

No. 754,863.

PATENTED MAR. 15, 1904.

G. W. GOODRIDGE.
ELECTRICAL PLUG AND RECEPTACLE.

APPLICATION FILED OCT. 9, 1903.

NO MODEL.

Fig. 1.

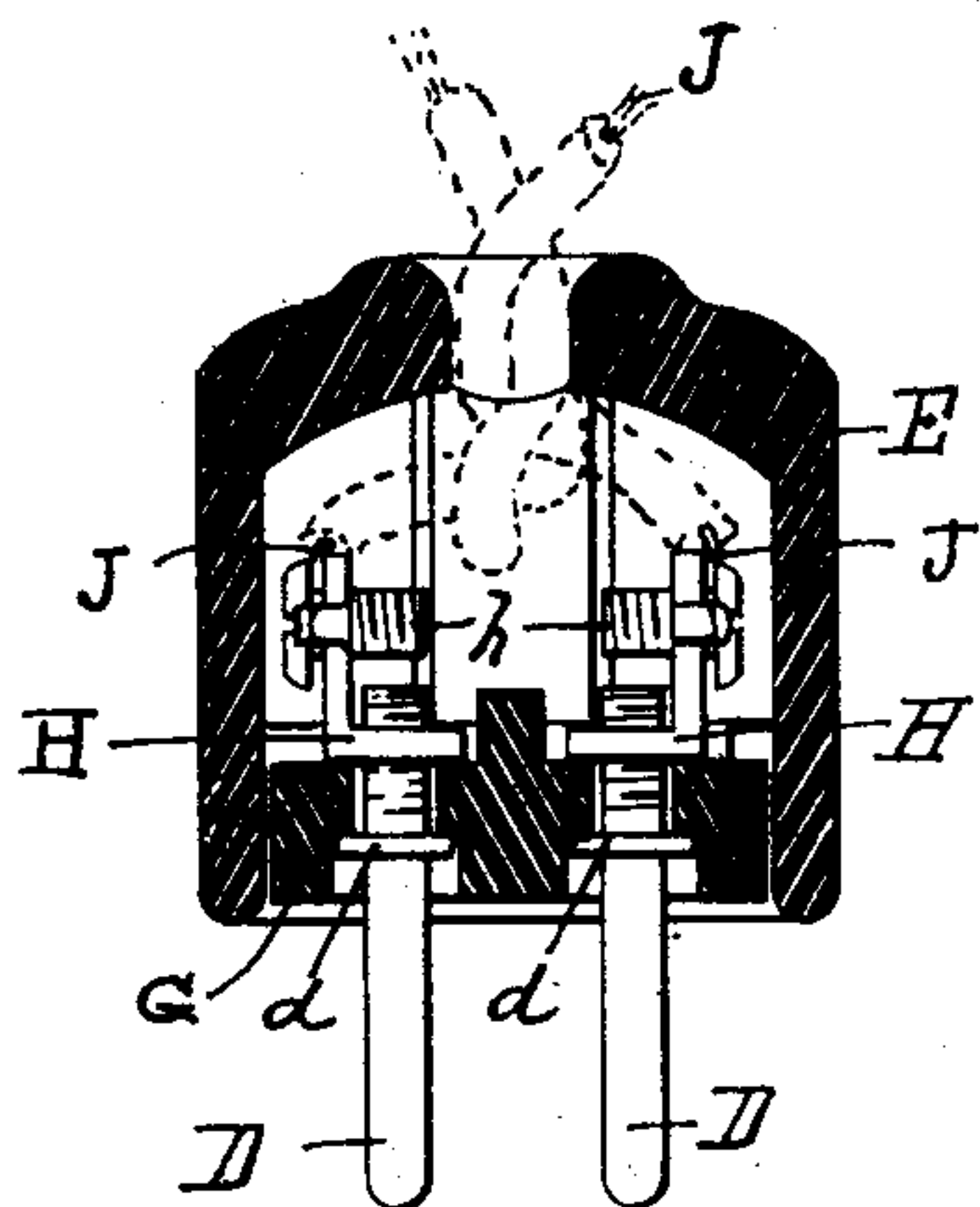


Fig. 3.

