Jan. 9, 1940. G. F. WEINREICH 2,186,186

TRACK CONSTRUCTION

Filed Sept. 27, 1937

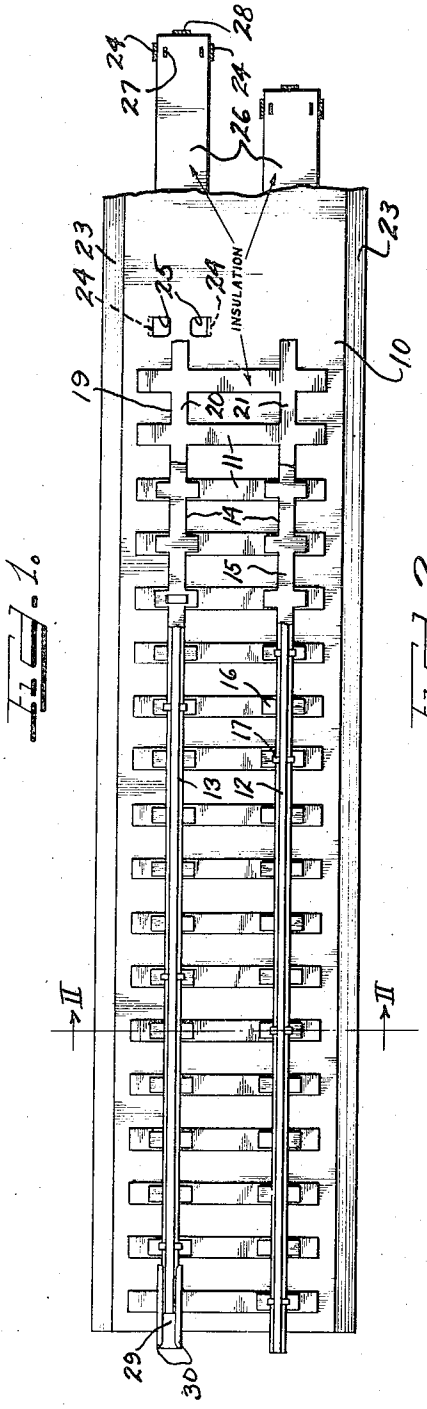



Fig. 1.

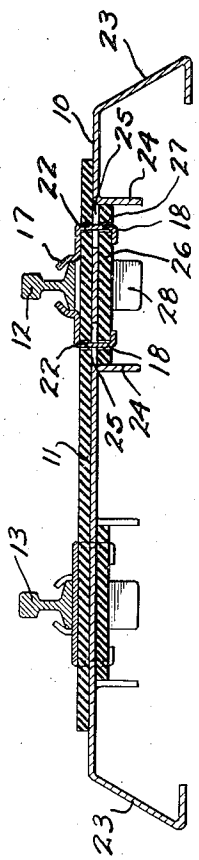


Fig. 2.

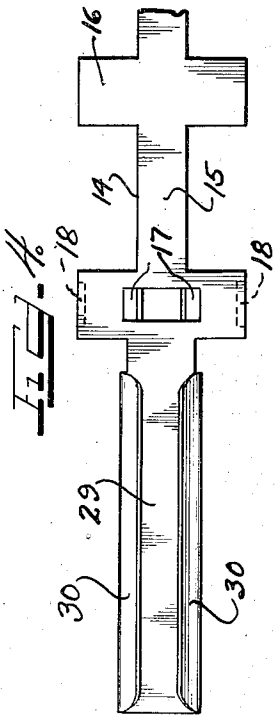


Fig. 4.

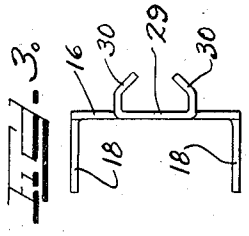


Fig. 3.

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# UNITED STATES PATENT OFFICE

2,186,186

## TRACK CONSTRUCTION

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3 Claims. (Cl. 238—10)

The present invention relates in general to an improved track construction for model or miniature railroads.

