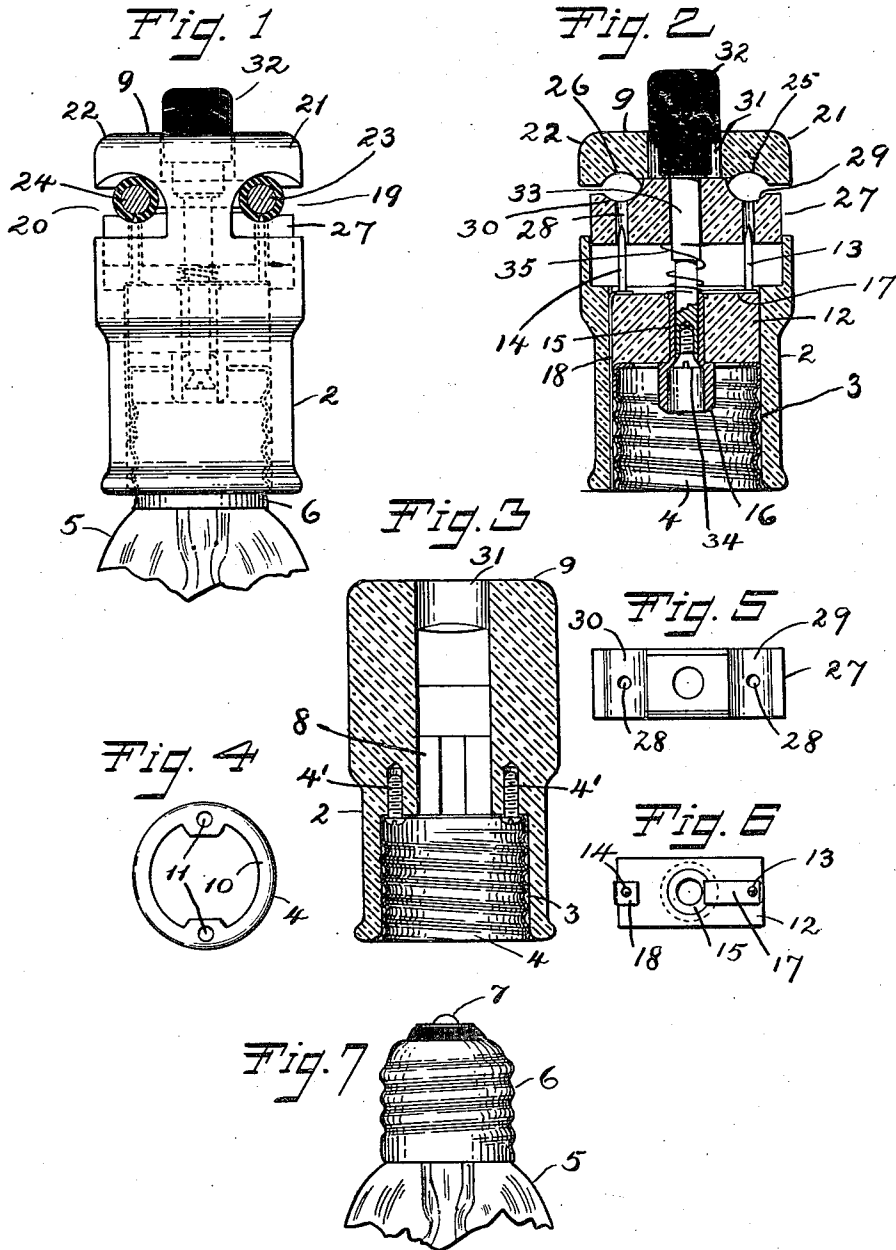


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INCANDESCENT LAMP SOCKET.
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UNITED STATES PATENT OFFICE.

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INCANDESCENT-LAMP SOCKET.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, MARTIN V. SMITH, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Incandescent-Lamp Sockets, of which the following is a specification.

