

No. 752,833.

PATENTED FEB. 23, 1904.

P. H. FIELDING.
ATTACHMENT PLUG.
APPLICATION FILED JUNE 27, 1903.

NO MODEL.

Fig. 1.

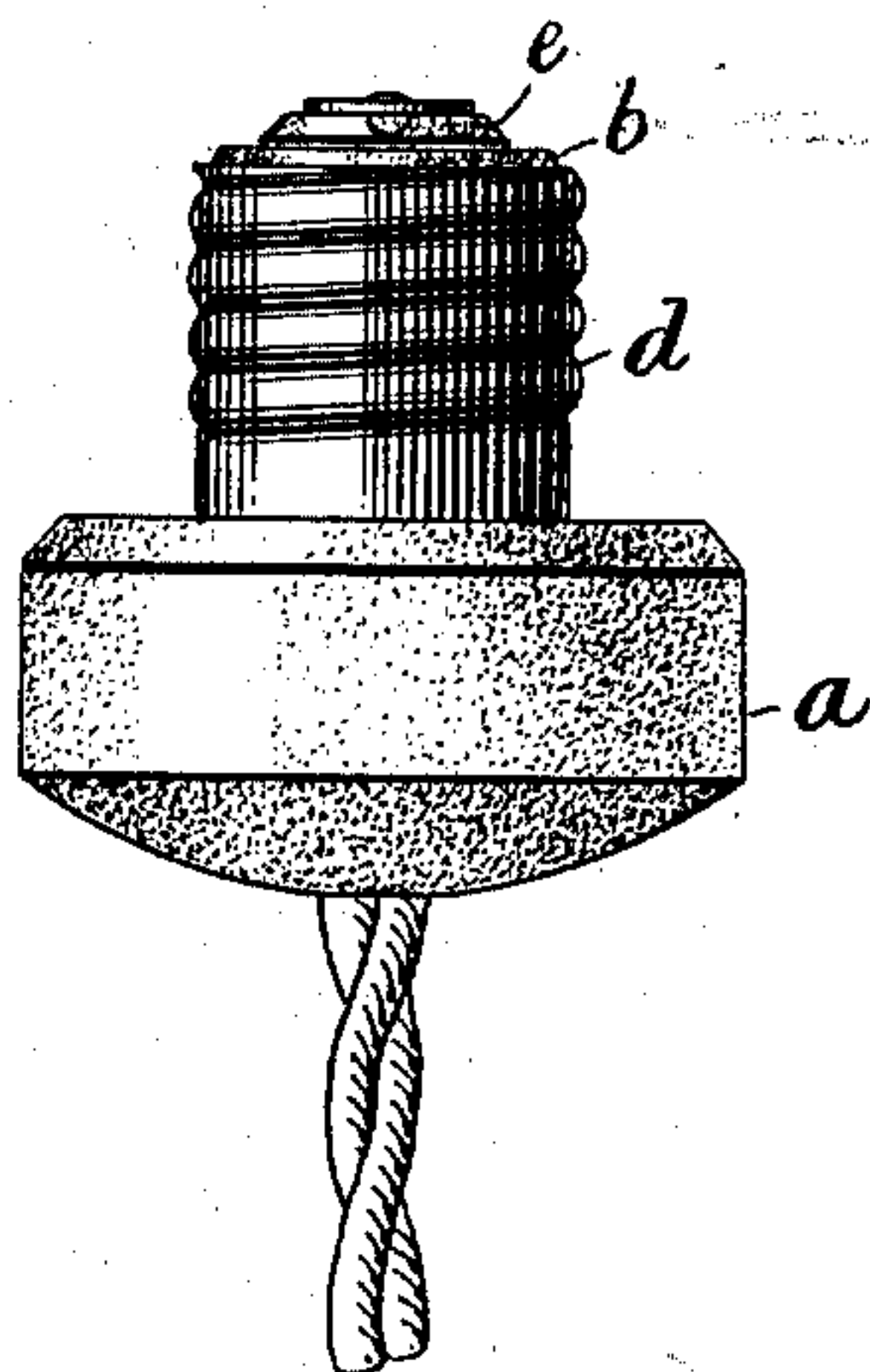


Fig. 4.

