

No. 759,120.

PATENTED MAY 3, 1904.

P. A. McGEORGE.
ELECTRIC INDUCTIVE CONDUCTOR.

APPLICATION FILED MAR. 17, 1904.

NO MODEL.

FIG. 1

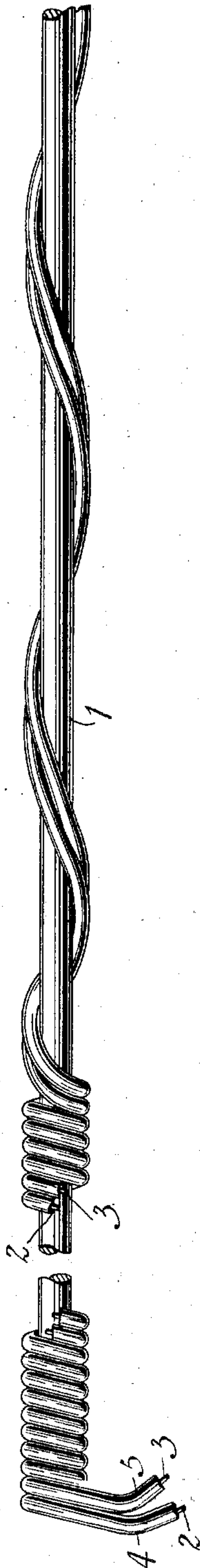
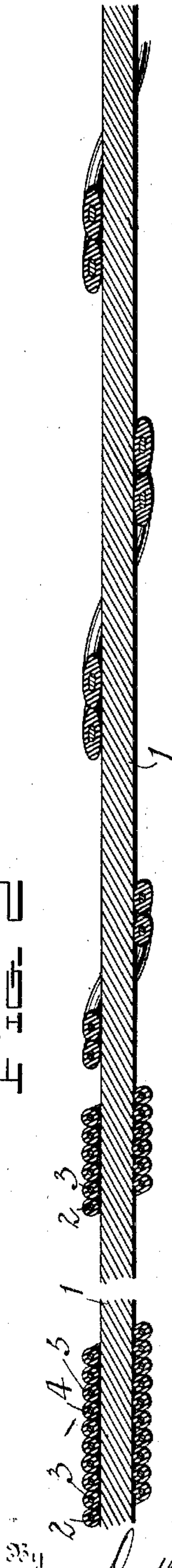


FIG. 2



Inventor

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Witnesses
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UNITED STATES PATENT OFFICE.

PERCY ALLAN McGEORGE, OF WEST HOBOKEN, NEW JERSEY, ASSIGNOR
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ELECTRIC INDUCTIVE CONDUCTOR.

SPECIFICATION forming part of Letters Patent No. 759,120, dated May 3, 1904.

Application filed March 17, 1904. Serial No. 198,672. (No model.)

To all whom it may concern:

Be it known that I, PERCY ALLAN McGEORGE, a citizen of the United States, residing at West Hoboken, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Electric Inductive Conductors; and I do hereby 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.

This invention, which relates to electrical conductors, is an improvement upon the conductor which forms the subject-matter of my application for patent filed September 10, 1902, Serial No. 122,901.

The object of the present invention is to obviate the loss of electricity due to radiation by reciprocation obtained through the instrumentality of polar inversion in the phenomenon of transmutation or mutual inductance whereby electrical currents may be transmitted regardless of distance and all danger due to sparking is effectually eliminated.

The nature of my present invention will be readily comprehended, reference being had to the following detailed description and to the accompanying drawings, which illustrate my improvements in their preferred form of embodiment, it being understood that various changes and modifications may be made therein without exceeding the scope of the concluding claims.

In the drawings, Figure 1 illustrates a conductor for electrical currents embodying my present improvement. Fig. 2 is a central longitudinal sectional view of same.

Referring to the drawings by numerals, 1 indicates a central core or wire of magnetic material, preferably soft iron. This core is continuous throughout the length of the conductor.

2 3 denote wires for conducting the electrical currents. Said wires are insulated, as at 4 5, and are wound in the same direction upon the central core or wire 1 in juxtaposed relation, the coils at the ends or terminals of the conductor being relatively close to provide

resistance. Intermediately of said ends or terminals the wires are coiled to present relatively long spirals, as shown. It will be understood that the wires 2 3 form a metallic circuit for the transmission of electrical currents and that the central core or wire forms the conductor for magnetic currents.

In the action of my improved conductor the lines of force which heretofore have radiated from the center of the conductor are by the employment of the central magnetic core or wire conserved or concentrated and their direction is changed and carried from pole to pole, thereby effecting an increase in the lines of force and preventing attenuation, with the consequent loss of power. In other words, the central core or wire effects a reciprocation of the magnetic lines of force, the polar inversion which obtains in the conductor being utilized to effect the reciprocal energization of the latter.

Where the conductor is used for submarine transmission of electrical currents, the employment of an insulating medium for magnetic currents is rendered unnecessary. In instances where the conductor is exposed to the influence of air it is incased in a magnetic insulating material—for example, lead. Whenever the conductor or any portion thereof—as, for example, the terminals—are subjected to the influence of air, or where it may be subjected to the effects of other and adjacent conductors, the lead or equivalent insulation is employed.

Suitable insulation, as shown at 4, is provided for each of the wires 2 3, and said wires are therefore in insulated contact and are electrically reciprocable.

My improved conductor may be employed for telegraphic and telephonic purposes and also for the transmission of electrical currents for power purposes.

As above stated, by the use of my improved conductor loss of power by radiation is entirely avoided and all liability of sparking is effectually prevented.

I claim as my invention—

1. An electric inductive conductor, compris-

ing a central core or wire of magnetic material, and a pair of wires providing a metallic circuit, said wires being insulated from each other and from the central core or wire and
5 coiled in the same direction and in juxtaposition around the latter.

2. An electric inductive conductor, comprising a core or wire of magnetic material, and a pair of juxtaposed insulated wires coiled in
10 the same direction and forming a metallic circuit and arranged within the magnetic zone of the core or wire.

3. An electric inductive conductor, comprising a central core or wire of magnetic material, and a pair of juxtaposed insulated wires
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forming a metallic circuit and coiled around the central core or wire, said wire coils being relatively close at the ends or terminals of the conductor.

4. An electric conductor comprising a pair 20 of continuous insulated juxtaposed wires coiled in the same direction and forming a metallic circuit, and resistance-coils in said wires at the terminals.

In testimony whereof I affix my signature in 25 presence of two witnesses.

PERCY ALLAN McGEORGE.

Witnesses:

W. T. NORTON,
E. L. WHITE.