

C. L. BUNDY & A. H. MANWARING.

STREET LAMP SOCKET.

APPLICATION FILED AUG. 16, 1909.

960,807.

Patented June 7, 1910.

Out-out film

Contact is made here when socket 2 is removed

Fig. 1.

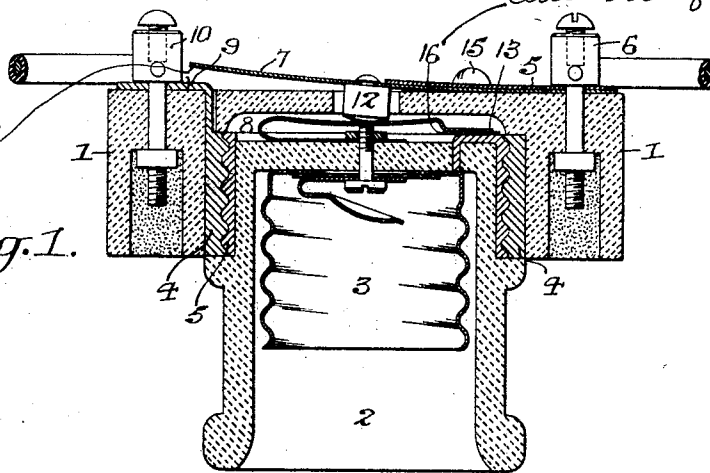


Fig. 2.

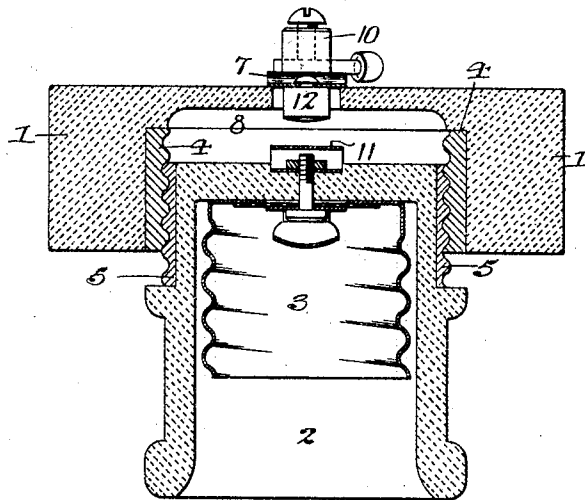
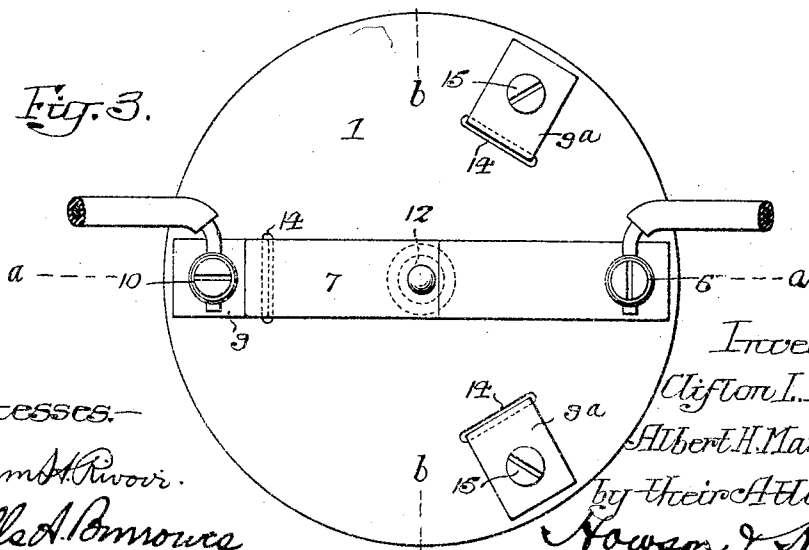


Fig. 3.



Witnesses-

William H. Rivoir.

Will A. Brounce

Inventors-

Clifton L. Bundy.

Albert H. Manwaring.

by their Attorneys-

Kowen & Kowen

UNITED STATES PATENT OFFICE.

CLIFTON L. BUNDY AND ALBERT H. MANWARING, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNORS TO PHILADELPHIA ELECTRICAL & MANUFACTURING CO., OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

STREET-LAMP SOCKET.

960,807.

Specification of Letters Patent.

Patented June 7, 1910.

Application filed August 16, 1909. Serial No. 513,030.

To all whom it may concern:

Be it known that we, CLIFTON L. BUNDY and ALBERT H. MANWARING, citizens of the United States, and residents of Philadelphia, Pennsylvania, have invented certain Improvements in Street-Lamp Sockets, of which the following is a specification.