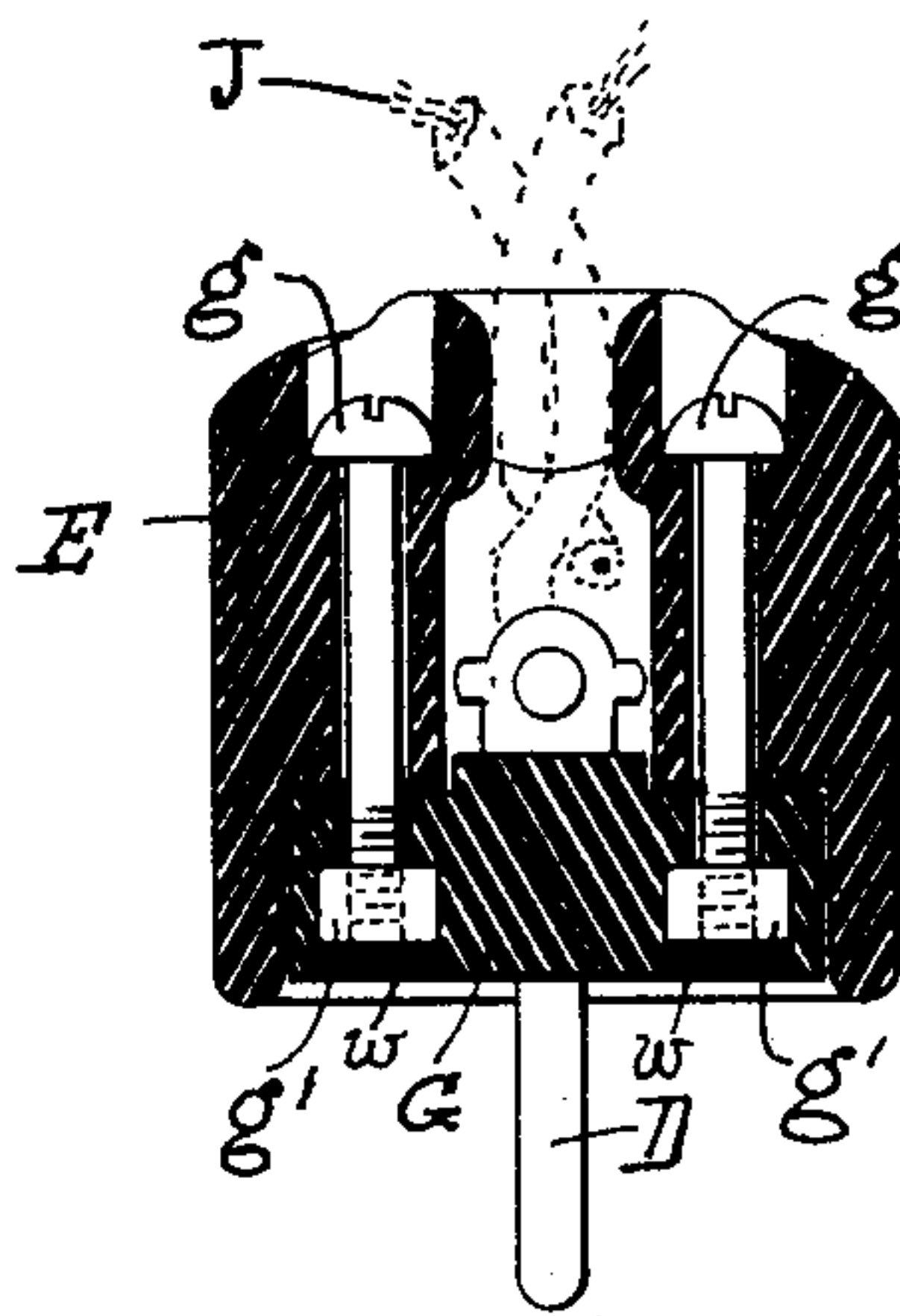


Fig. 2.

