(No Model.)

L. F. BETTS.

REFLECTOR AND ATTACHMENT FOR LANTERNS.

No. 343,792. Patented June 15, 1886.

Fig. 1.

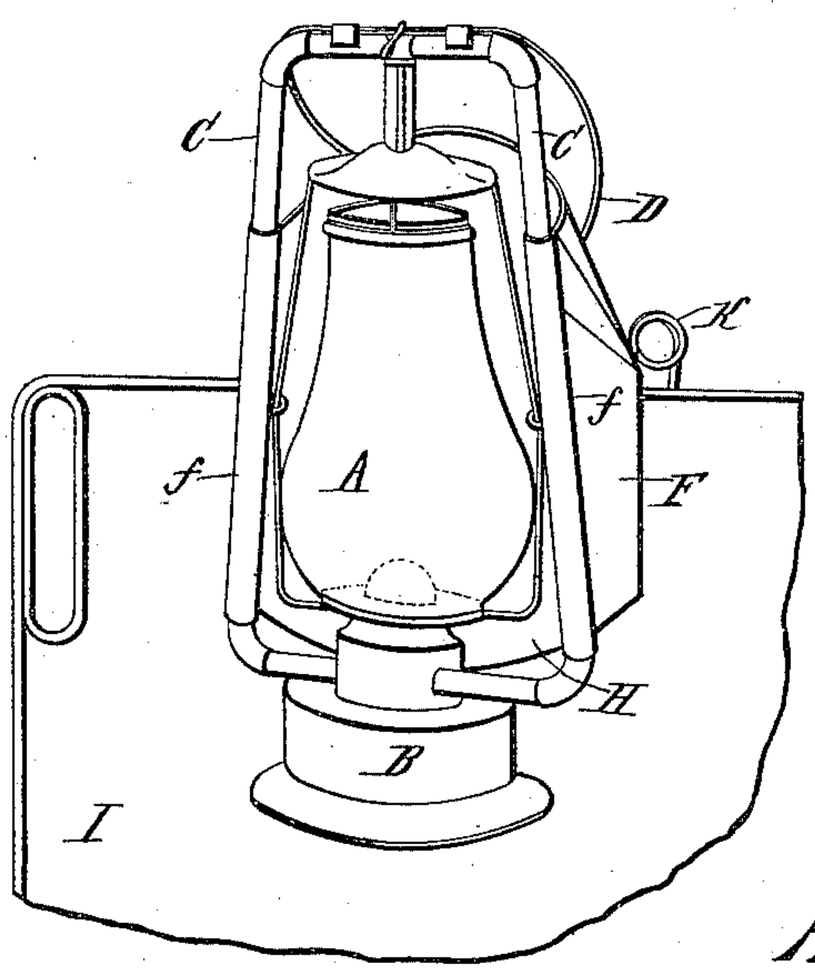


Fig. 2.

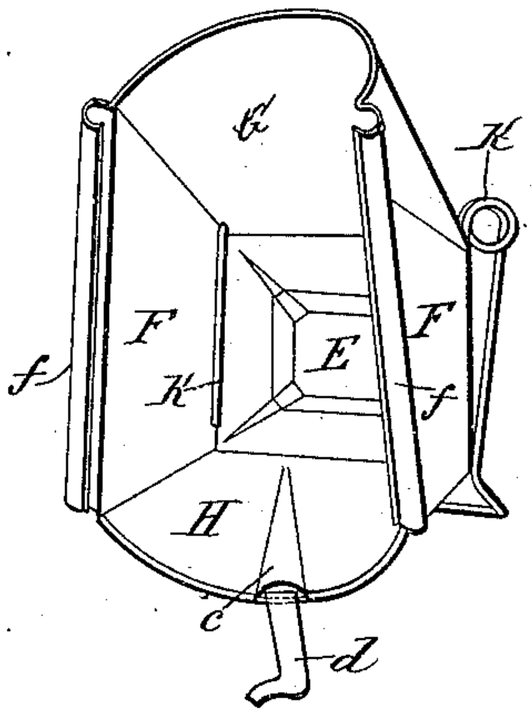


Fig. 3.

