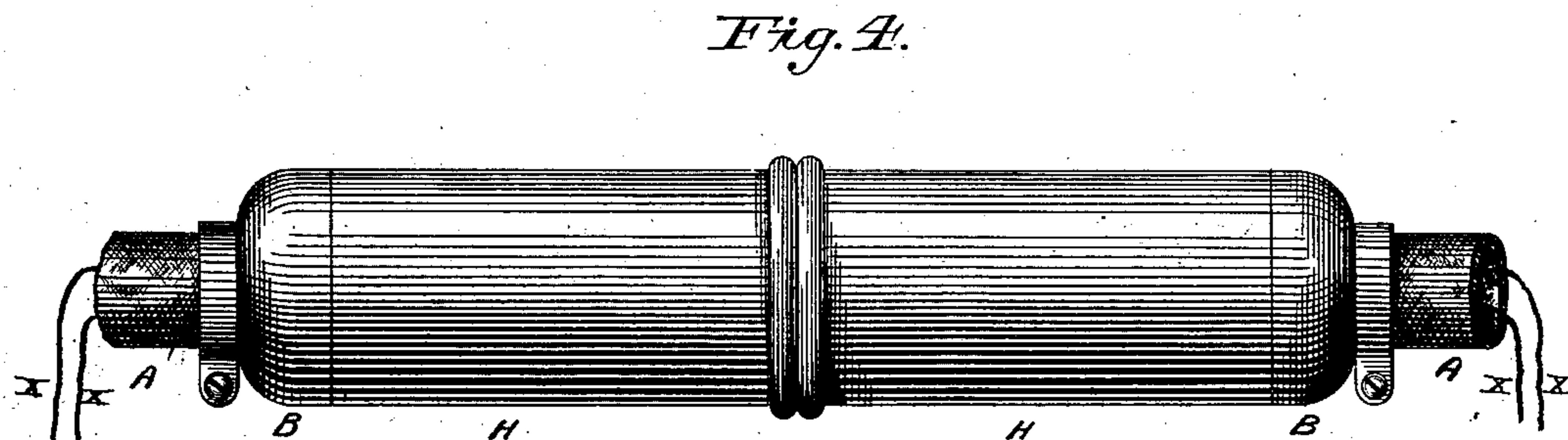
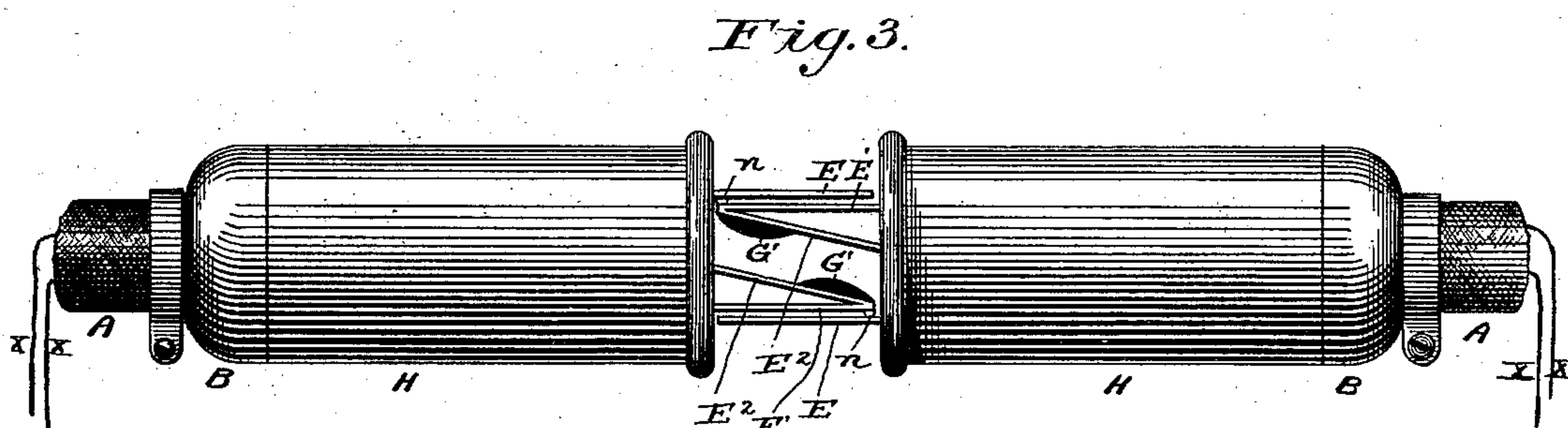
