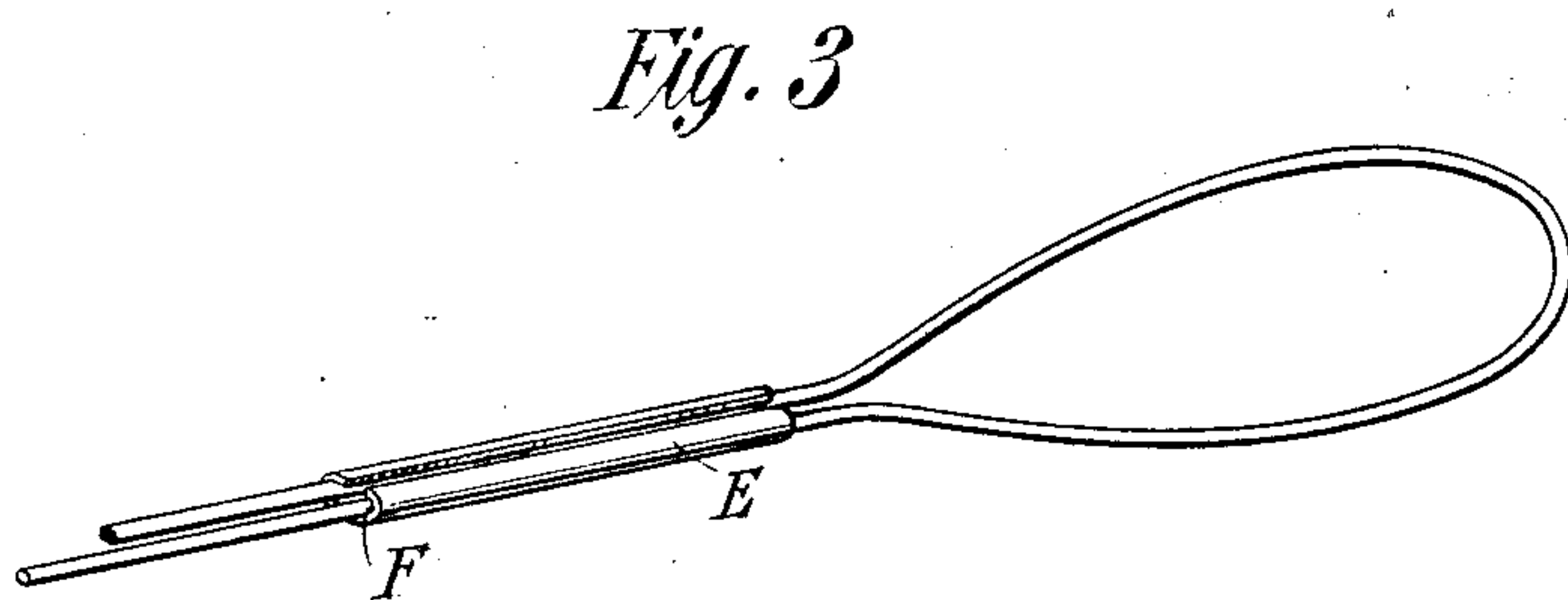
