J. H. REIGHARD.

Lantern.

No. 19,897. Patented April 6, 1858.

Fig. 1

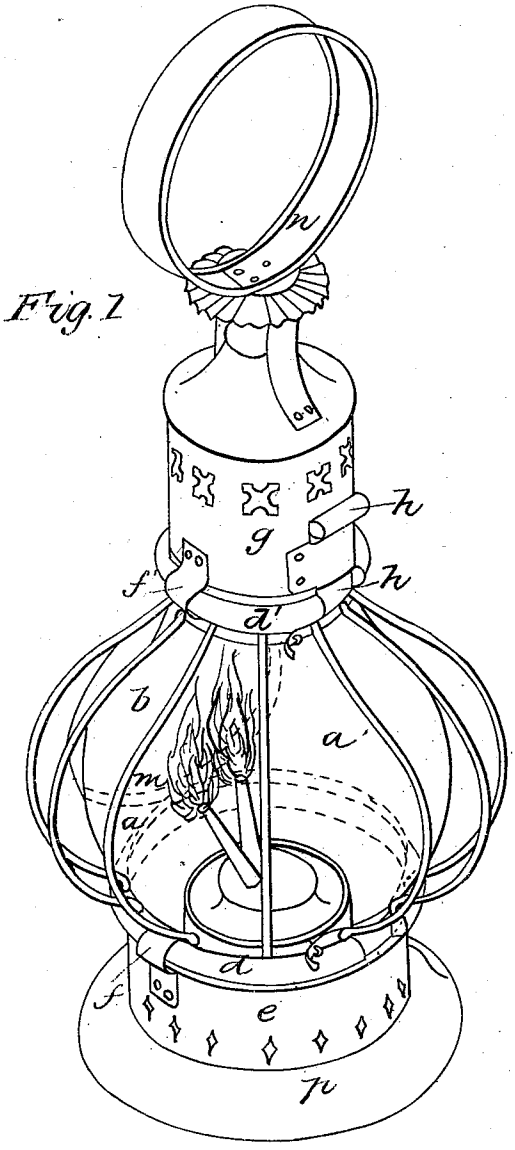
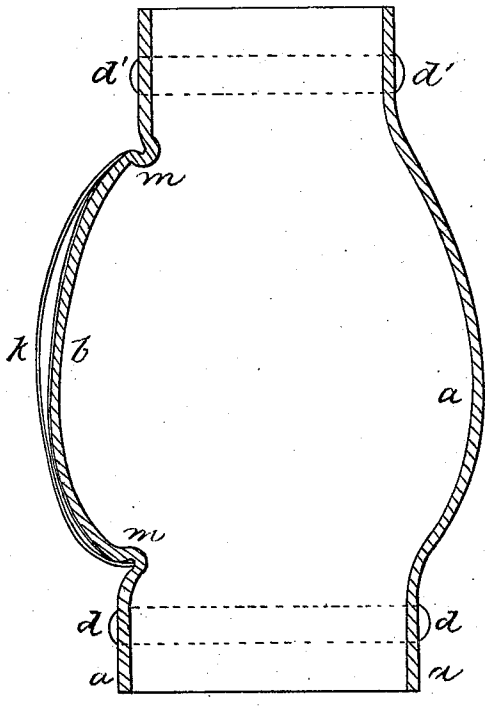


Fig. 2



Inventor
J. H. Reighard.

UNITED STATES PATENT OFFICE.

JACOB H. REIGHARD, OF BIRMINGHAM, PENNSYLVANIA, ASSIGNOR TO HIMSELF, JOHN BIRD, AND DAVID CHALLINER, OF SAME PLACE.

LANTERN.

Specification of Letters Patent No. 19,897, dated April 6, 1858.

To all whom it may concern:

Be it known that I, JACOB H. REIGHARD, of Birmingham, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Lanterns; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the annexed drawing, forming part of this specification, in which—

Figure I is a perspective view of a lantern constructed with my improvement, and Fig. II is a sectional view through the glass globe of a lantern or lamp detached from the trimmings.

My improvement consists in making on one side of the glass or globe of lanterns a circular projection of glass, of one piece with the globe, which projection is to be silvered externally as a reflector, the outer surface being convex, as is usual with reflectors, and its circular edge raised from the surrounding surface of the globe or glass of the lantern sufficiently to permit of the attachment of a cap or covering to protect the silvered surface of the projecting reflector from injury. This projecting convex reflector is molded in the glass of the lantern, whether the glass be globular, or plane, and in case the glass is globular, the convexity of the reflector is independent of the shape of the globe, being more or less convex than the globe as may be necessary.

To enable others skilled in the art to make and use my improvement in lanterns, I will proceed to describe its construction and operation.

The glass of the lantern which is usually made in the shape of a globe, but which may be made with plane sides, or of other convenient shape, is molded or pressed in one piece with the reflector, which is a circular projection from the plane or convex surface of the glass or globe of the lantern. The circular edge of this projection is raised sufficiently from the surface of the surrounding part of the globe or glass to form a neck, around which is attached a cap or covering to protect the reflector. The outer surface of this circular projecting reflector which is of sufficient size and proper convexity to act as a reflector, is carefully plated over with metallic silver in the manner usually followed in silvering hollow glass ware, the result of which is a very brilliant and highly reflecting concave mirror *b* in the inside of the glass lantern. The required shape and convexity of the reflector *b* is attained by blowing the globe of the lantern in a mold, so that the reflector may be made of any required diameter or degree of convexity.

As the silvered surface of the reflector is, of course, outside, it is liable, if unprotected, to injury, as the silvering would be easily rubbed off; and the covering over the silvered surface must not lie so close as to touch it, as any contact with the silvered surface would injure or deface it. To accomplish this object without obscuring more of the surface of the glass globe than is occupied by the reflector itself, I make the reflecting disk to project from the side of the globe as before stated, so as to have a neck *m* all around it; on which neck a metallic cap or covering *k* fits tightly, and is fastened on around the neck, with water proof cement, so as to exclude any moisture from the space between the cap and silvered surface of the glass. This cap or covering *k* has greater convexity than the disk or projecting reflector *b* so that the cap *k* touches it nowhere but around the neck *m*.

The advantage of the mode of constructing the reflector hereinbefore described, over simply silvering a portion of the globe as a reflecting surface (which I do not claim) is, that the reflecting surface may be made with a uniform convexity greater or less than that which the globe possesses as circumstances may require; and the advantage of being enabled to protect the external or silvered surface of the reflector (with a cap fitting around the neck of the projecting disk) from injury by contact with any other object. This improvement is applicable, with great advantage to carriage lamps, signal lanterns, &c.

Having thus described my improvements, I do not claim the coating of the external surface of a portion of the glass globe of lanterns with silver or other metallic substance for the purpose of giving a reflecting surface, but

What I do claim as my invention and desire to secure by Letters Patent is—

Making a circular convex projection in the side of the globe of lanterns cast or molded in one piece with the globe (which

is to be silvered externally as a reflector) the edge of which circular projection is slightly raised from the surrounding surface of the globe so as to permit of the convenient attachment of a cap or covering to protect the silvered surface of the reflector from injury.

In testimony whereof I have hereunto set my hand this twenty-eighth day of November, A. D. 1857.

J. H. REIGHARD.

Witnesses:

MARTIN G. CUSHING,

W. DUDLEY KING.