Nov. 21, 1967 A. J. GARCIA 3,354,423

WEDGE BASE BULB SOCKET

Filed Feb. 9, 1966

Fig. 1.

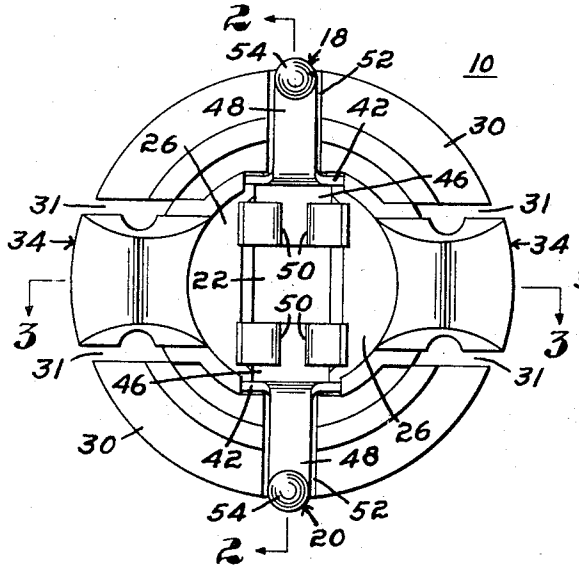


Fig. 2.

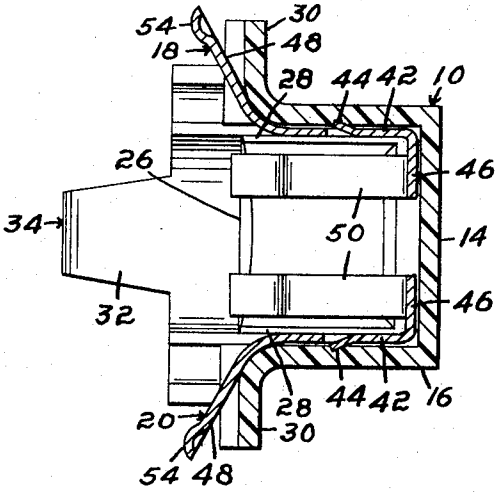


Fig. 3.

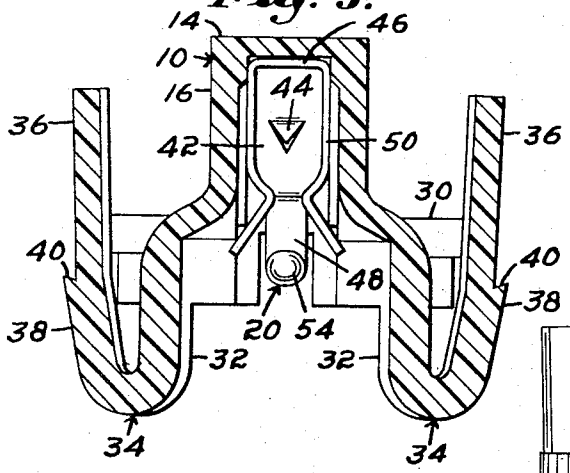
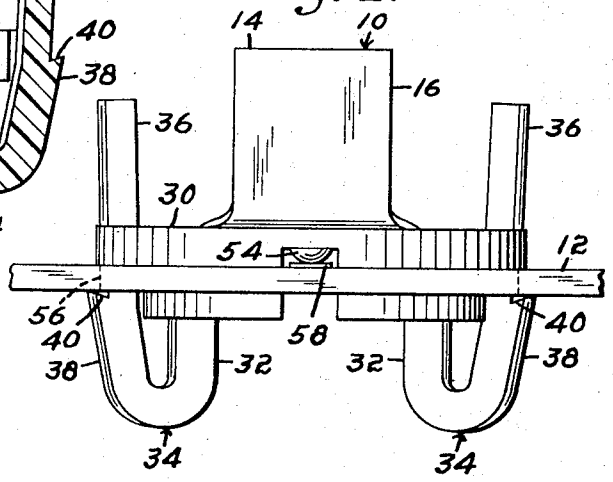


Fig. 4.



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United States Patent Office 3,354,423 Patented Nov. 21, 1967

3,354,423

WEDGE BASE BULB SOCKET

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Filed Feb. 9, 1966, Ser. No. 526,117
4 Claims. (Cl. 339—128)

ABSTRACT OF THE DISCLOSURE

This invention is directed at a socket housing which has a pair of flexible legs which have means of engaging a support and which may be manually flexed toward the body of the housing to release the housing when it is engaged with an apertured support.

This invention relates generally to lamp sockets and more specifically to lamp sockets having means of flexibly engaging a panel or the like.

An object of the present invention is to provide a lamp socket having manually operable means for releasing the lamp socket from engagement with an apertured support.

A further object of the present invention is to provide a one-piece housing for a socket where the socket engagement means is provided by at least one flexible leg which may be manually compressed toward the axis of the socket, thereby assisting in releasing the socket from engagement with an apertured support.

Other objects of the invention will, in part, be obvious and will, in part, appear hereinafter.

In the drawings:

FIG. 1 is a top plan view of the socket;

FIG. 2 is a section taken on line 2—2 of FIG. 1;

FIG. 3 is a section taken on line 3—3 of FIG. 1; and

FIG. 4 is a side elevation showing the socket engaged to an apertured support, the support having printed circuitry thereon.

Referring to the drawing, there is illustrated a wedge base lamp socket **10** which is adapted for assembly with a support panel **12** and which is adapted to complete an electrical circuit by receiving a lamp bulb.