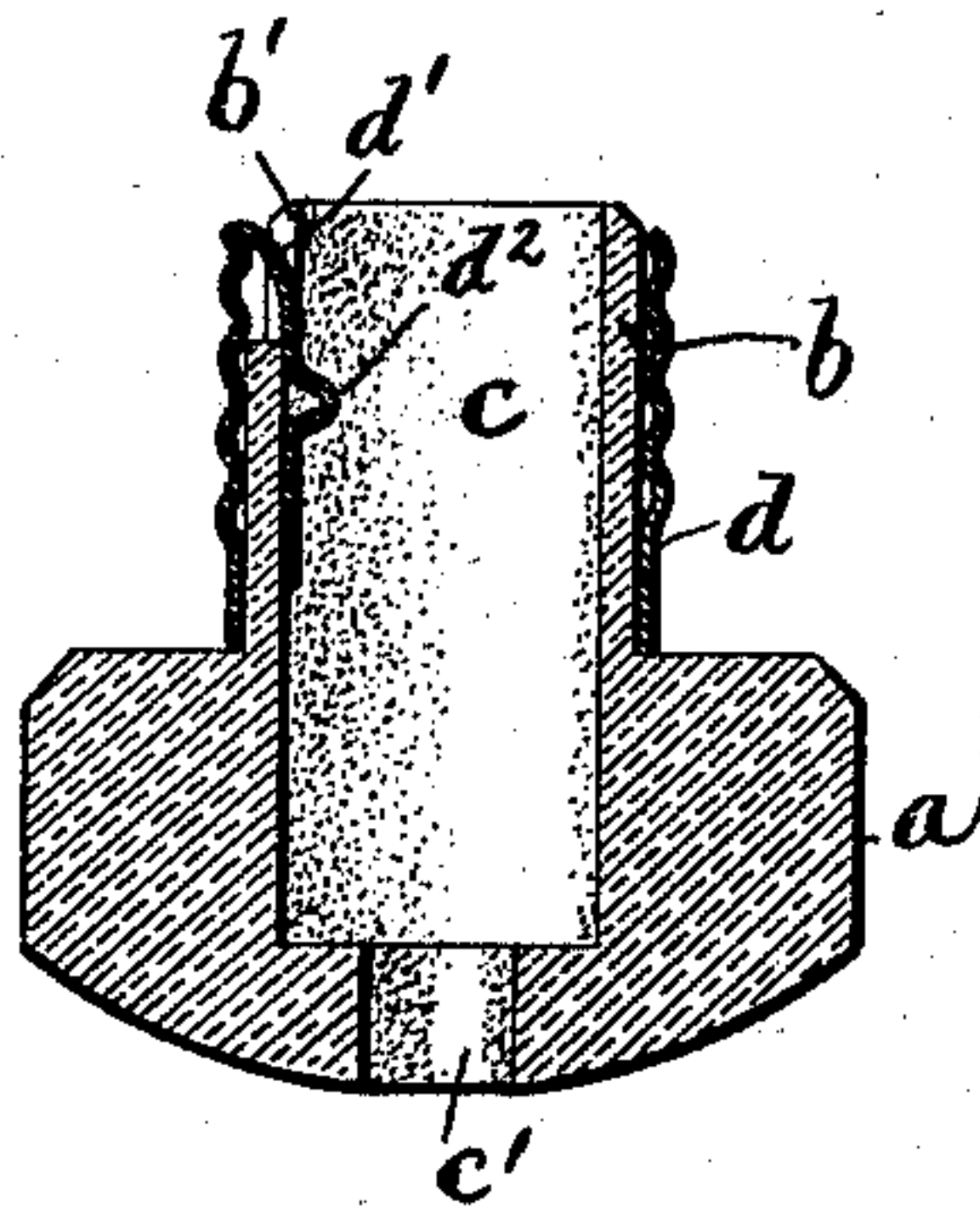
