

(No Model.)

J. B. SMITH.
SWITCH AND FUSE BOX.

No. 547,591.

Patented Oct. 8, 1895.

Fig. 1.

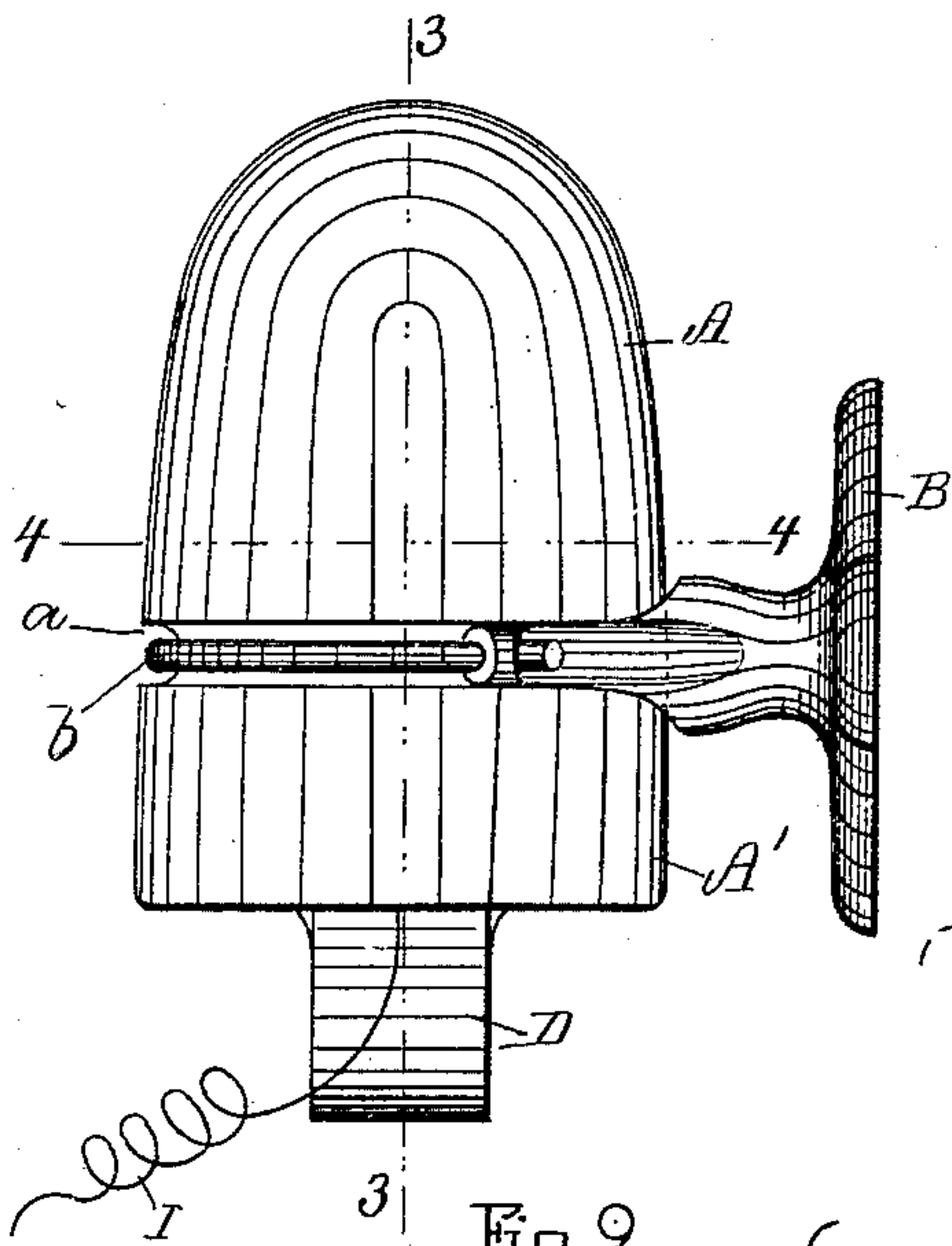


Fig. 3.