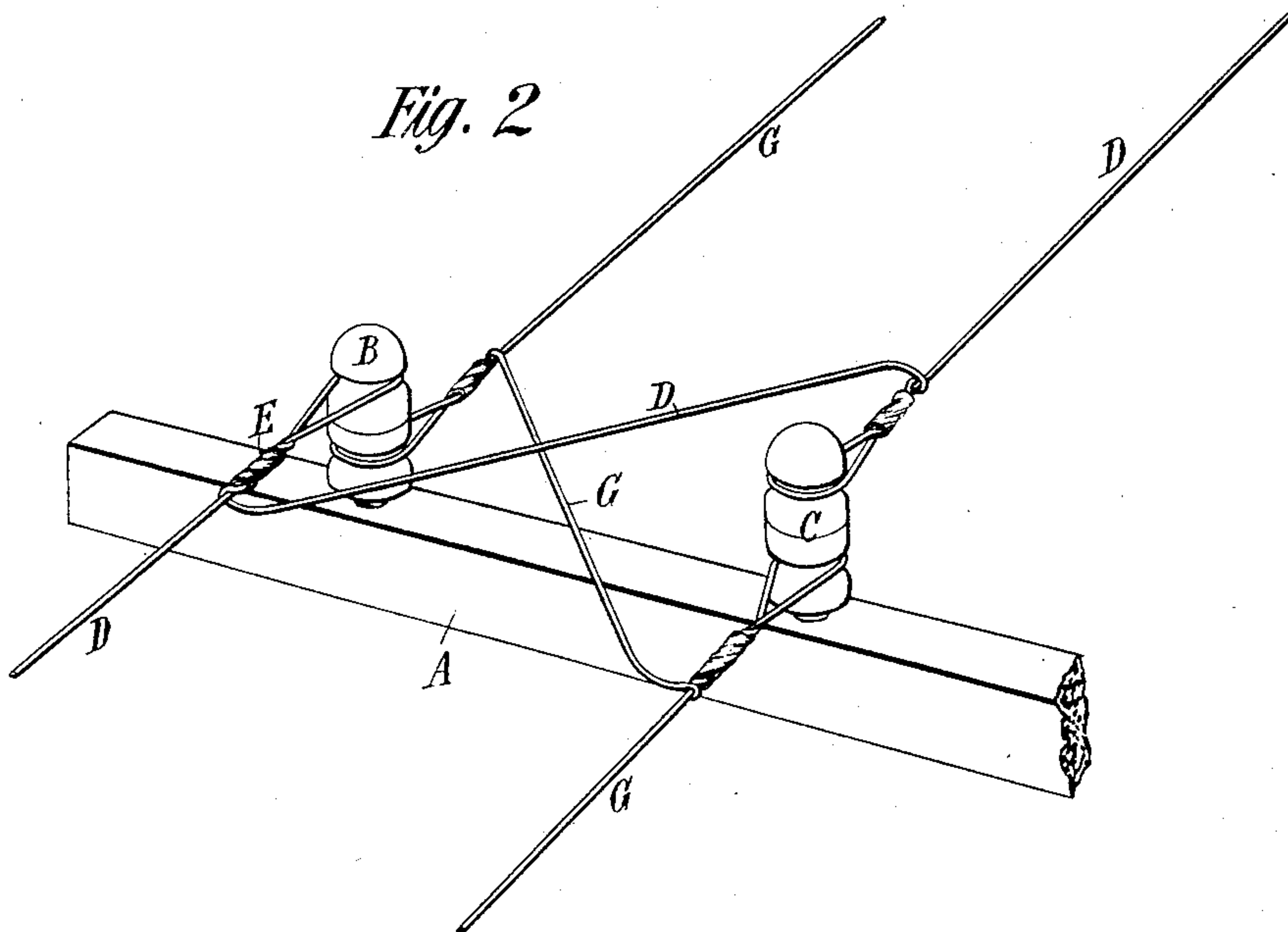
