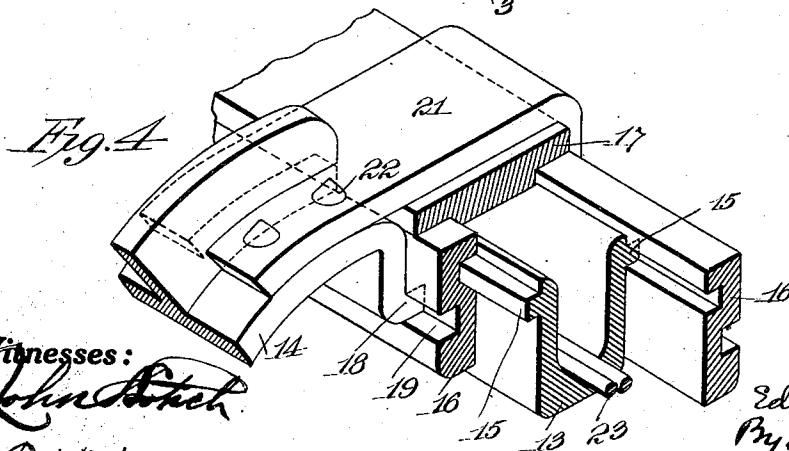
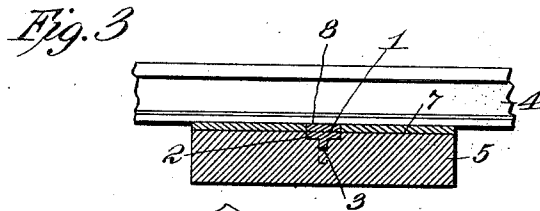
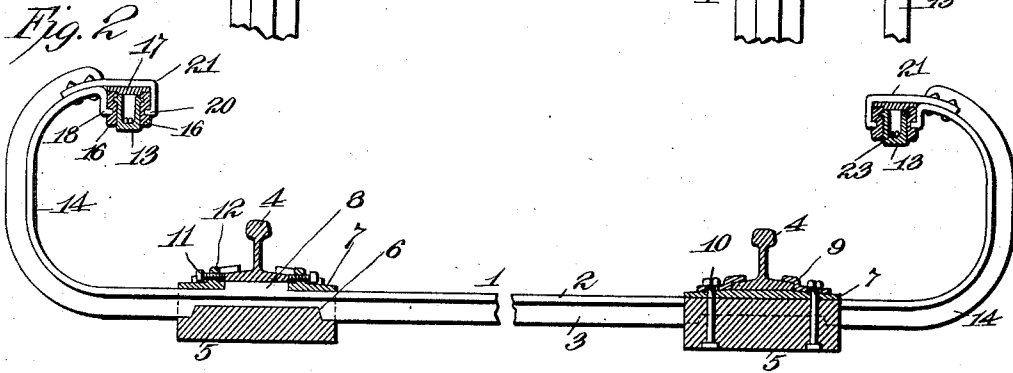
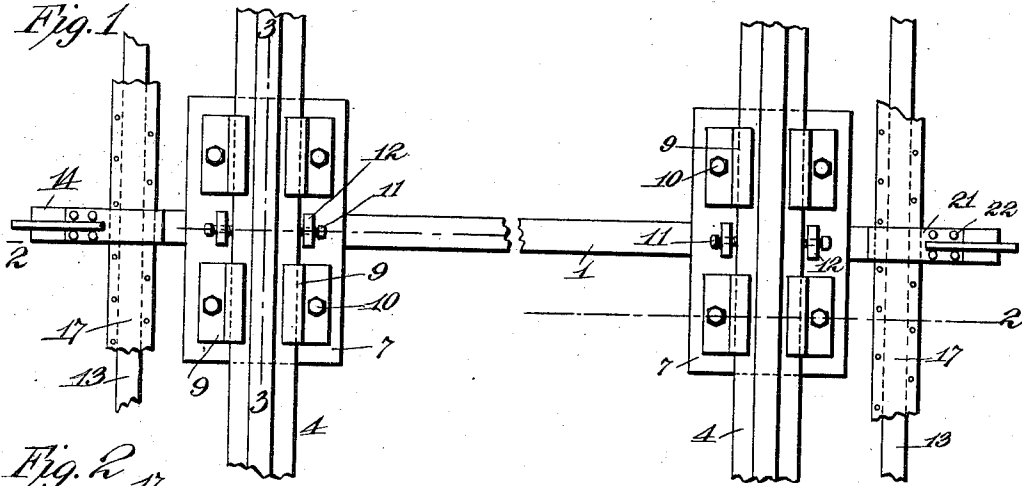


E. F. DAVIS.
 TRACK CONSTRUCTION.
 APPLICATION FILED DEC. 7, 1909.

1,019,307.

Patented Mar. 5, 1912.



Witnesses:
John A. Smith
P. J. Ward

Inventor
Edwin F. Davis
Pyatt & Pyatt
 Attorneys.

UNITED STATES PATENT OFFICE.

EDWIN F. DAVIS, OF CORNING, NEW YORK.

TRACK CONSTRUCTION.

1,019,307.

Specification of Letters Patent.

Patented Mar. 5, 1912.

Application filed December 7, 1909. Serial No. 531,895.

To all whom it may concern:

Be it known that I, EDWIN F. DAVIS, a citizen of the United States, and a resident of the city of Corning, county of Steuben, and State of New York, have invented a new and useful Improvement in Track Constructions, of which the following is a specification.

