Feb. 25, 1947. G. E. MacFADDEN 2,416,633

LIGHT FIXTURE

Filed July 3, 1945

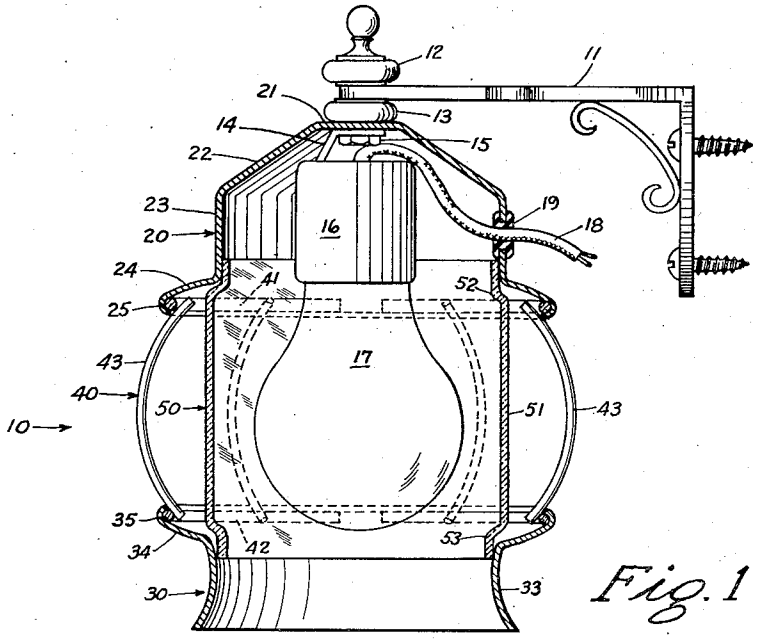


Fig. 1

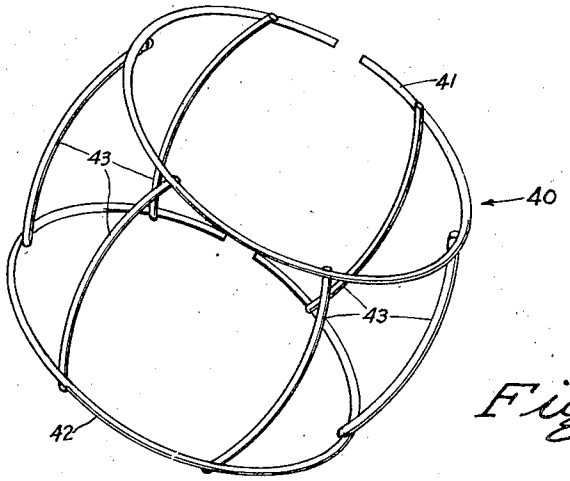


Fig. 2

INVENTOR.
GLENN E. MACFADDEN

BY

Ely & Frye

Patented Feb. 25, 1947

2,416,633

UNITED STATES PATENT OFFICE

2,416,633

LIGHT FIXTURE

Glenn E. MacFadden, Westlake, Ohio, assignor to John C. Virden Company, Cleveland, Ohio, a corporation of Ohio

Application July 3, 1945, Serial No. 603,053

3 Claims. (Cl. 240—11.2)

1

This invention relates to an improvement in electric light fixtures, and, more particularly, to an improvement in the ornamental guard lantern style of light fixture.

The ornamental guard lantern style of fixture is frequently used for porch lights, gate-post lights, recreation room fixtures, and the like, in order that the incandescent electric light may be in keeping with present popular architectural styles. Such ornamental fixtures were generally moderately priced; however, as a result of this invention the manufacturing costs of such prior art fixtures were unnecessarily increased by employing screw clamps, relatively expensive guard cages, and other elements which are now known to be unnecessary. However, the principal objection to prior guard lantern fixtures was the difficulty encountered when it became necessary to replace a burned-out light bulb or a broken globe or chimney; these fixtures are often placed in inconvenient locations where the disassembling and reassembling operations exceeded the mechanical capabilities of the ordinary householder and required a juggling of fixture parts which often resulted in dropping and breaking of the glass globe. Further, exposure of the fixture to weather frequently caused corrosion of the screw clamp, so that the fixture could be disassembled only with difficulty.

