

(No Model.)

A. HARRIS & G. M. CLARK.

LOCOMOTIVE HEAD LIGHT.

No. 270,792.

Patented Jan. 16, 1883.

Fig 1

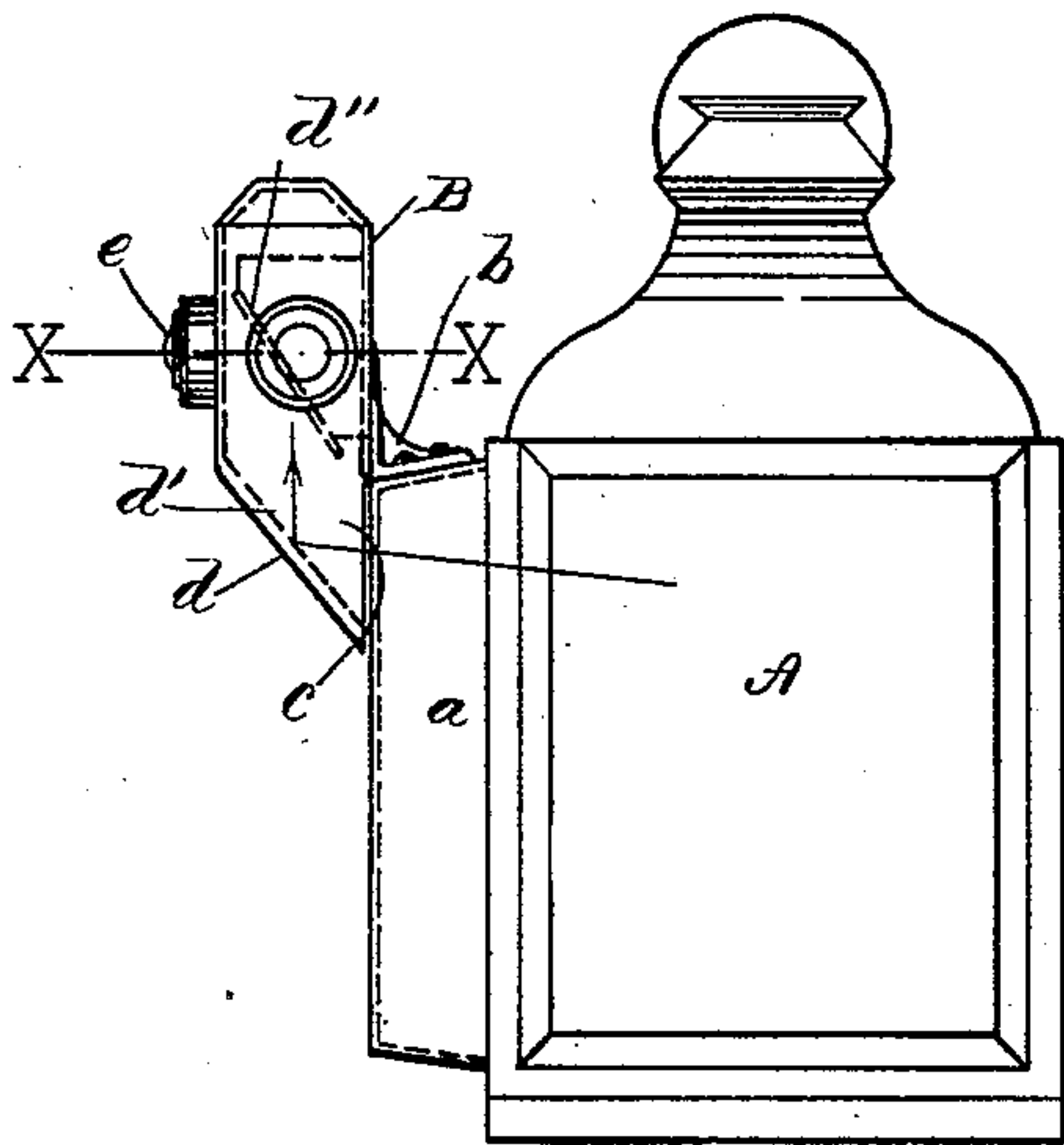


Fig 2

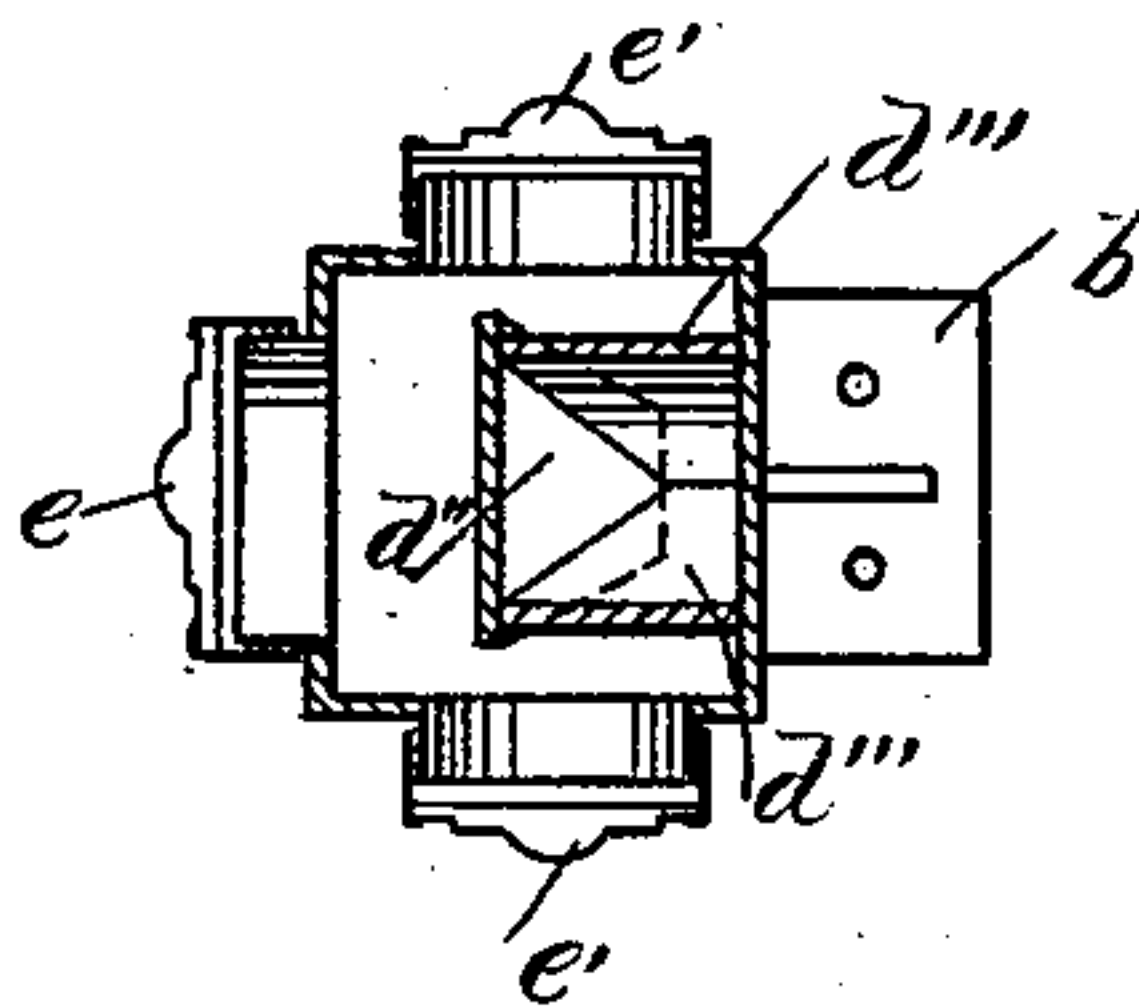
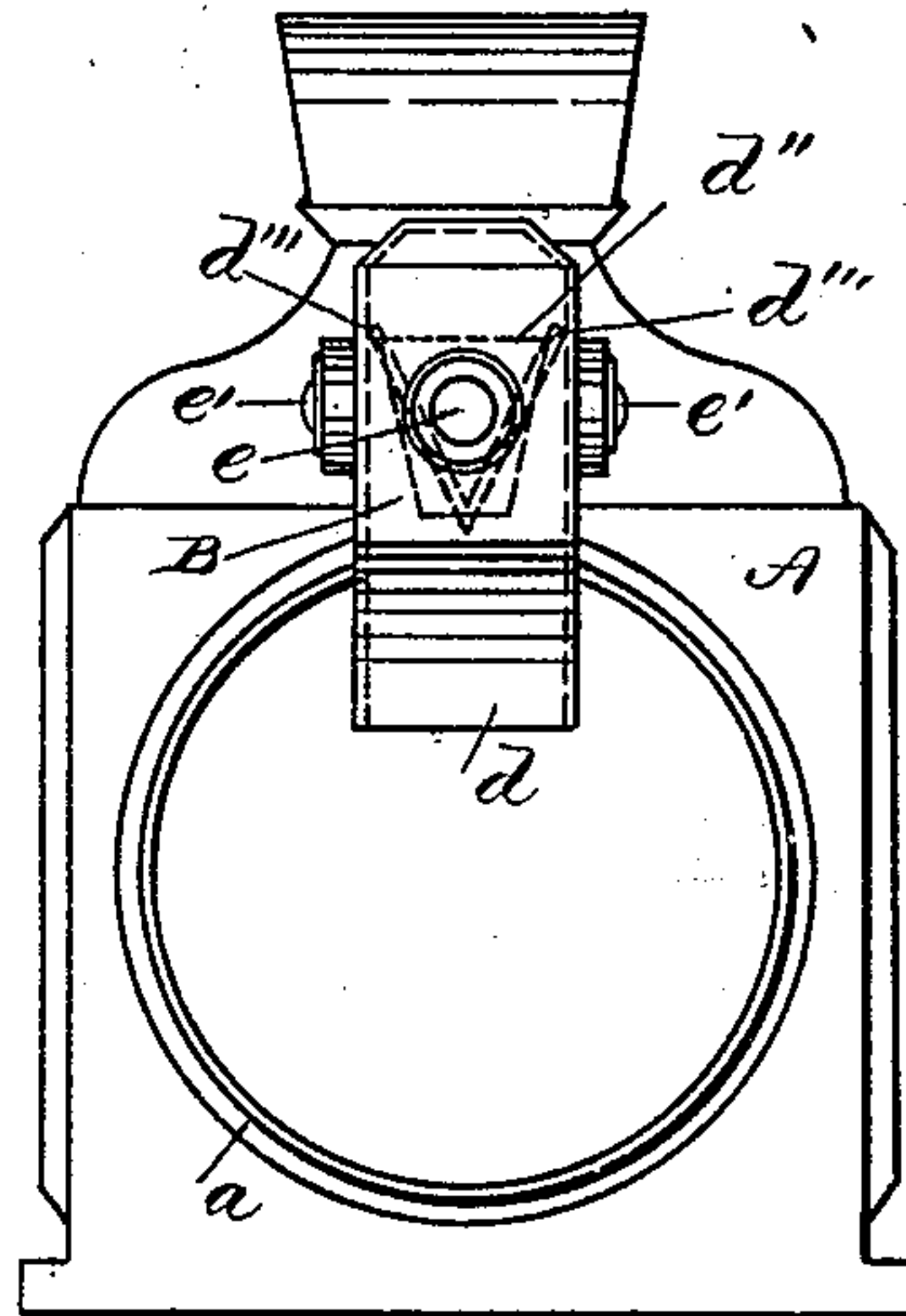


