Dec. 3, 1940. J. L. BONANNO 2,223,545

MINIATURE TRACK FOR TOY RAILROADS

Filed Jan. 13, 1940

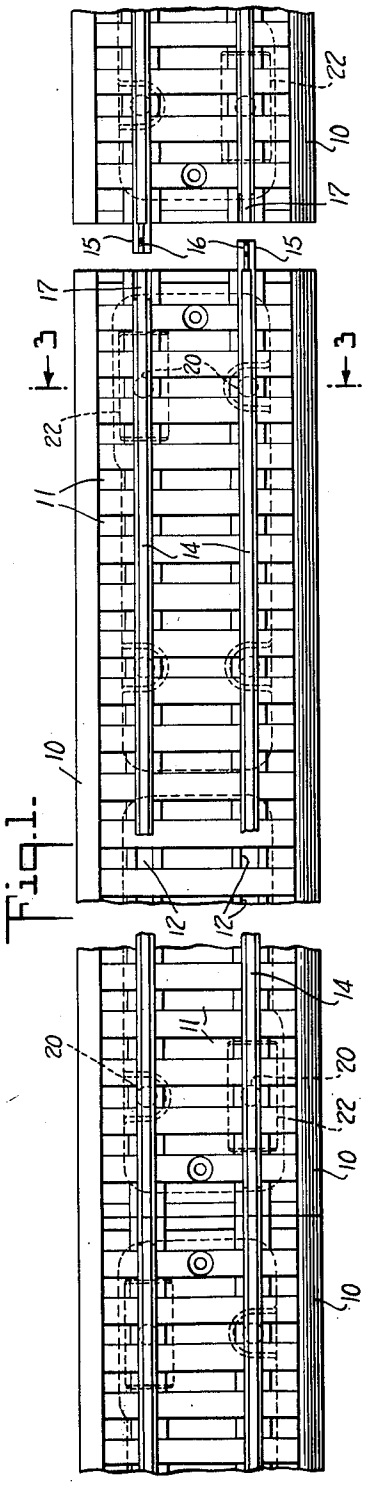


Fig. 1.

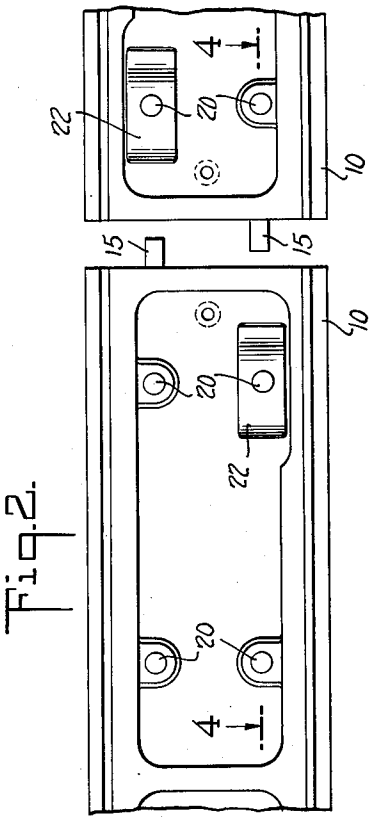


Fig. 2.

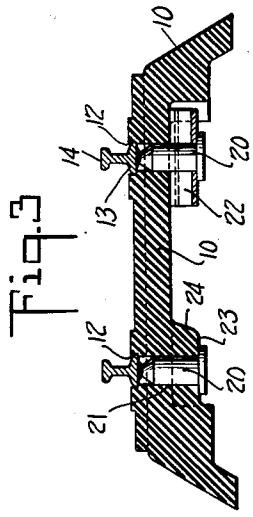


Fig. 3.

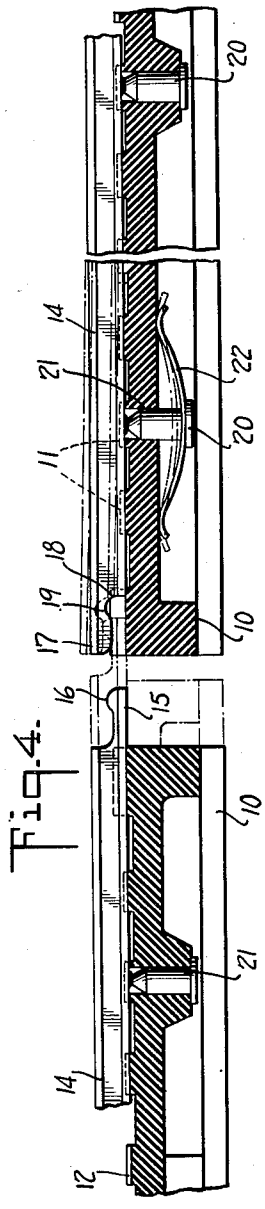


Fig. 4.

