Sept. 11, 1951 G. B. BENANDER 2,567,687

TROUBLE LIGHT WITH REFLECTOR, GUARD, AND TWO-PART HANDLE

Filed Oct. 12, 1949

Fig. 1.

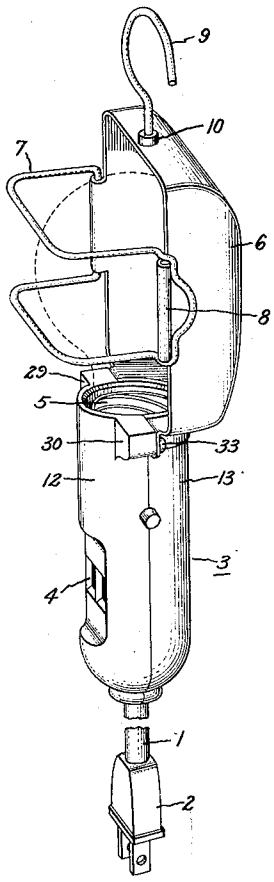


Fig. 2.

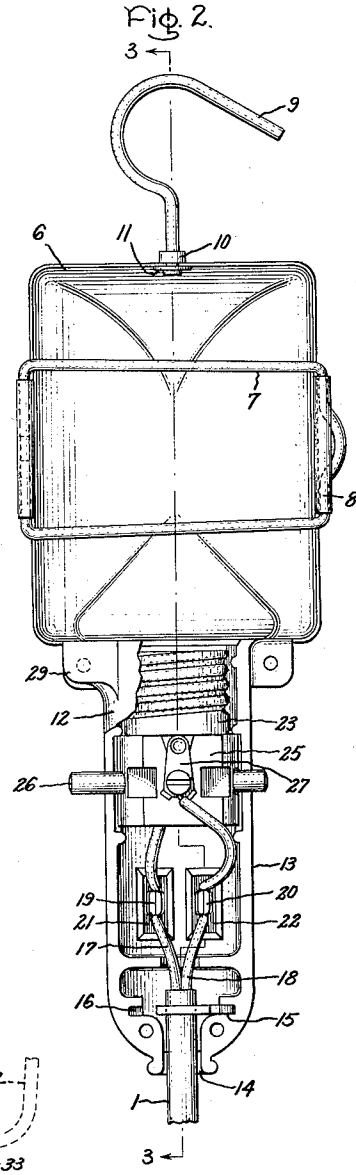


Fig. 3.

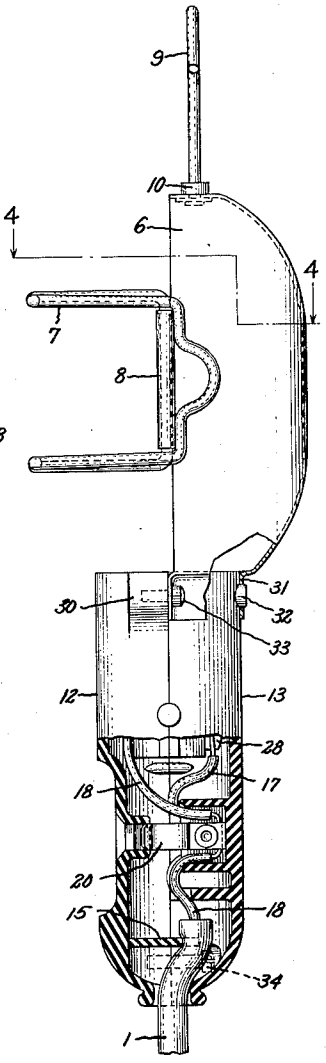
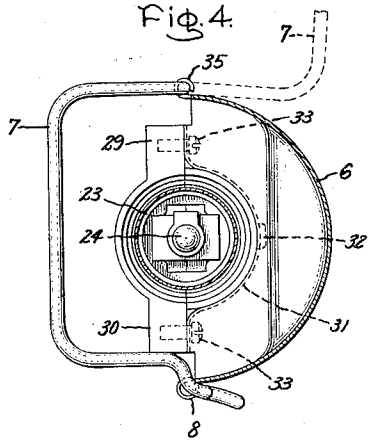


Fig. 4.



