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FLUORESCENT LAMP HOLDER AND CLIP

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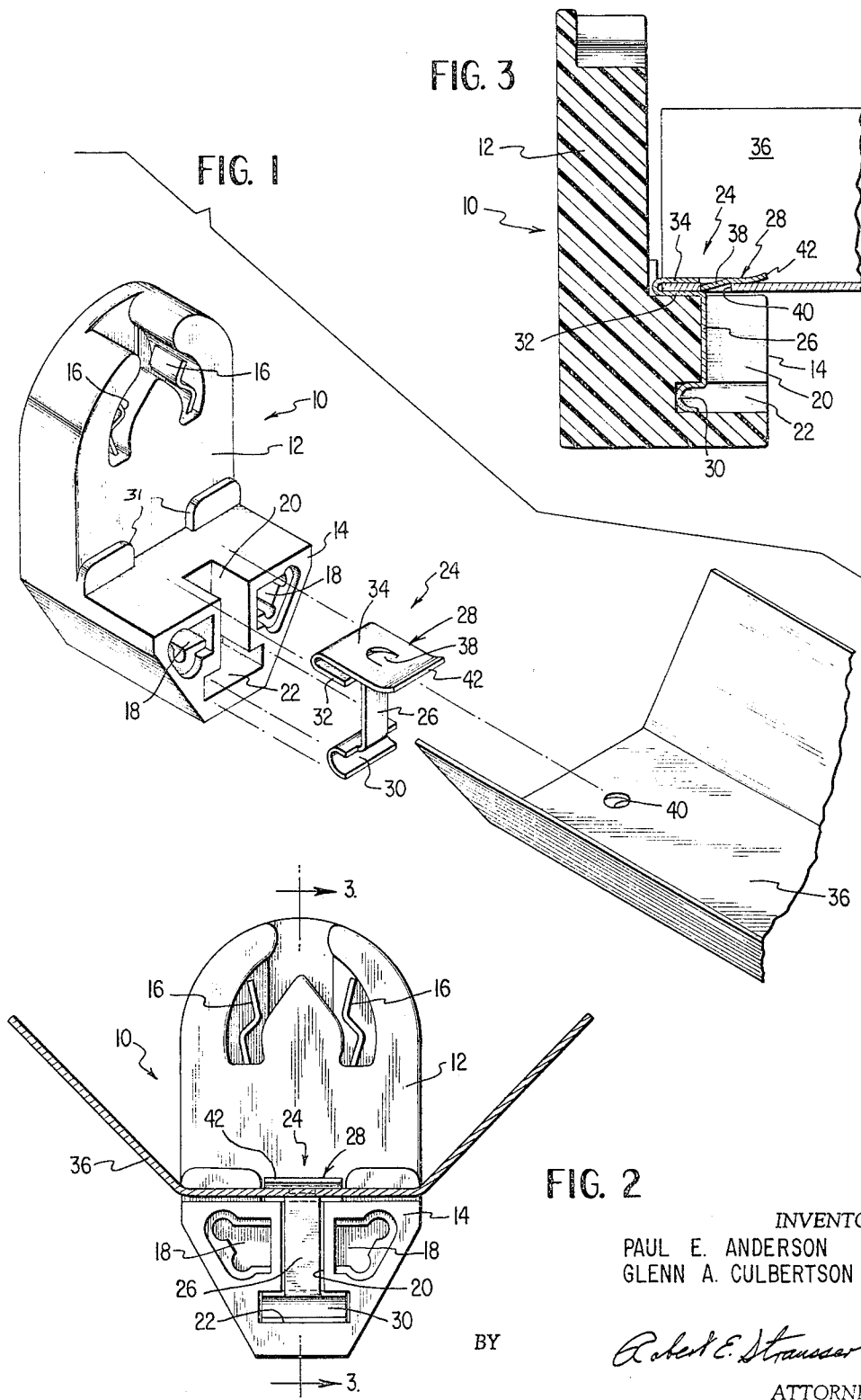


FIG. 2

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1

2

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FLUORESCENT LAMP HOLDER AND CLIP

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10 Claims

ABSTRACT OF THE DISCLOSURE

A lamp holder of generally L shape is provided with a spring clip snugly held in a vertical groove in one of the legs of the L-shaped holder for engagement with a plate. This spring clip has an upper reversely bent portion with a tongue struck out of the reversely bent portion, the plate being provided with a hole near a lateral edge which edge is inserted in the space provided by the reverse bending of the clip. The tongue engages in the hole in the plate and locks the holder in place with respect to the plate. A lower reversely bent portion on the clip is positioned in a horizontal groove to resist displacement of the clip from the holder.

