globe. These shields J are preferably formed of stiff wire bent into a loop form, as illustrated, and conforming to the contour of the globe. These shields also serve to hold the globe to the plate when the plate and globe are tilted or thrown backward.

The tubes which supply air to the burner for the purpose of maintaining combustion support at their upper end a sleeve or collar L, within which is a sliding sleeve or collar M, the lower end of which rests upon the top of the globe D. This sliding sleeve is encircled by a coil-spring N, which has one end connected in any suitable way with the sleeve, the other end of the spring bearing against an inwardly-projecting flange O at the top of the sleeve or collar L, so that the sliding sleeve will be held down by the spring. When the globe and its plate are pressed upward, this spring is contracted, and when the pressure is relieved the recoil of the spring restores the parts to their normal position. The space between the walls of the collar L and sliding sleeve M constitutes a chamber T, which communicates with the upper ends of the air-tubes and which also communicates with the interior of the sleeve M through openings P, made in the wall of the sleeve. Within the sleeve M is secured a cone-shaped collar Q, which forms a chamber R between it and the upper portion of the sleeve M, into which chamber air is received through openings S, formed in the top of the sleeve M, which air is prevented from going down the globe by the conical collar and is directed through the openings P into the chamber T, and thence down the air-tubes to the burner, and in the event of any very strong blast of air entering the chamber R the excess of air may pass from the chamber T through openings U made in the collar L below the upper ends of the air-tubes, and thus the blast is modified so as not to be too strong in passing from the air-tubes to the burner. Openings V may also be made in the lower part of the collar L adjacent to the flange W at the lower end of the collar.

The conical collar Q by its converging walls creates a stronger upward blast of air through the globe, so that the products of combustion are more quickly carried off, and above the conical collar Q is a deflecting-plate X, which is supported by metallic strips a, secured to the conical collar, and above this deflecting-

plate a hood or cover Y is supported from the top of the sliding sleeve M, which hood may be provided with a ring Z, by which the sleeve may be lifted from engagement with the upper end of the globe.

While I have described with particularity the construction of the upper portion of the lantern, no claim is made thereto in this application for patent.

I have described with particularity the details of construction and arrangement of the several parts constituting my invention and have set forth the advantages resulting therefrom; but it is to be understood that changes can be made in the details without departing from the essential features of my invention.

Having described my invention and set forth its merits, what I claim is—

1. In a tubular lantern, the combination with the globe-plate, of a vertically-movable support for said plate consisting of telescoping members located on the same side of the oil-cup, and a hinge connecting the globe-plate to the movable support whereby the globe-plate and globe may be both raised and tilted and removed from the lantern, substantially as described.

2. In a tubular lantern, the combination with the oil-cup and globe, of the globe-plate having shields or guards extending lengthwise of the globe, and a sliding and hinged connection between the globe-plate and oil-cup, said connection consisting of tubular guides and a support telescoping therewith, one of which parts is secured to the oil-cup and the other hinged to the globe-plate, said parts being located on one side of the lantern so that the globe-plate and globe may be raised and tilted and removed and replaced, substantially as described.

3. In a tubular lantern, the combination with the globe, of the hinged and vertically-movable globe-plate, said plate being formed with a central opening for the burner-cone and with fluted openings radiating from the central cone-opening, said fluted openings having their sides and the end next to the cone-opening closed and their outer ends open whereby currents of cool air are directed in radiating lines from the central cone-opening toward and around the interior of the globe at its base, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES H. HILL.

Witnesses:

FRANCIS S. WALLBRIDGE,  
E. GIVINS.