May 4, 1954 G. W. HEINZ 2,677,753

LAMP GUARD

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Fig. 1.

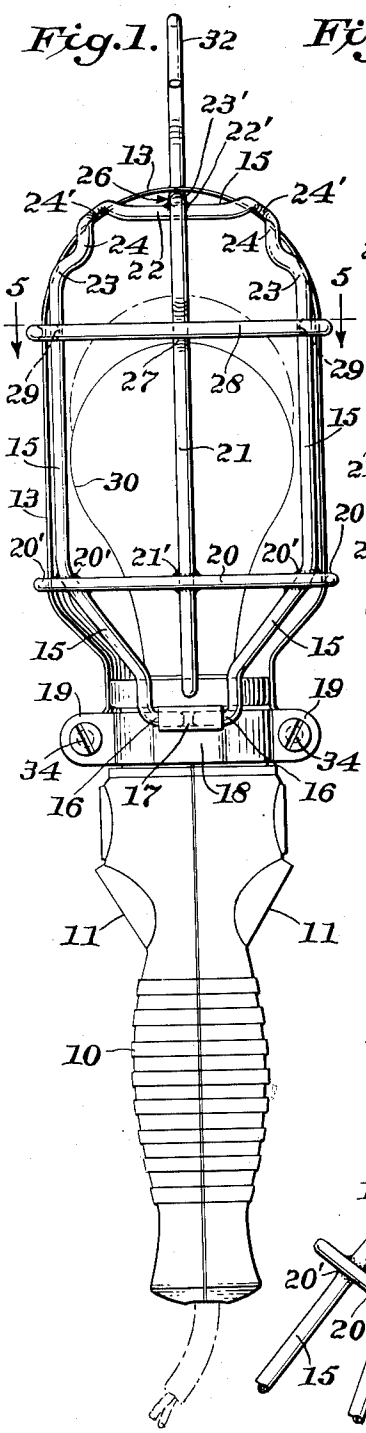


Fig. 2.

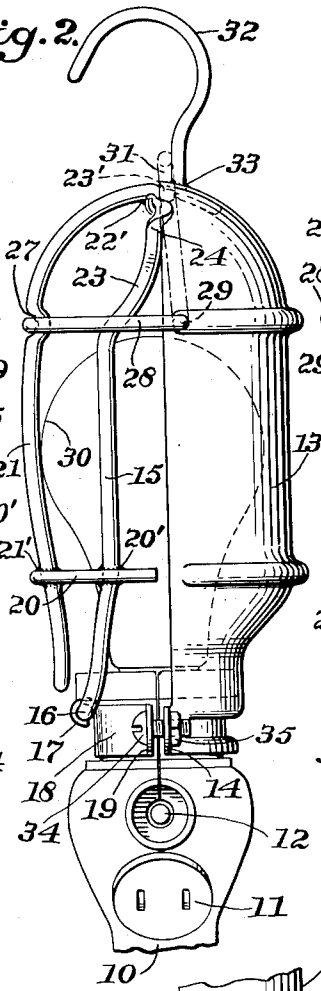


Fig. 3.

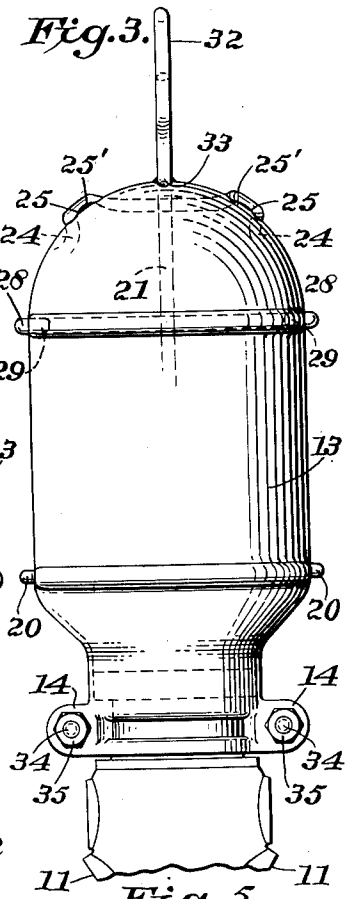


Fig. 4.