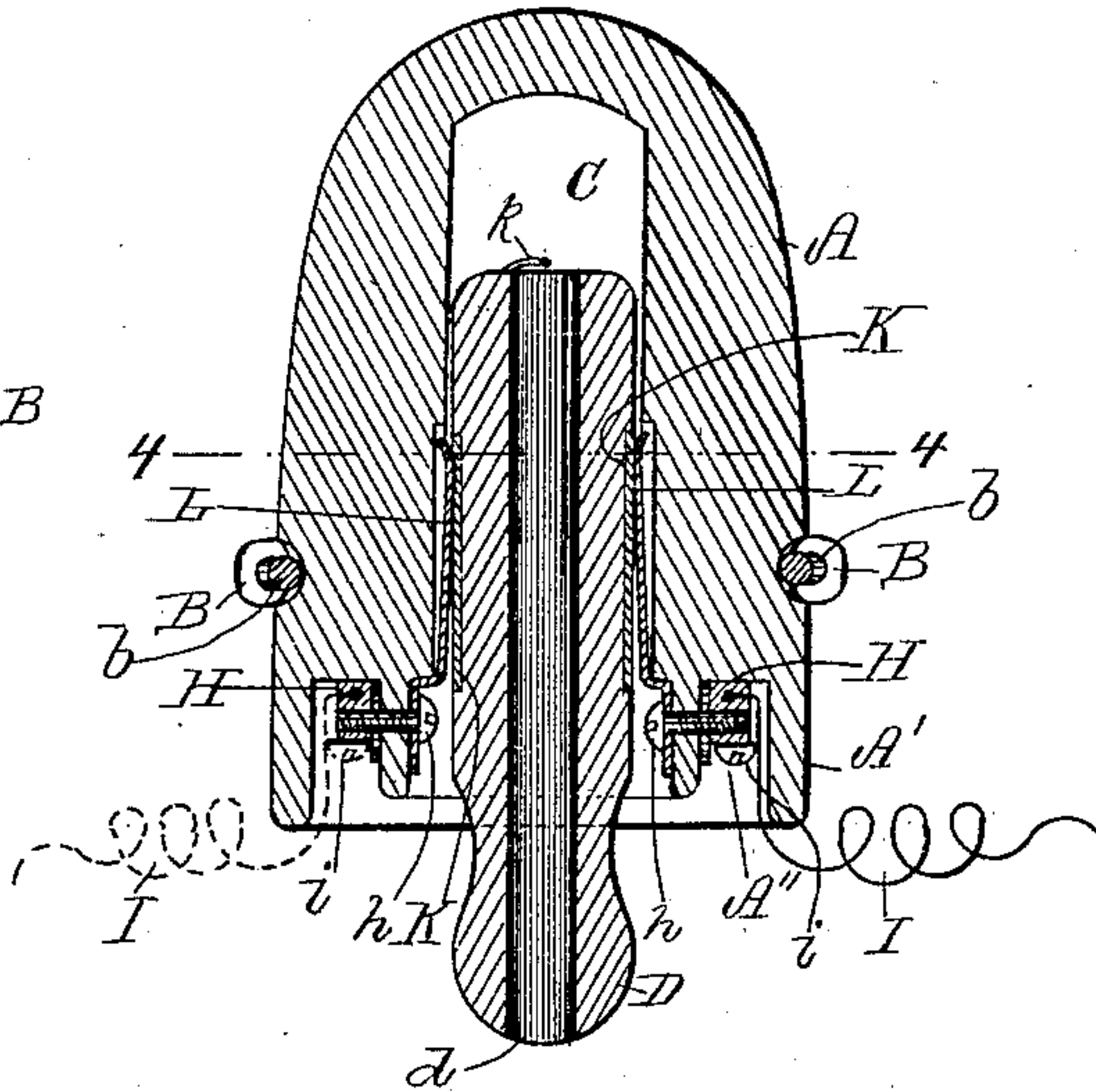


Fig. 2.

