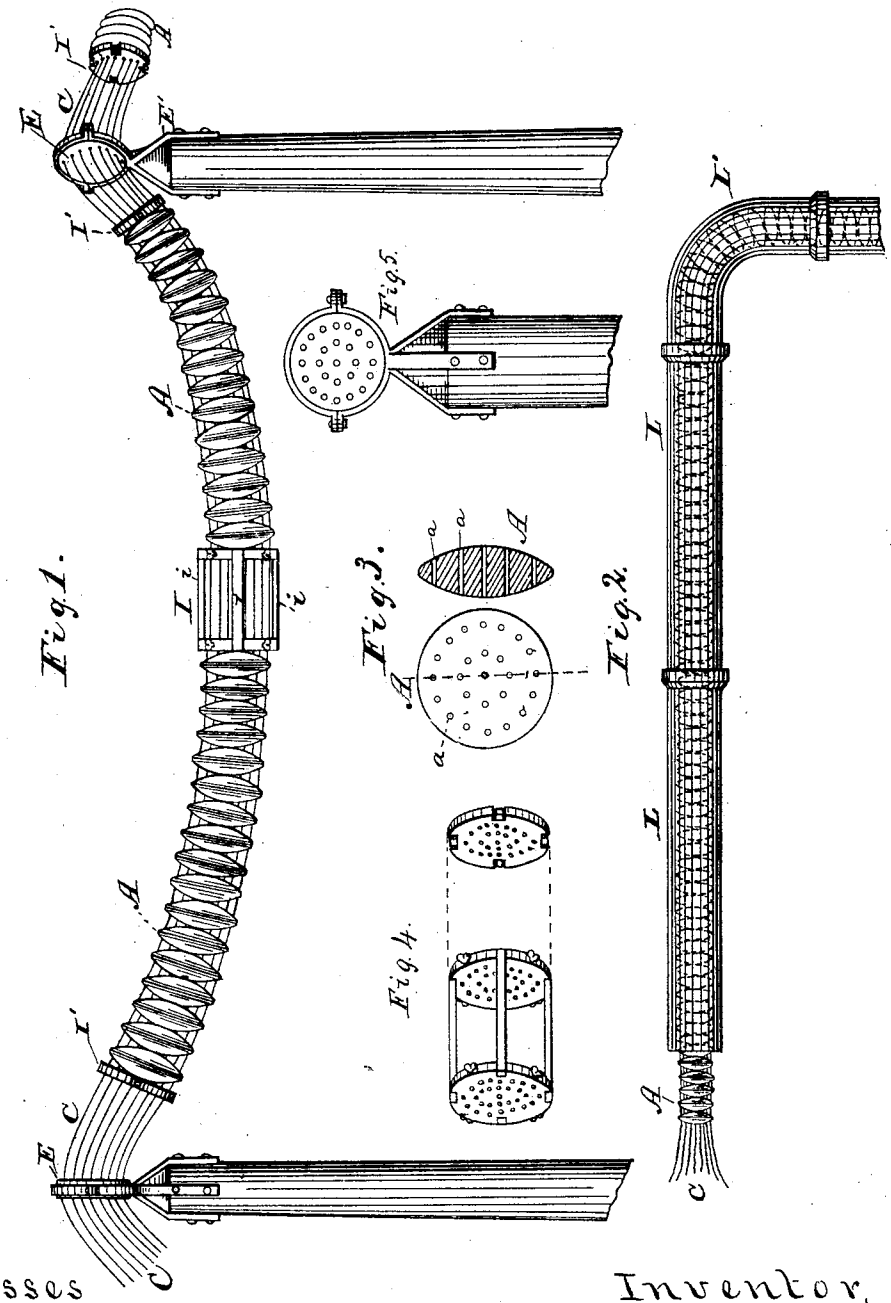
(No Model.)

P. B. DELANY.

ELECTRIC CABLE.

No. 266,353. Patented Oct. 24, 1882.



Witnesses
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Phil. W. Hale.

