

[54] **FLUORESCENT LAMPHOLDER OR THE LIKE**

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3,005,175 10/1961 Pistey.....339/50 R
 3,337,837 8/1967 Pistey339/53

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[52] **U.S. Cl.**.....339/53 R, 339/210 R
 [51] **Int. Cl.**.....H01r 33/08
 [58] **Field of Search**339/34-40, 50-57,
 339/119, 176, 189, 182

[57] **ABSTRACT**

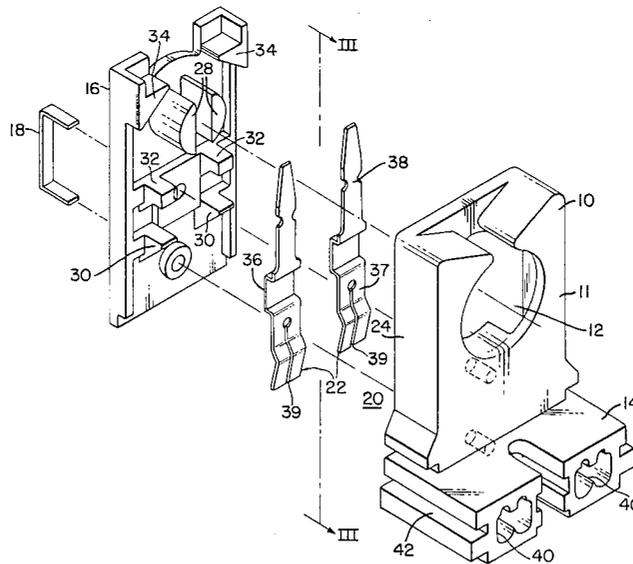
Contact members within a housing of a fluorescent lampholder are provided with a mounting portion secured in fixed position between the front and back members of the housing and a pin-contacting portion that is flat and parallel with a housing wall and not subject to twisting, the pin-contacting portion extending across a frontal opening for engaging an inserted lamp pin. The contact member has resilient means for permitting lateral motion parallel to the front wall but is constrained from any appreciable motion perpendicular to the front wall.

