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H. C. IVES

ELECTRIC TOY TRACK SWITCH SECTION

Filed Jan. 16, 1926.

Fig. 1

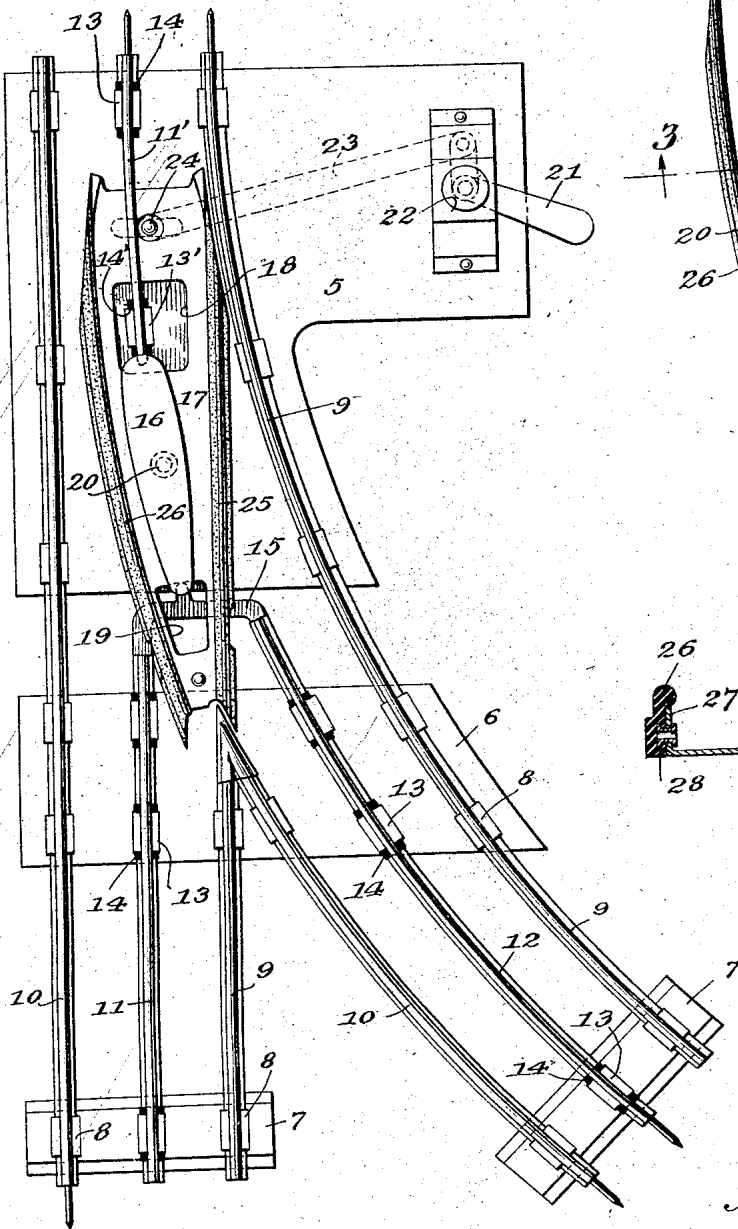


Fig. 2

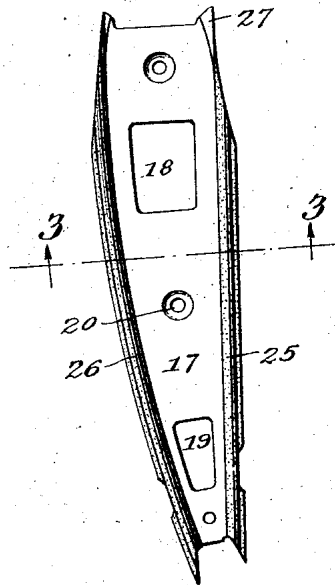
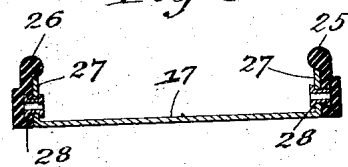


Fig. 3



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ELECTRIC TOY TRACK-SWITCH SECTION.

Application filed January 16, 1926. Serial No. 81,724.

This invention relates to toy railway tracks, for electric trains, such as are made up principally of sheet metal and in sections which are adapted to be joined together to form a continuous third rail track.

The invention more particularly relates to a switch section for tracks of this sort where by electrically operated trains may be run from one track to another.

The object of the invention is to provide a simple, efficient and inexpensive design of switch section, having improved form of insulating rails and movable switch member for supporting the same, which will allow the trains to run through without short-circuiting the third rails.

A further object of the invention is to construct the switch section so that the rail connections will be very effectively and firmly made in either position in which the switch may be thrown.

With the foregoing objects in view, the invention consists in the arrangement and combination of elements hereinafter described, reference being had to the accompanying drawing in which like reference characters designate like or corresponding parts in the several figures and in which:—

Fig. 1 shows a plan view of an electric toy railway switch section embodying my improvements.

