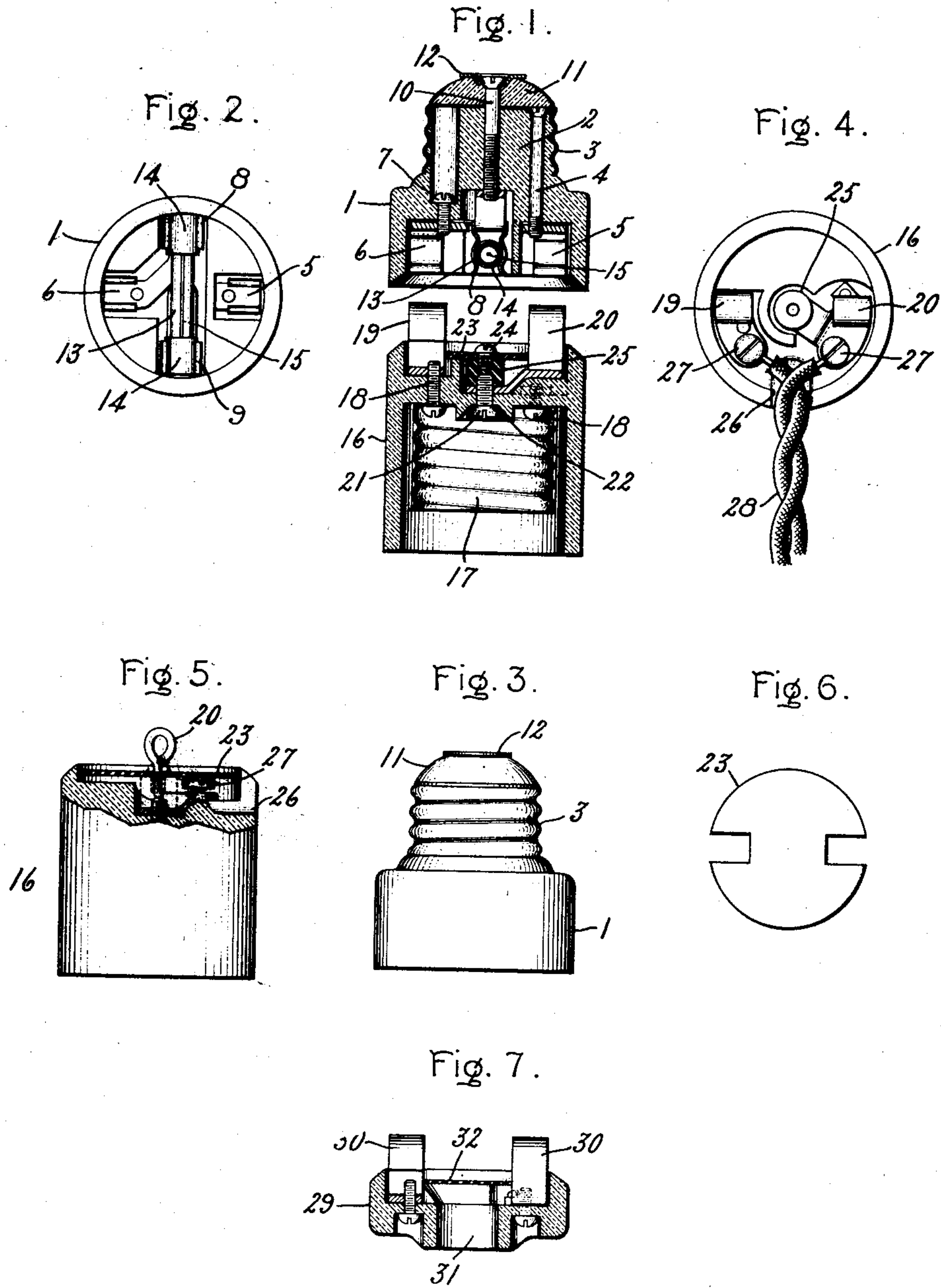


J. E. LUTHER.  
 SOCKET AND ATTACHING PLUG.  
 APPLICATION FILED JULY 13, 1907.

955,465.

Patented Apr. 19, 1910.



Witnesses:  
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 Att'y.



# UNITED STATES PATENT OFFICE.

JOHN E. LUTHER, OF SCHENECTADY, NEW YORK, ASSIGNOR TO GENERAL ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

## SOCKET AND ATTACHING-PLUG.

955,465.

Specification of Letters Patent.

Patented Apr. 19, 1910.

Application filed July 13, 1907. Serial No. 383,662.

*To all whom it may concern:*

Be it known that I, JOHN E. LUTHER, a citizen of the United States, residing at Schenectady, county of Schenectady, State of New York, have invented certain new and useful Improvements in Sockets and Attaching-Plugs, of which the following is a specification.

This invention relates to sockets for holding incandescent electric lamps or for receiving attaching plugs connected to lamps or other translating devices by means of flexible conductors.

The object of my invention is to enable a branch circuit to be led off from a socket, so that an additional translating device can be used without removing the lamp or cutting it out of service.

To this end, my invention consists in a combined attaching-plug and lamp-socket having binding screws for the terminals of a flexible core conductor which passes out through one side of the device so that it does not interfere with the lamp circuit.

