(No Model.)

# C. C. SIBLEY.

## INSULATED CONDUCTOR.

No. 385,576. Patented July 3, 1888.

*Fig. 1.*

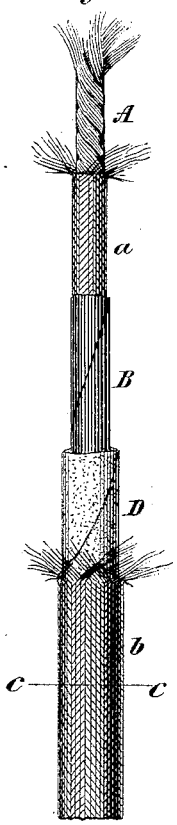
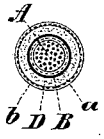



*Fig. 2.*




WITNESSES:

Gustave Dieterich

T. F. Bourne.

INVENTOR

Clarence C. Sibley,

BY Briesen & Steele

ATTORNEYS.

# UNITED STATES PATENT OFFICE.

CLARENCE C. SIBLEY, OF NEW YORK, N. Y., ASSIGNOR TO THE SPLITDORF WIRE COMPANY, OF SAME PLACE.

## INSULATED CONDUCTOR.

SPECIFICATION forming part of Letters Patent No. 385,576, dated July 3, 1888.

Application filed January 28, 1888. Serial No. 262,219. (No model.)

*To all whom it may concern:*

Be it known that I, CLARENCE C. SIBLEY, a resident of the city, county, and State of New York, have invented an Improved Insulated Conductor, of which the following is a specification.

The object of my invention is to provide an electrical conductor with an insulation that shall be fire-proof, and that will also prevent moisture reaching the conductor.

The invention consists in a conductor having a covering of rubber or analogous substance and an additional covering of asbestus fibers. The asbestus fibers form a non-combustible insulation, while the rubber covering prevents moisture passing to the conductor. The conductor may also have other coverings of cotton, silk, or the like, all as more fully hereinafter set forth.

Reference is to be had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side view of an insulated conductor embodying my improvements; and Fig. 2 is a cross-section on the line *c c*, Fig. 1.

In the accompanying drawings, the letter A represents a metallic conductor. In this instance it is shown as a piece of "tinsel," which combines strength with great flexibility; but the conductor A may be of any approved form.

*a* is a covering or insulation of cotton or the like, placed as a tubular braid directly upon the conductor A; but this covering *a* is not essential.

B is a covering of rubber or analogous substance placed over the conductor or over the first covering, *a*. In applying this rubber covering I prefer to use a thin narrow continuous strip of rubber that resembles "tape." This rubber tape is wound around the conductor A so as to overlap on its edges. These overlapping edges will adhere together when the rubber is of proper consistency, thereby forming a completely water-proof covering; but the rubber covering B may be applied in any desired manner and form.

D is a covering or insulation of asbestus fibers. These fibers D of asbestus I apply in the form of a thread or cord. The fibers are first untwisted and then spread and flattened into a thin layer, and thus placed upon the conductor. By this means a fire-proof insulation is made without unduly increasing the diameter of the conductor. I prefer to apply the asbestus fibers by means of the machine patented and described in Letters Patent No. 300,403, dated June 17, 1884, and also by the machine for which application for Letters Patent has been made by Henry Splitdorf, Serial No. 256,972, filed December 5, 1887.

Over the before-mentioned coverings or insulations I may place a covering or wrapping, *b*, of cotton, silk, or the like. This latter covering prevents the other insulations from becoming injured, besides strengthening the conductor and taking up the wear upon the same.

If the improved insulated conductor herein shown is attacked by fire or lightning from the exterior, the conductor will not be affected, because the asbestus fibers will prevent the heat reaching the metal. Again, if a current of undue strength passes through the conductor the insulation will not be destroyed and the conductor will not be injurious to life, because the asbestus will not be affected thereby.

It is well known that asbestus fibers absorb and retain moisture, and that this moisture will oxidize the metal of the conductor if brought in contact therewith. By using the rubber or analogous covering B, as described, the moisture is prevented from reaching the metal. Although I have shown the rubber covering B as between the conductor A and the asbestus insulation, it may be placed outside of the asbestus. In this case moisture will be prevented from reaching the asbestus. The first form is intended for use where the conductor is in danger of attack from external sources, and the latter form where an increased current in the wire will burn off ordinary insulation, the rubber covering being protected in both cases.

Having now described my invention, what I claim is—

A conductor for electrical and other purposes having a covering of threads, *a*, rubber B, asbestus fibers D, and threads *b*, all arranged substantially as herein specified.

CLARENCE C. SIBLEY.

Witnesses:
T. F. BOURNE,
HARRY M. TURK.