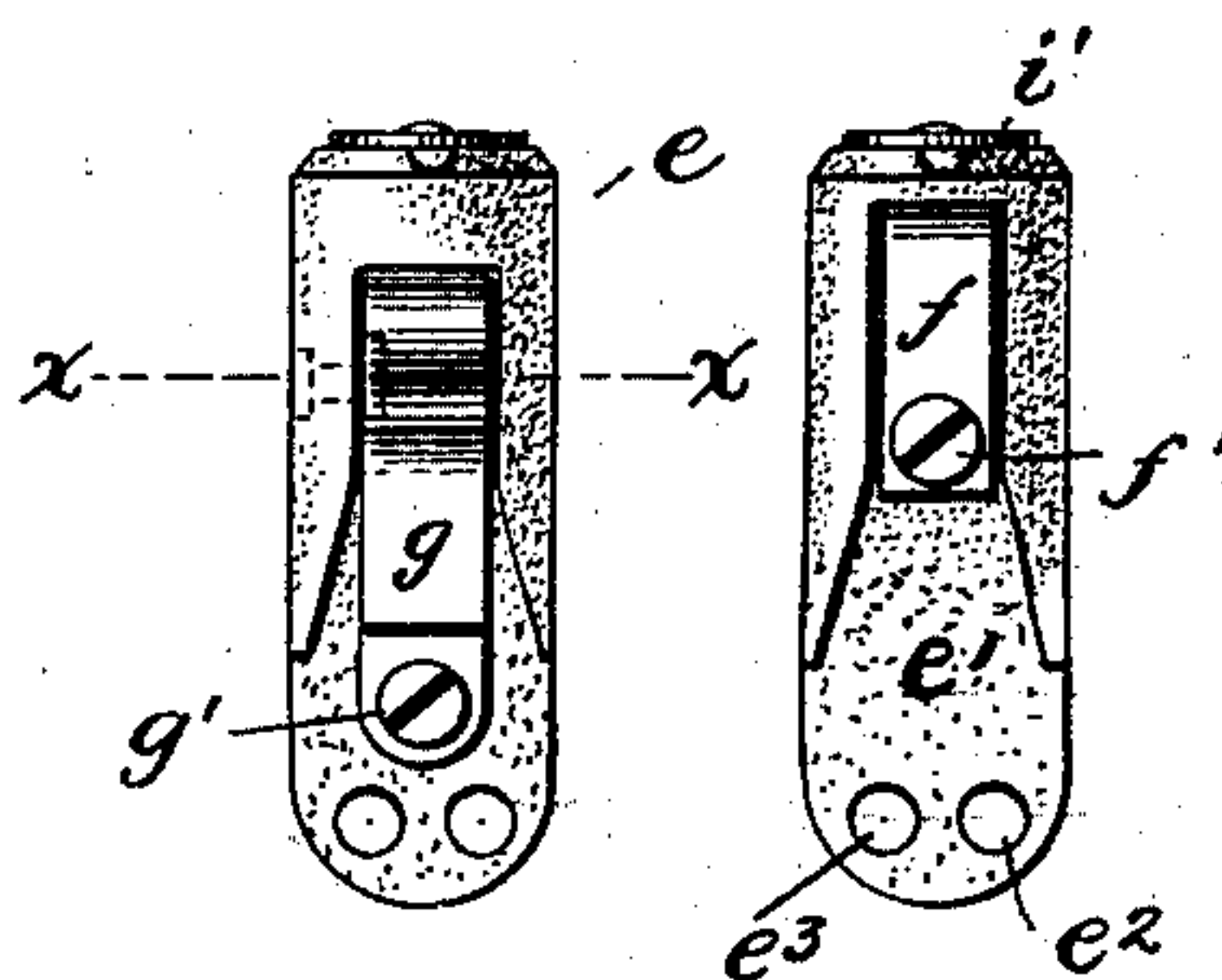