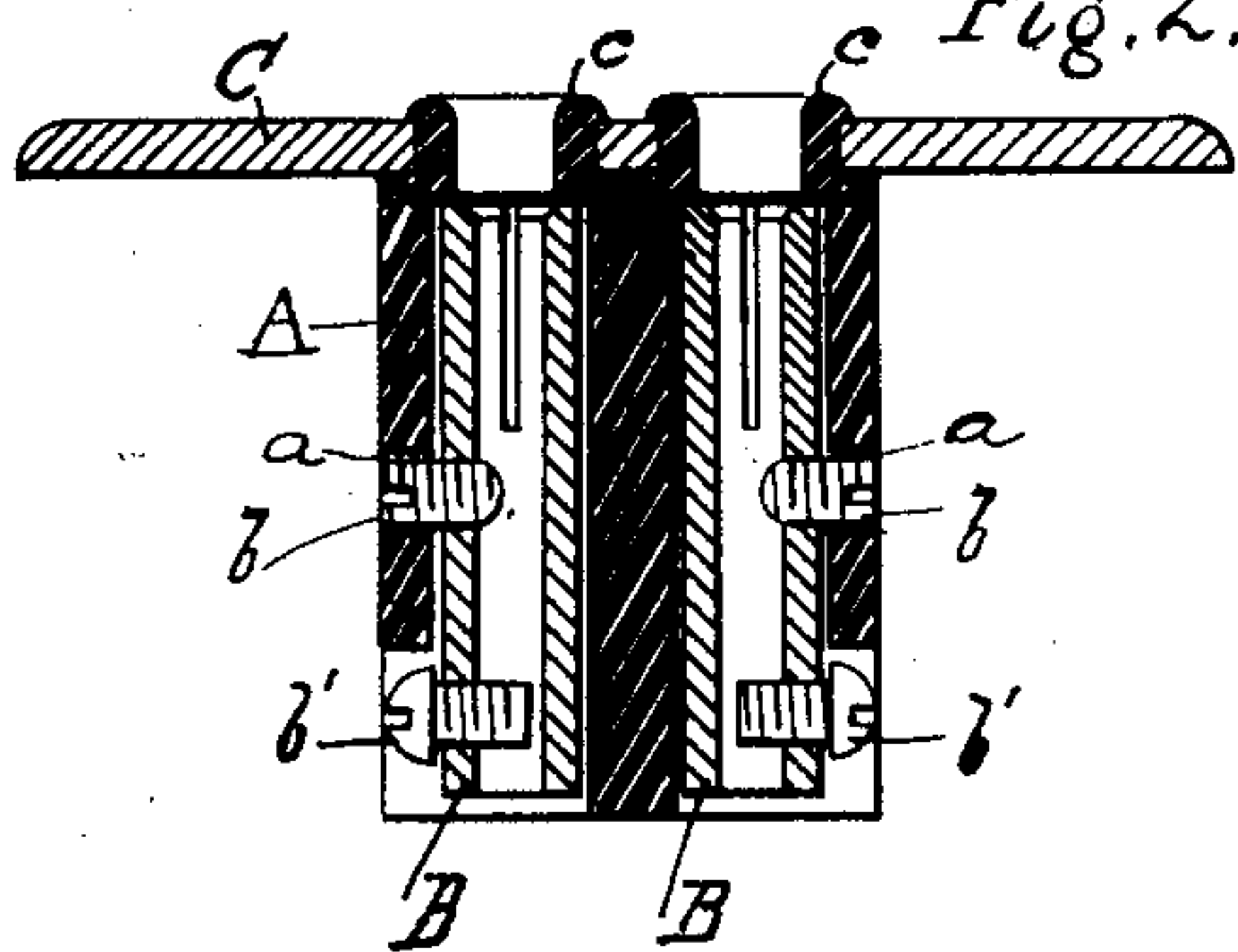


Fig. 4.

