

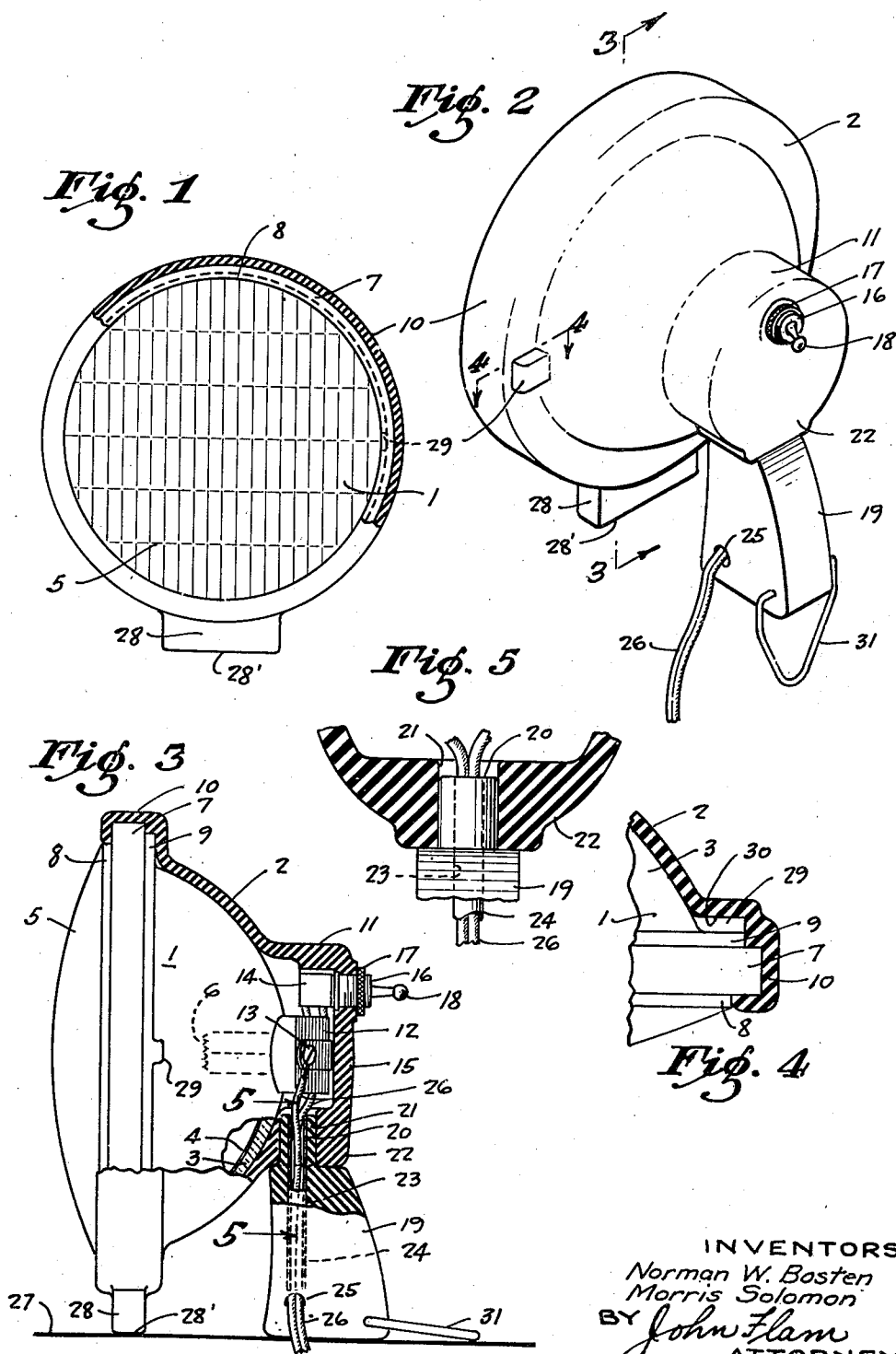
Nov. 23, 1943.

