

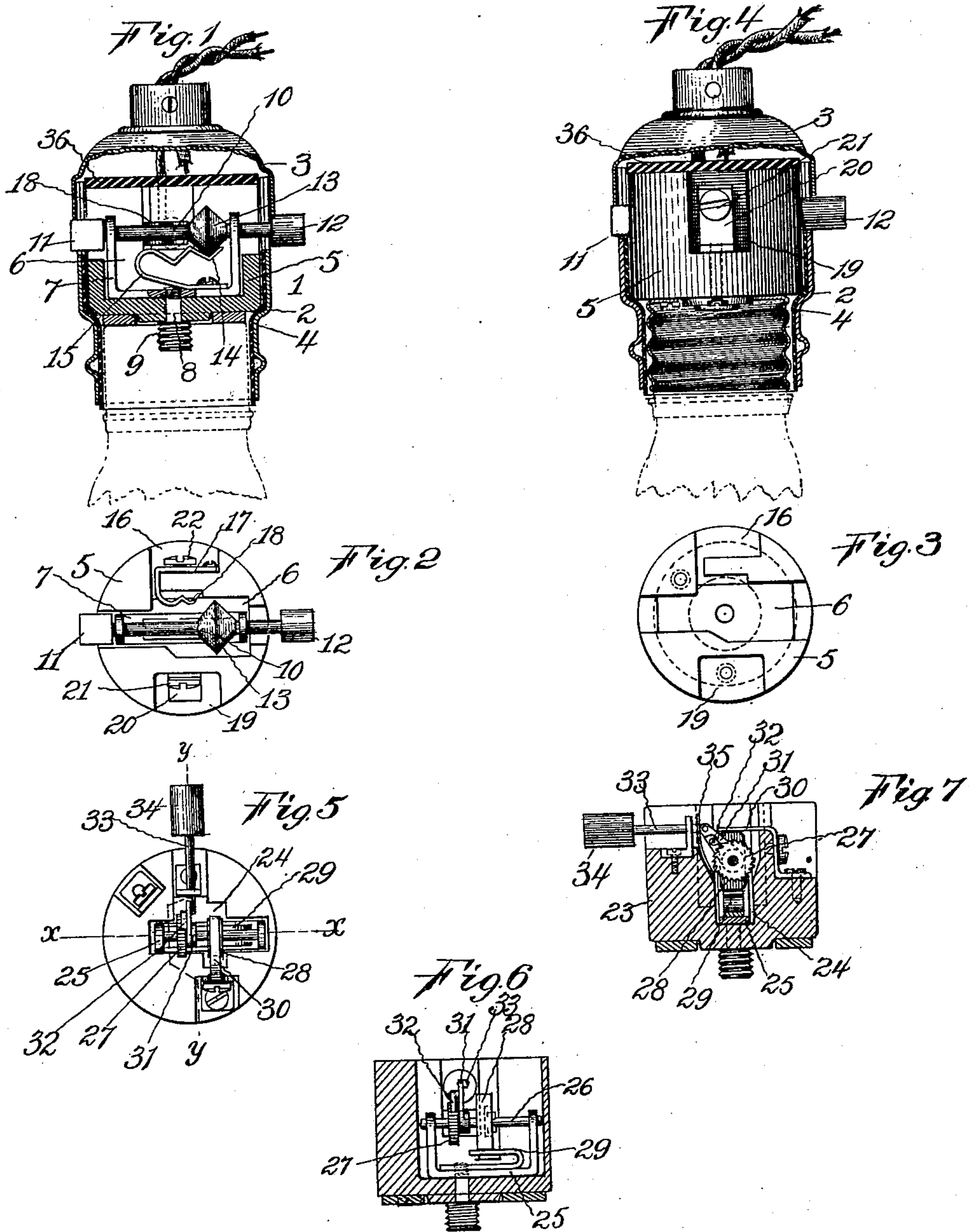
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J. H. & H. TRUMBULL.
ELECTRIC LAMP SOCKET.

(Application filed Dec. 16, 1899.)

(No Model.)



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UNITED STATES PATENT OFFICE.

JOHN H. TRUMBULL AND HENRY TRUMBULL, OF PLAINVILLE,
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ELECTRIC-LAMP SOCKET.

SPECIFICATION forming part of Letters Patent No. 669,151, dated March 5, 1901.

Application filed December 16, 1899. Serial No. 740,527. (No model.)

To all whom it may concern:

Be it known that we, JOHN H. TRUMBULL and HENRY TRUMBULL, citizens of the United States, residing at Plainville, in the county of Hartford and State of Connecticut, have invented a new and useful Electric-Lamp Socket, of which the following is a specification.

The invention relates to the ordinary form of incandescent electric lamps in which there are a socket and a bulb, the socket containing the switch by means of which the current is turned through the filament or cut off; and its object is to provide an electric switch or cut-off that may be used to show at a glance the condition of the incandescing filament as to life, as well as to provide compact and novel means for operating the switch in the lamp-socket.

Referring to the drawings, Figure 1 is a side view of the lamp-socket, with parts broken away to show construction. Fig. 2 is a detail top view of the non-conducting block and attached switch and contacts. Fig. 3 is a detail top view of the non-conducting block. Fig. 4 is a side view of a different form of socket from that shown in Fig. 1, with parts cut away in section. Fig. 5 is a top view of a block, showing a modified form of switch. Fig. 6 is a view in section of a modified form on plane denoted by the dotted line *xx* of Fig. 5. Fig. 7 is a view in section of the same device on plane denoted by the dotted line *yy* of Fig. 5.