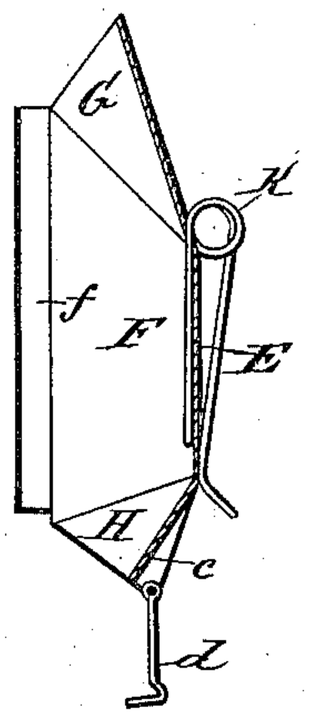


Fig. 4.

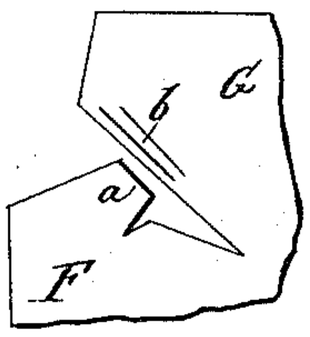


Fig. 5.

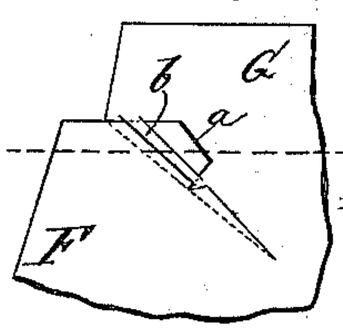


Fig. 6.

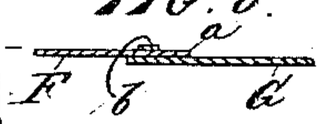


Fig. 7.

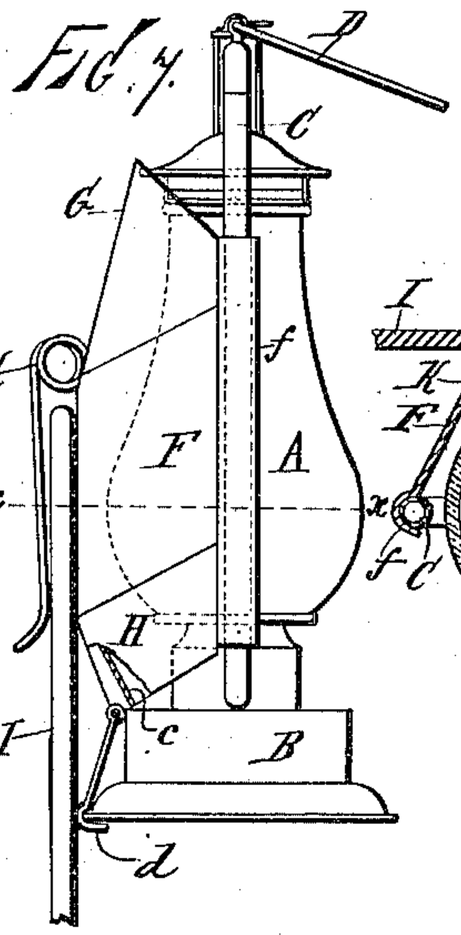


Fig. 8.

