Nov. 8, 1955 J. A. WASSELLE 2,723,343

LAMP BULB GUARD AND REFLECTOR

Filed Oct. 16, 1952 2 Sheets-Sheet 1

Fig. 1

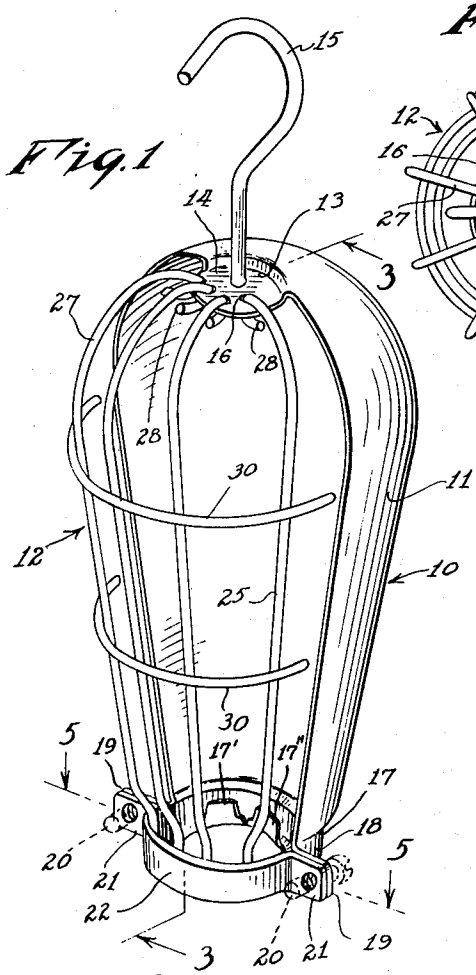


Fig. 2

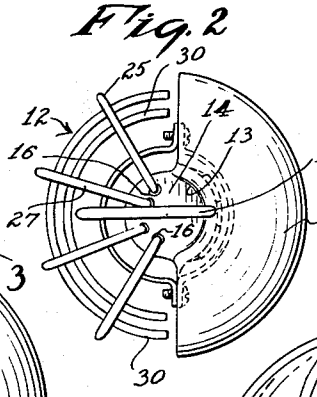


Fig. 3

Fig. 4

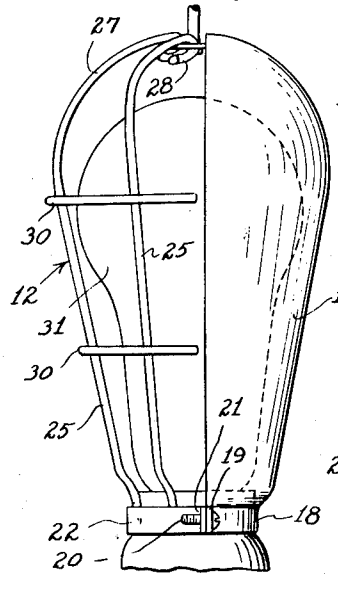
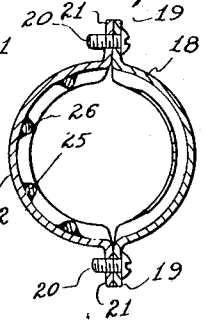


Fig. 5



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Filed Oct. 16, 1952 2 Sheets-Sheet 2

