Feb. 5, 1952 R. M. HUSBAND 2,584,388

TOY RAILROAD TRACK

Filed Sept. 4, 1947 2 SHEETS—SHEET 1

Fig. 1.

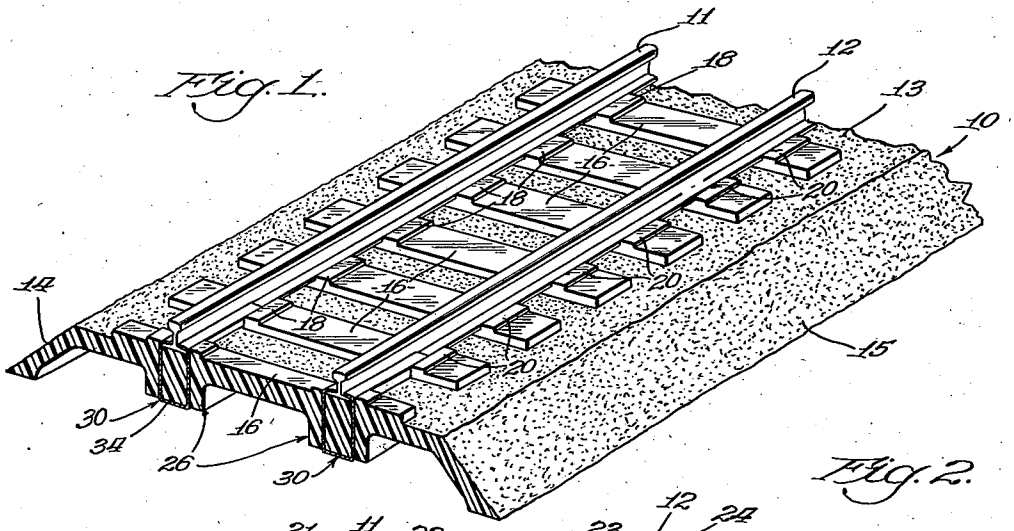
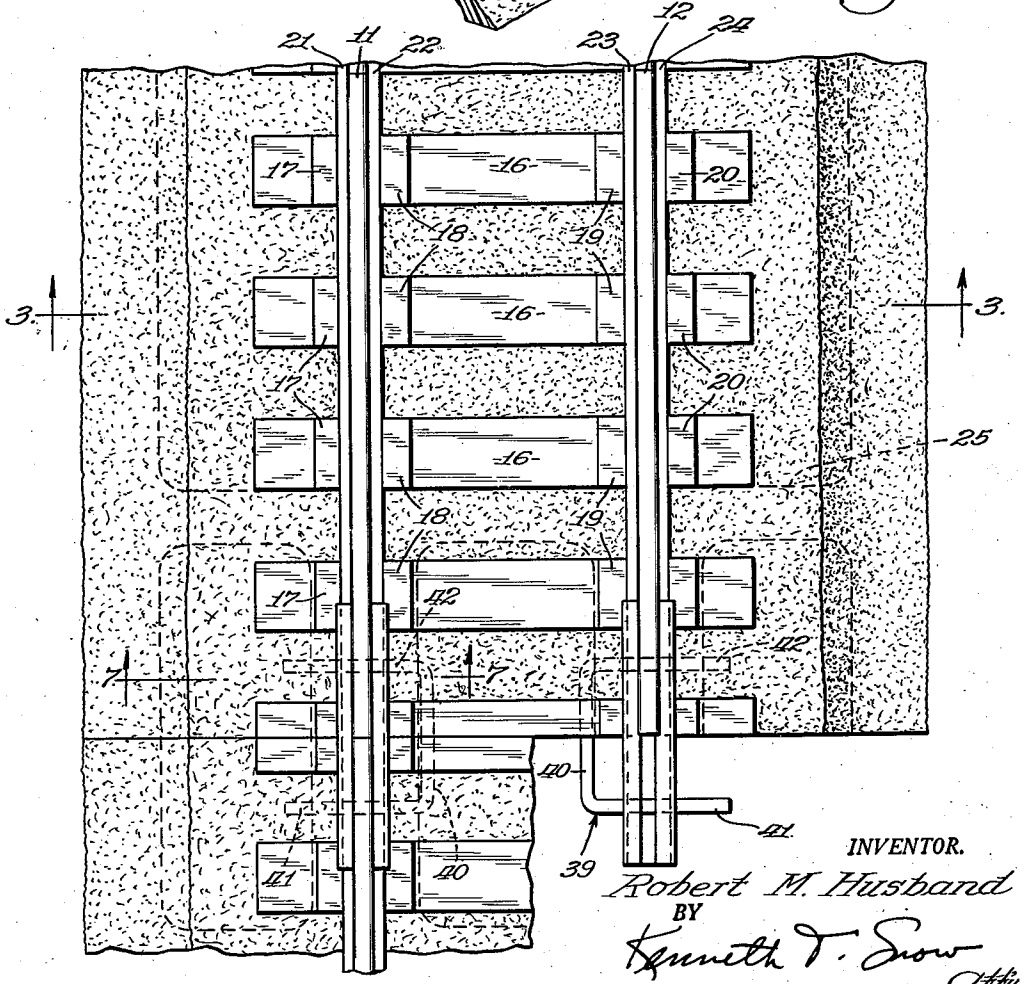


