No. 668,711.

Patented Feb. 26, 1901.

G. H. DAVIS.

ELECTRIC RAILWAY.

(No Model.)

(Application filed Sept. 15, 1900.)

Fig. 1

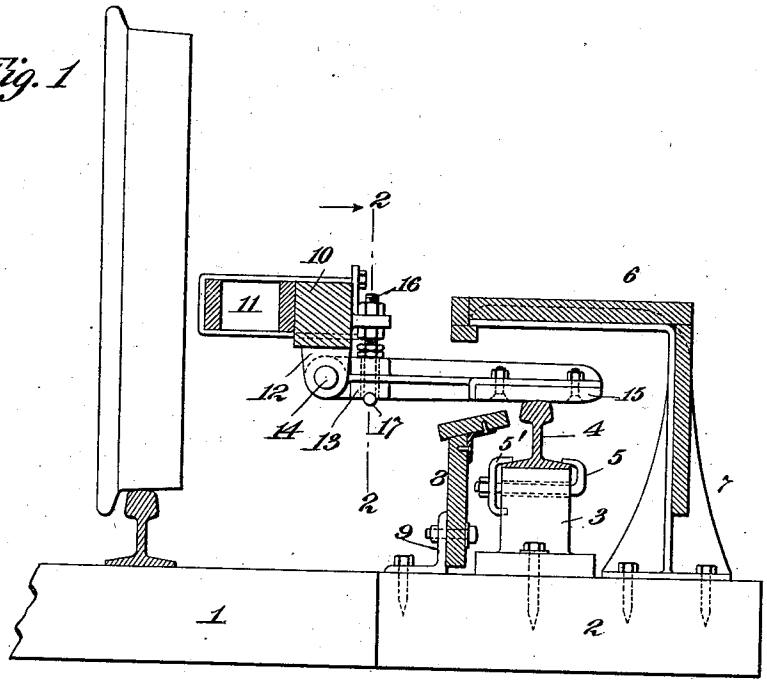
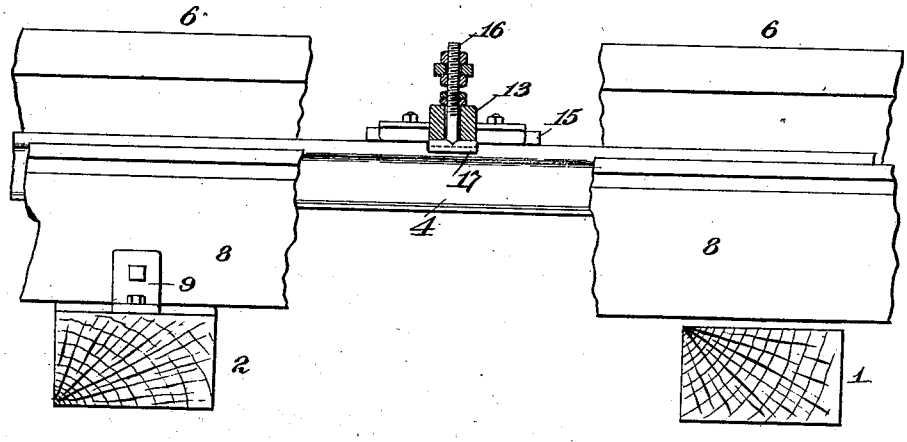


Fig. 2



Witnesses:

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by

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Att'ys.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

GEORGE H. DAVIS, OF NEW YORK, N. Y., ASSIGNOR TO FRANK R. FORD, GEORGE W. BACON, AND GEORGE H. DAVIS, OF SAME PLACE.

ELECTRIC RAILWAY.

SPECIFICATION forming part of Letters Patent No. 668,711, dated February 26, 1901.

Application filed September 15, 1900. Serial No. 30,197. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. DAVIS, a citizen of the United States, residing in the borough of Manhattan, city of New York, State of New York, have invented a certain new and useful Improvement in Electric Railways, (Case B,) of which the following is a description.

My invention relates to improvements in electric railways of the type employing a working conductor in the form of a third rail arranged parallel with the way and with which a contact-shoe, movable with the car, makes a top contact or, in other words, travels in contact with the upper surface thereof.

