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W. V. BERGEN ET AL.

1,926,224

REFLECTOR AND HOLDER

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2 Sheets-Sheet 1

Fig 2

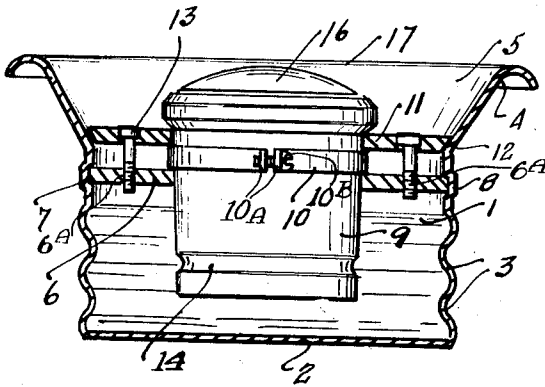


Fig 1

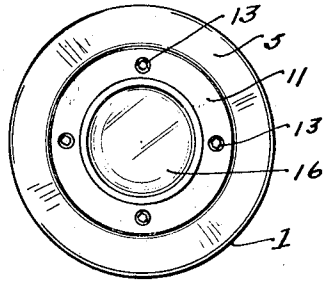


Fig 3

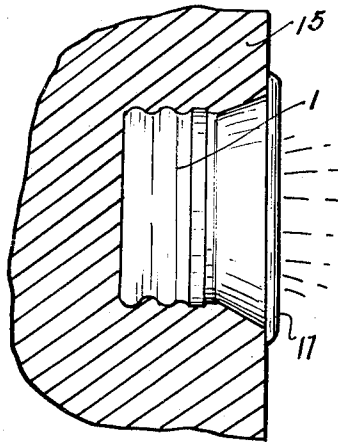


Fig 4

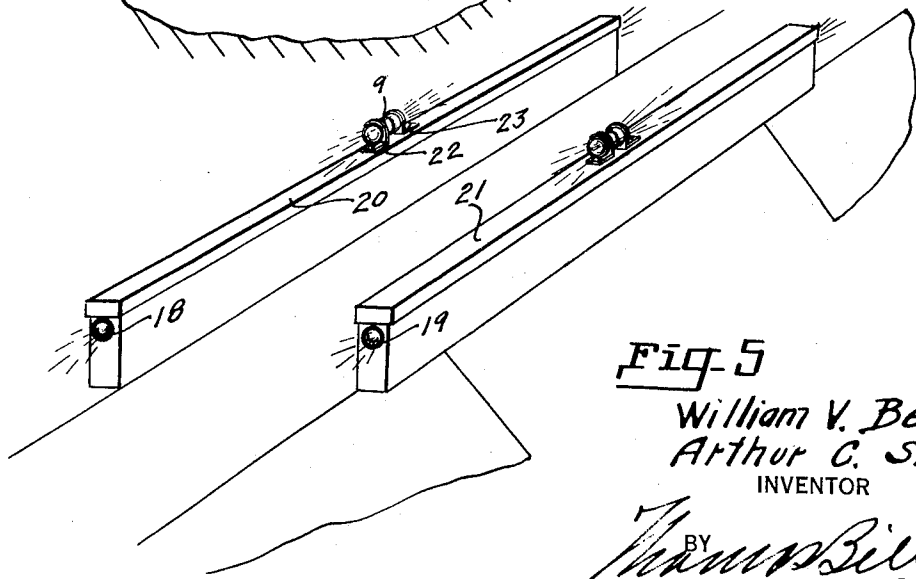
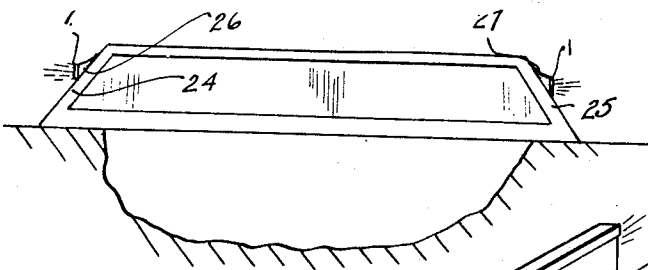


