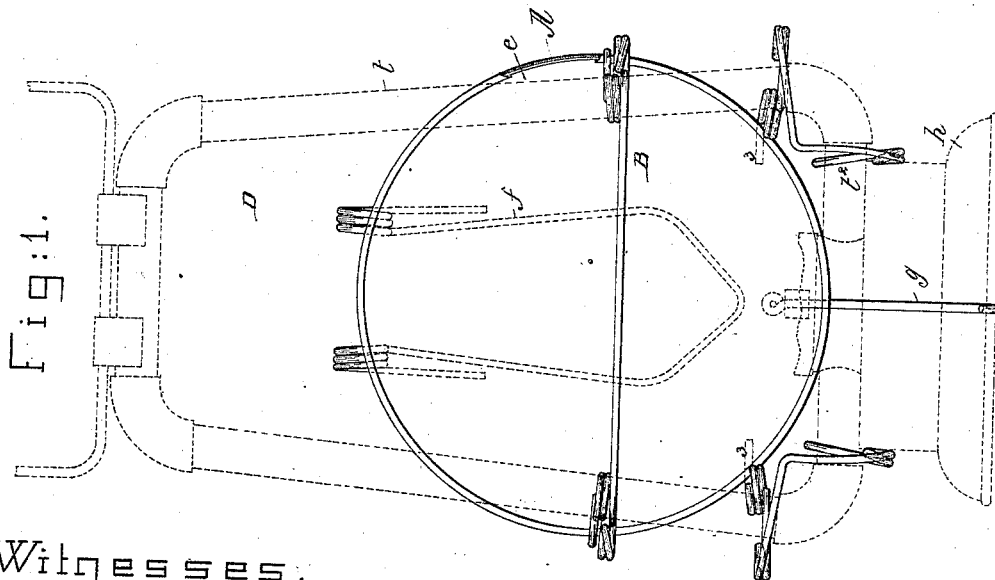
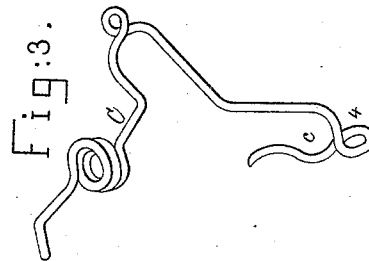
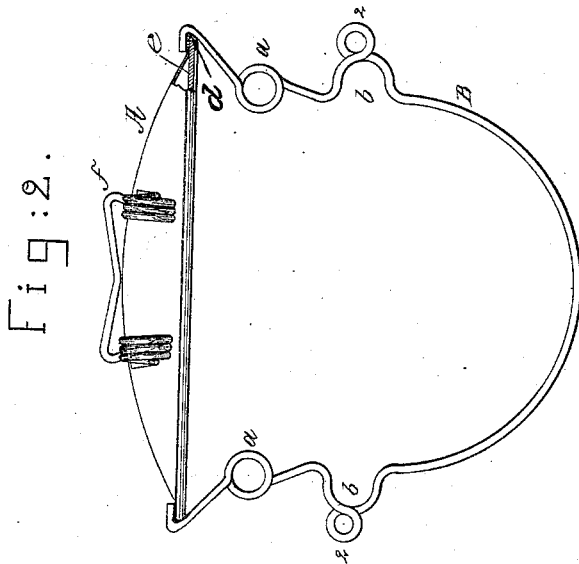


(No Model.)

C. J. HIGGINS.
REFLECTOR.

No. 305,749.

Patented Sept. 30, 1884.



Witnesses:
Arthur Lippert.
John F. C. Brinkert

Inventor.
Charles J. Higgins
by Crosby & Company attys

UNITED STATES PATENT OFFICE.

CHARLES J. HIGGINS, OF FARMINGDALE, MAINE.

REFLECTOR.

SPECIFICATION forming part of Letters Patent No. 305,749, dated September 30, 1884.

Application filed February 18, 1884. (No model.)

To all whom it may concern:

Be it known that I, CHARLES J. HIGGINS, of Farmingdale, county of Kennebec, State of Maine, have invented an Improvement in Reflectors, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object to provide a lantern-reflector with a guard to encircle the globe and arms of a tubular lantern.

My invention consists, chiefly, in the combination, with a lantern-reflector, of a guard to operate substantially as will be hereinafter described.

Figure 1 represents, in front elevation, a lantern-reflector embodying my invention, the dotted lines showing parts of a tubular lantern to which the reflector is applied, and also shows a spring-hook at the rear side of the reflector to engage a dash or other upright, upon which the lantern is to be hung. Fig. 2 is a top view of the said reflector; Fig. 3, a detail of the lower wire or arm.

The reflector A is composed of a concaved piece of metal, to which is attached a piece of wire to form a guard, B, to surround the lantern D, partially shown in dotted lines. The guard B will be provided with spring portions *a*, to thus permit it to be sprung open more or less according to the width of the lantern from tube to tube, and the wire of which the guard is made is also provided with tube-clasping portions *b*, made by bending the wire to form small secondary coils 2 outside of the parts *b*, which directly embrace the tubes *t* of the tubular lantern, thus constituting free springs, which are not liable to set, as would be the case were the coils 2 omitted. The wires or arms C, attached to the reflector at 3, are bent to form spring clasping-hooks *c*, having secondary coils 4, the said clasping-hooks *c* embracing the portions *t* of the tubes.

The reflector has at its edge a recessed rim, or annular recessed lip, *d*, suitable to receive a piece of glass, as shown at *e*, the same being interposed between the bright surface of the

reflector and the lantern-globe, so as to prevent air, water, &c., tarnishing the bright surface of the reflector. At its rear side the reflector is provided with a spring-hook, *f*, which is of suitable shape to be hooked over a dash-board or other suitable upright of a vehicle or other thing upon which the lantern is to be hung. The reflector also has connected with it a bottom-engaging hook, *g*, which engages the rim of the bottom-piece, *h*, of the usual tubular lantern.

The guard protects the lantern-globe from blows, and also acts to retain the reflector and lantern in proper position each with relation to the other.

In practice the metallic reflector, when used without the glass-protecting surface, soon becomes tarnished and fails to reflect the light in proper manner, but by the use of a glass surface in connection with the metallic under-surface the light is always reflected. The glass surface alone, with the reflecting-surface applied directly to it, is too expensive for ordinary use, and has not sufficient strength.

I claim—

1. The metallic reflector A, provided with an attached guard, B, to, in connection with the reflector, surround the lantern, substantially as described.

2. The metallic reflector and its attached guard B, provided with springs, substantially as described.

3. The metallic reflector and its attached guard B, provided with springs *a*, and with tube-clasping portions to embrace the tubes of the lantern, substantially as described.

4. The metallic reflector and attached guard B, provided with spring-clasping portions *b*, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES J. HIGGINS.

Witnesses:

G. W. GREGORY,
B. J. NOYES.