W. STRICKLER.

Insulated Telegraph-Wire.

No. 162,204. Patented April 20, 1875.

Fig. 1.

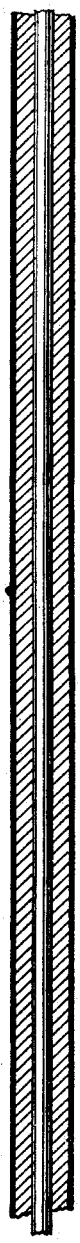

Fig. 2.

Witnesses.
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UNITED STATES PATENT OFFICE.

WILSON STRICKLER, OF LEBANON, PENNSYLVANIA.

IMPROVEMENT IN INSULATED TELEGRAPH-WIRES.

Specification forming part of Letters Patent No. **162,204**, dated April 20, 1875; application filed August 22, 1874.

To all whom it may concern:

Be it known that I, WILSON STRICKLER, of Lebanon, county of Lebanon, State of Pennsylvania, have invented a new Improvement in Gutta-Percha and India-Rubber (Caoutchouc) Covered Telegraph-Wires, of which the following is a specification:

Figures 1 and 2 are sectional views of the wire.

The object of my invention is to furnish a more durable and more perfectly insulated gutta-percha and india-rubber covered wire for telegraphic purposes than the gutta-percha and india-rubber wires at present in use, specially adapting them (when treated by my process) for bells, tunnels, mining, railway, subterranean, and submarine purposes; and to these ends my invention consists in the application to a telegraphic wire insulated by a coating of india-rubber or gutta-percha of thin sheets of mica or pulverized mica heated to about a cherry-red, and then suddenly cooled and dried, and applied between the wire and its coating of india-rubber or gutta-percha, and also on the outside of the latter, as hereinafter more fully described.

In the manufacture of my telegraphic wire, I employ mica in the form of thin sheets or pulverized, or both. The mica is heated to about a cherry-red heat, which will cause it to lose its elasticity and drive off any impurities. It is then suddenly cooled, and when dried, if in sheets, is attached to the wire by a binding of yarn or its equivalent, or in any other suitable manner.

At the joints of the wires the mica acts both as an insulator for them, and as an auxiliary means for uniting them in making good electric connections. The india-rubber or gutta-percha coating is then applied, after having been dipped in coal-tar, which closes the pores of the india-rubber or gutta-percha coating. Just before the coal-tar has become cold on the outer surface of the coating the exfoliated mica is applied thereto, the coal-tar, by its adhesiveness, securely retaining or holding the sheets of mica in place on the outside of the india-rubber or gutta-percha coating.

The mica may be pulverized and treated as heretofore described, and the wire, with its gutta-percha covering coated with coal-tar, may be drawn through the pulverized mica before the coal-tar on the outside of the india-rubber or gutta-percha coating has become perfectly solidified, thereby causing the mica to adhere to the coating. The mica protects the wire which it encompasses against chemical action, because the mica itself is insolvent by most chemicals, and, being a pure mineral, produces no action upon the wire; and, further, the mica acts as an insulator to retain the current of electricity upon the wire, and does not allow it to be dissipated.

It will be seen that in my invention the coal-tar for coating the india-rubber or gutta-percha covering of the wire is employed to close the pores of the latter, and prevent the escape of currents of electricity, and at the same time it is employed, from its adhesiveness, as a means for retaining the mica in its position on the india-rubber or gutta-percha coating.

I am aware that coal-tar has heretofore been applied to the outside of the india-rubber or gutta-percha coating of a telegraphic wire to prevent the escape of currents of electricity therefrom, and I therefore lay no claim thereto; but I am not aware that the coal-tar applied as above described has heretofore been employed for the double purpose of closing the pores of the india-rubber or gutta-percha coating, and as a means of holding the mica in place on said coating.

I am also aware that in insulators for telegraphic wires a wrapping of mica introduced between a metallic pin and the body of the insulator, as described in Letters Patent granted to Joseph J. Conklin, Jr., dated April 23, 1872, has heretofore been employed, and I therefore lay no claim to such invention; his insulator being entirely different from my telegraphic wire, and his invention described no such process as mine for applying the mica to the india-rubber or gutta-percha covering of the wire.

What I claim as new, and desire to secure by Letters Patent, is—

1. As a new article of manufacture, a telegraphic wire insulated by a covering of india-rubber or gutta-percha, coated with coal-tar, and provided with mica applied both to the outside and inside of the gutta-percha or in-

dia-rubber covering for the wires, as and for the purpose set forth.

2. The method herein described of insulating a telegraphic wire, consisting of the application of mica around the wire, and then encompassing the wire and mica with a covering of india-rubber or gutta-percha dipped in coal-tar, to which mica is then applied, the coal-tar performing the double functions of closing the pores of the covering and causing the retention of the mica in place, as set forth.

WILSON STRICKLER.

Witnesses:
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