Fig 3

WITNESSES.

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INVENTORS

Arthur Harris
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UNITED STATES PATENT OFFICE.

ARTHUR HARRIS AND GEORGE M. CLARK, OF CHICAGO, ILLINOIS, ASSIGNORS
TO J. MCGREGOR ADAMS, OF SAME PLACE.

LOCOMOTIVE HEAD-LIGHT.

SPECIFICATION forming part of Letters Patent No. 270,792, dated January 16, 1883.

Application filed November 28, 1882. (No model.)

To all whom it may concern:

Be it known that we, ARTHUR HARRIS and GEORGE M. CLARK, both of Chicago, in the county of Cook and State of Illinois, have invented certain Improvements in Locomotive Head-Lights, of which the following is a specification.

This invention relates to improved means for exhibiting signals on locomotive head-lights; and, briefly considered, it consists in transmitting light from the interior of the lantern by reflection through bull's-eyes or signal-glasses placed at the front of the head-light, as hereinafter set forth.

In the accompanying drawings, Figure 1 is a side view of our improved head-light. Fig. 2 is a front view thereof. Fig. 3 is a sectional plan on the line *xx* of Fig. 1.

Similar letters of reference indicate similar parts in the respective figures.

A is the exterior case of the head-light or lantern, and *a* its rim. B is a box, adapted to be secured removably or permanently to the upper part of the rim *a* by means of a bracket, *b*, at the rear of the box. The lower portion of the rear side of said box is open, as shown at *c*, and confronts the main reflector within the lantern. The bottom *d* of the box B is carried up at an outward angle from the face of the rim, and at its inner side is provided with a reflector, *d'*. The box B is furnished with a front signal-glass, *e*, and similar side glasses, *e'*. The glasses are shown of the ordinary bull's-eye class; but they may, if desired, be flat and of rectangular outline and bear a number or other mark.

Placed above the reflector *d* is another reflector, *d''*, at an angle practically parallel to the surface of the reflector *d'*. As shown in Figs. 2 and 3, the reflector *d''* is made to increase in width toward its top. Other reflectors, *d''' d''''*, are also placed within the box B,

which, as seen in Figs. 1 and 2, are confined between the back of the reflector *d''* and the rear wall of the box B, extending by preference somewhat above the top edge of the reflector *d''*. As shown in Figs. 2 and 3, the reflectors *d'''* join at their lower edges, extending upward at opposite outward angles. The reflector *d''* is designed to cover the entire area of the inner side of the bull's-eye *e*, and the reflectors *d'''* that of the bull's-eye *e' e'*. Light thrown from the main reflector within the head-light or lantern will strike the reflector *d'*, as indicated by the arrow in Fig. 1, and will then be thrown upon the reflectors *d'' d''' d''''* through the respective bull's-eyes or signal-glasses.

The glasses may be made removable for the use of different colors.

This invention can be applied to any head-light now in ordinary use.

We claim as our invention—

1. Combined with a locomotive head-light, a box secured to the head-light rim, having an opening extending within the margin of the rim, and confronting the main reflector, and furnished with interior reflecting-surfaces and signal-glasses, substantially as set forth.

2. The box B and bracket *b*, combined with the head-light A and rim *a*, substantially as set forth.

3. The box B, having signal-glasses *e e' e'*, reflecting-surfaces *d' d'' d''' d''''*, and the opening *c*, combined with a locomotive head-light, substantially as set forth.

In testimony whereof we have hereunto set our hands and seals this 22d day of November, 1882.

ARTHUR HARRIS. [L. S.]
GEO. M. CLARK. [L. S.]

Witnesses:

LAURENCE BROWN,
OSBORNE SAMPSON.