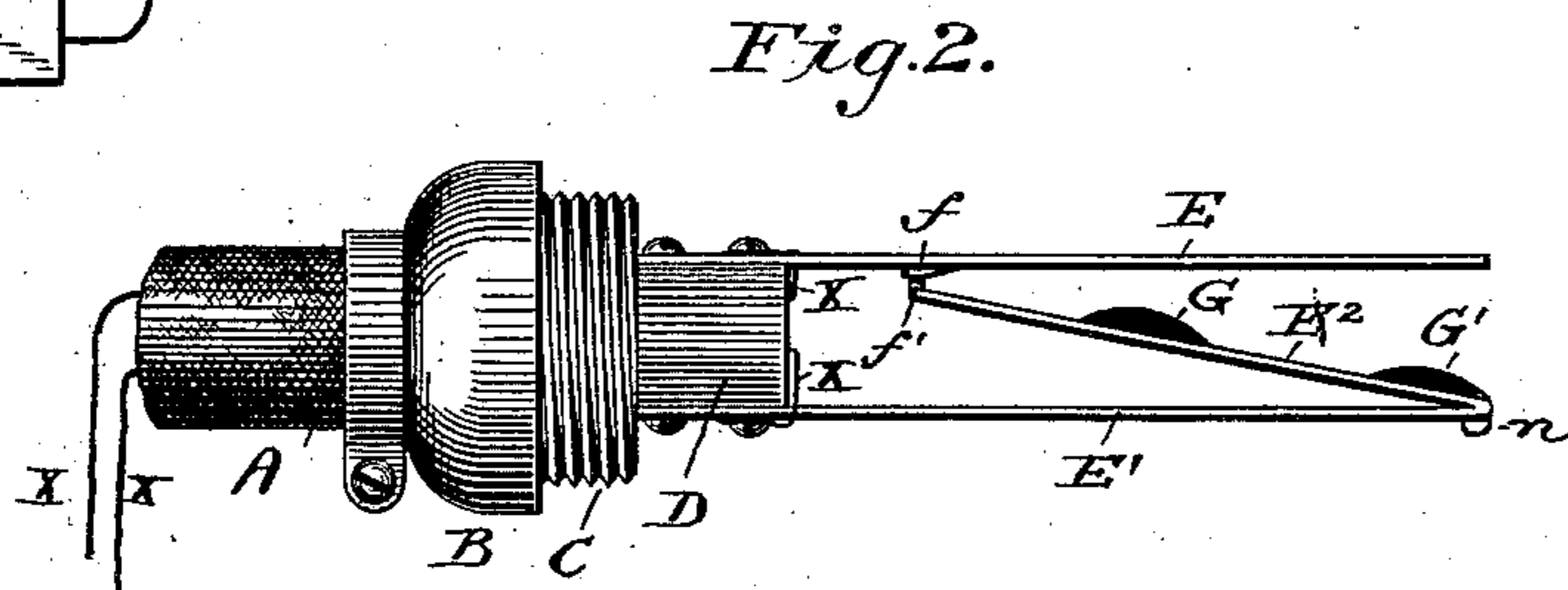
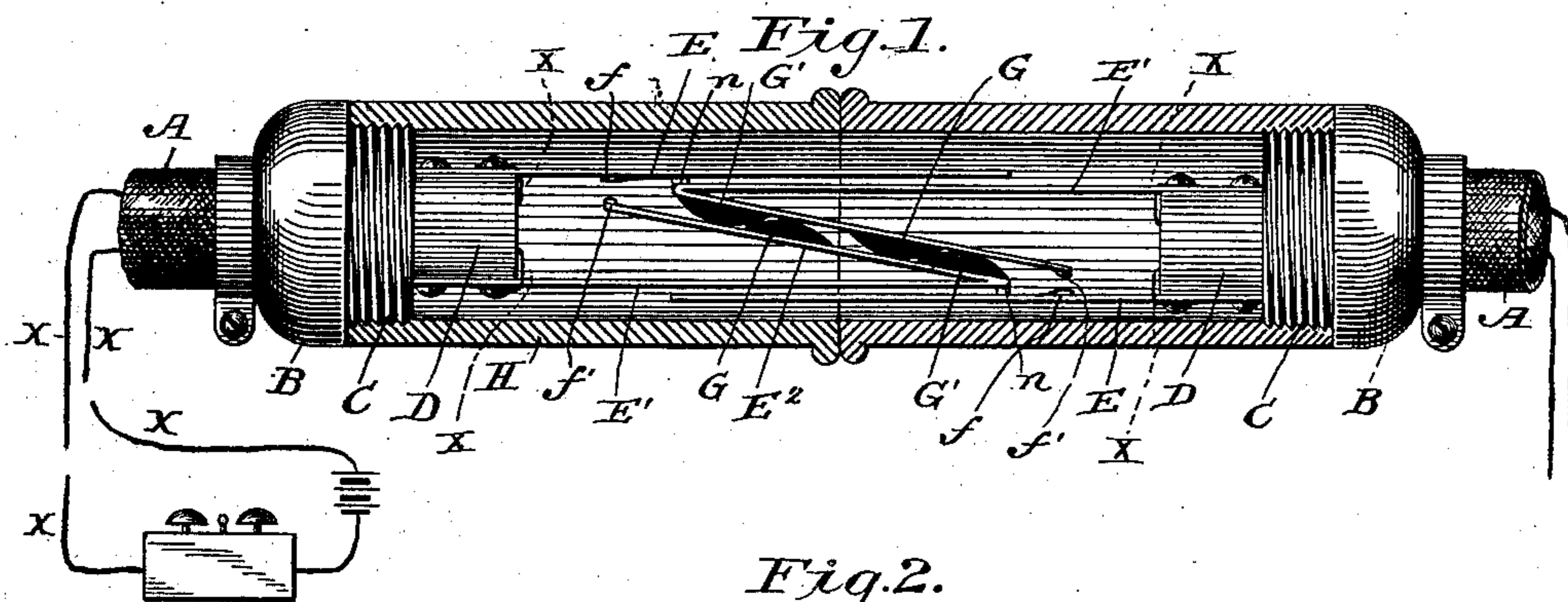


