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LIGHT SIGNAL

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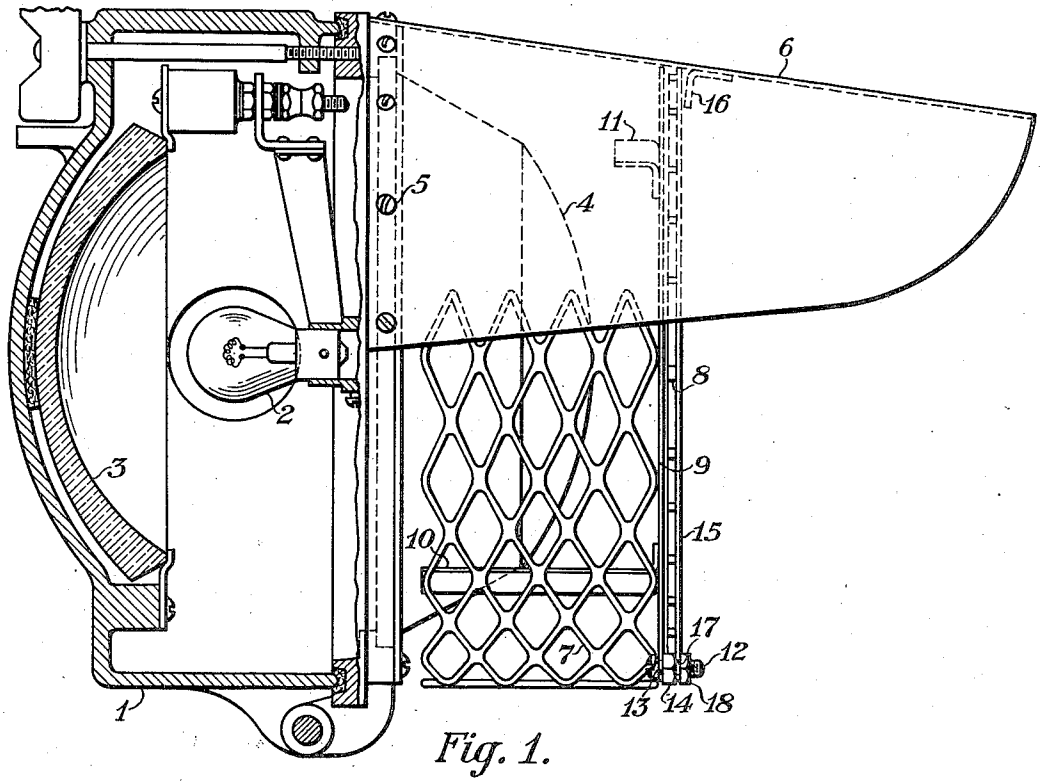


Fig. 1.

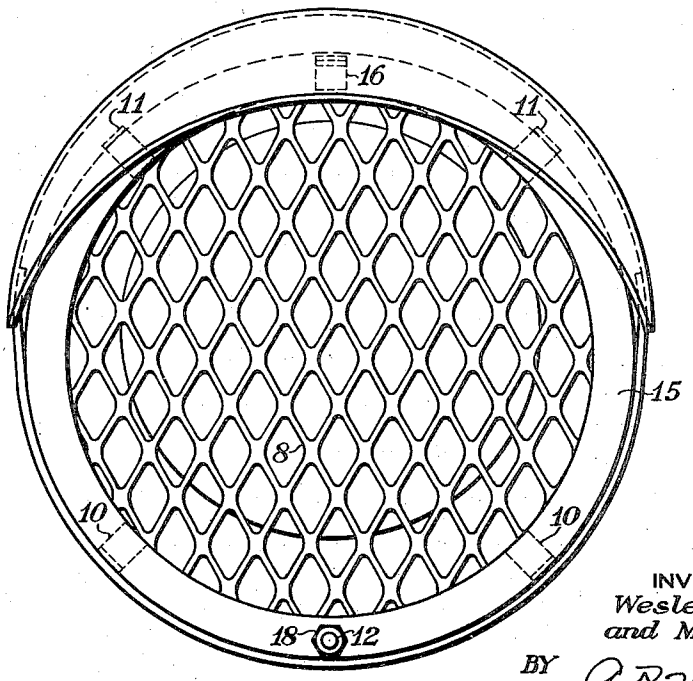


Fig. 2.

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LIGHT SIGNAL

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4 Claims. (Cl. 240—102)

Our invention relates to light signals, and particularly to highway crossing signals.

One object of our invention is to provide a combination lens guard and hood for light signals which may be attached to the signals in place of the usual hood, and which will prevent the lens and cover glass of the signal from being broken by stones or the like thrown at the signal.

We will describe one form of light signal embodying our invention, and will then point out the novel features thereof in claims.

In the accompanying drawing, Fig. 1 is a view partly in section and partly in elevation, showing a combined hood and lens guard embodying our invention applied to a highway crossing light signal unit. Fig. 2 is a front view of the hood and guard shown in Fig. 1.

Similar reference characters refer to similar parts in both views.

Referring first to Fig. 1, the signal unit here shown is of a well-known type commonly employed at the intersections of highways and railways to warn users of the highway that a train is approaching the highway, and comprises, briefly, a casing 1 containing an electric lamp 2, and a reflector 3 for projecting a beam of light through a cover glass 4.

Secured to the casing 1 directly above the cover glass 4, as by screws 5, is a hood 6 which performs the usual function of shielding the cover glass from the direct rays of the sun, and which in addition also serves as a support for the cover glass guard of our invention, which guard we will now describe.

