

Nov. 10, 1959

R. E. FITZ GERALD

2,912,669

LAMP SOCKET ASSEMBLY

Filed April 29, 1958

FIG. 1.

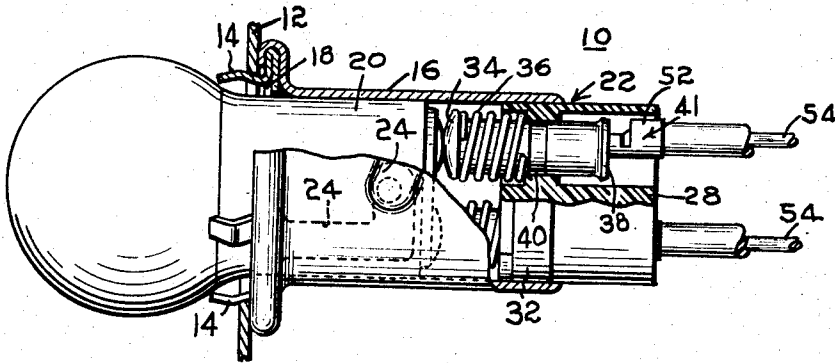


FIG. 2.

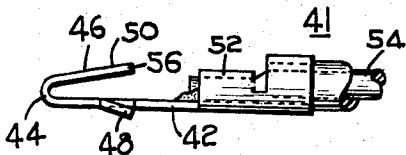
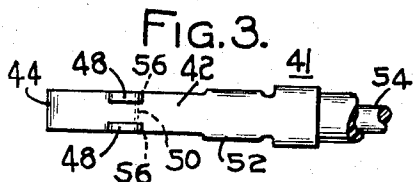


FIG. 4.

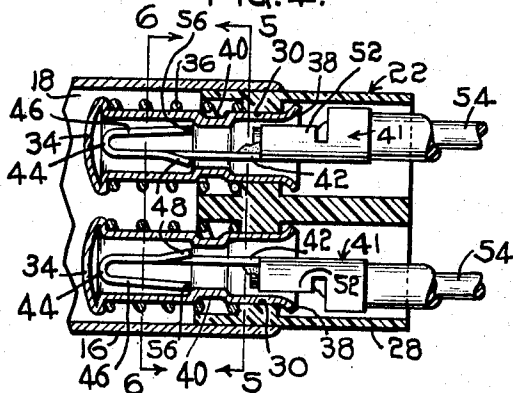


FIG. 5.

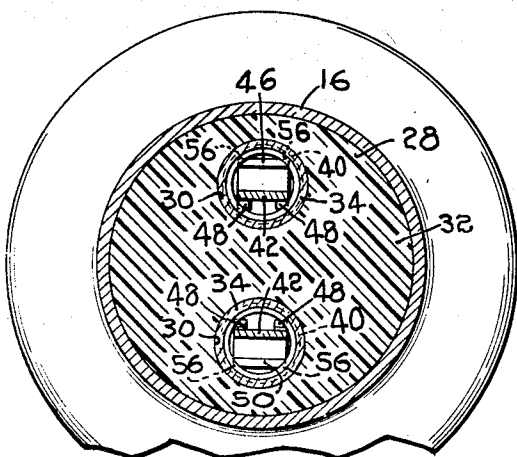
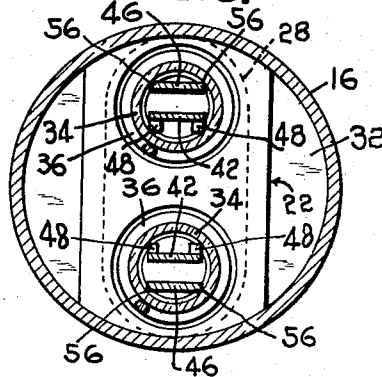


FIG. 6.



INVENTOR:
ROBERT E. FITZGERALD,
BY *Walter S. Jones*
ATTORNEY.

1

2,912,669

LAMP SOCKET ASSEMBLY

Robert E. FitzGerald, Quincy, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware

Application April 29, 1958, Serial No. 731,822

3 Claims. (Cl. 339—188)

This invention relates generally to lamp socket assemblies and has particular reference to wiring connectors adapted to be snapped into engagement with the terminal contacts assembled therewith.

The present practice, where a lamp socket assembly requires a detachable type wiring connector, utilizes a bullet type male connector which is staked on the wire lead and then snapped into engagement with a female terminal contact. Relative high insertion pressure is required to snap the bullet connector into the contact and difficulties have been experienced in maintaining good conductivity and also in the retention of the connector within the contact.

The object of this invention is to provide an improved type socket assembly whereby the wiring connector has means for snap engagement with a terminal contact.

A further object of this invention is to provide a connector having hook members for snap engagement with the walls of a terminal contact to effectuate a multi-point electrical contact.