Fig 5

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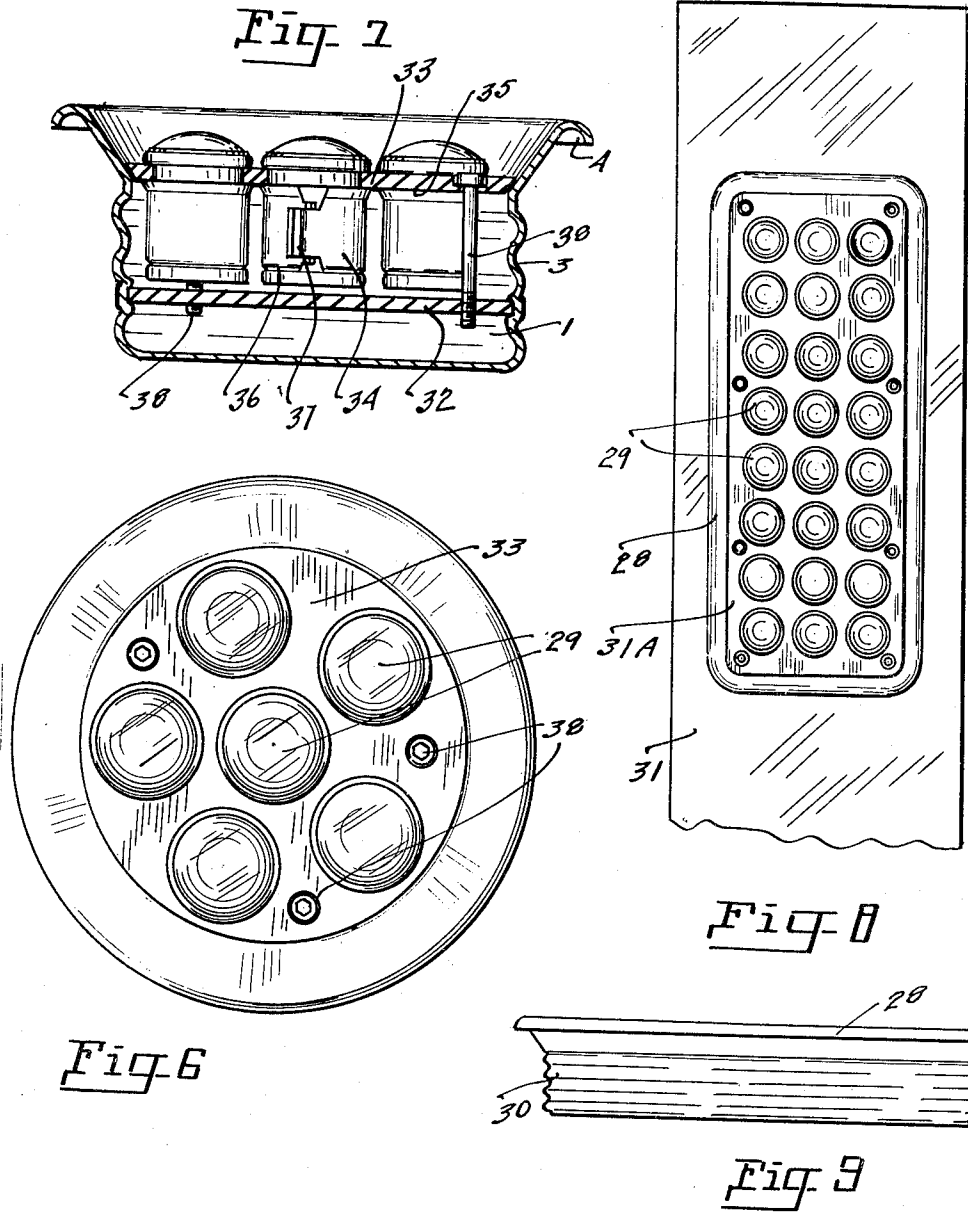
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2 Sheets-Sheet 2



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1,926,224

REFLECTOR AND HOLDER

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Application December 1, 1930. Serial No. 499,299

6 Claims. (Cl. 88—1)

Our invention is primarily intended for use as a reflector light adapted for being illuminated by the headlights of automobiles, locomotives and the like and is intended for placement upon
5 bridge heads, buttresses and curves, at danger points and crossings and at any and all places where it is desired to warn the driver of a vehicle to be cautious or direct the driver into the proper channels of travel.

10 The invention consists of a body, or jacket member adapted for placement within concrete, or for being secured to or within any object by any suitable means. Means are disposed within the body element for fastening the reflector in
15 place and position relative thereto. Means are also provided for removing the reflector from the body element when desired.