[56] **References Cited**

UNITED STATES PATENTS

2,317,163 4/1943 Young.....339/53
 2,402,941 7/1946 Bixby.....339/53

5 Claims, 3 Drawing Figures



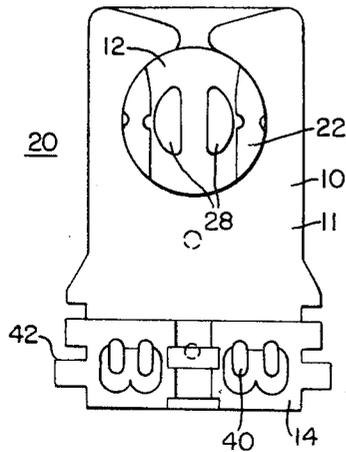


FIG. 1

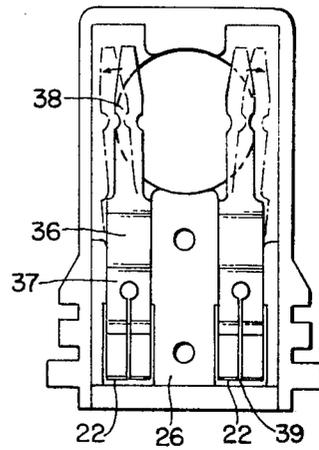


FIG. 3

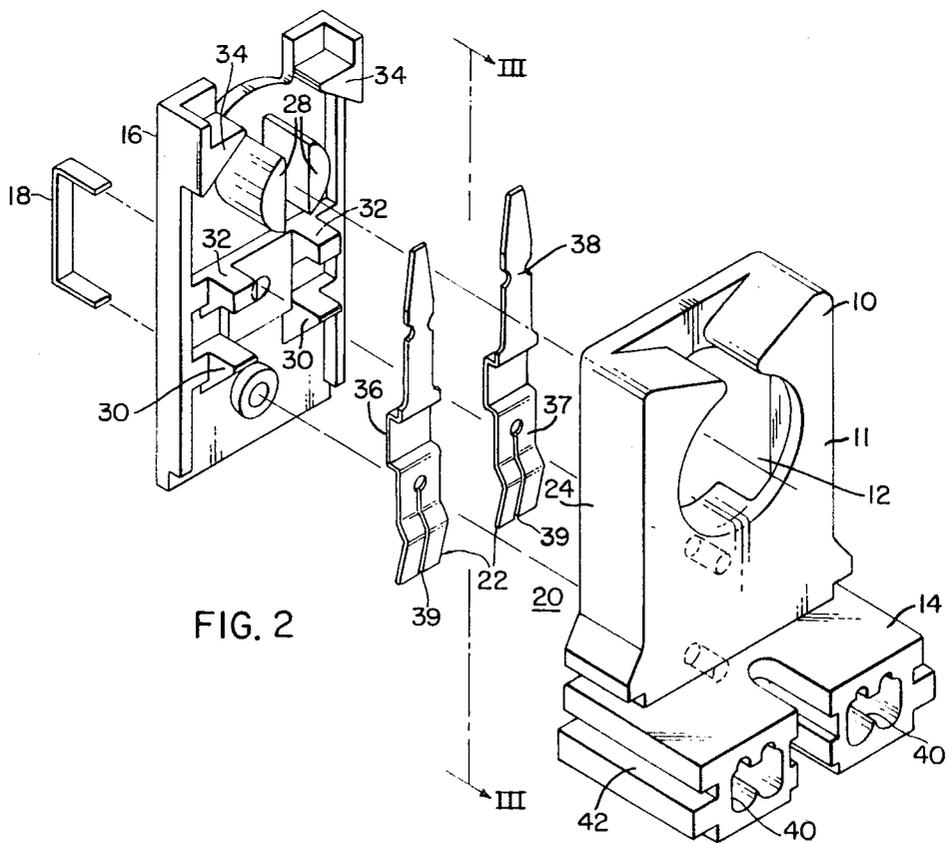


FIG. 2

FLUORESCENT LAMPHOLDER OR THE LIKE

BACKGROUND OF THE INVENTION

1. Field of the Invention

The invention relates generally to electrical receptacles particularly suitable for receiving a device, such as a lamp, having a pair of contact pins extending from the end thereof for connection with an electrical supply. The invention particularly applies to holders for tubular fluorescent lamps.

Description of the Prior Art

In certain fluorescent lighting fixture installations, space is so limited that it is desirable to have an extremely shallow fixture design. This is particularly the case of fixtures to be recessed within a ceiling or other surface. A help in achieving a shallow design is to use lampholders that are wired from the front face, that is, the face which also receives the lamp pins, instead of from the remote top surface. It is also desirable to include within the lampholder quick wiring terminals for receiving the conductors to minimize the assembly time. To insure positive contact with the lamp pins it is known to employ contact members that make edgewise contact with the pins.

Apparatus generally directed to the above mentioned purposes is known to the prior art such as is exemplified by U.S. Pat. No. 3,337,837, Aug. 22, 1967. Such devices include "torsion contacts" wherein the contact making section of the contact member is positioned at a nonperpendicular angle to the direction of a lamp pin inserted therein. The angle (departure from perpendicularity with an inserted pin) is between 40° and 20°. It is stated that with an angle of less than 4° there is a marked tendency for the torsional contact making section of the blade to have an uncontrolled twist varying greatly from contact blade to contact blade in a single production of blades and even varying in an individual blade from engagement to engagement by the lamp pins during continued use. It is also recognized that a blade may twist in one direction one time and in the other direction the next time it is engaged which contributes to reduced reliability and serviceability. The two contact members in a lampholder must be a mirror image of each other, but not identical. Provision of space for the desired twisting action also makes it possible for the contact members to be distorted through improper insertion of a lamp.

SUMMARY OF THE INVENTION

This invention provides an improved fluorescent lampholder with edgewise contact members that are flat and parallel with the front wall and constrained from motion perpendicular to the front wall or twisting motion. Each contact member has a mounting portion secured in fixed position and a pin-contacting portion that extends across an opening in the front wall with an edge for engaging an inserted lamp pin. Means within the housing prevents the deflection of the pin-contacting portion in a direction perpendicular to the wall and prevents twisting of the pin-contacting portion out of parallelism with the wall. The contact members are not subject to erratic behavior. They do not require fabrication with any precise angle and they exhibit long life and serviceability. The two contact members may be identical, i.e., not right and left handed.

In accordance with one form of the invention a housing is provided that includes a front body and a back cover, the front body member having a front wall with an opening to receive the contact pins and side walls extending rearwardly from the front wall. A central spacer extends rearwardly from the front wall and is located between and spaced from the side walls to define a pair of recesses. The back cover has a plurality of frontwardly extending projection including a pair of projections extending through the opening in the front wall for locating the contact pins of an inserted lamp, it also has projections extending within the recesses for securing contact members therebetween and it also has projections that extend near the front wall adjacent the opening for restricting the movement of contact members therebetween to only lateral movement

parallel to the front wall. A contact member is located in each of the recesses and between the front body and the back cover and has an edge extending across the opening for holding a pin contact between it and a contact pin locating projection.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a front elevation view of an exemplary lampholder in accordance with this invention;

FIG. 2 is an exploded view, in perspective, of the lampholder of FIG. 1; and

FIG. 3 is a rear elevation view of an assembled lampholder taken along the line III—III of FIG. 2.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to the drawing there is shown a fluorescent lampholder or the like comprising a front body member 10 with a front wall 11 having an opening 12 therein for receiving the pins of the lamp or similar device. The front body member 10 has integrally formed therewith a base 14 frontwardly extending from the front wall 11. The lampholder also includes a back cover member 16 securable to the front body member 10, such as by a staple 18, and forming therewith a housing 20 that contains contact members 22 for electrical contact to the pins of an inserted lamp.

