Dec. 14, 1948. H. J. FINER 2,456,179

STREET LIGHTING STANDARD

Filed June 10, 1944

2 Sheets-Sheet 1

FIG. 2

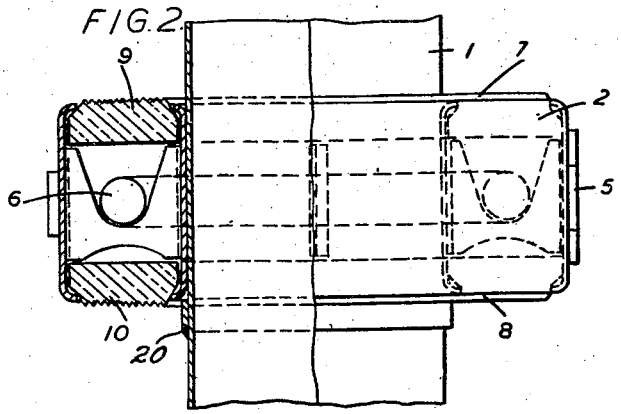

FIG. 1

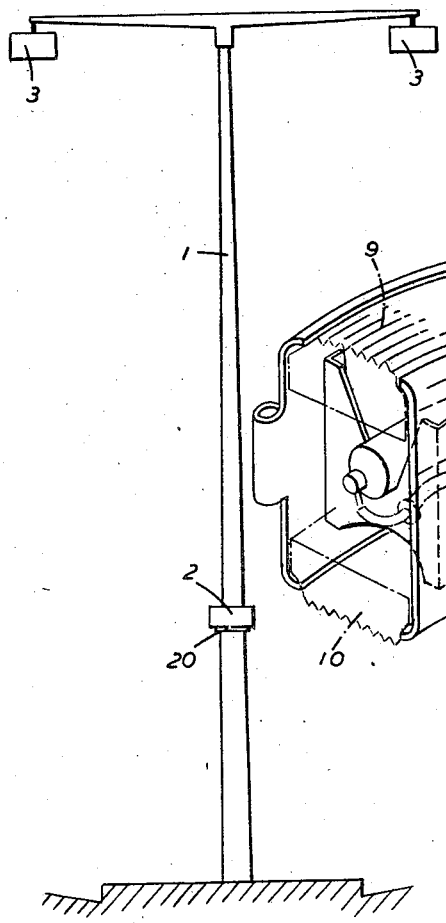

FIG. 3.

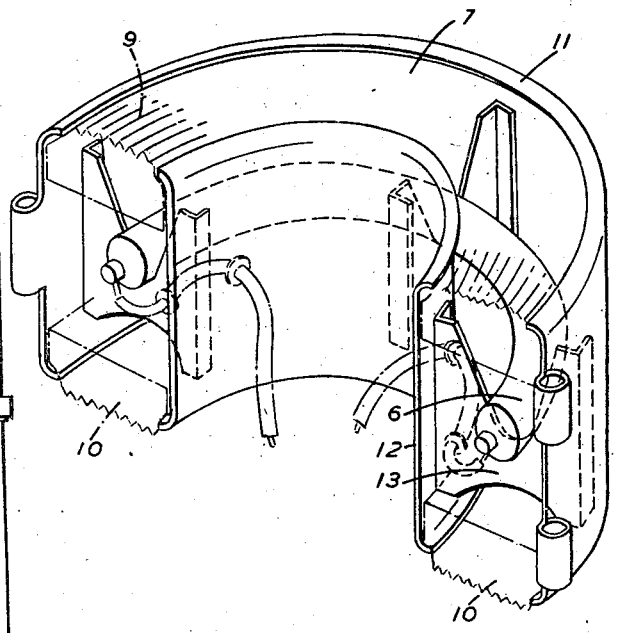

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FIG. 4.

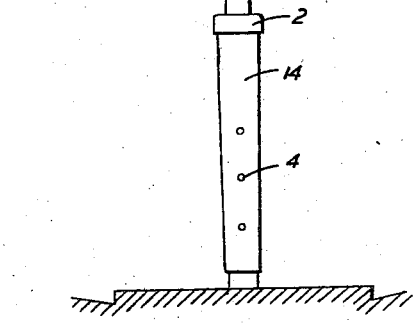


FIG. 5.

