No. 646,179. Patented Mar. 27, 1900.

R. D. IRELAND.

ELECTRIC COUPLING.

(Application filed Jan. 12, 1897.)

(No Model.)

Fig. 1.

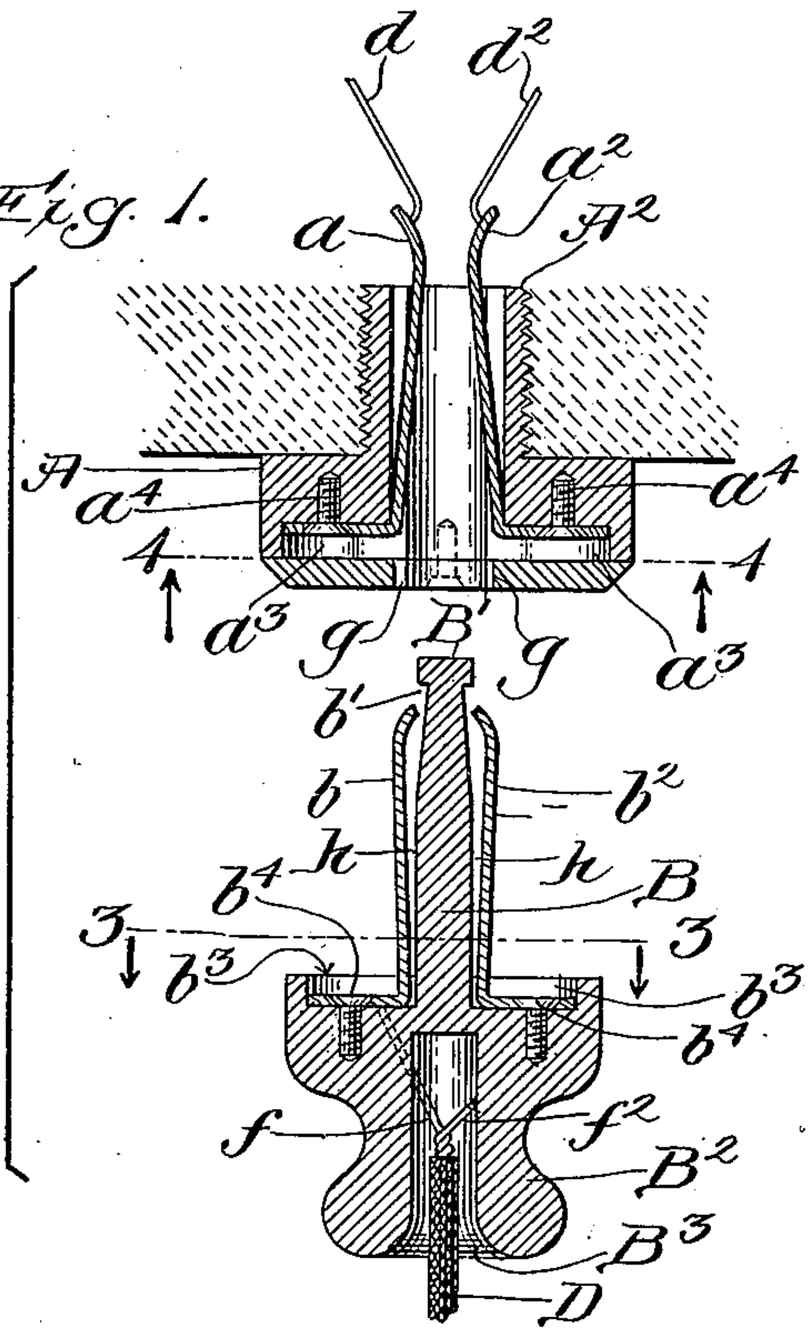


Fig. 2.

