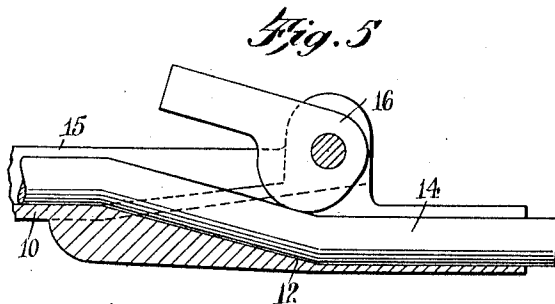
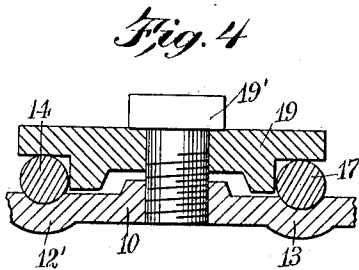
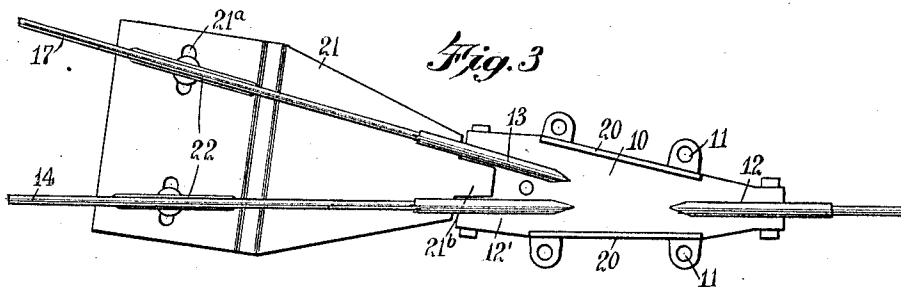
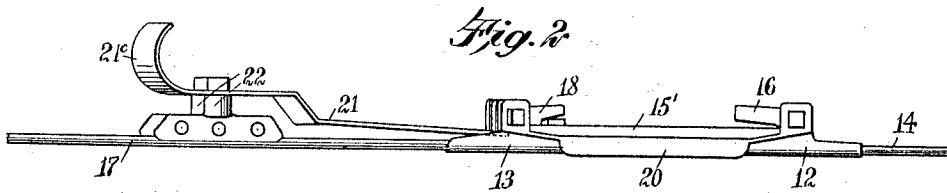
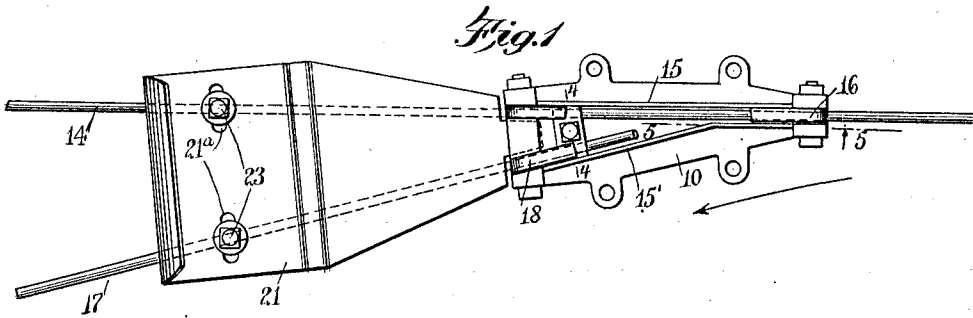


J. KIRBY.
TROLLEY WIRE SWITCH OR FROG.
APPLICATION FILED MAY 3, 1912.

1,040,212.

Patented Oct. 1, 1912.



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JOHN KIRBY, OF DOUGLAS, ARIZONA.

TROLLEY-WIRE SWITCH OR FROG.

1,040,212.

Specification of Letters Patent.

Patented Oct. 1, 1912.

Application filed May 3, 1912. Serial No. 694,958.

To all whom it may concern:

Be it known that I, JOHN KIRBY, a citizen of the United States, and a resident of Douglas, in the county of Cochise and State of Arizona, have invented a new and Improved Trolley-Wire Switch or Frog, of which the following is a full, clear, and exact description.

