June 22, 1937. G. A. CRANE 2,084,322

TOY RAILROAD TRACK

Filed Oct. 10, 1935

FIG.1.

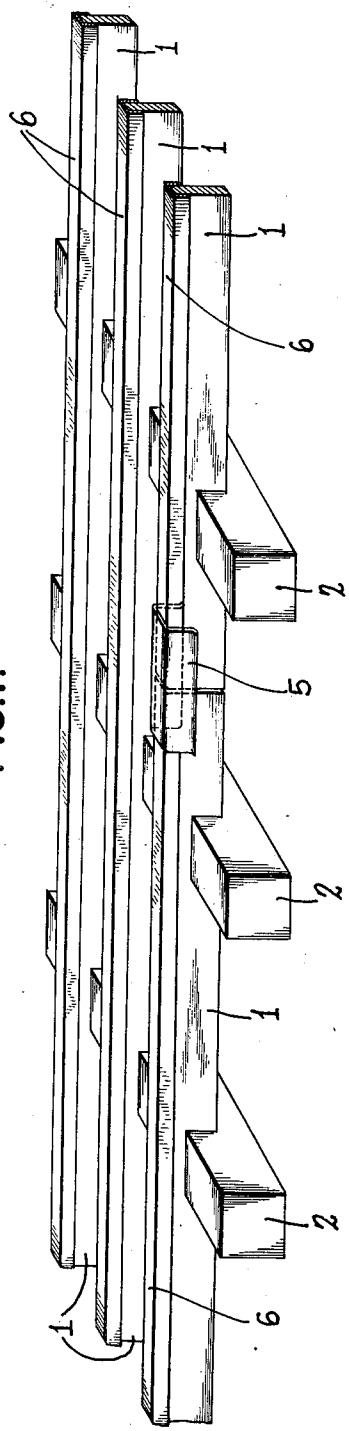


FIG.4.

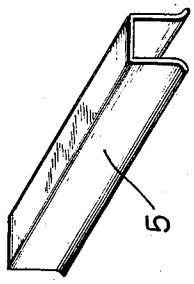


FIG.3.

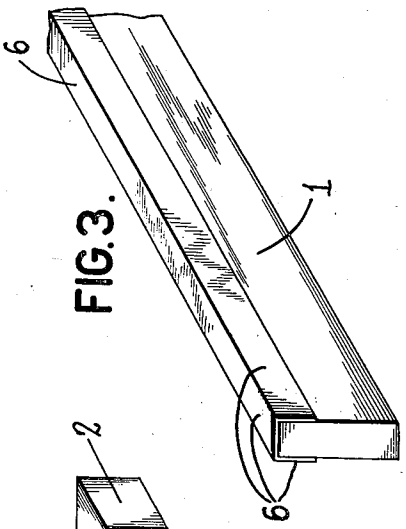
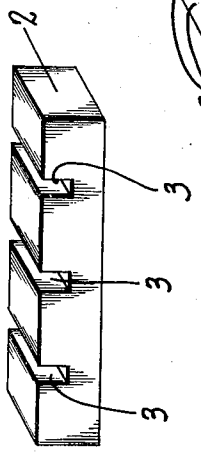


FIG.2.



INVENTOR
GEORGE A. CRANE
BY
ATTORNEY

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TOY RAILROAD TRACK

George A. Crane, New Rochelle, N. Y.

Application October 10, 1935, Serial No. 44,383

8 Claims. (Cl. 238—10)

This invention relates to toy railway tracks and more particularly to the rail elements employed in such toy railway tracks.

This invention has for its main object the provision for use in an electric toy railroad of an extremely light weight durable track structure which can be constructed at low cost.

Other objects and advantages of this invention will be fully understood from the following detailed description of an illustrative embodiment of the invention in conjunction with the accompanying drawing, in which:

Figure 1 is a fragmentary isometric view of a section of toy track incorporating the present invention;

Figures 2 and 3 are respectively isometric and top plan views of one of the cross ties used in the section of track shown in Figure 1;

Figure 4 is an isometric view of one of the rails used in the section of track shown in Figure 1.

Referring more in detail to the drawing and more particularly to Figure 1, the section of track comprises a plurality of rail elements 1, which are secured in proper spaced relationship by means of ties 2. The rails are secured to the ties by fitting them into suitable notches 3. Ordinarily the depth of the notches 3 is equal to approximately one-half the height of the rails 1, and the width of the notches 3 is such that the engagement between the ties and the rails affords sufficient frictional resistance against disassembly to maintain the rails and cross ties as a unitary track structure. The cross ties may be constructed of any suitable material; however, it is ordinarily preferred to construct them of wood.

