W. McARTHUR.

LANTERN GUARD.

APPLICATION FILED DEC. 4, 1911.

1,035,623. Patented Aug. 13, 1912.

Fig. 1.

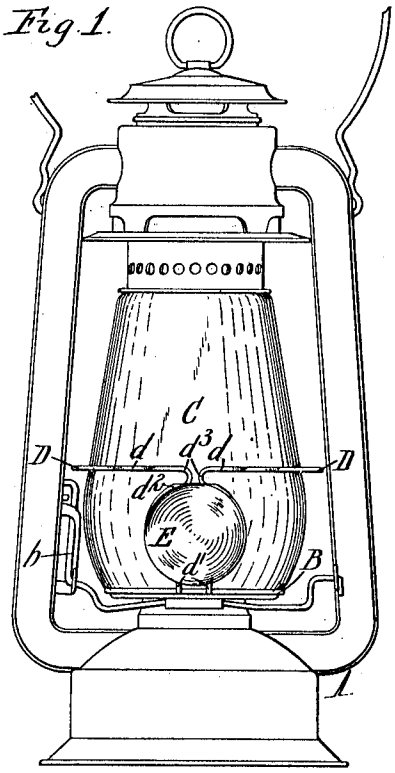


Fig. 2.

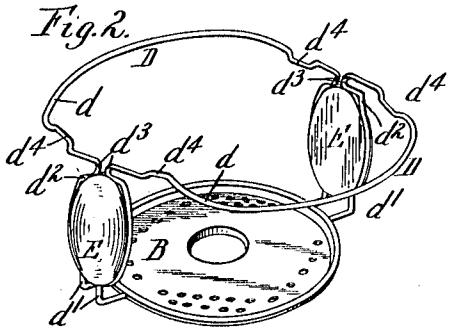


Fig. 3.

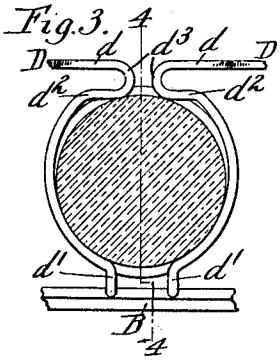


Fig. 4.

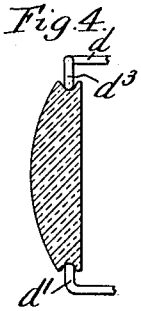


Fig. 5.

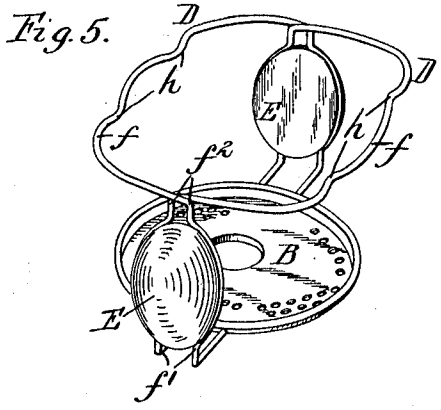
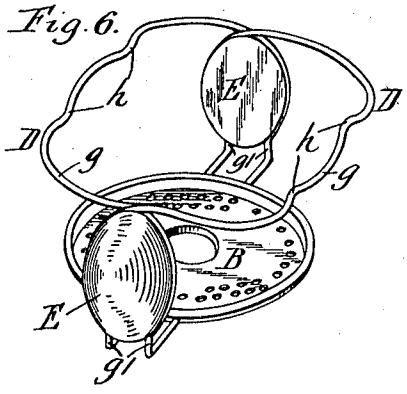


Fig. 6.



Witnesses:-
A. Borkenhagen.
A.G. Dumond.

Inventor
Warren McArthur,
By Wiskelman, Penley & Hand,
Attorneys.

UNITED STATES PATENT OFFICE.

WARREN McARTHUR, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO R. E. DIETZ COMPANY, OF NEW YORK, N. Y., AND ONE-HALF TO C. T. HAM MANUFACTURING COMPANY, OF ROCHESTER, NEW YORK.

LANTERN-GUARD.

1,035,623. Specification of Letters Patent. **Patented Aug. 13, 1912.**

Application filed December 4, 1911. Serial No. 663,803.

To all whom it may concern:

Be it known that I, WARREN McARTHUR, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Lantern-Guards, of which the following is a specification.

This invention has for its object to provide the wire guards of tubular lanterns with one or more lenses, usually called bull's eyes, in a simple, inexpensive and satisfactory manner.

The invention has reference more particularly to that class of guards which are secured to a base plate, usually perforated, upon which the globe rests and which comprise guard wires rising from this plate and encircling the lower large portion of the globe. This invention utilizes these guard wires as holding devices for the lenses.

The figures on the accompanying sheet of drawings represent three different embodiments of the invention.

