

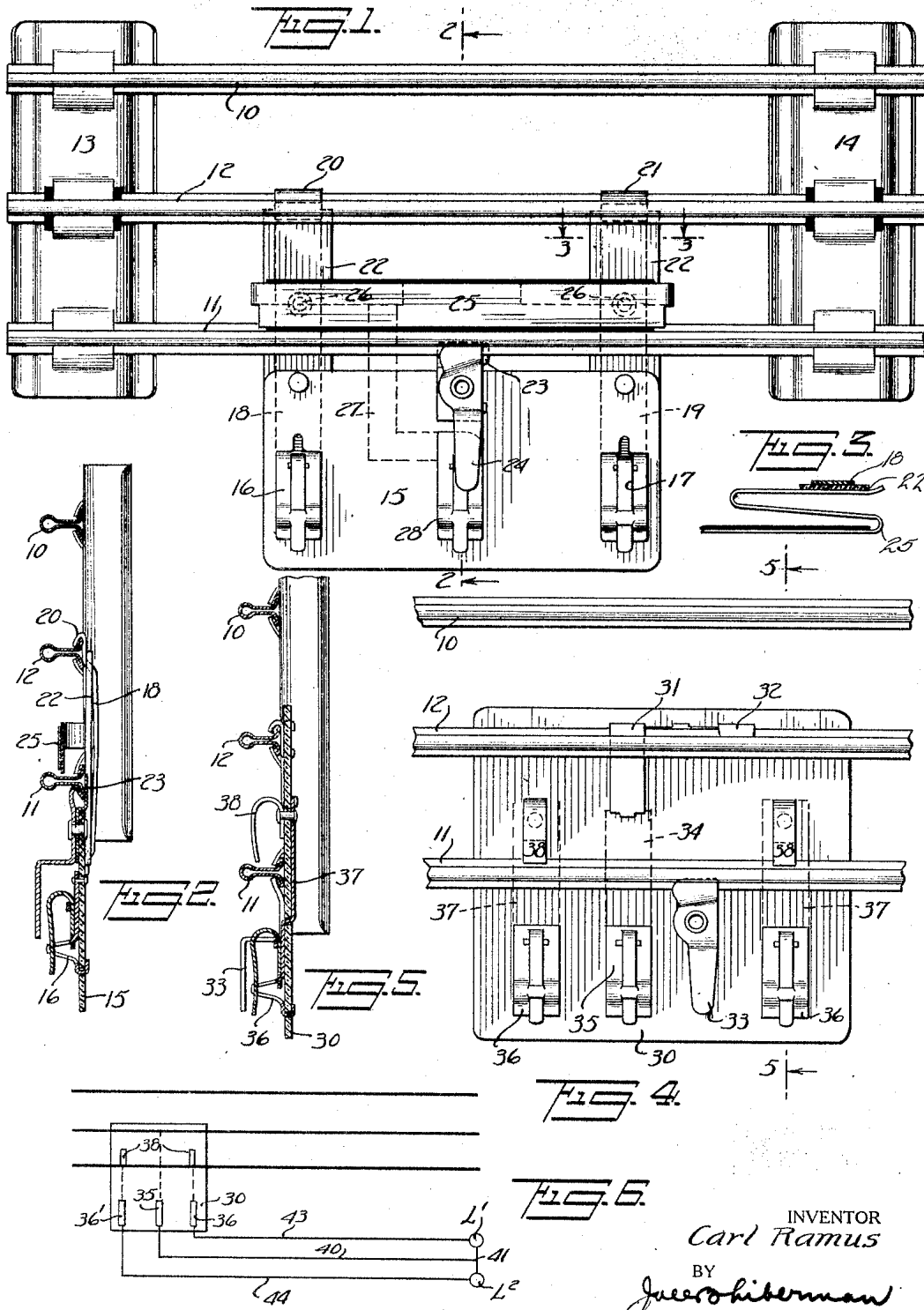
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C. RAMUS

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CONNECTER FOR TOY RAILROADS

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INVENTOR
Carl Ramus
BY
Jacob Hibernan
his ATTORNEY

UNITED STATES PATENT OFFICE

CARL RAMUS, OF EVANSVILLE, INDIANA, ASSIGNOR TO THE LIONEL CORPORATION, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK

CONNECTER FOR TOY RAILROADS

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The present invention relates to connectors for toy railroads, and is more particularly directed toward a connector adapted to be secured to the rails of toy railroad track for the purpose of providing electrical connections for signals or other devices.

In the operation of toy railroads, it is frequently desirable to actuate one or more signals such as bells, lights, or gates, when the train is passing through a predetermined section or portion of the toy track layout, and the present invention contemplates the provision of a connector which may be attached anywhere along the track for these and other purposes.

