April 27, 1937. A. CORBETT 2,078,370

REFLECTOR ASSEMBLY

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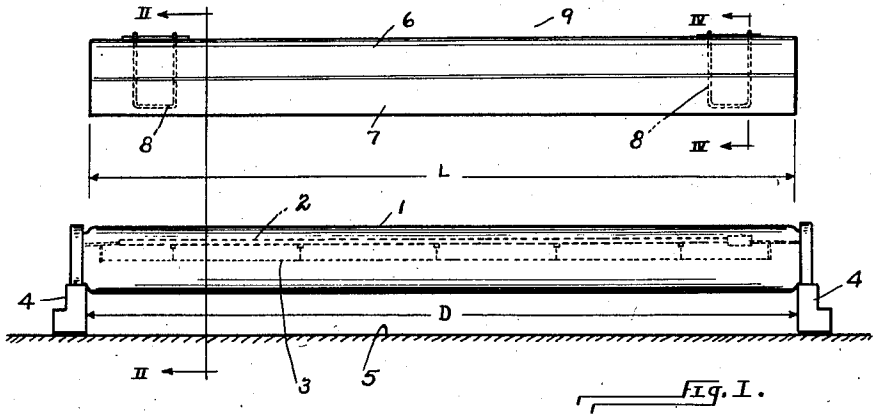
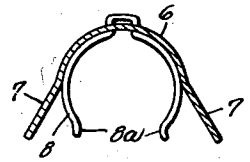
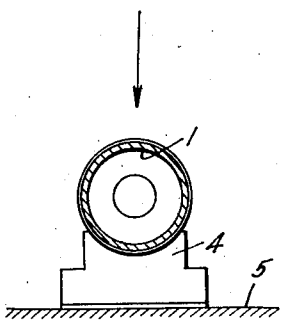


Fig. I.

Fig. II.





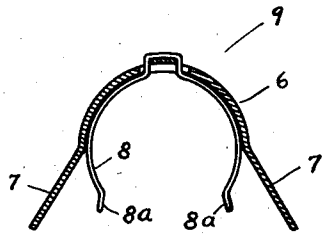
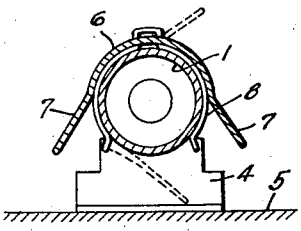


Fig. IV.

Fig. III.



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REFLECTOR ASSEMBLY

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6 Claims. (Cl. 240—138)

This invention relates to a reflector adapted peculiarly for use with elongate, cylindrical, electrical lamps.

Elongate, cylindrical, electrical lamps of a type readily mountable by means of end brackets adjacent a plane surface, such as the surface of a building wall or the surface of an article of furniture, present great illuminating convenience and have come into general use. For many purposes it is more desirable to direct and concentrate the illumination from a lamp of this type upon a localized area than to permit diffusion of the light from the lamp. In associations in which such lamps are used to provide illumination at the head of a bed, on a kitchen cabinet or sink, and upon work benches and stands generally, it is particularly desirable that it be possible readily to direct the illumination angularly about the longitudinal axis of the lamp. Because of the form of the lamp itself, and the nature of its mounting adjacent a relatively extended surface, it is not possible to obtain such angular adjustment of the illuminating effect from the lamp by means of usual structure since the lamp is itself so mounted as to prevent rotation about its axis, and since the supporting and feeding brackets for the lamp and the closely adjacent and relatively extended surface supporting the brackets prevent adjustment in usual manner.

It is also highly desirable with lamps of this type that a reflector associated with the lamp be readily applied and removed, so that when desired a diffused rather than a concentrated illumination may readily be obtained. With both problems in mind I have so constructed a lamp reflector, of great structural simplicity, that it may readily be applied to an electric lamp of the elongate cylindrical type to lie along the entire length of the lamp body by direct engagement of the reflector with the body of the lamp. Also, I have so made the reflector that it is readily rotatable in its mounted engagement with the body of an elongate cylindrical lamp, and is readily removable therefrom.

In the drawing Fig. I shows in juxtaposition an elongate, cylindrical, electrical lamp engaged at its ends by brackets mounting the lamp on an underlying surface, and my reflector presented toward the lamp for engagement thereon; this figure of the drawing also being provided with dimension lines illustrating the relative length of the lamp body and the reflector.

