

(No Model.)

G. E. JOHNSON.
TROLLEY WIRE HANGER.

No. 588,923.

Patented Aug. 24, 1897.

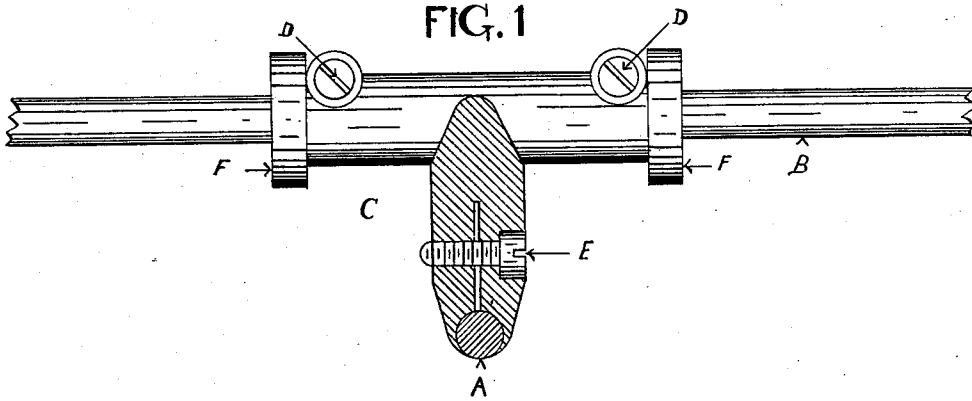


FIG. 2

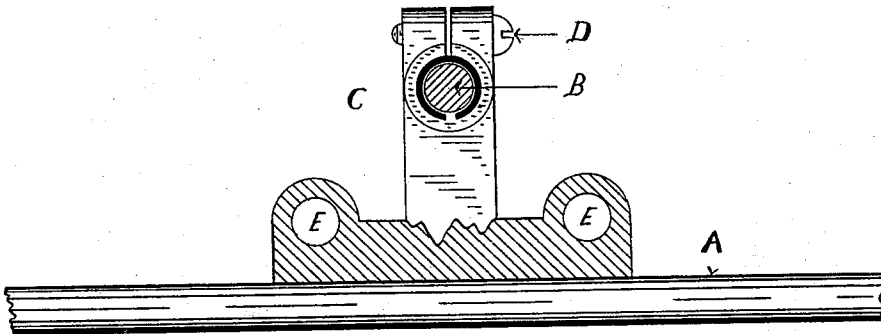
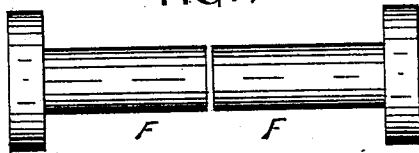


FIG. 3



FIG. 4



Witnesses:

Edgar T. Loy
James H. Hurin

Inventor

George Edwin Johnson

By *George W. Van Alstine and*
George L. Thiell
Attorneys

UNITED STATES PATENT OFFICE.

GEORGE EDWIN JOHNSON, OF LOS ANGELES, CALIFORNIA.

TROLLEY-WIRE HANGER.

SPECIFICATION forming part of Letters Patent No. 588,923, dated August 24, 1897.

Application filed June 5, 1896. Serial No. 594,436. (No model.)

To all whom it may concern:

Be it known that I, GEORGE EDWIN JOHNSON, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a certain new and useful Improvement in Trolley-Wire Hangers, of which the following is a full, clear, and exact specification, reference being had to the accompanying drawings.

My invention relates to improvements in the method of attaching trolley-wires to trolley-wire-supporting wires for the same; and the object of my invention is to provide a device for connecting the said wires that can be applied without soldering the said connections to either the supporting-wire or the trolley-wire. At the same time the connecting device is provided with an insulator, whereby current cannot pass from one to the other.