An object of the present invention is to provide a connector which may be clamped onto a section of toy railroad track in any desired location and which will provide one or more contacts normally insulated from the wheel bearing rails of the toy railroad track layout and so placed that the flange on the car wheel is adapted to ground a circuit including a connected signal or other device thereby bringing about the actuation of the signal. The connector for the present purpose is one which may be employed with three rail toy railroad track having the track rails insulated from one another, or not, as desired.

The accompanying drawings show, for purposes of illustration, two of the many possible embodiments in which the present 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 plan view of a section of toy railroad track to which one form of connector has been applied;

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

Figure 3 is a sectional view taken on the line 3—3 of Figure 1;

Figure 4 is a view similar to Figure 1 showing a modified form of construction;

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

Figure 6 is a wiring diagram.

A portion of a conventional section of toy electric railroad track is indicated in the

drawings. The wheel bearing rails 10 and 11 and the insulated, third or power-supply rail 12 are carried on cross ties 13 and 14 in the ordinary manner.

In the form of connector shown in Figures 1, 2 and 3, all the parts of the connector are carried from an insulating plate 15. As shown, two wire receiving terminals, 16 and 17, are connected by straps 18 and 19 with hooks 20 and 21 which are cooperative with the flange of the third or power rail. These straps pass under the track rail 11 and are insulated from it by insulating strips 22. A fixed metallic plate 23 mounted on the insulating plate 15 carries a pivoted locking member 24. The plate 23 and locking member 24 are adapted to cooperate with the flange on the wheel bearing member 11 and when the parts are in the position indicated in Figures 1 and 2, the connector will be locked in place on the rails between the cross ties.

The insulating strips 22 support a spring contact 25 which bridges across the two strips and this contact extends upwardly and inwardly and inwardly adjacent the tread of the wheel bearing rail 11. It is, as shown in Figure 2, spaced a slight distance below the tread of the rail and is electrically disconnected from the same. A convenient method of mounting the spring member 25 on the insulating support is to use rivets, such as indicated at 26, which fasten the spring member 25 to the insulating members 22. The strips 18 and 19 are provided with holes sufficiently large to clear the heads of the rivets. The spring member 25 is connected by a strap 27 with a wire receiving terminal 28 suitably carried on the insulating support 15.

In the embodiment of the invention illustrated in Figures 4 and 5, all the parts are carried on an insulating plate 30. This plate is adapted to extend underneath the central rail and one of the track rails and carries hooks 31 and 32 cooperative with the central rail and a pivoted catch 33 cooperative with the track rail. The hooks 31 and 32 are connected by a strap 34 with a wire receiving terminal 35. The connector also carries a plu-

5 rality of wire receiving terminals 36 and 36' which are connected by straps 37 to spring fingers 38 mounted on the upper surface of the insulating plate 30. These spring fingers extend up adjacent the tread of the rail 11 but do not contact with this rail.

Figure 6 illustrates a wiring diagram showing the use of a connector such as shown in Figures 4 and 5, for operating signals. 10 The central wire receiving terminal connected with the third rail is connected by a wire 40 with a point 41 such as a terminal in a signal tower having lamps L1 and L2. These lamps are connected to this common point and are 15 also connected by wires 43 and 44 with the wire receiving terminals 36 and 36'. When a train passes along the track to which the connector, wired up as indicated, has been attached, the flanges on the car wheels will en- 20 gage the contacts 36 and 36' thereby grounding the circuit of a signal connected to the particular contact and causing the signal which may be a lamp, crossing gate, bell, or other device, to be functioned. Where a 25 grounding contact such as the contact strip 25 of Figure 1, is used, the signal circuit will be kept closed during the time that the wheels are passing over the strip. When, however, a number of contacts are used such as indi- 30 cated in Figure 4, the circuit will be closed for an instant as each wheel passes by the contact and one will then obtain a flashing light from each lamp connected to the circuit.

35 Either of the present forms of connector may be readily attached to the track lay-out at any desired point. In this manner the train may readily connect the signals, crossing gates, bells, lights, or other devices to have them actuated as the train passes by 40 a predetermined place in the track. The device may be used in track in which the adjacent wheel bearing rail or the opposite wheel bearing rail are insulated, as the ground will then be made through the running gear of 45 the train.

It is obvious that the invention may be embodied in many forms and constructions, and I wish it to be understood that the par- 50 ticular forms shown are but a few 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:

55 In a toy railroad, a section of track having track rails and an insulated central rail, a plurality of signal devices, and a detachable connector electrically connected with the signal devices, said connector having means for 60 detachably supporting it from the central rail and one of the track rails and at the same time establishing a connection from the central rail to the signal devices, and a plu- 65 rality of contacts each connected with one

connector adjacent the track rail in a position to engage the flange of a car wheel.

Signed at Evansville, in the county of Vanderburg and State of Indiana, this 26 day of March, 1927.

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