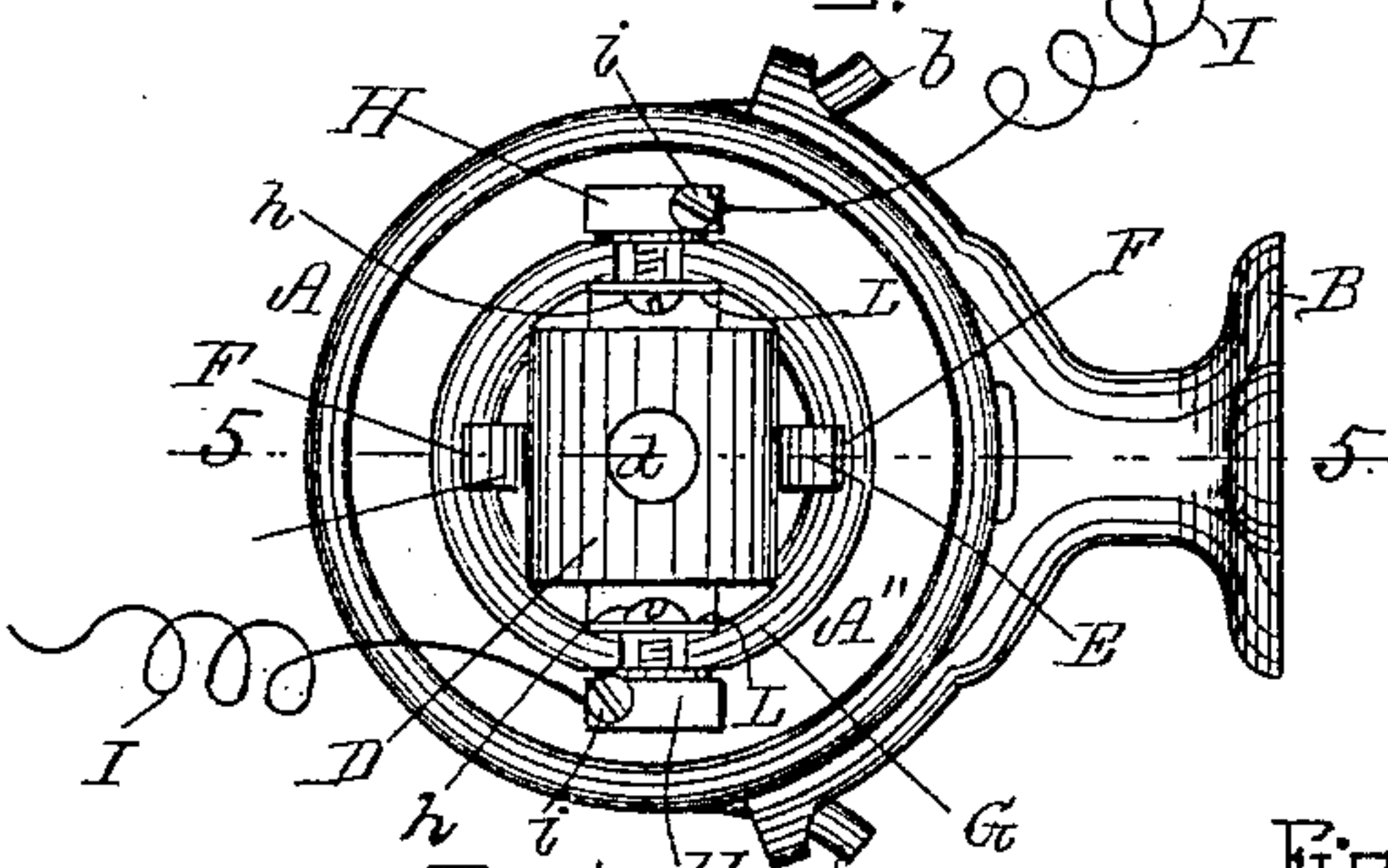


Fig. 5.

