May 13, 1930. W. E. THORN 1,758,093

TOY RAILWAY TRACK

Original Filed Dec. 23, 1927

Fig. 1.

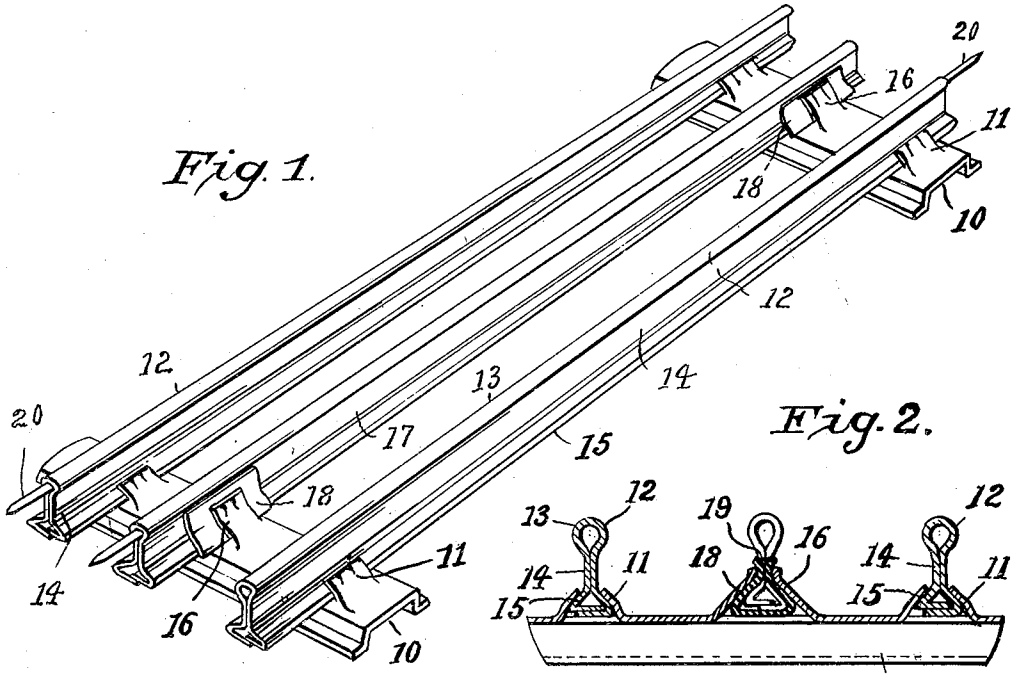


Fig. 2.

Fig. 4.

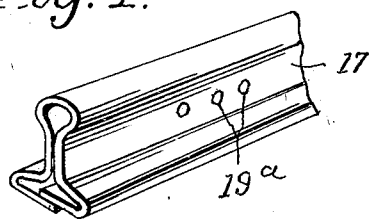


Fig. 5.

Fig. 3.

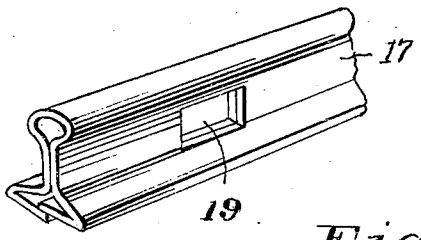
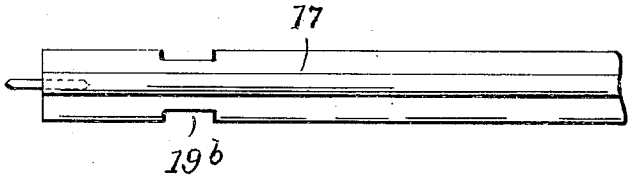
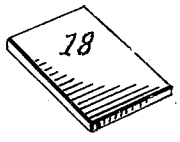


Fig. 6.





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UNITED STATES PATENT OFFICE

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TOY RAILWAY TRACK

Application filed December 23, 1927, Serial No. 242,174. Renewed October 19, 1929.

This invention relates to toy railway tracks, such as is commonly formed of sheet metal and made up of suitable sections adapted to be joined together to form tracks of various lengths and shapes, and to include the commercial forms of switches, curves and other special sections such as are employed in a modern toy railway line. The invention more particularly refers to a toy electric railway of the so-called third rail type and wherein one or more of the rails, usually the middle rail, of the three is insulatively connected to the sleepers.

