

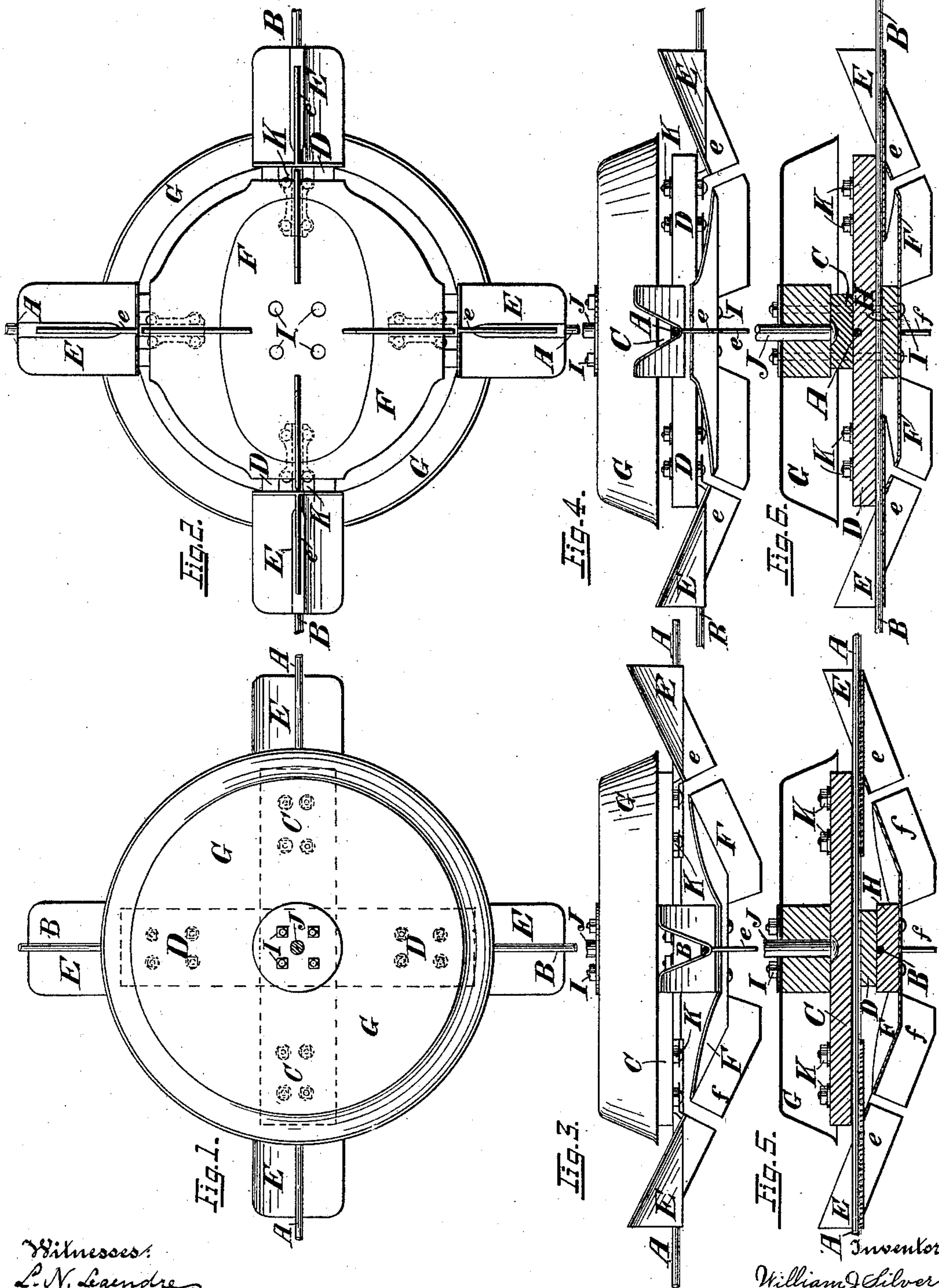
(No Model.)

W. J. SILVER.

CROSSING FOR ELECTRIC RAILWAY CONDUCTORS.

No. 463,310.

Patented Nov. 17, 1891.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

WILLIAM J. SILVER, OF SALT LAKE CITY, UTAH TERRITORY.

## CROSSING FOR ELECTRIC-RAILWAY CONDUCTORS.

SPECIFICATION forming part of Letters Patent No. 463,310, dated November 17, 1891.

Application filed February 12, 1891. Serial No. 381,144. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM J. SILVER, of Salt Lake City, in the county of Salt Lake, in the Territory of Utah, have invented a new and useful Improvement in Crossings for the Overhead Wires of Electric Railways, of which the following is a specification.