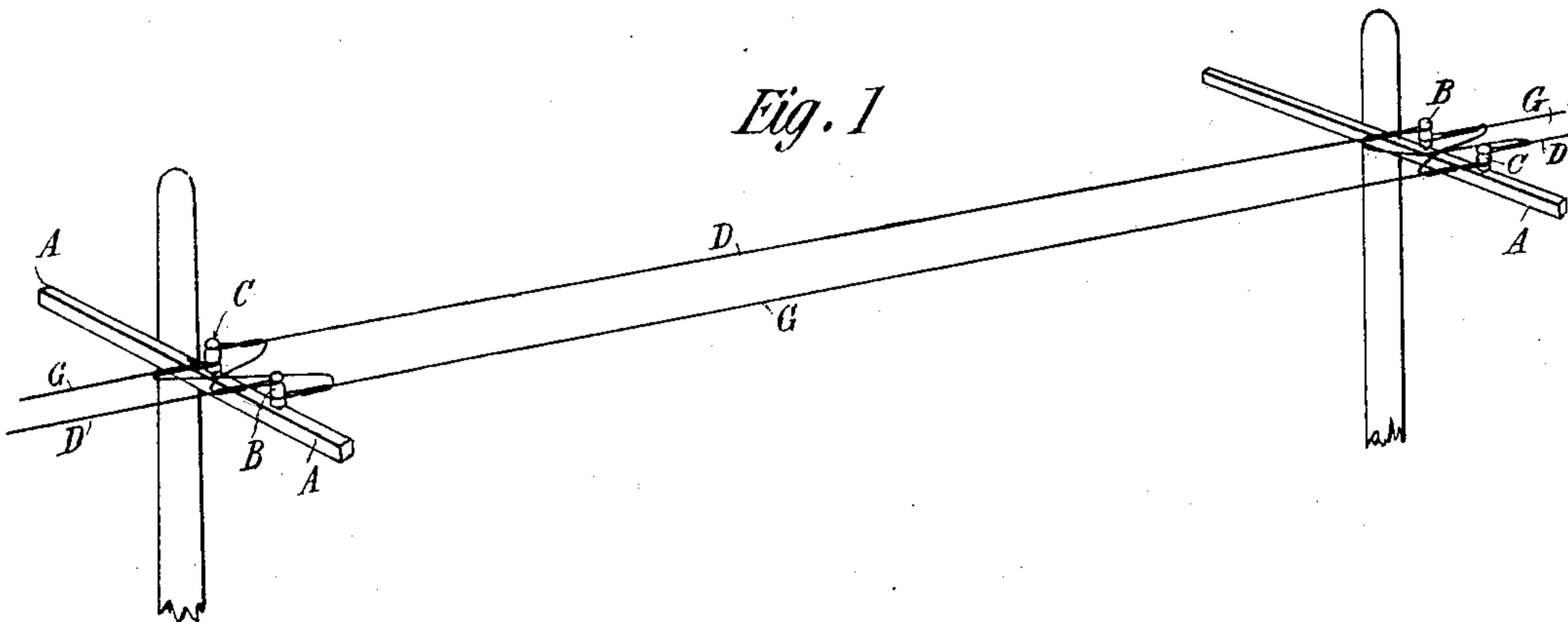


