

Feb. 6, 1968

H. BRAUN

3,368,184

SOCKET FOR ELECTRIC BULBS, ESPECIALLY FOR VEHICLE LAMPS

Filed May 31, 1966

FIG. 1

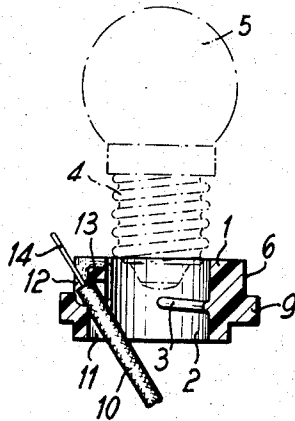


FIG. 4

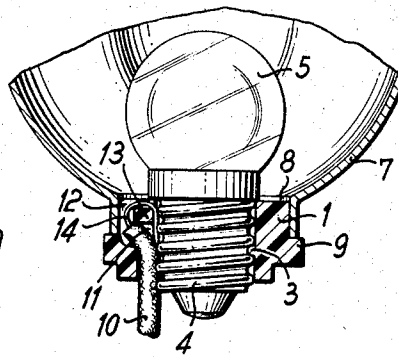


FIG. 2

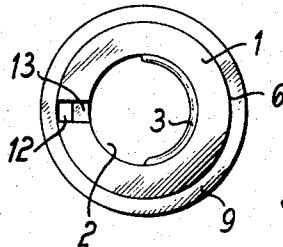


FIG. 5

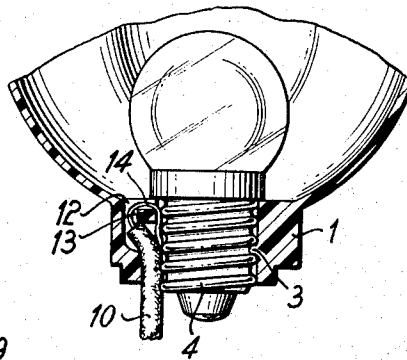
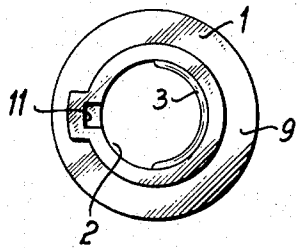


FIG. 3



INVENTOR

Helmut Braun

By

Walter Bucky

1

3,368,184

SOCKET FOR ELECTRIC BULBS, ESPECIALLY FOR VEHICLE LAMPS

Helmut Braun, Frondenberg (Ruhr), Germany, assignor to Union Sils, van de Loo & Co., Frondenberg (Ruhr), Germany

Filed May 31, 1966, Ser. No. 553,997

Claims priority, application Germany, June 4, 1965, U 11,782

7 Claims. (Cl. 339—103)

The present invention relates to a socket for electric bulbs, especially for vehicle lamps. Such sockets comprise a bushing provided with a thread winding for holding the bulb; by means of said bushing the bulb is adapted to be inserted into a socket or reflector.

In an effort to simplify such sockets and to reduce the price thereof, it has been suggested to produce sockets which consist exclusively of a bushing of insulating materials and in which the current feeding cable is brought into direct current conducting connection with the threaded socket of the bulb without special metallic contact elements. The non-insulated end of the current feeding cable is in this instance located in a bore provided in the socket bushing and extending in the direction of the central axis of the bushing and is subsequently folded into the interior of the socket bushing.

With heretofore known sockets of this type, the current feeding cable is not secured against unintentional withdrawal from the interior of the bushing.

It is, therefore, an object of the present invention to provide a socket which will remedy this drawback.

It is another object of this invention to provide a socket for electric bulbs, especially for vehicle lamps, which will bring about that both the current feeding cable as well as the bulb will be secured against unintentional loosening, as for instance by the vibrations of the vehicle.

These and other objects and advantages of the invention will appear more clearly from the following specification in connection with the accompanying drawing, in which:

FIG. 1 illustrates in section a socket according to the present invention with introduced cable.

FIG. 2 is a top view of the socket of FIG. 1.

FIG. 3 is a bottom view of the socket of FIG. 1.

FIG. 4 diagrammatically illustrates in section a reflector with inserted socket according to the invention.

FIG. 5 represents a modification over the arrangement of FIG. 4 and differs therefrom primarily in that the reflector and the socket form a single integral piece.

