

(No Model.)

G. R. SCRUGHAM.
ELECTRIC WIRE CONNECTOR.

Patented Oct. 20, 1891.

No. 461,452.

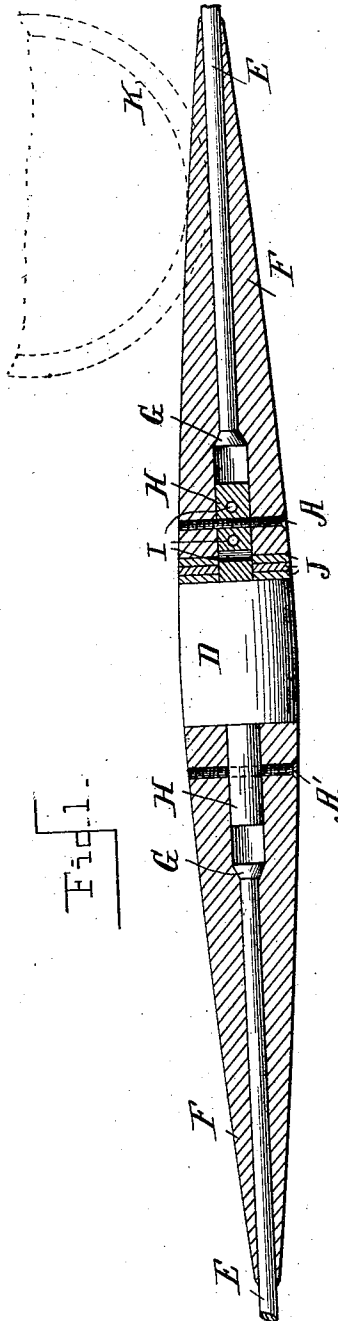
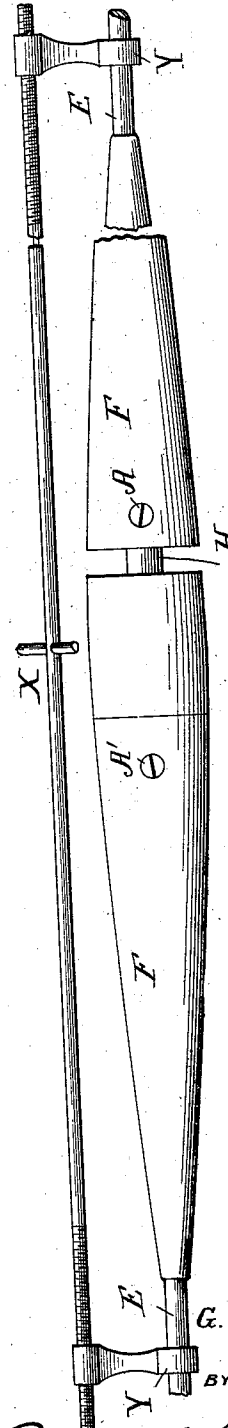


Fig. 1.

Fig. 2.



Witnesses
W. A. Courtland
Nellie L. Pope.

Inventor
G. R. SCRUGHAM
BY HIS ATTORNEY
Edward P. Thompson

UNITED STATES PATENT OFFICE.

GEORGE R. SCRUGHAM, OF LEXINGTON, KENTUCKY.

ELECTRIC-WIRE CONNECTOR.

SPECIFICATION forming part of Letters Patent No. 461,452, dated October 20, 1891.

Application filed June 15, 1891. Serial No. 396,307. (No model.)

To all whom it may concern:

Be it known that I, GEORGE R. SCRUGHAM, a citizen of the United States, and a resident of Lexington, county of Fayette, and State of Kentucky, have invented certain new and useful Improvements in Electric-Wire Connectors, (Case 1,) of which the following is a specification.

My invention relates to a device for making joints between the ends of the conductors upon which the trolley rolls in an electric-railway system.

The exact nature of the invention is set forth in the accompanying drawings, in which—

Figure 1, in vertical section, shows the mechanical construction; and Fig. 2, an elevation.

The wires to be joined are lettered E.

F represents two conical conductors provided with holes in the manner of a tube. The conductors F contain the wires E, which are riveted at G to prevent their being pulled free from the conductors F.

D is a doubly-conical truncated conductor connecting the conductors F, so that the conical surfaces of conductor D coincide, respectively, with extensions of the conical surfaces of the conductors F.

H are axial extensions, which enter the larger ends of the conductors F. These extensions belong to the conductor D. One of the extensions has diametrical holes I so located that when the extension is inserted into the conductor F any one of the holes may be opposite and in line with a hole in the conductor F in such a manner that the screw A may be passed through both. A screw A' likewise passes through the other conductor F and extension H.

J are washers or spacers fitting over one of the extensions H.

When the connector is applied for the first time, the wires E should be cut to such a length that several washers J must be placed upon the extension, so that the conical surface of one conductor F may be continuous with the conical surface of the conductor D, whereby the trolley-wheel represented by the lines K may roll smoothly from one end of the conductor to the other. When the wires

become slack, they may be made taut by removing one or more of the washers and drawing the conductor F sufficiently to come in contact with the end surface of the conductor D. It is preferable for strength that the holes I be not parallel to each other as regards contiguous holes.

In order to pull the wires E together, the wire-stretcher may be employed. It has its clamps Y attached to the wires. By turning the handle X the conductors F are drawn together.

The lineman is supplied with assorted sizes of washers J, so that the surface from conductor F to conductor D may be substantially conical or at the least continuous. If there is any unevenness, the same may be reduced with a file, which will easily remove the comparatively soft metal copper. Fig. 1 shows about the least number (three) of spacers or washers employed, it being supposed that other spacers have been removed for the purpose of taking up slack. If no spacers were used, the abruptness of diameter from conductor D to conductor F would be so great as to make the trolley jump slightly, which would not be a serious objection.

I claim as my invention—

1. A trolley-wire connector consisting of the combination of conical conductors fastened to the ends of the trolley-wires, a doubly-conical truncated conductor between the other-named conductors, extensions upon the last-named conductor fitting in holes in the first-named conical conductors, through which pass retaining-screws, and washers or spacers separating the doubly-conical conductor from one of the conical conductors.

2. A trolley-wire connector consisting of the combination of conical conductors F, fastened to the ends of the trolley-wires, a doubly-conical conductor D, fastened to said conical conductors, and detachable washers between the conductor D and the conductor or conductors F, the diameters of the conductors and washers being such that the surfaces of the same are continuous.

3. A trolley-wire connector consisting of the combination of two conductors fastened to the ends of the trolley-wires, a middle con-

ductor butting against and fastened to the
first-named conductors, and means for ad-
justing the distance between the said middle
conductor and the said first-named conduct-
5 ors, said means consisting of detachable wash-
ers placed between the abutting ends.

In testimony that I claim the foregoing as

my invention I have signed my name, in pres-
ence of two witnesses, this 8th day of June,
1891.

GEORGE R. SCRUGHAM.

Witnesses:

F. V. BARTLETT,
C. R. HANSON.