The invention contemplates as a primary object a novel track construction utilizing improved means whereby the various elements may be easily aligned, positioned and secured in assembled relation in such manner as to enable its being produced at decreased manufacturing cost.

A further object is to provide in a model or miniature railroad track, an improved bed plate construction and novel means for insulatingly securing the rails thereto.

It is also an object of the present invention to provide an improved tie construction and means for securing the rails, ties and ties plates in their proper relationship.

A still further object is to provide an improved track section embodying novel means for securing a plurality of track sections in end to end relationship.

Other objects and features of the invention will more fully appear from the following detailed description taken in connection with the accompanying drawing which illustrates a single embodiment, and in which:

Figure 1 is a plan view of a section of miniature railway track constructed in accordance with the principles of the present invention, portions being successively broken away to more clearly illustrate the cooperative relationship of the various elements composing the same;

Figure 2 is an enlarged transverse sectional view of the same taken substantially on line II—II of Figure 1;

Figure 3 is an enlarged end view looking at the end of the strip material constituting a series of tie plates and means for interconnecting the abutting ends of aligned rail sections; and

Figure 4 is a fragmentary plan view of said strip.

As shown on the drawing:

Referring to the drawing, Figure 1 illustrates the invention as being embodied in a track section comprising an elongated base plate 10 which supports a series of ties 11 upon which track rails 12 and 13 are mounted in parallel spaced relation.

Mounted on top of the ties, in spaced relation, are tie plate strips 14 of any suitable material and construction but preferably of relatively thin metal. Each tie plate strip is composed of an elongated connecting portion 15 having cross elements 16 at spaced intervals along the strip corresponding to the distance between the ties 11 so that each of the cross elements will overlie a tie as shown in Figure 1.

While each tie plate may, if preferred, be secured to the rail, this is not necessary as the rail will be supported rigidly in place if only a portion of the tie plates are in fact secured to the lower flange of the rail. For this purpose, the tie plates which are to be secured to the rails are provided with struck up bendable ears or fingers 17 arranged in opposed relationship on either side of the center line of the strip and so spaced as to receive the bottom portion of the rail which is placed thereon.

The tie plates which are secured to the rails in the manner described above are also preferably provided at the tie plate ends with downwardly struck ears or fingers 18—18, the purpose of which will be subsequently explained.

Instead of providing individual ties, as is the usual practice, the ties in the present invention are formed as a part of an elongated strip 19 wherein the ties 11 are connected together at their end portions by integrally formed laterally disposed members 20 and 21, as shown in Figure 1. These members are so positioned as to maintain the ties in parallel aligned spaced relationship and underlie the rails and connecting portions 14 of the tie plate strip.

The ties 11 which are associated with the tie plates that are connected to the lower flange of the rails by means of fingers 17 are provided with spaced openings 22—22 in their end portions for receiving respectively the downwardly struck fingers 18—18, as shown in Figure 2.

With the construction just described, it will be apparent that the tie plates, by means of the upwardly struck and downwardly struck fingers, provide connecting means between the rails, tie plate strips, and tie strip, whereby these elements are definitely aligned and held in correct operative relationship.

By reference to Figure 2, it will be observed that the base plate 10 has its lateral edge portions downwardly deflected as shown at 23—23 to form inclined supports and raise the track bed. The deflected edge portions 23 also strengthen the bed plate longitudinally. This construction not only provides a rigid support for the rails and ties, but simulates the ballasted road bed of a real railroad track.

At the position of each tie plate, which is secured to the rails, the bed plate 10 is provided with opposed struck down lugs 24—24 disposed on opposite sides of an associated rail. In the formation of these lugs, which are punched from the material composing the base plate, apertures 25—25 are formed. These apertures are disposed

on opposite sides of an associated rail and provide openings through which the downwardly struck ears of the associated tie plate may extend out of contact with the base plate material.

In order to secure the rails against vertical displacement relative to the base plate, an elongated strip **26** is disposed on the under surface of the base plate underlying each rail. This strip is of appropriate width to have its edges abut the ears **24**, whereby the strip will be held against lateral displacement relative to the bed plate. This strip is provided with suitable openings **27** adapted to respectively receive therethrough the downwardly struck fingers **18** of those tie plates which are connected to the rails. By clinching over the ends of these fingers against the under surface of the strip **26**, the strip **26** will be held in tight engagement with the under surface of the bed plate **10**. The strip **26** is retained against longitudinal movement relative to the base plate by means of lugs **28** which may be downwardly struck from the end edge portions of the bed plate **10**.

