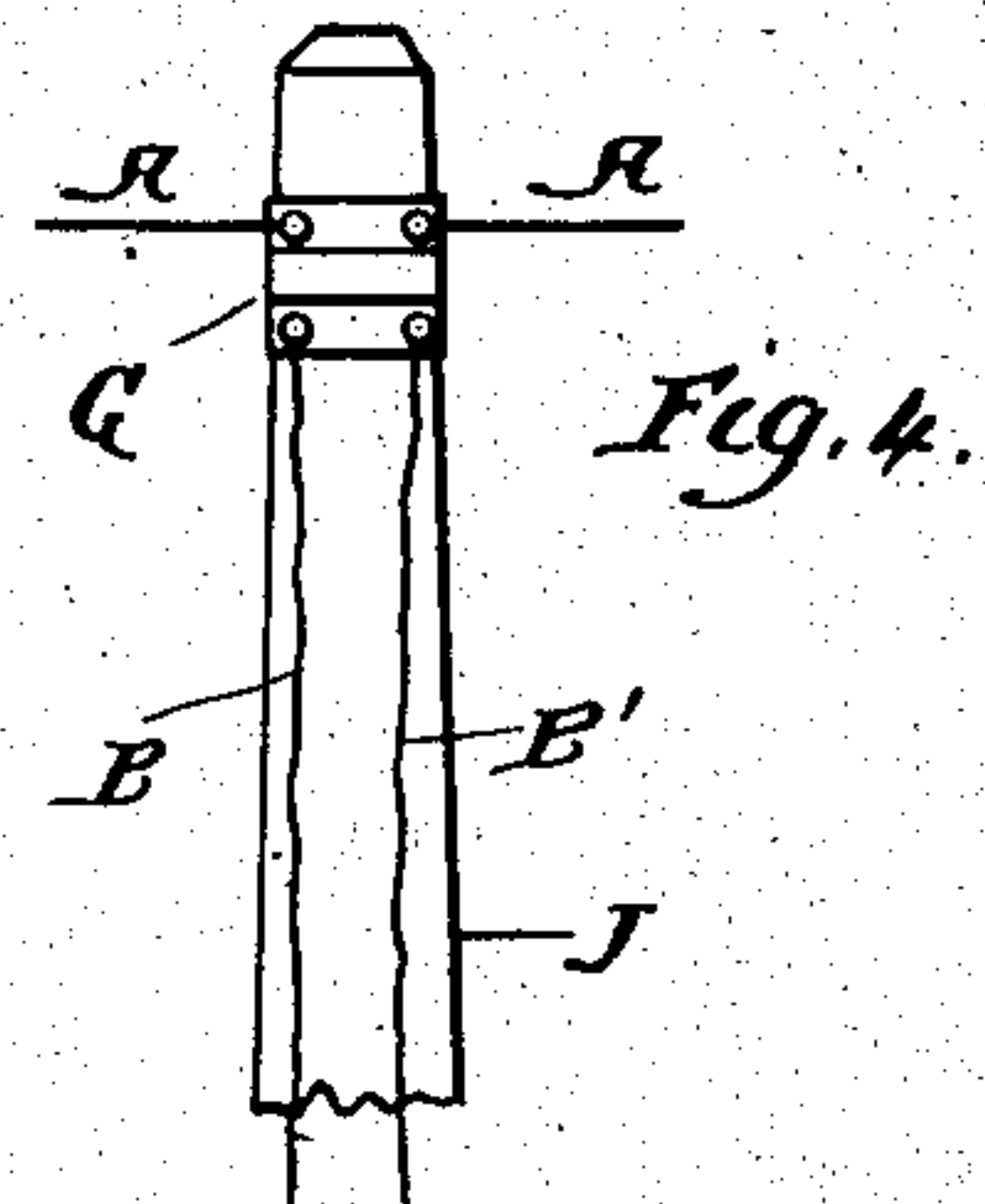