Fig. 2 is a detached plan view of the movable member of the switch section, carrying the insulative rails, and

Fig. 3 is an enlarged cross sectional view taken on line 3—3 of Fig. 2.

Referring in detail to the drawings and characters of reference marked thereon. 5 represents a large main tie-plate, 6 an intermediate tie-plate, and 7—7 a smaller form of tie, such as are commonly used in straight track sections. These ties are preferably made of sheet metal and include opposed clamping lugs 8—8 for the engagement of the flanges of the outer rails 9 and 10, at uniformly spaced distances apart, to secure the rails to said ties, which is done by being swedged down upon the opposite rail flanges to hold them to the ties.

11 represents the third rail of the straight track portion of the switch section, and 12 the third rail of the curved track portion. These third rails are also secured to the ties 6 and 7 by means of swedged down lugs 13 of the tie sections, but in all instances are

provided with insulations 14 positioned between the rails and the ties as to prevent all possibility of short-circuiting.

The inner end of the third rails 11 and 12 are connected by a downwardly disposed yoke portion 15, positioned between ties 5 and 6, and is further connected to one end of a flat rail member 16, one end of which is supported by said yoke and the other end of which is connected to the third rail member 11' which is insulatively mounted on the large tie 5. This flat rail member serves as a means for electrically connecting the third rail 11' with both the third rails 11 and 12 and to permit of the continual electrical operative engagement of the locomotive with the third rail.

17 represents the movable switch member which is formed in part of a specially shaped piece of sheet metal having cut-outs 18 and 19 formed therein, the former to accommodate the lug 13' and the insulation 14' secured to the base member 5 and to which the third rail member 11' is connected while the other cut-out 19 serves to accommodate the upwardly projected portion of the yoke 15 to which one end of the flat rail 16 is secured. The movable switch member is hingedly connected as at 20 to the tie 5, so as to permit said member to be thrown backward and forward to insure the required registration and alignment of the insulative rails of said movable member with either the rails of the straight track or the curved track. This switch member is operated by a switch lever 21 pivoted in a suitable bracket 22 secured to the main tie plate 5, and connected by a link 23, one end of said link being connected to an arm of the lever and the other to a pivotal stud 24 secured to the movable member that extends through an opening in the tie 5.

The movable switch member 17, as before stated, is formed of sheet metal and is pivotally attached to the sheet metal base, and carries a straight rail 25, and a curved rail 26, both of which are made of insulating material and extend the full length of said switch member, so as to form a continuation of one of the straight rails of the straight track, when in one position, and when adjusted to another position, forms a connecting curved rail member to complete the curved track so that the trains may be run from one track to the other. These

insulative rails may be formed of hard rubber or other suitable material, and are preferably secured to the movable switch section, as shown in Fig. 3, by attaching the same to one side of the upwardly disposed flanges 27 of the member 17, as for instance with rivets 28. These rail sections are preferably secured to the outer sides of the flanges 27, so as to entirely cover that side of the flanges, and is sufficiently large at the top to cover the top edge of the flange in a way to prevent the wheels of the train from engaging the metal, thus preventing any short-circuiting, and insuring the train passing over these movable rail members with the same degree of safety as is afforded by the main rails insulated from the ties by the insulations 14.

I find that it is much more practical to make these rails of insulative material throughout their entire length, as it not only affords a more economical manufacturing proposition, but avoids the use of rail joints and possible defective insulation which is liable to arise if inserts or short rails are employed.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:—

1. A switch section for toy electric railway including a straight track section and an intersecting branch track section, a movable rail carrying member hingedly supported at the intersection of said track section, rails formed of insulating material secured to said movable section and extending the length thereof.

2. A switch section for toy electric rail-

ways including a straight track section and an intersecting branch track section, a movable rail carrying member hingedly supported at the intersection of said track section, having upwardly disposed elongated flanges along its opposite edge portions, rails formed of insulating material secured to the outer sides of said flanges and extending the length thereof.

3. A switch section for toy electric railways including a straight track section and an intersecting branch track section, a movable rail carrying member hingedly supported at the intersection of said track sections having upwardly disposed elongated flanges along its opposite edge portions, rails formed of insulating material secured to said flanges and extending along the entire length thereof and covering their edge and side portions.

4. A switch section for toy electric railways including a straight track section and an intersecting branch track section, a movable rail carrying member hingedly supported at the intersection of said track sections, having upwardly disposed elongated flanges along its opposite edge portions, rails formed of insulating material secured to said flanges and having their end portions beveled off to conform to the shape of the face of the main track rails with which they engage and extending along the entire length thereof and covering their edge and side portions.

Signed at Bridgeport, in the county of Fairfield and State of Connecticut, this 31st day of October A. D. 1925.

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