In cases where the novel track construction described herein is to be used with miniature railway rolling stock propelled by electric motors, it is necessary that the respective rails be electrically insulated relative to each other. For this purpose, the herein novel construction is particularly adapted. By constructing the tie strip **19** and the strips **26—26** underlying each rail of suitable insulating material, such as fiber, the rails will be insulatingly supported relative to the bed plate **10**.

The present invention also embodies improved means whereby track sections, as shown in Figure 1, may be easily and quickly secured together in end to end relationship to form a continuous track construction. Referring to Figure 4, the tie plate strips are extended at one end as shown at **29**. This extension is provided with opposed inwardly deflected side portions **30—30** which are adapted to slidably receive in an endwise direction the abutting ends of the rails of the interconnected track sections.

As shown in Figure 1, it will be noted that it will only be necessary to provide the extension **29** in connection with one of the rails at the ends of a track section. The other rail is extended past the end of the bed plate **10** so as to be received by a similar extension carried by the rail section which is to be interconnected therewith. The tie plate strips including the extension **29** are, therefore, similarly constructed and in the case of a particular section are mounted thereon in reversed relationship, that is, the extension of one of the tie plate strips will be disposed at one end of the track sections, whereas the extension **29** of the other tie plate strip will be similarly disposed at the opposite end of the track section.

The novel track construction, as described herein, is particularly advantageous from the standpoint of manufacture in that the parts are secured together by bendable struck up and struck down fingers, thus making it unnecessary to utilize individual fasteners such as spikes, etc. in order to completely assemble the track elements.

From the foregoing description, it will be apparent that the herein described invention provides a novel track construction for model or miniature railroads which utilizes improved means for aligning, positioning and securing the various elements in assembled relation; which includes an improved bed plate construction and means for insulatingly securing the rails thereto; which embodies improved tie and tie plate constructions; and which utilizes novel means for securing a plurality of track sections in end to end relationship to form a continuous track structure.

The invention has been described herein more or less precisely as to details, yet it is to be understood that the invention is not to be limited thereby, as changes may be made in the arrangement and proportion of parts, and equivalents may be substituted, without departing from the spirit and scope of the invention.

I claim as my invention:

1. A track construction for miniature railroads comprising an elongate bed plate, a first strip of insulating material extending lengthwise on the underside of said plate, a second strip of insulating material on the upper surface of said plate having spaced transverse portions simulating ties and rail underlying portions connecting the transverse portions, a rail overlying the second strip and above the first strip, an elongate metallic strip between the rail and second strip having spaced integral portions simulating tie plates at the tie positions, certain of the tie plate portions having fingers for engaging the lower flange of the rail and fingers for engaging the first and second strips, said plate having apertures therein for receiving the latter fingers therethrough out of contact with the plate.

2. Model track for model railroads, comprising a bed plate, a strip of insulating material having a plurality of integrally formed interconnected tie simulating portions, elongate sheet metal strips disposed on top of said tie portions, and rails mounted on said metal strips, said metal strips having lateral extensions at the locations of said tie portions projecting beyond the side edges of said rails and formed to simulate tie-plates, elongate insulating strips on the underside of the bed plate respectively disposed below said rails, means connecting the metal strips to their associated rails, and means connecting the metal strips with their associated strips of insulating material, said latter means being in insulated relation to said plate.

3. A model track construction for model railroads, comprising a bed plate, an insulation strip disposed on the upper surface of said bed plate, tie plates on said strip, and rails mounted on top of said tie plates; said strip having transversely extending bar portions at the location of the tie plates formed to simulate ties, and further having connecting portions between the bar portions underlying the rails so as to be substantially hidden from view by said rails; means for holding said strip to said rail, and means for holding said strip to said base plate.

GEORGE F. WEINREICH.