Feb. 18, 1941. M. CARUSO 2,232,511

TRACKAGE FOR TOY RAILROADS

Filed May 12, 1939

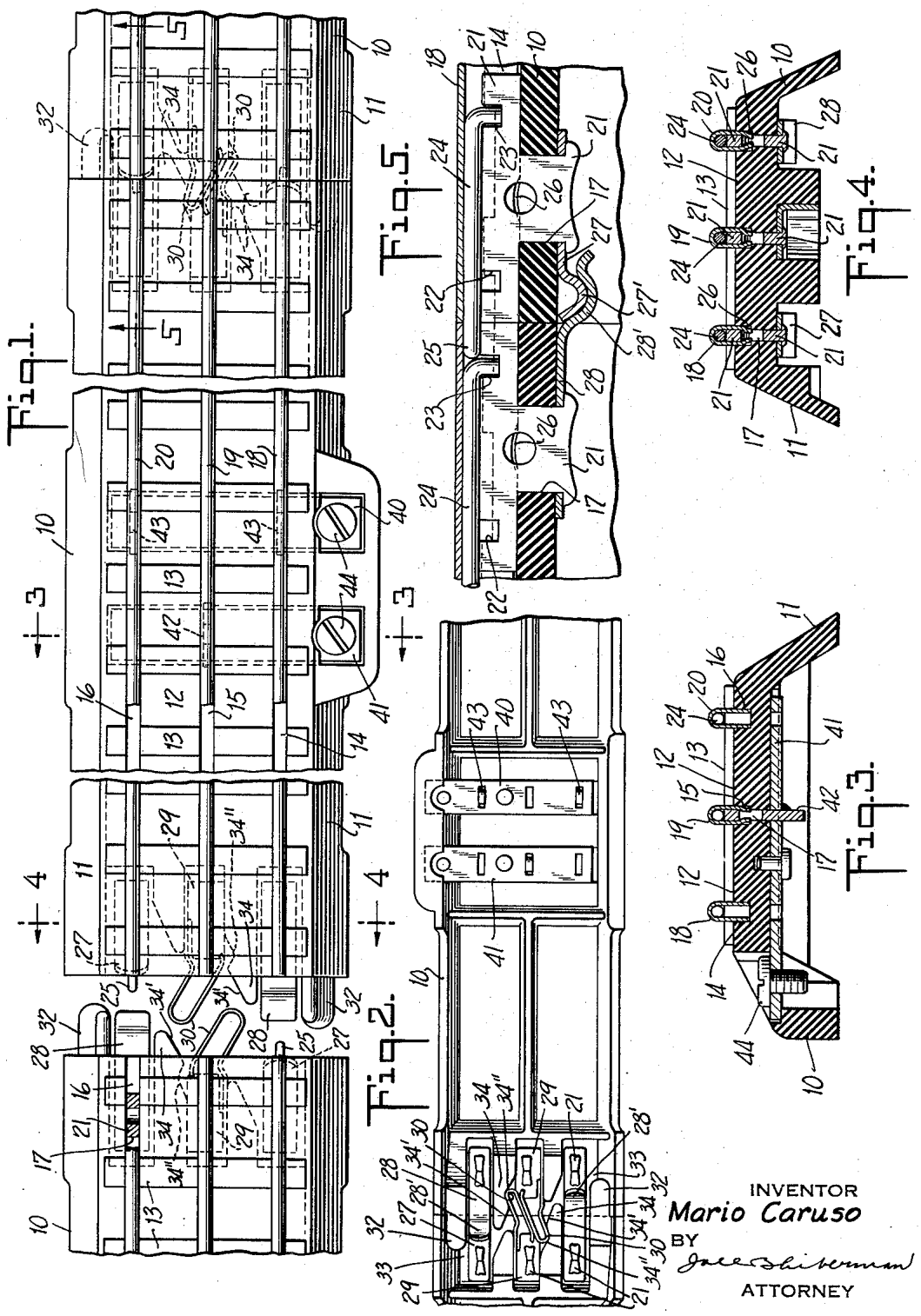

Fig. 1.

Fig. 2.

Fig. 5.

Fig. 4.

Fig. 3.