This invention relates to incandescent-lamp sockets, the object of the invention being to provide a simple and effective article of this character which can be readily and quickly connected with a wire or wires or similar conducting means and by which an incandescent-lamp can be put into electrical connection with said conducting means of whatever nature the same may be.

In the drawings accompanying and forming part of the present specification I have shown in detail one of the several convenient forms of embodiment of the invention, which to enable those skilled in the art to practise the same will be set forth fully in the following description. I do not restrict myself to this particular disclosure; I may depart therefrom in several respects within the scope of the invention defined by the claims following said description.

Referring to said drawings: Figure 1 is an elevation of an incandescent lamp socket, involving my invention, showing part of a lamp connected therewith. Fig. 2 is a central vertical section of said socket. Fig. 3 is a similar view of the body, the section, however, being taken at right angles to that of Fig. 2 and the socket member only appearing. Fig. 4 is a top plan view of a socket member. Fig. 5 is a bottom plan view of a clamping-member. Fig. 6 is a top plan view of a bridge-member, and, Fig. 7 is an elevation of the base portion of the lamp shown in Fig. 1.

Like characters refer to like parts throughout the several figures.

The device involves in its construction a suitable support, the body 2 answering in this respect and being of some non-conducting material, such for instance as porcelain, fiber or composition. This body 2 is practically hollow, and it incases certain parts hereinafter more particularly described. In

the lower part of the body is a chamber as 3 (shown as cylindrical) and which is adapted to receive a socket-member such as the shell 4. This socket member or shell 4 is of some conducting material such as copper or brass. While the base member of the lamp 5 might be connected with this socket-member or shell 4 in any desirable manner, I prefer that the connection be a screw-threaded one, the said socket member or shell 4 being internally threaded to receive the external threads of the contact-shell 6 of the lamp 5, said lamp being provided with the usual central end contact 7, the two parts 6 and 7 being quite familiar and constituting the terminals of said lamp. The insulating body 2 in addition to the chamber 3 has a slot 8 therein of approximately rectangular form, the lower end of which intersects substantially centrally, the chamber 3, the upper wall of the slot being presented by the top 9 of the body 2. Said slot 8 receives as will hereinafter appear, for sliding movement, a jaw or clamping member and a bridge-member both preferably of some insulating substances such as one of those hereinbefore mentioned. The upper wall of the chamber 3 at opposite sides of the longitudinally-extending slot 8 presents seats or shoulders for receiving the turned annular flange 10 of the socket member or shell 4. This socket-member may be held in position in any desirable manner, for instance by screws 4' extending through perforations 11 in the flanged portion thereof and tapped into the upper wall of said chamber 3, this being one of several convenient ways of securing the socket-member 4 in place. The exterior of said socket member is spaced or slightly separated from the adjacent wall of the chamber 3 for a reason that will hereinafter appear. Fitted for sliding movement in the lower portion of the slot 8 is the non-conducting bridge member 12 which constitutes a suitable carrier for practically duplicate contacts such as the pins 13 and 14, the shank of said pins being rigidly connected with the bridge member or carrier 12 and means being provided to electrically connect them with the terminals of the lamp 5. Said pins are

sharpened to present barbs or spurs, extending in parallelism with each other longitudinally of the body 2 and being advancible by and on the insertion of the lamp 5 into the socket member 4 which action in the construction shown is secured, by an upward thrust imparted by the lamp when it is inserted in the socket member 4. Extending through the bridge member or carrier 12 is a sleeve or hollow rivet 15, the upper edge of which is spun or otherwise fitted in a countersink in the upper surface of the bridge member 12, the lower enlarged head 16 of said sleeve fitting against the under side of the bridge member which provides a simple means of holding said bridge member in place. The sleeve 15 with its head 16 is of some conducting material such as brass and constitutes a suitable central contact.

