This invention relates to improvements in illuminating means for highways, sidewalks and the like.

The principal object of the invention is to provide an indirect illuminating means for a highway or sidewalk, which will be free of shadows and any possibility of glare.

A further object is to arrange reflectors on opposite sides of a highway to utilize light rays which would otherwise be lost.

A further object is to produce a device of this character wherein, the movement of vehicles or pedestrians over the illuminated surface will not cause objectionable shadows.

Another object is to provide means for illuminating a reflecting surface placed upon the opposite side of the structure being illuminated from that of the source of illumination.

A still further object is to produce a structure which is ornamental, at the same time rigid and one wherein the illuminating means may be readily serviced.

Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawings forming a part of this specification and in which like numerals are employed to designate like parts throughout the same,

Fig. 1 is a fragmentary view of a section of highway and sidewalk, having my illuminating means positioned thereon and illuminating the surface thereof,

Fig. 2 is a cross sectional view of Fig. 1, showing the manner in which the rays of illumination extend across the highway surfaces,

Fig. 3 is a cross sectional view taken on the line 3—3 of Fig. 4,

Fig. 4 is a cross sectional view taken on the line 4—4 of Fig. 3,

Fig. 5 is a side elevation of a rail post constructed in accordance with my invention, and

Fig. 6 is a cross section taken on the line 6—6 of Fig. 5.

In illuminating sidewalks, highways, bridges and the like, it has been common practice to install illuminating means upon high posts or brackets with the result that the illuminated surface is often poorly lighted, and further this type of lighting destroys the vision of the user in that he cannot readily see any great distance beyond a vertical line intersecting the source of illumination. When a vehicle or pedestrian passes over the surface being illuminated deep shadows are cast which shadows may extend a long distance down the highway. This type of illumination is hard to service, is subject to storms and, therefore, applicant has devised an illuminating means wherein the lights are placed so that the rays of illumination are projected across the highway or sidewalk surface in a plane substantially parallel with the surface and close thereto, thereby preventing any possibility of blinding rays. Further applicant's device, through a system of reflectors, may also provide indirect illumination at points higher up as for instance at a point adjacent the upper extremity of each handrail support.

In the accompanying drawings wherein for the purpose of illustration is shown a preferred embodiment of my invention, the numerals 5 and 6 designate the two sides of a highway, which is preferably divided by a marker strip 7, which strip has provided at intervals, illuminating boxes 8, such as are described in my co-pending application Serial Number 684,158. The numerals 9 and 11 designate the curbs upon opposite sides of the highway, along the edge of which is formed a reflecting surface 12. This reflecting surface may be enameled plates or similar wear resisting material. At 13 I have shown a sidewalk surface and at 14 a continuous fender strip having ornamental spaced reflectors 16 and a reflecting strip 17, similar to the reflecting strips 12. Spaced at suitable intervals along the fender strip, are housings 18 having openings 15 adjacent the highway and having posts 19 secured thereto. The housing 18 supports a lamp structure consisting of a casing 21 having a window 22 in alignment with the hollow posts 19. Within this casing 21 is mounted a reflector 23 in which is positioned a light source such as a bulb 24. This bulb is mounted in a socket 26, adjustably carried upon the bottom of the casing 21. Through the medium of the adjustment screws 27 the bulb 24 may be focused in the reflector 23.

A glass 28 projects rays of illumination as indicated by the arrows of Figs. 1, 2 and 3, that these housings 18 are staggered on opposite sides of the road or on the sidewalk so that the rays of illumination from the opposite and adjacent lights will overlap so that there will be no dark areas. It will also be here noted that the rays of illumination from one side of the highway will cross and engage the reflecting strips 12 and 17 upon the opposite side of the highway, as well as the reflectors 16. Consequently should the lights on one side of the highway be all ex-
tistinguished, the opposite side of the highway would still be visible due to the reflected light. The rays of illumination extending upwardly from the bulb 24 will engage a reflector 29, which is of such a shape that the rays of illumination will spread as illustrated by the left-hand arrows in the upper end of Fig. 3, passing through a suitable window 30, while certain rays of illumination will strike the surface 31 and be projected as indicated by the arrows on the right upper portion of this Fig. 3, passing through the window 35. The rays to the left will illuminate the sidewalk, while the rays to the right will serve to provide high bright spots along the roadway, thus indicating to the driver, the top of the post, thus permitting him to watch the road immediately in front or to lift the eyes to a point considerably in advance, and still be light-conscious of the edge of the road.

Referring now to Figs. 5 and 6, it will be noted that I here illustrate a post for the hand-rail, as for instance the hand-rail of a bridge, the construction being identical with that shown in Fig. 3, with the exception that the illuminating means is positioned in the upper end of the post and as shown at 32 a reflector, positioned in the bottom of the post and corresponding to the reflector 29, directs the rays of illumination out upon the sidewalk. The direct rays of illumination from the bulb 32 pass through openings in the upper end of the post and also serve to illuminate the sidewalk. The structure shown in Figs. 5 and 6 is virtually the same as Fig. 3, with the exception that the light is at the top and the reflector is at the bottom, thus reversing the position of the parts that perform the same function.

It is to be understood that the form of my invention hereinafter shown and described is to be taken as a preferred example of the same and that various changes relative to the material, size, shape and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claims.

Having thus described my invention, I claim:

1. In a highway illuminating device, in combination a housing adapted to be positioned adjacent a highway surface, a casing positioned in said housing, a hollow post positioned on said housing, a reflector carried in the upper portion of said post, illuminating means mounted in said casing and capable of illuminating said reflector, a portion of the rays from said illuminating means extending horizontally to said highway, and a reflecting surface positioned on the opposite side of said highway, upon which said rays impinge.

2. In combination with a highway having curbs on opposite sides thereof, of reflecting means mounted on said curbs, a fender strip formed on opposite sides of said highway and adjacent said curbs, illuminating means interposed at intervals in said fender strips, the illuminating means on opposite sides of said highway being staggered with relation to each other, said illuminating means comprising a housing having an opening therein facing the curb upon the opposite side of the highway, a hollow post positioned on said housing, said hollow post having windows formed therein, a reflector mounted in said hollow post, and said housing whereby rays of illumination therefrom will impinge on said reflector and will extend through said opening in said housing to the surface of said highway at a point substantially in parallelism with the surface of the highway and in close proximity thereto.

3. In combination with a highway having curbs on opposite sides thereof, of reflecting means mounted on said curbs, a fender strip formed on opposite sides of said highway and adjacent said curbs, illuminating means interposed at intervals in said fender strips, the illuminating means on opposite sides of said highway being staggered with relation to each other, said illuminating means comprising a housing having an opening therein facing the curb upon the opposite side of the highway, a hollow post positioned on said housing, said hollow post having windows formed therein, a reflector mounted in said hollow post, illuminating means mounted in said housing whereby rays of illumination therefrom will impinge on said reflector and will extend through said opening in said housing to the surface of said highway at a point substantially in parallelism with the surface of the highway and in close proximity thereto, and a plurality of reflectors mounted on said fender whereby the fender line may be readily determined through the reflection of headlights of a vehicle travelling over said highway.

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