

Sept. 22, 1931.

J. H. KINZLER

1,824,600

LAMP SOCKET

Filed May 22, 1930

Fig. 3.

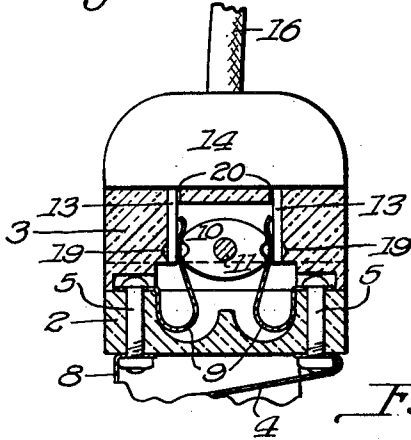


Fig. 2.

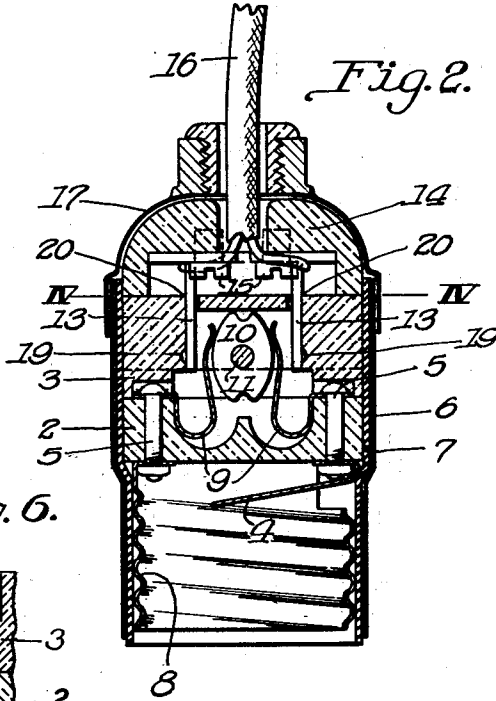


Fig. 6.

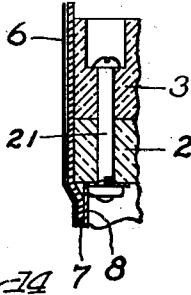


Fig. 1.

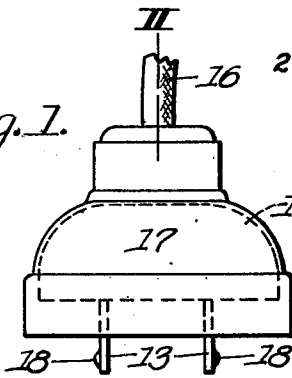


Fig. 4.

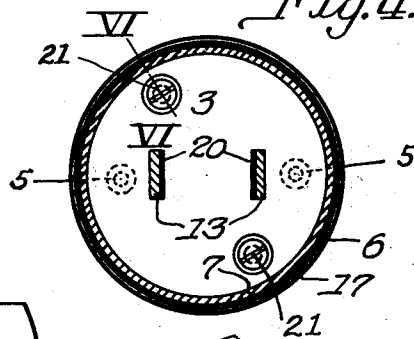
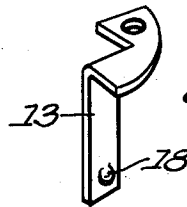
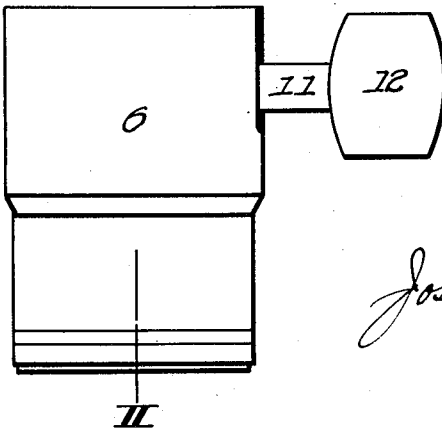


Fig. 5.



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LAMP SOCKET

Application filed May 22, 1930. Serial No. 454,541.

My invention consists of an improvement in sockets for electric lamps of the incandescent type. It has in view to provide in a socket of such a type means whereby the circuit may be opened and closed within the body portion of the socket by means of key-actuated make and break contact mechanism operable in connection with the contact prongs of a removable plug.