Fastened suitably to the top of the bridge member 12 is a conducting strip 17, the ends of which are connected electrically with the conducting sleeve 15 and pin 13. The pin 14 is connected with the bent over upper end of the conducting strip 18, the body of this strip 18 extending downward between one edge of the bridge member 12 and into the space between the socket member 4 and body 2, the lower bent free end of said conducting strip or finger 18 having a slidable electrical contact with the exterior surface of said socket member 4 from which, as will be inferred, there is a constant electrical connection between the pin 14 and socket member 4. In like manner there is a constant electrical connection between the pin 13 and head 16, the bridge member or carrier 12 insulating the two pins from each other.

The insulating body 2 at its upper end has opposite notches 19 and 20, the overhanging upper portions 21 and 22 of said body 2, constituting suitable fixed jaws against which the wires 23 and 24 are clamped as will hereinafter appear, the under or inner sides of these jaws 21 and 22 having seats 25 and 26 to receive the two wires. Mounted in the upper part of the slot 8 for slidable movement longitudinally of the body 2 is the jaw member 27 having perforations 28 therethrough to receive the pins 13 and 14. The jaw member 27 has notches 29 and 30 in its upper side complementary with the notches 25 and 26 respectively.

The top 9 has an approximately central perforation 31 to receive the button 32 of some suitable insulating material, the lower end of this button having a bearing against the upper surface of the bridge member 27. Connected rigidly with the button 32 is the shank or pin 33 which extends freely through a central perforation in the bridge member 27 and which is fitted in the sleeve 15, the screw 34 tapped into the lower end of the

pin 33 and the head of which fits against the sleeve 15 constituting a convenient means for normally rigidly connecting the pin 33 with the bridge member 12, by virtue of which, said bridge member can be operated by the pin 33 and consequently by the button 32. Interposed between the bridge member 12 and the jaw 27 is the expanding or push spring 35 which constantly tends to separate said parts 12 and 27.

When no lamp is connected with the socket the parts will occupy the positions shown in Fig. 2. To connect a lamp, through the intervention of the socket, with wires, the following procedure may be adopted: The button 32 will be pressed in thereby moving the jaw member 27 inward, so that the wires can be passed into the opposite apertures or notches 19 and 20, and when said wires are in the seats 25 and 26, the button will be released, so that the jaw member can be advanced by the spring 35, compressed by the inward motion of the jaw member, to thereby clamp the two wires and necessarily connect the socket with said wires. When this is accomplished the base of the lamp 5 will be inserted in the socket member 4 and when the base of the lamp engages the head 16, the latter and hence the bridge member 12 will be elevated or thrust outward, the pins 13 and 14 being moved in a corresponding direction and being caused to penetrate the insulation of the wire, so that the pointed ends of the pins can be brought into electrical connection with the cores of the wires at which point the terminals of the lamp are in circuit with the said wires, and if the circuit is closed, the lamp will be lighted. To detach the socket the lamp will be run out a short distance relieving its pressure upon the head 16 and the button 32 will be pushed inward, so that the clamping member 27 is correspondingly moved to free the two wires. By continuing the motion the button through the described parts can thrust the bridge member or carrier 12 inward, thereby positively moving the pins 13 and 14 from out of the insulation of the wires.

It will be noted that the means by which the contact means, comprising the contacts 13 and 14 in the present instance, are projected into electrical connection with the conducting means, operates independently of the clamping means for said conducting means by which the conducting means can be first clamped in operative relation with the socket 2 after which the contact means can be moved into electrical connection with the conducting means.

What I claim is:

1. An incandescent lamp socket comprising means for connection therewith of wires, means for the connection therewith of an incandescent-lamp, contacts insulated from each other, means for electrically connecting

said contacts with the terminals of said lamp when said lamp is connected with said socket, and means for moving said contacts into electrical connection with said wires by
5 and on the connection of said lamp with said body.