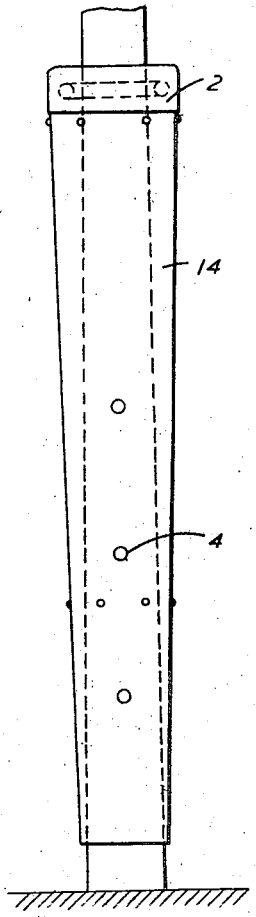


FIG. 6.

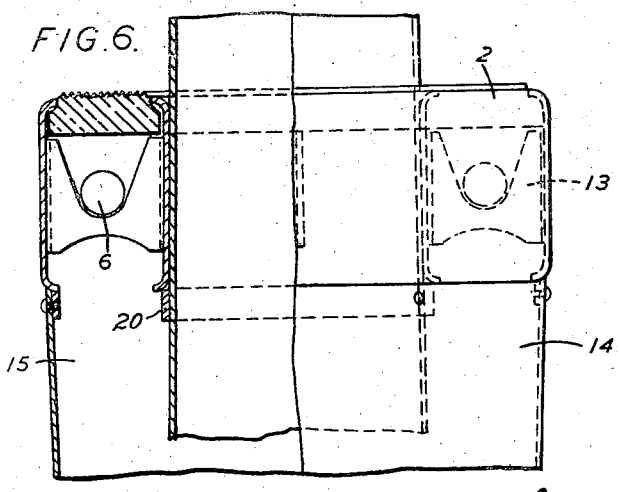


FIG. 7.

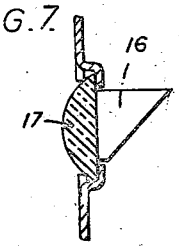
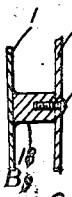


FIG. 8.



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UNITED STATES PATENT OFFICE

2,456,179

STREET LIGHTING STANDARD

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3 Claims. (Cl. 240—25)

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This invention is for street lighting standards and has for its object a standard which combines both a means for lighting the surface of a thoroughfare and means which permit the standard itself to constitute a line of direction for traffic moving along the said surface.

According to the present invention there is provided a street lighting standard which comprises in combination a tubular standard, at least one laterally extending arm mounted at the upper end of said standard arranged to carry a lamp at the free end thereof which is operable to illuminate an extended area of the surface upon which the standard is mounted, a sleeve arranged to envelop the standard at a point along the length thereof and house illuminating means operable to cast beams of light over the entire exterior surface of the said standard which extends at least between the said sleeve and the said arm so as to give a floodlighted, fluorescent or phosphorescent effect to the same and means for screening any lateral beams of light which tend to emanate from the said sleeve and illuminate the surface upon which the standard is mounted.

It will be seen from the foregoing that if a series of street lighting standards of the character specified in the preceding paragraph are mounted periodically along the centre line of a thoroughfare the same performs firstly the normal function of a street lighting standard, namely as a support for the lamps which illuminate the surface of the road, but in addition a series of street lighting standards constructed according to the present invention form upon a road which has an unobstructed view on either side thereof, a continuous line which indicates to the driver of a car the various bends and turns in the road and so eliminates any possibility of danger from fast driving because any sharp turn which may occur in the road is easily visible to a motorist a considerable distance before he approaches such a bend.