Fig. 6

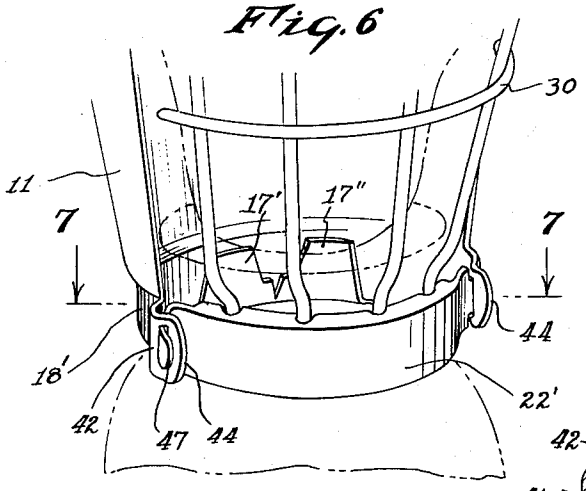


Fig. 7

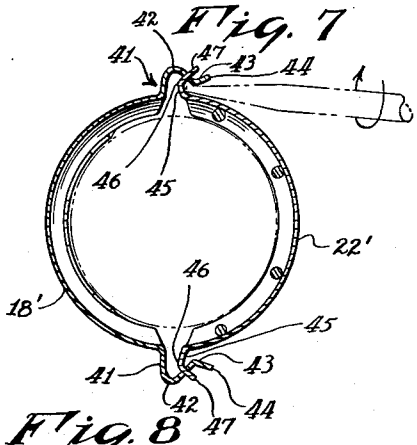


Fig. 8

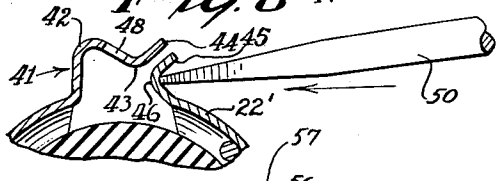


Fig. 9

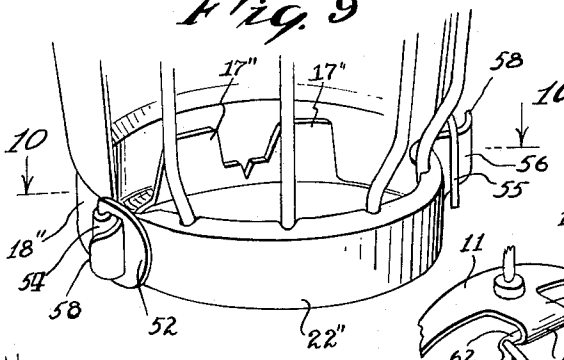


Fig. 10

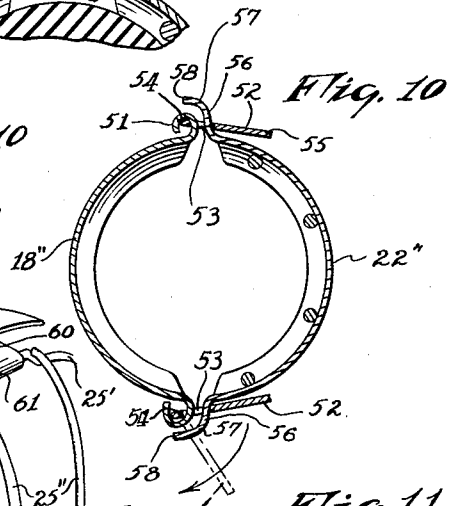


Fig. 12

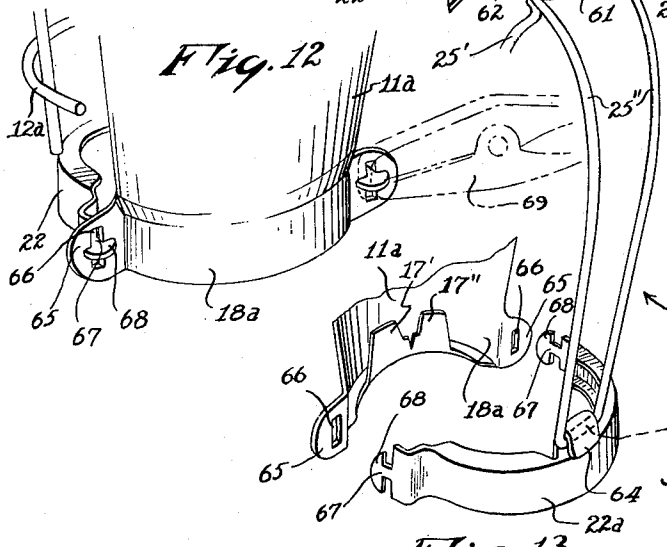


Fig. 11

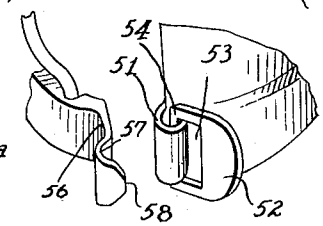


Fig. 13

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LAMP BULB GUARD AND REFLECTOR

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Application October 16, 1952, Serial No. 315,083

3 Claims. (Cl. 240—54)

This invention relates to a combined lamp bulb guard and reflector of the type adapted to be utilized in conjunction with a portable lamp bulb holder for directing light to a selected location, such as a part of a mechanism being worked upon, and at the same time protect the bulb from damage.