According to the present invention, it is suggested to provide the socket with pull relief means by which the current feeding cable will be held by the threaded socket in its respective position after the bulb has been inserted. More specifically, this has been realized according to the present invention by providing the socket bushing with two passages for introducing the current feeding cable. These two passages are so arranged with regard to each other that a web or rib is formed about which the non-insulated end of the current feeding cable, i.e. the end from which the insulation has been removed, is folded and introduced into the interior of the bushing where it establishes the current conducting connection with the threaded socket of the bulb. In this connection it is advantageous to arrange the passage for introducing the current feeding cable in the inner bore of the socket in such a way that the mantle of the current feeding cable will have a portion of its circumferential area in engagement with the threaded socket of the bulb. In view of this arrangement, the threaded socket will, when the bulb is screwed in, press itself into the mantle or cover of the current feeding cable whereby both parts will clamp and secure each

2

other. This has the advantage that in addition to the current feeding cable, also the bulb will be secured against accidental loosening by the vehicle vibrations. In order to assure a good clamping, the two passages for introducing the current conducting cable are preferably arranged on that side of the socket which is located opposite to the thread winding.

The socket may, in a manner known per se, be produced by injection molding or pressing of any suitable insulating synthetic material. With reflector lamps and headlights there exists the possibility to produce the socket bushing and the reflector in one piece.

Referring now to the drawing in detail, FIGS. 1, 2 and 3 show a socket 1 having a bore 2 with a thread winding 3 for receiving the corresponding thread winding on a base 4 of an incandescent lamp 5. The outer circumferential area of socket 1 has a cylindrical surface 6 for insertion into a bore 8 in the housing of the lamp or a reflector 7. The depth of insertion of socket or bushing 1 is limited by a collar 9 adjacent the said cylindrical surface 6. Bushing or socket 1 is additionally provided with two passages 11 and 12 which extend in axial direction of said bushing and serve for introducing the current feeding cable 10. These two passages 11 and 12 are provided on that side of bushing 1 which is located opposite to the thread winding 3. As will be seen from the drawing, the passages 11 and 12 are arranged in such a way with regard to each other that a web or rib 13 is formed in the walls of bushing 1. It is about this web 13 that the non-insulated end 14 of the current feeding cable 10, i.e. the end from which the insulation has been removed, is folded and is introduced into the bore 2 of the bushing 1. The depth of the passage 11 is so selected that the current feeding cable 10 with its insulating cover will extend somewhat into bore 2. In this way, the threaded base 4 will when the bulb 5 is screwed into the bushing 1, squeeze itself into the insulating cover of the current feeding cable and will thus bring about a mutual clamping and holding of the current feeding cable 10 and the threaded base 4 of bulb 5 in the socket 1. The non-insulated end 14 of the current feeding cable will likewise engage the threaded base 4 and will thus establish the current conducting connection with the bulb 5.

FIG. 4 shows how the socket or bushing 1 with incandescent bulb 5 and the connected current feeding cable 10 is inserted into a bore 8 in the neck of a reflector 7.

However, as shown in FIG. 5, bushing or socket 1 may be formed of a single piece with the reflector 7.

The bushing 1 may consist of metal or of insulating material, for instance synthetic material, and may be produced by pressing or injection molding. As synthetic material in this connection polystyrol may be used.

It is, of course, to be understood, that the present invention is, by no means limited to the particular embodiments shown in the drawing but also comprises any modifications within the scope of the appended claims.

What I claim is:

1. A socket for electric bulbs, especially for vehicle lamps, which includes: a bushing having a top surface and a bottom surface and also having a bore therethrough extending from said bottom surface to said top surface and being provided with thread winding means for engaging the threaded portion of a bulb inserted into said bore, said bushing additionally being provided with a cranked passage arranged laterally of said bore and extending from said bottom surface to said top surface, said passage having a first section open along its length toward said bore for receiving an insulation covered electric current conducting wire, said passage also comprising a second section communicating with said first section and extending to said top surface while being offset to said first section in the direction toward the outer periphery of said

3

bushing for receiving an exposed wire portion of an insulation covered wire introduced into said first section and permitting bending of said exposed wire portion into said bore against that wall portion thereof which is adjacent said second section.

2. A socket according to claim 1, in which said top surface is provided with groove means leading from the outer end of said second section into said bore.

3. A socket according to claim 1, in which said first section diameter-wise extends slightly into said bore so that an insulation covered wire portion received in said first section will partially extend into said bore and be clamped fast therein by a bulb having a threaded portion inserted into said bore.

4. A socket according to claim 1, in which said thread winding means consists of a portion only of a thread winding and is provided on that side of said bore which is located opposite said passage.

4

5. A socket according to claim 1, in which said bushing consists of pressed synthetic material.

6. A socket according to claim 1, in which said bushing consists of injection molded synthetic material.

5 7. A socket according to claim 1, in which said bushing has a reflector integrally formed thereon.

References Cited

UNITED STATES PATENTS

10 2,100,984 11/1937 Smally ----- 240—143

FOREIGN PATENTS

1,117,748 11/1961 Germany.

15 MARVIN A. CHAMPION, *Primary Examiner.*

J. H. McGLYNN, *Assistant Examiner.*