The primary object of our invention is to provide a reflector light unit that is placeable at
20 desired locations along the rights-of-way of highways, railroad tracks, streets, within channels of water-ways, upon landing fields and at any and all places where traffic is to be warned of any danger.

25 A further object of our invention consists in providing a simply constructed device that may be easily placed in or on the bridge piers, in or on street crossings, or other kinds of crossings, at the time of their construction or subsequent
30 thereto, or upon or within the concrete or other supporting surfaces to which one of our new and improved reflector lights may be removably secured.

35 A still further object of our invention consists in so constructing our device that the same will be given long life with a minimum of first cost.

40 With these and identical objects in view, the invention consists in certain novel features of construction and combination of parts, the essential elements of which are set forth in the appended claims, and a preferred form of embodiment of which is hereinafter shown with
45 reference to the drawings which accompany and form a part of this specification.

In the drawings:

Fig. 1 is a front view of the device.

Fig. 2 is a longitudinal, sectional, side elevation of the mechanism illustrated in Fig. 1.

50 Fig. 3 is a side view of the assembled device

shown in place and position in a concrete supporting surface.

Fig. 4 is a side view of a culvert illustrating reflector units of the character described in the oppositely disposed ends of the trusses of the culvert.
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Fig. 5 is a perspective, end view of a bridge illustrating a pair of reflecting units disposed within the bridge heads and illustrating also a pair of reflector units disposed at the top and central
60 of each of the trusses to thereby reflect light in oppositely disposed directions from the units disposed thereupon.

Fig. 6 illustrates a reflector comprised of a plurality of reflector units mounted within a
65 common support.

Fig. 7 is a sectional, side view of the mechanism illustrated in Fig. 6.

Fig. 8 is a front view of a modified form of body element in which a plurality of reflector units
70 are mounted therein.

Fig. 9 is a side view of the mechanism illustrated in Fig. 8.

Like reference characters refer to like parts throughout the several views.
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We preferably form our device of a body element made of material that is capable of resisting the elements and of resisting rough usage. It is desirable to make the body element 1 of non-corrosive and light material, such as aluminum,
80 but it is obvious that the functions of the device would not be affected by use of other kinds of material. The body element has a base 2, and configurations, such as corrugations 3, disposed upon its side walls. The functions of the corrugations are two-fold, namely, that of adding
85 strength to the body element, and that of presenting an uneven surface to the supports for the device, when the device is desired to be placed within the supporting surface. The second function is well illustrated in Fig. 3, wherein the device is secured within concrete material 15. The periphery of the body element has what constitutes a rolled edge 4 which terminates in an inclined reflecting surface 5. This manner of construction forms a flared entrance to the body
90 element. The rolled edge not only increases the appearance of the front portion of the body element but greatly aids in strengthening it. A supporting plate 6 is disposed within the body
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element in spaced relationship with the base 2. This plate 6 is fixedly held in position relative to the base by the circumferential recess 8 formed within the body element into which the peripheral end 7 of the plate intimately fits. The plate 6 has a suitable opening disposed therethrough into which a reflector 9 may be placed. The plate 6 also has a plurality of threaded openings 6A. When the reflector 9 is placed within the opening disposed through the plate 6, it is desirable to lock the reflector therein in order to prevent its removal. This is accomplished in the manner following: band 10 having upturned ends 10A is disposed about the side wall of the reflector 9 and is fixedly positioned thereabout by threaded screws 10B cooperating within threaded openings disposed through upturned ends 10A. The lower surface of band 10 rests upon the upper surface of the plate 6. A locking plate 11, having an opening disposed therethrough similar in circumference to the opening disposed through plate 6, is disposed about the wall of the reflector 9. The outer edge 12 of the plate 11 conforms to the inclined surface 5. The plate 11 also has a plurality of openings substantially equal in diameter to the openings 6A disposed through the plate 6, and when the countersunk screws 13 or other fastening means are threadably disposed through all of the openings within both plates, and tightly fastened, the outer edge 12 of the plate 11 fits intimately with the inclined surface 5 and makes a water-tight connection therewith. Each of the countersunk screws may have a head that is adapted for being locked and unlocked by a special type of wrench or may be of the common well known type of screw.

