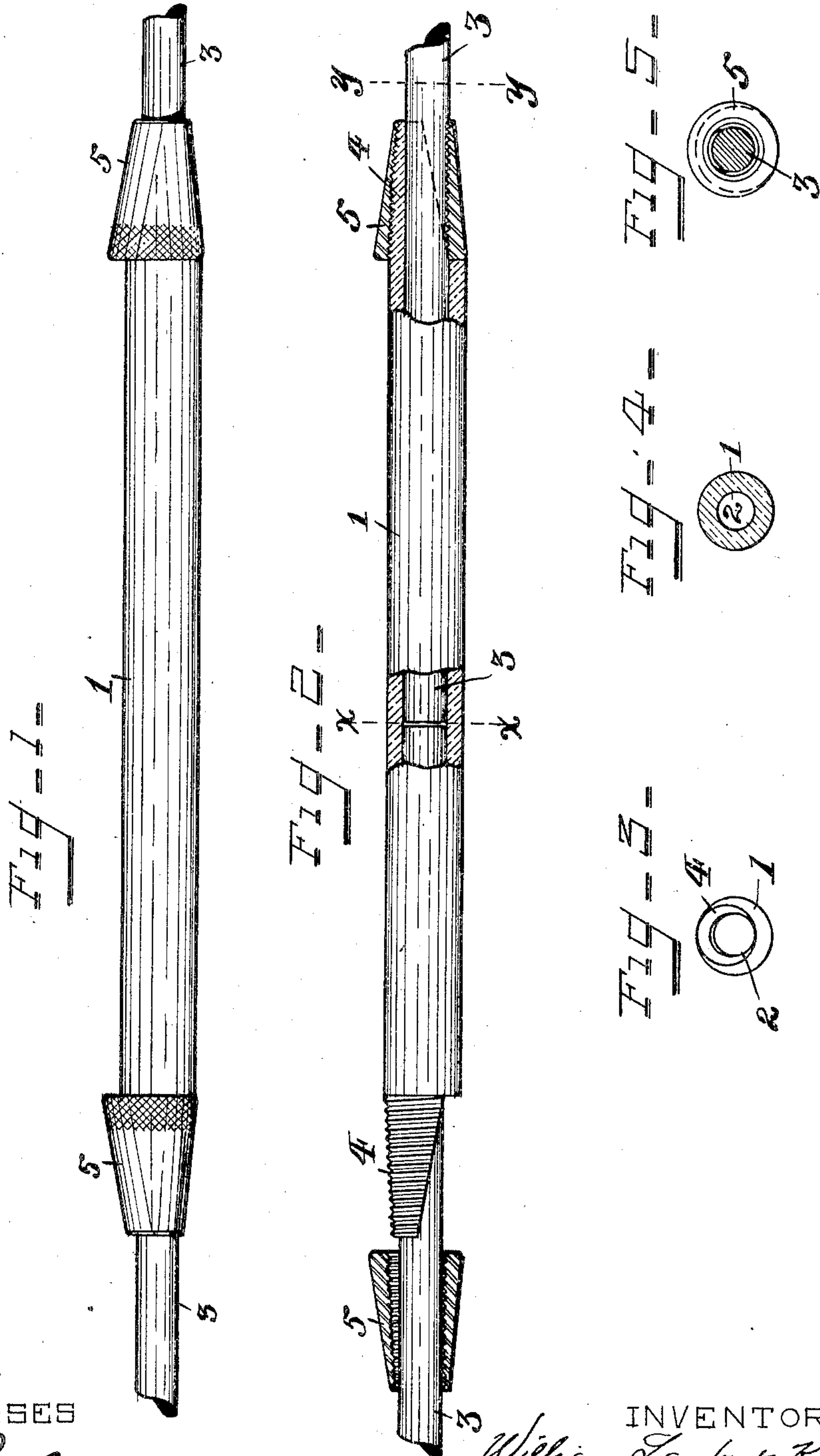


No. 789,613.

PATENTED MAY 9, 1905.

W. L. KERLIN.
TROLLEY WIRE SPLICER.
APPLICATION FILED JAN. 4, 1905.



WITNESSES
G. M. Peck
Gertrude Peck

INVENTOR
William Lambert Kerlin
by *Chas. M. Peck*
his ATTORNEY

UNITED STATES PATENT OFFICE.

WILLIAM LAMBERT KERLIN, OF WYOMING, OHIO, ASSIGNOR OF ONE-HALF TO JOSIAH KIRBY, OF WYOMING, OHIO.

TROLLEY-WIRE SPLICER.

SPECIFICATION forming part of Letters Patent No. 789,613, dated May 9, 1905.

