

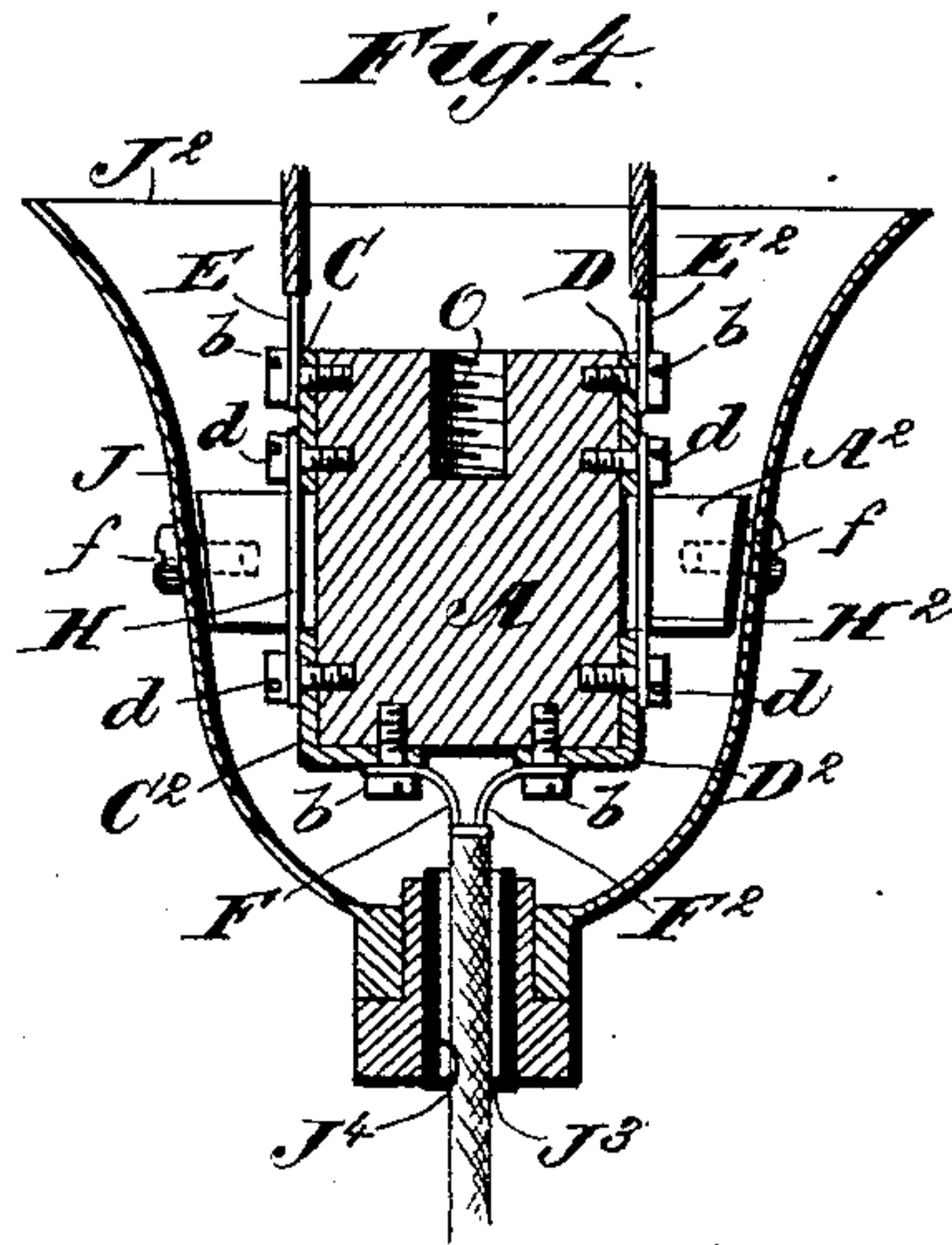
