

T. VARNEY.
OVERHEAD STRUCTURE FOR ELECTRIC RAILWAYS.
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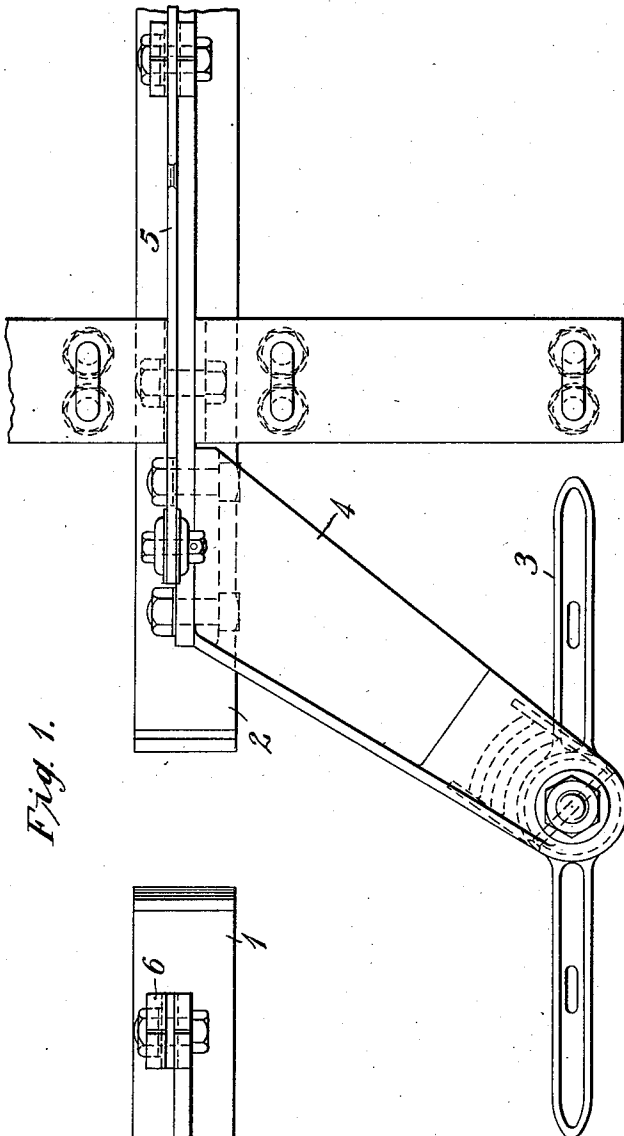


Fig. 1.

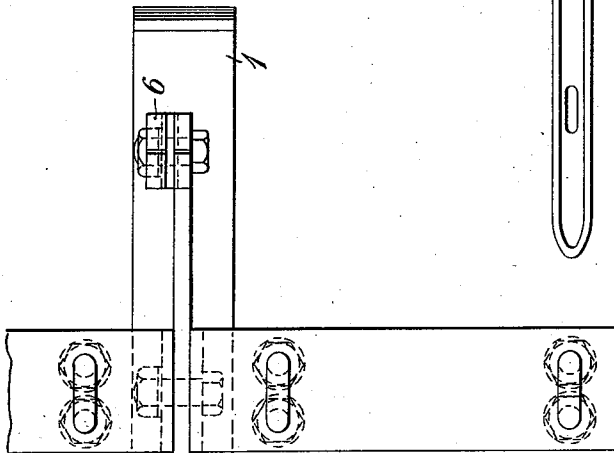
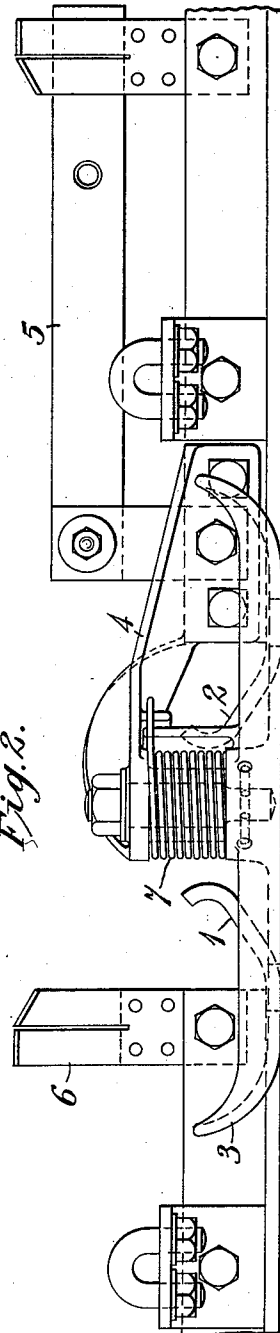


Fig. 2.



WITNESSES:

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OVERHEAD STRUCTURE FOR ELECTRIC RAILWAYS.

