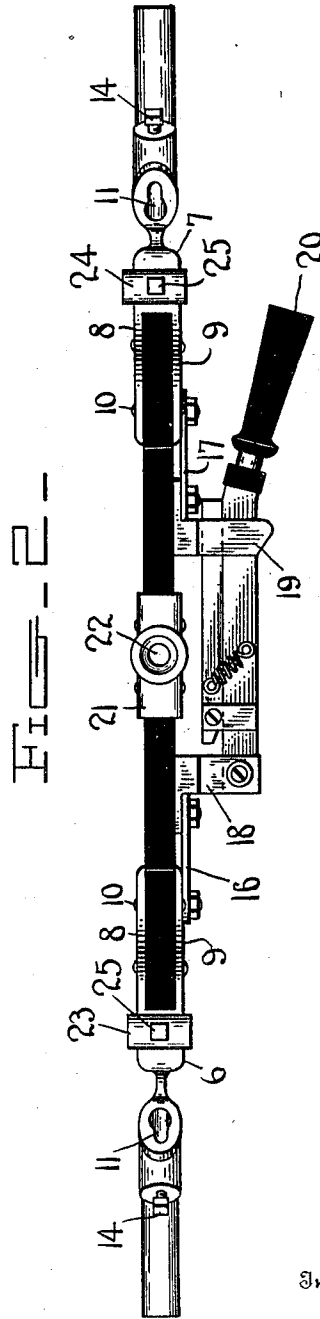
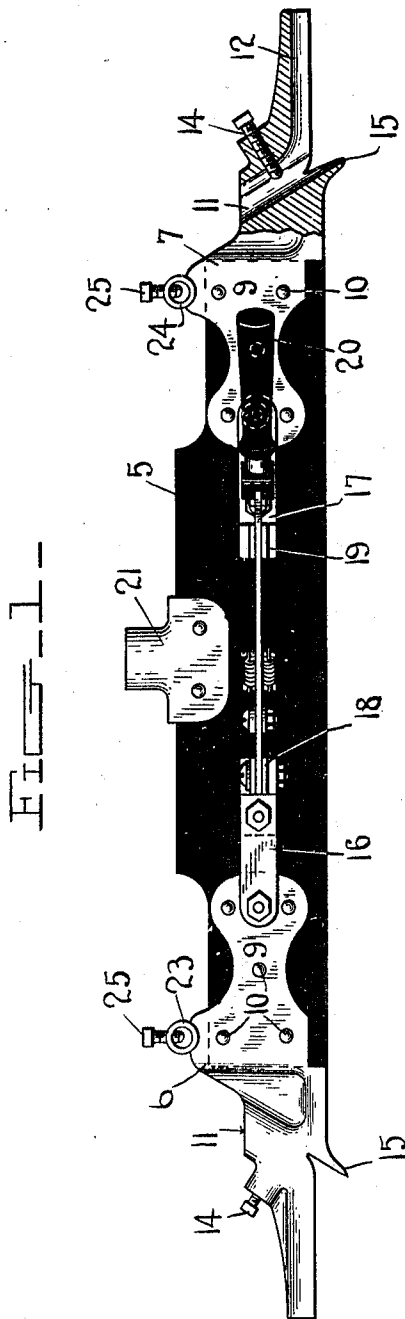


J. C. KING & T. J. REED.
TROLLEY LINE CIRCUIT BREAKER.
APPLICATION FILED MAY 6, 1909.

953,207.

Patented Mar. 29, 1910.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN C. KING AND THOMAS J. REED, OF RODA, VIRGINIA.

TROLLEY-LINE CIRCUIT-BREAKER.

953,207.

Specification of Letters Patent. Patented Mar. 29, 1910.

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To all whom it may concern:

Be it known that we, JOHN C. KING and THOMAS J. REED, citizens of the United States, residing at Roda, in the county of Wise, State of Virginia, have invented certain new and useful Improvements in Trolley-Line Circuit-Breakers; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in circuit breakers and more particularly to the type employed with trolley lines.

The invention contemplates for its object the provision of an insulating body, the opposite ends of which are provided with metallic sockets which are designed to receive the terminals of the wire, electric connection being made between the sockets by means of a quick break switch.

Another object is the provision of a device which will guard against the trolley sheave from leaving the line when engaging the circuit breaker.

