May 27, 1930. D. WOODHEAD 1,760,618

LAMP GUARD HANDLE

Filed Aug. 2, 1928

Fig. 1.

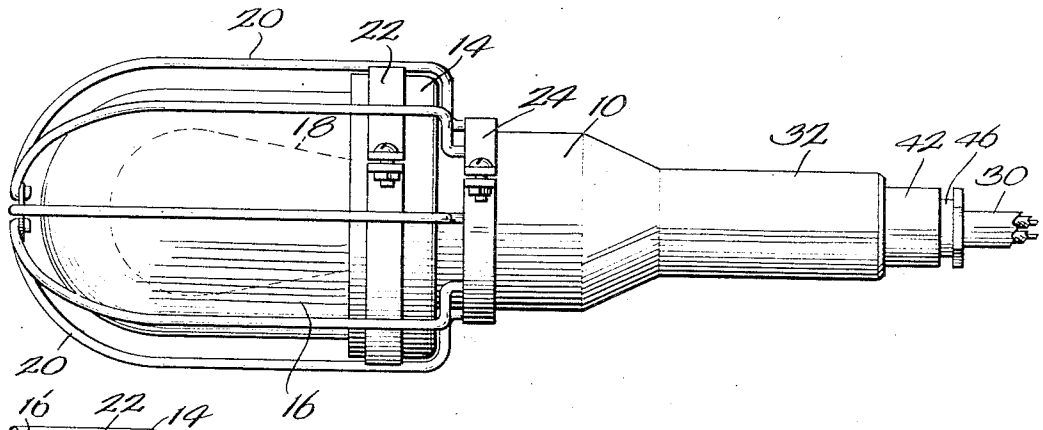


Fig. 2.

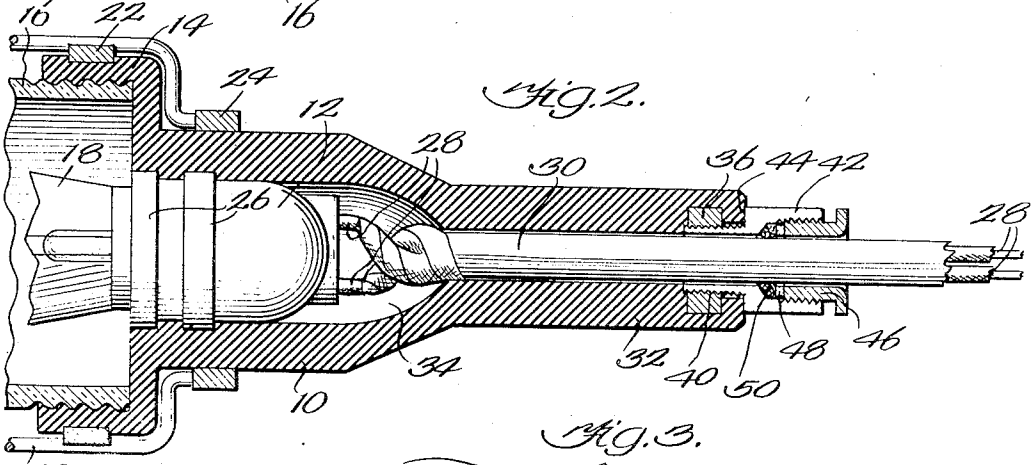
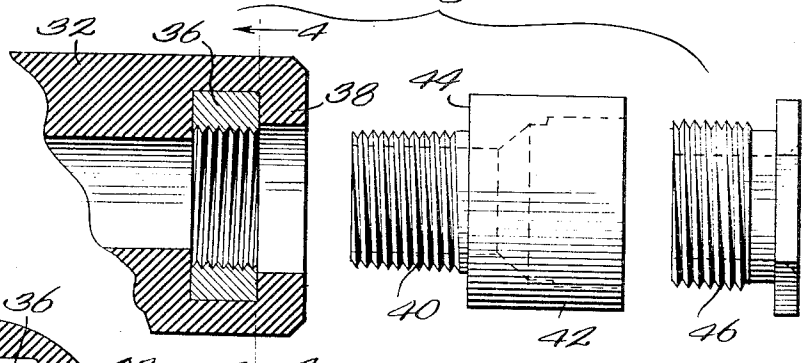


Fig. 3.



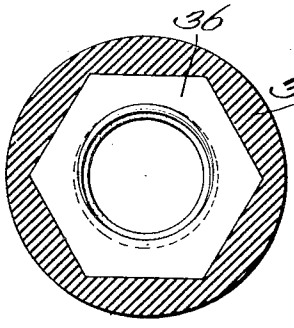


Fig. 4.

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UNITED STATES PATENT OFFICE

DANIEL WOODHEAD, OF CHICAGO, ILLINOIS

LAMP-GUARD HANDLE

Application filed August 2, 1928. Serial No. 296,999.

My invention relates to lamp guard handles, and the object of the invention is to provide simple and efficient means for sealing the inside of the handle against vapors, acids, gases and water.

It is common to provide guards for portable electric lamps. In a common form of lamp guard, wires are employed to enclose the lamp, and these wires are secured to a rubber or other handle by suitable means, such as ring clamps.

It is desirable, of course, to prevent liquids or gases from reaching the lamp base or the electric connectors issuing therefrom, and the purpose of my invention is to accomplish this in a simple and effective manner.