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2,334,900

REFLECTOR LAMP

Filed Oct. 13, 1941



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UNITED STATES PATENT OFFICE

2,334,900

REFLECTOR LAMP

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Application October 13, 1941, Serial No. 414,706

2 Claims. (Cl. 240—54)

This invention relates to an electric lamp, and more particularly to a lamp that can be used as a portable spot light or search light.

Such lamps have been proposed for use in connection with an automobile, the globe thereof being energized from the storage batteries. But such spot lights have been inconvenient to use; nor have they been particularly efficient so far as illumination is concerned.

It is one of the objects of this invention to provide a simple, inexpensive and efficient lamp of this general character.

Recently there has been available on the market a type of lamp globe that is formed with a refractor lens at the front of the filament, and that has a curved reflecting surface back of the filament. The entire structure, including the refractor lens, the reflector and the filament are sealed together to form an air tight envelope, just as in bulbs of the conventional form. Such "sealed beam" units thus ensure against the accumulation of foreign matter upon the reflector surface, and consequently a brilliant beam of light is produced even after extended use of the device. If necessary, the sealed beam unit may include some inert gas, such as nitrogen, as is well understood, to improve the efficiency of the device.

Such units are of necessity quite fragile. Accordingly it is another object of this invention to provide a housing of improved form, that ensures adequate protection for the device, obviating extreme care in the handling or use of the device.

In order to accomplish these results, a protective casing or housing is provided that compactly encloses all but the front refractor lens of the lamp, by closely encompassing the unit. Such a casing is preferably made from resilient material, such as rubber, enabling it to be quickly and easily slipped over the unit. It is accordingly another object of this invention to provide a casing or housing of this character.

It is still another object of this invention to make it possible to support the device by the hand, or alternatively to support it readily on a plane, as well as to provide a control switch capable of operation by manipulation of the switch by the hand that supports the device.

This invention possesses many other advantages, and has other objects which may be made more easily apparent from a consideration of one embodiment of the invention. For this purpose there is shown a form in the drawing accompanying and forming part of the present specification.

This form will now be described in detail, illustrating the general principles of the invention; but it is to be understood that this detailed description is not to be taken in a limiting sense, since the scope of this invention is best defined by the appended claims.

Referring to the drawing:

Figure 1 is a front elevation, partly broken away, of a lamp structure embodying the invention;

Fig. 2 is a pictorial view from the rear of the structure illustrated in Fig. 1;

Fig. 3 is a sectional view taken along plane 3—3 of Fig. 2;

Fig. 4 is a detail sectional view taken along plane 4—4 of Fig. 2; and

Fig. 5 is a fragmentary sectional view taken along plane 5—5 of Fig. 3.

The lamp structure includes a lamp unit 1 and a cover 2 therefor. The lamp unit 1, as shown most clearly in Fig. 3, is of the sealed beam type. This sealed beam type of unit includes a glass envelope, the rear wall 3 of which is curved to form an internal reflecting surface 4. The front of the lamp unit 1 is shown as formed with a convex translucent refractor or lens 5. The filament 6 is located as near the focal point of the reflecting surface 4 as possible. The conductors to the filament 6 may be sealed through the rear of the wall 3.

A flange 7 encircles the body of the unit 1 adjacent the translucent portion 5. It forms the place where parts of the glass envelope are joined together in sealing relationship. This flange 7 is in the form of an annular ring defining shoulders with the adjacent cylindrical portions 8 and 9 of the envelope.

In order to provide a practical support and cover for the sealed beam unit 1, the cover member 2 is made of relatively thin resilient rubber. This cover member 2 closely contacts the external surface of the wall 3. It is also provided with an annular band portion 10 integrally joined to the main portion of the cover 2 and shaped to conform with the external surfaces of the flange 7 and of the cylindrical portions 8 and 9. This resilient cover 2 can thus be slipped over the unit 1 and this unit will be held firmly and resiliently in place by the engagement of the flange 7 with the band 10.

The rear portion of the cover 2 is extended as a generally cylindrical housing 11 shown most clearly in Figs. 2 and 3. This cylindrical housing extends over the binding post supporting structure 12 firmly attached to the rear of unit 1,

and made of insulation material. Through this structure 12 extend the conductors that are sealed through the wall 3 for the filament 6. They are in turn attached to binding posts, one screw 13 of which is indicated in Fig. 3.

