

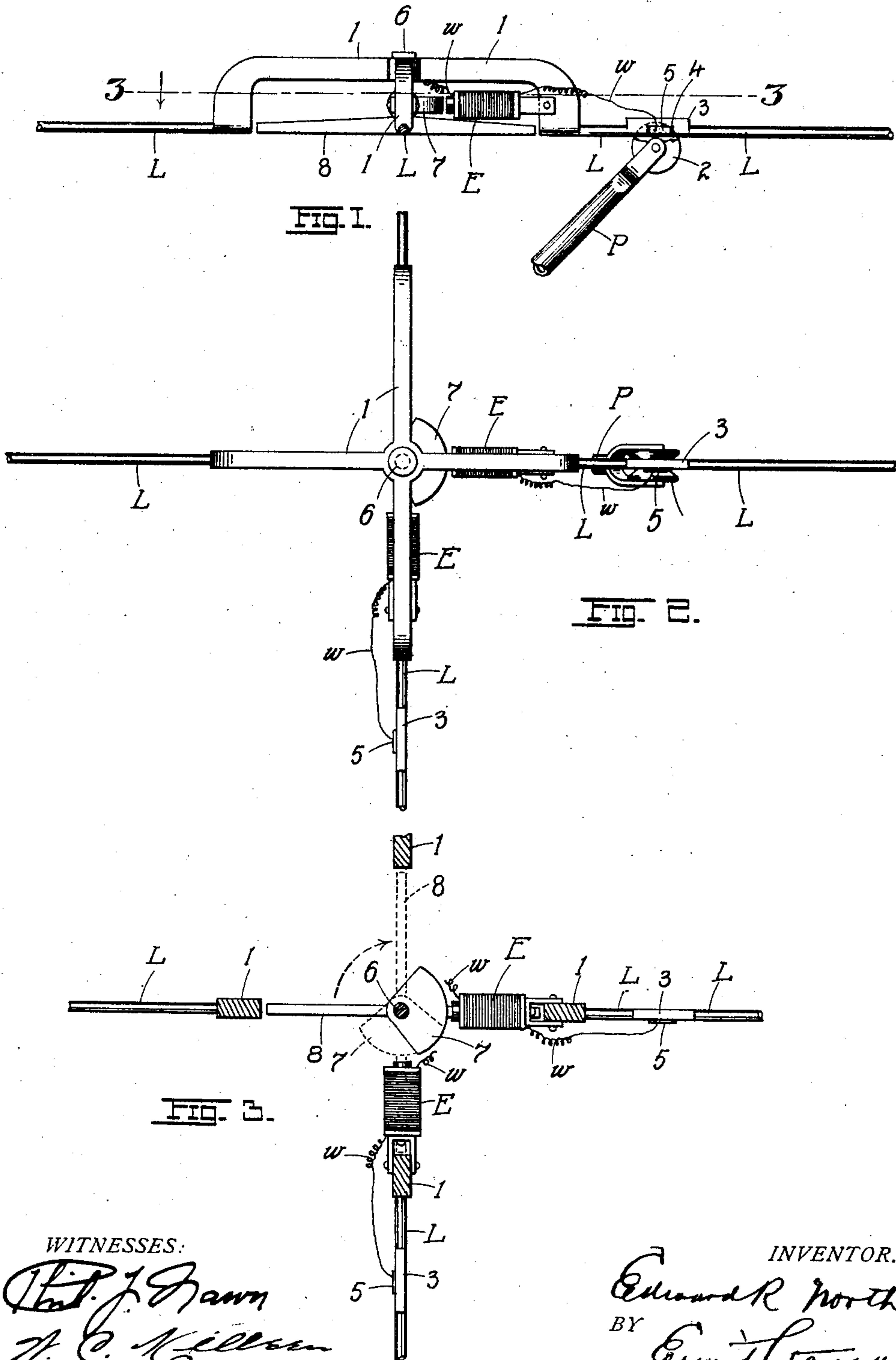
No. 777,912.

PATENTED DEC. 20, 1904.

E. R. NORTH.  
TROLLEY CROSSING.

APPLICATION FILED MAY 6, 1904.

NO MODEL.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

EDWARD R. NORTH, OF WEBSTER GROVES, MISSOURI.

## TROLLEY-CROSSING.

SPECIFICATION forming part of Letters Patent No. 777,912, dated December 20, 1904.

Application filed May 6, 1904. Serial No. 206,672.

*To all whom it may concern:*

Be it known that I, EDWARD R. NORTH, a citizen of the United States, residing at Webster Groves, in the county of St. Louis and State of Missouri, have invented certain new and useful Improvements in Trolley-Crossings, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to improvements in trolley-crossings; and it consists in the novel construction of crossing more fully set forth in the specification and pointed out in the claim.

In the drawings, Figure 1 is an elevation of the crossing. Fig. 2 is a top plan thereof, and Fig. 3 is a horizontal section on line 3 3 of Fig. 1.

The object of my invention is to construct a crossing which shall insure a continuous and uninterrupted path of travel for the trolley at such crossing no matter over which track the car may be passing.

In detail the invention may be described as follows:

Referring to the drawings, 1 1 represents the cross-arms intersecting one another at the angle of the streets over which the cars pass.

L represents the line-wire, the continuity of which is broken near its connection with the cross-arms, the ends thus separated being connected by a bridge-piece 3. Between the disconnected ends of the wire is interposed an insulating-plug 4, which carries a metallic plate 5. From the plate 5 extends the wire *w* of the electromagnet E, the opposite end of the wire being connected to the arms 1.

P represents the trolley - pole, and 2 the trolley.

Mounted at the intersection of the arms 1 1 on a rotatable spindle 6 is an armature 7,

to which is connected a bridge-bar 8, adapted to span the space between the ends of the arms 1, making the passage from the wire L on one side of the crossing continuous to the wire L on the opposite side thereof. As the trolley 2 contacts with the plate 5 (contacting, as it does, simultaneously with the bridge-piece 3) the current of the line-wire enters the wire *w*, thereby energizing the magnet E. This attracts the armature 7, deflecting the bridge-bar 8 into parallelism with the wire L L, thus making a continuous path for the trolley 2 to ride over. Of course each trolley energizes its own electromagnet, the armature being at all times in the reach of the magnetic field of the magnet thus energized. In Fig. 3 the dotted position shows the piece 8 swung into parallelism with the wire L L of the adjacent cross-arm 1.

Having described my invention, what I claim is—

A trolley-crossing comprising intersecting arms, trolley-wires coupled thereto, a break being formed in each wire adjacent to the cross-arm, a bridge-piece spanning the break, an insulating-plug interposed between the separated ends of the wire, a conducting-plate in the plug, an electromagnet having the wire thereof connected respectively to said plate and to the cross-arms, a rotatable spindle mounted at the intersection of the arms, an armature on said spindle, and a bridge-bar carried by the armature and adapted to be deflected into parallelism with the trolley-wire upon passage of the trolley over the plate aforesaid, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD R. NORTH.

Witnesses:

EMIL STAREK,  
W. C. KILLEEN.