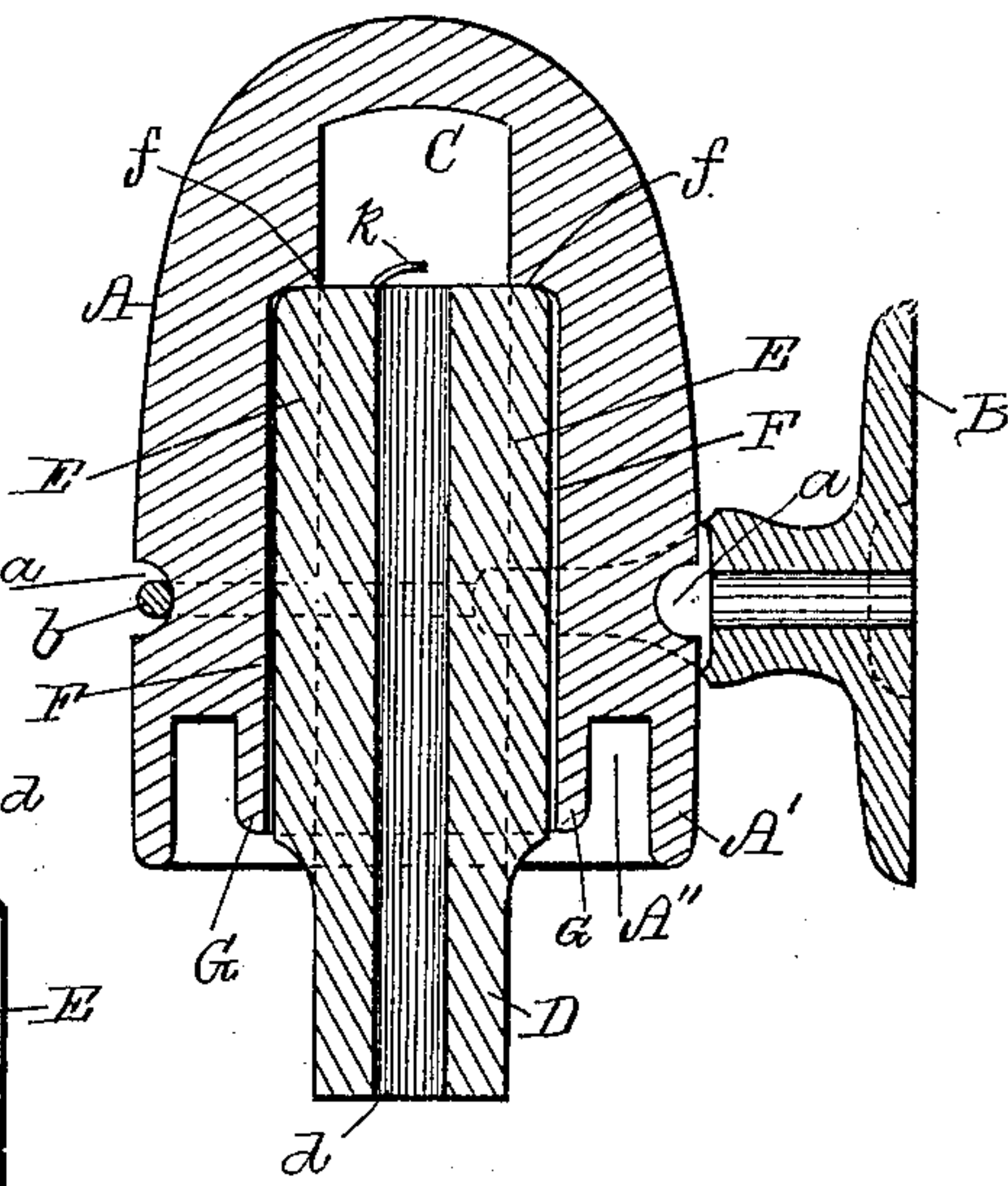


Fig. 6.