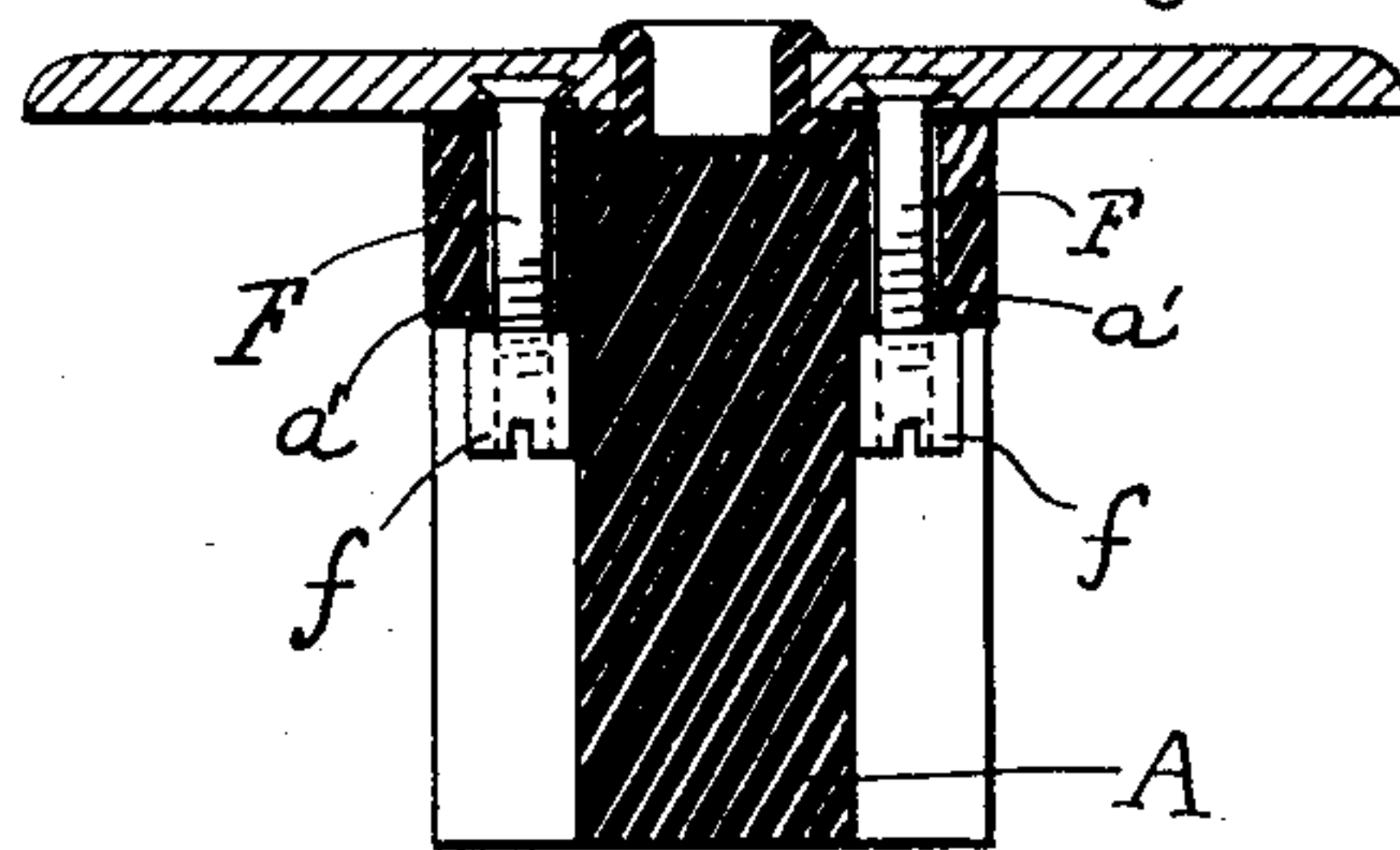


Fig. 8.

