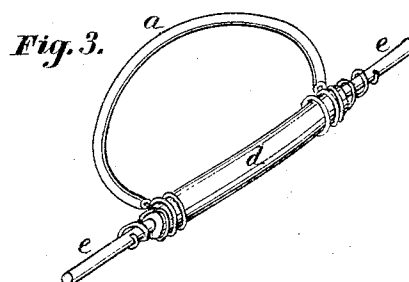
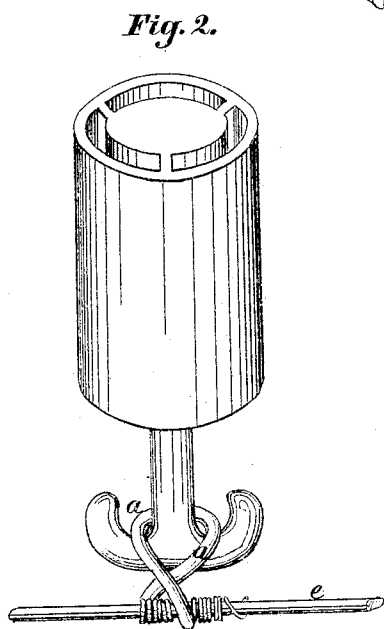
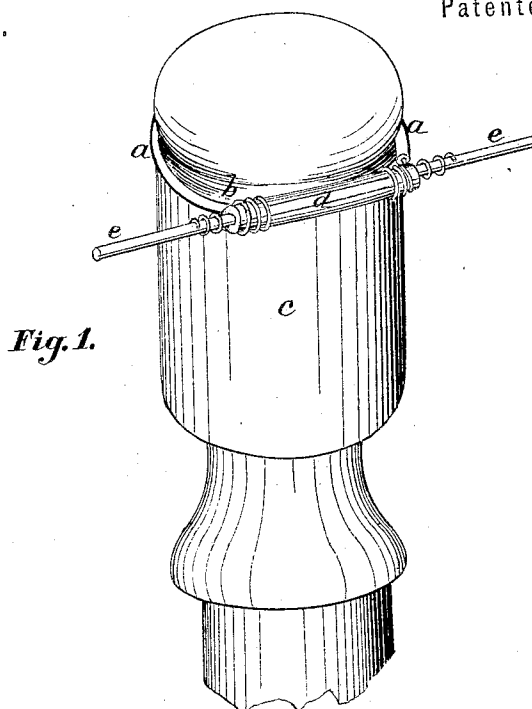


DENNIS DOREN.

Improvement in Fastening Telegraph Wires to Insulators.

No. 126,038.

Patented April 23, 1872.



Witnesses:

West Wagner
P. F. Larner

Inventor:

Dennis Doren
by Johnson, Klaucke & Co.
his Attorneys

UNITED STATES PATENT OFFICE.

DENNIS DOREN, OF NEW YORK, N. Y.

IMPROVEMENT IN FASTENING TELEGRAPH-WIRES TO INSULATORS.

Specification forming part of Letters Patent No. 126,038, dated April 23, 1872.

To all whom it may concern:

Be it known that I, DENNIS DOREN, of 145 Broadway, in the city, county, and State of New York, have invented new and useful Improvements in Insulated Ties for Telegraph-Line Wires, of which the following is a specification:

My invention relates to insulating telegraph-line wires; and the said invention consists of a tie-wire insulated itself so as to insulate it directly from the insulator to which the line-wire is connected, for the purpose of obtaining a more perfect insulation of the line-wire by insulating its connecting or tie wire from the insulator now in use; also, in providing the line-wire at its point of attachment with the insulated tie-wire with an insulating sheath, saddle, or covering, for the purpose of effecting an entire metallic separation of the line-wire from the insulators now in use.

My improved insulated tie-wire is applicable to any form of insulation now in use, two of the most common forms of which are represented in the accompanying drawing.

Figure 1 represents the line-wire, insulated according to my improvement, as applied directly to a glass-cup insulator. Fig. 2 represents the same as applied to the metallic insulated hook; and Fig. 3 represents a view, in perspective, of the insulated tie-wire and the line-wire sheath.

The insulation for the line-wires of telegraphs has been found defective from various causes, and the insulation has been, in a greater or less degree, rendered imperfect; and the object of my improvement is to obtain an insulation of the line-wire entirely independent of the means heretofore employed for insulating it from the telegraph-pole. This I accomplish by means of an insulated tie-wire, *a*, secured in any convenient way to the outside of an insulator or insulated projection. In Fig. 1 such tie-wire is shown as being secured within a groove, *b*, formed around the head of the glass screw-cup *c*, so as to render its connection therewith secure, the said tie-wire *a* being insulated by means of a

rubber tube-covering or saddle, which prevents the contact of the tie-wire with the insulator-cup, while the ends of said tie-wire are fastened in any convenient manner to the line-wire *e*, so as to hold the latter securely. By this means I obtain an insulated tie-connection with an insulator; and in order to still further increase the insulation and render it absolute and perfect, I insulate the insulator or attachment from the line-wire by covering the latter, at its junction with the tie-wire, with an insulating sheath, *d*, such as a rubber sleeve, saddle, or covering, held in place by wrapping the ends of the tie-wire over the said insulating sheath *d* and around the line-wire, said sheath preventing the contact of the line-wire with the body of the insulator within the space between the said connections of the tie-wire, thereby obtaining a threefold insulation of the line-wire from the earth.

The invention is simple, cheap, conveniently applied, and is of the highest advantage and value in the building of telegraph lines. I have described a rubber insulating medium for both the tie and line wires; but it is obvious that any means for effecting a separation of the tie and line wires from their support, while maintaining a permanent connection therewith, will produce the same threefold insulation.

In the metallic hook-support shown in Fig. 2 the insulating sheath *d* for the line-wire is not shown, as the insulation of the tie-wire is effected entirely with the shank of the hook; but I prefer to use the insulating line-wire sheath or saddle in connection with the insulated tie-wire, which may be effected by a saddle secured between the prongs of the hook. If deemed sufficient, however, the insulating sheath of the wire may be used with a non-insulated tie-wire, or vice versa.

The line-wire sheath shown in the drawing need only be sufficiently connected by the ends of the tie-wire to hold it in place with the insulator.

Having described my invention, I claim—
1. A telegraph-connecting or tie-wire, insu-

lated itself, in combination with an insulator, to which it is secured, and the line-wire, essentially as described.

2. In combination with an insulator, a telegraph-line wire, and an insulated tie, I claim an insulating sheath or saddle for the line-wire, essentially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses this 5th day of March, A. D. 1872.
DENNIS DOREN.

Witnesses:

A. E. H. JOHNSON,

J. W. HAMILTON JOHNSON.

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