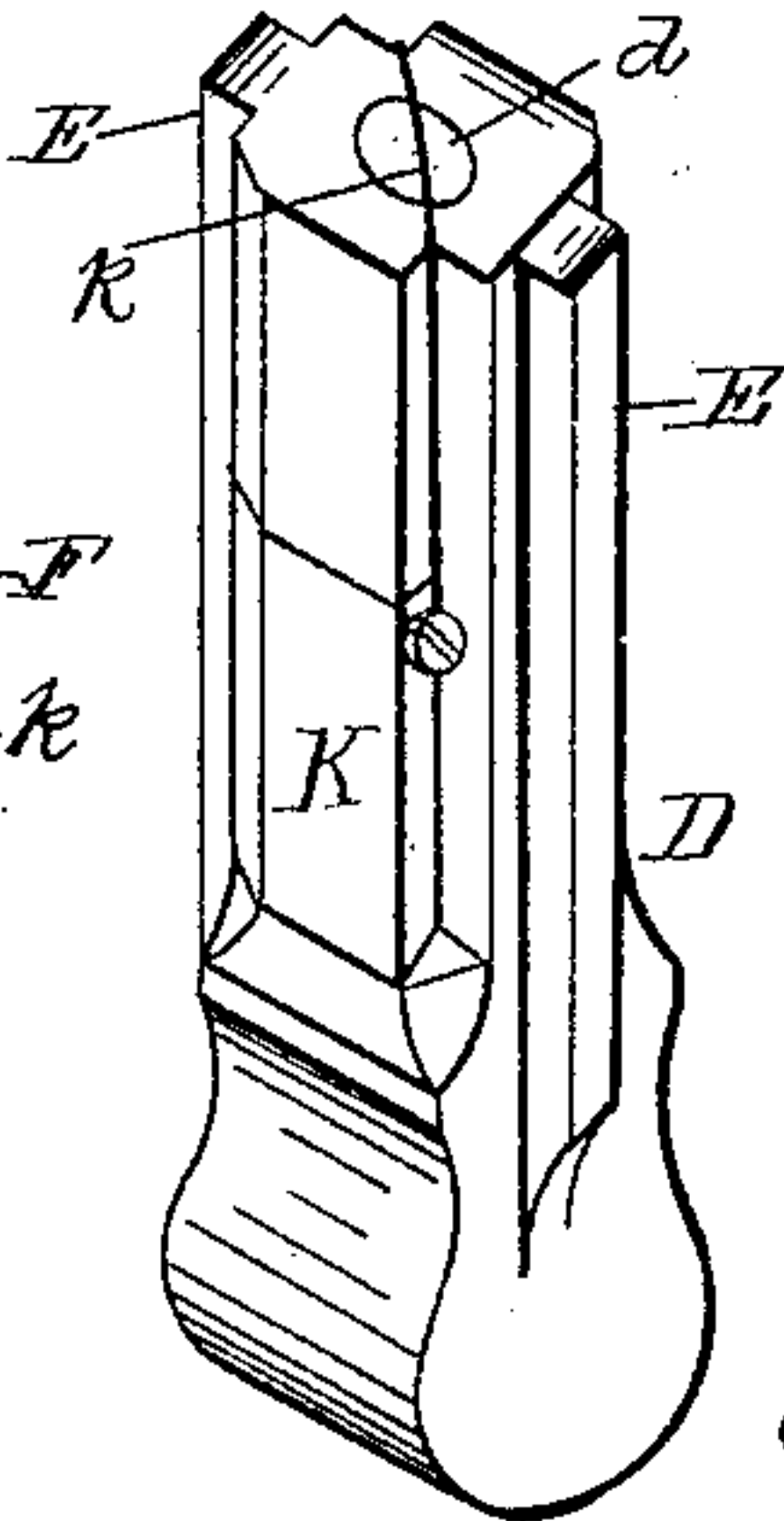
