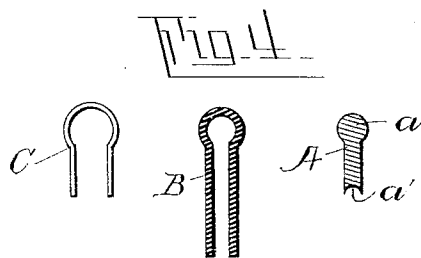
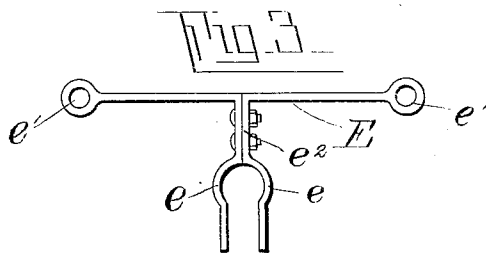
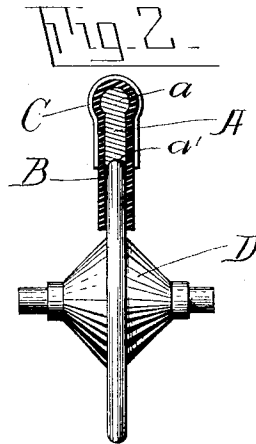
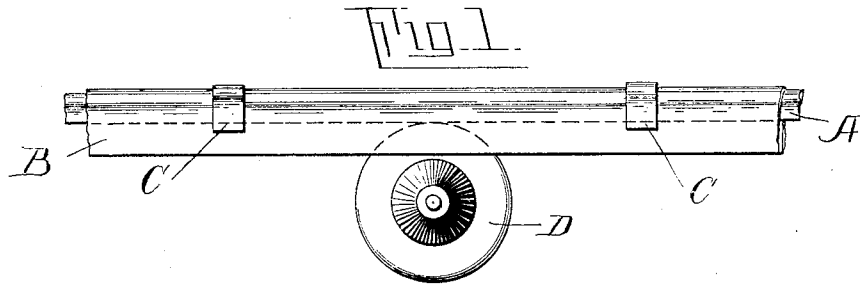


(No Model.)

E. D. LEWIS.
ELECTRICAL CONDUCTOR.

No. 532,796.

Patented Jan. 22, 1895.



Witnesses

W. H. Miller
J. H. Wilson

Inventor
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his Attorney.

UNITED STATES PATENT OFFICE.

EDWARD D. LEWIS, OF SAVONA, NEW YORK, ASSIGNOR OF TWO-THIRDS TO
FRED S. LEWIS, LEWIS H. HILL, ADELBERT D. DUSINBERRE, HORATIO S.
JOHNSON, CHARLES A. VAN HOUSEN, AND CHARLES W. GILLMER, OF
SAME PLACE.

ELECTRICAL CONDUCTOR.

SPECIFICATION forming part of Letters Patent No. 532,796, dated January 22, 1895.

Application filed June 16, 1894. Serial No. 514,785. (No model.)

To all whom it may concern:

Be it known that I, EDWARD D. LEWIS, a citizen of the United States, residing at Savona, in the county of Steuben and State of New York, have invented certain new and useful Improvements in Electrical Conductors; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to electrical conductors for trolley lines which operate by overhead conductors. One of the main objects is to insulate the line wire, thereby preventing injurious results which inevitably happen when a trolley wire as usually provided breaks and crosses telegraph and telephone wires, or falls to the street. One of the main difficulties met with in insulating such conductors is making provision for electrical contact between the contact wheel and the line wire at all times, and insuring that the exposed or uncovered side of the conductor shall normally occupy the lowest position. This objection is obviated by the present invention in a simple and efficient manner.

The invention will be more fully understood from the following description, reference being had to the annexed drawings, in which—

Figure 1 is a side elevation of the insulated conductor showing the contact wheel in connection therewith. Fig. 2 is a cross section of the conductor showing the contact wheel in operative relation therewith. Fig. 3 is a detail view showing the holder for attaching the conductor to a support. Fig. 4 is a detail view of the conductor, insulator and clip for securing the insulation on the conductor.

Similar letters refer to corresponding parts in the several views of the drawings.

The letter A is the main line or conductor which may be of any of the usual types, but is preferably elongated in cross section. The lower edge upon which the tracer wheel D is

designed to travel is grooved as shown at *a'*, to insure a seat for the said tracer wheel, and the upper edge is provided with a head *a* to be gripped by the suspending and insulator attaching devices as will more fully appear hereinafter. This conductor may be of suitable material, copper being preferred.

The insulation B incloses the conductor on three sides and has its edge portions *b* extended beyond the fourth side to constitute guards or protectors. This insulation may be of any suitable material, being usually a strip comprising layers of ducking and rubber combined in the ordinary manner and folded over the conductor and secured thereon. Spring clips C are provided for the purpose and are made to conform to the conductor so as to firmly clamp the insulation thereon. By this means the insulation can be readily removed for purposes of repairs, splicing and replacing it by new when worn or broken or for any required purpose.

If preferred the insulation may be cemented to the conductor thereby dispensing with the clips.

The holder comprises two right angled brackets E which have their vertical members bolted together near the horizontal branches, as shown at *e*², and have oppositely curved parts *e* to receive the conductor or the head *a* thereof. The horizontal members may be secured to a support in any suitable manner and terminate in loops or eyes *e'* which are designed to receive supporting wires.

The contact wheel D is sufficiently thin for a short distance from its peripheral edge to enter between the guards *b* and make electrical contact with the conductor A, and is mounted on a trolley arm in the usual manner so as to convey the currents thereto. This wheel may be a thin disk or bulged at the center as preferred.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. An electrical conductor oblong in cross section and grooved in one side to receive a contact wheel, substantially as described.

2. An electrical conductor oblong in cross

section having a head at one edge, the other edge being grooved to receive the contact wheel, substantially as set forth.

3. An electrical conductor having a flexible
5 insulating strip embracing and hugging it on three sides, the fourth side being exposed to make electrical contact with the contact wheel, substantially as described.

4. An electrical conductor having a flexible
10 insulating strip embracing and hugging closely its three sides, the fourth side being exposed and protected by edge extensions of the said insulating strip, substantially as described.

15 5. An electrical conductor having a flexible strip of insulating material folded around three of its sides, the edge portions projecting in parallel relation beyond the fourth side, substantially as set forth.

20 6. An electrical conductor oblong in cross section and having side extensions, a flexible strip of insulating material folded closely

around three sides of the conductor and having edge portions extending in parallel relation beyond the fourth side, and clips constructed to spring over the lateral enlargements of the conductor and retain the insulating strip in place, substantially as described.

7. The combination with an electrical conductor oblong in cross section and having side enlargements, of a holder composed of approximately right angled brackets bolted together against the sides of the conductor, and having deflected portions to receive the side enlargements, of the conductor, substantially as described.

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

EDWARD D. LEWIS.

Witnesses:

CHARLES A. VAN HOUSEN,
F. E. SCOTFIELD.