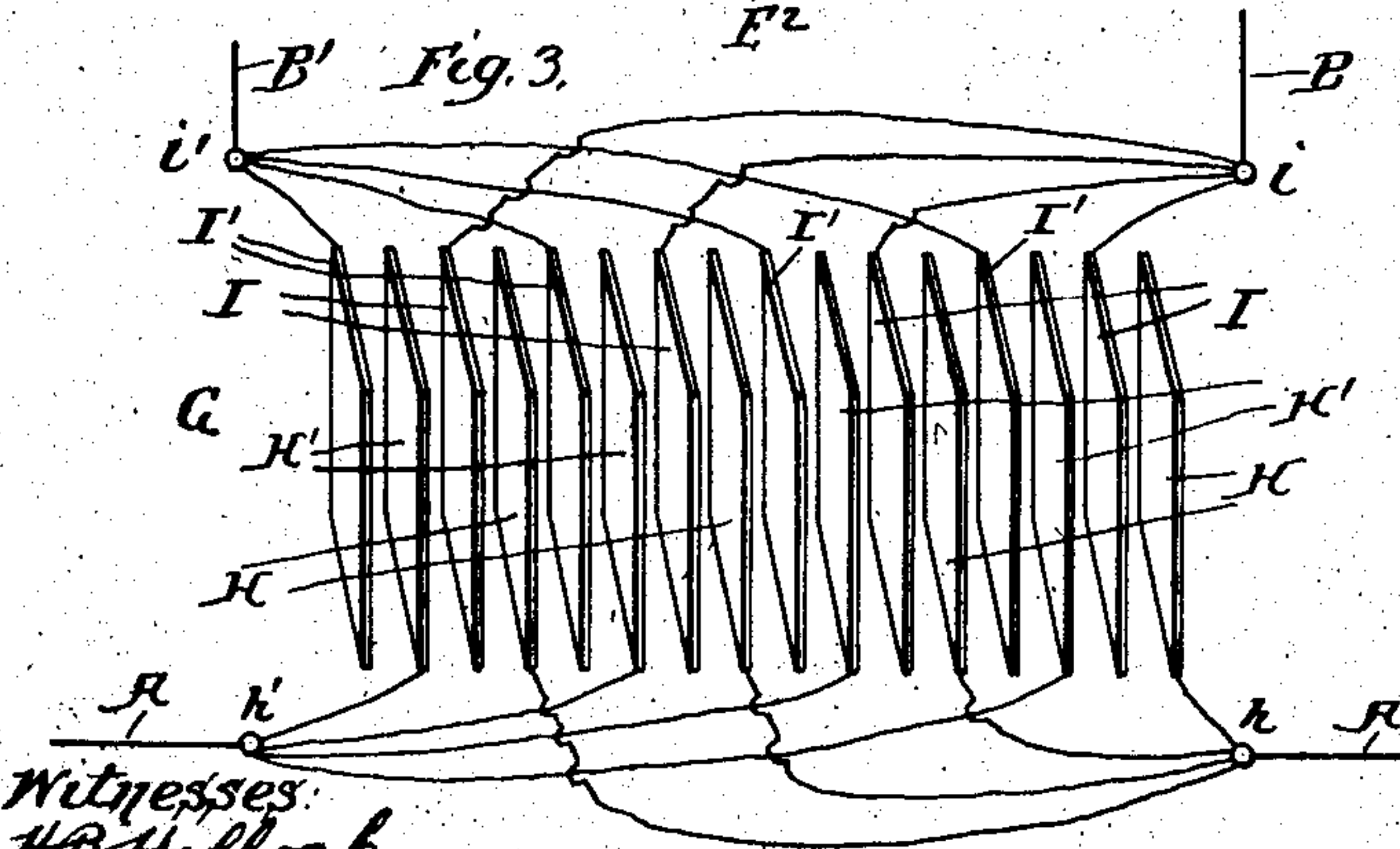
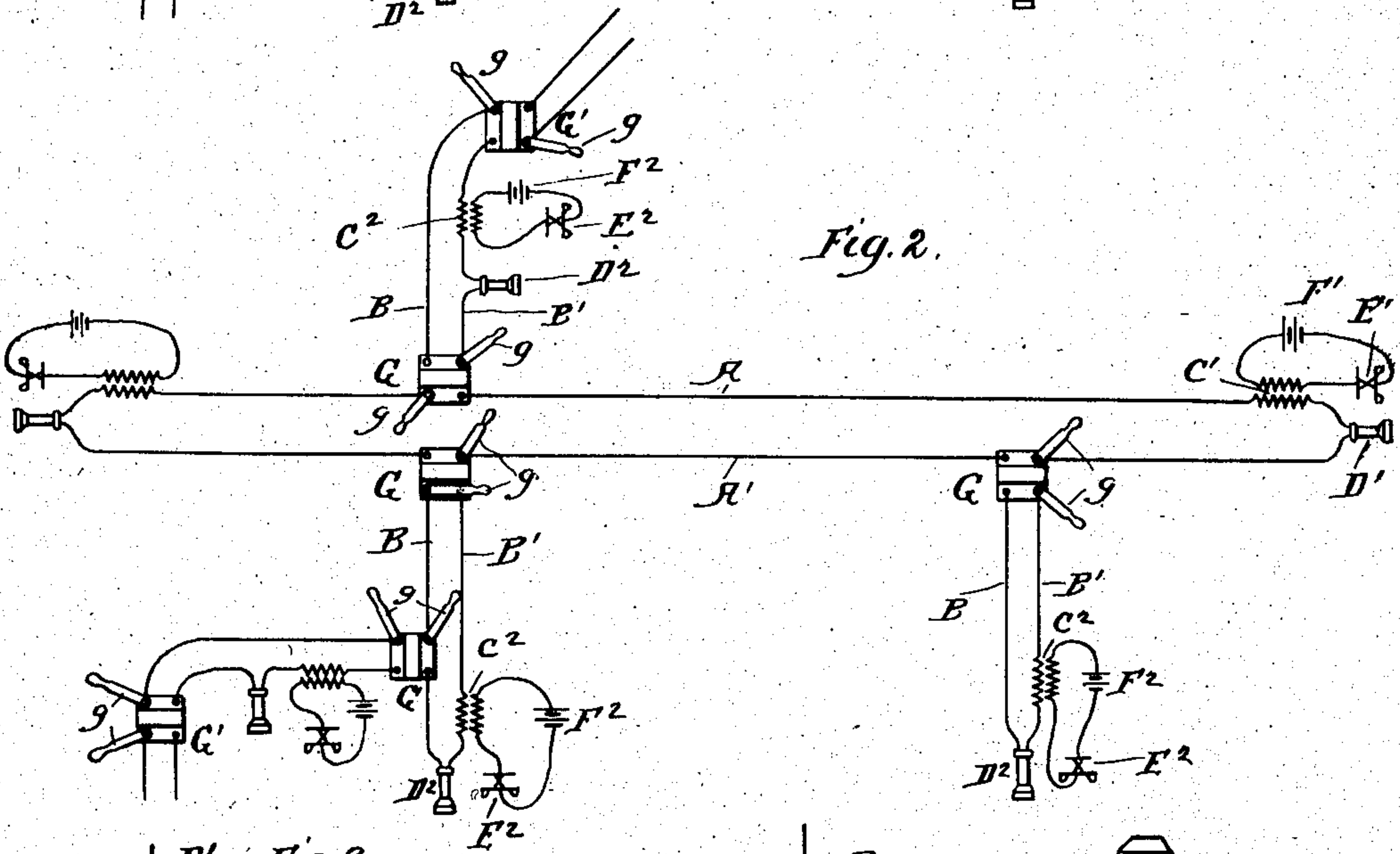