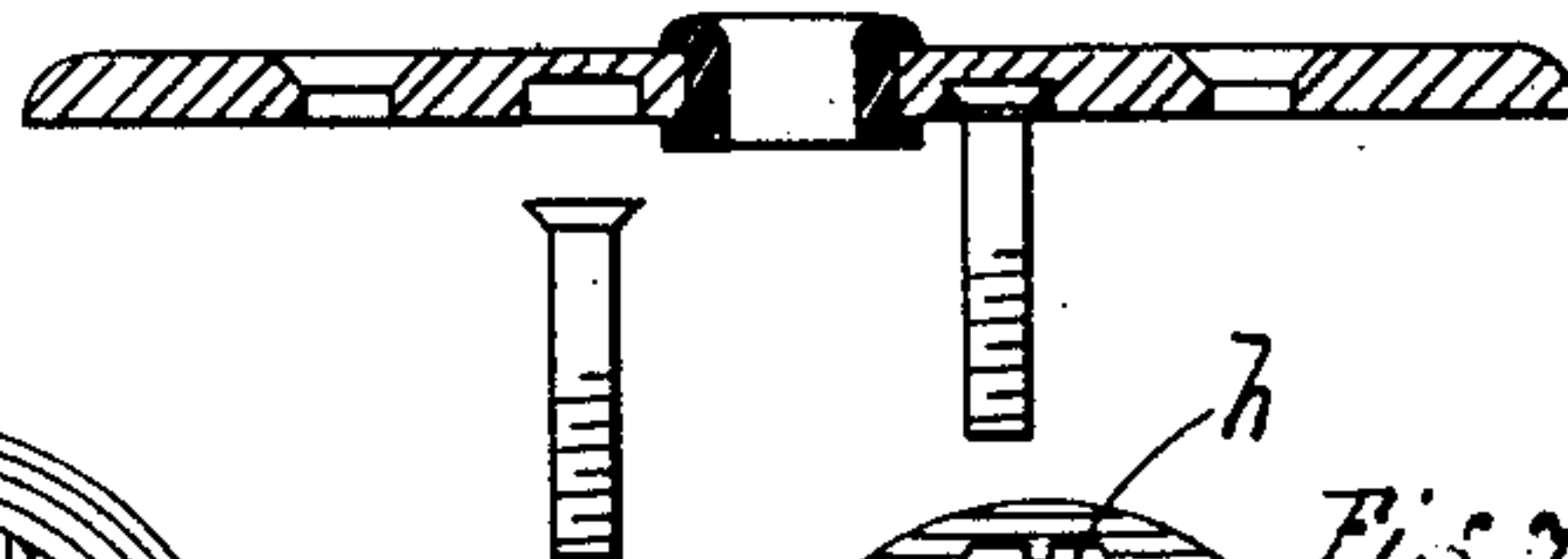


Fig. 5.