Fig. 3.

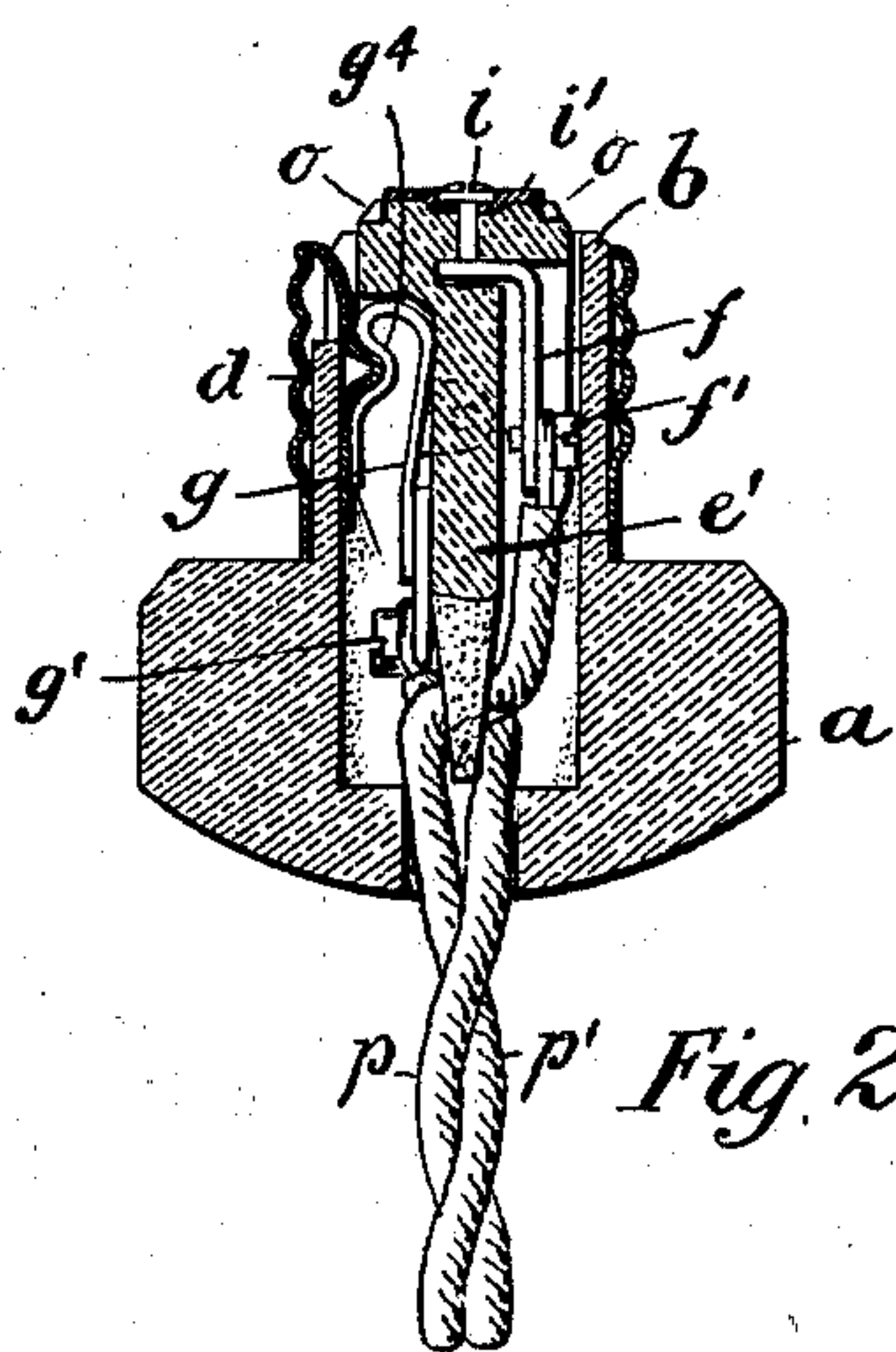


Fig. 2.

