

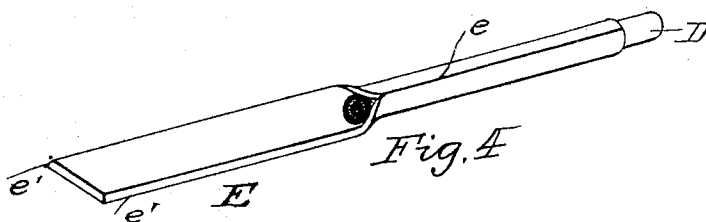
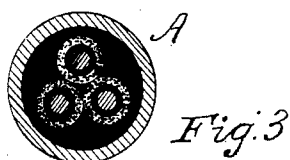
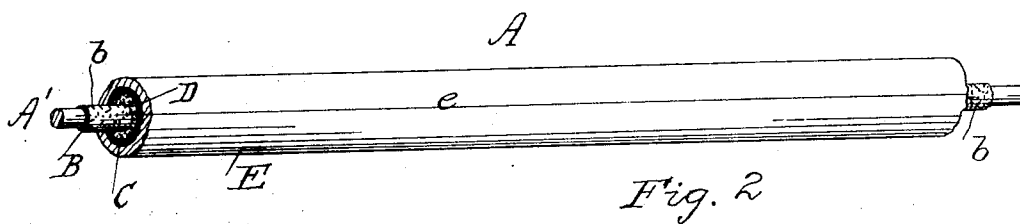
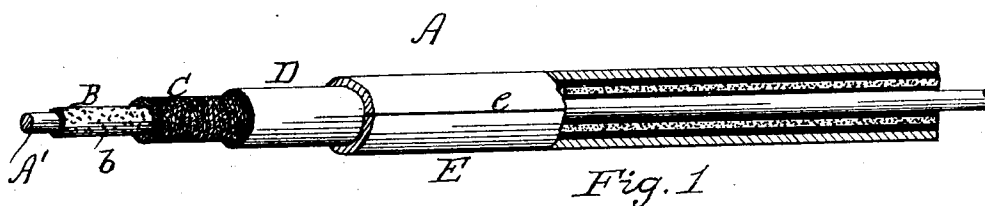
(No Model.)

W. J. PHILIPS & G. L. KITSON.

ELECTRIC CABLE.

No. 275,407.

Patented Apr. 10, 1883.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM J. PHILIPS AND GEORGE L. KITSON, OF PHILADELPHIA,
PENNSYLVANIA, ASSIGNORS TO SAID PHILIPS.

ELECTRIC CABLE.

SPECIFICATION forming part of Letters Patent No. 275,407, dated April 10, 1883.

Application filed September 27, 1882. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM J. PHILIPS and GEORGE L. KITSON, citizens of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Electric Cables, of which the following is a specification, reference being had therein to the accompanying drawings, wherein—

Figure 1 is a broken perspective, partly sectional, of a single-wire cable embodying our invention. Fig. 2 is a perspective of same. Fig. 3 is a transverse section of a cable having more than one wire; and Fig. 4 is a perspective illustrating the manner of applying the casing of lead to the cable.

Our invention has for its object to provide an insulated conductor or cable for transmitting electric currents, which is especially adapted for underground service, and which may be easily, rapidly, and inexpensively manufactured.

Our invention accordingly consists of a cable the wire or wires of which are first coated with Burgundy pitch roughened on its surface, then wrapped with a covering of asbestos, over which a layer of rosin is placed, and the whole incased in a covering of lead.

Referring to the accompanying drawings, A represents a section of a cable; A', the wire or conductor; B, the coating of Burgundy pitch; C, the wrapping of asbestos; D, the coating of rosin, and E the casing of lead. Said cable may be made in any suitable or desired manner; but we prefer to construct it in substantially the following manner: The wire A' is run or caused to be passed through a bath of Burgundy pitch to form a coating thereon. When the pitch dries or hardens it is whipped or otherwise suitably manipulated to break its gloss or smooth surface, so that when the asbestos covering is applied thereto it will adhere to the pitch, and securely hold the wire therein and prevent it being easily withdrawn therefrom, as would otherwise be the case if the gloss or surface of the pitch were allowed to remain smooth or unbroken. Such roughened surface for the pitch is represented at b, and the asbestos covering therefor may be applied thereto in any suitable or desired manner, either in a fibrous or plastic condition. The

wire A', with its coating of pitch and wrapping of asbestos, is then covered with rosin and inclosed in the casing of lead. The latter may be a tube, or it may consist of a strip of sheet-lead folded around the cable, as plainly shown in Fig. 4. When so folded, solder is applied to the joint e, or the latter may be lead-burned. The edges e' e' of strip E are beveled, as shown, so that as the lead stretches in the process of folding it, said edges will come flush with each other to make a perfect joint.

The cable so constructed may be placed in the ground without using a conduit, as the casing of lead answers for that purpose.

What we claim as our invention is—

1. A cable composed of a wire or wires covered with Burgundy pitch having a whipped or roughened surface, a layer of asbestos or fibrous material, a coating of rosin, and a casing of lead, substantially as shown and described.

2. The method herein described for manufacturing electric cables, which consists in coating the wires or conductors with Burgundy pitch, then breaking the gloss or roughening the surface of such pitch, then applying a covering of asbestos material thereto, then a layer of rosin, and then inclosing the whole in a casing of lead, substantially as set forth.

3. The method herein shown and described for making electric cables, which consists in coating the wires or conductors with Burgundy pitch, then breaking the gloss or surface of such pitch, then applying a covering of asbestos, then a layer of rosin, then folding a strip of sheet-lead around the same, and then soldering or burning its joint to form an air-tight casing therefor, substantially as set forth.

4. A cable composed of a wire or wires covered with Burgundy pitch, a wrapping of asbestos, a coating of rosin, and a casing of lead formed by folding a strip of sheet-lead having beveled edges e' e' around the same, substantially as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM J. PHILIPS.
GEORGE L. KITSON.

Witnesses:

S. J. VAN STAVOREN,
CHAS. F. VAN HORN.