In setting up and taking down sectional tracks of this kind it is necessary in joining the ends of the sections together to insert the projected pin portions of the ends of the rails of one section into the hollow end portions of the rails of the adjoining track sections. Owing to the tightness with which these pin connections are frequently made, considerable strain is brought upon the respective rails with the result that they are, particularly the third rail, sometimes loosened and slipped longitudinally in their fastenings with the sleepers so as to render them more or less objectionable if not altogether useless.

The object of my invention therefore is to provide means for insulatively connecting a metal rail of a toy railway track to the metal sleeper in a manner to prevent relative movement of the rail and sleeper lengthwise of the rail.

With these and other objects in view, the invention resides and consists in the construction and novel combination and arrangement of parts hereinafter more fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended, it being understood that various changes in the form, proportion, size and minor details of construction within the scope of the claims may be resorted to without departure from the spirit, or sacrificing any of the advantages of the invention.

Similar characters of reference denote like or corresponding parts throughout the several figures of the accompanying drawing forming a part of this specification and upon which—

Fig. 1 shows a perspective view of a third rail sheet metal track section embodying my invention;

Fig. 2 is an enlarged cross section taken through the three rails and attached sleeper;

Fig. 3 shows a perspective view of one end portion of the center or third rail of the section shown in Figs. 1 and 2.

Fig. 4 is a similar perspective view of a modified form of rail construction;

Fig. 5 is a detailed perspective view of a small sheet of insulating material such as is used between the rails and sleepers; and

Fig. 6 shows a plan view of a section of rail including a further modified form as embodied in the invention.

The track section shown in Figs. 1 and 2 comprises sleepers 10 formed of sheet metal and having lugs 11 for the attachment of the outer rails 12—12. These rails are also formed of sheet metal and include a hollow tread portion 13, a web 14 and opposite side flange portions 15—15. The lugs 11 are struck up from the top portion of the sleeper and disposed upward in a way to permit the flanges of the rail to be positioned upon the sleepers between the lugs and swedged down on the opposite flange portions of the rail in a manner to secure the same to the sleeper. Connecting pins 20 are fixedly positioned in one end of each rail and are adapted to be inserted in the hollow end of corresponding ends of the adjoining sections.

The lugs 16 formed of the central portion of the sleeper are slightly larger than the outer lugs and serve to engage and hold the central or third rail 17 in position. These third rails are like the outer rails and include a hollow thread, a web and side flanges for the engagement of the lugs of the sleepers. Suitable small pieces of sheet insulating material 18 are provided between the sleepers and third rail at each of these connecting points. The rails at these points of fastening being so formed with relation to said insulation and sleepers as to not only form an insulative connection, but also holding means to posi-

tively secure the rail against longitudinal movement.

In Figs. 2 and 3 I have shown means, for accomplishing this object, in the form of a relatively large opening 19 in the web of the rail at the point of its connection to the sleeper and whereby in the swedging of the lugs 16 down upon the opposite side portions of the insulative sheet, the flange and web portions of the rail, the said insulations and end portions of the lugs will be pressed into the opening 19 so as to form a positive lock of the rail for the purpose mentioned.

In Fig. 4 is shown several small punch holes 19^a instead of the single large opening in the web portion of the rail, and whereby a similar locking engagement of the web and lugs may be affected. In Fig. 6 is shown notches 19^b in the opposite end portions of the rail flanges to receive the insulation and lugs when pressed thereagainst in the assembling of the sections and in a manner to hold the parts together.

The insulative assembling of the sleepers and third rail of a track section in the manner above disclosed will successfully accomplish the object sought and rigidly hold the rails against both sidewise and longitudinal movement with respect to the sleepers and permit of the manufacture of reliable track, switch and other sections, for a toy electric railway which may be assembled and disconnected in the manner desired without injury to the respective sections.

Having thus described the invention what I desire to secure by Letters Patent is:

1. In an electric toy railway track, a rail having openings formed therein, an insulating sheet, a metal sleeper provided with lugs positioned against and holding the insulation in the opening of the rail in a manner to insulate the same from the sleeper and lock it against endwise movement.

2. An electric toy railway track section comprising metal sleepers, metal rails positioned thereon, insulating means between the sleepers and rails, and one of the said metal members having an opening therein and the other a lug to press the insulation into the opening to hold the rails against longitudinal movement.

3. A toy railway track section, comprising a metal rail having an opening in its web portion, an insulation sheet covering opposite sides of said opening, metal sleepers for supporting the rail and having insulation and rail engaging members for pressing the insulation into the opening and to hold the rail against longitudinal movement.

Signed at Bridgeport in the county of Fairfield and State of Connecticut, this 21st day of Dec., A. D. 1927.

WILLIAM E. THORN.