Further, it will be found that according to the present invention, with a normal street lighting standard the light which is cast downwardly upon the surface of a road does not provide very great assistance to a motorist in foggy weather, whereas with a street lighting standard constructed in accordance with the present invention the illuminating surface of the standard forms a very easy directional indication which in itself permits of the driver of a car travelling at a comparatively high speed in foggy conditions without the slightest danger of leaving the road

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surface, a condition which cannot prevail under normal lighting conditions.

The invention is more particularly described with reference to the accompanying drawings, in which:

Figure 1 illustrates a lighting standard constructed in accordance with the present invention;

Figure 2 is an enlarged view of an illuminating unit for a lighting standard;

Figure 3 illustrates upon an enlarged scale and in perspective half of the illuminating unit illustrated in Figure 2;

Figure 4 illustrates a modification of the lighting standard illustrated in Figure 1;

Figure 5 is an enlarged view of the base portion of a lighting standard, constructed in accordance with the present invention;

Figure 6 is an enlarged view of the upper end of Figure 5;

Figure 7 illustrates one means of mounting a signal light in a casing surrounding the base portion of a lighting standard, constructed in accordance with the present invention; and

Figure 8 illustrates one means of spacing a casing such as is illustrated in Figures 4, 5, and 6 from the base portion of a lighting standard, constructed in accordance with the present invention.

Referring to the drawings there is illustrated a tapering lighting standard 1 of circular cross-section for use upon promenades and boulevards, wherein there is mounted at a point along the length of the same a sleeve 2 which is segmental in form and is constructed in the manner illustrated in Figures 2 and 3 so as to be placed around the standard so as to encircle the same in the manner of a hinged bracelet and is arranged to house illuminating means operable to cast beams of light at least upwardly over the exterior surface of the standard so as to give a floodlighted effect to the same.

With such an arrangement the standard is given a prominence which is not only artistic in its appearance but provides in addition, if the standards are not spaced too far apart a line of direction for traffic which is clear and yet in no way presents any dazzling effect to the driver of a vehicle. The standards are provided at their upper ends with lamps 3 which overhang the road ways so as to provide the usual illumination for the road surface.

The unit employed for illuminating the surface of the standard may be of any desired shape and configuration, but the light therefrom must be

thrown upwardly and concentrated upon the exterior surface of the standard, although it is to be understood that the light from the illuminating unit may be employed for subsidiary purposes, for example to provide signal lights 4 at required intervals along the surface of the standard, as is clearly shown in Figures 4 and 5. Such signal lights will preferably be arranged to reflect the light in any desired direction.

Further, the light from the illuminating unit may be such as to give a decorative effect to the standard, for example it may be coloured or the colour of the light may be periodically varied so as to give a kaleidescopic effect, but it is to be understood that the essence of the invention resides in the employment of a means of illumination upon a standard, wherein the major portion of the light is employed in illuminating the surface of the standard, so as to give it a floodlighted effect.

One form of construction of illuminating unit for use in connection with the present invention is illustrated in Figures 2 and 3 and comprises two semi-circular elements similar to the element illustrated in Figure 3 hinged together at 5 in the form of a bracelet, each provided in the interior thereof with a lamp 6, for example a fluorescent tube, mounted in each segmental section so as to throw light upwardly and downwardly through upper and lower windows 7 and 8 provided with transparent or translucent lenses 9 and 10 constructed so as to cast the beam of light emitted from the lamps 6 over the major portion of the surface of the standard, which the unit encircles. Each semi-circular portion of such an illuminating unit can be formed primarily out of two semi-circular metal stampings 11 and 12 (Figure 3) arranged concentric with one another and joined to one another by V-shaped brackets 13 mounted between the stampings so that the base of the V constitutes the holder for the semi-circular fluorescent tube 6 arranged in the annular space provided between the stampings. The annular openings at the top and the bottom of the unit which form the upper and lower windows 7 and 8 support the glass lenses 9 and 10 constructed and arranged so that when the unit is in position upon a standard and the lamps are lighted the lenses throw the light over the surface of the standard. The semi-circular units are hinged to one another so that the jaws of the unit can be opened out and placed around the standard in the form of a bracelet and then closed so that the two halves of the unit completely encircle the surface of the standard. The electrical connections for the lamps 6 carried by the unit extend inwardly and through apertures in the metal sides 12 and thence into the standard, and can be connected to the electrical cables extending through the standard by means of plugs which can be easily removed from their sockets and thereby permit the illuminating unit to be removed from the standard as a complete article and so provide a simple and efficient means of mounting such illuminating units both on standards already erected and standards constructed for the provision of such units.