As here shown, the cover glass guard comprises a side screen 7 and a front screen 8. Both of these screens in the form illustrated are made of expanded metal, but it will be readily understood that these screens could equally well be made of any suitable heavy wire mesh or its equivalent. The side screen 7 is semi-cylindrical in shape, and is secured at its ends, as by spot welding, to the depending side portions of the hood 6 in a manner which will be readily understood from an inspection of the drawing. A metal ring 9, the outer edge of which has substantially the same radius of curvature as the side screen 7, and also as the hood at a vertical plane above the outer edge of the screen, is fastened to the screen adjacent its outer edge by means of two L-shaped brackets 10, one leg of each of which is spot welded to the ring, and the other leg of each of which is spot welded to the screen. The ring 9 is also fastened to the hood by means of two L-shaped brackets 11 in the same manner that the ring is fastened to the screen.

A bolt 12 passes through a hole 13 provided in ring 9 at the lower portion of the ring, and is held in place by a nut 14, for a purpose which will be made clear presently.

The front screen 8 is circular in shape, and is fastened, as by spot welding, to the rear face of a second metal ring 15. The front screen 8 rests against the ring 9 and is held in place at its upper end by an L-shaped lug 16, one leg of which is spot welded to the under side of the hood 6 adjacent the top of the ring 15, and the other leg of which extends downwardly directly in front of the ring 15. The front screen is secured to the side screen by means of the bolt 12, which bolt projects through a suitable hole 17 in the ring 15, and is provided on its outer end with a nut 18 which engages the ring 15.

In constructing the combined hood and lens guard, the side screen 7 is first rolled into a cylindrical shape, and the L-shaped brackets 10 are then spot welded to this screen. The metal ring 9 is next welded to the brackets 10 following which the two L-shaped brackets 11 are welded to the ring 9. The brackets 11 and the two ends of the screen are then spot welded to the hood 6, thus completing the assembly of the side screen and hood. L-shaped lug 16 is next spot welded to the under side of the hood 6 a sufficient distance away from ring 9 to provide the necessary clearance for the front screen 8 and the associated ring 15. Bolt 12 is then passed through the hole 13 in ring 9, and is secured in place in the hole by means of the nut 14. The front screen 8 is next welded to the associated ring 15 and the assembly of the front screen and ring 15 is then placed behind the depending leg of lug 16, and the hole 17 in the ring 15 is placed over the outer end of the bolt 12. Nut 18 is then screwed onto the bolt 12, thus securing the front screen and ring 15 in place.

One advantage of a combined hood and lens guard embodying our invention is that it can be attached to light signal units which are already in service by merely substituting the hood with guard attached for the usual hood.

Another advantage of the combined hood and guard embodying our invention is that it can be manufactured without any special tools and hence at a minimum cost.

A further advantage of a combined hood and lens guard embodying our invention is that when it is desired to clean the lens or cover glass of a signal which is provided with a hood and guard

the front screen can readily be removed to permit this to be done by merely removing the nut 18 from the bolt 12.

Although we have herein shown and described only one form of light signal embodying our invention, it is understood that various changes and modifications may be made therein within the scope of the appended claims without departing from the spirit and scope of our invention.

Having thus described our invention, what we claim is:

1. The combination with a light signal unit having a breakable member through which the signal beam is projected, of a hood secured to said signal unit above said member, a semi-cylindrical side screen secured to said hood and projecting away from the signal beyond said member, and a circular front screen removably fastened to said side screen at the forward edge of said side screen.

2. The combination with a light signal unit having a cover glass through which the signal beam is projected, of a hood secured to said unit above said cover glass, a semi-cylindrical side screen surrounding the lower portion of said cover glass and secured at its ends to said hood, a first ring secured to said hood and said side screen at the forward edge of said side screen, a front screen resting against said ring and secured to the rear face of a second ring which is disposed in alignment with said first ring, and means cooperating with said two rings for removably securing said front screen to said side screen.

3. The combination with a light signal unit having a cover glass through which the signal beam is projected, of a hood secured to said unit directly above said cover glass, a semi-cylindrical side screen spot welded at its ends to said hood and surrounding the lower portion of said cover glass, two L-shaped brackets welded to said side screen, a first ring welded to said two L-shaped brackets at the forward edge of said side screen, two other L-shaped brackets welded to said first ring and to said hood, a forwardly projecting bolt secured to said first ring at its lower portion, an L-shaped lug spot welded to the under side of said hood and having one leg extending downwardly a short distance in front of said first ring, a circular front screen spot welded to a second ring, said first screen being disposed with its rear face engaging said first ring and with its upper portion between said first ring and the downwardly extending leg of said lug, a hole provided in said second ring and receiving said bolt, and a nut screwed onto said bolt outside of said second ring to secure said front screen to said side screen.

4. The combination with a light signal unit having a cover glass through which the signal beam is projected, of a hood secured to said unit above said cover glass, a semi-cylindrical side screen secured at its ends to said hood and surrounding the lower portion of said cover glass, a bracket secured to said side screen, a first ring secured to said bracket at the forward edge of said side screen, another bracket secured to said first ring and to said hood, a forwardly projecting bolt secured to said ring, a lug secured to the under side of said hood and having a part which extends downwardly in front of said first ring, a front screen secured to a second ring, said front screen being disposed with its rear face engaging said first ring and with its upper portion between said first ring and the downwardly extending part of said lug, a hole provided in said second ring and receiving said bolt, and a nut screwed onto said bolt outside of said second ring to secure said front screen to said side screen.

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