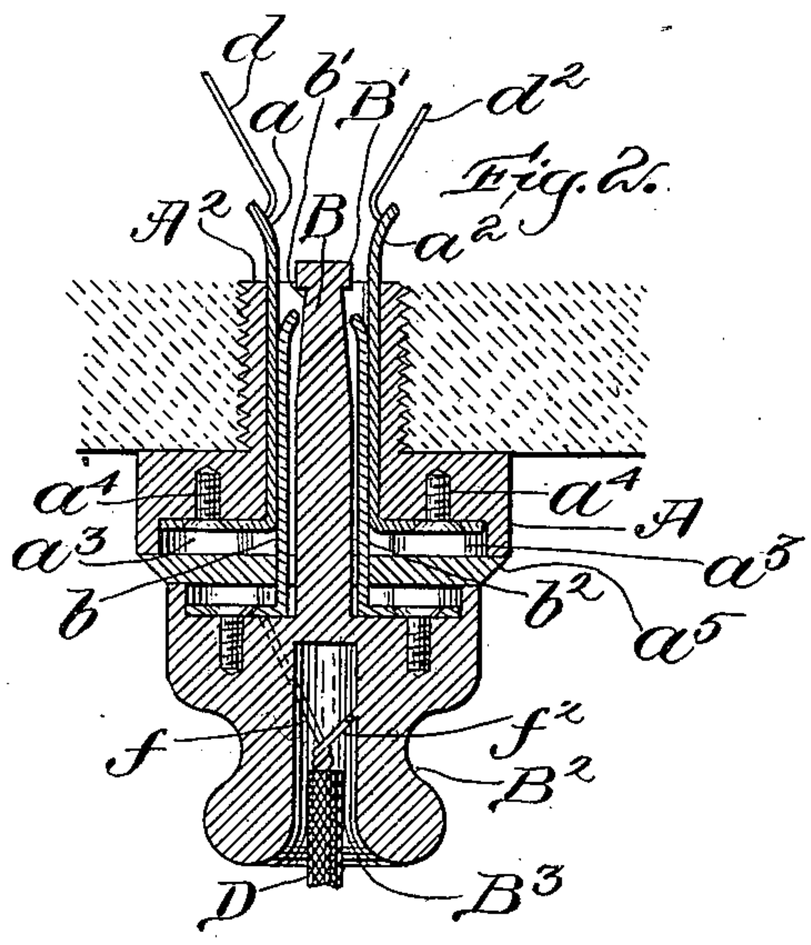


Fig. 3.

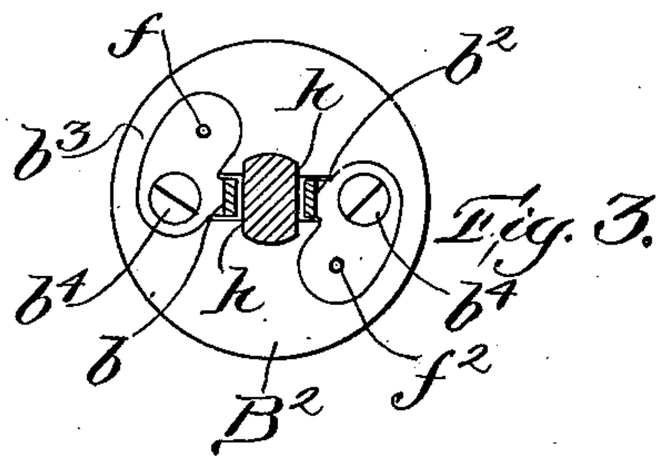
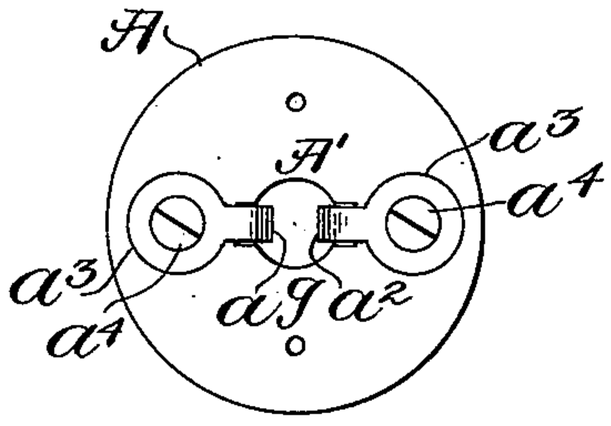


Fig. 4.



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UNITED STATES PATENT OFFICE.

ROBERT D. IRELAND, OF WINTHROP, MASSACHUSETTS.

ELECTRIC COUPLING.

SPECIFICATION forming part of Letters Patent No. 646,179, dated March 27, 1900.

Application filed January 12, 1897. Serial No. 618,994. (No model.)

To all whom it may concern:

Be it known that I, ROBERT D. IRELAND, a citizen of the United States of America, and a resident of the town of Winthrop, in the county of Suffolk and State of Massachusetts, have invented a certain new and useful Improvement in Electric Couplings, of which the following is a full, clear, and exact description.