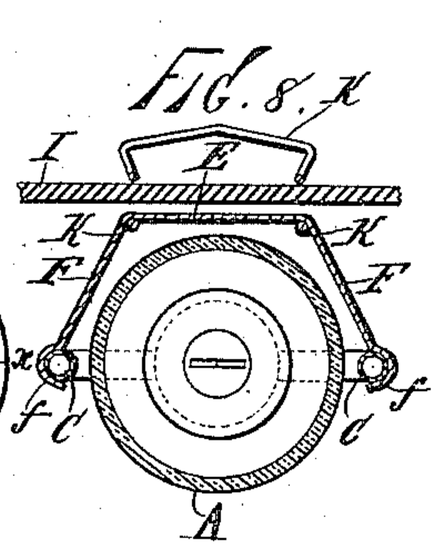
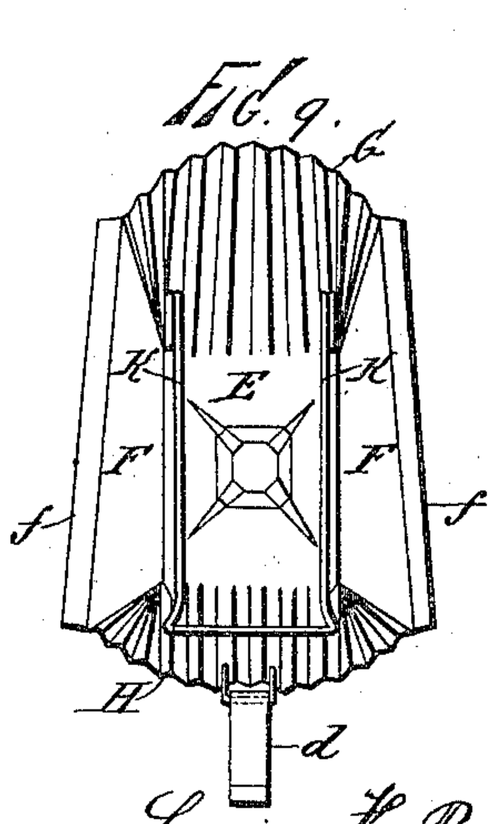


Fig. 9.



Witnesses:
John Buckler,
L. H. Osgood.

Lewis F. Betts,
Inventor;
By Wm. Osgood,
Attorney.

UNITED STATES PATENT OFFICE.

LEWIS F. BETTS, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO ROBERT E. DIETZ, OF SAME PLACE.

REFLECTOR AND ATTACHMENT FOR LANTERNS.

SPECIFICATION forming part of Letters Patent No. 343,792, dated June 15, 1886.

Application filed January 16, 1886. Serial No. 188,748. (No model.)

To all whom it may concern:

Be it known that I, LEWIS F. BETTS, of New York city, county of New York, and State of New York, have invented certain new and useful Improvements in Reflector and Dash-Board Attachments for Tubular Lanterns, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My improvements have relation to appliances for use in connection with the now well-known tubular lanterns, the object of my invention being to provide a simple, cheap, compact, durable, and convenient form of reflector which may be readily adjusted upon a tubular lantern and securely connected therewith, operating at all times when in use as a powerful reflector of light, and affording a simple and convenient medium through which the lantern may be applied upon the dash-board of a wagon or carriage, or upon any other analogous point of support. To accomplish all of this, my improvements involve certain new and useful peculiarities of construction and relative arrangements or combinations of parts, all of which will be herein first fully described, and then pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a perspective view showing a tubular lantern having my improved reflector applied thereon and mounted or sustained upon a dash-board. Fig. 2 is a perspective view of the reflector detached, and Fig. 3 a vertical sectional elevation of the same. Fig. 4 is a plan of a fragment of sheet metal, showing one manner of cutting the blank in order to form and lock the corners of the reflector, giving it the required curvature. Fig. 5 is a plan, and Fig. 6 a sectional view, showing the parts of the corner in closed position. Fig. 7 is a side elevation and partial sectional view of the lantern and attachment shown in Fig. 1, and Fig. 8 is a horizontal section through line *x x*. Fig. 9 is a rear elevation of a reflecting attachment constructed and arranged for operation in accordance with my invention, wherein the necessary curvature is supplied by simply corrugating or fluting the material.

In all these figures like letters of reference, wherever they occur, indicate corresponding parts.

The lantern shown is of the usual tubular pattern, of which A is the globe, B the oil-fount, C C the side tubes, and D the bail or handle. In these tubular lanterns the side tubes are generally inclined, being spread more at the bottom than at the top.