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TROUBLE LIGHT WITH REFLECTOR, GUARD, AND TWO-PART HANDLE

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6 Claims. (Cl. 240—54)

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This invention relates to portable electric lamp holders of a type commonly known as a trouble lamp.

An object of my invention is to provide an improved device useful not only as a trouble lamp, but also as an extension cord outlet.

Another object of my invention is to provide an improved construction for portable electric lamp holders having a reflector and guard assembly serving also to clamp the device in assembled relation.

A further object of my invention is to provide an improved lamp holder having a reflector and guard assembly arranged to facilitate replacement of the lamp.

Still a further object of my invention is to provide a portable electric lamp holder and outlet receptacle having a simplified construction, resulting in reduced manufacturing cost.

Another object of my invention is to construct a reflector and lamp guard assembly in a manner which prevents the trouble lamp from rolling when placed on an irregular or sloping surface.

In accomplishment of the foregoing objectives, a feature of my invention consists in constructing a lamp holder, including a switch assembly and a separate electric outlet in addition to the lamp socket, within an insulated housing which forms a handle. Another feature of my invention comprises an improved reflector and lamp guard assembly in which an angularly shaped lamp guard is hinged to the reflector in a manner permitting it to be swung open for lamp replacement or snapped closed with respect to the reflector to protect a lamp bulb. The attachment of the reflector and guard assembly to the handle housing is arranged to clamp the housing and elements included therein in assembled relation.

The features of my invention which I believe to be novel are set forth with particularity in the appended claims. My invention itself, however, both as to its organization and method of operation, together with further objects and advantages thereof, may best be understood by reference to the following description taken in connection with the accompanying drawing, in which Fig. 1 is a perspective view of a portable lamp holder constructed in accordance with my invention; Fig. 2 is a front elevation, with a portion of the housing broken away; Fig. 3 is a side elevation, partially sectionalized along the line 3—3 of Fig. 2; and Fig. 4 is a cross-sectional view taken on the line 4—4 of Fig. 3.

Referring to the drawing, and in particular to Fig. 1, my improved portable lamp holder and

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outlet assembly includes an electric cord 1 having on its outer end a male plug 2 for insertion into a suitable convenience outlet. Cord 1, which may be of any suitable length, extends axially into the end of a two-part housing, indicated generally at 3, forming a handle for this device. Housing 3, of insulating material, forms an enclosure for anchoring cord 1 and protecting the electrical connection to an electric outlet indicated generally at 4 and a lamp socket indicated generally at 5. As shown in Fig. 1, the lamp socket is adapted to receive a suitable electric lamp, which is protected from damage and the light therefrom is reflected outwardly by a reflector and guard assembly. This assembly includes a reflector 6 and wire guard 7 hinged thereto. For simplicity, this hinged connection may be made by rolling a lateral edge of the reflector around a portion of the wire forming the guard. The opposite edge of the reflector may be provided with a similar rolled edge 8 over which the wire guard snaps into closed position. A lamp supporting hook 9 is secured to the upper end of the lamp as shown on the drawing by heading or swaging a collar 10 on the neck portion of the hook with the extreme end of the hook extending through the reflector and anchored in position with a washer 11. This permits the hook to rotate with respect to the reflector 6. It is to be understood, of course, that any suitable material may be employed for the reflector. However, I prefer to make this portion of the device from sheet metal which may be stamped out to the desired shape. The guard assembly preferably is of wire. All of the exposed metal parts are plated with a suitable metal which resists corrosion and rust.