The rails 1 comprise relatively narrow elongated flexible strips, and are constructed of a suitable material, such as wood or the like, which does not have the property of electric conductivity. The upper portion of each rail is provided with an over-lying covering 6 consisting of a thin layer or sheet of metal which is capable of conducting electricity. This thin over-lying metallic covering 6 preferably takes the form of a metal foil formed from any suitable metal or alloy of metal, for example, aluminum, copper, et cetera. This foil is preferably of the standard type, which is readily available on the market. It will be noted in the embodiment illustrated that the over-lying thin metal strip extends a substantial distance below the top surface of the rail, this particular structure being employed to overcome any possibility of the foil becoming detached from the rail, and to insure that the flanges of the wheels of the toy railroad train will contact metal as well as the flat peripheral face of the wheels. The foil is preferably secured by means of a suitable adhesive agent such as glue or cement. I have found it expedient to employ a metal foil which has secured to it (by cement, glue or the like) a backing formed of paper, the paper in turn being cemented or glued to the rail. The thin over-lying metal cover permits the rail to be considerably flexed or curved without in any way tending to injure, such as by buckling or breaking, or dislodge the metal covering, at the same time providing a smooth metallic surface for the rails which will resist wear and function in every way as satisfactorily as the conventional type of all metal rail heretofore used for the operation of toy electric trains.

In actual practice, it is preferred to employ the metal covered rails of the present invention for both the side rails of the track proper, as well as the middle or third rail which is contacted by the brush or shoe of the electric locomotive. The rails may be of any desired length. The track is intended to be assembled by the user and because of its character it can be assembled in any desired shape or conformation, the flexibility of the rails permitting the track to be curved as desired. In assembling the track, it is preferred to so arrange the rails that each particular length of rail ends and abuts the next length of rail at or between different ties. Various means of assuring proper alignment between the abutting ends of the individual lengths of rail may be employed. In the embodiment illustrated in the drawing, I have shown metal clips 5, formed of spring steel or the like, which are adapted to engage the abutting rail ends in the manner shown in Figure 1. The clip conforms with the shape of the rail and firmly embraces the portion of the rail covered by the thin overlying sheet of metal or foil, thereby providing a satisfactory electric connection between each rail length. The clip is sufficiently thin so that it does not protrude to a material extent above the top surface of the rail. If desired, the abutting ends of the individual rail lengths may be maintained in alignment by so engaging the tie that the point of engagement is substantially in the middle of the notch 3, and a suitable metal element may be secured to the cross tie and extend upwardly and contact the side of both the abutting rail lengths and the metal covering thereon to provide the necessary electric connection between the rail lengths.

If desired, the bottom surface of the rail may be provided with an overlying layer of thin metal-

lic material similar to that employed on the upper surface so that upon undue wear occurring to the upper surface of the rail, the track may be restored to new condition by reversing the rail. If desired, the entire rail may be covered with the thin metallic covering or foil, however, when this type of rail is employed, it will be desirable to insure that no electric conductivity is established through the ties. This, of course, can be accomplished by employing wooden cross ties. Instead of employing a metal foil as the electricity conducting metallic covering for the upper surface of the rails, a coating of suitable metal paint may be applied to the rails. There are a number of brands of such paint readily available on the market which are suitable, for example, the type made with fine particles of aluminum or copper alone, or in the form of alloys of these metals. The thickness of the metallic paint coating may be varied as desired, however, one or two coats of such paint will ordinarily be found to be sufficient. When dry, the metal paint forms a thin adhering continuous metal covering capable of conducting electricity.

I claim:

1. A toy electrical railroad track rail element comprising a length of material which is a non-conductor of electricity, the top surface of said length of material having cemented to it a thin foil-like layer of metallic material which is a conductor of electricity.

2. A toy electrical railroad track rail element comprising a length of material which is a non-conductor of electricity, the upper surface of said length of material having cemented to it a covering of metal foil which is a conductor of electricity.

3. A toy electrical railroad track rail element comprising a length of material which is a non-conductor of electricity, the upper portion of said length of material, including its top surface being provided with an adhering thin foil-like over-lying metallic covering which is a conductor of electricity.

4. A toy electrical railroad track rail element comprising a length of material which is a non-conductor of electricity, the upper portion of said length of material, including its top surface, having cemented to it an over-lying covering of metal foil which is a conductor of electricity.

5. A toy electrical railroad track rail element comprising an elongated strip of wood having cemented to the upper portion thereof, including its top surface, a thin foil-like over-lying continuous metallic covering which is a conductor of electricity.

6. A toy electrical railroad track rail element comprising an elongated strip of wood having cemented to the upper portion thereof, including its top surface, a thin foil-like over-lying continuous metallic covering comprising metal foil which is a conductor of electricity.

7. A toy electrical railroad track rail element consisting of a rail element formed of wood and having permanently cemented to its top surface a thin foil-like continuous metallic covering capable of conducting electricity along substantially the entire length of the top surface of said rail element.

8. A toy electrical railroad track rail element consisting of a rail element formed of wood and having permanently cemented to its top surface a thin continuous metallic covering comprising metal foil capable of conducting electricity along substantially the entire length of the top surface of said rail element.

GEORGE A. CRANE.