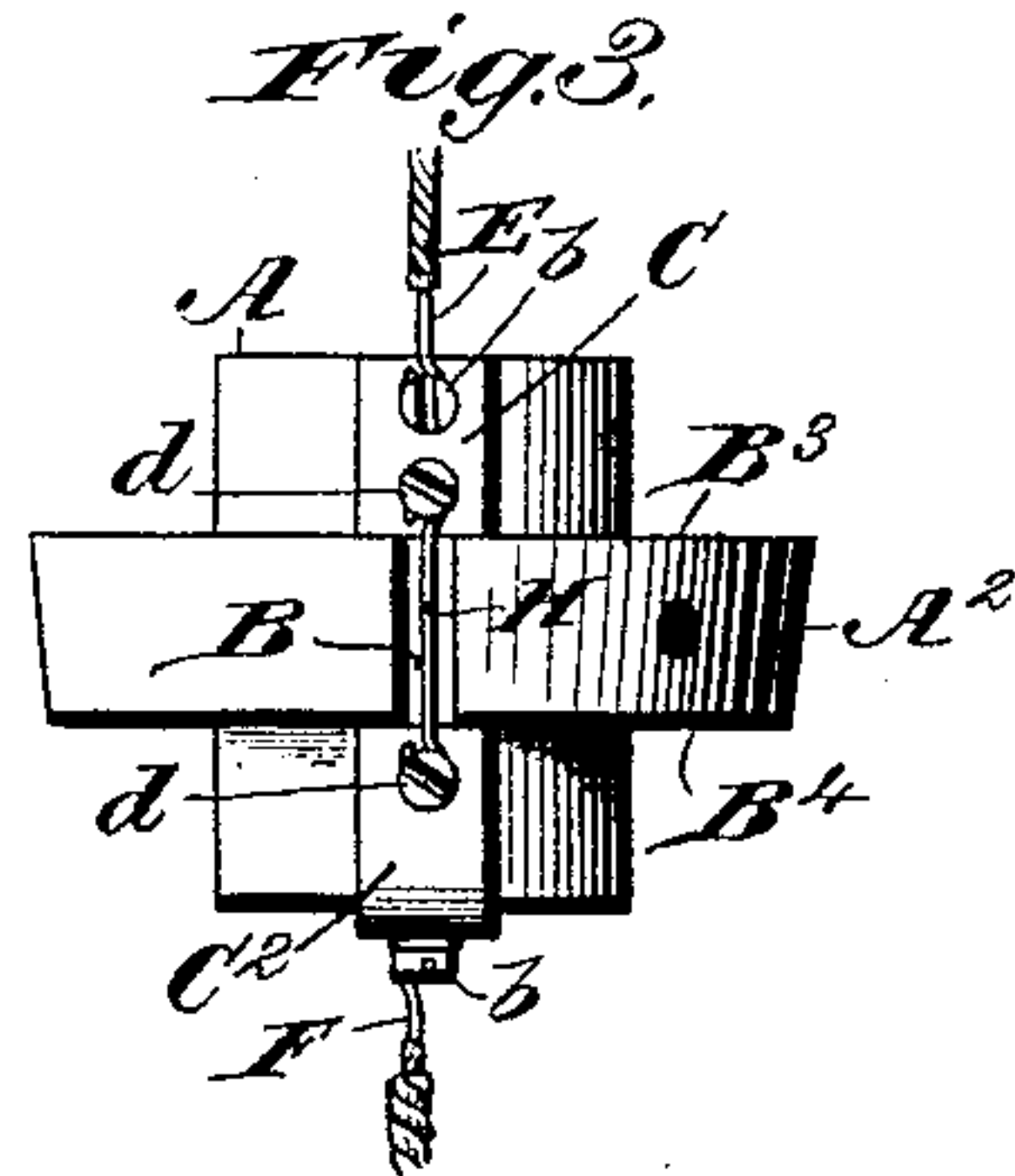
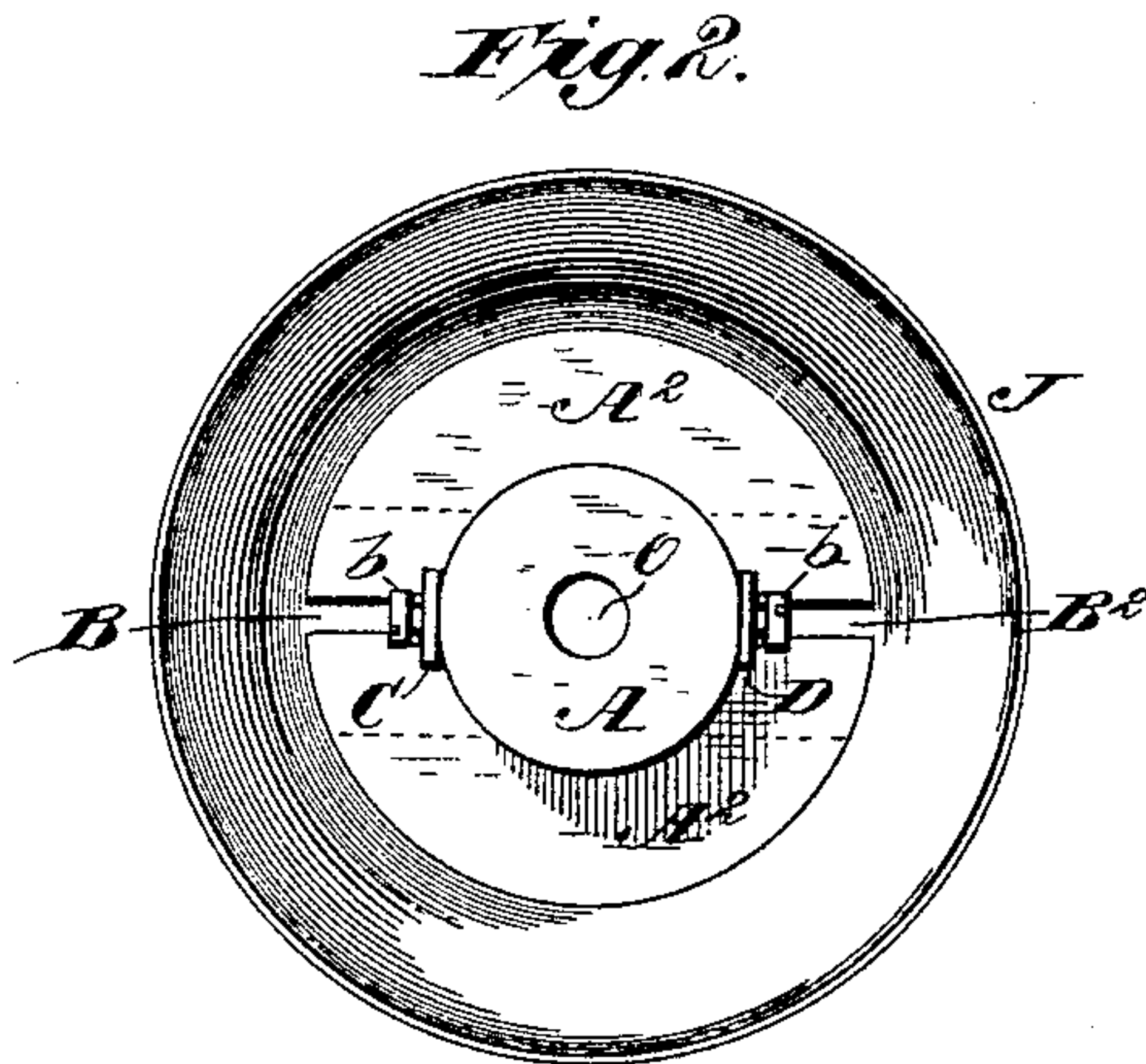