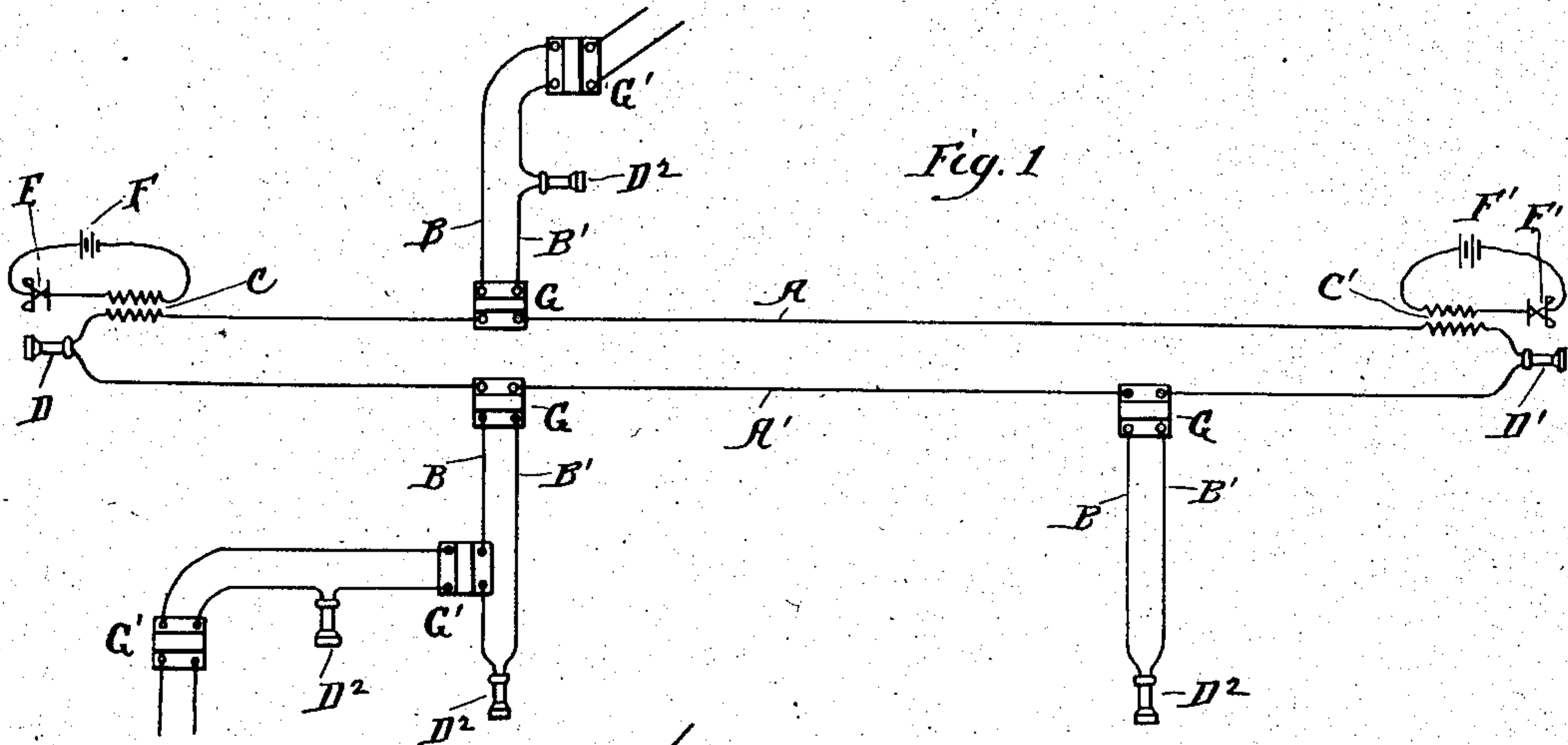


