United States Patent Office 3,456,233 Patented July 15, 1969

3,456,233

UNITARY SEPARABLE DOUBLE SOCKET ASSEMBLY

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Filed June 2, 1967, Ser. No. 643,110
Int. Cl. H01r 13/50; F21l 7/00, 9/00
U.S. Cl. 339—154 7 Claims

ABSTRACT OF THE DISCLOSURE

A separable double socket assembly made of an electrically conducting metal and provided with two socket members connected in spaced axial alignment by a pair of elongated conducting elements. The elements have abutments thereon adapted to be engaged by a spring conductor and prongs thereon which retain a non-conducting disk member that has conducting means thereon adapted to make contact with bulbs in the socket members.

This invention relates to a unitary separable double socket assembly and more specifically, to a double socket assembly, which is a modified form of the socket assembly disclosed in my Patent No. 3,226,538, issued Dec. 28, 1965, for insertion into a housing similar to the housing disclosed in my Patent No. 3,114,509, issued Dec. 17, 1963.

The socket assembly of the present invention comprises first and second socket members provided with helical threads, bayonet slots or other suitable means for retaining a light bulb. The sockets are connected in axial alignment, with the rear portions of the sockets facing one another, by means of a pair of elongated conducting elements. The elements are each provided with a set of centrally located prongs on their inner surfaces, which retain an insulated disk provided with a conducting strip on its upper and lower surfaces. The elements are also provided with abutments on their outer surfaces which are axially spaced from the prongs. The abutments are adapted to be engaged by a spring which forces the conducting strip of the disk into contact with a socket such as the socket disclosed in my Patent No. 3,114,509 issued Dec. 17, 1963.

One of the objects of the present invention is to provide a socket assembly which will serve as a substitute for a double light bulb assembly as illustrated, or similar to that illustrated, in my Patent No. 3,114,509, issued Dec. 17, 1963 and Patent No. 3,278,787, issued Oct. 11, 1966.

Another object of the invention is to provide an inexpensive, practical double bulb unit which utilizes ordinary light bulbs.

Another object of the invention is to provide a double socket assembly which still functions with only one bulb in the assembly.

Other objects and advantages of the present invention will become more apparent from the following disclosure when taken in combination with the accompanying drawings in which:

FIGURE 1 is a perspective view of the unitary separable double socket assembly of the present invention;

FIGURE 2 is a sectional view of the unitary separable double socket assembly taken along line 2—2 of FIGURE 1;

FIGURE 3 is a view partly in section showing the socket assembly of the present invention within a lamp assembly; and

FIGURE 4 is a sectional view of the socket assembly within the lamp housing taken along line 4—4 of FIGURE 3.

As shown in FIGURE 1, the socket assembly generally indicated by reference character 30 has first and second socket members 31 and 32, respectively, which are adapted to receive standard light bulbs of any preferred configuration. The sockets are made up of an electrically conducting material such as copper and although, as shown, they are provided with helical threads, the sockets may be provided with bayonet slots or other suitable means for retaining the bulbs.

Sockets 31 and 32 are connected by elongated conducting elements 33 and 34, which are secured to the outer surfaces of the sockets in a manner that insures an electrical connection between the elements and the sockets. The elements serve to maintain the sockets 31 and 32 in axial alignment as well as in electrical contact with one another with the rear portions of the sockets facing one another. Of course, while as shown in FIGURE 1, the elements are soldered to the outer surfaces of the side walls of sockets 31 and 32, it is contemplated that any suitable means may be used to join the elements to the socket which will insure electrical contact between the sockets and the elements and which will be of sufficient strength to maintain the socket in their fixed axial relation.

The elongated conducting elements 33 and 34 are each provided with a set of resilient prongs 35, 35' and 36, 36', respectively, which are centrally located on the inner surfaces of the elements 33 and 34 intermediate the rear portions of sockets 31 and 32. Each resilient prong is soldered or otherwise suitably secured at one end to element 33 or 34 and has an inturned portion 37 at the other end which cooperates with an adjacent inturned portion on the other prong of the set to act as a retaining means for disk 38. While this is the preferred means for retaining disk 38, it is contemplated that disk 38 could be retained between elements 33 and 34 by other means where desired or necessitated.

Disk 38 is made of rubber, plastic or some other suitable insulating material and has laterally projecting portions 39 and 39' which abut elements 33 and 34, respectively, to insure that the disk is properly positioned in socket assembly 30. Disk 38 is provided with a centrally located slot 40 and a metal strip 41 which passes through and is retained by slot 40.