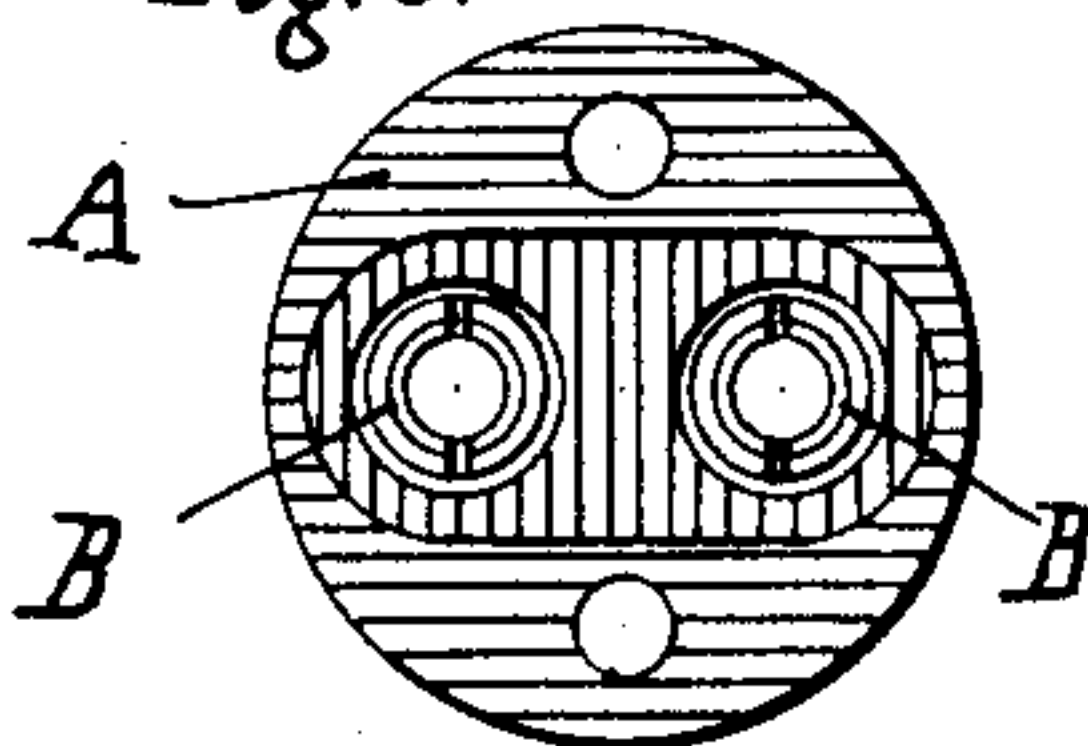


Fig. 6.