The difficulties with the connections for uniting a trolley-wire to a trolley-supporting wire as at present constructed is as follows:

First. The connection must be soldered to the trolley-wire, which renders it difficult to put them up.

Second. When it is desired to take either the trolley-wire down or remove the supporting-wire for any purpose, it is troublesome, as in so doing it is necessary to melt the solder connection holding the parts together.

The advantages of this device over those now in use are—

First. In building a new line the supporting-wire can be put up before the trolley-wire is strung, as the connection can be attached to both the trolley-wire and the trolley-supporting wire without disturbing either of them.

Second. In making repairs this device is a decided improvement over those now in use, as it can be more easily and quickly applied, and when once in position it can be easily moved in either direction when it is necessary to do so in order to make a trolley-line hang properly.

Third. The device so insulates a trolley-wire from the trolley-supporting wire that no current can get into the supporting-wire.

I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure I is a vertical view, partly in sec-

tion, of my device, showing it as applied to a trolley-wire and a trolley-supporting wire. Fig. II is a vertical view, partly in section, of my invention, taken at right angles with Fig. I. In this view the device is also shown in connection with a trolley-wire and a trolley-supporting wire. Fig. III is an end view of the hard-rubber tube used for insulating the supporting-wire so that no current can get into it. In this view a slot is shown which extends the full length of the tube. The object of this slot is to provide adjustment, so that the tube can be closed tightly upon a supporting-wire. Fig. IV is a prospective view of the insulator.

Similar letters refer to similar parts throughout the several views.

In the drawings, A represents a trolley-wire; B, a trolley-wire-supporting wire; C, my connection for uniting the trolley-wire A to the trolley-wire-supporting wire B; D, the screws for drawing the connection tightly upon the trolley-wire-supporting wire; E, the screws for drawing the connection tightly upon the trolley-wire A, and F the hard-rubber tube employed for insulating the trolley-wire-supporting wire, so that no current can pass into it.

In operation the hard-rubber tube is placed within the connection, as shown in Fig. I, with a slot cut its full length, as shown in Figs. I and III. The object of this slot is to allow the tube to close tightly upon the trolley-wire-supporting wire. The connection being slipped upon the trolley-wire-supporting wire with the insulator in place it is obvious that no current can pass from the trolley-wire to the trolley-supporting wire.

The parts of the connection into which the trolley-wire is fastened are opened by loosening the screws E to allow the trolley-wire to enter from the bottom, and when the trolley-wire is properly introduced between the said parts the screws E are drawn up, securely clamping the trolley-wire within the part of the frame into which it is introduced. Thus the device is manipulated when applying it.

Now having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. As means for attaching a trolley-wire to a trolley-supporting wire, a connection in

which the frame is made of one piece with a suitable insulator for preventing the current from the trolley-wire from passing into the trolley-wire-supporting wire, and suitable screws for fastening the connection to both the trolley-wire and the trolley-wire-supporting wire, substantially and for the purpose as specified.

2. In a connection for attaching a trolley-wire to a trolley-supporting wire, the combination of a frame with suitable screws for fastening the said frame to a trolley-supporting wire, and a trolley-wire, an insulator consisting of a hard-rubber tube, with a slot extending longitudinally its full length, with relation to the said tube, the said frame provided with a hole, into which the said insulator can be placed, and a suitable slot cut into the said frame, extending into the said

hole, so that by closing the said slot, the said hole will be reduced in size, for the purpose of clamping the said frame tightly to the said trolley-wire-supporting wire, or a trolley-wire substantially as described.

3. In a trolley-wire support, the combination with a split clamp for embracing the trolley-wire, of a split tube formed integral with said clamp and arranged at right angles thereto, a split-insulator cylinder of hard rubber arranged within said split tube, and screws tapped through said clamp and split tube for contracting them about the trolley-wire and supporting-wire, substantially as described.

GEORGE EDWIN JOHNSON.

Witnesses:

GEORGE L. THIELL,
G. G. JOHNSON.