E is the back of the reflector, from which the side walls, F F, and top G and bottom H project. The reflector is preferably made of bright tin, and may be made of a single piece, as shown, or of two or more, if required.

The manner of securing the required curvature or dishing of the reflector is not material. I have indicated two methods. The blank may be cut as shown in Fig. 4, the tongue *a* upon the side wall being formed to pass under the piece *b*, formed by slitting the part G. When located as in Fig. 5, the two parts are locked by simply stamping upon the piece *b*, or applying solder. The bottom part may be joined with the side walls in the same manner, giving the required curvature. In Fig. 9 the curvature is secured by fluting or corrugating the top and bottom parts, thus avoiding the cutting, and making the reflector of a continuous piece of metal. The back E is intended to be located about opposite the position of the flame in the lantern.

To connect the reflector with the lantern, the side walls are bent or turned at their margins, as at *f f*, the bent portions being calculated to partly embrace the tubes C C, and to slip upon them from the top, the inclination of the bent portions being about the same as that of the tubes, and the width between them being such that when in place the reflector will be sustained at the required height with respect to the flame.

To secure the reflector against accidental displacement or disarrangement, it should be locked upon the lantern. A variety of catches may be employed for this purpose, the form of catch shown being regarded as among the best. At *c* the bottom portion of the reflector is bent so as to form a ledge or abutment, which will strike upon the top of the oil-fount and prevent the reflector from being crowded

downwardly. At *d* is a spring or other hook hinged upon the bottom of the reflector and calculated to be forced under the bottom of the oil-fount or under the rim connected therewith, as shown in Fig. 7. When mounted upon the lantern, as in Fig. 7, the reflector cannot move upon the lantern without that the hook *d* be first disengaged. With the reflector in place the lantern may be carried and operated the same as without it, the light being all directed toward one side of the structure. The reflector fits snugly around the lantern, adding little to its original bulk, very little to its weight, is easily and quickly mounted or dismounted, and is cheaply made and well calculated for the purposes of a reflector in the position for which it is adapted.

It is desirable to provide means by which the lantern may be sustained in any required position, as upon the dash-board of a carriage or wagon, in which position the reflector is of peculiar advantage in connection with this class of lanterns.

I represents any dash-board.

K is a spring made of wire, the same being securely connected with reflector by passing the inner ends through the reflector near the top and carrying them well down toward the bottom part and in the corners of the reflector, where they are secured by solder or other means. The outer portion of the spring forms a broad bearing against the board, and operates to hug the back of the reflector against the dash-board in such manner that the reflector and the lantern supported therein will be firmly held against accidental movement. The lower exterior portion of the spring is slightly bent back, so that the device can be easily and quickly adjusted upon the dash-board or equivalent support, and be as readily removed therefrom whenever desired.

When constructed and arranged for operation in accordance with the foregoing explanations, the improved device has been found to admirably answer the purpose or object of the invention, as above set forth.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In combination with a tubular lantern, the reflector having the side walls curved or bent at their margins, as explained, the said bent portions being made to fit upon the lantern-tubes, substantially as and for the purposes set forth.

2. In combination with a tubular lantern, a reflector having the side walls bent at their margins, as explained, the said bent portions being made to fit the lantern-tubes, and a catch for locking the reflector upon the lantern, substantially as and for the purposes set forth.

3. In combination with a tubular lantern, the reflector having the side walls bent at their margins to fit upon the tubes, the ledge for bearing upon the oil-fount of the lantern, and the hinged hook for engaging with the lower part of the lantern, substantially as shown and described.

4. The herein-described attachment for tubular lanterns, consisting of the concaved reflector having the curved marginal portions for fitting the inclined lantern-tubes, the ledge, hook, and spring, all constructed and arranged substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of two witnesses.

LEWIS F. BETTS.

Witnesses:
JOHN BUCKLER,
WORTH OSGOOD.