The cylindrical housing portion 11 also serves to support a control switch 14 placed adjacent the rear wall 15 of the housing member 11. This switch 14 is appropriately connected to control the circuit of the filament 6. It has a threaded shank 16 extending through an appropriate clearance aperture in the rear wall 15. A knurled nut 17 is threaded over the shank 16 in order to hold the switch 14 in place. A manually manipulable element 18 extends from the shank in a well understood manner, capable of being rocked in either of two directions for closing or opening the switch. This member 18 can readily be operated by the fingers of a user who may, as hereinafter explained, support the entire unit by the hand.

For thus supporting the entire structure, a hand grip 19 is provided extending below the housing portion 11. This hand grip 19 may be formed as a conveniently formed pistol grip, also molded from rubber. It may be joined to and supported by the cover 2 by the aid of a cylindrical projection 20 (Figs. 3 and 5) extending into an appropriately formed aperture 21 in the lower portion 22 of the housing 11. This lower portion 22 may be thickened for the accommodation of the projection 20 as indicated in Fig. 5. Appropriate adhesion may be secured between this portion of the grip 19 and the cover 2.

Furthermore, external leads for completing the circuit of the lamp may extend through the supporting means or grip 19. For this purpose the supporting means 19 is shown as provided with a longitudinal aperture 23 extending entirely through the projection 20 and substantially to the bottom of the grip 19. This aperture is lined by a thin metallic tube 24. The interior passage of the tube 24 connects with a transverse passageway 25 extending from beneath the tube 24 to the exterior side wall of the grip 19. The insulated conductors 26 leading from the binding posts supported on the member 12 pass through the tube 24 and thence outwardly through the aperture 25. They may be connected in a well understood manner to a source of electrical energy, such as the storage battery of an automobile.

While the operator holds the device for ready manipulation by the aid of the hand grip 19, one of his fingers can readily manipulate the operating member 18 of the control switch 14.

Should it be desired to rest the lamp structure temporarily upon a support such as the plane surface 27 (Fig. 3) the lower flat surface of the grip 19 is caused to rest upon this plane surface.

In order to supplement this supporting means, a projection 28 (Figs. 1 and 3) is formed integrally with the band 10 and is also shown as having a lower plane surface 28' adapted to contact the supporting plane 27.

In order to ensure that the sealed beam unit be accurately positioned within the cover 2, use is made of a thin projection 29 (Figs. 3 and 4) extending radially along the rear surface of the cylindrical member 9. This projection 29 serves as a keying member adapted to be located in a corresponding recess 30 of the cover 2.

In order to make it possible to anchor the structure on a hook or nail or the like, use is made of a suspending ring 31 (Figs. 2 and 3). This ring has its ends accommodated in appropriate apertures located near the lower corner of the grip 19.

What is claimed is:

1. In a lamp structure, an electric lamp of the incandescent filament type, said lamp having a sealed envelope through which leads for the filament are sealed, a surface of the envelope forming a reflector for the direct rays of light from the filament, and said envelope having a translucent portion opposite the reflector through which portion light rays from the envelope may be transmitted, there being a flange projecting around the envelope adjacent said translucent portion, a resilient rubber cover closely fitting and resiliently gripping said envelope over the region of said reflector as well as over said flange, a grip formed to fit the hand of a user, and carried by and extending from the back of the cover, said leads extending through the grip, and a manually operable control switch for the lamp, supported within the cover and having an operating means extending out of the cover.

2. In a lamp structure, an electric lamp of the incandescent filament type, said lamp having a sealed envelope through which leads for the filament are sealed, a surface of the envelope forming a reflector for the direct rays of light from the filament, and said envelope having a translucent portion opposite the reflector through which portion light rays from the envelope may be transmitted, said envelope having an exterior rounded surface, a cover resiliently gripping and maintaining said rounded surface against material relative movement between said cover and the envelope, a grip formed to fit the hand of a user, and carried by and extending from the back of the cover, said cover being formed with a recess adjacent the reflector end of the envelope, and a circuit controller supported in the recess and manipulable exteriorly of the cover.

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