This invention relates to improvements in third rail construction for electric railways or for electric signals for electric or other railways.

The object of my invention is to reduce the cost of the third rail and its supports and to increase the efficiency. These and further objects will appear from consideration of the embodiment of my invention set forth in the following specification and accompanying drawings.

In the drawings: Figure 1 is a plan view of a structure embodying my invention, showing two third rails; Fig. 2 is a section on the line 2—2 of Fig. 1; Fig. 3 is a section on the line 3—3 of Fig. 1; Fig. 4 is an isometric projection, showing in detail a portion of the third rail and its support.

In all of the views, like parts are designated by the same reference characters.

The embodiment of the invention chosen for illustration comprises a tie 1, such tie being one of a series placed a suitable distance apart, each tie being preferably made of metal of T section. A flange 2 lies at the top and a web 3 at the bottom. The rails 4 are supported upon blocks 5, said blocks being made of wood, concrete or other suitable material. Each block has a groove of suitable shape in which the tie lies. The web is notched at 6 to the shape shown and the groove in each block is correspondingly shaped, so that a tongue of the material of the block will lie within the notch, thereby serving to align the block and keep it from shifting along the length of the tie. Above the block is a plate 7, upon which the rail lies. This plate is provided with a central opening through which extends a projection 8 on the tie. The height of the projection is preferably the same as the thickness of the plate, so that the top of the latter with the tie in place will be flush. This projection also centers the plate and prevents it from shifting. The rail is secured in place upon the plate by clips 9. These clips are secured to the plate and block by bolts 10, such

bolts passing through all three parts,—namely, the clips, plate and block.

For the purpose of alining the rails and increasing or decreasing the gage, in accordance with wear or other causes, if it becomes necessary to do so, adjusting means are provided, comprising bolts 11 which pass through threaded openings in ears 12. The ends of the bolts engage with the flange of the rail, as shown in Fig. 2. By this means the rail may be moved bodily from one side to the other.

The third rail 13 is supported at the proper distance outside of and above the rail 4. As shown, two third rails are employed, but the invention may be carried out by using but a single third rail. The third rail is supported by a continuation of the tie 1, forming curved extensions 14. These curved extensions may be extended on each end of a given tie where two third rails are used or they may extend on one end only, the third rail being supported on the other side by the continuation of another tie. Each tie may have a curved portion 14, but such is not necessary as the extensions may be fewer in number than the ties, provided there are enough to properly support the third rails. The third rails are of U cross-section, as shown, having a flat bottom, rectangular sides and continuous ears or flanges 15. The rail is inclosed by a casing formed of side pieces 16, 16 and a top or capping 17. This casing may be made of wood or other insulating material. The side pieces have grooves within which the continuous ears 15 lie. The capping incloses the top of the hollow inside of the third rail. The third rail is supported by the casing, and the casing is supported from the curved portions 14 of the ties.

The details of construction whereby the casing is supported from the ties are as follows: The web 3 of the tie is removed for a short distance from the end of the latter, and the flange 2 is bent downward and then outward, forming a hook 18. This hook engages within a groove 19 formed in one side of the pieces 16, 16. A second hook 20 is formed upon a piece 21 and engages within a groove corresponding to the groove 19 in the other side piece 16. This piece 21 is preferably made of metal of the same width and thickness as the flange 2, and is provided with a slot adjacent to the end

opposite from the hook, which slot straddles the web 3 (as shown in Fig. 4); and the piece 21 is secured to the flange 2 by rivets 22 or other form of fastening.

5 The grooves 19 are preferably made continuous, as they may be more readily made, and the device may be more readily assembled than if they were only the same length as the width of the hooks. The third rail
10 projects a slight distance below the lower edges of the side pieces, so that there is no danger of the shoe or other contact member on the vehicle coming in contact with the side pieces.

15 I prefer to make my third rail of steel or iron, which is durable but of less conductivity than copper, or similar material. I improve the conductivity of the rail by placing within it one or more copper wires
20 23, such wires being bare and resting in the bottom of the inside of the rail. These wires may also be the feed wires of the system. These wires will conduct current and yet, being in contact with the rail, will allow
25 the current to flow through the rail at the parts adjacent to the contact member of the vehicle. The wires by being simply dropped within the cavity of the rail are adjusted at a minimum of expense and they may be examined and, if necessary, renewed very expeditiously.
30

In accordance with the provisions of the patent statutes, I have described the principle of my invention, together with the ap-

paratus which I now consider to represent 35 the best embodiment thereof; but I desire to have it understood that the apparatus shown is merely illustrative and that the invention can be carried out in other ways.

Having now described my invention, what I claim as new and desire to secure by Letters Patent, is: 40

1. A track construction comprising supporting blocks, rails mounted thereon, metal cross ties embedded in and secured against 45 movement in said blocks and having upturned ends, and a third rail secured to and supported by the upturned ends of said ties.

2. In a third rail construction, a flanged tie, one end of which is upwardly curved, 50 a portion extending beyond the web and forming a hook, a piece constituting a second hook and having a slot which straddles the web, and means for securing the piece to the tie to constitute a support for the 55 third rail.

3. The combination with a third rail, having a continuous flange on each side, and a casing formed of side pieces having channels engaging with the flanges and having 60 grooves, of a support which comprises hooks which engage with the grooves in the casing.

This specification signed and witnessed this twenty-second day of October, 1909.

EDWIN F. DAVIS.

Witnesses:

S. E. QUACKENBUSH,
LESLIE W. WELLINGTON.

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