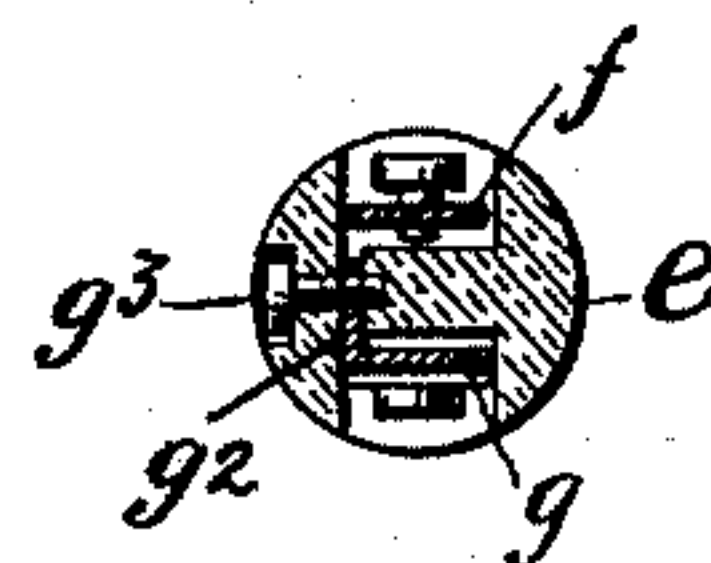


Fig. 5.

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UNITED STATES PATENT OFFICE.

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ATTACHMENT-PLUG.

SPECIFICATION forming part of Letters Patent No. 752,833, dated February 23, 1904.

Application filed June 27, 1903. Serial No. 163,349. (No model.)

To all whom it may concern:

Be it known that I, PHILIP H. FIELDING, a citizen of the United States, residing at the city of New York, in the borough of Manhattan and State of New York, have invented certain new and useful Improvements in Attachment-Plugs, of which the following is a full, clear, and exact description.

This invention relates to devices which are commonly attached to the end of a flexible electric conductor for the purpose of connecting a translating device with a source of electricity and known as "attachment-plugs." These devices usually consist of a block or base of porcelain or other suitable insulating material carrying binding-screws for securing the ends of the flexible conductor and having a projection or block upon which are mounted metallic parts, which serve the double purpose of mechanically connecting the plug with a socket and electrically connecting the binding devices on the plug or base with those in the socket.

In my improved attachment-plug the connections for the flexible conductor are wholly within the plug itself and amply covered and protected thereby, the construction nevertheless being such that the conductors can be readily attached and detached as required and arranged to prevent strains upon the conductor from being communicated to the binding devices.

The details of my improved attachment-plug will be described with reference to the accompanying drawings, in which—

Figure 1 is a side elevation of the plug. Fig. 2 is a longitudinal section thereof. Fig. 3 is a section of the shell of the plug with the core removed; Fig. 4, two side views of the core, and Fig. 5 a cross-section of the core on line $x-x$ of Fig. 4.

My improved attachment-plug has the same general shape of the ordinary attachment-plugs in that it consists of a thickened disk part a and a central cylindrical projection b from one face thereof. The disk part a is used as a knob to manipulate the device when attaching or detaching it to and from its socket and in the old forms. This part also carries upon it binding-screws, to which the conduct-

ing-wires are attached; but in the present device the binding-screws are not attached to the disk. The projection b is provided with an axial chamber c of such diameter as to leave the walls of the projection comparatively thin, but of sufficient mechanical strength. This chamber extends into the disk portion and is continued through the bottom thereof by a more contracted passage c' . At the outside of the projection is a metallic sleeve d , having a suitable shape to mechanically engage with a socket, into which it fits. The sleeve here shown is provided with a cross-thread and is similar to an ordinary Edison lamp-base. On one side of the projection b a notch b' is formed, through which a spring-plate d' extends. This plate is soldered or otherwise connected to the upper edge of the sleeve d and extends thence downward and into the chamber c , where it rests against the side thereof. It is provided with a kink d'' to act as a latch, as will hereinafter be explained.