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Patented Feb. 18, 1941

2,232,511

UNITED STATES PATENT OFFICE

2,232,511

TRACKAGE FOR TOY RAILROADS

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Application May 12, 1939, Serial No. 273,246

11 Claims. (Cl. 238—10)

The present invention relates to trackage for toy railroads, and is more particularly directed toward providing toy railroads with interchangeable trackage units or sections wherein the rails are supported throughout their entire length by insulating bases, and wherein the units or sections are susceptible of quick attachment and detachment which effects mechanical interlocking as well as electrical connection between the power and track rails.

The present invention contemplates toy trackage units having insulating bases grooved to receive inverted U-shaped sheet metal rails, and wherein the rails are anchored to the bases by current conducting elements which may be connected to suitable terminals at the ends of the trackage units. Certain of these terminals may be adapted to interconnect track rails while others are adopted to interconnect the power rails.

The invention also contemplates providing the bases of the units with lugs adapted to enter recesses to assist in aligning the sections together and certain of the lugs are arranged opposite the power rail contacts to bring about lateral pressure so as to insure good contact in the power line.

Other and further objects will appear as the description proceeds.

The accompanying drawing shows, for purposes of illustrating the present invention, one of the many embodiments in which the invention may 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 top plan view of a length of trackage employing two interconnected track units and a third disconnected unit;

Figure 2 is an inverted plan view of two trackage units joined together;

Figures 3 and 4 are cross sectional views on the lines 3—3 and 4—4 of Figure 1 showing the arrangements for connecting the track unit into an external circuit and securing coupling contacts to the rail; and

Figure 5 is a cross sectional view on the line 5—5 of Figure 1 showing current connections between track rails.

The trackage units embodying the present invention may be conveniently made up to have a single molded insulating base 10 which extends the entire length of the unit. It may have sloping side walls 11 and a flat top wall 12 provided with raised elements 13 to simulate cross ties. The upper surface of the molded insulating body is provided with three grooves 14, 15 and 16 which extend from end to end of the base. Near the ends of the base these grooves communicate with openings 17 which extend through to the bottom of the base.

The rails are indicated at 18, 19 and 20. They are formed of lengths of sheet metal folded to U-shape and received in the grooves 14, 15 and 16. The rails receive T-shaped anchorage members 21 which extend down through the holes 17. The upper edge of these anchorage members are provided with notches 22 and 23 adapted to receive L-shaped pins 24, as shown in Figure 5. These pins may be placed so as to provide an exposed connecting pin, as indicated at 25, or they may be inserted in both the power and track rails and reversed as shown at the left of Figure 5. In either case these pins act as spacers to definitely locate the top of the rail relative to the anchorage member. The rails are secured to the anchorage member by squeezing in a portion of the sheet metal, as shown at 26, Figure 5.

The anchorage members 21 for the track rails extend down through the holes 17 in the insulating base and are upset onto conducting strips 27 and 28. These strips are arranged so that the short conducting strip 27 at one end of the track unit has a hump 27' to engage a spring tip 28' on the end of the longer conducting element 28 which projects beyond the end of the base, as will be clear in Figures 1 and 2.

The anchorage members 21 for the center or power rail extend down through the base and are upset onto conducting strips 29. These conducting strips are bent to form diagonally disposed spring contacts 30 which extend beyond the end of the insulating base and are laterally flexible.

The insulating base has on each end a longitudinally extending lug 32 adapted to enter a recess 33 formed in the corresponding end of an adjacent section. It will be noted that these lugs are placed near the extreme side edges of the bases of the trackage units. The trackage units are also provided with lugs 34 extending beyond the ends of the base and adapted to enter under the opposite end of the adjacent trackage unit. The pairs of lugs 32 and 34 of each end of each unit are spaced so as to be on opposite sides of the long conducting elements 28.

When the two track sections or units are brought to the position shown at the left of Figure 2, it is apparent that the camming surfaces 34' of the lugs will engage the bent ends of the

springs 30, and will move these springs toward one another. When the parts are brought to the position shown at the right of Figure 1, or at the left of Figure 2, the springs 30 are compressed and wiped past one another so as to insure contact. The bent ends of the springs enter into notches 34'' in the lugs 34, thereby effecting secure interlock of the parts.