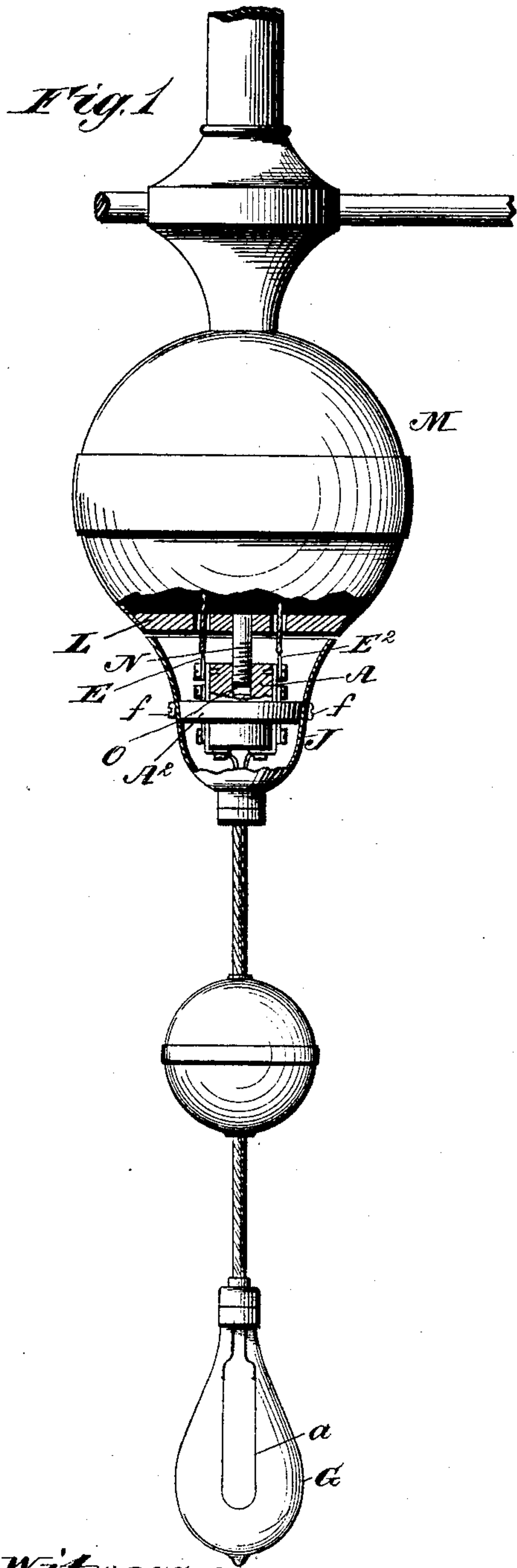
(No Model.)