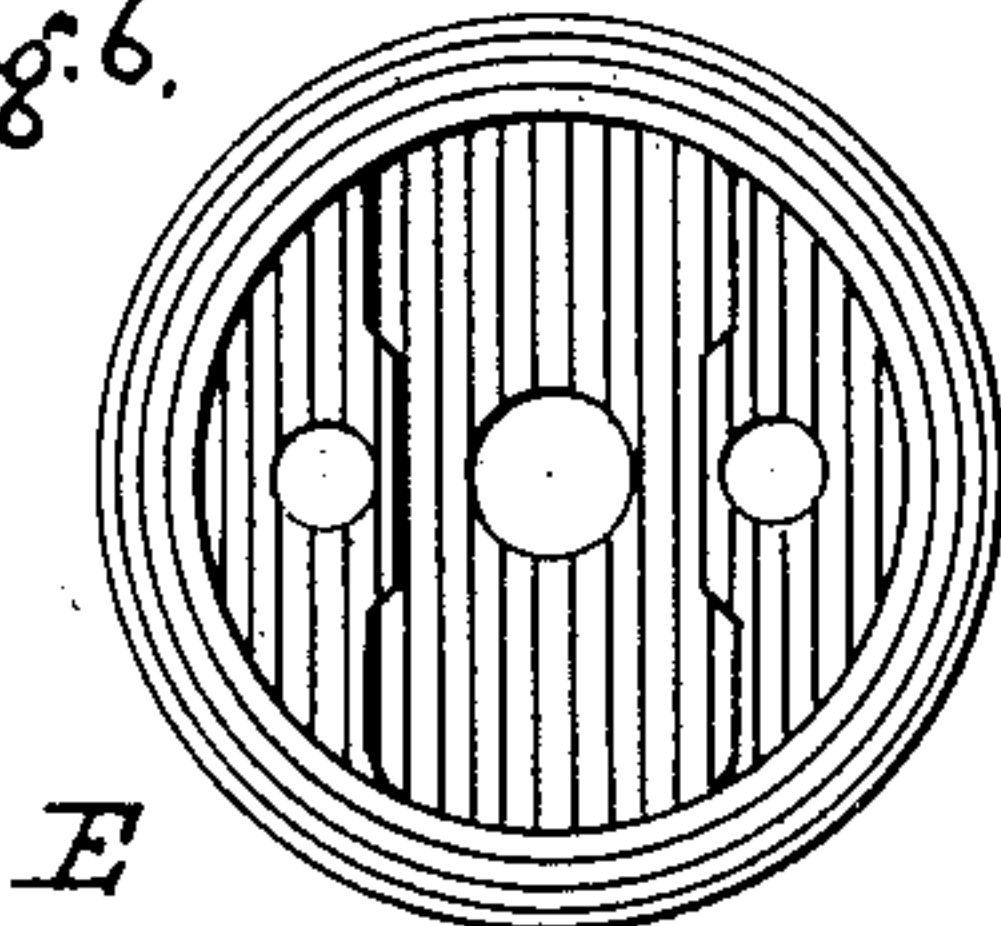
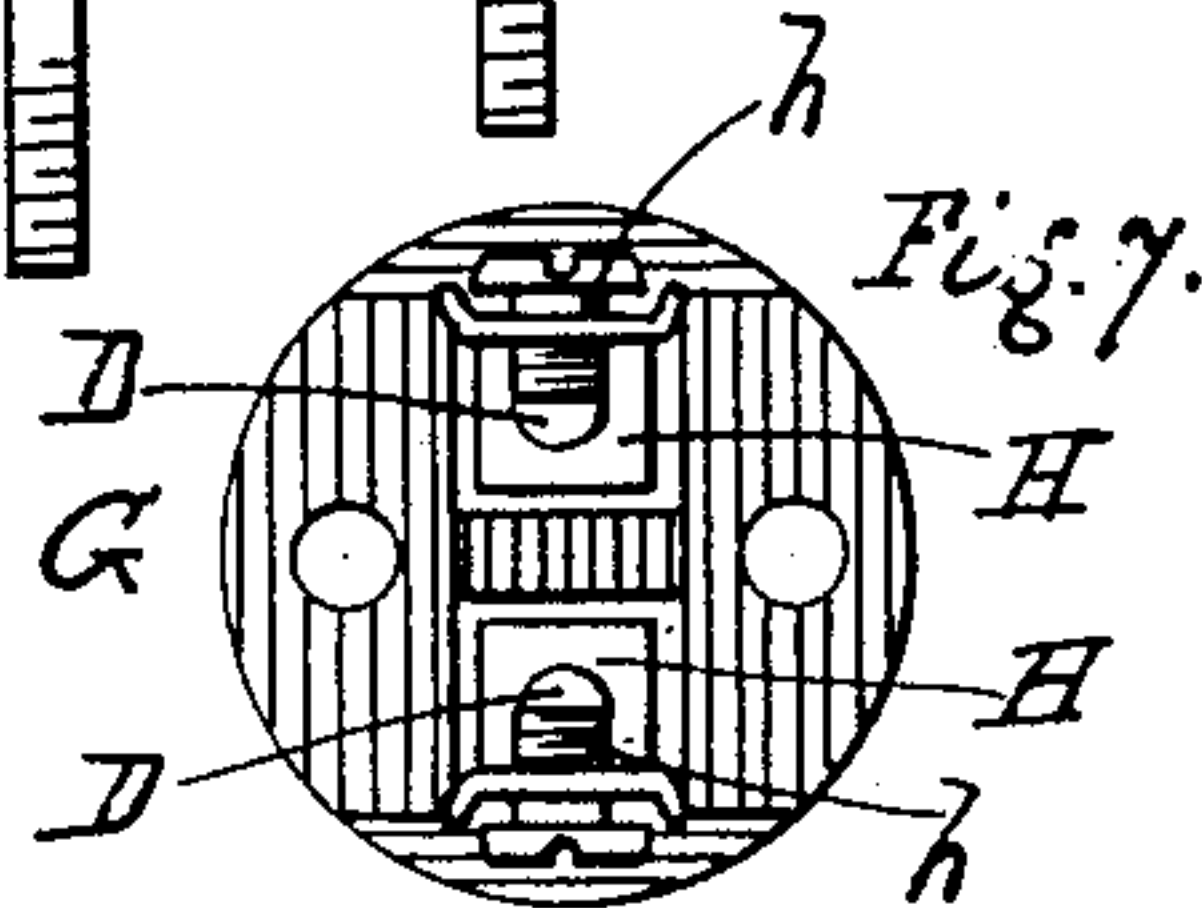


Fig. 7.



WITNESSES

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GILBERT W. GOODRIDGE, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO
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ELECTRICAL PLUG AND RECEPTACLE.

SPECIFICATION forming part of Letters Patent No. 754,863, dated March 15, 1904.

Application filed October 9, 1903. Serial No. 176,389. (No model.)

To all whom it may concern:

Be it known that I, GILBERT W. GOODRIDGE, a citizen of the United States of America, residing in Bridgeport, in the county of Fairfield, State of Connecticut, have invented Improvements in Electrical Plugs and Receptacles, of which the following is a specification.