Another object of the invention is to provide means for gripping the supply conductors above the point where they are connected to the lamp base, thus relieving the terminals of strain due to tension on the supply conductors or lamp cord.

I accomplish these objects by the construction illustrated in the accompanying drawings, in which,—

Fig. 1 is a side view of a lamp guard and handle embodying my invention, the same being shown assembled upon a lamp;

Fig. 2 is an enlarged sectional view taken along the axis of the device, showing the internal construction;

Fig. 3 is a distributed view of the sealing and connecting elements which form the basis of the invention; and

Fig. 4 is a transverse sectional view on the line 4—4 of Fig. 3.

Like reference numerals denote like parts throughout the several views.

In the form of device selected to illustrate the invention, the handle is of rubber and comprises a socket portion 10 which forms the body of the device and constitutes a receptacle for the lamp base 12. In this particular form the handle has a flange 14 which is internally screw-threaded for co-operating with the screw-threaded base of the globe 16 which protects the lamp bulb 18 in known manner. The protecting wires 20 are secured to the body of the handle by means of clamping rings 22, 24. The ring 22 encircles the flange 14 and holds it in close, vapor-tight contact with the globe. The clamping ring or collar 24 encircles the body 10 of the handle and serves to keep it in close contact with the collars 26 formed on the base of the lamp socket.

In practice, electric conductors 28 issue from the butt end of the lamp socket, these conductors sometimes being enclosed in an insulating sheath 30. This may be referred to as the lamp cord or extension cord.

Extending rearward from the body 10 is the stem 32 of the handle, which is usually of smaller diameter than the body of the handle and is centrally apertured to accommodate the conductors.

Attempts have been made, without success so far as I know, to prevent gases and liquids from creeping along the lamp cord into the cavity 34 within the body of the device. The problem, while apparently simple, presents difficulties well understood by those having experience with such devices. The handle, being of rubber, is subject to deterioration under the action of certain gases and vapors, as well as oil, the latter tending to soften the rubber. If these or other fluids gain access to the interior of the handle, they remain there and cause rapid deterioration without the fact becoming apparent until it is too late.

According to my improvement, a metallic nut 36 of hexagonal or other outline is molded within the rubber handle a short distance from the rear end thereof In practice, it may be a quarter of an inch, more or less, from the outer end of the nut, thus leaving a flange 38 of rubber overlying the nut, as shown in Figs. 2 and 3. This nut is designed to receive the threaded stem 40 of a stuffing box 42 formed of bronze or other metal. The outer diameter of the stuffing box is greater than the diameter of the stem, thus forming a shoulder 44 which, when the parts are assembled, screws down tightly upon the flange 38 and forms a seal between the nut and the stuffing box. It is desirable to make the threads loose enough so that the stuffing box will rotate freely without creating much tendency to rotate the nut. The result is

that when the parts are screwed up tight, with the stem of the stuffing box in the nut, there will be little tendency to rotate the nut, but the rubber flange 38 can be tightly compressed between the nut and the body of the stuffing box. After the manner of stuffing boxes, a gland or stuffing box nut 46 screws into the stuffing box in the usual manner, and the connection is made tight by means of a ring or gasket 48 screwing down on to packing 50. as shown in Fig. 2.

In practice, when the clamping rings or collars 22, 24 are tightened, there will be an effective seal between the rubber and the globe 16 and lamp socket 12. This takes care of the connections at the forward end of the handle. At the rear end of the handle, by first screwing the stuffing box stem into the nut 36, a tight seal can be made between the stuffing box and the handle, the flange 38 serving as a gasket for perfecting the seal. Finally, by screwing the nut 46 into the stuffing box, a tight seal will be effected between the stuffing box and the lamp cord. This not only prevents oil or other liquid or gases from creeping along the lamp cord into the interior of the handle, but it also produces a gripping action of the packing 50 against the sides of the lamp cord, with the result that if the lamp cord is jerked or pulled there is no danger that the conductors will be pulled loose from their connection with the lamp base.

My device has proven, under adverse working conditions, to be highly effective, durable and simple to operate.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A lamp guard handle of resilient material having a nut embedded near the rear end thereof, and means surrounding the cord for gripping the same, said means screwing into the nut to be thereby secured to the handle.

2. A lamp guard handle having a nut embedded therein, gripping means surrounding and gripping the lamp cord, and means for coupling together the gripping means and the nut.

3. A lamp guard handle having a stuffing box surrounding the lamp cord, said stuffing box having a shoulder facing the lamp guard handle, and means embedded within the handle for drawing the stuffing box toward the rear end of the handle to cause the shoulder to bear against the same and effect a seal.

4. A lamp guard handle of resilient material having a nut embedded therein at a predetermined distance from the rear end of the handle whereby a flange is formed between the rear surface of the nut and the rear end of the handle, and a stuffing box screwing into said nut and having a shoulder for engaging the flange at the rear end of the handle.

5. A lamp guard handle of resilient material having a nut embedded near its rear end whereby a portion of the material of the handle overlies the rear surface of the nut, a stuffing box having a stem with a loose running thread screwing into the nut whereby the rotation of the box is without important effect to rotate the nut and causes the stuffing box to be drawn towards the nut, the stuffing box having a surface facing forward to engage the material of the handle which overlies the nut, packing within the box and a stuffing nut screwing into the box for effecting a tight seal between the cord and the stuffing box.

In witness whereof, I have hereunto subscribed my name.

DANIEL WOODHEAD.