Fig. II is a cross-sectional view showing the lamp and reflector in juxtaposition, the view being taken in the plane of section line II—II, Fig. I.

Fig. III is a cross-sectional view through the assembly of lamp and reflector as initially made, and shows in dotted lines one of the many angular positions into which the reflector may be rotated on the body of the lamp.

Fig. IV is a detail cross-sectional view through the reflector.

In the drawing reference numeral **1** designates the translucent, elongate, cylindrical body of an electrical lamp of specialized sort. Specifically, this lamp is shown as one having therein a single conductive filament support **2** and single longitudinally extending filament **3**. As shown, the lamp is mounted between a pair of brackets **4**, which are attached to a basal surface **5**, and which engage the ends of the cylindrical lamp body in a manner to prevent or render difficult rotation of the lamp in its mounting. By way of these brackets current is passed through the elements contained within the translucent, cylindrical shell of the lamp.

My reflector body may be formed, as shown, of a single sheet or plate of material, desirably metal, which has an interior light-reflecting surface. The body of the reflector is in the form of a substantially semi-cylindrical portion **6**, having non-radial wings **7** extended divergently from the periphery of the semi-cylindrical portion **6**. The effect of the reflector applied to the lamp is thus to provide a light-directing and -intensifying hood. The angular positioning of the wings **7** is also such as to permit the reflector to be rotated within a relatively restricted space lying between the cylindrical body of the lamp and the surface on which the lamp is mounted.

The means for mounting the reflector directly upon the body of the lamp are resilient lamp-embracing elements mounted within the cavity of the reflector. In order that the reflector may be mounted on the lamp body by a simple pushing movement, these resilient lamp-embracing means are of a nature to embrace the body of the lamp in resilient engagement.

As shown, the lamp-engaging elements **8** are in the form of wire clips, each of which clips comprises opposed legs formed of two stringer lengths and a terminal transverse spreader length. This structure of the clips is best shown in the dotted line representation found in Fig. I of the drawing. Desirably, as shown in Figs. II and IV, the free terminals **8a** of the clips are made divergent for a short distance, in order the more readily to open for receiving the rounded

surface of the cylindrical lamp. As shown, attachment of the clips is made exteriorly of the reflector body, as by being projected through the reflector wall and clamped against the exterior wall surface. As mounted to lie within the semi-cylindrical portion of the reflector, the clips are so positioned that their free terminals 8a lie equal distances from the interior surfaces of the reflector wings to provide balanced mounting of the reflector on the lamp.

By engaging the reflector directly to the cylindrical body of the lamp, I am able to make the longitudinal dimensions of the reflector closely approximate the longitudinal dimensions of the lamp. Referring to Fig. I of the drawing it will be seen that the dimension line L, illustrating the extreme length of the reflector, closely approximates in length the dimension line D which represents the distance between the opposed surfaces of the lamp mounting and feeding brackets 4. It is desirable that the dimension line L be slightly shorter than the dimension line D, in order that the reflector, which I shall designate generally by reference numeral 9, may be rotated about the body of the lamp.

To describe the application and use of the reflector, the open side of the reflector being presented to the cylindrical body of the lamp with the reflector longitudinally in alignment with the body of the lamp, the reflector may be applied to the lamp merely by so pushing the free ends 8a of the clips 8 against the body or shell of the lamp that they are caused to open and embrace it. When applied at any angle about the longitudinal axis of the lamp body or shell, the reflector may then be rotated about the body of the lamp into the desired light-directing position.

It will be seen that, because of the mounting of the lamp, it is necessary that slight clearance be provided between the end edges of the reflector and the inner or opposed faces of the brackets. A close approximation between the lengths of reflector and the available space between brackets is, however, important, not only in order that the effect of the reflector be extended throughout the lamp length, but also because the assembly is far more sightly if the reflector extend throughout the entire exposed length of the lamp body than if it were to terminate short of the lamp ends. It is necessary in order to obtain free rotation of the reflector about the body or shell of the lamp that the depth of the reflector body and the tangential projection of the wings be so proportioned with respect to the height of the mounting brackets that in rotation the longitudinal edges of the wings will clear the surface on which the brackets are mounted.