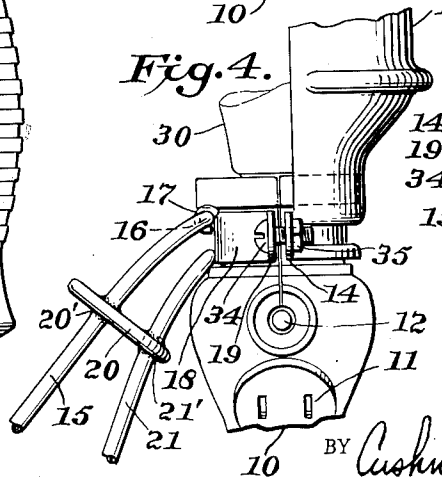
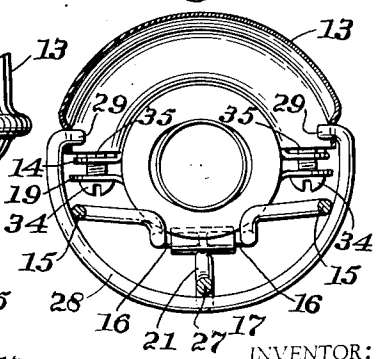


Fig. 5.



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## LAMP GUARD

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1 Claim. (Cl. 240—54)

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This invention relates to an improved guard structure for trouble lamps of the type which include a handle, a reflector carried by the handle and a wire cage guard cooperating with the reflector to enclose the lamp. In some cases, a suitable hook or attachment for suspending the lamp is provided.

The object of the present invention is to provide an improved type of open cage structure which is hingedly mounted with relation to the handle and reflector and is locked in its operative or closed position by engagement with means pivotally carried by the reflector. Upon releasing the locking engagement between the cage and the pivotally mounted locking means, the guard cage can be swung away from the reflector so as to permit ready access to the lamp for removing and replacing it. The invention also comprises means for assuring that when the wire guard is returned to its operative position, it will be guided and centered with respect to the reflector and the locking means carried by the reflector.

Referring to the drawings:

Figure 1 is a front elevation;

Figure 2 is a side elevation with the locking member in locking engagement, as shown in full lines, and with the locking member in its released position, as shown in dot and dash lines, at which time the cage can be moved on its pivot away from the reflector;

Figure 3 is a back or rear view;

Figure 4 is a fragmental side view with the guard cage let down or lowered to permit access to the lamp; and

Figure 5 is a transverse section on the line 5—5 of Figure 1.

Referring to Figure 1, a conventional handle member is shown at 10 having suitable electrical connectors 11 and a switch member 12, as shown in Figure 2. The guard structure comprises a reflector 13, as shown in Figures 1, 2 and 3, which at its lower end has a pair of outwardly extending clamping flanges 14, as best shown in Figure 3. The guard cage structure consists of a frame made of a continuous length of wire bent into the form shown at 15. The lower free ends 16 of the substantially rectangular frame 15 are brought together and disposed within a tubular hinge member 17 formed, as shown in Figures 2 and 4, by bending the metal of a clamping ring 18 outwardly into an integral closed tube having open ends. The ring 18 has outwardly extending clamping flanges 19 cooperating with the clamping flanges 14. This engagement of the ends 16

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of the continuous wire 15 in the tube 17 provides a hinge whereby the wire guard is hingedly mounted with respect to the handle and reflector and the clamping member 18.

The wire guard cage also includes a lower arcuate transverse connecting wire 20 which is welded to the wire 15 at each side of the frame, as shown at 20', and to a central wire 21, as shown at 21', the longitudinally extending wire 21 being also connected as by welding to the upper transversely extending part 22 of the wire frame, as shown at 22' and being suitably curved and extending slightly beyond the same, as shown at 23'.