The electric coupling of this invention was more particularly designed to connect and disconnect a stand or drop electric light and the electric current of a chandelier or other fixed electric-light appliance; but, as will be apparent from the description hereinafter given of the same, it is applicable to other purposes of electric connection and disconnection.

The electric coupling of this invention consists, essentially, of a socket and of a plug to enter into and to be held in said socket in combination with two electric contacts within said socket and two electric contacts on the plug, severally having proper wire connections and all so that the plug and socket entered the one into the other. The electric contacts of each become and are so joined that an electric circuit therethrough is established and the plug and socket withdrawn the one from the other. The electric contacts of each become and are disconnected, and thus the electric circuit is broken, it being of course understood that said electric contacts are properly insulated and that they are by wires or otherwise suitably connected for an electric current to be established and when established utilized as desired.

In the accompanying plate of drawings, forming part of this specification, an electric coupling of this invention is illustrated in its most approved form of construction.

Figure 1 is a central longitudinal section showing the socket and plug of the coupling as separated; and Fig. 2 is a similar section, but showing them as joined or, in other words, the plug as entered into the socket. Fig. 3 is a transverse section on line 3 3, Fig. 1. Fig. 4 is a transverse section on line 4 4, Fig. 1.

In the drawings, A is the socket. B is the plug. a a^2 are the electric contacts of the socket, and b b^2 are the electric contacts of the plug.

The plug B is tapered or reduced toward its upper end, as indicated by b', and at its outer end is provided with an enlargement or head B'. The upper ends of the contacts b b^2 are bent inward, as shown. By this construction when the plug is inserted in the socket the upper ends of the contacts b b^2 will be sprung into the tapered or reduced portion b' beneath the head B', and thereby be protected from contact with foreign substances which might short-circuit the current.

The socket and the plug are made of any suitable insulating material, such as hard vulcanized india-rubber, porcelain, &c. The electric contacts are made of metal, brass, or any other suitable material.

Both the socket and plug are suitably adapted for attachment, as may be required, as for illustration. The socket has a hub A^2 externally screw-threaded, so as to enable it thereby to be attached to an electric-light chandelier or other fixture or appliance and to have its electric contacts a a^2 connected by wires d d^2 with the electric wires or current of said fixture or appliance, and the plug at one end has a knob B^2 open lengthwise through its center, as at B^3, for an electric-wire cord D or such like—that is, two insulated wires f f^2—to be entered and suitably connected with the electric contacts of the plug, said wires f f^2 otherwise being in suitable connection—as, for instance, with an incandescent electric-light bulb or other appliance.

The several electric contacts a a^2 and b b^2 in pairs are affixed by screws or otherwise suitably to the socket and to the plug, respectively, and in each instance they extend along the length and on opposite sides of each and are resilient or springy and all so that with the plug, which otherwise is made so as to closely fit the bore of the socket inserted in said socket, as shown in Fig. 2, the said electric contacts make close connection and contact, and thereby establish an electric circuit, all else being suitable therefor.

The spring action of the electric contacts plainly insures their close connection and contact when the plug is inserted in the socket and tends to hold the plug and socket against accidental separation, which is further insured by a close fit between the sides of the

plug not covered by its electric contacts and the portions of the wall of the socket not covered by its electric contacts.

The socket and the plug are suitably formed, as at *g* and *h*, respectively, to allow of the lateral play of the electric contacts of each in the insertion of the plug within the socket, as described.

The electric coupling described and shown is most practical and efficient as well as most simple and neat and can be utilized to great advantage wherever it is desirable to have a convenient and ready means of connecting and separating any electric appliance and an electric current contained in some other fixture or appliance, as, for illustration, to connect and disconnect an electric drop or stand light and an electric-light chandelier or bracket or other fixed electric-light appliance or fixed electric supply.

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

An electric coupling comprising the socket A having resilient electric contacts extending upward therein, the plug B having toward its upper end a reduced portion and at said upper end an enlargement or head, and resilient electric contacts secured to and extending along said plug, and having their upper ends bent inward and adapted to lie in the reduced portion beneath said enlargement or head, whereby, when the plug is inserted into the socket said ends will be sprung beneath said enlargement or head by the engagement of the contacts of the plug with those of the socket, and be protected from contact with foreign substances, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ROBERT D. IRELAND.

Witnesses:
MINNIE IRELAND,
ALBERT W. BROWN.