C. BRAMMING.

CIRCUIT CONNECTOR.

APPLICATION FILED FEB. 19, 1917. RENEWED JAN. 10, 1920.

1,332,379. Patented Mar. 2, 1920.

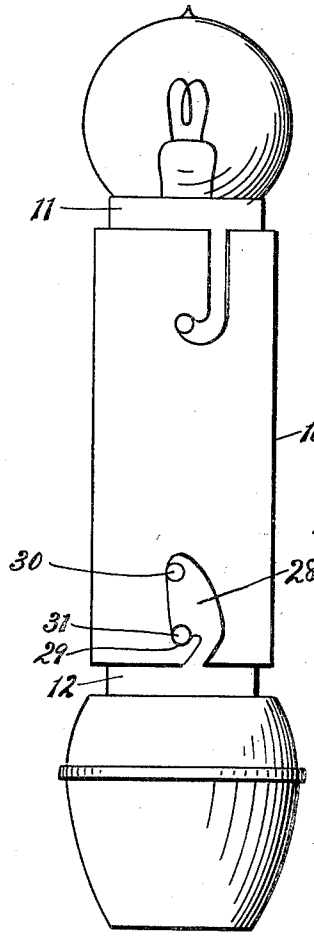


Fig. 1

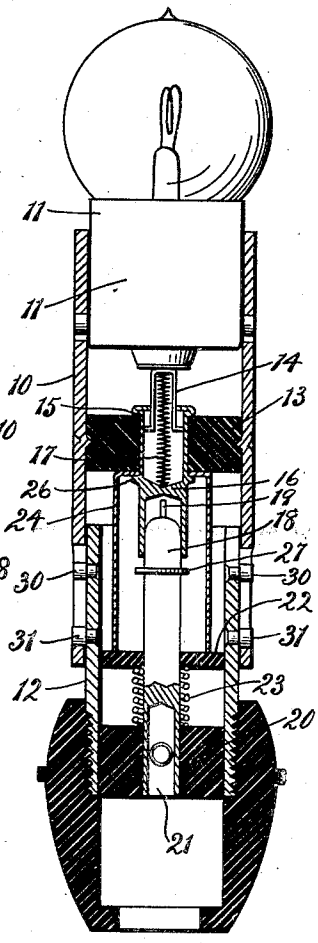


Fig. 2.

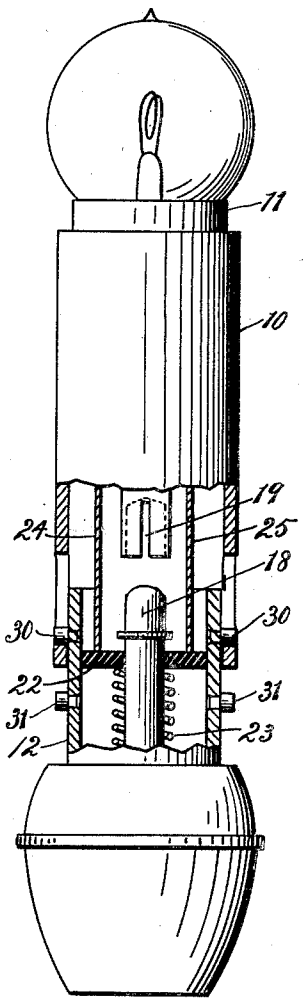


Fig. 3.

Inventor:
Carl Bramming
By Edwards Freiss
Atty's.

UNITED STATES PATENT OFFICE.

CARL BRAMMING, OF CHICAGO, ILLINOIS, ASSIGNOR TO ACCESSORIES MANUFACTURING COMPANY, A CORPORATION OF ILLINOIS.

CIRCUIT-CONNECTOR.

1,332,379. Specification of Letters Patent. Patented Mar. 2, 1920.

Application filed February 19, 1917, Serial No. 149,626. Renewed January 10, 1920. Serial No. 350,680.

To all whom it may concern:

Be it known that I, CARL BRAMMING, a citizen of the United States, and resident of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Circuit-Connectors, of which the following is a specification, and which are illustrated in the accompanying drawings, forming a part thereof.