W. E. DOW.

FUSIBLE CUT-OUT FOR ELECTRIC CONNECTIONS.

No. 451,997.

Patented May 12, 1891.



Witnesses:
Robert Everett,
J. A. Rutherford

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UNITED STATES PATENT OFFICE.

WILLARD E. DOW, OF BRAINTREE, MASSACHUSETTS.

FUSIBLE CUT-OUT FOR ELECTRIC CONNECTIONS.

SPECIFICATION forming part of Letters Patent No. 451,997, dated May 12, 1891.

Application filed December 4, 1890. Serial No. 373,590. (No model.)

To all whom it may concern.

Be it known that I, WILLARD E. DOW, a citizen of the United States of America, and a resident of the town of Braintree, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Fusible Cut-outs for Electric Connections, of which the following is a full, clear, and exact description.

10 This invention relates to electric fusible cut-outs, and it is more especially designed for use in connection with the circuit-wires of an incandescent electric light, and it is particularly applicable in that relation with the
15 light suspended from a drop capable of being raised and lowered within given limits and supported wherever placed.

The electric fusible cut-out of this invention in substance is composed of a block of
20 insulating material, preferably hard vulcanized india-rubber and cylindrical, and having a side enlargement intermediate of its opposite ends, preferably a continuous flange of circular outline, and two radial slots, one on
25 each side and for the full width of said flange and both open at the periphery and opposite sides of said flange and ending at or near the block, in combination with metallic plates or such like, held in pairs on opposite
30 sides of the block and one of each pair at each side and crossing the slots of its said peripheral flange, wires of an electric circuit held in electric contact with each of said plates, and fusible electric wires, one for each
35 circuit length of electric wire, and each of which at its opposite ends is held in electric contact with said metallic plates and lies lengthwise within a slot of the peripheral flange of, but preferably out of contact with,
40 the insulated block.

Furthermore, this invention consists, in combination with the above, of a metallic shell adapted to incase said insulating-block with its flange and electric attachments, all
45 as explained, and also for the passage into and out of it end to end of the wire-lengths of the electric circuit.