2. An incandescent lamp socket comprising means for clamping wires thereof, means for the connection therewith of an incandescent-lamp, contacts insulated from each other, means for connecting said contacts with the terminals of said lamp when the latter is connected with said socket, and means for simultaneously moving said contacts into electrical connection with said wires.
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3. An incandescent lamp socket comprising means for clamping wires thereto, means for the connection therewith of an incandescent lamp, contacts insulated from each other, means for electrically connecting said contacts with the terminals of said lamp when the latter is connected with said socket, and means for moving said contacts into electrical connection with said wires by and on the connection of said lamp with said body.
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4. An incandescent lamp socket comprising means for connection therewith of wires, means for the connection therewith of an incandescent-lamp, a bridge-member having contacts, means for electrically connecting said contacts with the terminals of said lamp when the latter is connected with the socket, the bridge member being in position to be operated by the lamp by and on the connection thereof with said body for causing said contacts to be moved into electrical connection with said wires.
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5. An incandescent lamp socket comprising a socket-member, a pair of contacts insulated from each other, and means actuated by the lamp on the insertion of the base thereof into said socket-member, for advancing said contacts.
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6. An incandescent lamp socket comprising a socket-member, and having means for the connection therewith of wires, a pair of contacts insulated from each other, means actuated by the lamp on the insertion of the base thereof into said socket member, for moving said contacts into electrical connection with the wires, and means for moving the contacts away from the wires.
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7. An incandescent lamp socket comprising a socket-member and having means for the connection therewith of wires, a pair of contact pins insulated from each other, and means actuated by the lamp on the insertion of the base thereof into said socket member, for pushing said contacts through the insulation of the wire.
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8. An incandescent lamp socket comprising a socket-member and having means for the connection therewith of wires, a pair of
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contact pins insulated from each other, means actuated by the lamp on the insertion of the base thereof into said socket member, for pushing said contacts through the insulation of the wire, and means for moving said contact pins out of the insulation.
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9. An incandescent lamp socket comprising an insulating body, a movable bridge member in the body, and contacts on the bridge member, the body having openings for the passage of said contacts.
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10. A lamp socket having means for the connection therewith of conducting means, contact means, and means actuated by the lamp on the connection thereof with said socket for moving said contact means into electrical connection with said conducting means.
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11. An incandescent lamp socket comprising a non-conducting body, a socket member of conducting material set into said body, a movable bridge member in the body, a pin extending from the bridge member, an electrical connection between said pin and socket member, a second pin on the bridge member, the latter having a central contact adapted to be engaged by the central end contact of the lamp and the central contact of the bridge member being electrically connected with said second pin.
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12. An incandescent lamp socket comprising a non-conducting body having lateral apertures, one side of each of which constitutes a jaw, a movable jaw member in the body, the terminals of which cooperate with the other jaws to clamp wires, means for retracting said jaw member, contacts, the jaw member having openings to receive said contacts, and means whereby said contacts can be moved into electrical connection with said wires.
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13. An incandescent lamp socket comprising means for clamping wires thereto, means for the connection therewith of an incandescent lamp, contacts insulated from each other, means for connecting said contacts with the terminals of said lamp when the latter is connected with the socket, and means active independently of the clamping means, for moving said contacts into electrical connection with said wires.
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14. An incandescent lamp socket comprising means for clamping wires thereto, means for the connection therewith of an incandescent lamp, pointed contacts insulated from each other, means for connecting said contacts with the terminals of said lamp when the latter is connected with said socket, and means active independently of the clamping means and after the wires are clamped for pushing the pointed portions of the contacts through the insulation of the wires.
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15. An incandescent lamp socket provided with contacts insulated from each
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other, means for the connection of said contacts with the terminals of a lamp when the latter is connected with the socket, and means for clamping wires to the socket and
5 for moving said contacts into electrical connection with the wires after the wires have been clamped.

In testimony whereof I affix my signature in presence of two witnesses.

MARTIN V. SMITH.

Witnesses:

L. L. MARKEL,
HEATH SUTHERLAND.