No. 698,133. Patented Apr. 22, 1902.

W. H. PERKINS.

INCANDESCENT LAMP SOCKET.

(Application filed Apr. 9, 1901.)

(No Model.)

Fig. 1

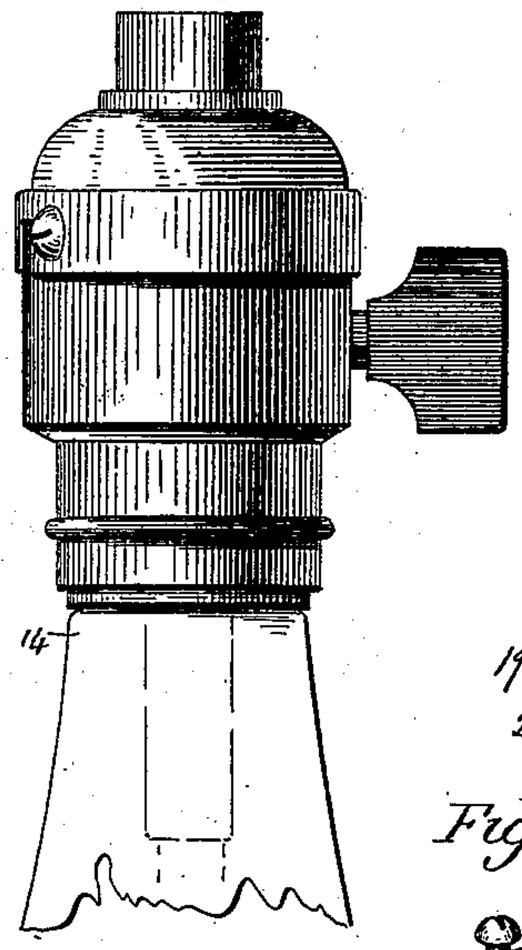


Fig. 2

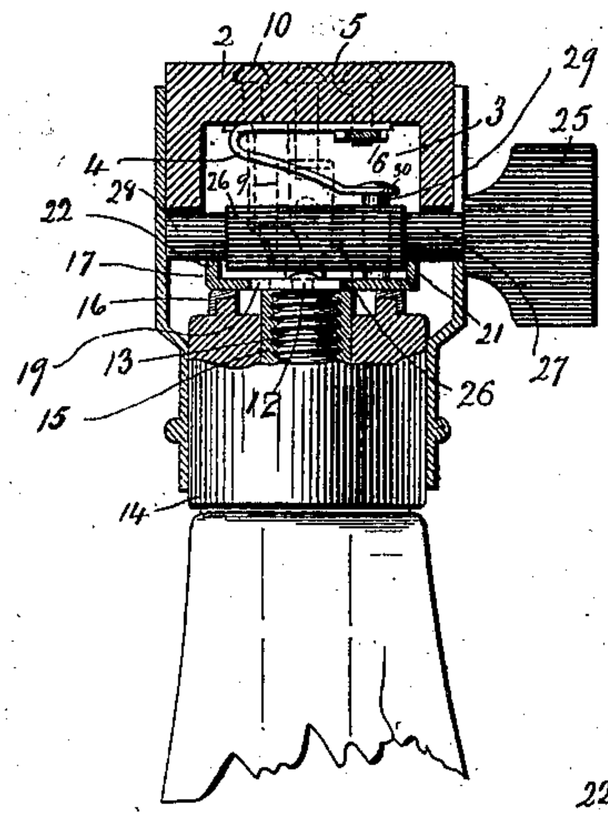


Fig. 3

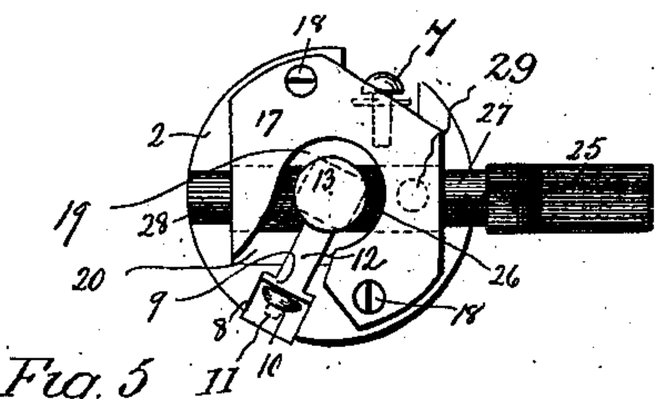


Fig. 4

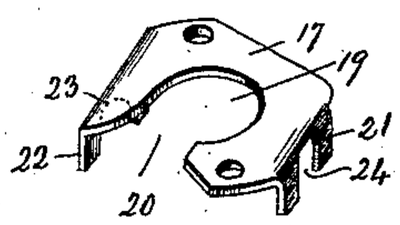


Fig. 5

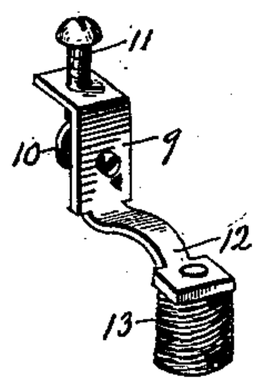


Fig. 6

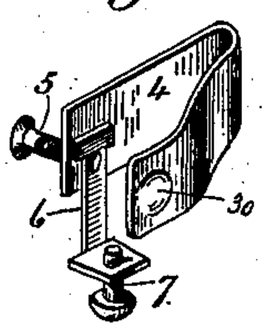


Fig. 7

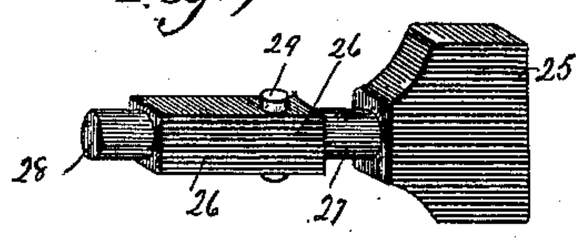


Fig. 8

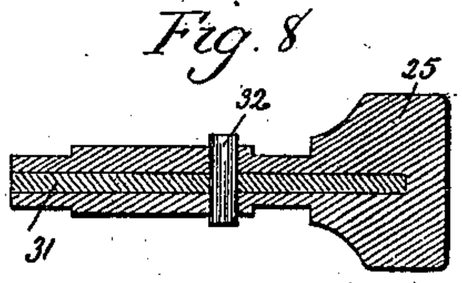


Fig. 9

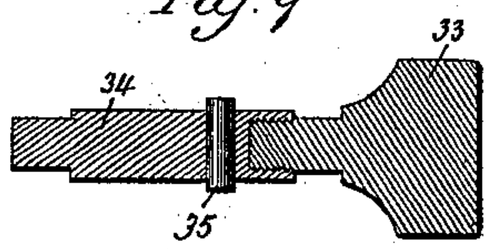
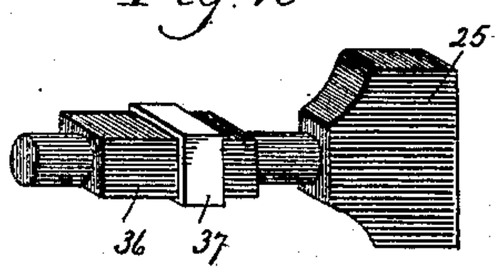


Fig. 10



Witnesses.
J. F. Shumway
Lillian D. Kelsey

Walter H. Perkins
Inventor.
By Atty Seymour & Earle

UNITED STATES PATENT OFFICE.

WALTER H. PERKINS, OF WATERBURY, CONNECTICUT, ASSIGNOR TO THE WATERBURY MFG. CO., OF WATERBURY, CONNECTICUT, A CORPORATION.

INCANDESCENT-LAMP SOCKET.

SPECIFICATION forming part of Letters Patent No. 698,133, dated April 22, 1902.

Application filed April 9, 1901. Serial No. 55,069. (No model.)

To all whom it may concern:

Be it known that I, WALTER H. PERKINS, of Waterbury, in the county of New Haven and State of Connecticut, have invented a new Improvement in Incandescent-Lamp Sockets, (Case B;) and I do hereby declare the following, when taken in connection with the accompanying drawings and the numerals of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a broken view, in side elevation, of one form which an incandescent-lamp socket constructed in accordance with my invention will assume; Fig. 2, a view thereof, partly in side elevation and partly in section, to show the chambered non-conducting plug of the socket; Fig. 3, an end view of the plug and the contact-plate applied thereto; Fig. 4, a detached perspective view of the contact-plate; Fig. 5, a corresponding view of the contact-bracket; Fig. 6, a detached perspective view of the spring and terminal bracket; Fig. 7, a perspective view of one form which the key may assume; Fig. 8, a sectional view of a modified form of the key; Fig. 9, a sectional view of another modified form of the key; Fig. 10, a perspective view of another modified form of the key.

My invention relates to an improvement in incandescent-lamp sockets, the object being to produce a simple, cheap, effective, and convenient socket adapted with slight modifications to be used with the various kinds of lamps now on the market.