Fig. 2.



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Fig. 3.

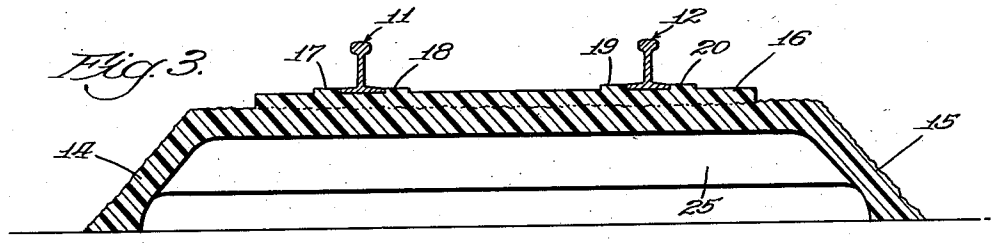


Fig. 4.

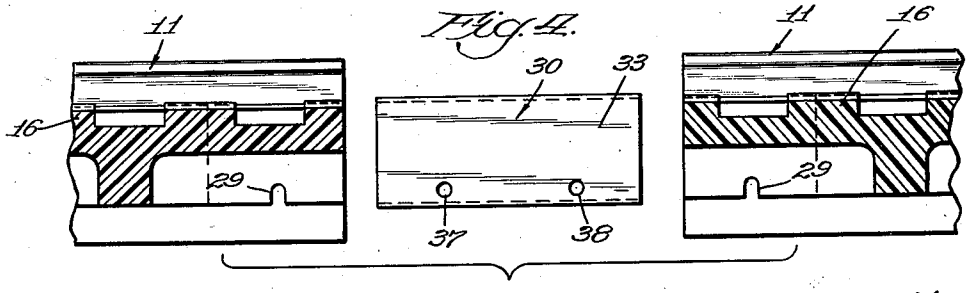


Fig. 5.

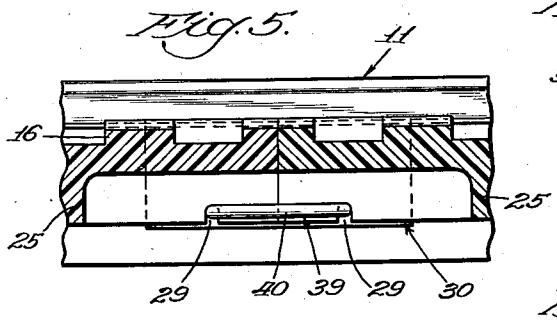


Fig. 9.

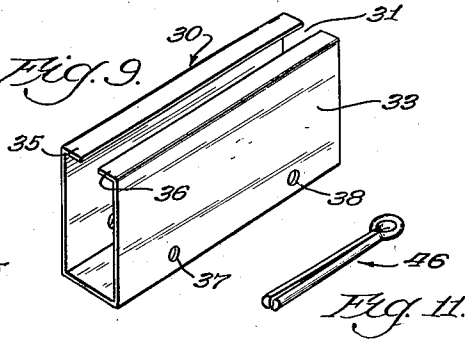


Fig. 11.