It is a primary object of this invention to provide a unitary guard and reflector structure, thus obviating the necessity for separate guards and reflectors, such as heretofore has been the case and wherein the guard assembly need not be disassembled or removed from the holder or handle to remove or replace the lamp bulb.

It is another object of the invention to provide such a device which may be readily applied to and removed from a light bulb as desired.

It is still another object of the invention to provide an integral structure of this nature which has a hook, whereby the same may be suspended in any desired location.

It is still another object of the invention to provide such a device which requires a minimum of parts, and which may be assembled and manufactured with a minimum of expense and difficulty.

It is a further object of the invention to provide such a device which may be readily utilized with a variety of sizes and shapes of light bulbs.

It is still a further object of the invention to provide such a device which will serve effectively to protect the lamp bulb against damage, and which will at the same time serve effectively to direct the light in the desired direction in accordance with the relative position of the reflector member.

It is still another object of the present invention to provide a lamp bulb guard of the type described which is simple in construction, durable, which is effective for its intended purposes, and which can be manufactured and sold at a reasonable cost.

For other objects and a better understanding of the invention, reference may be had to the following detailed description taken in connection with the accompanying drawing in which:

Figure 1 is a perspective view of one form of lamp bulb guard and reflector embodying features of the present invention;

Fig. 2 is a top plan view of the construction of Fig. 1;

Fig. 3 is a sectional view taken substantially along the line 3—3 of Fig. 1, and illustration being made as to the manner of assembling and disassembling the combined guard and reflector upon and from the lamp bulb holder;

Fig. 4 is a side elevational view of the guard and reflector after application to the lamp bulb holder and showing the relationship of the parts;

Fig. 5 is a sectional view taken substantially along the line 5—5 of Fig. 1 as viewed in the direction indicated by the arrows;

Fig. 6 is a fragmentary perspective view showing a modified form with a different collar connecting means;

Fig. 7 is a sectional view taken on the line 7—7 of Fig. 6;

Fig. 8 is an enlarged fragmentary sectional view similar to Fig. 7 showing an implement in operative position to force the collars together;

Fig. 9 is a fragmentary perspective view of another modified form with a still different collar connecting means;

Fig. 10 shows a sectional view taken on the line 10—10 of Fig. 9 and shows the movements necessary to disconnect the collars;

Fig. 11 is a fragmentary perspective view of the connecting means shown in Figs. 9 and 10;

Fig. 12 is a fragmentary perspective view showing still another form with a still different collar connecting means, and showing pliers in dotted outline operatively engaging the collar connecting means;

Fig. 13 is a perspective view partly cut away, showing the collar connecting means of Fig. 12 and showing a modified form of hinge connections.

Similar reference characters refer to similar parts throughout the several views of the drawing.

Referring now to the drawings in detail, the combined bulb reflector and guard of the instant invention, generally indicated at **10**, is comprised of a reflector half **11** and a guard half generally indicated at **12**. Referring first to the reflector half **11**, the same is comprised of a shell of generally elongated semi-spheroidal shape, including at its top portion a recessed rim **13**, terminating in a flat circular plate or tab **14**, in the center of which is swivelably mounted a hook **15** of conventional type for the suitable suspension of the device and its associated bulb from a suport. Extending peripherally about a portion of the rim of circular plate or tab **14** opposite reflector shell **11** are a plurality of holes or apertures **16**, the purpose of which will be more fully pointed out hereinafter.

The lower portion of reflector half **11** is externally indented or recessed as at **17** to form a semicircular band or locking collar portion or member **18**, provided on the ends thereof with oppositely projecting lugs **19**, which in turn are provided with suitably threaded bores for the reception of screws **20**. The lower portion of reflector half **11** has turned inwardly and upwardly two resilient tabs **17'** and **17''** adapted to engage a shoulder of the handle or holder to align and retain the device **10** against outward axial displacement from the handle or holder.