With these ends in view my invention consists in certain details of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In carrying out my invention I employ a chambered plug 2, of porcelain or other non-conducting material, in which the circuit-closing devices are mounted and in which they are insulated from each other. In the bottom of the chamber 3 of this plug I locate a spring 4, fixed in position by means of a small bolt 5, passing through a hole formed in the plug and also passing through one arm of the spring, which is made of a piece of sheet metal bent upon itself. The said bolt 5 also passes through and secures firmly in place a small sheet-metal bracket 6, the outer end of which carries one of the two terminal screws 7, through which the current enters the lamp. The said plug 2 is formed with an exterior recess 8 for the reception of a sheet-metal contact-bracket 9, secured in place by a screw 10 and carrying a terminal screw 11. This plate is formed with an arm 12, to which, in the construction now being described, I attach a threaded stud 13, which provides for connecting the lamp 14 with the socket, the said lamp being provided for this purpose with an internally-threaded sleeve 15, which permits the lamp to be screwed over the stud, so as to bring the contact-ring 16 of the lamp down upon the contact-plate 17 of the socket. The said contact-plate 17, which is secured to the lower face of the plug 2 by means of screws 18 18 entering the same, as shown in Fig. 3, is formed with a central opening 19 for the downward passage through it of the stud 13 and with a lateral clearance-opening 20 for the reception of the arm 12, which must not make any contact with the plate. The said plate is also formed with flanges 21 and 22, formed with slots 23 and 24 for the reception of the key, which is held in place in the slots by the constant tension imposed upon it by the spring 4. The key itself may assume a variety of forms. My design is to construct it in one or more pieces of non-conducting material and to provide it with a transversely-arranged contact-pin or some equivalent therefor. As shown in Fig. 7, the key is formed from a single piece of non-conducting material—such as vulcanized fiber, rubber, porcelain, wood, &c.—and comprises a finger-button 25, a body 26, and two trunnions 27 and 28, these several members being integral with each other. In the body 26 of the key I locate a transversely-arranged contact-pin 29, which is located so that when the key is in its normal position the pin will stand in a plane parallel with the planes of the spring 4 and contact-plate 17, and therefore be out of contact with both of them. When, however, the key is turned a quarter-turn, one end of the pin is brought into en-

gagement with the spring, while the other end is brought into engagement with the plate, as shown in Fig. 2, so as to close a circuit through the socket and through the lamp. If desired, the free end of the spring may be recessed, as at 30 in Fig. 6, for receiving one end of the spring and locking the key in its closed-circuit position.

If desired, the key may be formed as shown in Fig. 8, in which it is represented as being made in a single piece from some non-conducting material and reinforced by a stiffening-rod 31, which may be a conductor. This key is also furnished with a transversely-arranged contact-pin 32.

In the modified construction shown by Fig. 9 the key is formed from two pieces of non-conducting material, one being the finger button-piece 33 and the other the body-piece 34, the latter being furnished with a transversely-arranged pin 35.

In the construction shown by Fig. 10 the key is formed from non-conducting material; but its central or body piece 36 is made flat instead of square in cross-section and encompassed by a metal band 37, the ends of which are brought into contact with the spring and plate when the key is turned so as to bring the major axis of the body into line between the said parts, from which the metal point is cleared when the key is turned so as to bring its minor axis between the said parts. Still other modifications of the key might be resorted to.

The provision of my improved socket with the threaded stud 13 is to adapt it to a lamp of the Thomson-Houston type; but for other types of lamps, such as the Edison lamp and the Westinghouse lamp, the said stud would be dispensed with and the contact made between the lamp and the arm 12 of the bracket 9, which might then be modified in form. I would therefore have it understood that I do not limit myself to the exact details of construction herein shown and described, but hold myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of my invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a lamp-socket, the combination with a non-conducting plug formed with a chamber, of a spring located within and secured to the floor of the said chamber, a contact-plate secured to the plug at the open end thereof so as to close the said chamber, and formed with a central opening and a lateral opening and with key-bearings, a contact-bracket secured to the outside of the plug, entering the said openings and carrying a terminal screw, and also carrying a threaded stud which extends through the said central opening and provides for the attachment of a lamp a portion of which impinges against the outer face of the said plate; and a key having bearing in the bearings of said contact-plate.

2. In a lamp-socket, the combination with a non-conducting plug having a chamber, of a spring located within and secured to the floor of the chamber, a bracket secured to the outside of the plug, carrying a terminal screw and connected with the said spring, a contact-plate secured to the plug over the open end thereof and formed with a central opening and a lateral opening and with key-bearings, a contact-bracket secured to the outside of the plug and carrying the other terminal screw and also carrying a threaded stud which extends through the said central opening and provides for the application of the lamp which impinges against the outer surface of the said plate, and a key having bearing in the said plate and provided with a contact-piece which, when the key is properly turned, makes a connection between the said spring and the said contact-plate.

3. A key for incandescent-lamp sockets consisting of one or more pieces of non-conducting material and provided with a transversely-arranged contact-piece opposite points of which are brought into play for closing the circuit through the socket, the said contact-piece being entirely insulated from the body of the key.

4. A key for incandescent-lamp sockets, consisting of one or more pieces of non-conducting material, and provided with a transversely-arranged contact-pin the opposite ends of which are brought into play for closing a circuit through the socket when the key is turned a quarter-turn.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WALTER H. PERKINS.

Witnesses:
ADOLPH C. RECKER,
EDWARD H. MARSHALL.