As shown in FIGURES 1 and 2, strip 41 preferably extends at right angles to a plane passing through elements 33 and 34 so that strip 41 does not come in contact with elements 33 and 34. Metal strip 41 comprises a midportion 42, two intermediate portions 43, 43' and two terminal portions 44, 44'. The midportion 42 of metal strip 41 extends along the upper surface of disk 38 and is folded over at each end with the two intermediate portions 43, 43' extending inwardly at an angle from the ends of the midportion 42 through slot 40. The two intermediate portions are equal in length and meet at their inner ends adjacent the lower portion of slot 40. The two terminal portions 44, 44' of strip 41 extend outwardly from the lower end of slot 40 in the same direction as midportion 42 but on the opposite side of disk 38, whereby the conducting strip 41 extends from slot 40 on both sides of the insulated disk 38.

Although as shown, the terminal portions 44, 44' extend out farther than the midportion 42, the relative length of these members is not critical. However, terminal portions 44, 44' extend out farther than socket 32 and elements 33, 34 so that the terminal portions can make contact with a contact ring which has a greater diameter than socket 32 for reasons as will be explained hereinafter.

The elements 33 and 34 are also provided with outwardly extending abutments located on the outer surfaces

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ELECTRIC CLIP CONNECTOR

Filed Dec. 16, 1966

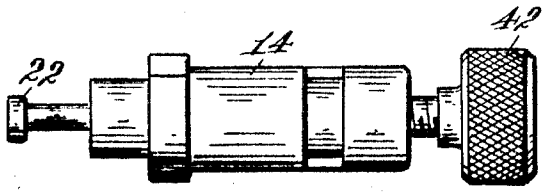


Fig. 2

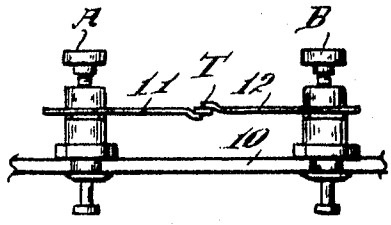


Fig. 1

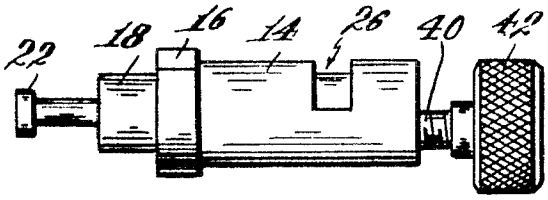


Fig. 3

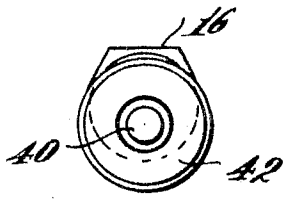


Fig. 4

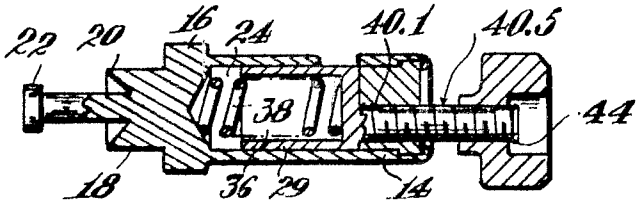


Fig. 5

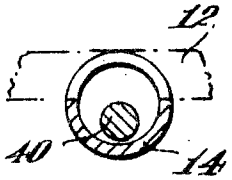


Fig. 7

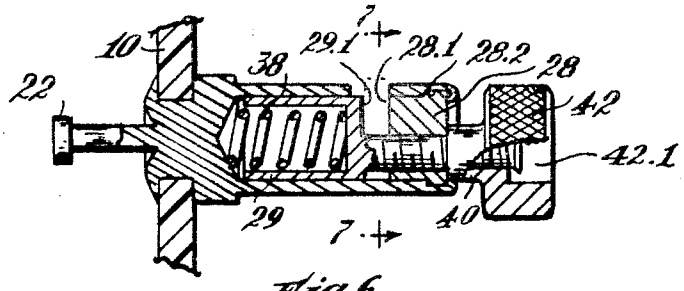


Fig. 6

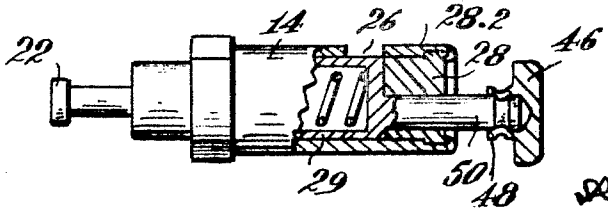


Fig. 8

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