(No Model.)

J. S. CAPERS.
AUTOMATIC ELECTRICAL SIGNAL COUPLER.

No. 357,165.

Patented Feb. 1, 1887.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN S. CAPERS, OF NEW ORLEANS, LOUISIANA.

AUTOMATIC ELECTRICAL SIGNAL-COUPLER.

SPECIFICATION forming part of Letters Patent No. 357,165, dated February 1, 1887.

Application filed February 11, 1886. Serial No. 191,560. (No model.)

To all whom it may concern:

Be it known that I, JOHN SINGLETERY CAPERS, a citizen of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented certain new and useful Improvements in Automatic Electrical Signal-Couplers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to that class of separable connections interposed in the line of a normally-inoperative annunciator-circuit, whose uncoupling is signalized by the energizing of the annunciating device.

The object of my invention is to provide a connection or coupling of this kind especially adapted to unite the separate sections of an electric circuit extending throughout the length of a train of cars in such manner that the breaking away of any car or cars shall serve to uncouple the separable parts of the connection, and thereby cause an annunciator located in the engine-house, caboose, or other convenient point of the train to give notice of the accident.

To this end I have devised the construction illustrated in the drawings, and hereinafter described, the arrangement and formation of parts being such as to secure, with economy and simplicity of manufacture, an effective and durable device.

In the drawings, Figure 1 represents a side elevation of my improved coupling, the casing being shown partly in section. Fig. 2 represents a side elevation of one of the members of the coupling disconnected from the other and with the coupling-sleeve removed. Fig. 3 represents a like view of the coupling in the act of being connected, and Fig. 4 represents a like view of the completed coupling.

Similar letters of reference indicate similar parts throughout the several views.

Each member of the coupling is connected with a flexible tube, A, extending in sections in the usual manner beneath the train and inclosing the conducting-wires X X, which in-

clude in circuit an electric bell located at some convenient point of the train, such as the engine-cab, the caboose, or the like.

Each member of the coupling is composed of an end piece, B, screw-threaded at C, as shown, and provided at its inner end with the projection D, upon opposite sides of which are attached, by means of screws or otherwise, the flexible strips E E' of conducting material. The wires X X pass through the portion D, as shown, and are respectively electrically connected with the strips E E' by means of fastening-screws. The conductor E is provided at f with a platinum contact, and the strip E' is provided with an inward projection, E², bearing at its free end a contact, f'. Upon the outer surface of the piece E² are attached the insulating-buttons G G', and at the point of junction between the strip E' and the auxiliary strip E² is an additional contact, n, which serves to electrically connect E and E'. The sleeve H is screwed upon the base-thread C, as shown. The end piece, B, with its projection D, and the casing H are of non-conducting material.

The parts being constructed and arranged as described, the operation of my invention is as follows: When the two members of the coupling are disconnected, the contacts f f' abut against each other, and the circuit through the strips E E² E', conductor X, and annunciating-bell is completed, thereby causing an alarm to be given. This closing of the circuit is effected whenever the two members of the coupling are pulled apart by the breaking away of a car to which one of them is attached. When the members of the coupling are connected together, as illustrated in Figs. 1 and 4, the insulating-buttons G G' cause the auxiliary strips E² E² to spring inwardly, thereby breaking the contact at f f' and causing the bell-circuit to be inoperative. The resiliency of the spring-pieces E² E² prevents the members of the coupling from separating during the ordinary jolting of the train. They may be, however, readily pulled apart when desired, the insulating-buttons sliding past each other.

It is contemplated to locate these couplings between every two adjoining cars, one member of the coupling being attached to one car and the other member to the adjacent car.

The sleeves H may readily be removed when it is desired to repair or remove any of the interior parts.

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

1. An electric coupling of the kind described, consisting of two co-operating members, each of which consists of the casing H, the parallel flexible strips E E', connected with the conducting-wire X X of an annunciator-circuit, and the auxiliary strip E², extending inwardly from the outer end of the strip E' and making spring-contact with the strip E when the members of the coupling are disconnected, said auxiliary strip being provided on the face proximate to the strip E with the insulating-buttons G G', substantially as described.

2. An electric coupling of the kind described, consisting of the casings H, the end portions, B, screw-threaded at C, and provided with the inner projections, D, the strips E, secured to the sides of the said inner projections, and connected with the conducting-wire X X of an annunciator-circuit, and the auxiliary strips E², making contact with the strips E when the members of the coupling are disconnected, and provided with the insulating-buttons G G', substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JNO. S. CAPERS.

Witnesses:

JOS. MAILLE,

LOUIS P. NAQUET.