No. 827,449.

PATENTED JULY 31, 1906.

I. KITSEE.
TELEPHONY.

APPLICATION FILED MAR. 1, 1901. RENEWED JAN. 5, 1906.



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UNITED STATES PATENT OFFICE.

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TELEPHONY.

No. 827,449.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ISIDOR KITSEE, of the city and county of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Telephony, of which the following is a specification.

My invention relates to an improvement in the construction and installation of circuits for telephonic transmission; and it consists, substantially, in the novel arrangement hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the appended claims.

Referring now to the drawings, Figure 1 is a diagrammatic view of a telephonic circuit embodying my invention. Fig. 2 is a similar view in which the induction-condensers are provided with switches, the function of which will later on be described. Fig. 3 is a plan view in perspective of one of the induction-condensers. Fig. 4 is a front view of a section of a pole to which the induction-condenser is attached.

A A' are the main-line wires connected to two telephonic stations, provided with the transmitter E, battery F, inductorium C, receiver D, the designation of both of the stations being the same with the exception that the letters of the right-hand station are provided with the additional numeral 1.

In series with the line-wire are connected the primary parts of the induction-condenser G, the secondary parts of which are connected to the derived circuit, consisting of the line-wires B and B' and the receiver D². The first derived circuits, looped off from the wires A and A', are provided with a second induction-condenser G' with the aid of which a subderived circuit is carried from the first branch circuit.

In Fig. 2 each part of each condenser is provided with the switch *g* and each of the derived circuits is provided with a fully-equipped telephonic station. These stations are designated by the same letters as the station in the main line with the exception of the additional numeral 2 to each of the letters.