With these and other objects in view as will more fully hereinafter appear, the present invention consists in certain novel details of construction and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings and more particularly pointed out in the appended claim, it being understood that various changes in the form, proportion, size and minor details of the device may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings forming part of the specification:—Figure 1 is a side elevation of the device. Fig. 2 is a plan view of the same.

Similar numerals of reference are employed to designate corresponding parts throughout.

As shown, the insulating body 5 is preferably of wood or other low conducting material and is in one piece, being oblong in contour and rectangular in cross section. The lower longitudinal side of the insulating body is rounded off so as to correspond as nearly as possible with the surface of the trolley wire, it being understood that the thickness of the member 5 corresponds to the diameter of the ordinary trolley wire, or substantially so. Rigidly secured to the

opposite ends of the insulating body 5 are a pair of sockets 6 and 7. Each of these members is preferably formed of a single casting and since both are identical in structure a description of one will be sufficient. As shown in Fig. 2 the sockets are at one end formed with a pair of spaced ears 8 and 9 which straddle the body 5 by fitting over one end thereof and are secured in place by suitable bolts or rivets 10, that portion of each socket extending in advance of the ears 8 and 9 is reduced and is provided with an obliquely disposed bore 11 extending from the upper to the lower sides of the advanced portion, the upper end being disposed adjacent the base of the members 8 and 9. The remainder of the portion extending in advance of the bore 11 is provided with a central longitudinally disposed bore 12 extending throughout its length and terminating in the oblique bore 11. The lower half of the wall of the bore 12 is cut away from the point adjacent the inner side of the bolt 11. The diameter of the bore 11 is sufficient to accommodate the ordinary trolley wire, the upper half of the latter bearing on the upper side of the bore 12 while its lower half lies in the same plane with the lower side of the insulating member, or substantially so. This construction permits the wire to be soldered or otherwise secured in the socket. A radial opening is formed through the side wall of the oblique bore 11 and is screw threaded for the reception of a binding screw 14 which is adapted to be turned to engage the surface of the wire and prevent the same from displacement. That portion of the lower side of the advanced portion of the socket is, at a point substantially in alinement with the inner side of the oblique bore 11, extended downwardly and obliquely as shown at 15 whereby a tongue is provided, the lower terminal of which lies below the plane of the lower side of the advanced portion of the socket. The function of this construction is to provide a means for more firmly securing the wire in the oblique bore since the tongue 15 may be tamped around the lower side of the wire and soldered or otherwise secured whenever desired. The ears disposed on one side of the body 5 are provided with contact plates 16 and 17, the outer terminals of which are bolted or otherwise secured to the ears as shown in the drawings while their inner ends extend to points adjacent the hori-

zontal center of the body 5. Fixedly secured to the inner terminal of one of these contact plates is the inner terminal 18 of a switch post and similarly secured to the terminal of the opposite plate is a spring contact 19. A quick break switch has one end pivoted to the switch post 18 while its opposite end is adapted to be inserted into the contact 19, the switch bar is provided with a handle 20 of the usual construction.

A supporting socket is designated by the numeral 21 and is provided at its lower end with spaced lugs to straddle the upper side and middle portion of the member 5. The socket is provided with the usual bore 22 which receives the threaded shank of the button carried by the supporting wire (not shown). Sockets 23 and 24 are provided at the outer ends and on the upper sides of the ears 8 and 9 which are adapted to receive the guy wires from the trolley pole. These sockets are provided with radial openings for the reception of threaded set screws 25.

Thus it will be seen when it is necessary to break the trolley circuit the same can be done by opening the switch. It will be observed that the passage of the trolley sheave

will not be hindered owing to the formation of the lower side of the insulating member 5.

Having thus described our invention what is claimed as new, is:—

A trolley line circuit breaker comprising an insulating body having its lower side rounded to conform to the shape of the trolley wire, sockets at the opposite ends of said insulating body, one of which is provided with a contact spring and each of which is provided with a longitudinal groove terminating in an upwardly inclined bore and means located in each of said bores for securing a trolley wire therein and a switch handle bar having one end pivoted to one of said sockets and its opposite end engageable by the contact spring located on the other of said sockets.

In testimony whereof, we affix our signatures, in presence of two witnesses.

JOHN C. KING.
THOMAS J. REED.

Witnesses:

W. J. STONE,
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