

(No Model.)

2 Sheets—Sheet 1.

R. M. JONES.
CROSSING FOR TROLLEY WIRES.

No. 464,129.

Patented Dec. 1, 1891.

Fig. 1.

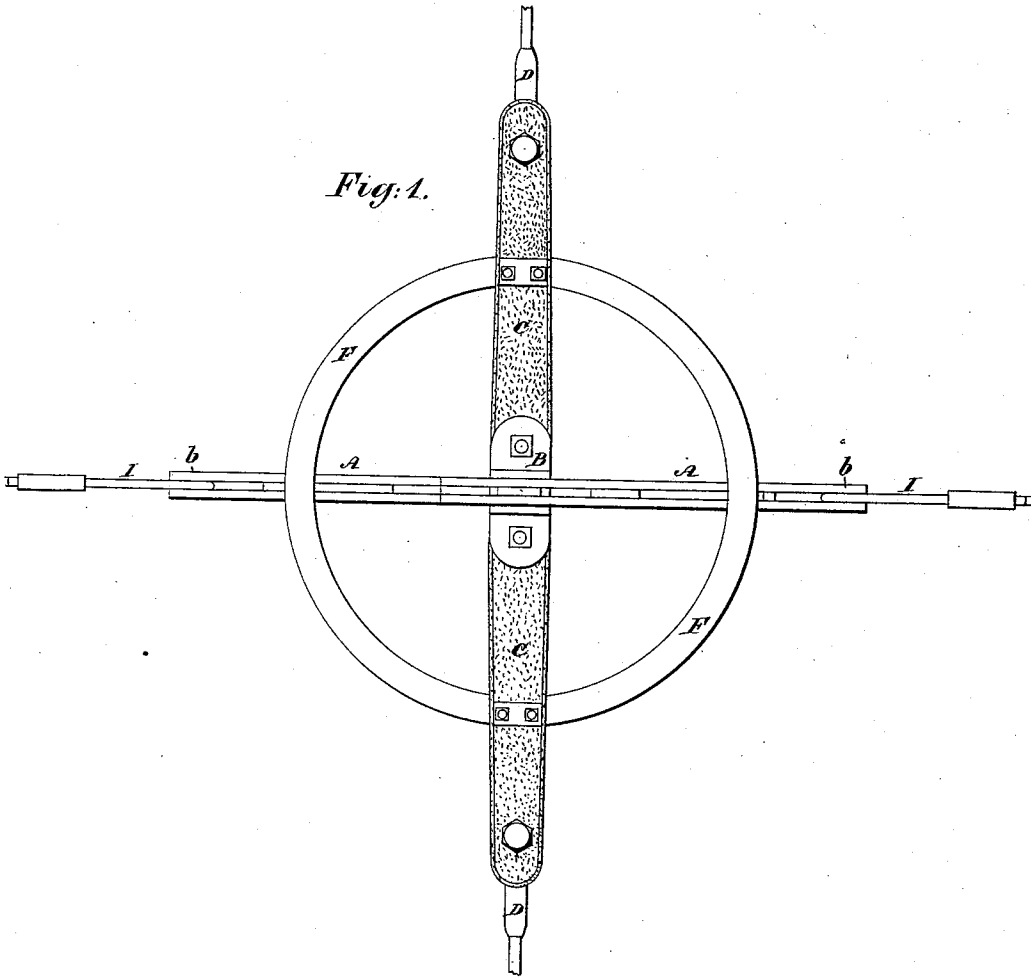
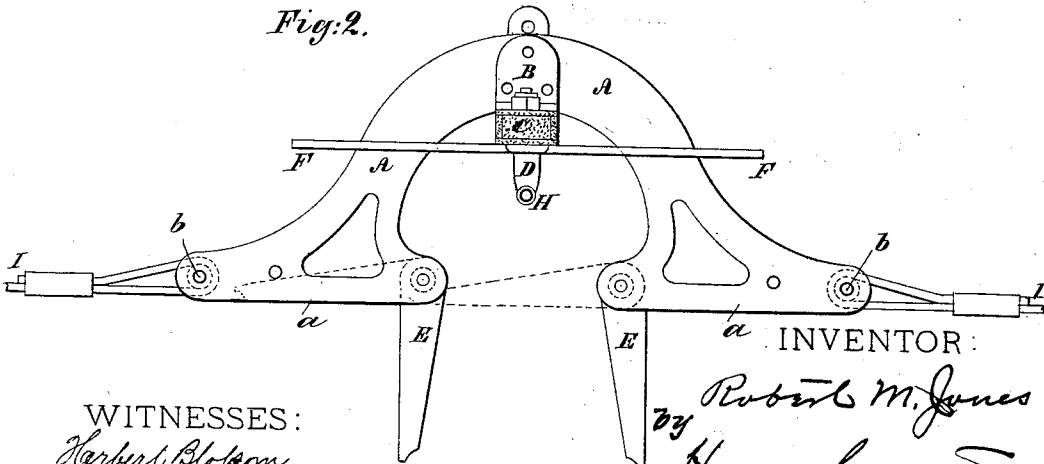