Our invention relates to sockets for incandescent lamps employed for series incandescent lighting, in which systems it is necessary to provide means for keeping the circuit closed in case a lamp burns out or is removed from its receptacle. In many instances it is desirable and is fast becoming the practice to employ incandescent lights of high candle power for street lighting, having fragile filaments of metal and other material, tungsten, for instance. The usual form of sockets for the reception of these lamps have been provided with an insulating base, usually mounted in a hood, in combination with a socket member arranged to be pushed into such base and into which a lamp with an ordinary Edison base is screwed. It is common knowledge, however, that in practice the removable socket member when pushed into the base member jars the lamp to such an extent that in many instances the delicate metal filament is broken. In order to obviate this, the present invention is so designed that not only does the lamp screw into the socket member, but the socket member also screws into the base member.

The object of our invention, therefore, is to prevent breakage of the fragile metallic filament in the lamps now being generally used for street lighting purposes. It is also desirable in such structures to employ means preventing the formation of an arc when the socket is removed from the receptacle.

Other features of our invention will be pointed out hereinafter, reference being had to the accompanying drawings, in which:

Figure 1, is a sectional elevation of a street lamp socket made in accordance with our invention, taken on the line *a-a*, Fig. 3. Fig. 2, is a vertical section, taken on the line *b-b*, Fig. 3, and Fig. 3, is a plan view of our improved structure.

In the drawings herewith, 1 represents a base member, and 2 a socket member or lamp receptacle, having within the same a threaded shell 3 of the well-known Edison

type. The base member is provided with an internally threaded shell 4 into which a similarly threaded metal shell 5 carried on the exterior of the socket member 2 may be screwed. Upon one side of the base is a terminal 6, to which a contact strip 7 is connected, such strip extending across the center of the central recess 8 of the base member into which the said socket member is screwed, and being resilient or having combined with it a resilient or springy member. When said socket member is not in position this contact strip 7 engages a contact strip 9 on the opposite side of the base, which is connected to a second terminal 10, so that said terminals are connected, closing the line circuit. When, however, the sprocket member 2 is screwed into position, a contact piece 11 mounted upon the same, preferably resilient and constituting a conducting member, engages a metallic projection 12 on the contact strip 7, thereby forming electrical connection between the terminal 6 of the base and the center terminal 11 of the socket member, and also raising said contact strip 7 out of engagement with the contact strip 9, as 80 shown.

As may be noted upon references to the drawings, the threaded shell 3 is electrically connected by a strip 13 with the exteriorly threaded shell 5 of the socket member, while the threaded shell 4 of the base member is electrically connected with the terminal 10. It will be readily understood, therefore, that after a lamp has been screwed into the shell 3, the socket member 2 may be entered into the base member 1 and electrically placed in circuit by raising the spring strip 7 without occasioning the slightest jar to the lamp.

The base is apertured at 14 for the passage of the strip 9, which may be integral with the shell 4. In addition this shell has other strips, indicated at 9^a, which pass through said apertures 14, and are secured to the base by means of screws 15. These strips are set equi-distant, so that any one may form the contact in engagement with the terminal 10.

In our device, should the lamp be broken, a thin sheet of high resistance material 16 placed between the contact piece 11 and the strip 13 punctures, thereby closing the circuit, and when the socket is removed from the receptacle, the line is also automatically

closed by the act of unscrewing the socket. A new lamp can be put into the socket, and after renewing the high resistance material 16, the whole can be screwed back into the receptacle without vibration or possibility of breaking the filament. This result is attained by our improved construction, comprising the exterior and interior threads on the socket and receptacle.

10 The working parts of this socket are very much more accessible than in any other series socket used for this purpose.

The device may be so changed, so far as the outside thread on the socket is concerned, as to permit the use of a single thread having sufficient pitch to lift it in position with substantially a single turn.

We claim:

1. A lamp socket having a base member provided with an internal shell, terminal contacts carried by said base member, one of which is movable, a socket member having an external shell arranged to be entered into the shell of the base member, said socket having a contact for engagement with the movable contact whereby the latter may be pushed out of the way, and a lamp receiving shell or terminal in the socket member.

2. A lamp socket having a base member provided with an internally threaded shell, terminals carried by said base member, one of which terminals has a spring contact, a socket member having an externally threaded shell arranged to be screwed into the base member, said socket having a contact for engagement with the spring contact of the terminal whereby the latter may be pushed out of the way, and a lamp receiving shell or terminal in the socket member.

3. A lamp socket consisting of an annular supporting base structure of insulating material provided with an internally threaded metal ring, terminals mounted on said base structure, of which one is provided with a spring contact capable of engaging the other terminal, said second terminal being connected to said metal ring, a socket member having an externally threaded metal ring capable of screwing into the ring of the base structure, lamp receiving terminals on the socket member, of which one is electrically connected to the externally threaded ring thereof, and the other has a portion capable of engaging the spring contact of the base structure to move the same out of engagement with the second terminal thereof.