With the unit above described, the light, as hereinbefore stated, can be thrown upwardly and downwardly over the entire surface of the standard. If necessary, however, the downwardly directed light can be directed into a shield 14 (Figures 4, 5 and 6) which extends from the underside of the illuminating unit 2 to a point adjacent to the ground. The shield can be arranged to taper

downwardly and form an annular space 15 between the standard and the shield. The shield 14 can be provided with apertures along the length thereof in which there are mounted prismatic lenses 16 (Figure 7) which when the light is thrown downwardly from the illuminating unit, refract the light through plano-convex lenses 17 into a horizontal beam which will be emitted from the lower end of the standard and constitute a signal light or lights for traffic.

Furthermore the shield 14 hereinbefore referred to which extends downwardly from the illuminating unit is preferably secured to the standard 1 by means of a tapped pad 18 welded to the standard 1 and arranged to receive a screw 19 so that an annular space is provided between the shield and the standard at the lower end of the shield, for drainage purposes.

In order to support the unit hereinbefore described upon a standard, there is preferably provided around the surface of the lamp at the desired height above ground level, for example eight to nine feet, a stop ring 20 (Figures 1, 2 and 6) upon which the unit rests.

It will be appreciated that where the light from the illuminating unit is cast upwardly and downwardly over the surface of the standard, the lower half of the standard offers considerable assistance under foggy conditions to traffic travelling along a road.

It is to be understood that the illuminating unit or units may comprise a violet or substantially violet light visible in character, which casts a beam or beams over a reflecting surface of the standard for example a white surface, so as to give the said surface of the standard a fluorescent effect.

Thus it will be seen that according to the present invention there is provided a lighting standard, which is not only effective in appearance, but also provides a very efficient means for indicating to traffic the line of direction of the road upon which they are travelling.

What I claim as my invention and desire to secure by Letters Patent of the United States is:

1. An illuminating device for the exterior surface of a pole, comprising a unit adapted to surround an intermediate portion of a pole, said unit comprising a substantially annular inner sleeve of internal diameter to fit over the outer surface of the pole to which the unit is applied; a substantially annular outer sleeve concentrically disposed with respect to said inner sleeve and spaced outwardly therefrom; radially extending brackets having their ends secured to the said sleeves and maintaining them in concentric, spaced relation, each of said brackets having a notch along its upper edge; and a substantially annular illuminating tube positioned between the sleeves and supported within the said notches in the radially-extending brackets for casting beams of light upwardly and downwardly along the exterior surface of a pole on which said unit is mounted.

2. An illuminating device as defined in claim 1, in which the unit, including the sleeves and illuminating tube, is substantially annular and is composed of two substantially semi-annular portions, hinged to one another at one end of each of the said portions whereby the unit may be readily placed about a pole to encircle the same, and in which means are provided at the other ends of the said portions for securing said ends together, whereby to secure said unit about a pole.

3. An illuminating device for the exterior surface of a pole, comprising a unit adapted to sur-

round an intermediate portion of a pole, said unit comprising an inner sleeve, an outer sleeve concentrically disposed with respect to said inner sleeve and spaced outwardly therefrom, the upper and lower edges of said sleeves being disposed, respectively, in the same planes and being turned inwardly toward each other with a space therebetween, brackets connecting said sleeves and maintaining them in concentric, spaced relation, illuminating means positioned between the sleeves and supported on said brackets for casting beams of light upwardly and downwardly along the exterior surface of a pole on which said unit is mounted, and lenses mounted between the sleeves at the upper and lower edges thereof and retained in position by the inturned edges of said sleeves.

HENRY JAMES FINER.

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