Fig. 2.



WITNESSES:
Herbert Bloppom.
Charles A. Barker

INVENTOR:
Robert M. Jones
by *Henry Commins*
Attorney.

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Fig. 3.

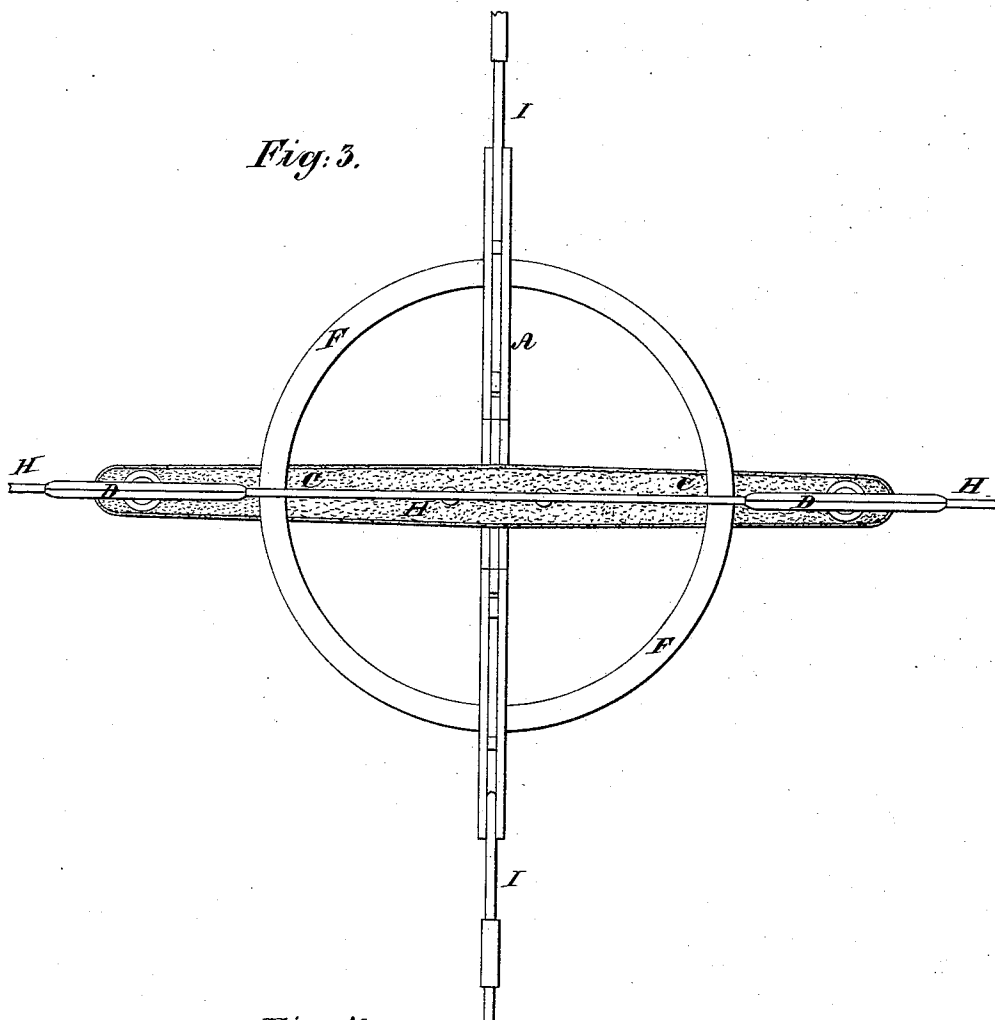
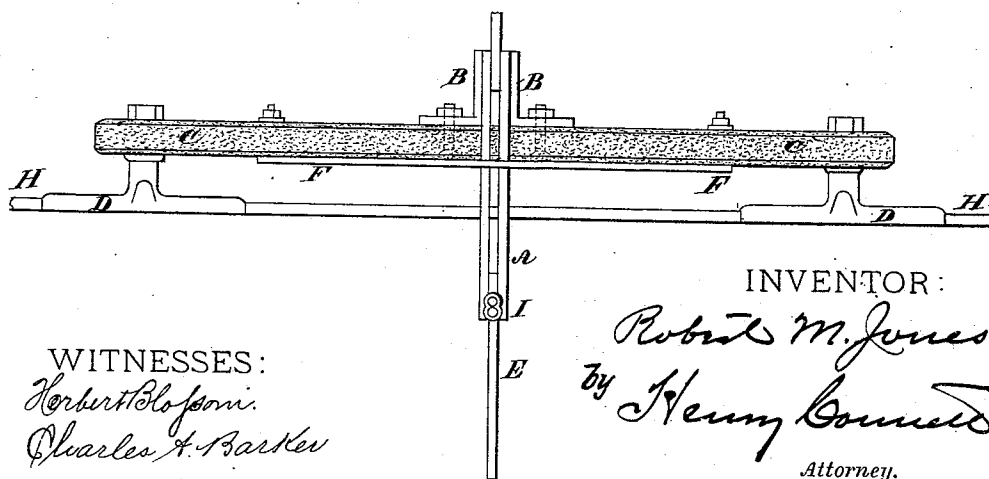


Fig. 4.



WITNESSES:
Herbert Blofson.
Charles A. Barker

INVENTOR:
Robert M. Jones
 by *Henry Conner*
 Attorney.

UNITED STATES PATENT OFFICE.

ROBERT M. JONES, OF SALT LAKE CITY, UTAH TERRITORY.

CROSSING FOR TROLLEY-WIRES.

SPECIFICATION forming part of Letters Patent No. 464,129, dated December 1, 1891.

Application filed April 16, 1891. Serial No. 389,171. (No model.)

To all whom it may concern:

Be it known that I, ROBERT M. JONES, a citizen of the United States, and a resident of the city and county of Salt Lake, in the Territory of Utah, have invented certain Improvements in Insulated Crossings for Intersecting Trolley-Wires, of which the following is a specification.

My invention relates to improvements in crossings for the trolley-wires of competing or independent electric-railway companies; and the object of my invention is to provide a crossing for use in such cases, which shall insure a perfect insulation of the wires of the respective systems, whereby the current of the one system may not leak into and intermingle with that of the other system.

My invention will be fully described hereinafter, and its novel features carefully defined in the claims.

In the accompanying drawings, which serve to illustrate my invention, Figure 1 is a plan view of the crossing constructed according to my invention; and Fig. 2 is a side view of the same, looking in the direction indicated by the arrow in Fig. 1. Fig. 3 is an under side plan view of the crossing; and Fig. 4 is a view similar to Fig. 3, but taken at right angles thereto or in the direction of the arrow in Fig. 3.