INVENTOR
JOSEPH L. BONANNO
BY
Jacob Liberman
ATTORNEY

Patented Dec. 3, 1940 2,223,545

UNITED STATES PATENT OFFICE

2,223,545

MINIATURE TRACK FOR TOY RAILROADS

Joseph L. Bonanno, Maplewood, N. J., assignor to The Lionel Corporation, New York, N. Y., a corporation of New York

Application January 13, 1940, Serial No. 313,680

5 Claims. (Cl. 238—10)

The present invention relates to miniature track for toy railroads, and is more particularly directed toward a track having solid rails secured to insulated bases.

The present invention contemplates toy railroad track of the type referred to wherein the ends of the track rails each are provided with cooperative configurations so that when the ends of the track sections are brought into abutting relation the ends of the rails are also brought into abutting and current conducting relation.

A further object of the invention is to provide toy track of the type referred to wherein one end of each rail is yieldingly held down by a spring, the other end of the rail, which will cooperate with a similar spring supported rail of another section, being securely anchored, the ends of the rail having hill and valley configurations which facilitate holding the abutting sections of track together.

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 portion of a track layout showing at the left two sections in abutting relation and showing at the right two sections separated;

Figure 2 is an inverted plan view showing two track sections separated;

Figure 3 is a cross section taken on the line 3—3 of Figure 1; and

Figure 4 is a cross sectional view taken on the line 4—4 of Figures 1 and 2.

Each track section in the layout has an insulating base 10 which may be straight or curved as desired. The top of the base may be provided with raised portions 11 which simulate ties and these tie portions are provided with longitudinally extending grooves 12 adapted to receive the bases 13 of solid rails 14.

The rails are alike and are here shown reversed end for end on each track section. One end of each rail projects beyond the end of the insulating base, as indicated at 15. This projecting end, however, is cut back, as indicated in Figure 4, so that all the tread portion of the rail is removed and practically all the web. Only the base and a small hump or hill 16 remains. The other end of each rail terminates at the end of the insulating base, as indicated at 17. In this end of the rail the base portion is cut away, as indicated at 18, so as to leave the tread portion and a hill and valley shaped element 19 adapted to make or fit the hill and valley configuration of the end of the corresponding rail of an adjacent section.

The rails are secured to the insulating bases by headed pins 20. These pins may be all alike and are here shown as passing through holes 21 in the insulating base in alignment with the bases of the rails. The pin which is to be secured to the short end 17 of the rail is passed through the leaf spring 22 which bears on the under surface of the insulating base. The pin length between the head and the tip is slightly greater than the distance between the lower face 23 of the bosses 24 and the abutments of the grooves 12. In manufacturing the track section the pins, springs and rails are placed in position and the assemblage passed through a welding machine which individually welds each pin to the corresponding rail. In the welding operation the current is applied for an extremely short period of time so that insufficient heat is developed to burn or injure the insulating material.

The interchangeable sections may be readily assembled to form various track layouts by merely pushing the abutting ends of the sections together. The protruding end 15 of the rail of one section will pass under the overhanging short end 17 of the corresponding rail of an adjacent section and enter into the unoccupied section of the groove 12. The hump or hill 16 on the protruding end of the rail will pass by the hill and valley 19 of the short end 17 of the adjacent rail tending to lift the same, as indicated in dotted lines in Figure 4, thereby deforming the spring 22. When the ends of the bases are in abutting relation the overlapping hill and valley arrangement on the rails will securely hold the sections together and provide continuous electrical contact between the rails.

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. In a miniature railroad track layout, a plurality of track sections each comprising an insulating base provided with longitudinally extending grooves to receive and align track rails, a pair of track rails each having their bases received in the grooves, each rail having its base

portion extending beyond one end of the insulating base and its tread portions at the same end removed beyond the end of the base, the other end of said rail terminating at the other end of the base and having its base portion cut back to receive the projecting base portion of the corresponding rail of an adjacent section, means for fixedly anchoring the said other end of the rail to the base, and means for anchoring the first mentioned end of the rail to the base including a spring adapted to yield to permit raising said end of the rail slightly when the protruding end of the corresponding rail of the adjacent section is inserted underneath the same.

2. A track such as claimed in claim 1, wherein the fixed anchoring means comprises a headed pin welded to the rail.

3. A track such as claimed in claim 1, wherein the spring in the second mentioned anchoring means is secured in place by the head of a pin welded to the said rail end.

4. In a miniature track layout, a plurality of track sections each comprising an insulating base provided with longitudinally extending grooves to receive and align track rails, a pair of rails each having their bases received in the grooves, one end of each rail having its base portion only extending beyond the end of the insulating base, the other end of each rail having its tread portion only extending to the other end of the insulating base, means for securing the said other ends of each rail to the insulating base for yieldable vertical movement, and means for fixedly securing the remainder of each rail to the insulating base, the projecting base portions of the rails of any section entering under the tread portons of the rails of adjacent sections and into the unoccupied portions of the grooves in the insulating bases to align the bases and rails when the ends of the bases are brought together in abutting relation.

5. A track such as claimed in claim 4, wherein the overlapping rail ends have cooperative hill and valley configurations to resist separation of the rail sections.

JOSEPH L. BONANNO.