Feb. 12, 1929.

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M. CARUSO

TOY RAILROAD TRACK CONSTRUCTION

Filed March 4, 1927

Fig. 1.

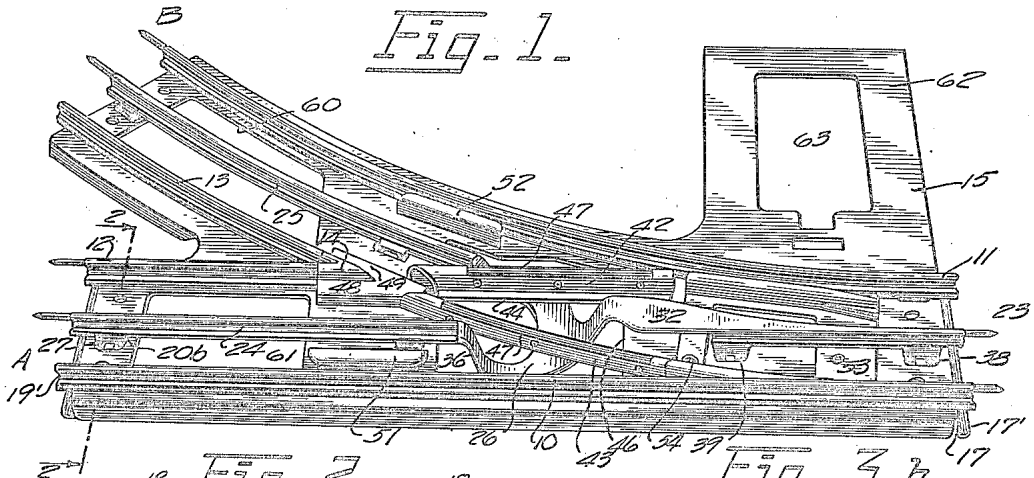


Fig. 2.

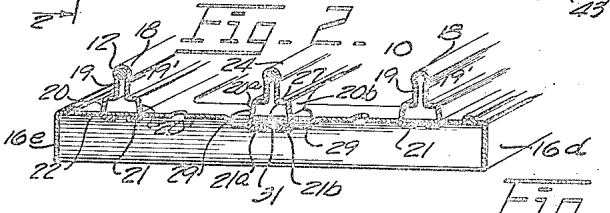


Fig. 3.

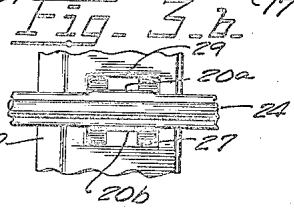


Fig. 4.

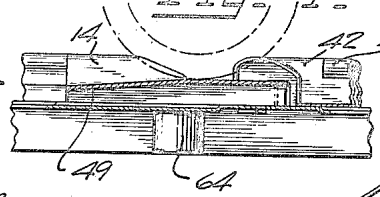


Fig. 5.