In the drawings forming part of this specification, Figure 1 is a side elevation of part
50 of a gas or electric-light fixture and partially a side elevation and a vertical section of the

electric fusible cut-out of this invention held thereon, and also a side view of an incandescent electric light and a drop for it. Fig. 2 is a plan view of the electric fusible cut-out
55 and its casing detached. Fig. 3 is a side elevation of the electric fusible cut-out. Fig. 4 is a central vertical section, line 4 4, Fig. 2.

In the drawings, A is a block of insulating material, preferably hard vulcanized india-
60 rubber and cylindrical, and A² is an enlargement, shown as a projecting flange about the block A and intermediate of its length. The block A and its flange A² preferably are of
65 one piece.

B B² are radial slots at opposite sides of the block-flange A². These slots are open at the periphery and at each side B³ B⁴ of the flange A², and each terminates preferably at the periphery of the block A.
70

C C² and D D² are two pairs of metal or such like plates, and those of each pair are held on opposite sides of the block and one pair at one side and the other pair at the other side of its peripheral flange, and they sever-
75 ally extend across the slots of the flange.

E E² and F F² are the lengths of wire to make an electric circuit—for instance, including therewith the carbon filament *a* of an incandescent electric light G. The lengths E
80 F and E² F² are those of each pair, respectively, held in electric contact by screws *b* with the metal plates C D and C² D², respectively.

H H² are electric fusible cut-out wires or
85 such like, each held at its opposite ends by screws *d* on the plates C D and C² D², respectively, and thus completing the electric connection of each length of the electric circuit. Each fusible cut-out wire H H² lies within a
90 slot B B², respectively, and extends from side B³ to side B⁴ of the flange A² of the block A, and all connections of the fusible cut-out and other electric wires to the metal plates, as has been explained, are on the block A at each
95 side of it and its flange.

It is obvious that the insulating-block A and its slotted enlargement or peripheral flange A² furnishes not only a most complete and convenient device for the electric con-
100 nections, as described, but at the same time affords protection to the electric fusible cut-

outs and allows them to be readily replaced, as may be desired or required. The advisability and necessity of electric fusible cut-outs in electric circuits are so well known as to require no mention.

Obviously the enlargement of the block (particularly shown as a continuous flange A^2) may be disconnected sections, one at each side of the block, as shown by and between the dotted lines, Fig. 2, at each side of the periphery of the flange.

J is a metallic cone-shaped shell, at its larger end J^2 open and at its smaller end having an opening J^3 , suitable for the passage of two wire-lengths of an electric circuit, each length being suitably insulated and wound spirally about each other. The opening J^3 is preferably lined with an insulating material J^4 , such as india-rubber, hard or soft, vulcanized, so as to prevent electric connection with the shell should the insulation of the wires of the circuit wear so as to expose the wires. The larger and open end J^2 of the shell J receives the electric wires of the circuit, and it is quite useful for the attachment of the shell, as may be desired—as, for instance, as shown in Fig. 1—assisted by the further attachment of the insulating-block A to a fixed part L of the gas-fixture M by means of a fixed screw-threaded projection N of said part L, on which the block by its axial screw-threaded socket O is screwed, the said block being also secured to the shell by screws f at quartering or other points thereof.

Having thus described my invention, what

I claim, and desire to secure by Letters Patent, is—

1. In an electric cut-out, an insulating-block A and its annular insulating enlargement A^2 , having radial slots B B^2 , in combination with metallic plates on opposite sides of said block and enlargement and electric-circuit and fusible cut-out wires held on said plates and the latter lying in said slots B B^2 , substantially as described, for the purposes specified.

2. In an electric cut-out, an insulating-block A and its insulating enlargement A^2 , having radial slots B B^2 , metallic plates on opposite sides of said block and enlargement, and electric-circuit and fusible cut-out wires held on said plates and the latter lying in said slots B B^2 , in combination with a shell J, adapted to incase said block, its enlargement, and their said attachments and open at its opposite ends for the passage of the electric-circuit wires therethrough, means for attaching said block to the shell, and an insulating-lining of the open end of the shell J and at which the electric-circuit wires pass out thereof, substantially as described, for the purpose specified.

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

WILLARD E. DOW.

Witnesses:

ALBERT W. BROWN,
FRANCES M. BROWN.