It is an object and advantage of this invention that a fixture made according to this invention is inexpensive and, though strong and secure when assembled, is readily manufactured and assembled in mass production with a minimum of operations. Because the fixture is so simple in construction, it is simply and easily taken apart and reassembled by the user. It is another object of this invention to provide a guard lantern in which the guard is an inexpensive, easily manufactured wire cage. A further object of this invention is to provide a light fixture avoiding the use of screws or clamps which become stuck when corroded by exposure to weather. Another advantage of this invention is that it is neat and attractive in appearance, and, in the preferred embodiment, the spot welds and split spring rings of the inexpensive cage are concealed from view. Still another advantage of this invention is that the guard cage, in addition to its apparent function of protecting the lamp globe or chimney and serving as an ornament also serves as an essential structural element holding the fixture together.

Further objects and advantages of this invention will be apparent from the following specification, claims, and drawings in which:

2

Fig. 1 is a vertical section through a fixture made according to this invention.

Fig. 2 is an isometric view of the wire cage illustrated in section in Fig. 1.

In the selected embodiment disclosed in the drawings, the fixture 10 is comprised of a top or hood portion 20 having a flattened apex 21 from which the fixture, in this instance, is suspended by a suitable ornamental wall bracket 11. The fixture 10 is secured to the bracket 11 by an ornamentally headed bolt 12 which passes through an opening in the outstanding arm of the bracket 11, the ornamental spacing washer 13 and thence through the flattened apex 21 and socket bracket 14 to a half-nut 15. Depending from the socket bracket 14 is the light socket 16 carrying the conventional incandescent light bulb 17. The wiring 18 for the socket 16 is led in through an opening 19 in the shank 23 of the hood 20. Thus, in the preferred embodiment, the single bolt 12 and nut 15 hold the fixture 10, supporting bracket 11, and socket 16 in an assembly which, for all practical purposes, may be regarded as substantially permanent, since neither the fixture, socket nor bracket are likely to be removed or replaced in normal use. It is to be understood, of course, that the fixture 10 may be supported by any other suitable means and the manner of supporting or wiring the socket 16 may be varied as desired without affecting the novel construction of the fixture 10.

The hood 20 of the fixture 10 is a metal spinning contoured, in this instance, to provide a conical portion 22 depending from the flattened apex 21, the portions 22 and 21 closing the integral cylindrical shank 23. Integral with the shank 23 is a lower outwardly flaring skirt portion 24, the outer edge of which is spun in to provide an internally-opening annular groove or recess 25 in which the upper split spring ring 41 of the guard cage 40 is received.

The base 30 of the fixture 10 is comprised of an ornamentally contoured shank portion 33 having an upper outwardly flaring skirt portion 34, the outer edge of the skirt portion 34 being spun in to provide an internally-opening annular groove or recess 35 in which the lower split spring ring 42 of the guard cage 40 is received.

The hood 20 and base 30 are held in their assembled position by the guard cage 40. As best shown in Fig. 2 of the drawings, the guard cage 40 is comprised of the upper split spring ring 41

and the lower split spring ring 42, the pair of rings 41 and 42 being fixed axially with respect to each other by the spot-welded, outwardly bowed guard wires 43 spaced evenly around the cage 40. To maintain the rings 41 and 42 under compression when the rings are received in the grooves 25 and 35 to hold the hood 20 and base 30 in their spaced assembled position, the spring rings are often sprung open and out of round, thereby securing a tight fit between the ring and its corresponding groove when the ring is held in round by the groove. Regardless of whether the ring is under compression or merely holds its normal set when received in its corresponding groove, the diameter of the ring must be such that the ring must be compressed (by pressing together the guard wires adjacent the split) in order to remove the ring from the groove.

To complete the fixture, a glass globe or chimney 50 is provided. The globe 50 when shown in the drawings has a cylindrical body portion 51 which may obviously be molded to provide annular corrugations or otherwise contoured to provide simulated lenses or other surface ornamentations. The upper and lower ends of the globe terminate in inset portions to provide upper and lower shoulders 52 and 53 which at least approximately mate with the shoulders provided by the junction of the upper shank 23 and skirt 24 and the lower shank 33 and skirt 34, so that the shouldered globe 50 is retained in the fixture by the shoulders provided in the base and hood.

