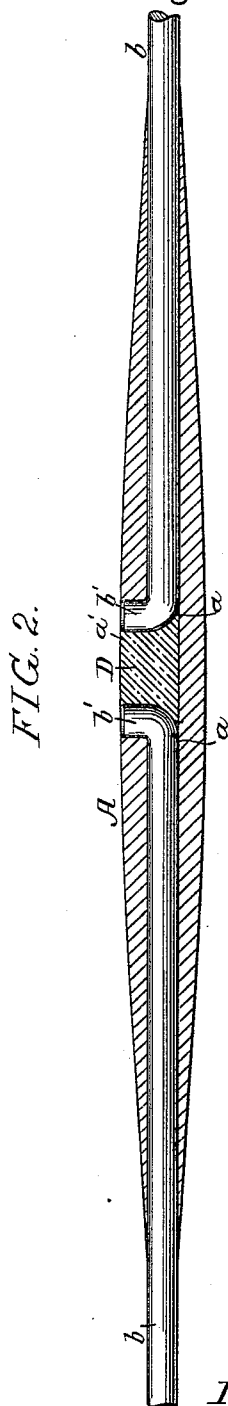
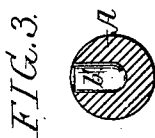
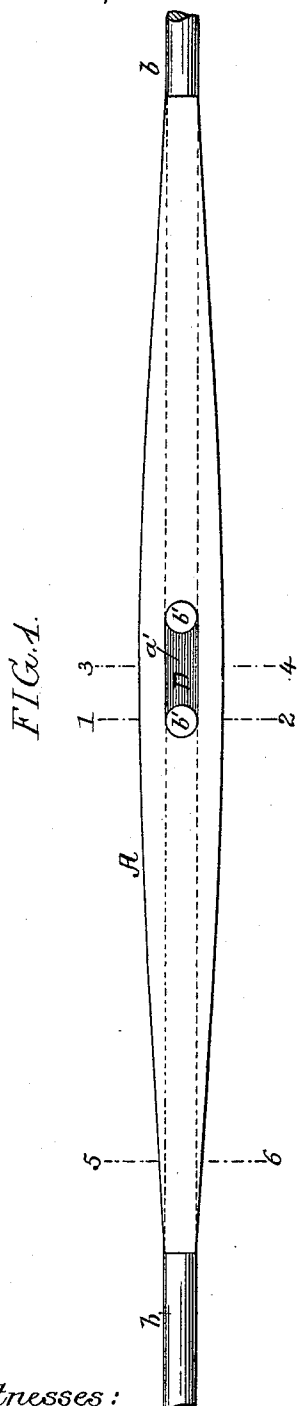


(No Model.)

W. E. HARRINGTON.
JOINT FOR ELECTRIC WIRES.

No. 481,025.

Patented Aug. 16, 1892.



Witnesses:
R. Schleicher.
Murray L. Boyer.

Inventor:
Walter E. Harrington
by his Attorneys
Atwood & Howson.

UNITED STATES PATENT OFFICE.

WALTER E. HARRINGTON, OF ATLANTIC CITY, NEW JERSEY, ASSIGNOR OF ONE-HALF TO LEONARD ATWOOD, OF PHILADELPHIA, PENNSYLVANIA.

JOINT FOR ELECTRIC WIRES.

SPECIFICATION forming part of Letters Patent No. 481,025, dated August 16, 1892.

Application filed August 28, 1890. Serial No. 363,291. (No model.)

To all whom it may concern:

Be it known that I, WALTER E. HARRINGTON, a citizen of the United States, and a resident of Atlantic City, Atlantic county, New Jersey, have invented certain Improvements in Wire Joints for Electric Trolley-Wires, of which the following is a specification.

The object of my invention is to construct an improved joint for the trolley or conducting wire of overhead or underground electric railways. This object I attain in the following manner, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of my improved joint. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a transverse section on the line 1 2, Fig. 1. Fig. 4 is transverse section on the line 3 4, Fig. 1; and Fig. 5 is a transverse section on the line 5 6, Fig. 1.

The joints for overhead trolley-wires of electric railways have generally been made by twisting the ends of the wires together and then filling up the space between the twisted portions of the wires to make a smooth surface over which the trolley can travel; but such a joint is not only expensive to make, but is rough and imperfect, the trolley having a tendency to jump and spark when passing over such joints.

In carrying out my invention I provide a tube or sleeve, which may be readily secured to the adjoining ends of the wires, the sleeve tapering in opposite directions from its central portion to its opposite ends, at which points it is but slightly larger than the diameter of the wire, so that the trolley in traveling along the wire will pass over the joint without sparking or without jumping. The ends of wires *b b* are turned up into the opening *a'*, connecting with the elongated opening *a*, and the space between the two wires is filled with any suitable material, such as molten lead or solder, as shown in Figs. 1 and 2, and then when the joint is completed the entire sur-

face of the coupling is scraped or filed to form a smooth unbroken surface from one end of the coupling to the other. With a coupling of this construction it is impossible for the wires to become detached, as the molten metal *D* not only fills the cavity *a'*, but also extends for some distance into the opening *a* and around the wires, securely uniting them to the coupling.

I claim as my invention—

1. The improvement in the art of connecting wires, which consists in forming a sleeve with a longitudinal passage and a transverse opening communicating therewith, inserting the ends of the wires into the passage, bending the ends of the wires, and introducing a material which afterward hardens around the bent ends of the wires, substantially as described.

2. A joint for wires, consisting of a sleeve having a longitudinal passage and a transverse opening communicating therewith, wires in the longitudinal passage, the ends of the wires being bent in the transverse opening, and a filling of cast material embedding the ends of the wires, substantially as described.

3. A coupling for electric trolley-wires, consisting of a shell made from a single piece of metal having an orifice extending throughout its length and a transverse slot at the center, opening into said orifice, said shell being tapered to a feather-edge at both ends, wires passed through the orifice and having their ends turned up into the slot, and solder filling the slot and embedding the ends of the wires, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WALTER E. HARRINGTON.

Witnesses:

LUCIUS I. WRIGHT,
CLEMENT J. ADAMS.