The upper portion of the sides of the wire 15 are bent inwardly, as shown at 23, at opposite sides of the frame and then upwardly, as at 24, and the corner portions 24' are flattened and bent to form extensions 25 which, in the normal position of the guard, act as guides to engage the adjacent edge of the reflector and extend over the same and assure that the wire guard will be centered with relation to the reflector, as best shown at 25' in Figure 3. The extended free end 23' of the center wire 21, in the normal closed position of the wire guard cage, is disposed under the top surface of the reflector substantially midway between the extensions 25, as shown at 26, and acts in cooperation with the flattened guiding extensions 25 to assure that the guard will be centered with relation to the reflector. By this construction, not only will the wire guard cage always be centered in relation to the reflector, but it will be held against movement and prevented from becoming loose as well.

The center wire 21 which, as shown in Figure 2, is generally curved near its upper end, is provided with an inwardly bent recess 27 for cooperation with a transversely extending arcuate locking member or wire ring 28 having its opposite ends freely pivoted to the reflector, as shown best at 29 in Figure 5. In the normal position of the parts, the wires of the cage being resilient, and the locking means 28 being also of resilient wire, the ring 28 is sprung into engagement with the recess 27 of the wire 21 whereby the cage is securely locked in position against pivotal movement. It will be noted that the locking engagement thus provided cooperates with the flattened extensions 25 of the wire frame 15 and with the free end 23' of the wire 21 to assure that the cage will be held firmly in position at all times.

When it is desired to obtain access to the electric lamp 30, as when the same has burned out

or it is desired to include a lamp of additional candle power or a different color, it is only necessary to spring the curved wire ring **28** out of the recess **27** in the wire **21** and move it upwardly on its pivotal mounting **29**, whence it will loosely clear the top of the reflector, and the flattened extensions **25** of the frame **15**, as shown at **31** in dot and dash lines. The cage, including the wire frame **15** and the central wire **21**, as well as the transverse connecting wire **20**, can then be moved away from the reflector upon the pivotal mounting provided by the tube hinge **17** and the free ends **16** of the wire frame **15** which are disposed therein. That is, upon release of the locking engagement of the member or ring **28** with the wire **21**, the cage can be withdrawn or lowered and access provided to the lamp **30** which is normally enclosed between the reflector and the open wire guard cage. After the lamp has been replaced, it is simply necessary to swing the cage upwardly whence it will be centered by reason of the flattened extensions **24** engaging over the reflector and the upper free end of the wire **21** which engages under the reflector. In its thus closed position, the transverse ring member **28** is moved downwardly upon its pivotal mounting **29** until it springs into engagement with the recess **27** in the wire **21**. Thereupon the open wire cage is securely locked into position against movement or looseness. If desired, a wire hook or hanger member **32** may be secured to the reflector by passing the same through an opening **33** in the top of the reflector and welding the free end to both the top and the undersurface of the reflector.

The guard structure including the reflector and open wire cage guard, are detachably secured upon the end of the handle **10** by means of bolts **34** and nuts **35** passing through the flanges **14** and **19**, respectively, of the clamping rings carried by the reflector and guard, as best shown in Figure 5. In this manner, the complete device may be readily mounted upon a handle or detached therefrom.



I claim:

A lamp guard having a two-part collar arranged to be clamped to a lamp holder, a concave lamp reflector connected to said collar, a wire cage, said wire cage including a continuous length of wire having spaced longitudinally extending side portions connected by a transverse upper portion and having free lower ends, hinge means pivotally connecting said free ends to said collar on the side thereof opposite said reflector, said wire at the juncture of the sides with the transverse portion being provided with offset flat extensions arranged to overlap and engage the outer curved surface of said reflector, said cage having a longitudinally disposed wire portion extending between said side portions and terminating in an upwardly curved end arranged to extend below and engage the underside of the reflector, a curved retaining member pivotally connected to said reflector and arranged to be maintained in releasable locking engagement with the cage when the latter is moved to its closed position, and said offset flat extensions coacting with said upwardly curved end to guide and maintain the cage firmly in a fixed position with the reflector when the parts are assembled.


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