My object generally is to provide a system of this character which can be installed cheaply, wherein the working conductor will be rigidly supported, and in which the conductors will be effectively protected, so as to make the system entirely safe for practical purposes.

A further object is to improve the construction and arrangement of the contact-shoe and its manner of support, all as will be more fully hereinafter described and claimed.

In order that the invention may be better understood, attention is directed to the accompanying drawings, forming part of this specification, and in which—

Figure 1 is a cross-sectional view illustrating the part of the car carrying the contact-shoe, and Fig. 2 a section on the line 2 2 of Fig. 1 looking toward the working conductor.

In both of the above views corresponding parts are represented by the same numerals of reference.

The ties 1 of the way are of the ordinary character, except that certain of said ties 2 are extended to one side for the support of the working conductor. The ties 2 are arranged any suitable distance apart; but ordinarily about ten feet between centers will be advantageous. The ties 2 carry pedestals 3, which are bolted or otherwise secured in place and which are made of some suitable insulating material, preferably "reconstructed granite," so called. On the pedestals 3 is clamped the working conductor 4, which is preferably in the form of an ordinary T-rail, as shown, said conductor being formed, by preference, of mild steel. The tread of this rail offers a wide bearing-surface for the contact-shoe, so as to withstand wear in use. The working conductor is secured to the pedestals 3 in any suitable way—as, for instance, by means of two-part clips 5 5′, as shown, the part 5 of each clip being provided with a nut for clamping the clip-sections tightly upon the foot of the rail, so as to hold the latter firmly in place. In order to properly protect the working conductor, so as to make the system safe for all practical purposes, I employ a continuous housing 6, made, essentially, trough-like in cross-section and which is secured to suitable brackets 7 or sustained upon such brackets by its weight. This housing or casing is made of any suitable material, but preferably creosoted wood. The brackets 7 are bolted or spiked to the ties 2, as shown. At the other side of the working conductor I arrange a supplemental housing 8, generally angular in cross-section, which effectively protects the foot of the working conductor and the clips 5 5′, and this supplemental housing is also made, preferably, of creosoted wood, being secured in place by means of knees 9, which are bolted or spiked to the ties.

In order to supply current to the car motor or motors, I employ a sliding contact-shoe, which engages the upper surface of the working conductor and which may be carried by the car or cars on the way. Preferably the contact-shoe is sustained by the equalizing-bar of the car-trucks, since the relation between such bar and the working conductor remains practically unchanged in use. I have therefore illustrated a block 10, made of wood or other suitable insulating material, as being clamped in place upon the side of the equalizing-bar 11 11 of a car-truck, said block carrying a lug 12 at its lower end, to which an arm 13 is pivoted on horizontal gimbals 14. The outer end of the arm 13 carries the shoe 15, bolted or otherwise secured in position and made, preferably, of case-iron, so as to minimize the wear on the working conductor. The weight of the arm 13 and contact-shoe 15 will ordinarily be sufficient to secure the desired closeness of contact with the

working conductor; but it will be understood that such arm may be forced downwardly, if desired, by means of a spring, or that said arm may be additionally weighted for the same purpose. Downward movement of the arm 13 materially below the top face of the working conductor is restricted by a rod 16, adjustably connected to the insulating-block 10 and provided with a cross-head 17 at its lower end, which engages beneath the arm 13. It will thus be seen that in case of a break in the working conductor the arm 13 will not drop too far below the upper surface of said conductor to be properly received upon and engaged by the continuation thereof beyond such break, as in the case of a street-crossing or cut-out.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is as follows:

In an electric railway, the combination of the way, a series of insulating-pedestals supported parallel with the way, a working conductor carried on said pedestals, a series of brackets supported parallel with the way adjacent to said pedestals, a continuous housing or casing arranged on said brackets so as to inclose the working conductor, a supplemental housing carried on brackets on the other side of the working conductor and forming between its upper edge and the housing or casing a slot or conduit, and a contact device working in said slot and making contact with the upper surface of the working conductor, substantially as and for the purposes set forth.

This specification signed and witnessed this 6th day of September, 1900.

GEORGE H. DAVIS.

Witnesses:

FRANK L. DYER,

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