One of the particular advantages of the construction is that the socket is capable of connection or disconnection with the plug, without danger of short circuiting, permitting its use with a live wire connector with the plug, and avoiding the necessity of disconnection from a source of current or of circuit connections or disconnections, in the manner more fully hereinafter described.

Referring to the drawings showing one preferred embodiment of the invention:

Fig. 1 is a view in side elevation of the entire socket and plug, disconnected;

Fig. 2 is a central vertical section thereof on the line II—II, assembled, in non-conducting position;

Fig. 3 is a partial similar view showing the circuit closed;

Fig. 4 is a cross sectional view on the line IV—IV of Fig. 2;

Fig. 5 is a detail view of one of the prongs of the plug detached;

Fig. 6 is a sectional detail view on the line VI—VI of Fig. 4.

Referring to the drawings, the main inner base portion of the socket consists of a plurality of insulating members 2 and 3, held together by screws or bolts 21 as a unitary construction within the outer surrounding shell 6, and preferably with an intervening non-conducting shell or insulating lining 7 of fibre or other suitable material.

The base portions 2 and 3 are of porcelain, bakelite, or other suitable insulating material of usual or well known construction, having sufficient strength and capable of being manufactured by any of the usual methods known to the art.

An inner threaded shell 8 for reception of the neck of the lamp is connected and in electrical communication with screw or bolt

5 at one side as shown in Fig. 2, while a middle contact spring 4 is similarly connected by the nut of a similar screw or bolt 5 at the other side.

Clamped between members 2 and 3 of the base by screws or bolts 5 and in electrical communication with each of the screws 5, are the oppositely located spring contact members 9. These, as shown, are of resilient form bearing inwardly at each side against the opposite faces of an insulating cam 10 rotatably mounted by stem 11 of the opening and closing key 12, of usual form.

Cam 10 is provided with extending portions sufficiently longer than the middle width of the cam to thrust the spring terminals of contact members 9 outwardly into close contact with the plug terminal members 13.

These, as shown, are mounted within the inner body of an insulating plug 14 and connected by screws 15 with the individual wires of a compound conductor 16 extending outwardly through the terminal opening of the plug casing 17 of well known construction. Such plug and its casing are connected with the casing 6 by a bayonet joint, screws, or other suitable connection so that when the parts are brought together they will constitute a complete operative unit.

The terminals 13 of the plug are slightly resilient and are provided at their opposite outer ends with projections or lugs 18 adapted to interfit in corresponding receiving sockets 19 of the base member 3, as in Fig. 2.

The object of such construction is that upon insertion of the plug terminals through the openings 20 of base member 3, they will engage with sockets 19 due to their outward resiliency and will prevent accidental withdrawal. The plug may, however, be separated from the main socket by using sufficient force and in either removal or insertion the lugs 19 will spring outwardly, effecting the above desired result.

The construction, operation and advantages of the invention will be readily understood and appreciated from the foregoing description, and it will be understood

that it may be made in different sizes, proportions, or by the use of different suitable material by the skilled mechanic, but that all such changes or variations are to be understood as within the scope of the following claims.

What I claim is:

1. In a lamp socket of the kind disclosed, the combination with an insulating base having a lamp receiving shell and a pair of circuit establishing spring contact arms and a key-actuated spreader therefor, of a removable plug having prongs insertible in the base in range of said arms.

2. In a lamp socket of the kind disclosed, the combination with an insulating base having a lamp receiving shell and a pair of circuit establishing spring contact arms and a key-actuated spreader therefor, of a removable plug having resilient prongs insertible in the base in range of said arms and having arresting projections thereon.

3. In a lamp socket of the kind disclosed, the combination with an insulating base having a lamp receiving shell and a pair of circuit establishing spring contact arms, a holding socket secured to the base, a key-actuated spreader for the contact arms, and a removable plug having resilient prongs insertible in the base in range of said arms and having lugs adapted to seat in the holding sockets of the base.

4. In a lamp socket of the kind disclosed, the combination of a two-part insulating base, an outer lamp receiving shell, a pair of circuit establishing spring contact arms, a threaded holding socket within the shell, a contact spring within the shell, bolts extending through one of the base members connecting the contact arms with the threaded socket and contact spring respectively, bolts connecting the members of the two-part base, a key-actuated spreader for the contact arms, and a removable plug having resilient prongs insertible in the base in range of said arms and having lugs adapted to seat in the holding sockets of the base.

In testimony whereof I hereunto affix my signature.

JOSEPH H. KINZLER.

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