In order to provide for the connection of the trackage units to an outside source of power, or to signals, or the like, the trackage units may be provided with conducting strips 40 and 41 secured on the under face of the insulating base. The central rail is electrically connected with the strip 41 by a lug 42 similar to the anchorage lug 21, while the track rails 18 and 20 are connected to the conducting strip 40 by anchorage devices 43 similar to the anchorage devices 21. The ends of the strips 40 and 41 are provided with binding screws 44. Where connection is to be made to one only of the two track rails, as, for example, for signalling control, only one of the anchorage lugs 43 would be used.

From the foregoing it will be apparent that the track sections provided are well adapted to provide a continuous roadbed for toy electric railroads, and that the units or sections may be readily interlocked by simply pushing them together so that all electrical and mechanical connections are made.

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 trackage unit for toy railroads comprising an insulating base having a longitudinally extending upwardly opening groove, a sheet metal track rail of inverted U-shaped cross section disposed in the groove and extending above the groove, anchoring lugs secured inside the U-shaped track rail and extending through slots in the base, the slots being aligned with and interrupting the groove, and apertured plates below the base through which the lugs extend and against which they are upset.

2. A trackage unit for toy railroads as in claim 1, wherein the upper faces of the anchoring lugs are notched, and having L-shaped members with the short ends in the notches, the other or longer ends extending along the top of the corresponding lug and engaging the inside of the rail to space the rail above the lugs.

3. A trackage unit for toy railroads as in claim 1, wherein one of the anchoring lugs adjacent an end of the unit has a notch in its upper face, and an L-shaped rod whose short end is anchored in said notch and whose long end extends out through the end of the rail to form a connecting pin for aligning the corresponding rail of another unit.

4. A trackage unit for toy railroads as in claim 1, wherein the plate at one end has a downwardly depressible tip extending beyond the end of the base and the plate at the other end has a hump to cooperate with the depressible tip of the plate on the other end of a corresponding unit.

5. A trackage unit for toy railroads as in claim 1, wherein the anchoring lugs have apertured T-shaped heads extending beyond the slots to fit the bottom of the groove, and the material of the rail is pressed into the aperture.

6. A trackage unit for toy railroads as in claim 1, wherein the plates adjacent the ends of the units have spring contact members extending beyond the ends of the base and disposed diagonally with respect to the plane through the ends of the rails.

7. A trackage unit for toy electric railroads comprising an insulating base having a vertical end wall in a single plane adapted to abut a similar end wall of another similar unit and provided at each end with a longitudinally extending guiding lug below the level of the vertical end wall and with downwardly opening recesses adapted to receive guiding lugs of adjacent trackage units to maintain lateral alignment of the trackage units.

8. A trackage unit for toy electric railroads as in claim 7, wherein each end is also provided with a second longitudinally extending lug adapted to enter under the end of the adjacent trackage unit.

9. Toy electric trackage comprising two track units assembled end to end, each unit having an insulating base, a power rail on the upper surface thereof, a laterally yieldable spring contact below the base, connected to the corresponding power rail, and extending beyond the end of the track unit for engagement with a substantially duplicate contact on the other unit, and a base carried contact engaging element engageable with the outer face of the contact of the other unit to press the contacts together.

10. Toy electric trackage as in claim 9, wherein the contact engaging elements are notched to fit bent portions of the contacts and hold the units against separation.

11. Toy electric trackage comprising a plurality of insulating bases having vertical end walls in a single plane in abutting relation, longitudinally extending track rails and a power rail carried thereby and terminating at the ends of the bases, pairs of aligning lugs carried at the ends of the bases and received in downwardly opening recesses in the ends of the bases to align the bases, the lugs on each base being disposed to one side of the power rail and spaced apart, a spring contact on each base in the space between the lugs thereof and connected to the track rail above the same, cooperative fixed contacts on the other base, each connected to a track rail whereby the track rails are electrically connected to form a continuous conductor, and a spring contact carried by the base and extending beyond each end of the base and connected to the power rail carried thereby, the adjacent spring contacts having wiping contact as the lugs enter the recesses and engaging the adjacent lug of the other base to be laterally supported thereby.

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