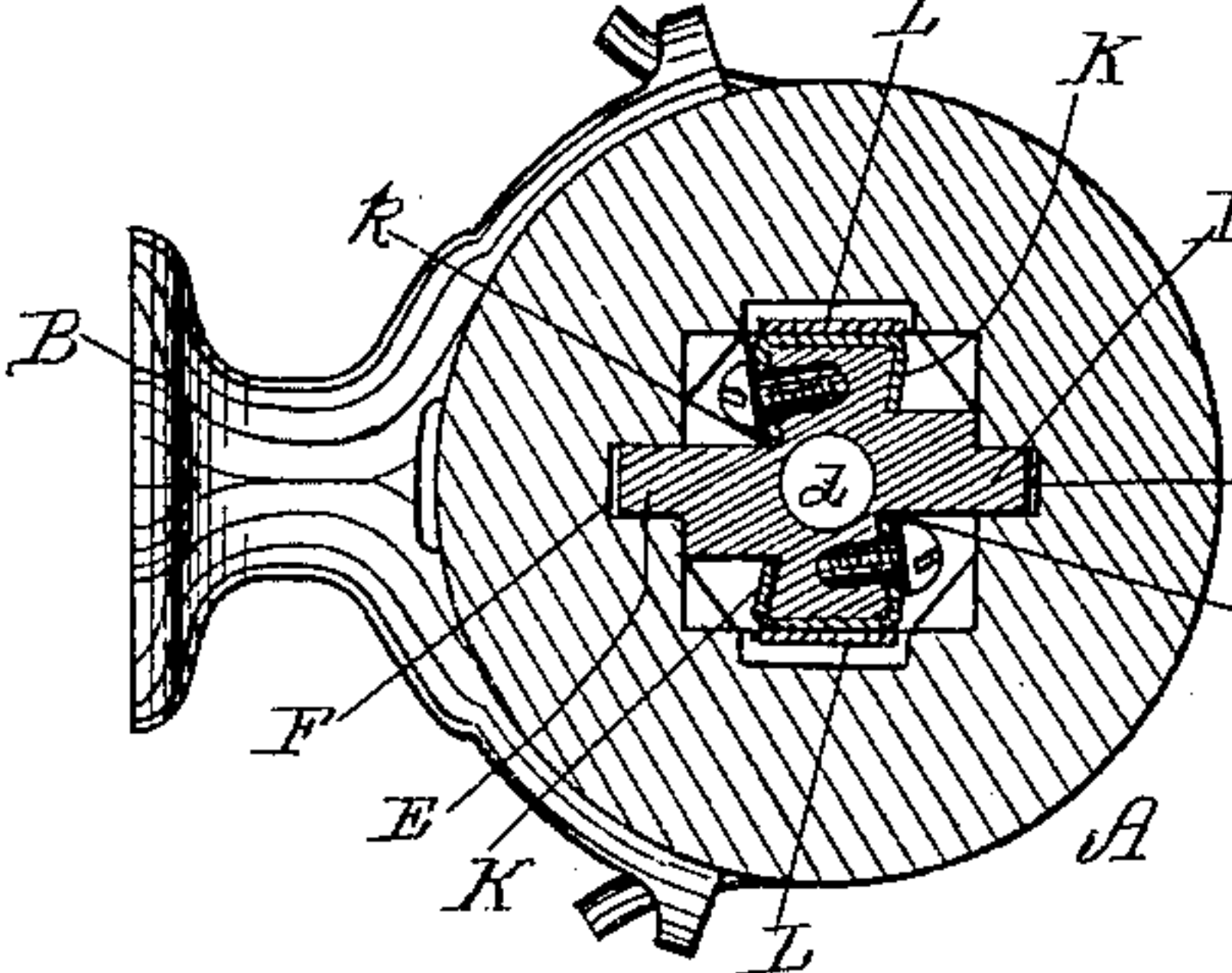


