

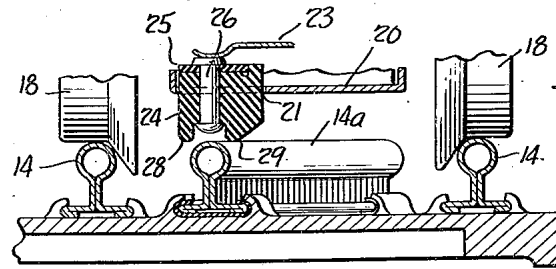
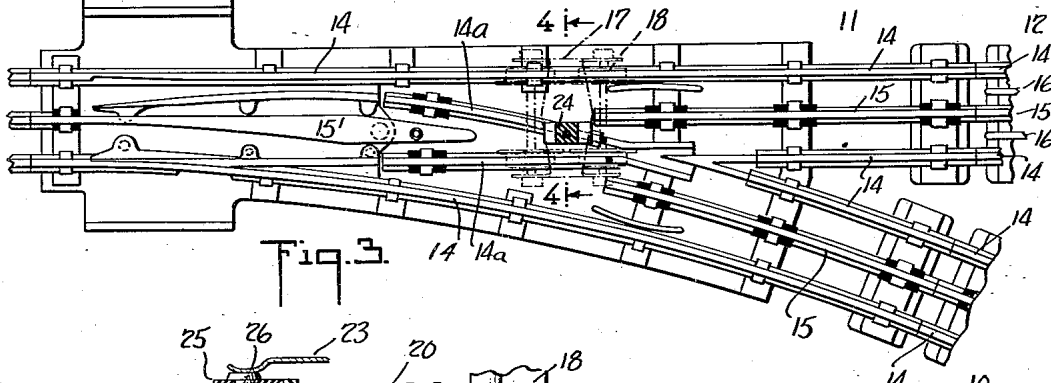
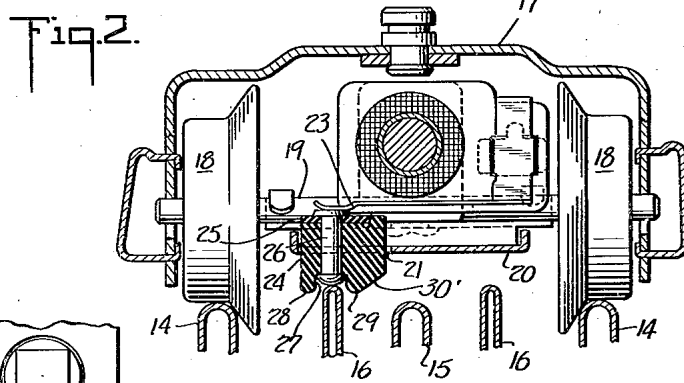
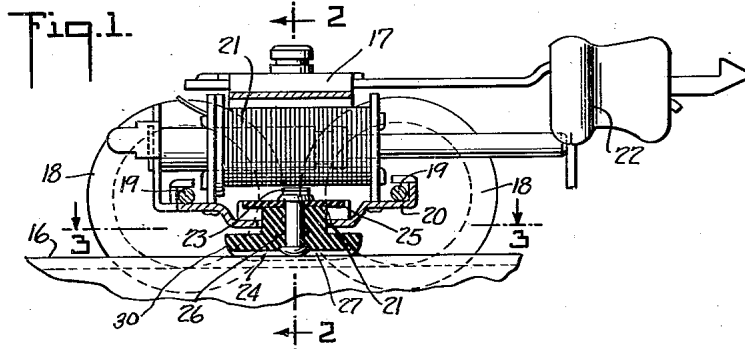
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CURRENT COLLECTOR FOR TOY RAILROADS

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CURRENT COLLECTOR FOR TOY RAILROADS

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6 Claims. (Cl. 191—49)

The present invention relates to current collectors and is more particularly directed toward current collectors adapted to be used on the trucks of toy cars having an accessory which is to be supplied by current from a supplemental rail interposed between the usual wheel bearing and power rails of the toy railroad truck layout. When a car truck having such a collector passes through a toy track switch section, the current collector passes over a portion of the power rail of the toy track switch section and over one of the guide rails of the toy track switch section. As contact with one of these rails will either energize or ground the circuit connected with the current collector, it is possible to obtain improper action of the accessory carried by the car. According to the present invention the current collector is arranged so that it is impossible for the conducting element to come into contact with the power rail or the guide rails of the track switch section, so that all possibility of accidental operation of the accessory on the car is avoided.

According to the present invention, the current collector is provided with an insulating body having a contact receiving groove. The fins on the insulating body are located so as to keep the contact from coming into engagement with anything but the supplemental rail with which it is intended to cooperate.

