

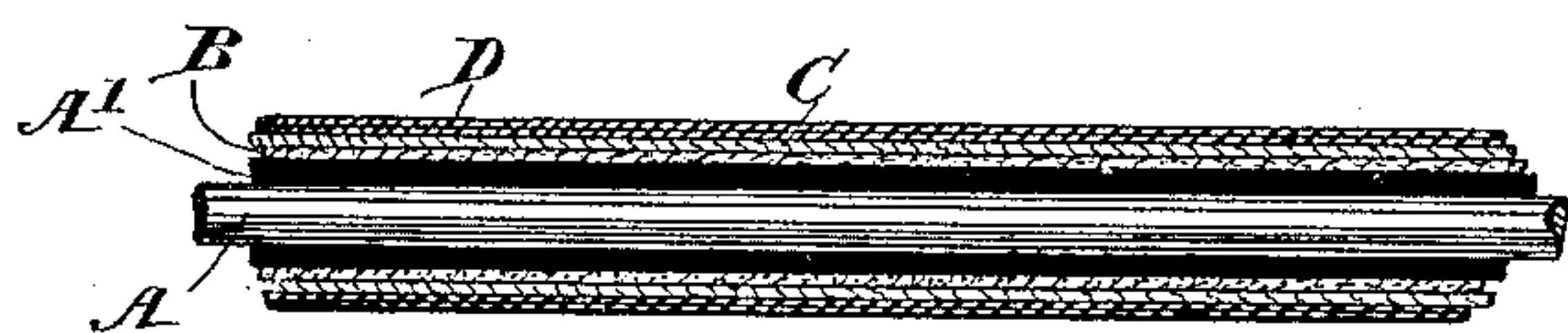
(No Model.)

H. H. BROWN.
INSULATED WIRE.

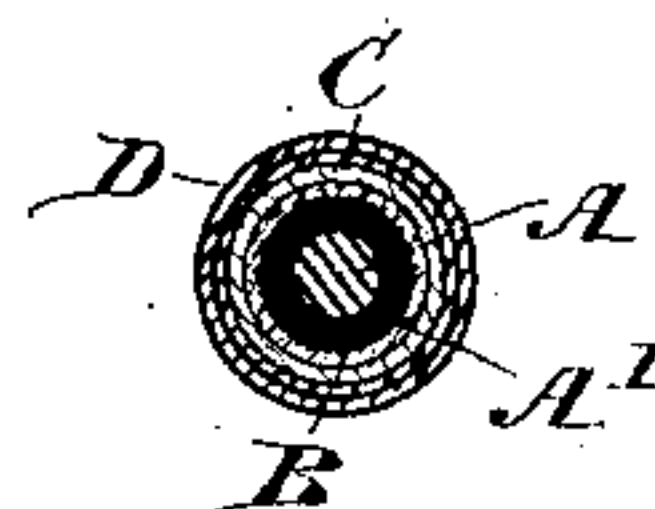
No. 507,257.

Patented Oct. 24, 1893.

—Fig. 1—



—Fig. 2—



Witnesses

John M. Smith
Jed J. Sears

Inventor

Herman H. Brown

By *his* Attorney

Frank H. Lyman

UNITED STATES PATENT OFFICE.

HERMAN H. BROWN, OF MONTREAL, CANADA.

INSULATED WIRE.

SPECIFICATION forming part of Letters Patent No. 507,257, dated October 24, 1893.

Application filed October 12, 1892. Serial No. 448,694. (No model.) Patented in Canada July 13, 1892, No. 39,320.

To all whom it may concern:

Be it known that I, HERMAN HENRY BROWN, of the city of Montreal, in the district of Montreal and Province of Quebec, Canada, have
5 invented certain new and useful Improvements in the Manufacture of Insulated Wire for Electrical Purposes, (for which I have obtained Letters Patent of the Dominion of
10 Canada under No. 39,320, granted July 13, 1892;) and I do hereby declare that the following is a full, clear, and exact description of the same.

This invention has special reference to the insulation of wire for electric lighting and
15 like purposes and has for its object to produce an insulated conductor which shall be both fire and water proof, capable of being bent without cracking, and of being painted any color.

20 The insulation may be thus briefly described: Upon the wire itself is placed a water-proof coating of plastic material preferably having for its base asphalt, mixed with other materials for thinning and drying it, &c.

25 Upon this is placed in any usual way a covering of braid and the wire thus covered is passed through a bath of fire proof solution, such as silicate of soda, the solution being sufficiently strong and the time of immersion
30 long enough to fill up the interstices of the braid. Over this is preferably placed another covering of braid, which in its turn becomes partially saturated with the fire proof solution carried by the first braid and is further given

35 a coat of size so as to completely close up the pores of the material and prevent any damaging effect of the fireproof solution upon the paint subsequently applied and to allow this to thoroughly harden. The painting can be
40 of any color, even the lightest as the wrapper or braiding saturated with the silicate of soda

will prevent any exudation of the intermediate plastic coating however much the wire core may become heated and the coating of size will in its turn co-operate to this end. 45

For full comprehension of the invention reference must be had to the accompanying drawings, forming part of this specification in which like symbols denote the same parts, and wherein— 50

Figures 1 and 2 are respectively longitudinal and transverse sections of the conductor.

A is the inner strand or core of metal and A' the first or plastic waterproof coat preferably composed of the following ingredients, 55 in the proportions given, for a certain length: Asphalt, the base six hundred parts; ozokerite; for thinning purposes, fifty parts; canoba wax for drying, fifty parts; gomme de mer, ten parts and rubber to give an even surface 60 ten parts, all these elements being mixed together and the mixture applied when hot. The outer fire proof wrapper or casing is preferably formed of two layers of textile fabric or braid, B being the first braid cover saturated, as above described, by being, when in place, dipped into or passed through a bath of solution of silicate of soda, and C the second braid cover, and D shows the outside coat of size and paint. 65 70

What I claim is as follows:

In the insulation of wire for electrical purposes the combination of an inner water proofing coat of plastic substance; two superimposed braid coverings the innermost 75 one of which is saturated when in place with a solution of silicate of soda, and an outer coating of size, all as herein set forth.

HERMAN H. BROWN.

Witnesses:

FRED. J. SEARS,
WILL P. McFEAT.