The screws **20** are adapted to engage corresponding threaded bores in lugs **21**, which comprise the extremities of a semicircular band or locking collar member **22**, that is a portion of guard half **12** of the device. Guard half **12** is comprised of any suitable number of vertically extending wires **25**, in the illustrative embodiment there being shown only four of these wires. The guard **12** is generally of the same elongated semi-spheroidal shape as the reflector and will close into opposing relationship thereupon. Vertical wires **25** are suitably secured in any desired manner, as by welding **26** at their lower ends to semi-circular locking collar member **22** and extend upwardly and outwardly in order to embrace a lamp bulb **31**, and thence inwardly as at **27**. The upper extremities terminate in relatively loose loop portions **28**, that are passed through the apertures **16** in circular plate or tab **14**, in such manner as to form a hinged connection thereto, and in a manner and for a purpose to be more fully described hereinafter.

Any suitable number of arcuate horizontal or cross guard wires **30** may be secured in any desired manner, as by welding or the like, at spaced intervals upon vertical guard wires **25**.

In Figs. 6, 7, and 8, there is shown a modified form of collar connecting means wherein the locking collar

band 18' is provided with outwardly extending lugs or extensions 41. These extensions are bent inwardly at 42 and turned outwardly at 43, to provide a free end or lip 44. On the opposite ends of collar 22' are outstanding lugs or extensions 45 which are bent outwardly at 46 adjacent to and spaced from the end 47. The lugs 41 are fabricated of resilient or springable material and provided with an aperture 48 intermediate the bends 42 and 43 for receiving therethrough the free end 43 of lugs 41. For inter-engaging the lugs 41 and 45, a screw driver or other elongated implement 50 or hand pressure, may be used to urge the lug 45 against the lug 41, so that the lug 41 will spring over the free end 47 of the lug 45 and so that the lug 45 will be received in aperture 48. It will be apparent that no screws are necessary for assembling this form of the device upon the handle or holder.

Another modified form of collar connecting means is shown in Figs. 9, 10 and 11. A collar 18'' is provided with looped or curled ends 51 for rotatably mounting buckle cam latch plates 52. Each of these buckle plates has a wide aperture 53, and bar portion 54 by which the buckle latch plate is hinged upon the looped end 51. The outer end 55 of each plate 52 forms a hand tab by which the buckle cam plate is moved. A collar 22'' has outwardly-extending lugs or extensions 56 which are bent forwardly at 57 and have free ends 58. When the collars 18'' and 22'' are moved toward each other, and the cam plates 52 are in their outward position as shown in dotted outline in Fig. 10, their apertures 53 will receive the free end 58 of the lugs 56. The cam plates 52 may then be rotated or cammed over the bends 57 against the frictional resistance thereof and as the lugs 56 are somewhat resilient the cam plates 52 will be frictionally held in their locked positions. This permits easy locking of the device upon the handle with finger tip control and also without the use of screws.

In Figs. 12 and 13, there is shown another modified form of the invention. The reflector half 11*a* is formed at its top portion with an extension or tab 60 which has its free end 61 looped or coiled to provide a hinge formation. The guard half 12 has a vertically extending wire 25' depressed at its upper end to provide a transverse hinge portion 62 which is rotatably received in the looped end 61 of the extension 60. Thus, the guard half 12*a* is hingedly connected to the reflector half 11 in such a manner as to restrain the guard half 12*a* against longitudinal and lateral displacement relative to the reflector half 11*a*.

Adjacent the lower end of the half 12*a* and interconnecting the lower extremity of wires 25'' is a transverse portion 63. A collar portion or member 22*a* is formed intermediate its ends with a catch extension 64 which loosely receives the transverse wire portion 63 and releasably connects the collar 22*a* to the guard half 12*a* in a hooked locked position under tension. The guard half 12*a* is pulled down to engage or disengage the portion 63 from the loop extension 64.