As shown in FIGS. 2 and 3 the front body member 10 has rearwardly extending side walls 24 and a rearwardly extending spacer 26 that together define a pair of recesses within which are positioned contact members 22.

The back wall member 16 has a plurality of frontwardly extending projections. One pair of projections are each of a half circular cross section and are for locating contact pins of an inserted lamp in relation with the contact members 22 of the lampholder. Other projections 30 and 32 are for securing contact members 22 in the housing 20. Projections 30 and 32 extend within the recesses of the front body 10. The lower projections 30 in the embodiment shown bear firmly against the contact members, the upper projections 32 merely restrict movement in a direction perpendicular to the front wall 11. There are also provided contact member restricting projections 34 extending near the front wall 11 adjacent the opening 12.

In the assembled device the front appears as shown in FIG. 1. The contact members 22 partially obstruct the opening of the front wall and have an edge extending thereacross for engaging an inserted lamp pin between each member 22 and one of the frontwardly extending projections 28 of the back cover. When a lamp is inserted so that the two pins are displaced vertically and then rotated from that position to a horizontal, the contact members 22 are forced outwardly as shown in FIG. 3 until the pins are seated between the contact members 22 and the projections 28. The contact members have notches for securely holding the pins.

The lateral movement of the contact members is permitted by the resilience of a U-shaped portion 36 thereof between portion 37 that is secured between the back cover and front wall and the pin contacting portion 38. The pin contacting portions 38 of the contact members are flat and parallel with the front wall. There is no twist designed into them and in fact the housing 20 avoids twist. The uppermost projections 34 of the back cover 16 extend closely adjacent the rear surface of the front wall 11 and define a space that may be no more than slightly greater than the thickness of the contact members 22 to permit only the lateral motion as shown in FIG. 3 without twisting. Such projections 34 also prevent distortion of the contact members 22 upon improper insertion of the lamp pins such as by bearing the pins directly against the face of contact members 22.

The contact members 22 have separations at their lower extremities 39. When assembled the two portions of each member 22 are aligned with openings 40 within the base 14 of the lampholder for receiving wires and securing them in quick wiring terminal fashion by pressure contact between a

separated end of the contact member and the adjacent housing surface. The base 14 is also configured with grooves 42 or the like for securing to a panel.

The configuration shown may be modified in various ways. For example, the inner surface of the front body member 10 may be provided with a number of projections that would provide means for securing the contact members between the body 10 and back cover 16, (as for projections 30 and 32) as well as for the pin retaining projections 28. In this manner the back cover member 16 could be a single flat piece of material.

I claim:

1. An electrical receptacle particularly suitable for receiving a lamp, such as a fluorescent lamp, having a pair of contact pins extending from an end thereof for connection with an electrical supply, said receptacle comprising: a housing including a front body member and a back cover member; said front body member having a front wall with an opening therein to receive contact pins, side walls extending rearwardly from said front wall, a central spacer extending rearwardly from said front wall located between and spaced from said side walls to define a pair of recesses; said back cover member having a plurality of frontwardly extending projections including contact pin locating projections extending within said opening in said front wall, contact member securing projections extending within said recesses and contact member restricting projections extending near said front wall adjacent said opening; a pair of contact members, one in each of said recesses, and having a pin-contacting portion extending across said opening for holding a pin contact between an edge of said contact member and said contact pin locating projection; said pin-contacting portion being flat and parallel with said front wall and prevented from twisting out of parallelism by said contact member restricting projections of said

back cover.

2. The subject matter of claim 1 further comprising: a base integral with said front body member; a portion of said base extending frontwardly from said front wall with apertures therein for receiving electrical conductors; said contact members having means to make pressure contact to conductors passed through said apertures.

3. The subject matter of claim 1 wherein: each said contact member has a U-shaped portion held between said front wall and said contact member securing projections of said back cover, and said pin-contacting portion extends perpendicularly from one leg of said U-shaped portion.

4. A lampholder comprising: a housing having a front member and a back member, said front member having a wall with an opening therein for admitting a lamp pin; a contact member positioned in said housing and having a mounting portion fixedly secured thereto by pressure between said front and back members, said contact member also having a pin-contacting portion that is flat and parallel with said housing wall and partially obstructs said opening with an edge thereacross for engaging an inserted lamp pin, said pin-contacting portion being positioned so that an inserted lamp pin laterally displaces said pin-contacting portion in a direction parallel to said wall, said contact member also having a resilient portion between said mounting portion and said pin-contacting portion.

5. The subject matter of claim 4 further comprising: means within said housing to prevent deflection of said pin-contacting portion in a direction perpendicular to said wall and to prevent twisting of said pin-contacting portion out of parallelism with said wall.

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