Fig. 10.



Fig. 6.

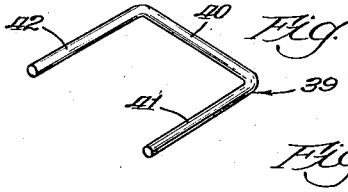
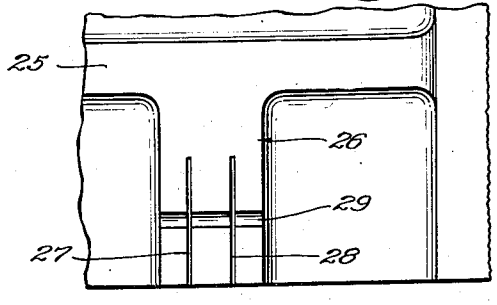


Fig. 8.



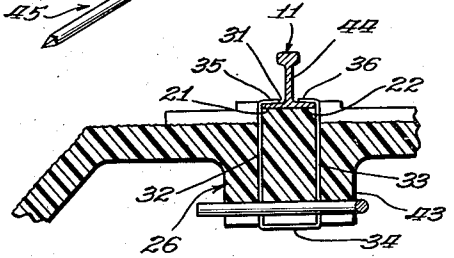


Fig. 7.

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TOY RAILROAD TRACK

Robert M. Husband, Fort Wayne, Ind.

Application September 4, 1947, Serial No. 772,083

4 Claims. (Cl. 238—10)

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This invention relates to a new and improved sectional toy railroad track.

An important object of this invention is to provide a sectional toy railroad track which simulates rather closely a real railroad track in appearance.

Another important object of this invention is the provision of a simple coupling for a sectional toy railroad track having means at the joints which prevents separation of the track sections at the joints when the track is in use and thereby prevents derailment of toy locomotives and cars.

Another important object of this invention is to provide a coupling means with exceptional structural strength at the joints between sections of the assembled track structure.

Still another object is the provision of a coupling means which jointly encompasses the rail ends and portions of the abutting ends of the roadbed section thereby providing a unified structure at the joint.

A still further object is the provision of coupling means for sections of toy railroad track with removable rails adapted to simultaneously maintain the rails and roadbed sections in fixed position as to both lateral, vertical, and longitudinal shifting.

Another object of the invention is to provide a coupling for sectional track which is the means of securing the rails onto the roadbed.

A further object of this invention is to provide a toy railroad sectional track having ties integral with the roadbed and tie-plates integral with the ties and removable rails mounted on the tie plates.

Another and still further object of this invention is to provide a rail supporting base structure for toy railroad tracks in which means are provided integrally with the base structure to locate removable rails in some predetermined gauge.

Another and further object is the provision of a toy railroad sectional track coupling which provides electrical continuity and conductivity at abutting rail ends.

Still another object of this invention is to provide a simple coupling means for easily disassembling the sections for changing the track layout and for storage of track.

Other and further important objects of this invention will become apparent from the disclosures in the following specification and accompanying drawings.

In the drawings:

Figure 1 is a perspective view of a portion of the toy railroad track of this invention.

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Figure 2 is a top plan view of the toy railroad track of this invention and taken over a track joint.

Figure 3 is a sectional view taken on the line 3—3 of Figure 2.

Figure 4 is an exploded view partially in section of the track point employed in this railroad track.

Figure 5 is a view similar to Figure 4 showing the joint elements assembled.

Figure 6 is a perspective view of U-shaped locking pins used in the joint holding the tracks against longitudinal separation.

Figure 7 is a sectional view taken on the line 7—7 of Figure 2.

Figure 8 is a plan view showing a portion of the under side of the track section as shown in Figure 1.

Figure 9 is a perspective view of a portion of the track coupling.

Figure 10 is a perspective view of a modified form of locking pin for the one shown in Figure 6.

Figure 11 is a perspective view of still another modified form of locking pin.