The lamp socket **10** comprises a body portion **16** substantially rectangular in configuration, although other geometric configurations may be used, and which may be formed of a single piece of molded plastic material and a pair of contact members **18** and **20** assembled therewith.

In the illustrated embodiment, the body portion **16** is provided with a central cavity **22** opening to the forward end thereof and adapted to receive the base of a bulb. The walls of the central cavity **22** are provided with a pair of opposed, internal, arced shoulder means **26**, each of which has a pair of spaced longitudinal ribs **28** disposed on opposite sides thereof. The ribs **28** extend from the plane of the shoulder means **26** toward the base portion **14** of the body portion **16** as shown in FIG. 2. A radially extending arcuate wing **30** extends from each side of the body portion **16** in opposed relation to each other and each is spaced from the other by two opposed slots **31**. An arcuate wall portion **32** extends laterally from each of the shoulder means **26** to provide a predetermined edge on a plane above the plane of the wings **30**. A forwardly extending leg **34** is formed at the free terminal edge of each of the arcuate wall portions **32** and has a width less than the length of the arcuate wall portions **32** as shown in FIG. 2. Each of the legs **34** has an outwardly inclined, rearwardly extending, resilient terminal portion **36**. An integral ramp portion **38** is formed transversely of each of the legs **34** providing an external shoulder **40**. The external shoulder **40** lies in a plane

which is in spaced substantially parallel relationship to the plane of the wings **30**, although it may be in angular relation therewith. The shoulders **40** lie on a plane above the plane of the wings **30**. The terminal portion **36** of the legs **34** extend longitudinally along the outside of the body portion **16** passing through the slot **31**, extending above the free edge of the arcuate portions **32** and down to a plane which cuts transversely through the body portion **16**.

Each of the contacts **18** and **20** comprise a substantially rectangular base plate **42** having a prong **44** extending therefrom, an angular portion **46** extends from an end edge of the base plate **42** and a contact portion **48** extends from the other end of the base plate **42** in a direction opposite to that of the angular portion **46**. An arm **50** extends from each side edge of the angular portion **46** in right angle relationship thereto and in spaced substantially parallel relation with the base plate **42** as shown in FIG. 3. The terminal ends of the arms **50** may be bent outwardly to provide a lead-in. The contacts **18** and **20** are engaged to the housing of the socket **10** by sliding the base plate **42** along the internal wall of the body portion **16**, with each of the side edges of the base plate **42** riding within a channel formed by one of the longitudinal ribs **28** and the internal wall of the body portion **16**. The angular portion **46**, when engagement is complete, will abut the base portion **14** of the body portion **16** and the apex of the prong **44** is directed away from the base portion **14**, inwardly toward the wall of the body portion **16**, to prevent withdrawal of the contact once engagement is completed. The terminal ends of the contact portions **48** lie partially within grooves **52** formed in the upper surface of the wings **30** and each of the terminal ends of the contact portions **48** may have protuberances **54** formed thereon to make better, trouble-free, engagement with the printed circuit **58** formed on the support **12**.

To engage the socket **10** in a support **12**, having an aperture **56** formed therein, the terminal portions **36** of the legs **32** are flexed toward the axis of the body portion **16** and then the socket is passed into the aperture with the contact portions **48** facing the printed circuitry **58** on the support **12**. In a relaxed position, the diameter defined by the wings **30** and the distance between the external surfaces of the terminal portions **36** is greater than the diameter of the aperture **56** so that after the wings **30** have abutted against the surface of the support **12** the legs on being released, lock the socket **10** to the support panel **12**. If an appropriate dimension between the upper surface of the wings **30** and the shoulders **40** has been provided, then the shoulders **40** will engage on the opposite side of the support **12** from that of the wings **30**.

To disengage the socket from the aperture, pressure in right angles to the axis of the socket **10** is applied to one or both of the terminal portions **36** and then the socket may be axially removed or tilted from engagement.

With reference to the foregoing description it is to be understood that what has been disclosed herein represents only a single embodiment of the invention and is to be construed as illustrative rather than restrictive in nature and that the invention is best described by the following claims.

What is claimed is:

1. A housing for an electrical socket, engageable in an apertured supporting wall, comprising a body portion having a base portion and having a cavity formed therein opened at one end, a wing extending outwardly from each of opposite sides of said body portion, the wings being spaced from each other to provide a pair of spaced opposed slots, two retaining legs extending forwardly from said body portion, at least one of the legs having a terminal end bent back on itself, providing a bight portion

and a free end, extending through and beyond one of said slots and extending along a portion of said body portion in spaced relation therewith, said legs adapted to cooperatively engage the edge of the apertured supporting wall and be disengaged therefrom by manual manipulation of said free end, and having an abutment means facing said wings, formed between the bight portion and the free end, which is adapted to engage a surface of the wall adjacent the aperture with said wings engageable with the opposite surface of said wall.

2. A housing for a socket as set forth in claim 1 wherein the free end extends beyond the wall when the housing is engaged with the electrical element and is adapted to be flexed toward the body portion, to release the housing from engagement with the wall.

3. A housing for a socket as set forth in claim 2 wherein said abutment means comprises a shoulder.

4. A housing as set forth in claim 3 wherein both of said legs have terminal ends bent back on themselves to provide bight portions and free ends and both legs extend through the slots formed on their respective sides, and each of the legs extend along a portion of the body portion in spaced relation therewith and both legs are adapted to cooperatively engage an edge portion forming the aperture formed in the wall, and both legs have shoulders formed between their bight portion and their free end.

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