To assemble the fixture 10, the wall bracket 11, hood 20, and the wired socket 16 are assembled on the ornamental bolt 12 and secured by the half-nut 15 to provide the permanent hood assembly. (If the fixture is to be supported from the base 30, the socket and support are obviously permanently assembled in the base 30.) The cage 40 is then compressed adjacent the upper spring ring 41 so that the spring ring may be slipped into the groove 25, whereupon the compression is released so that the cage will be held in the groove 25 by the force of the compressed spring ring 41. The globe 50 is placed in the base 30 so that its lower shoulder 53 rests on the shank 33. The cage 40 is then dropped over the globe so that the upper shoulder 52 will engage the shank 23 of the hood 20 and the lower split ring 42 engages the spun-in edge of the base skirt 34. The lower split ring 42 is then compressed until it can be slipped into the groove 35, locking the assembled fixture.

To disassemble the fixture to permit a broken globe 50 to be replaced, the cage is simple compressed until one of the split rings 41 or 42 can be slipped out of a groove 25 or 35. The bulb 17 is easily inserted or removed through the open bottom of the base 30 in the embodiment shown, though in models having a closed base, it is simple to disassemble and then reassemble the fixture in order to replace a burned-out bulb.

The operations for manufacturing the fixture 10 are obviously simple and inexpensive. The hood 20 and base 30 may be readily formed from sheet metal or tubing by spinning or stamping. The cage 40 is assembled and spot-welded together on a jig. In this connection, it is to be noted that, in the preferred embodiment disclosed, the guard wires 43 are spot-welded to the inside of the split rings 41 and 42 so that the guard wires do not interfere with the reception of the spring rings 41 and 42 in their respective grooves 25 and 35. Obviously, if the fixture is modified so that one or both of the grooves 25 and 35 are exteriorly opening instead of interiorly opening, then the guard wires should be spot-welded to the outside of the ring received in the exteriorly opening groove. An advantage of providing interiorly opening grooves in which the split rings are received is that the spot-welded junction between the guard wires and the split rings, as well as the split in the rings, is concealed. It should also be noted that an advantage of this fixture is that any corrosion which might tend to hold the rings in their grooves will be broken when the rings are sprung to disassemble the fixture. It should also be apparent that this fixture is not limited to the use of a shouldered globe; instead of providing a shoulder in the ends of the globe, the shanks of the base and hood may be externally shouldered to receive the ends of a straight-walled cylindrical globe, for example.

From the foregoing, it should be apparent that this invention is not limited to the specific embodiment disclosed but may be modified and varied as desired within the scope of the following claims.

What is claimed is:

1. A guard lantern fixture comprising a hood, an internally shouldered downwardly extending hollow shank portion on said hood, said shank having an annular groove opening in a radial direction, a base, an internally shouldered upwardly extending hollow shank portion on said base, said shank having an annular groove opening in a radial direction, a globe engaged between the shouldered portion of the shanks, and a guard cage maintaining said base and hood in spaced relationship comprising upper and lower split spring rings engaged in said grooves, said rings having a thickness greater than the depth of the grooves and having a diameter such that the rings must be stressed to remove them from the grooves, and guard wires connecting the rings, said guard wires being joined to the rings at the surface radially opposite the surfaces of the rings engaged in the grooves.

2. In a guard lantern style of electric light fixture, a hood, an outwardly flaring skirt on said hood, the outer edge of said skirt being turned in to provide an inwardly opening annular groove, a base, an outwardly flaring skirt on said base, the outer edge of said skirt being turned in to provide an inwardly opening groove, a globe having upper and lower annular shoulders, the upper shoulder engaging the hood at the junction of the skirt and the body of the hood and the lower shoulder engaging the base at the junction of the skirt and the body of the base, and a guard cage holding the hood, base, and globe in assembled relationship comprising spring rings received in said grooves and guard wires connecting said spring rings, the diameter of said spring rings being greater than the diameter of the grooves at the opening thereof, whereby the spring rings must be compressed to be removed from the grooves.

3. In a guard lantern fixture comprising a hood and a base portion, a cylindrical shank on each of said hood and base, each shank comprising an internal shoulder and an annular groove opening in a radial direction, a globe engaging said shoulder, and a wire guard cage for maintaining the hood and base portion in spaced relationship but permitting ready assembling and disassembling of the hood, base, and globe, said cage comprising a split spring ring engaged in said groove but having a thickness greater than

the depth of said groove, whereby an annular portion of the ring projects beyond said groove, the diameter of said ring with respect to the diameter of said groove being such that the ring must be stressed to be removed from said groove, and guard members connected to said ring at the portion projecting beyond said groove.

GLENN E. MacFADDEN.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,044,566	Overbagh et al	Nov. 18, 1912
1,696,244	Lindsay	Dec. 25, 1928