1,010,096.

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To all whom it may concern:

Be it known that I, THEODORE VARNEY, a citizen of the United States, and a resident of Pittsburgh, in the county of Allegheny, and State of Pennsylvania, have invented a new and useful Improvement in Overhead Structures for Electric Railways, of which the following is a specification.

My invention relates to trolley line structures for electric railways, and it has for its object to provide a suitable structure for draw-bridges or similar track sections in which it is necessary to frequently interrupt the continuity of the trolley conductor and in which slight displacements of the adjacent ends of the sections are to be expected.

When electric railways are obliged to operate over draw-bridges, a special overhead structure is necessary in order that energy may be supplied to the vehicle motors while the movable member of the bridge is being traversed without interfering with the smooth passage of the trolley or other traveling contact member and without preventing the normal action of the draw.

According to my present invention, I provide an overlapping, offset shoe which has a bottom contact surface that lies in the same horizontal plane as the ends of the trolley sections and is connected to one of them. A switch is provided for establishing the electrical connection across the gap and through the shunt circuit, when the draw is closed.

Figure 1 of the accompanying drawings is a plan view, and Fig. 2 is an elevation of a terminal structure and a switch constructed in accordance with my invention.

Referring to the drawings, the structure here shown comprises a contact member 1, which forms one terminal of the section of overhead trolley conductor on the swinging member and is adapted to be engaged by a sliding trolley, and a contact member 2 which forms a terminal of an adjacent section of trolley conductor which may, for convenience, be termed a shore-section in opposition to the swinging or draw-section of the draw-bridge. The adjacent ends of the contact members 1 and 2 are bent upwardly and an auxiliary contact member 3 is pivotally supported at the outer end of an arm 4 which forms a part of the shore-terminal, in order to carry the trolley or traveling contact member across the gap. The contact member 2 is provided with a knife

blade-switch 5 which is adapted to engage contact member 6 on the swinging section terminal and to make electrical connection therewith when the two sections are in alignment with each other. The auxiliary contact member 3 is normally parallel to the shore-section, but it is held in this position by a helical spring 7 in order that it may easily be swung out of the way by the contact member 1 as the draw-bridge is opened. The ends of the contact member 3 are bent upwardly in order to avoid catching or injuring the trolley shoe, and its contact surface lies in substantially the same horizontal plane as the contact surfaces of the members 1 and 2.

When it is desired to open the draw-bridge, the switch 5 is swung into the position shown in the drawing. When the draw-bridge is closed, the switch should be thrown in the opposite direction into contact with the member 6, in order that electric energy may be supplied to the swinging section of the trolley conductor.

The contact members 1 and 2 are preferably of the form of strips or bars and extend for some distance back of the point of interruption and are bent upwardly at their ends in order to permit the sliding or bow trolley to travel easily from the trolley wire to the strip or bar.

I claim as my invention:

1. A section break device for trolley line structures comprising two strips or bars of conducting material disposed in longitudinal alinement and separated by a material gap, and an auxiliary contact member projecting in both directions from said gap in parallel relation to the adjacent ends of said strips or bars and electrically connected to one of them.

2. A section break device for trolley line structures comprising two strips or bars of conducting material disposed in longitudinal alinement and spaced apart, and an auxiliary contact member disposed alongside both of said strips or bars and parallel thereto in substantially the same horizontal plane and electrically connected to one of them.

3. A section break device for trolley line structures comprising two strips or bars separated by a material gap, an auxiliary contact member comprising a resiliently mounted contact shoe electrically connected to and mechanically supported by one of

said strips or bars and normally disposed parallel to their adjacent ends.

4. A section break device for trolley line structures comprising a switch having stationary contact members and a movable contact member pivotally secured to one of the stationary members and adapted to form an electrical connection across the gap when in engagement with the other contact member, and an auxiliary contact shoe disposed in the same horizontal plane as the strips or bars and substantially parallel thereto, said shoe being electrically connected to one of the strips or bars and adapted to guide a sliding contact shoe across the gap.

5. A section break device for trolley line structures comprising a supporting structure, a pair of spaced strips or bars of conducting material secured to said structure in longitudinal alinement and having up-

wardly bent adjacent ends and lower contact surfaces in substantially the same plane, an oblique arm secured to the supporting structure above the end of one of the strips or bars and projecting outwardly therefrom to a point substantially opposite the gap between the parts, an auxiliary contact member resiliently secured to the outer extremity of the oblique arm and having its ends bent upwardly and its lower surface in substantially the same plane as the contact surfaces of the bars. 25 30

In testimony whereof, I have hereunto subscribed my name this 4th day of October, 1909.

THEODORE VARNEY.

Witnesses:

WILLIAM SCHAAKE,
B. B. HINES.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."