As shown in the drawings:

The reference numeral 10 indicates generally a supporting structure or base adapted to carry spaced rails 11 and 12. The supporting structure 10 includes a roadbed 13 and simulated embankments in the form of inclined walls 14 and 15. The base 10 may be made of numerous materials, such as plastics, and may be finished in a roughened manner as indicated in the drawings to more nearly represent an actual railroad track structure. The roadbed 13 is provided with a plurality of longitudinally spaced transversely positioned ties 16 which may be formed integrally with the supporting structure 10. Each of the cross ties 16 is provided with two pairs of upwardly extending shoulders as shown at 17 and 18, and 19 and 20 which simulate tie plates on real railroad track construction. Base flanges 21 and 22 of the rail 11 are adapted to fit relatively snugly between the shoulders 17 and 18, and base flanges 23 and 24 of the rail 12 similarly fit snugly between the shoulders 19 and 20. The spaced pairs of shoulders define some particular track width or gauge which may be varied as desired by changing the spacing of the shoulders.

The track is made in sectional units of a length convenient to use. The base supporting structure 10 is equipped with transversely extending ribs 25 at various intervals along the length thereof in order to supply the necessary rigidity to the track. As shown in Figure 8 the ends of each section of the track are equipped with

longitudinally extending ribs or the like 26 which join with the cross ribs 25. The ribs 26 are positioned directly beneath the rails 11 and 12 and supply the necessary material for joining abutting sections of track. The ribs 26 are slit in a longitudinal direction in two places as shown at 27 and 28 and further are supplied with a downwardly opening cross slot 29. The material thickness between slits 27 and 28 corresponds to the width of the base of the rail.

Figure 4 shows normally abutting track sections spaced apart and showing a U-shaped sleeve member 30 positioned therebetween. The sleeve member 30 is shown in the detail perspective view of Figure 9. The sleeve 30 has a longitudinal slit 31 in the center of its top as best shown in Figure 7 and is provided with sides 32 and 33, an adjoining bottom 34, and inwardly turned top flanges 35 and 36. Transversely aligned holes 37 and 38 are provided in the side walls 32 and 33 and are longitudinally spaced apart to register with downwardly opening cross slots 29. The U-shaped sleeve member is adapted to slide longitudinally into the slots or slits 27 and 28 into adjacent and abutting sections of toy railroad track while its top flanges 35 and 36 simultaneously slide over base flanges 21 and 22 of rail 11. The material which forms the outer walls of slits or slots 27 and 28 serves to outwardly confine side walls 32 and 33 of sleeve member 30 and prevents these walls from bulging outwardly. Likewise the material which forms the inner walls of slits or slots 27 and 28 serves to inwardly confine side walls 32 and 33 of sleeve member 30 and prevents these walls from collapsing inwardly. This external and internal confinement of side walls 32 and 33 of sleeve member 30 gives that member exceptional stiffness and resistance to distortion when external forces are applied which tend to cause misalignment of rails and/or roadbed at the joint between adjacent sections.

The base 34 of sleeve member 30 bears against the under side of the central portion of rib 26 lying between slits or slots 27 and 28 while the undersides of the inwardly turned flanges 35 and 36 bear on the top of the base flanges 21 and 22 of rail 11.

This coupling construction performs four important functions: First, it maintains lateral alignment of abutting ends of roadbed sections and lateral alignment of the rail ends at the rail joints in addition to that provided by lugs 17 and 18; Second, it maintains vertical alignment of abutting ends of roadbed sections; Third, it insures that separable rails 11 and 12 be firmly held in position on the base supporting structure to resist angular distortion; and, Fourth, it provides electrical continuity and conductivity between adjacent rail ends.