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

In the drawing:

Fig. 1 is a view in elevation, partly in section showing the application of the lamp assembly;

Fig. 2 is a view in elevation of the blade contact;

Fig. 3 is an underneath plan view of the contact of Fig. 2;

Fig. 4 is a view in section, partly in elevation of the contact carrying means before assembly into the housing;

Fig. 5 is a section taken on line 5—5 of Fig. 4;

Fig. 6 is a section taken on line 6—6 of Fig. 4.

Referring to the drawing there is illustrated a lamp socket 10 of the type which is adapted to be assembled into an opening in a support 12 by means of resilient spring fingers 14. The lamp socket 10 comprises a housing 16 with an opening 18 at one end to receive the base of a lamp bulb 20 and a sub-assembly 22 extending outwardly from the other end. The housing 16 has J slots 24 for engaging pins on the lamp bulb 20 in the usual manner.

In Fig. 4 there is shown the sub-assembly 22 which comprises an insulated casing 28 having a pair of apertures 30 extending therethrough and a flange 32 extending radially outward from one end. Disposed within the aperture 30 are a pair of headed eyelets 34 which are resiliently biased away from the flange 32 and into contact with a bulb base by springs 36 and retained within the apertures by a flared open end portion 38. A circumferential groove 40 is formed in the eyelet on the lateral surface midway between the closed and open end for a purpose to be described hereinafter.

The blade terminal 41 as shown in Fig. 2 consists of

2

a base member 42 having a bight 44 at one end and a reverse bent portion which extends angularly away from the base portion but in face to face relationship and defines a shorter arm 46. Projections 48 are struck out of the base member 42 and extending in a direction away from the shorter arm 46 and disposed from the bight 44 a distance equal to the length of the shorter arm so that the distal end portion 50 of the shorter arm and the projections are substantially co-planar. Upwardly extending lugs 52 are formed on the free end of the base member 42 to enable the blade terminal to be staked to a wire 54.

To assemble the blade terminal 41 with the headed eyelet 34 the bight portion 44 is inserted into the open end of the eyelet so that the shorter arm 46 resiliently flexes toward the base member 42 until it passes the circumferential groove 40. The resilient characteristics of the blade terminal 41 will thereby allow the shorter arm to flex outwardly in a direction away from the base member so that the distal end portion 50 will enter into snap engagement with one wall of the circumferential groove 40 and the projection 48 will cooperatively engage the diametrically opposed wall.

By this construction it will be obvious that the mechanical connection of the blade terminal with the headed eyelet can be simply made without the use of excessive force and can be firmly retained in assembly.

Figs. 5 and 6 illustrate the electrical connection made between the blade terminal 41 and the eyelet 34 whereby the two corners 56 of the shorter arm 46, and the two corners of the projections 48 cooperate with the circumferential groove 40 resulting in a multi-point electrical contact.

Since certain other obvious modifications may be made in this device without departing from the scope of the invention, it is intended that all matter contained herein be interpreted in an illustrative and not in a limiting sense.

I claim:

1. A terminal connector for a lamp socket and the like comprising in combination a contact member consisting of an eyelet having an annular groove therein and a blade terminal, said blade terminal having a portion adapted to be staked to a wire and a forwardly extending blade portion, said blade portion having a rearwardly extending portion defining an arm which is shorter than said blade portion, the blade portion being provided with a tongue struck out to provide a projection adapted for biting engagement with a wall adjacent to the annular groove, the distal end portion of said arm engaging said wall diametrically opposed to where said projection engages said wall.

2. A terminal connector for a lamp socket comprising in combination an insulated housing having bulb retention means formed therein, said housing having a base provided with contact carrying means and contacts consisting of a pair of headed eyelets having a circumferential groove intermediate the ends thereof, a blade terminal comprising a strip of metal bent back upon itself defining a pair of arms, one of said arms being shorter than the other, projections extending outwardly from the outer face of the longer arm and spaced from the junction of the two arms a distance equal to the length of said shorter arm, the distal end of said shorter arm and said projections adapted for cooperative engagement with diametrically opposed walls of said circumferential groove,

and means formed on said longer arm for attachment to a wire.

3. A terminal connector for use in an electric lamp socket comprising in combination a closed end eyelet having the closed end flared outwardly defining a bulb contact portion, the open end flared outwardly for retention in contact carrying means, said eyelet having a circumferential groove formed on its outer surface and intermediate the ends thereof; and a blade contact having means thereon for attachment to a wire lead, said contact comprising a pair of arms joined by a reverse bent portion in face to face relation and inclined away from each other, one of said arms being shorter than the other, the longer of said arms having tongues bent out of the plane

of said arm in a direction away from said shorter arm, said tongues being spaced from the reverse bent portion a distance equal to the length of said shorter arm, the distal end portion of the shorter arm and said tongues adapted for cooperative engagement with the circumferential groove.

References Cited in the file of this patent

UNITED STATES PATENTS

1,995,172	Douglas	Mar. 19, 1935
2,119,517	Alden	June 7, 1938
2,728,060	Doeg	Dec. 20, 1955