BACKGROUND OF THE INVENTION

The invention relates to lamp holders and more particularly to means for attaching a holder for a fluorescent type lamp to a portion of a fluorescent lamp fixture within which the lamp holder is mounted.

It was conventional practice in assembling fluorescent lamp fixtures to utilize screws or bolts for effecting attachment of the individual lamp holder elements thereto. One or more holes in the lamp holders or associated brackets were aligned with suitably fashioned holes oriented in the fixture or reflector wherein screws or bolts were inserted into threaded receptive portions and tightened to affix the lamp holders to the fixture. This was a time consuming operation involving the handling and mating of the plurality of items. In addition, cross-threading of the bolt in the threaded receptive portion sometimes became an aggravating factor hindering production.

OBJECTS AND SUMMARY OF THE INVENTION

It is an object of the invention to reduce the aforementioned difficulties and to provide improved means for attaching lamp holders to fluorescent lamp fixtures to facilitate the rapid assembly thereof.

Another object is to provide an improved lamp holder device with attachment means whereof bolts and screws are eliminated.

The foregoing objects are achieved in one aspect of the invention by the provision of a combination of a lamp holder having an associated clip or coupling member fashioned for engagement with a plate portion of the lamp fixture. The resilient snap-type clip serves to fasten the lamp holder to a formed portion of the fixture. Should repair or replacement of parts be necessary, the clip may be readily sprung to release the lamp holder from the fixture.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an exploded perspective view of the lamp holder with spring clip detached therefrom and a portion of a reflector plate which is to be attached to the holder;

FIG. 2 is a section through the assembly showing the holder and clip in elevation; and

FIG. 3 is a section on the line 3—3 of FIG. 2.

DESCRIPTION OF THE PREFERRED EMBODIMENT

For a better understanding of the present invention, together with other and further objects, advantages, and capabilities thereof, reference is made to the following specification and appended claims in connection with the afore-described drawings.

With reference to the drawings, the lamp holder, indicated as a whole at 10, comprises an insulating block having a vertical leg 12 and a horizontal leg 14. The vertical leg is recessed, as is conventional in the art, and has electrical contacts 16 in the recess to receive the electrical contact pins of a fluorescent lamp. The horizontal leg is provided with two openings 18 to receive ends of electrical conductors and to make connection with the lower ends of the contacts 16, as is conventional in the art.

The horizontal leg 14 further comprises a vertical slot 20 penetrating part way through the forward to back thickness of the horizontal leg. Communicating with said slot at the lower end thereof is a horizontal slot 22 which is deeper from front to back of the holder than the slot 20. Within these slots there is sprung a coupling member in the form of a clip 24. The clip held against lateral movement by the vertical slot, comprises a piece of resilient material or spring metal having a narrow shank 26, a reversely bent top grip portion 28 and a reversely bent lower grip portion 30. The width of the shank portion is just sufficient to fit snugly in the width of the vertical slot 20 and the shank lies against the back of the slot. The vertical length of the shank is substantially the length of the vertical slot but the reversely bent portions tightly grip the material of the horizontal leg 14 between the portions 28 and 30 by spring action. Also the lower grip portion fits snugly in the horizontal slot, the lower edge of the reversely bent portion tending to bite into the material in a direction to resist removal of the clip from the holder. The upper clip portion 24 may be confined in a space between ribs 31 at the angle between the legs of the holder.