In the drawings, A represents the frame or body of the crossing, provided with a hook on its crown, through which is passed the supporting-wire from the brace in constructing the crossing. This frame is preferably of iron, copper, or some other metal of high conductivity in order to admit of the current passing through it from one line-wire section to the other section. To the opposite sides or wings of the frame A are secured at *b b* the line-wire sections I I of one of the respective systems, which sections may be secured in any suitable manner, but by preference as shown in Fig. 1, wherein they are represented as being brought around studs or bolts in the wings and carried back upon themselves and secured by twisting or otherwise.

On opposite faces of the frame A, beneath the hook A', are secured the brackets B B, of an L shape, to the lower flanges of which is bolted a long bar C, of papier-maché, vulcan-

ized fiber, or the like, which extends out on the opposite sides of frame A, at right angles to the arms thereof, and bears at its extremities two like hangers D D, in which the trolley-line wire of the other system is secured. This wire H is continuous and passes directly across the crossing from one hanger to the other.

A trolley-guard F of circular form, which may be of any material, is secured to the bar C at opposite sides by bolts or the like.

The frame A is, as herein shown, composed of two thin metal plates slightly separated and held apart by other metal plates inserted at proper points. In this manner a very light and strong structure is obtained. The arms or wings of the frame A are widened at their extreme ends and are formed so that their elongated lower faces *a* will serve as a continuation of the line-wires I I, and on studs passing through the inner ends of these horizontal trolley-surfaces are hinged the two switch-plates E E, the operation of which will be described. The plates E are hinged inside or between the two plates forming the frame A, and are thus adapted to be folded up between said plates and out of the way when necessary.

As the car approaches the crossing, running on the line-wires I I, the trolley will ride off the line-wire and onto the lower end of frame A, and, striking the plate E, will swing it over, as indicated in dotted lines in Fig. 2, said plate thus forming a bridge between the two arms of the said frame, along which the trolley passes, receiving all the while the full current. Having passed across the space between the two arms of the frame A, the trolley strikes the second plate E, and, pressing it upward in the same plane as the first plate, as seen in dotted lines, passes along the other arm or wing of the frame and out upon the second section of the line-wire, as indicated by the arrow. The plates E of course return to their vertical position as soon as the trolley has passed them and the original line-wire H is open for the trolley of a car passing over that line.

I wish to state that, as here shown, my device or bridge is designed for use on single trolley-lines of competing companies, and

the purpose of the bridge-plate E is to form a connection in a right line between the line-wire sections I. The device, as shown, is not designed for use at the intersection of double trolley-wire systems, where a positive wire crosses a negative wire.

Having thus described my invention, I claim—

1. In a crossing for electric-railway trolley-lines, the combination of the frame A, composed of two similar metal plates separated and distanced by interposed pieces, the line-wire sections I, attached to studs in the plates of the frame and arranged between said plates at the attaching-points, the said studs, the plates E, pivoted to the frame between the plates thereof and adapted to fold up between the said plates in line with the wires I, the insulating-plate C, attached to the frame between the branches thereof, and the crossing line-wire H, attached to said insulating-plate, substantially as set forth.

2. In a crossing for electric-railway trolley-lines, the combination, with the frame A, provided with two downwardly-projecting arms, of the bar C, secured to said frame but insulated therefrom, the trolley-guard F, secured to said bar and of the circular form shown, the trolley-line wire H, secured to said bar and passing between the arms of frame A, the switch-plate E, hinged in the arm of plate A and adapted to be thrown up by the passing trolley, so as to bridge the space between the arms of frame A, and the trolley-line wire I, secured to the arms of frame A, substantially as and for the purposes set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

ROBERT M. JONES.

Witnesses:

BERNARD J. MCCANVILLE,
HORACE ELLERBECK.