Application filed January 4, 1905. Serial No. 239,548.

To all whom it may concern:

Be it known that I, WILLIAM LAMBERT KERLIN, a citizen of the United States, residing at Wyoming, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Trolley-Wire Splicers, of which the following is a full, clear and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to a coupling for the ends of wires; and it is especially designed to splice together in a simple, quick, and efficient manner the broken ends of trolley-wires in electric street or suburban car service; and it has for its object the provision of novel and simple means whereby the repairmen, in case of breakage of a line-wire, may unite the ends of the same securely without the loss of time and without the necessity of soldering, brazing, or other slow processes.

The novelty of my invention will be hereinafter set forth, and specifically pointed out in the claims.

In the accompanying drawings, Figure 1 is an elevation of a wire-splicer embodying my invention. Fig. 2 is a broken sectional view of the same. Fig. 3 is an end view of the wire-holding tube before the nut is screwed on. Fig. 4 is a section on the dotted line *x x* of Fig. 2 looking to the right. Fig. 5 is a transverse section on the dotted line *y y*, Fig. 2, looking to the left.

The same numerals of reference are used to indicate identical parts in all the figures.

I provide a tube 1, preferably of brass or any other good conductor of electricity, which is slightly larger in diameter than the ends of the wires to be spliced, and this tube has through it a central bore 2 of just sufficient size to permit the ends of the wires 3 to be slipped into it, so that they come together or nearly come together at the middle, as seen in Fig. 2.

Each end of the tube 1 has a portion cut away, leaving on what is intended to be the upper side of the tube when the wires are spliced, a tapering threaded portion 4, whose

ends next to the tube come substantially flush with the bore and whose outer ends are on a line substantially bisecting a horizontal plane through the bore of the tube.

In uniting the ends of the wires 3 frusto-conoidal nuts 5, internally threaded and having a bore which is tapering, as seen in Fig. 5, are first slipped over the ends of the wires. The wires are then inserted into the tube, as seen in Fig. 2, and the nuts are slipped up and screwed upon the projecting threaded tapering ends 4 of the tube. The nuts are of some metal harder than the wire, preferably steel, and the construction is such that in screwing them up the lower sides of the wires have a thread chased upon them, which extends partly up their sides, caused by the tapering shape of the projections 4, which throws the nuts out of center with the bore of the tube and causes their inner lower sides to bite into and grip the wires. In this way the nuts firmly lock the wires to the tube and to themselves, so that they effectually resist all of the tensile strain put upon the wires in their ordinary course of duty. At the same time, as will be observed in Fig. 1, the undersides of the nuts at their largest diameter are flush with the bottom side of the tube, and their ends being of but slightly-greater diameter than the wires at their outer extremities there is no jar to the trolley-wheel in its passage and no danger of throwing it off.

It will be readily seen from the above description and the construction of the parts that it will be only necessary for the lineman, after having placed the parts in position, as above described, to hold the tube steady with a pipe-wrench and with a similar wrench to screw up the nuts, which have their inner ends knurled or milled, as shown, and the whole operation will require but a very few moments of time to splice the two ends of a broken wire. I have found in practice that a tube of from six to nine inches in length and of but slightly-greater diameter than the wires is sufficient.

Having thus fully described my invention, I claim—

1. A wire-splicing device comprising a

tube having a bore to receive the ends of the wire and with its ends tapered, cut away on one side and exteriorly threaded, and tapering nuts adapted to be slipped over the wires
5 and having tapering threaded bores to engage the projecting threaded ends of the tube and to bite into and engage that portion of the wires exposed by the cut-away portions of the tube, said nuts being of harder
10 material than the wires, substantially as described.

2. A wire-splicing device comprising a tube having a bore to receive the ends of the wire and with its ends tapered, cut away on
15 one side and exteriorly threaded, and tapering nuts adapted to be slipped over the wires and having tapering threaded bores to engage the cut-away ends of the tube and to bite into and engage that portion of the
20 wires exposed by the cut-away portions of

the tube, said nuts being of harder material than the wires whereby, when the nuts are screwed upon the tube they are thrown out of center with the axis of the same and their
under portions lie flush with the tube while 25 their upper portions project above the tube, substantially as described.

3. The herein-described wire-splicer composed of the tube 1 with tapering cut-away threaded portions 4 at each end and the tapering steel nuts 5 with tapering threaded
30 bores adapted to be screwed over the threaded ends 4 and to bite into the exposed parts of the wires beneath the ends 4, substantially
in the manner and for the purpose specified. 35

WILLIAM LAMBERT KERLIN.

Witnesses:

GERTRUDE PECK,
CHAS. M. PECK.