The object of this invention is to provide for the support of the overhead wires of two intersecting systems of electric railways by a wire-crossing which affords provision for complete insulation of the intersecting wires, which is so light that its weight is not objectionable, in which there are no loose pieces, such as sooner or later wear and cause trouble, which can be easily manufactured and have its parts easily duplicated, and which does not require the cutting of the wire of either system.

Figure 1 is a plan view of a wire-crossing embodying my invention. Fig. 2 is an inverted plan view of the same. Figs. 3 and 4 are side views at right angles to each other. Figs. 5 and 6 are central vertical sections at right angles to each other.

Similar letters of reference designate corresponding parts in all the figures.

A is the trolley-wire of one of two intersecting systems of electric railways, and B the trolley-wire of the other system.

C is a bar of insulating material, to which the wire A is attached, and D a similar bar to which the wire B is attached, the said bars being arranged lengthwise of their respective wires and being clamped together between two central blocks H H by means of screw-bolts I I passing through the said bars and blocks. The block H has attached to it centrally a bolt J, by which the said blocks, bars, and wires may be suspended from an overhead support of any suitable kind. The said blocks, bars, and central bolt constitute an insulating-wire hanger.

E E are guards or guides of metal attached to the bars C and D, one to each arm of each bar. These guides or guards are represented as having their upper parts and outer ends of V shape internally and externally, their interiors forming troughs, in the bottoms of which are received their respective wires and the exteriors of which constitute guides for the trolley-wheel. The said guards or guides

are furnished under their V-shaped or trough-like portions with ribs *e e*, the lower edges of which have a downward inclination toward the intersection of the wires for the purpose of depressing the trolley of one railway system as it approaches the crossing wire of the other system. The said guards E are secured to the projecting arms of their respective bars C D by bolts K K, and they are made to serve the purpose of clamping the wires to said bars.

F is a shield placed under the lower block H, and represented as secured to said block by the same bolts I I which secure the blocks H H and the bars C D together. On the bottom of this shield are four ribs *ff*, which form prolongations of the four ribs *e e* of the guards or guides E E for the purpose of further guiding the trolley-wheel. The said ribs or guides *ff* are interrupted at the intersection of the wires to allow the passage of the trolley running on one wire between the guides *ff* of the other wire.

G is a cover secured on the upper block H by the bolts I I to protect the parts from rain and storm.

It will be readily understood that the trolley running under the wire A or B on its arrival at the crossing will be directed by the upper parts E E of the V-shaped portions of the guards or guides onto the inclined ribs *e e* thereof, and will be caused to run down the said ribs and thence along the ribs *ff* of the shield F, and thereby caused to pass under and entirely clear of the crossing wire B or A of the other system, and after passing the crossing wire the trolley will run along the opposite rib *f* of the shield F and up the rib *e* of the opposite guide or guard E, by which it will be guided again onto its own wire.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, in a wire-crossing for the wires of intersecting systems of electric railways, of an insulating-hanger consisting of bars of insulating material supporting each wire and insulating one from the other, and guides, two for each wire, having downward inclinations toward the center of the hanger, substantially as set forth.

2. The combination, in a wire-crossing for the wires of intersecting systems of electric railways, of an insulating-hanger consisting



of bars of insulating material, one for each wire and insulating one from the other, and clamping guards or guides for securing the wires to the insulating-bars, and provided  
5 with depending ribs having downward inclinations toward the center of the hanger, substantially as set forth.

3. The combination, in a wire-crossing for the wires of intersecting systems of electric  
10 railways, of an insulating wire-hanger and guards or guides E e E e of the form of troughs, having downwardly-projecting inclined ribs for the guidance and depression of the trolleys, substantially as herein described.

15 4. The combination, in a wire-crossing for the wires of intersecting systems of electric railways, of an insulating-hanger consisting of bars of insulating material, one for each wire and separating the same, clamping  
20 guards or guides for securing the wires to the said insulating-bars and having downwardly-extending ribs thereon, an insulating-block

secured to the hanger, and a shield fixed to the block and completely insulated from the rest of the hanger, said shield having ribs in  
25 alignment with the ribs on the clamping guards or guides, substantially as set forth.

5. The combination, in a wire-crossing for the wires of intersecting systems of electric railways, of an insulating-hanger consisting  
30 of insulating-bars for supporting the wires, clamping guards or guides for securing the wires to the said bars and having ribs depending therefrom, insulating-blocks, a shield secured to one of said blocks and having ribs  
35 in alignment with the ribs on the clamping guards or guides, a cover secured to the other block for protecting the parts of the hanger, and bolts adapted to secure the parts together, substantially as set forth.

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Witnesses:

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