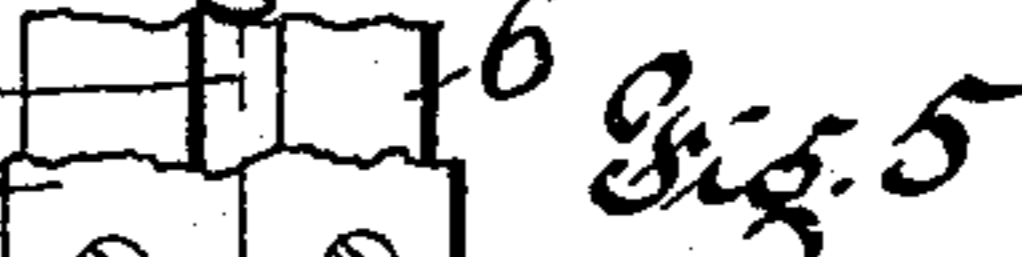
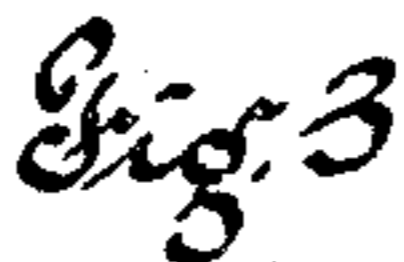


PATENTED MAR. 19, 1907.

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Inventor
J. M. Hayes
his Exrs Attys

UNITED STATES PATENT OFFICE.

JAMES N. HAYES, OF ST. LOUIS, MISSOURI.

TROLLEY-WIRE CROSSING.

No. 847,989.

Specification of Letters Patent.

Patented March 19, 1907.

Application filed January 29, 1906. Serial No. 298,489.

To all whom it may concern:

Be it known that I, JAMES N. HAYES, a citizen of the United States, and a resident of St. Louis, State of Missouri, have invented certain new and useful Improvements in Trolley-Wire Crossings, of which the following is a specification.

My invention relates to improvements in trolley-wire crossings, and consists of the novel features hereinafter described and claimed.

The object of my invention is to construct a crossing to be attached to the trolley-wires and so arranged as to permit the trolley-wheel to freely pass without becoming disconnected.

In the drawings, Figure 1 is a bottom plan view of my complete crossing. Fig. 2 is a vertical sectional view taken on the line 2 2 of Fig. 5. Fig. 3 is a side elevation with a part thereof in section and taken on the line 3 3 of Fig. 5. Fig. 4 is a side elevation with parts broken away. Fig. 5 is a top plan view with parts broken away.

In the construction of my invention I provide a pair of cross-bars 6 and 7, each provided on its under surface with a tapered portion 8. The bar 7 is provided in its center with a pyramidal portion 9 and so arranged as to be in alinement with the tapered portions 8 when both bars are placed together. The bar 7 is provided with a mortise 10, in which is inserted the bar 6. The central portion of the bar 6 is also mortised, as indicated by the numeral 11, and of a depth sufficient to permit the lower edges of the tapered portions to be in alinement when both bars are placed together.

The upper surface of each of the bars 6 and 7 is provided with a central elongated slot 12 and 13, in which are located the trolley-wires 14 and 15. These slots 12 and 13 are suitably covered by plates 16 and 17 and held in position by screws 18. The bars 6 and 7, together with their integral tapering portions 8, cone 9, and the plates 16 and 17, are constructed of insulating material, and on each end of the tapering portions 8 are secured the shoe 19, the ends 20 thereof being inlaid flush with the surface of the tapering portion and the ends 21 formed with a clamp, whereby the same is held upon the trolley-wire.

Both sections of the crossing are held together by means of the clamping device 22, which consists of a pair of clamps 23, each being constructed in halves and clamped to-

gether over the horizontal bar 24 by means of the bolt and nut 25. The lower ends of the clamps 23 are provided with prongs 26, which fit into the recesses 27, formed in the sides of the bar 7. (See Fig. 4.)

The horizontal bar 24 is provided with an eye 28, to which the guy-wire is attached for supporting the crossing. Through the center of the pyramid 9 I provide a bore 29, in which is inserted a metallic pin 30, its inner end provided with a shoe 31, arranged to contact with the trolley-wire 14, and the purpose of which is to provide a contact for the trolley-wheel when the same is passing over the center of the crossing.

The pin 30, having contact with the trolley-wire 14, will provide at all times a live contact, which has been found through experience to permit the current while the trolley-wheel is passing between the contact-point 30 and the shoe 19 to enter the trolley-wheel by jumping spaces of about two inches. The general construction of the crossing is such that the size of the trolley-wheel in proportion to the spaces between the contact-point 30 and the shoe 19 varies two inches, and while the trolley-wheel is passing from the shoe toward the center of the crossing the current will jump from the shoe to the wheel. By that time the wheel is brought in contact with the pin 30, and during the passage of the wheel the current will jump from the pin to the wheel, keeping the wheel alive during the entire travel under the crossing and prevents the flickering of the lights in the car, as well as to prevent a dead-center should the car stop at a point with the trolley-wheel on the crossing.

The inclined surfaces of both bars are arranged so as to provide a shoulder 32, which acts as a track on which the flange of the trolley-wheel operates.

Having thus described my invention, what I claim as new, and desire to have secured to me by the grant of Letters Patent, is—

1. A device of the class described comprising a crossing made of two sections, inclined surfaces formed on each of said sections, said inclined surfaces so arranged as to form shoulders for the operation of the flanges of a trolley-wheel, elongated slots formed in each of said sections for the insertion of a trolley-wire, the upper surface of each section being covered with a plate, clamps securing both sections in locked position, and a contact extending through the

central inclined surface of the crossing communicating with one of the trolley-wires whereby current may be supplied to the passing trolley-wheel, substantially as specified.

5 2. A device of the class described comprising a crossing made of two sections, inclined surfaces formed on each of said sections, said inclined surfaces so arranged as to form shoulders for the operation of the
10 flanges of a trolley-wheel, elongated slots formed in each of said sections for the insertion of a trolley-wire, the upper surface of each section being covered with a plate, clamps securing both sections in locked position,
15 a contact extending through the cen-

tral inclined surface of the crossing communicating with one of the trolley-wires whereby current may be supplied to the passing trolley-wheel, and shoes secured to the ends of the inclined surfaces, projecting upwardly and secured to the trolley-wires, substantially as specified. 20

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

JAMES N. HAYES.

Witnesses:

ALFRED A. EICKS,
WALTER C. STEIN.