Figure 1 represents a rear elevation of a tubular lantern provided with this improved guard. Fig. 2 is a detached perspective view of this guard. Fig. 3 is a fragmentary sectional elevation of the lens and adjacent portions of the guard. Fig. 4 is a vertical section in line 4—4, Fig. 3. Figs. 5 and 6 are detached perspective views illustrating modified constructions of the guard.

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

A represents the frame of a tubular lantern of any suitable construction.

B represents the base plate which supports the globe C and which is connected with the frame by a lifter shaft *b* of well known construction or by any other suitable means which prevents rotary movement of the plate in the frame.

D D represent two guard wires or sections which are secured to the base plate and rise therefrom on the front and rear sides of the lantern. Each of these wires extends approximately around one-half of the globe.

E E represent the lenses which are arranged on the front and rear sides of the lantern, respectively, and are clamped between opposing upright portions of the two guard sections at a proper height above the base support to be in line with the flame.

In Figs. 1–4, d represents the upper horizontal portion of each guard wire and d' the upright or ascending portion which extends from the base plate to the horizontal portion. The upright portion is bent to follow more or less closely the circumference of the lens, which latter is provided with a marginal groove for the reception of the guard wire. Preferably the upper part d^2 of the upright portion is bent to an approximately horizontal position so that the wire bears against the lens by the return bend d^3 at the top of the lens and by the bent portion d' at the lower portion of the lens. This arrangement strains the upright portions of the wires and permits the two sections of the guard to be separated as far as is necessary in inserting and removing the globe without danger of releasing the lens. The two opposing sections of the guard are movable toward and from each other at the top by reason of the flexibility of the parts and yield or spring as the globe is inserted between or removed from the holding portions d^4 of the horizontal portions d of the guards. These holding portions bear against the globe above the bulging part thereof and hold the globe releasably on the base plate.

In the guard represented in Figs. 1–4, each upright lens-clamping portion d' is arranged on the same side of the lens on which the horizontal guard portion d is arranged with which such upright portion connects, while in the guards represented in Figs. 5 and 6, the upright and horizontal portions of the same section are arranged on opposite sides of the lens. The latter arrangement causes the guard to tighten on the lens when the guard sections are spread apart in inserting or removing the globe and thereby prevents the lens from becoming loosened by that action of the guard but they render the guard somewhat more rigid than the guard represented in Figs. 1–4.

In the guard represented in Fig. 5, the horizontal portion f of each guard section is connected with the upright portion f' by an offset or elbow portion f^2 which increases the flexibility of the guard as compared with the construction represented in Fig. 6, in which the horizontal portion g is connected with the upright or lens-clamping portion g' directly and without the intervention of such an offset. The horizontal

portions *f* and *g*, respectively, of the guards represented in Figs. 5 and 6 are provided with globe holding portions *h* which are narrow or rounded, while the globe holding portions d^4 of the guard represented in Figs. 1–4 are curved concentric with the globe, which construction of these globe-holding portions is preferred.

In each of the guards herein shown the lens is clamped between the two sections of the guard which are flexible or springy and exert sufficient pressure upon the lens to hold the latter securely in position, while at the same time the lens is readily removable. When the guard is provided with two lenses, one on the front and one on the rear side of the lantern, the lenses can be of different colors, for instance, the front lens can be white and the rear lens red, and these lenses can be readily exchanged for others, as circumstances may require.

I claim as my invention:

1. The combination with a globe plate, of a wire guard secured to the same and comprising separate side sections, each encircling one side of the globe and having an upright member adapted to bear against one side of a lens, the two guard sections being movable toward and from each other and adapted to clamp a lens between their upright members, substantially as set forth.

2. The combination with a base plate, of a wire guard secured to the same and comprising two sections, each composed of a horizontal portion which partly encircles the globe and an upright portion which is constructed to engage against the edge of a lens, the two opposing upright portions clamping the lens between them, substantially as set forth.

3. A lantern guard comprising a base plate, opposing guard sections secured to said plate and lenses clamped between said sections on the front and rear sides of the guard, said guard sections encircling the globe and having upright portions on the front and rear sides of the guard between which portions the lenses are clamped, substantially as set forth.

4. The combination with a base plate, of a wire guard comprising two sections, each having a top portion which partially encircles the globe and an upright portion constructed to engage a lens which is clamped between the two sections, said top portion and said upright portion being arranged on the same side of the lens, substantially as set forth.

5. The combination with a base plate, of a wire guard comprising two sections, each having a top portion which partially encircles the globe and an upright portion constructed to engage a lens which is clamped between the two sections, said top portion being provided with globe-holding portions which bear against the globe and hold the same on said plate, substantially as set forth.

Witness my hand in the presence of two subscribing witnesses.

WARREN McARTHUR.

Witnesses:
JOS. LUDES,
R. E. LINDSTROM.