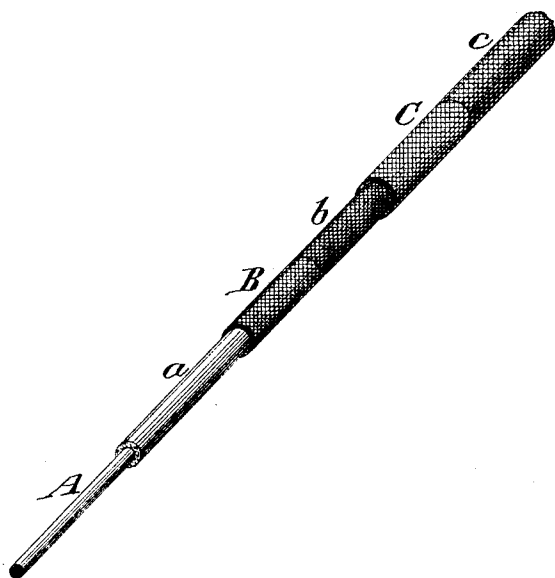


(No Model.)

T. F. ATTIX.
INSULATED CONDUCTOR.

No. 498,757.

Patented June 6, 1893.



Witnesses:-

D. H. Hayward

C. Sundgren

Inventor:-

Thomas F. Attix

by attorneys

Brown & Howard

UNITED STATES PATENT OFFICE.

THOMAS F. ATTIX, OF BROOKLYN, NEW YORK, ASSIGNOR OF ONE-THIRD TO
HENRY C. HULBERT, OF SAME PLACE.

INSULATED CONDUCTOR.

SPECIFICATION forming part of Letters Patent No. 498,757, dated June 6, 1893.

Application filed December 1, 1892. Serial No. 453,718. (No specimens.)

To all whom it may concern:

Be it known that I, THOMAS F. ATTIX, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful
5 Improvement in Coverings for Insulated Electric Conductors, of which the following is a specification.

My invention relates to an improvement in coverings for insulated electric conductors in
10 which the conductor is provided with a fire and waterproof coating suitable for completely protecting the conductor from surrounding objects.

The particular object aimed at is to provide the conductor with a coating which shall
15 completely protect it and which, at the same time, will permit of its being bent and twisted at sharp angles without injury to the coating and without in any respect impairing the insulation.
20

A practical embodiment of my invention is represented in the accompanying drawing, which represents an ordinary insulated electric wire provided with a double tubular coating of interwoven threads.
25

A represents an ordinary electric conductor provided with an insulating coat *a* of gutta-percha or other suitable insulating material such as is commonly employed in connection
30 with the copper house-wires for incandescent electric lighting. Around the ordinary insulated conductor A, and in close proximity to its exterior, I lay the inner tubular section of my double tubular coating. This I prefer to
35 make as shown at B in the drawing, in which the coating is made of threads of cotton or other suitable fiber tightly braided about the exterior of the conductor A. This inner section B or B' of the double tubular coating is
40 then treated with a suitable waterproof material, such for example as what is commonly

known in the art as the "B, B" waterproof paint, the treatment being preferably such as to thoroughly saturate the coating. The waterproofed inner section of the double coating
45 is represented at *b*.

Upon the exterior of the inner section of the double coating and in close proximity to it, I form a tubular coating section C, preferably by braiding cotton threads, and this exterior section of the double coating I treat
50 with a suitable fire proof material, such for example as what is known in the art as "asbestos" paint. Such treated exterior section is denoted at *c*. I prefer that the treatment
55 of this exterior section should be sufficient to thoroughly saturate the coating with the fire-proof compound. After the insulated wire is provided with a double tubular coating, as hereinabove set forth, it may be bent with
60 perfect freedom without impairing the protecting coat and may be laid with perfect freedom across or along in proximity to iron pipes, either hot or cold, and in contact with
65 moist or wet surfaces without in any wise interfering with the perfect insulation of the conductor and without danger of disturbing the integrity of the coating.

What I claim is—

The combination with an insulated electric
70 conductor, of an inner tubular coating tightly braided about the exterior of the insulated conductor and treated with waterproof material and a second tubular coating tightly
75 braided about the exterior of the inner tubular coating and treated with fire-proof material, substantially as set forth.

THOMAS F. ATTIX.

Witnesses:

FREDK. HAYNES,
GEORGE BARRY.