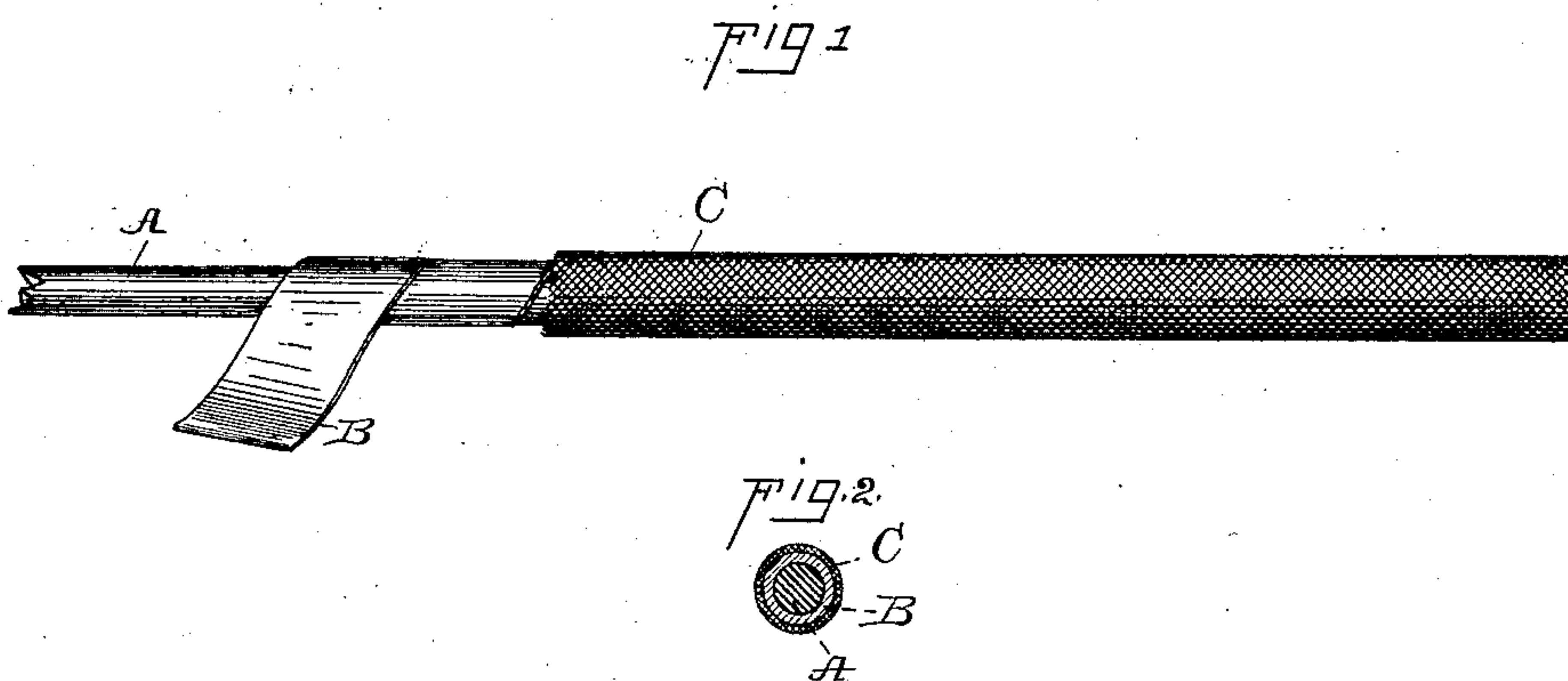


(No Model.)

W. A. PHILLIPS.  
INSULATED ELECTRICAL CONDUCTOR.

No. 380,295.

Patented Mar. 27, 1888.



Witnesses,

*E. C. Howland*  
*William Pezzer*

Inventor,

*William A. Phillips.*

By his Attorneys

*Oliver Sney*

# UNITED STATES PATENT OFFICE.

WILLIAM A. PHILLIPS, OF SCHENECTADY, NEW YORK, ASSIGNOR TO THE  
EDISON MACHINE WORKS, OF SAME PLACE.

## INSULATED ELECTRICAL CONDUCTOR.

SPECIFICATION forming part of Letters Patent No. 380,295, dated March 27, 1888.

Application filed November 10, 1887. Serial No. 254,741. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM A. PHILLIPS, a subject of the Queen of Great Britain, residing at Schenectady, in the county of Schenectady and State of New York, have invented a certain new and useful Improvement in Insulated Electrical Conductors, of which the following is a specification.

The object of my invention is to effectively insulate electrical conductors.

Rubber is found to be a suitable material for this purpose on account of its flexibility and water-proof qualities; but it lacks strength and durability, and, besides, its pores are usually found to contain moisture, which lessens its insulating property.

In the practice of my invention I take vulcanized rubber and in the form of sheets or strips and pass it through a bath of hot paraffine, wax, or moisture-proof material, so that the pores of the rubber become filled and impregnated with such material. This drives out the moisture from the rubber, and I find that it very largely increases the insulating quality of the rubber, besides adding to its strength and durability. Any superfluous material may be scraped from the surface of the rubber. The rubber so treated is placed upon the wire. Strips may be wound spirally thereon, or sheets may be wrapped longitudinally. I prefer to then cover the whole with an external wound, braided,

woven, or wrapped covering of fabric of fibrous material.

Figure 1 of the drawings is an elevation of a wire insulated according to my invention, and Fig. 2 a cross section thereof.

A is the wire, B a spiral wrapping of rubber impregnated, as above described, and C the outer fabric covering.

What I claim is—

1. The combination, with an electrical conductor, of an insulating covering consisting of a sheet or strip of rubber impregnated with paraffine or similar moisture-proof substance wrapped on said conductor, substantially as set forth.

2. The combination, with an electrical conductor, of an insulating covering consisting of a sheet or strip of rubber impregnated with paraffine or similar moisture-proof substance wrapped on said conductor, and an external fabric covering, substantially as set forth.

3. As an insulating material for electrical conductors, sheets or strips of vulcanized rubber impregnated with paraffine or similar moisture-proof material, substantially as set forth.

This specification signed and witnessed this 7th day of November, 1887.

WILLIAM A. PHILLIPS.

Witnesses:

D. CADY SMITH,  
JAMES A. VAN VOAST.