In the accompanying drawing, Figure 1 is a longitudinal section of my invention, the plug being separated from the socket. Fig. 2 is an end view of the plug; Fig. 3 is a side elevation of the plug; Fig. 4 is an end view of the socket; Fig. 5 is a side elevation of the socket, partly in section; Fig. 6 shows the insulating disk, and Fig. 7 is a section of a supplemental attaching plug capable of substitution for the socket.

My device is composed of two separate portions, a plug portion and a socket portion, with means for removably connecting them. They are made of insulating material, preferably porcelain, and are preferably circular in cross-section.

The plug has a body 1 and a neck 2 on which is a screw-threaded metal shell 3 having a flange turned in over the end of the neck to receive a fastening screw 4 which passes lengthwise through the plug and is tapped into the base of a metal clip 5 seated in a recess in one side of the body 1. A similar clip 6 is received in a recess in the other side of the body, and is secured in place by a screw 7 inserted through a deep hole extending in from the end of the neck 2. The base of the clip 6 is integral with that of a third clip 8 lying in a recess about midway between the clips 5 and 6 and at one side of

the plug. A fourth clip 9 stands opposite the clip 8, and its base is extended into a deeper central recess in the plug. A center contact screw 10 is tapped into this base, and also serves to maintain in place a cap 11 of insulation placed upon the end of the neck 2: a washer 12 being preferably placed under the head of said screw on the outside of said cap.

Removably held in the clips 8 and 9 is a transversely arranged glass tube 13 having metallic caps 14 which make contact with said clips and to which are attached the ends of a fuse-wire 15 inclosed in said tube.

The socket portion 16 is deeply recessed to house the metallic screw-threaded shell 17, having inturned flanges by means of which it is secured in place by screws 18, one of which passes through the bottom of the recess and is tapped into the base of a contact finger 19 seated at one side of a shallow recess in this end of the socket portion. At the opposite side of said recess is a second finger 20 whose base extends to the center of the socket where it receives a center contact screw 21 entering through the bottom of the socket. The head of this screw 21 is countersunk in a rib 22 which projects beyond the plane of the flanges by which the shell 17 is fastened in place. A disk 23 of insulation, such as mica, covers the bases of the fingers, and may be secured in place by a screw 24 tapped into a block 25 of insulation, which, in turn, is fastened by the center contact screw, as shown in Fig. 1.

The fingers project beyond the end of the socket portion, so that where this portion is thrust against the plug, the fingers enter and are retained by the clips 5, 6, and electrically connect the plug shell 3 with the center contact screw 21 of the socket portion, and the center contact screw 10 of the plug with the shell 17 of the socket portion. By giving the socket portion a half revolution before uniting it to the plug, these connections will be reversed, as will be evident from the drawing. The meeting edges of the plug and socket are preferably beveled to assist in centering the parts and preventing lateral displacement.

In one side of the socket portion is a lateral opening 26 communicating with the shallow recess in which the fingers are seated. The bases of these fingers are long



enough to receive binding screws 27, by which the terminals of a double-conductor flexible cord 28 can be connected with the two sides of the circuit, respectively, as shown in Fig. 4. Any desired translating device can be attached to this cord and used without disturbing the lamp or other device held in the socket. The fingers engaging with the clips 5, 6, hold the socket and plug firmly together, but permit them to be readily pulled apart in case it is desired to renew the fuse or disconnect the branch conductors.

Fig. 7 shows a form of supplemental attaching plug to be used with the plug 1 in lieu of the socket portion, when only one circuit is wanted. This supplemental attaching plug consists of a flat block 29 recessed to receive fingers 30 which fit into the clips 5, 6, and having a central aperture 31 to receive the flexible attaching cord, whose terminals are secured to the fingers. A disk 32 of insulation intervenes between said terminals and the fuse, the same as in the socket structure.

What I claim as new and desire to secure by Letters Patent of the United States, is,—

1. A lamp socket comprising a base, a pair of exposed contact fingers projecting from the rear end of said base, lamp-engaging contacts on the front end of said base respectively connected to said contact fingers, binding posts for connecting branch wires to said contacts, and a detachable insulating cover over said binding posts through which the

contact fingers extend and operating to sustain the branch wires.

2. A lamp socket comprising a base, a pair of contact fingers projecting from the rear end of said base, lamp-engaging contacts on the front end of said base respectively engaging said contact fingers, binding posts for connecting branch wires to said contacts, an opening in the side of said base for the entrance of the branch wires, and an insulating cover over said binding posts secured to said base.

3. The combination with an attaching plug, having a pair of clips, of a socket having a pair of fingers adapted to enter said clips, lamp contacts in said socket respectively connected with said fingers, and binding screws on said fingers, said socket having a lateral opening adjacent to said binding screws.

4. The combination with an attaching plug, having a pair of clips, of a socket having fingers to cooperate therewith, lamp contacts in said socket respectively connected with said fingers, binding screws on the bases of said fingers, and a disk of insulation covering said bases, said socket having a lateral opening adjacent to said binding screws and below said disk.

In witness whereof, I have hereunto set my hand this 8th day of July, 1907.

JOHN E. LUTHER.

Witnesses:

HELEN ORFORD,  
BENJAMIN B. HULL.