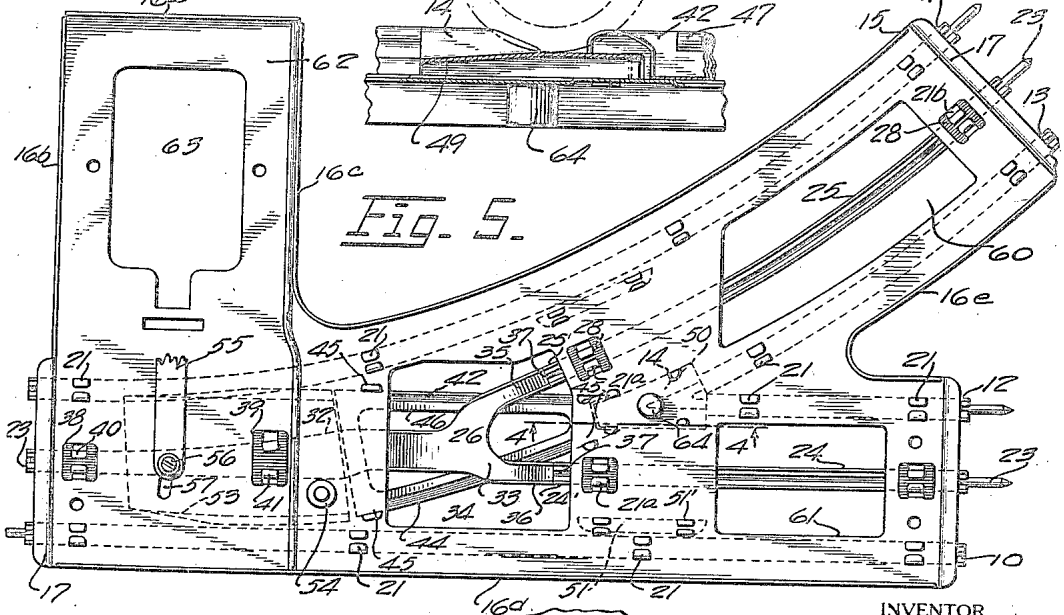
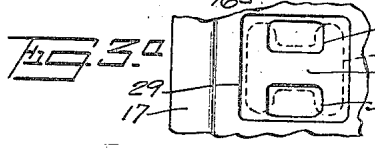


Fig. 3a.



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UNITED STATES PATENT OFFICE.

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TOY-RAILROAD-TRACK CONSTRUCTION.

Application filed March 4, 1927. Serial No. 172,777.

The present invention relates to toy railroad track construction and is more particularly directed toward improvements in the construction of special sections of toy electric railroad tracks such as switches, crossings and the like.

An object of the invention is to provide a section of toy railroad track in which a sheet metal stamping having a substantially flat upper surface supports the wheel bearing or track rails and the power or third rail and wherein these rails are mounted on the rail support by means of prongs projecting downwardly from the base of the rail and passing through slots or apertures in the rail support, the prongs being bent up underneath the lower side of the rail support. Where it is desired to insulate a rail, such for example as the power or third rail, suitable insulating means are inserted between that rail and the rail support.

Another object of the invention is to provide a switch section for toy railroads in which stationary converging wheel bearing rails are separated from one another and from the diverging wheel bearing rails, which carry the train away from the frog, a sufficient distance so that flanges on the car wheels may pass through, and to associate with the frog and converging rails, a short platform to receive the flanges on the wheels and maintain the wheels at substantially the same level they would be were the treads resting on a rail.

Another object of the invention is to provide a toy railroad track switch with suitable guards or antiderailing devices to prevent the car trucks from becoming derailed when passing through the switch.

Other and further objects of the invention will be apparent as the description proceeds.

The accompanying drawings show, for purposes of illustrating the invention, one of the many possible embodiments in which the invention may take form, it being understood that the drawings are illustrative of the invention rather than limiting the same.

In these drawings:

Figure 1 is a perspective view of a track switch for toy electric railroads showing the wheel bearing rails, the third rails and switch tongues together with the rail support, but omitting the switch actuating mechanism;

Figure 2 is a sectional view taken on the line 2—2 of Figure 1;

Figures 3^a and 3^b are fragmentary views illustrating the means for supporting the third or power rail;

Figure 4 is a sectional view on the line 4—4 of Figure 5; and

Figure 5 is an inverted plan view of the track switch.

As shown in the drawings, the track construction, exemplified in the form of a track switch for toy railroads, is made up in the form of an interchangeable section of railroad track adapted to be connected into track layouts having other sections of toy railroad track. As here illustrated the track switch has a main line designated by the letter "A" and a branch line designated by the letter "B". The main line A has a straight track or wheel bearing rail 10 extending through the length of the track switch section, while the branch line B has a curved outside track rail 11 which extends from the lower righthand end of the switch as indicated in the drawings, out through the branch line. The main and branch lines also have wheel bearing rails 12 and 13 which diverge from a frog 14.