In Fig. 3, in which the condenser is shown in detail, the separate series of conducting-leaves are designated, respectively, by the letters H and H' for the primary part of the condenser and I and I' for the secondary part of the condenser, each series of leaves being connected to one contact-point. As illustrated, the conducting-leaves designed to form the

secondary part of the condenser are intervening between the leaves forming the primary part of the condenser.

In Fig. 4, J is a pole, such as is usually employed to carry telephonic or telegraphic wires, and at a convenient height the condenser G is secured by any of the well-known means.

I will now describe the *modus operandi* of my invention.

If it is desired to use the main station alone and none of the derived stations, then the switches of the primary parts of the condensers placed in the main line are closed. In this position the main line forms a circuit of its own, as does each of the derived circuits, it being understood that each of the derived circuits may have as many telephonic stations as are desired. But let us suppose that one of the subscribers at the main station wishes to communicate with one of the subscribers at one of the branch stations. It is only necessary for the operator at the main station to telephone to the operator at the intervening main station the following message, "Give me clear way to ———." (Naming the station.) The operator has only to throw the switch of his condenser and the path will be open for conversation to the branch circuit.

It often happens, especially in newspaper-work, that one station wishes to communicate with all the stations along its route or connected to this route by branch stations. In this case all switches of all stations are left open, and the transmitted speech will be heard by every one of the offices or subscribers connected either with the main line or sublimes.

It is unnecessary to dwell on the simplicity and importance of this invention, as persons versed in the art will readily understand the degree of flexibility attainable with the aid of this converting device in telephonic circuits.

For better understanding of the device such as described and illustrated I state here that said device is designed to perform and does in actual practice perform the same function as the well-known induction-coil and consists, like such coil, of two elements, primary and secondary elements, the secondary in inductive relation to the primary, each element provided with two terminals, the terminals of the primary elements connected to one circuit, generally called the "generating"

or "primary" circuit, and the terminals of the second elements connected to a second and separate circuit, generally called the "secondary" circuit. The difference between my device and the induction-coil consists only in the fact that where in the latter the induction is electromagnetic in my device it is purely electrostatic. Where, therefore, in this specification and claims following this specification I use the expression "induction-condenser," it will be understood that the same covers a device consisting of primary elements connected to a primary or generating circuit and secondary elements connected to a circuit carrying the induced impulses.

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

1. In a system of telephonic transmission, a main line provided with one or more telephonic stations, one or more induction-condensers each consisting of primary and secondary parts, the primary parts being connected to said main line, and branch circuits for the secondary parts of said condensers.
2. In a system of telephonic transmission consisting of a main line provided with one or more telephonic stations, one or more induction-condensers, connected with their primary part or parts to the main line, and with their secondary part or parts to an independent line, said independent line provided with a telephonic receiver.
3. In a system of telephonic transmission, a series of induction-condensers, the primaries of which are connected to the main line and the secondaries of which are connected to independent lines, the main line as well as the independent lines provided each with one or more telephonic stations.
4. A telephonic line consisting of the main-

line wires having interposed therein in series, the primary part or parts of one or more induction-condensers, each of said induction-condensers consisting of four series of conducting-leaves, insulated from each other, two series designed to form the primary and two series designed to form the secondary part of said condenser.

5. In a system of telephonic transmission, the combination of two or more telephonic stations, a line-wire connecting the same, one or more induction-condensers, the primaries of which are connected in series to said line-wires, and the secondaries of which are connected to independent line-wires; provided each with one or more telephonic stations.

6. A system of telephonic communication, consisting of a series of telephonic stations connected together through a main line and one or more derived lines, and induction-condensers electrically connecting the derived lines with the main line.

7. In telephonic communications, a main line provided with one or more telephonic stations, induction-condensers, the primaries of which are connected in series to said main line, and means for each of said condensers to open and shunt the same.

8. A line for electric transmission, having interposed therein in series the primary of an induction-condenser, the secondary of which is connected with a second and independent line, said condenser provided with means to open and shunt the same.

In testimony whereof I hereby sign my name, in the presence of two subscribing witnesses, this 18th day of February, A. D. 1901.

ISIDOR KITSEE.

Witnesses:

EDITH R. STILLEY,
WALLACE B. ELDRIDGE.