In the accompanying drawings the numeral 1 denotes a socket for an incandescent electric lamp; 2, the metallic shell; 3, the cap or cover; 4, a lining of non-conducting material, and 5 an insulating-block. This block 5 is made of any suitable non-conducting material, preferably porcelain, as that is readily molded to the desired form, with recesses and openings in which the operative parts of the device are located. In the form shown in Fig. 1 the block 5 is open on the top and has a recess 6, extending, preferably, across the center of the block. A metallic switch-frame 7 is located in the bottom of this recess 6, and a stud or bolt 8, with a threaded head 9, is screwed into a threaded socket in the frame 7 to hold the latter firmly in place and also

serve as a connection from the switch to one wire of the lamp-filament.

The switch-frame 7 supports a reciprocating switch 10, the outer ends of which extend through openings in the shell of the socket and on diametrically opposite sides, the shaft being so proportioned that one button 11 is quite close to the surface of the socket when the other button 12 on the other end of the switch projects noticeably beyond the wall. The shaft of the switch 10 is provided with a cam 13 with inclined faces to enable it to engage the angular bends 14 in the contact-spring 15. A sufficient pressure on the end of the projecting knob, as 11, will move the shaft across the socket, disengage the cam from one of the bends, and cause it to locate in the other bend in position, as shown in Fig. 1 of the drawings. In this position the lamp appurtenant to the socket will be cut out.

In a recess 16 in the side of the block 5 a contact 17 is secured by any convenient and ordinary means, this contact having a spring-arm 18, which is located in the path of movement of the cam on the switch-shaft and provided with an angular bend to closely engage the cam. When the switch is in a position to engage the contact-spring 18, it also engages the spring 15 and would enable a current to pass through the lamp. In a recess 19 in the block 5 another contact 20 is located and so arranged as to make contact with the other wire of the lamp. A binding-screw 21 serves to unite one leading-in wire with the contact 20 and the binding-screw 22 serves to unite the other leading-in wire with the contact 17. The bulb having the usual metallic shank is connected to the socket 1 by screwing it onto the threaded head 9 of the block 8.

When the push-button switch, as above described, is used, it is preferred to have one of the buttons, as 11, white and the other black, or any other two contrasting colors may be used, so as to show at a glance the position of the switch whether on or off. If the current is on and the switch thrown so as to establish an electrical connection through the socket and the filament fails to glow, it will show that it is burned out and a new lamp required.

Fig. 4 shows simply a modified form of contact for a different pattern of lamp from that shown in Fig. 1, the metal post or stud for contact with one terminal of the filament in the bulb being left flat on top instead of threaded, as in the form shown in Fig. 1 of the drawings.

In Figs. 5, 6, and 7 a modified form of the device is shown in which the push-button is used on but one side. The numeral 23 denotes the insulating-block with the recess 24 for the operative parts, a switch-form 25, supporting a rock-shaft 26, on which is secured a ratchet-wheel 27. The shaft also supports a block 28, oblong in shape and adapted to extend across between the contact-spring 29 and the contact-spring 30. At one end of the ratchet-wheel an arm 31 is mounted on the rock-shaft and carrying a spring-pawl 32, which engages the teeth in the ratchet-wheel 27. The outer end of the arm is connected to the rod 33, on the outer end of which is the push-button 34, and when the latter is moved in the ratchet and shaft connected to it are rotated, at the same time turning the switch-block 28. The push-button is returned to its outer position by means of a spring 35. Suitable contacts are provided for connecting the leading-in wires and the lamp-wires.

In all the forms of the improvement in which the insulating-block has an open end a cover 36 of insulating material is provided and held firmly in place on the block by any convenient means.

The old form of switch in an electric lamp of this class is provided with a turn-button, and when the lamp is on the end of a cord or held by other flexible connection both hands are required to manipulate the switch. With our improved form of push-button switch the latter is easily operated with the fingers and thumb of one hand and without any danger of twisting the lamp so as to break or disturb the continuity or position of the leading-in wires to which the lamp is attached.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. In an electric-lamp socket, in combina-

tion, a shell, an insulating-base located within the shell and having a recess depthwise thereof, a sliding shaft located within and with its ends projecting beyond the walls of this base, and contacts projecting through the walls of this base and adapted to engage the sliding shaft, said contacts being connected up within the circuit.

2. In combination in a lamp-socket, a shell, an insulating-base located within the shell and having a recess depthwise thereof, a frame secured to the bottom of this socket, a sliding shaft having its bearings in said frame and with its ends projecting through the walls of the socket in the base, contacts extending through the walls of said socket and adapted to make connection with the sliding shaft and connected up within the circuit.

3. In combination in a lamp-socket, a shell, an insulating-base located within the shell and having a recess depthwise thereof with lateral openings into said recess, a sliding shaft extending through the recess in the base-plate and having an angular surface formed thereon, and contacts extending through the lateral openings in the base and having angular sockets adapted to receive the angular surface on the shaft and connected up within the circuit.

4. In combination in a lamp-socket, a shell, an insulating-base located within the shell and having a recess depthwise thereof and lateral openings into said recess, a U-shaped frame secured to the bottom of this socket, a sliding shaft having its bearings in the arms of the U-shaped frame and having an angular surface and extending through the side walls of the socket, and contacts projecting through the lateral openings in the socket and having a bent end with an angular recess adapted to engage the angular surface on the shaft and connected up within the circuit.

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