It may be well to note here that the manner in which the reflector 9 is locked within the body element 1 is not the essence of our invention. This may be accomplished in several ways. In Figs. 2 and 7 I have shown two ways in which the reflector may be maintained in fixed position within the body element. In Fig. 7 supporting plate 32 is fixedly disposed within the body element 1 in spaced relation with its base in the same manner as described for supporting plate 6 but is placed in closer proximity to the base. This plate does not have any openings into which a reflector may fit, but it does have a plurality of threaded openings into which countersunk screws 38 are threadably disposed. The locking plate 35 is made in the same manner and performs the same functions that plate 11 performs but it has a plurality of openings 33 into which a number of reflector units 9 may be placed. Instead of using bands 10, a modified locking means is used. A jacket 34 having a crimped lower periphery 36 that is adapted to fit into the recess 14 disposed within the lower portion of the reflector is fixedly secured about the outer wall of the reflector by locking means 37 secured upon the free ends of the jacket.

It will be seen from the above descriptions of the locking means that there are several ways of locking the reflector to the body element and while we have described two ways of locking the reflector in the body element, we do not want to be limited to these specific disclosures. In fact, it is possible to do away with both the band 10 and the jacket 34 and lock the reflectors to the body element by placing a number of clamping lugs on the countersunk screws 13 which intimately contact the periphery of the reflector when the screws are tightened.

In order to prevent the possibility of damaging

the lens 16 of the reflector 9 is placed slightly below the rim 17 of the inclined surface 5.

Our device may be placed in the heads of bridge trusses 20 and 21 as shown at 18 and 19 in Fig. 5 and may also be supported upon the top portions of the bridge trusses as shown supported thereon in suitable brackets 22 and 23. Where the bridge heads are made of concrete and are inclined at an angle as shown at 26 and 25 in Fig. 4, supporting bases 26 and 27 may be used into which the assembled device may be placed in proper alignment to obtain their greatest effectiveness.

In Fig. 8 is shown a modified form of body element 28 capable of supporting therein a great number of reflector units 29. This type of body element also has configurations upon its sides such as corrugations 30 and these corrugations perform similar functions to those heretofore set out, namely, the strengthening of the body element and the presenting of an uneven surface to the supporting media 31. The reflector units are disposed within a locking plate 31A in the manner hereinbefore set out in detail.

While the form of mechanism herein shown and described is admirably adapted to fulfill the objects primarily stated, it is to be understood that it is not intended to confine the invention to the one form of embodiment herein shown and described, as it is susceptible of embodiment in various forms, all coming within the scope of the claims which follow.

What we claim is:

1. In a device of the class described, the combination of a body element, a permanent supporting plate disposed within the body element, a removable supporting plate disposed within the body element and spaced apart from the permanent plate; a reflector unit positioned within the removable plate, means for supporting the reflector unit within the removable plate and means for removably securing the removable plate to the permanent plate.

2. In a device of the class described, the combination of a closed end body element, a permanent plate fixedly positioned within the body element, a removable plate positionable within the body element and adapted to form a relatively tight connection at its peripheral edge with the body element; one or more reflector units fixedly positioned within the removable plate, means for removably securing the removable plate to the permanent plate and means for maintaining a spaced relationship between the respective plates.

3. In a device of the class described, the combination of a body element adapted for being fixedly positioned within a supporting media and to be formed integral therewith, a permanent plate fixedly positioned within the body element, a removable plate adapted for placement within the body element; one or more reflector units extending through the permanent and the removable plate; means for locking the reflector units to the removable plate and means for removably securing the removable plate to the permanent plate.

4. In a device of the class described, the combination of a body element; means for fixedly positioning the body element within a supporting media, a permanent supporting plate disposed within the body element, a removable plate adapted for engagement with the supporting plate, said plates having openings disposed there-through in registerable alignment with each

other; means for removably positioning a reflector unit within the respective plates and means for removably positioning and locking the removable plate relative to the body element and to the permanent plate.

5 5. In a device of the class described, the combination of a hollow cylindrical body closed at one of its ends, and open and flared at its opposite end, corrugations formed around the periphery of the cylindrical body, a fixed plate and a removable plate mounted in spaced relation within the cylindrical body, and reflector units removably secured to said plates.

6. In a device of the class described, the combination of a hollow cylindrical body closed at one of its ends, and open and flared at its opposite end, corrugations formed around the periphery of the cylindrical body, a fixed plate and a removable plate mounted in spaced relation within the cylindrical body, and a reflector unit removably secured to said plates.

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