The invention relates to circuit connectors of the plug and socket type, and more particularly to such devices in which the plug is adapted to occupy two positions with reference to the socket, in one position closing the circuit and in the other opening it.

The objects of the invention are to provide a connector simple in construction and convenient and reliable in operation.

An embodiment of the invention is hereinafter described, and is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the device;

Fig. 2 is a longitudinal central section thereof; and

Fig. 3 is an elevation partly in longitudinal section.

The socket 10 is shown as open at both ends, receiving at one end an incandescent bulb 11 and at the other end a plug 12. The bulb is shown as of the ordinary center and rim contact type, and is connected with the socket by an ordinary form of bayonet joint.

The invention appertains to the means for connecting the plug with the socket and effecting the electrical connection. A block 13 of insulating material is fixed within the socket, and is shown as being provided with a yielding contact element 14 for coöperating with the central terminal of the bulb 11. A tubular member 15 extends through the block 13, and carries the contact element 14, being provided with an internal abutment 16 against which the spring 17, for advancing the contact element, reacts. This tubular member projects at its opposite end beyond the block 13, and forms a contact element for coöperation with the plug terminal 18, which is in the form of a rod and telescopically enters the member 15, the latter preferably being longitudinally split, as shown at 19, from its end and slightly contracted to engage the member 18 by a spring pressure.

The plug 12 is tubular. A block 20 of insulating material is fixed within its outer end, and within this block is anchored the terminal 18, the outer end of which is hollow, as shown at 21, to receive the leading-in wire. Within the bore of the plug is housed a sliding abutment 22, preferably of insulating material, a spring 23 reacting against the plug 20 urging it toward the open end of the plug. Fingers 24, 25, which may be either separate or embodied in a cup formed member, project from the block 13 beyond the end of the terminal 15, and may be secured against the block under a flange 26 of this member. A flange 27 on the terminal 18, and near its inner end, limits the movement of the abutment 22 under the influence of the spring 23. When the plug is inserted into the socket the abutment 22 engages the ends of the fingers 24, 25, before the plug terminal makes contact with the socket terminal, and is forced backwardly against the resistance of the spring 23.

The plug is locked in the socket by any suitable means, preferably by a bayonet joint, as shown, the locking means being arranged to hold the plug in either a fully inserted or a partially inserted position. For this purpose there is shown a bayonet joint slot 28 in the socket wall, having a single seat 29 near its outer end for engagement by either of a pair of studs 30, 31, projecting laterally from the plug, though if desired the well known alternative arrangement of a slot provided with two seats which coöperate with a single stud may be employed.

When the plug is fully inserted, as shown in Figs. 1 and 2, its terminal 18 is in engagement with the contact element 15, and the stud 31 engages the seat 29. When the plug is but partially inserted its terminal is out of engagement with the contact element 15, and the stud 30 engages the seat 29. In both positions the plug stud is held against the slot seat by the action of the spring 23, urging the abutment 22 against the fingers 24, 25.

While a simple and efficient form of construction is shown, changes of detail may be made without departing from the scope of the invention.

I claim as my invention—

1. In a circuit connector, in combination, a socket, a block fixed within the socket, a contact element carried by the block and being recessed from its end, rigid fingers anchored to the block and projecting beyond

the end of the contact element, a hollow plug adapted to enter the socket, a terminal fixed within the plug and adapted to enter the recess in the terminal element, a spring-advanced sliding element housed within the plug for engaging the fingers, and means for locking the plug within the socket in two positions, the terminal and contact element being in engagement in one of such positions and out of engagement in the other of such positions.

2. In a circuit connector, in combination, a socket having a fixed abutment and a contact element projecting therethrough, a chambered plug adapted to enter the socket and to interlock therewith in two axially spaced positions, a contact element carried by the plug and telescopically engageable with the contact element of the socket when the plug is in its innermost position, a yielding abutment within the plug chamber, and fingers carried by one of the named abutments and engageable by the other when the plug is in either of its interlocking positions.

CARL BRAMMING.