These rails as well as all the other parts of the section of track are mounted on a track support 15 which is preferably made in the form of a sheet metal stamping of the proper shape to support the rails and the operating device for the switch. As indicated in the drawings, this stamped rail support is provided with downwardly bent flanges 16^a, 16^b, 16^c, 16^d and 16^e extending along the edges to stiffen the rail support, and with end flanges 17 having outwardly extending lower ends or feet 17′. These flanges 17 are for the purpose of supporting the track section and for facilitating coupling the section to other track sections by connecting ties customarily used in assembling toy track lay-outs.

The wheel bearing rails 10, 11, 12 and 13 are each made out of sheet metal stampings by folding the stamping to the cross section indicated in Figure 2 wherein it appears that the rail has an upper or tread portion 18, two vertical walls 19 and 19′ supporting the upper portion and a wider base portion having walls 20 and 20′ extending down to the upper surface of the supporting plate 15. The stampings from which the sheet metal rails are made are also provided with suitably spaced prongs 21 preferably arranged in pairs as indicated. These prongs are passed through apertures 22 punched in the sheet metal rail support and are then bent up un-

derneath the lower side of the rail support to securely fasten the wheel bearing rails in place on the rail support.

The track switch shown in the drawings is also provided with a Y-shaped continuous third or power rail 23 for conducting current through both the main line and the branch line. This power rail is made up of three parts, including a straight third rail 24 between the wheel bearing rails 10 and 12, a curved power supply rail 25 between the rails 11 and 13, and a Y-shaped sheet metal stamping 26. The rails 24 and 25 are made of sheet metal in approximately the same manner as the wheel bearing rails. These differ, however, in that the wider spaced base portions 20^a and 20^b are short instead of being continuous. The third rails are provided with prongs 21^a and 21^b which extend downwardly from the wide base portions 20^a and 20^b of the third rails, similar to the prongs 21 on the wheel bearing rails.

The third rails are insulated from the rail support 15 by means of two H-shaped plates 27 and 28 of insulating material arranged above and below the sheet metal support. The rail support 15 is provided with depressions 29 to receive the upper insulating plates 27 and these depressed portions are provided with comparatively large apertures 30. As indicated in dotted lines in Figure 3^a the insulating plates 27 and 28 are H-shaped and are so arranged as to hold the prongs 21^a and 21^b out of contact with the bridging member 31 between the holes 30. The portions 20^a and 20^b of these third rails which support the bodies of the rails are shorter than the insulating plates 27 and 28, and therefore do not come in contact with the supporting plate 15. By placing the insulating plate in the depression 29 and clamping the parts tightly together one provides a construction in which the third or power rail is insulatively supported and at the same time held from shifting longitudinally or laterally.

The sheet metal stamping 26 forming the Y-shaped portion of the conductor rail has its right hand end (as indicated in Figure 1) a cross section substantially as the third or power rails 24 and 25. This stamping has a broadened portion 32 and a depressed portion 33 which is adapted to pass downwardly into an aperture 34 punched in the rail support. The ends 35 and 36 of the Y-shaped stamping are then bent up to be adjacent the ends 24′ and 25′ of the power rails 24 and 25. The stamping 26 may be conveniently fastened to these rails by passing the end portions of the stamping into the rails from underneath and applying drops of solder at the points indicated at 37. The stamping 26 is insulatively supported from the stamping 15 by pairs of insulators 38 and 39 and held in place by prongs 40 and 41 similar to the support for the third rails 24 and 25.

The track switch is also preferably provided with short converging wheel guiding rails 42 and 43. As here shown, these rails are in the form of a triangular shaped sheet metal stamping 44 bent up along the sides to provide the rails. This stamping is fastened to the supporting plate 15 by prongs 45 so as to locate the rails 42 and 43 in line with the rails 12 and 13 respectively. This stamping 44 has an opening in the center as indicated at 46 to permit the third rail member 26 to pass downwardly through it, this third rail member being carried underneath the rails 42 and 43. The rails 42 and 43 are brought adjacent the frog 14 and if desired may include insulators 47 to prevent grounding the moving contact on the locomotive as it passes from the broadened portion 32 of the power rail to the portions 24 or 25.