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UNITED STATES PATENT OFFICE.

PATRICK B. DELANY, OF NEW YORK, N. Y.

ELECTRIC CABLE.

SPECIFICATION forming part of Letters Patent No. 266,353, dated October 24, 1882.

Application filed October 31, 1881. (No model.)

To all whom it may concern:

Be it known that I, PATRICK B. DELANY, a citizen of the United States, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Electric Cables, of which the following is a specification.

My invention relates to that class of compound cables in which each one of a series of wires is passed through the corresponding perforations of a series of insulating blocks or sections to prevent contact of the wires with each other, or with their sheathing when such is employed.

The objects of my invention are to adapt such a cable for use with currents of high tension—such as those used in some electric lighting systems—and to secure good insulation and flexibility. These ends I attain by stringing a series of wires through loose contiguous perforated lenticular or round-ended buttons, which allow the cable to flex or bend freely, while preserving the insulation of its wires.

The subject-matter of my invention is specifically designated in the claims at the end of this specification.

In the accompanying drawings, Figure 1 represents a view in elevation of an aerial cable embodying my invention. Fig. 2 represents a similar view of an underground cable. Fig. 3 represents a face view of my preferred form of button, also a transverse section therethrough. Fig. 4 represents a view in perspective of a separating-stop adapted for use with either cable, and Fig. 5 shows the details of the mode of supporting the cable.

The insulating-buttons A may be made of glass, porcelain, or other suitable non-combustible insulating material, and of any desired diameter. They are made with rounded ends, preferably of the lens shape shown in the drawings, as such shape permits them to rock or roll upon one another to render the cable flexible without unduly straining the wires. These buttons are provided with a series of parallel transverse perforations, through which the wires are strung, the perforations being a sufficient distance from the edge to prevent contact of the wires with the sheathing when one is employed, and a sufficient distance apart to prevent contact of the wires with each other. The wires, either naked or covered with insulating material, are threaded through the holes in the buttons in well-known ways. The buttons are strung loosely upon the wires, as close together as they can be placed without undue straining, so as to prevent sagging of the wires and to keep them from contact with surrounding objects, while the shape of the buttons allows the cable to bend freely within certain limits.

For aerial lines the cables are supported by passing through disks E, of insulating material, fixed upon posts or walls in well-known ways.

For underground use the cable is inclosed in a sheathing or protecting-pipe, L, of well-known construction. This sheathing may be composed either of metal, earthenware, india-rubber, gutta-percha, or wooden sections, or of other well-known material, connected by suitable joints, through which the cable is drawn in well-known ways.

Where space is desired in the cable for branch wires or other purposes a suitable separating-stop, I, is interposed between the buttons. In the drawings this stop is shown as composed of two perforated heads connected by a series of bars, *i*, forming a cage. Screws inserted in these disks press upon the wires, and thus prevent the longitudinal movement of the cage thereon, though the stops will answer a good purpose without the screws.

I do not broadly claim a single wire passing through perforated glass beads and covered with gutta-percha, as such device is old. Neither do I broadly claim a series of wires passing through flat-ended perforated wooden sections. Such a device obviously differs from my invention in the particulars of being combustible and not permitting the desired flexibility of the cable.

Letters Patent No. 247,146, granted to me September 13, 1881, show devices similar to those herein described, except that the cable is provided with a central supporting-rope, which constitutes an improvement upon the present device. I do not therefore herein claim anything claimed in that patent.

What I claim as my invention is—

1. The combination, substantially as herein-

before set forth, of the series of wires with contiguous round-ended incombustible perforated insulating-buttons loosely strung thereon.

2. The combination, substantially as hereinbefore set forth, of the series of wires, the contiguous round-ended incombustible perforated insulating-buttons loosely strung thereon, and the sheathing.

In testimony whereof I affix my signature in presence of two witnesses.

PATRICK B. DELANY.

Witnesses:
FRANK L. WARRIN,
JOHN W. MOORE.