4. The combination of an annular base structure of insulating material, terminals on opposite sides thereof, a spring contact connected to one terminal and extending across the center of the base structure so as to be capable of engaging the other terminal, an internally threaded metal ring within the base structure electrically connected to the second terminal, and a socket

member provided with an externally threaded shell capable of screwing into the metal shell of the base structure, said socket member having a centrally placed contact capable of engaging the spring contact of the base structure so as to move the same out of engagement with the second terminal and being provided with terminals for electrical connection to a lamp, one of said terminals being connected to said central contact, and the other to the shell carried by the socket member.

5. A lamp socket having an apertured base member, in combination with an internal shell, having projections arranged to pass through said apertures and terminal contacts carried by said base member, one of said projections being in electrical contact with one of said terminals.

6. A lamp socket having a base member provided with an internal contact, separable terminal contacts carried by said base member and normally tending to engage each other, a lamp receptacle having an external contact arranged to engage the internal contact of said base member, said receptacle also having a conducting member capable of engaging one of the terminal contacts of said base so as to hold it out of engagement with the other terminal contact, and lamp terminals in said receptacle.

7. A lamp socket having a base member provided with an internally threaded shell, two terminals on said base member, a spring contact member normally connected to one of the terminals and tending to engage the other, a socket member having an externally threaded shell entering the shell of the base member, said socket member having a contact arranged to engage the spring contact of the base, and lamp terminals in said socket of which one is connected to the contact thereof.

8. In series incandescent lighting, a receptacle having automatic line closing contacts and a lamp socket adapted to receive an incandescent lamp therein and carrying means normally made inoperative by insulation of low dielectric value for short circuiting the lamp contacts, together with screw means for securing said contact in said receptacle.

9. In series incandescent lighting, a receptacle having a spring contact adapted to automatically establish the line circuit, in combination with a lamp receptacle and screw means for securing said lamp receptacle to said first mentioned receptacle and means in connection therewith for breaking said spring contact and leading the current to the contacts of the lamp receptacle whereby the circuit may be completed through the lamp.

10. In series incandescent lighting, a receptacle having a spring contact adapted to

automatically establish the line circuit, in combination with a lamp socket and screw means for securing said lamp socket to said receptacle and means in connection therewith for breaking said spring contact and leading the current to the contacts of the lamp receptacle whereby the circuit may be completed through the lamp, together with means for automatically short circuiting the lamp upon the interruption of the circuit in the lamp.

11. In a lamp socket for the purpose specified, shell and center contacts, the center contact having a screw rod, together with a spring contact secured thereon bearing through insulation of low dielectric value against a conductor in the shell circuit, substantially as described.

12. In series incandescent lighting, a receptacle having automatic line-closing contacts, a lamp socket adapted to be secured thereto, having shell and center contacts for a lamp of ordinary type and a rod adapted to lead the current to said center contact, in combination with a contact member mounted on said rod adjacent a member in the shell circuit and insulation of low dielectric value separating said contact from said member in the shell circuit whereby the line circuit may be closed therethrough upon interruption of the circuit through the lamp.

13. In series incandescent lighting, a

spring contact normally closing the circuit, a screw shell electrically connected with one member of said spring contact, in combination with a lamp-carrying member adapted to be screwed into said shell and carrying shell and center contacts for a lamp of ordinary type, together with means for electrically connecting said lamp shell with said screw shell and means in connection with said center contact for breaking the spring contact normally closing the circuit and establishing electrical connection with said center contact for the lamp whereby the circuit may be completed through the lamp, substantially as described.

14. In series incandescent lighting, a receptacle comprising a lamp socket having shell and center contacts to receive an incandescent lamp therein and a conductor engaging one of said contacts and normally separated from the other contact only by insulation of low dielectric value, for the purpose described.

In testimony whereof, we have signed our names to this specification, in the presence of two subscribing witnesses.

CLIFTON L. BUNDY.
ALBERT H. MANWARING.

Witnesses:

MURRAY C. BOYER,
WM. A. BARR.

It is hereby certified that in Letters Patent No. 960,807, granted June 7, 1910, upon the application of Clifton L. Bundy and Albert H. Manwaring, of Philadelphia, Pennsylvania, for an improvement in "Street-Lamp Sockets," an error appears in the printed specification requiring correction as follows: Page 1, line 71, the word "sprocket" should read *socket*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 13th day of June, A. D. 1911.

[SEAL.]

C. C. BILLINGS,

Acting Commissioner of Patents.