As the rails 42 and 43 are stationary, it is necessary to separate them sufficiently from the ends of rails 12 and 13 to permit the flanges of the car wheels to pass through both the main line and the branch line without interference. In order to prevent the wheel of the car from dropping on account of the gap between the wheel bearing rails, the present invention contemplates the provision of platforms 48 and 49 which may be parts of the stamping forming the frog 14. These platforms are so arranged that the flange of the wheel rolls across the platform and the wheel is carried at substantially the same elevation it would have been carried were the tread of the wheel on a wheel bearing rail. The position of the wheel is indicated by dotted lines in Figure 4. This frog or platform may be in the form of a stamping held in place by prongs 50 bent up underneath the rail support.

In order to keep the toy train on the track while it is passing through the switch, wheel guards 51 and 52 are provided adjacent the rails 10 and 11 and placed so that they engage the flanges of the wheels carried on these rails at the time the flanges on the opposite wheels of the car truck are passing over the platforms 38 and 39. These wheel guards are held in place by prongs 51′ and 52′.

The toy train may be guided through the main line A or onto the branch line B by means of a movable switch tongue 54 and of the proper shape to guide the flange of a car wheel from the rail 10 onto the rail 43 or from the rail 11 onto the rail 42 depending upon the position of the switch tongue. This switch tongue may be operated by a shift bar 55 connected to the tongue by a member 56 passing through a slot 57 in the stamping

50. The stamping may be cut away as indicated at 60 and 61 to reduce the weight if desired and may be provided with a lateral extension 62 for the support of the switch actuating mechanism which may be mounted in an aperture 63 if desired. The central part of the track switch may be provided with a supporting block 64 arranged underneath the frog of the switch.

Many of the improved features of track construction above described in detail as being employed in toy railroad track switches are, it is of course understood, applicable to other units of track customarily used in toy track layouts, such as straight and curved sections of track, crossings and the like. Various arrangements of fixed and movable rails may be employed. The method of fastening the rails to the rail support is such that the track section is materially stiffened by reason of the reinforcement afforded by the rails. The entire track section may be assembled very readily. The rails, frog and wheel guards may be placed on the rail support and all the prongs bent down at one time thereby securely fastening all these parts in place.

It will also be understood that any or all the wheel bearing or track rails may be insulated from the rail support by interposing insulators such as used with the third or power rail in order to provide insulated wheel bearing rails for controlling signals or train operation.

It is obvious that the invention may be embodied in many forms and constructions, and I wish it to be understood that the particular form shown is but one of the many forms. Various modifications and changes being possible, I do not limit myself in any way with respect thereto.

What is claimed is:

1. In toy railroad track construction, a sheet metal rail support and a sheet metal rail formed out of a strip of sheet metal folded onto itself to provide a narrow upper portion and wider base portion including spaced vertical side walls, the rail having pairs of attaching prongs extending downwardly from the vertical side walls and passing through holes in the rail support.

2. In toy railroad track construction, a sheet metal rail support and a sheet metal rail formed out of a strip of sheet metal folded onto itself to provide a narrow upper portion and wider base portion including spaced vertical side walls, the rail having pairs of attaching prongs extending downwardly from the vertical side walls and passing through holes in the rail support and insulation between the rail support and the side wall of the rail and the prongs.

3. In toy railroad track construction, a sheet metal rail support and a sheet metal rail formed out of a strip of sheet metal folded onto itself to provide a narrow upper portion and wider base portion including spaced vertical side walls, the rail having pairs of attaching prongs extending downwardly from the vertical side walls and passing through holes in the rail support and insulation between the rail support and the side wall of the rail and the prongs, portions of the side walls of the rail between the pairs of attaching prongs being cut away to keep the rails out of contact with the rail support.

Signed at Irvington, in the county of Essex and State of New Jersey, this 25 day of February, 1927.

MARIO CARUSO.