The object of my invention is to simplify and improve the construction of electrical plugs and receptacles; and this object I attain in the manner which I will now describe.

In the accompanying drawings, Figure 1 is a vertical section of the plug, and Fig. 2 is a corresponding section of the receptacle. Fig. 3 is a vertical section of the plug at right angles to the view Fig. 1, while Fig. 4 is a corresponding section of the receptacle. Fig. 5 is a face view of the receptacle when the face-plate has been removed. Fig. 6 is a face view of the body of the plug when the contact-carrying piece has been removed. Fig. 7 is a plan view of the contact-carrying part when detached from the body of the plug. Fig. 8 is a sectional view of the receptacle face-plate to show how the screws are secured.

The body A of the receptacle, which is of porcelain or other suitable insulating material, is preferably cylindrical and has formed in it two longitudinal holes to receive two plain metal tubes B B, which are held in place by pins *b b* passing through lateral openings *a a* and threaded into the tubes B, as shown in Fig. 2. The rear ends of the tubes are provided with laterally-inserted binding-screws *b' b'*, by which to connect up the bared ends of the electrical conductors. The forward (in the drawings the upper) ends of the tubes B B are slit, as shown in Fig. 2, to receive the pins D D of the plug, Fig. 1. The metallic face-plate C for the receptacle has rubber or other insulated bushings *c c* around the openings, through which the pins D of the plug pass. This face is secured to the body of the receptacle by screws F, carried by the plate and passing through openings *a'* in the body A, Fig. 4, and held by nuts *f*. Instead of passing these screws F through openings from

front to back of the face-plate, as is customary, I improve the appearance of the face-plate and reduce the number of separable parts by permanently securing the screws to the rear of the plate, as best shown in Fig. 8—that is, by first boring out of the back of the plate a hole of the diameter of the screw-head, (see left of Fig. 8,) then inserting the screw-head and then by a suitable tool forcing down the adjacent metal over the beveled face of the screw-head, as shown at the right of Fig. 8, to firmly fasten the screw to the plate.

The main body E of the plug is of porcelain or other suitable insulating material and is made hollow. It is preferably cylindrical, with a cylindrical chamber open at the rear or under side to receive the correspondingly-shaped button or diaphragm G, of insulating material, which carries on one side the contact-pins D D and on the other side, within the body, the connecting-lugs and binding-screws for the wires J. Back of this chamber receiving this diaphragm G there is a chamber of narrower width (oblong, as shown in Fig. 6) to contain the lugs and binding-screws and also to allow a knot to be tied in the wires J.

The contact-carrying diaphragm G is secured in place, as shown in Fig. 3, by screws *g g*, inserted from the upper or front side of the plug through openings in the thickened walls formed by making the chamber for the connections and wires oblong, Fig. 6. These screws *g g* are held in place by nuts *g' g'*, let into the face of the diaphragm, said nuts being held therein by sealing-wax *w*.

The pins D D have shoulders *d d* to abut against the diaphragm. Back of these shoulders the pins are threaded and screwed into and held in place by the L-shaped lugs H H, the upright arms of which carry the binding-screws *h h* for the wires J within the hollow body E.

I claim as my invention—

1. A plug-receptacle, consisting of an insulating-body having holes through it, with a plain metal single tube in each of said holes, carrying a binding-screw at its rear end, and

a securing-pin passing through lateral openings in the body and secured in the tubes, all substantially as described.

5 2. A receptacle, comprising a body in combination with a face-plate and screws and nuts by which said face-plate is secured to the body, the screw-heads being secured in holes in the back of the plate by the metal of the plate forced down over the screw-heads.

10 3. A receptacle-plug consisting of a hollow insulating-body with a button in the open end of said body, and an oblong chamber behind said button, contact-pins on the outer side of

said button, contacts on the inner side thereof within said chamber, securing-screws for 15 the button passing through the thickened walls of the plug-body, and nuts for the securing-screws.

In testimony whereof I have signed my name to this specification in the presence of two sub- 20 scribing witnesses.

GILBERT W. GOODRIDGE.

Witnesses:

N. W. HARDER,
H. G. WALES.