(No Model.)

D. BROOKS, Jr.

ELECTRIC WIRE AND CABLE.

No. 244,790. Patented July 26, 1881.

Fig. 1.

Fig. 2.

Fig. 3.

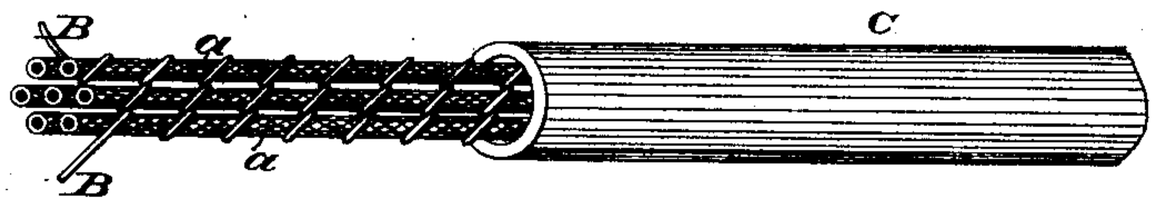
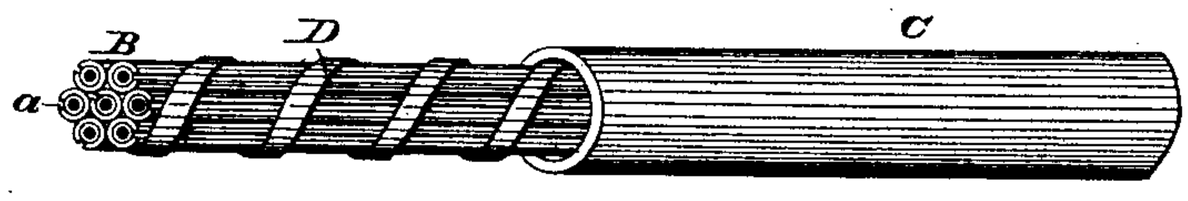


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

DAVID BROOKS, JR., OF PHILADELPHIA, PENNSYLVANIA.

ELECTRIC WIRE AND CABLE.

SPECIFICATION forming part of Letters Patent No. 244,790, dated July 26, 1881.

Application filed May 20, 1881. (No model.)

To all whom it may concern:

Be it known that I, DAVID BROOKS, Jr., a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Electric Wires and Cables, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figures 1 and 2 are views of pieces of the wire embodying my invention. Figs. 3 and 4 are views of the wires bunched and inclosed in a metallic sheath or pipe.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists of insulated metallic-wrapped wires, the wrappings being partly open or separated, whereby the tissue or fibrous coverings of the wires may be readily saturated with insulating material.

It also consists of a bunch of uninsulated metallic-wrapped wires, the wrapping being partly open or separated, and an inclosing metallic pipe receiving insulating material, which reaches and saturates the tissue or fibrous covering of the wires through the openings or spaces of the wrappings, thus freely insulating all of the wires, the wrappings being in contact with each other and with the exterior metallic pipe, forming an electrical communication between all of the metallic wrappings inside of the pipe with the pipe itself, whereby the induced currents are carried off to the exterior pipe and the inductive effects upon the other wires prevented or lessened.

Referring to the drawings, A represents a tissue or fibrous covered wire, which is wrapped with an uninsulated wire or metallic strap, B, in open spiral form, as at *a*, Fig. 1, or metallic ribbon B, Fig. 2, longitudinally inclosing the covered wire, the width of the ribbon of sheet metal being smaller than the circumference of the wire, so that a slight longitudinal space, *a*, is left at the ends of the ribbon, in which the fibrous covering of the wire is exposed, whereby the insulating material may be absorbed by the tissue or fibrous covering of the wire admitted through the opening or space *a*. When the ribbon is employed it may be bent around the wire by means of dies or other suitable devices. A number of wires thus wrapped are bunched together, forming a cable, which is covered with or inserted into lead pipe or lead encasement C, and insulating material run into the pipe, thus saturating the tissue or fibrous covering of the several wires through the openings or spaces of the wrappings.

It will be seen that the wrappings B are in metallic contact with each other and with the outside metallic pipe, forming a complete electrical communication between all of the uninsulated parts inside of the pipe with the pipe itself, the purpose of which is to carry off the induced currents directly to the exterior metallic pipe, and thereby prevent or lessen the inductive effect upon the other wires.

In order to securely bind together the wires of the cable and render the latter convenient for inserting it into or covering it with the lead pipe or encasement C, the cable is wound or served with a metallic wire or strap, D, spirally wrapped on the cable, said strap also forming a direct electrical communication at all points between all of the metallic wrappings inside of the pipe with the pipe itself, whereby the induced currents are carried off to the exterior pipe, and the inductive effects upon the other wires prevented or lessened.

I am aware that uninsulated metallic wires have been formed in bunches with an exterior closed binding, and that metallic pipes for inclosing electric conductors are not new. I am also aware that it is not new to carry off induced currents by wires encircling the cables at intervals and running into the ground; wherefore I disclaim such features; but,

Having fully described my invention and set forth the advantages thereof, what I claim as new, and desire to secure by Letters Patent, is—

1. Tissue or fibrous covered wire having an uninsulated metallic wrapping partly open, substantially as and for the purpose set forth.

2. A bunch of tissue or fibrous covered wires, each having an uninsulated metallic wrapping partly open, in combination with an exterior metallic pipe, the several wrappings being in contact, forming an electrical communication between all of the metallic wrappings inside of the pipe with the pipe itself, substantially as and for the purpose set forth.

DAVID BROOKS, JR.

Witnesses:
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