As organized, it will readily be seen that the assembly accommodates itself to the direction of light from the lamp at any angle about the lamp axis. Thus, the light may be directed straight outwardly from the underlying surface, upwardly or downwardly from the surface (assuming that the surface be vertical), or the light alternatively may be directed rearwardly against the surface to obtain an indirect lighting effect. The reflector, as a whole, is of great structural simplicity, its advantages arising from appropriate form and proportions.

Desirably, the reflector body is made of a single piece of metal, interiorly polished and exteriorly finished in any desired manner. Obviously, however, suitable reflecting material other than metal may be used to form the reflector body. While the lamp-engaging clips are shown as made of wire, they may be formed of other suitable resilient material. Thus, they may, if desired, be made of some suitable resilient composition, or of light-gauge strip metal.

In the assembly shown the entire length of the lamp body, or shell is exposed to view, save insofar as it is enclosed by the reflector. Obviously the reflector body may be made shorter than herein shown without detracting from the appearance of the assembly if the brackets have thereon projections wholly or partially enclosing end regions of the lamp.

I claim as my invention:

1. In a lamp and reflector assembly the combination with an elongate cylindrical electrical lamp and brackets having end engagement with the lamp for mounting the lamp non-rotatably adjacent an underlying surface, of a reflector comprising an elongate lamp-embracing body having for presentation to the lamp a concave reflecting surface, said reflector body closely approximating in its length the otherwise exposed length of the cylindrical lamp, and resilient lamp-embracing elements mounted in the concavity of the reflector arranged resiliently to engage the lamp between its ends rotatably to mount the reflector thereon.

2. In a lamp and reflector assembly the combination with an elongate cylindrical electrical lamp and brackets having an end engagement for mounting the lamp non-rotatably adjacent an underlying surface, of a reflector comprising an elongate body at least partially semi-circular in cross section to present a semi-cylindrical cavity to the cylindrical lamp, said reflector being adapted resiliently to engage the lamp in the semi-cylindrical cavity of the reflector with a force adequately moderate for rotation of the reflector on the lamp.

3. In a lamp and reflector assembly the combination with an elongate cylindrical electrical lamp and brackets having an end engagement with the lamp for mounting the lamp non-rotatably adjacent an underlying surface, of a reflector comprising a formed elongate body having a lamp-containing light-reflecting concavity, and means for mounting the reflector on the lamp assembly to rotate about the longitudinal axis of the lamp.

4. In a lamp and reflector assembly the combination with an elongate cylindrical electrical lamp and brackets having end engagement with the lamp for mounting the lamp non-rotatably adjacent an underlying surface, of a reflector comprising an elongate body having a portion of its cross-sectional contour semi-circular and having wings extending divergently from said semi-circular portion, said reflector being adapted resiliently to engage the lamp in the semi-cylindrical cavity formed by the semi-circular portion of the reflector body, the distance from the longitudinal edges of the reflector wings to the center of rotation of the reflector being so proportioned to the effective height of the lamp-mounting brackets that the reflector may be rotated through a complete revolution without contact with a plane surface on which the brackets are mounted.

5. In a lamp and reflector assembly the combination with an elongate cylindrical electrical lamp and brackets having an end engagement for mounting the lamp non-rotatably adjacent an underlying surface, of a reflector comprising an elongate body at least partially semi-circular in

cross section to present a semi-cylindrical cavity to the cylindrical lamp, said reflector being adapted to engage the lamp in the semi-cylindrical cavity of the reflector at longitudinally spaced points within the length of the lamp with a force adequately moderate for rotation of the reflector on the lamp.

6. In a lamp and reflector assembly the combination with an elongate cylindrical electrical lamp and brackets having an end engagement for mounting the lamp non-rotatably adjacent an underlying surface, of a reflector comprising an elongate body at least partially semi-circular in cross section to present a semi-cylindrical cavity to the cylindrical lamp, said reflector being adapted to engage the lamp in the semi-cylindrical cavity of the reflector at longitudinally spaced points within the length of the lamp with a force adequately moderate for rotation of the reflector on the lamp, and reflector wings non-radially extended from the semi-cylindrical portion of the reflector body, the distance from the longitudinal edges of the reflector wings to the center of rotation of the reflector being so proportioned to the effective height of the lamp-mounting brackets that the reflector may be rotated through a complete revolution without contact with a plane surface on which the brackets are mounted.

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