On the reflector half 11*a* are a pair of outstanding slotted extensions 65 at opposite ends of the collar which extensions are provided with vertically-extending slots or apertures 66. The collar 22*a* is formed with laterally offset, tangentially-extending lugs 67. The lugs 67 are T-shaped and their cross members 68 are insertable through the slots 66. The cross-members 68 are then engaged by pliers 69, shown in dotted outline in Fig. 12, and the lugs twisted to fixedly secure the collars 18*a* and 22*a* together.

From the foregoing the use and method of application of the device should now be readily understandable. When it is desired to utilize the same as a guard and reflector for a lamp bulb 31, the lamp bulb is threaded into the holder 32 that is provided either with or without a switch 33 and a source of current (not shown). The reflector is placed upon the holder so that the tabs 17' and 17'' will engage a shoulder thereof and wire guard

is secured to the reflector and about the holder whereby the tabs upon engaging the shoulder positively lock the reflector and guard against axial displacement therefrom. The relatively loose looped connection of the ends 28 of wires 25 with apertures 16 affords a hinge, whereby the two halves 11 and 12 may be separated to an extent sufficient to permit the device to be readily slid over the enlarged portion of a lamp bulb. The separable bands 18 and 22 are then moved downwardly to a position about socket 32, as shown best in Fig. 4, and with the tabs 17' and 17'' providing a sure grip on the handle or holder 32 and suitably secured together by the reinsertion of screws 20 to the desired extent.

In the modification shown in Figs. 6, 7 and 8, it is only necessary to bring the lug 41 over the lug 45 in order to secure together the collars 18' and 22'. The form shown in Figs. 9 and 10 requires the rotation of cam plate 52 to receive the lug 56 and frictionally engage the latter, and the form shown in Figs. 12 and 13 need only be moved toward each other so that the extensions 67 pass through the slots 66 and are then twisted approximately a quarter of a turn.

It will thus be apparent that the lamp bulb is effectively protected from accidental impact or jar from any direction, on one side by the guard 12 and on the other side by the reflector 11. The device may then be used in conjunction with a hand lamp, the light rays being directed as desired by means of reflector 11 or may be suspended by means of a swivel hook 15 and the direction of the light beam governed in accordance with the positioning of reflector 11. Obviously reflector 11 may be comprised of any desired material, and supplied interiorly with any desired reflecting coating, in accordance with the intensity of reflection desired.

From the foregoing it will now be seen that there is herein provided an improved lamp bulb guard and reflector, which accomplishes the function hitherto accomplished only by separate guards and reflector members, which may be manufactured with a minimum of expense and difficulty, and applied to and removed with minimum effort.

While various changes may be made in the detail construction, it shall be understood that such changes shall be within the spirit and scope of the present invention as defined by the appended claims.

What is claimed is:

1. A combined lamp bulb guard and reflector comprising two separable elongated semi-spheroidal members, one of said members being a reflector and the other of said members being a wire guard, each of said reflector and guard members having a semi-circular bottom collar, said collars lying in opposing relationship to each other and adapted to surround a lamp bulb holder, means for securing the collars together about the holder, at least one of said collars having an inwardly and upwardly extending spring tab means with a free end adapted to engage a shoulder on the lamp bulb holder when the collars are secured together, whereby said combined guard and reflector will be positively held upon the holder against axial displacement therefrom.

2. A combined lamp bulb guard and reflector as defined in claim 1, and said spring tab means integrally formed on the reflector collar and including plural tabs bent inwardly from the lower edge of the collar and upwardly to extend substantially parallel to and spaced inwardly from the inner face of the collar and adapted to lie flush upon the surface of the holder.

3. A combined lamp bulb guard and reflector comprising two separable elongated semi-spheroidal members, one of said members being a reflector and the other of said members being a wire guard, each of said reflector and guard members having a semi-circular bottom collar, said collars lying in opposing relationship to each other and adapted to surround a lamp bulb holder, means for securing the collars together about the holder, said col-

lar securing means including integrally formed outwardly extending lugs on the ends of one of the collars, each of said lugs being bent inwardly to provide ends spaced from sides of the holder, each of said lugs having a vertically extending slot in the end thereof, and integrally formed lugs on the other collar, said latter lugs being rearwardly bent to enter the slots of the other lugs whereby upon the other collar being pressed toward the one collar and released, the lugs of the other collar will enter the slots of the lugs of the one collar.

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