The handle housing 3 is formed in two parts 12 and 13 as shown in Fig. 3. The assembled housing defines an aperture 14 in its lower end through which electric cord 1 may enter. Within the housing, cord 1 is wedged in position by an insulating barrier 15 positioned in a slot 16 in the housing. As shown more clearly by Fig. 3, this insulating barrier engages the outer insulation on cord 1, forcing a bend therein to increase the frictional engagement between the cord, the housing, and the barrier to aid in preventing the cord from accidentally being pulled free from its connections. The two conductors 17 and 18 within cord 1 have previously bared portions anchored respectively to bifurcated contact elements 19 and 20. These contact elements are received within recesses 21 and 22, respectively, formed in the housing half 13, and are thus positioned in

alignment with the slots in handle portion 12 to provide electric outlet 4.

In the present embodiment, I have shown the lamp socket as being of the type adapted to receive a lamp having a threaded base. It will be understood, of course, that other types of lamp sockets might equally well be employed within the scope of this invention. As here shown, this lamp socket includes a threaded shell 23, as shown in Fig. 2, and a central contact button 24, as shown in Fig. 4. Shell 23 and contact button 24 are both secured to an insulated housing 25 of a push button switch. This switch may take the form of any one of numerous such switches well known in the art, and as here shown it includes a push button operated member 26 for making or breaking the electrical circuit through the lamp socket. As shown in Fig. 2, conductor 18 of the electric cord 1 extends upwardly and is connected to a terminal 27 on the switch housing. This terminal 27 is electrically connected to shell 23 of the lamp socket. The other electric conductor 17 is connected to a terminal 28 on the switch housing. With this arrangement, when the switch is in its "on" position, electric power is conducted through conductor 17, the switch, to the central contact button 24. Operation of the switch to its "open" position interrupts this circuit to turn off the lamp.

The attachment of the lamp shade or reflector 6 to the handle housing of this device is arranged to serve also to clamp the two halves of the handle into assembled relation. For this purpose, housing half 12 is provided with a pair of laterally extending ears 29 and 30 at its upper end. The lower end of reflector 6 is shaped with a semi-cylindrical neck portion 31 adapted to encircle the upper end of housing half 13. To prevent movement of housing portion 13, it includes a molded protuberance 32 which projects through an aperture in the neck portion 31 of the reflector. The reflector includes laterally projecting ears extending from the semi-cylindrical portion 31 which overlie ears 29 and 30 on housing half 12. Thus, by use of any suitable fastening devices, such as screws 33, the reflector is secured to housing half 12, and at the same time, engagement of protuberance 32 with the reflector neck portion 31 clamps the housing half 13 in assembled relation with the handle half 12 and the reflector, and simultaneously secures the socket, switch, contacts, and cord in their respective positions. Additionally, it may be desirable to employ fastening devices such as 34 at the lower end of the lamp handle to retain more securely the two halves of the handle housing in assembled relation.

The form and method of attachment of the wire guard 7 to reflector 6 may be more clearly understood by a reference to Fig. 4. As here shown, guard 7 is bent into the desired shape, preferably from a single length of wire of appropriate guage for the purpose. While there are other ways of forming the guard, as here illustrated the wire is bent into a substantially rectangular loop. An end of the resulting loop, preferably where the ends of the wire meet, is hinged to the reflector as at 35, for example by rolling an edge of the reflector about the wire forming the guard. This permits the guard to be swung into an open position, shown in dotted lines, to provide access for ready removal and replacement of a lamp. When guard 7 is reclosed, it is held in closed position by engagement of an opposite end of the wire loop with a rolled lip 8 formed on a correspondingly opposite edge of the reflector from hinge 35. The inherent resiliency of reflector 6 and the wire forming lamp guard 7 permits the guard to snap into engagement in closed position. Furthermore, guard 7 is formed in a manner to prevent the trouble lamp from rolling, when it is laid down on a sloping or irregular surface, by bending the rectangular loop so that it extends outwardly from the reflector in an angular fashion, rather than curved. As here shown, the completed guard extends outwardly from the reflector with a substantially rectangular configuration with respect to the plane of the edges of the reflector.