The accompanying drawing shows, for purposes of illustrating the present invention, one of the many embodiments in which it make take form, it being understood that the drawing is illustrative of the invention rather than limiting the same.

In the drawing:

Figure 1 is a side elevational view of a toy truck provided with the current collector;

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

Figure 3 is a top plan view of a fragment of a toy track layout and showing the truck on a track switch section, parts being in section on the line 3—3 of Figure 1; and

Figure 4 is a cross section on the line 4—4 of Figure 3.

The toy track layout shown in Figure 3 includes a section 10 of ordinary three rail track, a toy track switch section 11 and a track section 12 having supplemental rails. The wheel bearing rails are designated at 14, the power rails at 15 and the supplemental rails 16. Track sections, such as referred to, are in common use on toy electric railroads.

The body of a toy truck is illustrated at 17. It

has wheels 18 cooperable with the wheel bearing rails 14. These wheels are mounted on axles 19 and these axles support a sheet metal frame 20. This frame carries a current consuming device here shown in the form of a coil 21 for operating a toy coupler 22. This coil is connected to a spring 23, as shown and described in the application of Charles V. Giaimo, Serial No. 356,804, filed concurrently herewith. The plate 20 has a rectangular opening 21 to receive a piece of molded insulation 24. It is secured to a piece of sheet insulation 25 by a conducting pin 26, the upper end of which is in contact with the spring 23. The insulating body formed by these two pieces of insulation is mounted for limited vertical movement in the frame member 20 and can tilt to a slight amount. The lower face of the insulating member 24 has a longitudinally extending groove 27 formed by two ribs 28 and 29. These ribs extend below the lower end of the pin 26, as will be apparent from the drawing. The insulating piece 24 also has rounded ends 30 and an upwardly extending camming portion 30' on the side toward the center rail. When the collector shown is in normal operating position, as shown in Figure 2, the lower end of the pin 26 rides on top of one of the supplemental rails 16. This rail is somewhat higher than the third rail and wheel bearing rails, as will be apparent from Figure 2.

When a truck equipped with the current collector shown passes through a track switch section the current collector passes above one of the short wheel guiding rails 14a indicated. Owing to the downwardly extending fins of the insulating body the pin 26 cannot contact this wheel bearing rail. Hence there will be no disturbance to the circuit of the coil 21, and no disturbance to the circuit to which the guide rail is connected, as shown in Patent No. 2,202,546. Similarly, when the collector shoe passes over the power rail element 15' in the track switch section no connection is made to the coil 21. The rounded ends 30 and camming element 30' make it easier for the current collector to ride up over the rails when it comes into contact with them.

It is obvious that the invention may be embodied in many forms and constructions within the scope of the claims 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 otherwise limit myself in any way with respect thereto.

What is claimed is:

1. A current collector for sliding contact along

the rail of a toy railroad, comprising an insulating body which in transverse section has a groove in its lower face adapted to receive a toy railroad rail extending parallel to the groove and override a rail substantially out of parallelism with the groove, and a centrally disposed contact member projecting downwardly into the groove a part of its depth to contact with the parallel rail.

2. A current collector such as claimed in claim 1, wherein the lower face of the insulating body has an oblique upwardly extending cam surface outside the groove.

3. A current collector such as claimed in claim 1, having means for supporting the insulating body for limited vertical movement, and spring means acting on the upper end of the contact member urging the body and contact downward.

4. A current collector for toy railroads comprising a wheeled truck having a horizontal plate with an aperture disposed closer to the wheels of one side of the truck than to the wheels on the other side of the truck, an insulating contact carrier non-rotatably mounted in the aperture for limited vertical movement and limited tilting movement, and a spring urging the carrier downwardly, the carrier having two downwardly extending parallel insulating fins and a contact be-

tween the fins for engagement with a rail parallel with the fins.

5. A toy railroad truck carrying a current collector having a conducting element engageable with a supplemental rail interposed between the usual power rail and a track rail of a three rail toy railroad and having insulating elements for engagement with guide rails and power rails of track switches to keep the conducting element of the current collector out of contact therewith.

6. The combination with a toy railroad track layout including track sections and track switch sections each having wheel guiding rails and a central power rail and at least one track section having supplemental insulated rails between the wheel bearing and power rails thereof and at a higher elevation, of a car truck having wheels engageable with the wheel bearing rails and a downwardly spring pressed current collector co-operable with one of the supplemental rails, the current collector having a contact element and insulating elements engageable with the guide rails and the power rail of the track switch section to keep the conducting element from contacting the same.

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