A U-shaped locking pin 39 is shown in Figure 6 and is provided with a base 40 and side members 41 and 42. After the track sections are placed in abutting position as shown in Figure 5 and the U-shaped sleeve member is inserted within the slits 27 and 28 and over the base flanges of the rail, the U-shaped locking pin 39 is applied to complete the coupling. The legs 41 and 42 are slid transversely through the downwardly open slots 29 and through the openings 37 and 38 in the U-shaped sleeve 30, so that the base 40 of the locking pin is positionable against the side wall 43 of the rib 26. The U-shaped locking pin performs the function of preventing longitudinal separation of the adjacent track

sections. Optional or modified forms of locking pins are shown in Figures 10 and 11. The leg members 41 and 42 of the U-member need not be one piece, but may be replaced by two of the simple nails as shown in Figure 10 at 45 or the cotter pins as shown in Figure 11 at 46. The diameter and length of the nails and cotter pins correspond to the leg or arms 41 and 42 of the U-member.

In operation the various track sections, whether they be straight or curved, are placed in desired abutting relationship to form a complete track. The rails 11 and 12 are preferably metallic to carry electricity, and in order to more closely resemble a real railroad track, the tracks may be of rolled or extruded metal either solid in cross section or sheet metal rolled or formed to the shape of a rail. The tracks are coupled together by sliding on the U-shaped sleeve member so that the longitudinally extending slot 31 in the upper surface thereof provides passage for the thin body portion 44 of the rails. The sleeve member 30 as previously stated maintains the rails on the base supporting structure and holds the abutting track sections against lateral or vertical displacement, or displacement resulting from torsional strain. The final portion of the coupling is the insertion of the U-shaped locking pin 39 which holds the track sections and thus the rails 11 and 12 against longitudinal displacement or separation.

While the drawings show a section of straight track, this basic design and this method of coupling the sections can also be applied to sections of curved track, switches, cross overs, etc.

Numerous variations of this novel coupling may be made without departing from the principles of this invention and I therefore do not propose limiting the patent granted hereon otherwise than as necessitated by the appended claims.

What is claimed is:

1. For a toy railroad track having a plurality of sections, each section having a supporting structure and rails having base flanges mounted on said supporting structure, a coupling for adjacent track sections comprising U-shaped sleeve members with inwardly turned top flanges adapted to engage the top surfaces of the rail base flanges in a longitudinal direction, said supporting structures having their ends slotted to receive said U-shaped sleeve members, said supporting structures of adjacent sections and the adjoining U-shaped sleeve members having transversely aligned longitudinally spaced apertures, and locking means adapted to pass through said aligned apertures whereby the track sections are held against separate longitudinal and transverse movement.

2. A toy railroad track comprising a plurality of base supporting structures having pairs of spaced ribs extending longitudinally of said structures on the top surface thereof, rails having base flanges placed between said spaced ribs on said supporting structure, coupling means for said base supporting structures adapted to join end abutting structures and maintain the rails in fixed position, each of said coupling means including a sleeve longitudinally slotted and having longitudinally spaced transverse apertures, said supporting structures being longitudinally slotted to provide passage for sleeve, said sleeve adapted to slide over the base flanges of the rails and portions of said supporting structures and through said longitudinal slots to maintain the

rails in axial alignment, and a U-shaped pin having legs adapted to transversely engage portions of abutting supporting structures and pass through the apertures in said sleeve whereby the rails and the plurality of base supporting structures are maintained in fixed relationship.

3. For a toy railroad track having a plurality of sections, a supporting structure for each section, rails for each section, said rails having base flanges mounted on said supporting structure, a coupling for adjacent track sections comprising U-shaped sleeve members with inwardly turned top flanges adapted to engage the top surfaces of the rail base flanges in a longitudinal direction, said supporting structures having their ends slotted to receive said U-shaped sleeve members, and means associated with said U-shaped sleeve members and extending laterally therefrom, said supporting structures having notches therein, and said means extending laterally from said U-shaped sleeve adapted for reception in the notches of said supporting structures whereby the track sections are held against separate longitudinal and transverse movement.

4. For a toy railroad track having a plurality of sections, a supporting structure for each section, rails for each section, and said rails having

base flanges mounted on said supporting structure, a coupling for adjacent track sections comprising U-shaped sleeve members with inwardly turned top flanges adapted to engage the top surfaces of the rail base flanges in a longitudinal direction, said supporting structures having their ends slotted to receive said U-shaped sleeve members, said slots to closely confine the side walls of said U-shaped sleeve members and maintain their vertical relationship whereby the track sections are held against transverse movement.

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