e is a cylindrical core of porcelain or other suitable insulating material having an external diameter such as to neatly fit into the chamber c . This core has two vertical grooves arranged on opposite sides, the partition e' between them projecting somewhat below the body of the core for a purpose which will hereinafter appear. In each of these grooves is fixed a metallic plate f and g , respectively. The former carries a binding-screw f' and is bent laterally to enter a recess in the upper end of the core, where it is caught by an axial screw i , which enters the top of the core and at the same time confines a central contact-plate i' on the extreme end of the core. The plate g carries a binding-screw g' and has an ear g'' bent laterally to enter another recess in the porcelain, as shown in Fig. 5, and there caught and held by a countersunk screw g''' , entering the side of the core to hold the plate in place. The upper end of plate g is returned and provided with a depression or bend g^4 , adapted to receive the kink d'' in the plate d' . The lower end of the extended partition e' is provided with two transverse holes e^2 and e^3 .

The flexible conductor is secured to the attachment-plug in the following manner: First,

the conductor (indicated by p and p') is passed through the opening e' and brought out through and above the chamber c . The two wires are then passed, respectively, in opposite directions through the holes e^2 and e^3 of the core. Then the ends of the wires are stripped of their insulation, and one of them is fastened by the binding-screw f' , while the other is fastened by the binding-screw g' . The naked parts of the wires are then separated from each other by the extended partition e' . The conductor is now pulled backward and the core inserted into the chamber c through the open upper end, the core being so placed that plate g will be presented to the plate d' . The core is shoved home and caught in its final position by the engagement of the plate d' with the plate g . Thus the external cylinder d and the external center contact i' become the respective terminals of the wires p and p' . The device now presents the appearance shown in Fig. 1, where, it will be observed, the binding-screws and connection devices are entirely covered and housed, so that short circuits are impossible by reason of contact of foreign bodies with interior parts of the plug while the latter is in its socket. It is understood that this plug is adapted to be used in connection with an incandescent-lamp socket or any electrical "outlet" provided with a suitable socket for the plug.

Whenever it is necessary to readjust the flexible cord, the core can be readily withdrawn by means of forceps applied under the center contact i' at the notches o .

These attachment-plugs when not in use are very often left suspended at the end of the flexible cord, so that the weight of the plug together with any disturbances of it impart a strain to the binding device in the plug, which tends to detach the cord; but in my device it will be seen that the cord in passing laterally through the openings e^2 and e^3 of the core before it reaches the binding-screws is suspended by the core and the strains to which the cord is subjected are not communicated to the binding device. The result is that the plug is not liable to become detached from the cord. It is also pointed out that since the

plug or core to which the flexible conductor is attached is confined in a chamber of the body part, which is closed at the rear, the plug cannot be detached from the body part by pulling on a cord, as would be the case if the plug entered from the rear.

Having described my invention, I claim—

1. An attachment-plug consisting of a base of insulating material, having a cylindrical projection surrounded by a metallic sleeve and having an axial chamber opening at the outer end of said projection, in combination with a plug removably fitted into said chamber and carrying two binding devices and an exposed contact, said binding devices being respectively connected with the sleeve and the exposed contact, and a flexible conductor attached to the binding devices and leading rearward through the base, substantially as described.

2. An attachment-plug consisting of a base of insulating material having a cylindrical projection surrounded by a metallic sleeve and having an axial chamber opening at the outer end of the projection, in combination with a plug removably fitted into said chamber and carrying two binding devices for electrical conductors, means for connecting one of the binding devices with said sleeve and a contact on the end of the plug connected with the other binding device and exposed at the end of the projection, substantially as described.

3. An attachment-plug consisting of a base of insulating material having an integral cylindrical projection therefrom containing an axial chamber, a metallic sleeve surrounding said projection, a plate connected with said sleeve and extending into said chamber and a core removably fitted to said chamber and provided with two contacts, one of which is exposed outside when the plug is in place and the other adapted to engage said plate, and binding devices for electric wires connected with said contacts.

In witness whereof I subscribe my signature in presence of two witnesses.

PHILIP H. FIELDING.

Witnesses:

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