A leg grip portion 32 of the top grip portion 28 is spaced from a horizontal deck portion 34 of the upper portion of the shank a distance substantially equal to the thickness of a support plate or web to which the holder is to be applied, for example the reflector plate 36 of a fluorescent lamp fixture. The top deck portion extends toward the front or right hand face of the holder as viewed in FIG. 3 to no greater distance than said front face to avoid the existence of projections. Struck downwardly out of the top deck is a tongue 38, the free end of the tongue extending backwardly toward the vertical leg of the holder. This tongue is adapted to engage a hole 40 located in the reflector plate close to the edge thereof, the spacing of the wall of the hole nearest the edge of the plate from the edge of the plate being substantially that of the free end of the tongue from the interior of the right portion of the reversely bent top grip portion. The free end 42 of the top grip portion is curled slightly upwardly to facilitate the joining of the reflector plate with the holder and the removal of the plate.

In use, the clip having first been assembled with the holder, the holder is applied to a web or plate such as the reflector plate 36 of a fluorescent fixture opposite the hole 40 therein by pushing the upper grip portion 28 against the reflector plate. The free end of the tongue 38 rides over the upper surface of the plate until it snaps into the hole 40, thereby locking the holder to the plate. In the usual construction of fluorescent tube fixtures, end plates form part of the fixture and the back of the vertical portion of the holder would then bear against or be close to

3

an end plate. Should it be necessary to separate the holder from the plate for any reason, a thin wedge such as the blade edge of a screw driver may be inserted beneath the curled up edge 42 and the deck portion 34 pried up sufficiently to free the tongue, whereupon the holder may be pulled off from the plate or a tool may push up on the tongue where it is exposed in the slot 20.

Thus, lamp holder devices having improved means for attaching lamp holders to fluorescent lamp fixtures are provided, whereby snap-clip mounting means facilitates rapid assembling and positive attachment of the lamp holders thereto.

While there has been shown and described what is at present considered the improved embodiment of the invention, it will be obvious to those skilled in the art that various changes and modifications may be made therein without departing from the scope of the invention as defined by the appended claims.

We claim:

1. A lamp holder for holding a fluorescent lamp in a fixture comprising:

an insulating structure having a vertical leg and a horizontal leg, said vertical leg having electrical contacts therein positioned to be engaged by contact pins on said fluorescent lamp; and

a coupling member held on said horizontal leg, said member having a reversely bent portion forming a bight to receive therein a plate portion of said lamp fixture, said reversely bent portion including a horizontal deck portion having a resilient tongue extending downwardly from said deck portion with the free edge of said tongue extending toward said vertical leg of said holder and removably engaged within a hole in said fixture plate inserted into said bight of said reversely bent portion.

2. A lamp holder device according to claim 1 wherein said coupling member has a second reversely bent portion, and wherein said horizontal leg has a horizontal slot therein, and wherein said second reversely bent portion fits snugly in said horizontal slot to resist separation of said lamp holder and said coupling member.

3. A lamp holder device according to claim 2 wherein said entire coupling member is made of resilient material, and wherein said two reversely bent portions of said member engage with spring-like pressure the material of said horizontal leg positioned between said bent portions.

4

4. A lamp holder device according to claim 2 wherein the free edge of said second reversely bent portion has an edge which bites into a wall of said horizontal slot upon attempted removal of said coupling member from said holder.

5. A lamp holder device according to claim 1 wherein said horizontal leg has a vertical slot wherein a portion of said coupling member is retained within said vertical slot.

6. A lamp holder device according to claim 5 wherein said reversely bent portion extends no further horizontally than the front wall of said horizontal leg.

7. A lamp holder device according to claim 5 wherein the horizontal leg also has a horizontal slot communicating with said vertical slot, said coupling member having a second reversely bent portion fitting snugly in said horizontal slot.

8. A lamp holder device according to claim 7 wherein said entire coupling member is made of resilient material, and wherein said two reversely bent portions engage with spring-like pressure the material of said horizontal leg positioned between said bent portions.

9. A lamp holder device according to claim 8 wherein the portion of said coupling member in said vertical slot is narrower than the width of said reversely bent portions.

10. A lamp holder device according to claim 9 wherein said reversely bent portions extend no further horizontally than the front wall of said horizontal leg.

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