

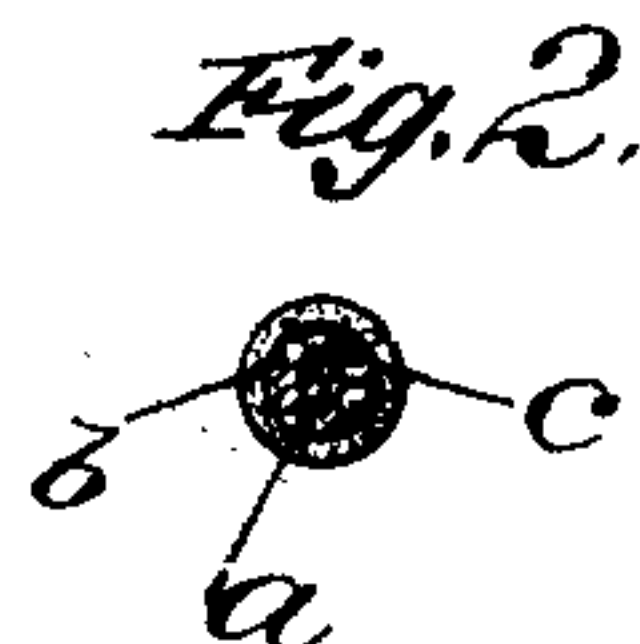
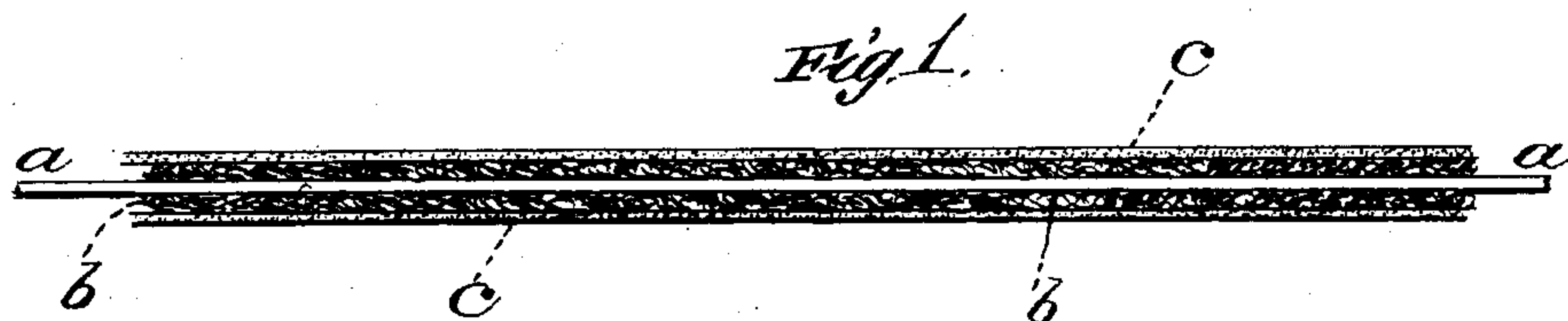
(No Model.)

H. C. STRONG.

INSULATION FOR ELECTRICAL CONDUCTORS.

No. 253,446.

Patented Feb. 7, 1882.



WITNESSES
E. H. Bates
Philip C. Massi

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UNITED STATES PATENT OFFICE.

HENRY C. STRONG, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO
JAMES LLOYD AND LLEWELLYN H. LLOYD, OF SAME PLACE.

INSULATION OF ELECTRICAL CONDUCTORS.

SPECIFICATION forming part of Letters Patent No. 253,446, dated February 7, 1882.

Application filed August 23, 1881. (No model.)

To all whom it may concern :

Be it known that I, HENRY C. STRONG, of the city of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Insulators for Subterranean Electrical Conductors, which improvement is fully set forth in the following specification and accompanying drawings.

This invention relates to insulators for subterranean electrical conductors; and it consists in an insulator of pure asbestos or hornblende, as hereinafter described. This asbestos is wound around annealed telegraph-wires, the latter being first submitted to a sizing of shellac or any suitable adhesive preparation. By using asbestos for aseptic insulation in its pure state it is found that dampness and air are excluded from the surface of the wire and oxidation does not occur when the wire is placed in the earth or water, the fibrous nature of the pure asbestos causing it to adhere to the wire in a compact and durable form. In addition to the fibrous asbestos already described, there is applied over it a water-proof coating composed of a preparation of pulverized asbestos with pure vegetable oils or other indestructible water-proof substances, making a permanent water-proof shield or covering for the asbestos insulation within. By insulating the wire with asbestos in a pure state the iron wire used need not be galvanized, but simply annealed; and when thus insulated and placed in the earth the polarity of the iron wire blends with the polarity or magnetism of the earth, making the iron wire permanently polarized, for the reason that the iron wire is not in direct contact with the earth, but separated from it by the asbestos insulation, thus forming an inexpensive insulated conductor.

The asbestos insulation herein described has a twofold effect, preserving the wire from rust and enabling those using large quantities of insulated wire to obtain the same at a reduced cost and free from imperfect insulation.

In the annexed drawings, Figure 1 is a vertical section of asbestos insulated telegraph-wire, and Fig. 2 is a cross-section of the same.

The letter *a* designates the wire, and *b* the asbestos coating, on which latter is put the water-proof coating *c*, of asbestos and oil, as already described.

I do not limit myself to any particular mode of applying the asbestos other than winding the strands around the wire, as is the usual way of insulating wire; nor do I make use of any particular plan of applying the water-proof coating material.

Asbestos has been used heretofore as an insulator by wrapping it in strips about the wire; but I am the first, so far as I know, to make a coating of oil and asbestos to be placed outside of the insulator for its protection. Water-proof coatings have been used, but none which contained asbestos. By using this the coating itself acts as an additional insulator, thereby aiding the asbestos within.

What I claim is—

As an improved article of manufacture, an annealed telegraph-wire coated with a sizing of adhesive preparation and wrapped in pure asbestos, said asbestos wrapping being coated with a covering of pulverized asbestos and oil, substantially as specified.

HENRY C. STRONG.

Witnesses :

JAY C. STRONG,
CHARLES W. RITTER.