Fig. 4.



Witnesses.

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his atty.

UNITED STATES PATENT OFFICE.

JOSEPH BRODIE SMITH, OF MANCHESTER, NEW HAMPSHIRE.

SWITCH AND FUSE-BOX.

SPECIFICATION forming part of Letters Patent No. 547,591, dated October 8, 1895.

Application filed April 12, 1895. Serial No. 545,471. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH BRODIE SMITH, a citizen of the United States, and a resident of Manchester, in the county of Hillsborough and State of New Hampshire, have invented new and useful Improvements in a Combined Switch and Fuse-Box, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to a new and useful combined switch and fuse-box adapted for use in connection with electric translating devices—such as, for instance, transformers, motors, lights, &c.—and it is carried out as follows, reference being had to the accompanying drawings, wherein—

Figure 1 represents a side elevation of the invention. Fig. 2 represents a bottom plan view. Fig. 3 represents a central longitudinal section on the line 3 3 shown in Fig. 1. Fig. 4 represents a cross-section on the line 4 4 shown in Figs. 1 and 3. Fig. 5 represents a vertical longitudinal section on the line 5 5 shown in Fig. 2, and Fig. 6 represents a perspective view of the detachable plug shown as removed from the box.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

A represents the box, made of any desired insulating material, which is preferably attached in any suitable manner to a metal bracket B, adapted to be secured to a building or other support, according to circumstances. In practice I prefer to secure the bracket B to the box A by means of a wire *b*, received in a groove *a* on the exterior of said box A, as shown in the drawings; but this is not essential, as the box may be attached to its bracket in any other suitable or desirable manner. The box A has a central recess C, which is closed at the top of the box and serves to receive the plug D, as shown. The plug D is provided with longitudinal ribs EE, adapted to be received in longitudinal grooves FF on the interior of the box A, as shown, such grooves having stop projections *f f* at their upper ends for the purpose of limiting the upward motion of the plug within the box, as fully shown in Fig. 5. Within the lower

part of the hollow box A there is an annular lip or inner petticoat G, to which the metal binding-posts H H are secured by means of screws *h h*, as shown.

I represent the circuit-wires metallically connected, preferably by means of binding-screws *i i*, to the posts H H, said wires leading, respectively, to the source of electrical energy and the translating device for which the combined switch and fuse-box is to be used.

To opposite sides of the plug D are secured in any suitable manner the metal plates K K, adapted to be held in metallic contact with metal springs L L, arranged within the central recess C of the box A and secured in their lower ends to the binder-screws *h h*, as shown in Fig. 3. The plug contact-plates K K are connected by means of a fuse-wire *k*, (shown in Figs. 3, 5, and 6,) and by means of such wire and the plug-plates K K, the box-springs L L, and binding-posts H H the circuit is closed between the wires I I, when the plug D is placed in position within the box A, as shown in Figs. 1, 2, 3, 4, and 5. The recess C extends above the upper end of the plug D, and through the latter is made a central perforation or hole *d* for the purpose of permitting the expanded air to escape freely from the upper end of chamber C in case fusion takes place in the wire *k*. Said perforation *d* also serves to prevent arcing of the fuse-wire, as the flame is caused to be blown out through said perforation as soon as ignition takes place.

The box A is made of the kind termed a "double petticoat," and it is provided at its lower end, in addition to the inner petticoat G, with an outer petticoat A', between which there is an annular space A'', (shown in Figs. 2, 3, and 5,) in which the binder-posts H H are located, as shown in Figs. 2 and 3. The outer petticoat A' serves to prevent rain and moisture from contact with said binder-posts and prevents escape of current to the supporting-bracket B. By removing the plug D from within the box A the circuit is broken in the latter and the translating device cut off from the source of electrical energy. In case the fuse-wire K should be burned out it can

easily be replaced by another supply by withdrawing the plug D and attaching to it a new fuse-wire in place of the one burned out.

What I wish to secure by Letters Patent and claim is—

1. The herein described combined switch and fuse box consisting of a box of insulating material having a central recess in combination with a perforated plug of insulating material longitudinally movable in said recess, contact plates and a fuse wire attached thereto and contact springs secured within the interior of the box and connected to the circuit wires, substantially as and for the purpose set forth.

2. In a combined switch and fuse box a plug of insulating material having a longitudinal channel in combination with contact plates connected to a fuse wire crossing the upper end of said channel; a box of insulating material having a central recess for receiving said plug and extended above the latter and stop projections to limit the upward movement of said plug, substantially as and for the purpose set forth.

3. The herein described combined switch

and fuse box consisting of a box of insulating material open at the bottom in combination with one or more insulating petticoats about said opening, a chamber forming the interior of said box, a removable plug of insulating material having a perforation therein acting to furnish a vent to the gases contained in that portion of the chamber not filled by the plug, contact plates attached to said box and protected from moisture by the aforesaid petticoats said contact plates being adapted to connect with corresponding contact plates on the plug and serving for terminals of the leading wires of the before mentioned contact plates carried upon the plug and a fusible conductor connecting them, substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 6th day of March, A. D. 1895.

JOSEPH BRODIE SMITH.

Witnesses:

ALBAN ANDRÉN,
LAURITZ N. MÖLLER.