From the above disclosure, it is seen that I have provided a portable lamp and electric outlet, particularly suitable for use as a trouble lamp, of simplified construction and increased utility. Re-lamping of this device is facilitated by the hinged connection of the lamp guard to the reflector and the snap engagement to retain the lamp guard closed. Its utility has been increased by shaping the lamp guard angularly to prevent the trouble lamp from rolling. Furthermore, the final assembly of the handle portion of this device to the reflector serves to clamp the handle housing assembly together. The addition of the electric outlet on the handle permits convenient use of other electrical appliances along with the trouble lamp.

While the present invention has been described by reference to particular embodiments thereof, it is to be understood that numerous modifications may be made by those skilled in the art without actually departing from the invention. I, therefore, aim in the appended claims to cover all such equivalent variations as come within the true spirit and scope of the foregoing disclosure.

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

1. An electric trouble lamp comprising a longitudinally split handle housing including therein a lamp socket and switch and an outlet receptacle, and a lamp guard and reflector assembly, said assembly comprising a reflector, a wire lamp guard hinged to said reflector along one edge thereof and adapted to snap into engagement with an opposite edge of said reflector for closed position, and means attaching said reflector to said handle housing to retain the trouble lamp in assembled relation.

2. An electric trouble lamp holder comprising a handle housing formed in two parts, a lamp receptacle mounted at one end of said housing, means within the other end of said housing forming a terminal structure for an electric cord, means defining an electric outlet receptacle carried by said housing, a switch interposed within said housing between said terminal structure and said lamp receptacle including an operator outside said housing for switch operation, and a lamp guard and reflector assembly adapted to clamp said housing in assembled relation, said lamp guard and reflector assembly including a reflector and a guard hinged to said reflector along one edge thereof and engageable with said reflector along an opposite edge.

3. In an electric trouble lamp, a lamp guard and reflector unit comprising a lamp reflector, a neck portion on one end of said reflector adapted to be clamped to a handle, a lamp guard formed from a single piece of wire hinged to a lateral edge of said reflector, a rolled edge along the opposite lateral edge of said reflector forming a catch, and means on said guard forming

a latch resiliently engageable with said catch to hold said guard in closed position with respect to said reflector.

4. An electric trouble lamp comprising a handle housing of insulating material formed in two substantially semi-cylindrical parts, a lamp receptacle mounted axially within said housing at one end thereof, a lamp cord extending into said housing for connection to said receptacle, a lamp reflector having a semi-cylindrical neck portion engageable around an end of one of said handle housing parts with laterally extending ears on said neck portion, said other handle housing part including laterally extending ears at one end thereof, and means for attachment of the ears on said reflector to the corresponding ears on said other housing part, whereby said reflector is secured to said handle housing and the two parts of said housing are clamped together.

5. In an electric trouble lamp, a lamp guard and reflector unit comprising a cup-shaped sheet metal reflector, a lamp guard bent from a single piece of wire into a substantially rectangular loop, one end of said rectangular loop being hinged to an edge of said reflector, an opposite end of said rectangular loop being adapted to snap into engagement with a correspondingly opposite edge of said reflector when said lamp guard is in closed position, said rectangular loop further being formed with a substantially rectangular configuration extending outwardly from the plane of the edges of said reflector.

6. In an electric trouble lamp, a lamp guard and reflector assembly comprising a cup-shaped metal reflector having a substantially rectangular outer rim, a lamp guard formed from a single piece of wire hinged to said reflector along one edge of the rim and adapted to snap into engagement with an opposite edge of said reflector when in closed position, said lamp guard having a rectangular configuration extending outwardly from said reflector and including as viewed in closed position a plurality of linear elements extending substantially perpendicularly away from the plane of reflector rim at the said opposite edges thereof, and corresponding pairs of said elements being joined by linear elements extending at right angles to said first elements and in a plane substantially parallel to the reflector rim.

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