No. 731,239.

PATENTED JUNE 16, 1903.

F. W. SORG.
TELEPHONE CIRCUIT.
APPLICATION FILED AUG. 14, 1902.

NO MODEL.



Witnesses:
Raphaël Ketter
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UNITED STATES PATENT OFFICE.

FREDRICH WILLIAM SORG, OF ENGLEWOOD, NEW JERSEY.

TELEPHONE-CIRCUIT.

SPECIFICATION forming part of Letters Patent No. 731,239, dated June 16, 1903.

Application filed August 14, 1902. Serial No. 119,657. (No model.)

To all whom it may concern:

Be it known that I, FREDRICH WILLIAM SORG, a citizen of the United States, residing at Englewood, in the county of Bergen and State of New Jersey, have invented certain new and useful Improvements in Telephone-Circuits, of which the following is a specification, reference being had to the drawings accompanying and forming a part of the same.

It is customary in running telephone or other circuits of a like nature to "transpose" the line-wires, as it is called, at frequent intervals to prevent or destroy the detrimental effects of induction between the several lines. This, as is well known, consists in transferring the wire conducting the circuit from one line of supports or insulators to another line of supports or insulators, usually in the same horizontal plane, so that the relative position of different portions of two or more circuits on the same line is constantly varied.

To provide a simple, effective, and economical means of running and transposing a line by a single operation, I have devised the following plan. I string a wire on a given line of insulators and at the desired points where the wire is brought to the insulator it is merely looped around or similarly secured to the same and then bent back upon itself, and at the point of union both portions of the wire are secured together by means of an open sleeve or connector, which for greater security is then given a twist to partially or completely close it. The wire is then carried to the next insulator and a loop formed in it in the same manner, which loop is secured to the insulator and the wire then carried on to the next pole. Considering each section of line that is supported by a given line of insulators, it will be seen that its ends are supported by terminal insulators as in the present system, but that its circuit is transposed to another section by its own unbroken wire.

This improvement is illustrated in the accompanying drawings, in which

Figure 1 illustrates in perspective the general arrangement of circuits, and Fig. 2 is an enlarged view in perspective illustrating my improved means of transposing the circuits, and Fig. 3 is a perspective view of the open sleeve or connector.

Referring to Fig. 2, A is the cross-arm of a telephone or similar pole, and B C two of any number of insulators that may be secured to the arm. These insulators are or may be of the usual and well-known type of double insulators and are conveniently illustrated as provided with two grooves for the reception or attachment of line-wires. In the figure now under consideration one wire D is coming to the insulator B. It is wound or secured in one groove of the same, after which it is brought back upon itself, and the two parts secured by the sleeve or connector E by laying the two portions of wire into the groove F and then giving the sleeve one or more twists by means of a suitable tool. It is then desirable to make one or more turns of the wire emanating from the sleeve around the other or to twist the loop before attaching it to the insulator. A second loop is then formed in the wire at a suitable distance beyond the sleeve to enable the transposition of the circuit to insulator C to be effected. This second loop is formed precisely as the first and is secured to or passed around one of the grooves in insulator C, and the wire is then stretched to the next pole. Another wire G is looped and secured to the remaining grooves of the insulators and transposed in the same manner.

It will be seen that when a transposition of two wires which have been running parallel to each other is made the wires after leaving the pole upon which the transposition is made will be crossed and that there will be danger of short-circuiting through one wire sagging down upon the other. At the next transposition, however, the wires would naturally run parallel to each other again. In running a line, therefore, it is my practice, in order to obviate crossed wires, to pass the coil or running board of one line across the other after each intermediate transposition. In this way the two lines are kept parallel with each other between all the poles and crossed wires done away with.

I have shown in illustration of my invention a simple and convenient form of connector; but this may be varied to almost any extent, it being only essential that it shall preserve a mechanical union between the two portions of the wire to enable it to remain

supported from one insulator and transposed to the part of the circuit suspended from another insulator; nor is my invention limited to any special method of securing the wire or loops therein to the supports or insulators, as this may be varied as desired.

What I claim is—

1. In a telephone or similar line circuit, the combination with insulators arranged in groups in lines transverse to the circuit, of a wire or conductor supported in sections by the insulators, the wire or conductor at the end of each section being bent back and secured upon itself to form a loop engaging an insulator, the bent-back portion being carried across to another insulator in the same group and again bent and secured to form a loop extending in the opposite direction from the first and engaging the second insulator, as set forth.

2. In a telephone or similar line circuit, the combination with insulators arranged in groups in lines transverse to the circuit, of a wire or conductor supported in sections by

insulators, the wire or conductor at the end of each section being bent back and secured upon itself to form a loop engaging an insulator, the bent-back portion being carried across to another insulator in the same group and again bent and secured upon itself to form a loop extending in the opposite direction from the first and engaging the second insulator, and means for securing the bent-back portions of the wire or conductor, as set forth.

3. In a telephone or similar line circuit, the combination with a continuous line-wire supported in sections on different lines of insulators, connectors uniting the wire of the suspended sections with portions of the wire between the terminal insulators of contiguous sections, to form loops, the two portions of the wire being coiled one on the other adjacent to the connectors, as set forth.

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Witnesses:

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