This invention relates to supporting devices for electric conducting wires and particularly to the line wires for overhead electric railway trolleys.

An object of this invention is to make an easy and more reliable connection between a main line wire and a switch wire than has heretofore been possible.

Another object of this invention is to provide a means for reducing the danger of a misplaced trolley from becoming lodged in the switch or frog, and a still further object is to generally improve this class of devices, all as will be fully explained as this description progresses.

Reference is to be had to the accompanying drawing forming a part of this specification in which like characters of reference indicate corresponding parts in all the views, and in which—

Figure 1 is a plan view of one embodiment of the invention shown as adapted to a main line wire from which a switch wire leads to the left, as viewed in the direction of the arrow; Fig. 2 is a side elevation of the same; Fig. 3 is a bottom plan view; Fig. 4 is a transverse sectional detail on the line 4—4 of Fig. 1; and Fig. 5 is a longitudinal sectional detail on the line 5—5 of Fig. 4.

Referring particularly to the drawings, the numeral 10 indicates a frog comprising a substantial metallic plate having any suitable number or arrangement of attachment ears 11 whereby it may be guyed in place. As shown, said frog is provided with longitudinal sockets 12 and 12' in alinement with each other, and with an auxiliary socket 13 leading off laterally at an angle from the aforesaid sockets. In this connection it is to be noted that the frog with its sockets may be variously formed, the auxiliary sockets leading off in any direction or in any suitable number so as to adapt the frog to either a right or left switch, a V-switch or the like.

At 14 is represented the main line wire which extends longitudinally of the upper

surface of the frog and is held thereon by means of a flange 15. Coöperating with each of the sockets 12 and 12' is a pivoted cam-locking means 16 adapted to force the wire downwardly into the respective socket. The form and position of each cam are such that the greater the strain upon the wire longitudinally, the greater will be the clamping tendency thereof.

A branch wire is indicated at 17 and is clamped to the frog by means of a cam 18 which forces a portion of the wire 17 into the socket 13 of the frog. Associated with the cam 18 and supplementing its locking effect upon the frog is a clamp plate 19 embracing a portion of the wire 17 and an adjacent portion of the wire 14 by virtue of a screw or bolt 19'. Said clamp plate 19 and the end of the branch wire 17 are further prevented from lateral displacement by means of a flange or rib 15' on the upper surface of the frog.

By reference particularly to Fig. 3 it will be noted that the socket portions of the frog constitute in effect continuations of the several portions of the trolley wires, but such portions being spaced to enable the trolley to pass from the main line to the switch line or vice versa, without any obstruction. During the transfer of the trolley as just indicated its displacement laterally from the frog will be prevented by guides 20.

In order to prevent the trolley, if momentarily off the line, from becoming lodged in the frog, I provide a guard 21 formed, as illustrated, of a piece of sheet metal and secured to the main and branch wires 14 and 17 by means of a pair of ears 22 secured respectively to said wires and having adjustable connection to said guard plate through clamping bolts 23 operative through transverse slots 21^a formed in the guard. The front end of the guard plate is formed into a tongue 21^b adapted to extend beneath the frog plate and between the sockets 12' and 13 whereby said end of the guard is secured in position, and the opposite end of the guard is bent upwardly in a curve at 21^c, whereby the trolley pole by contact therewith will cause the trolley to be restored to the main line as it approaches the switch, instead of being dragged into the frog and causing serious damage to the equipment.

From the foregoing description it will be noted that I do not wish to be limited to the exact details of construction illustrated, re-

serving the right to vary therefrom to considerable extent without departing from the spirit of the invention.

Having thus described my invention, what
5 I claim as new and desire to secure by Letters Patent is:

In a device of the character set forth, the combination of a frog plate, main and branch conducting wires, means to clamp
10 said wires to said plate, a guard adjacent one end of said frog, one end of the guard being extended between the main and branch

wires and beneath the frog plate, the other end of said guard being formed into an upwardly extending curve, and means to clamp the guard adjustably to the main and branch wires, substantially as set forth.

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

JOHN KIRBY.

Witnesses:

GUS MICHEL,
JAS. GARNER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."