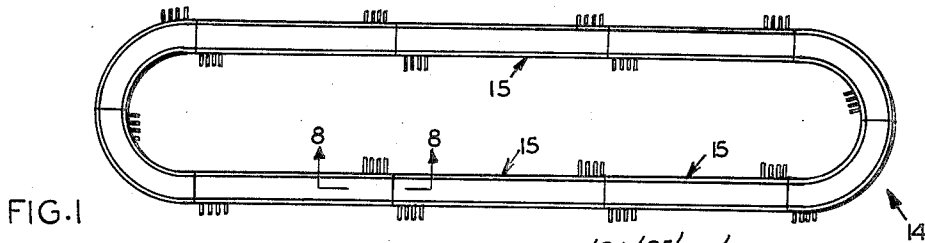
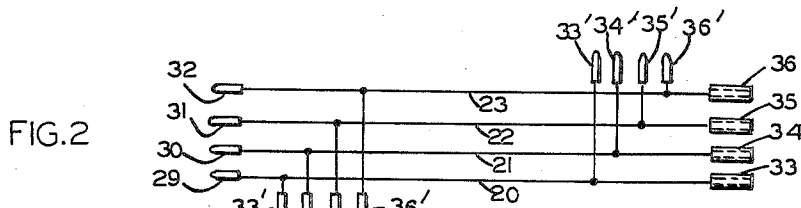
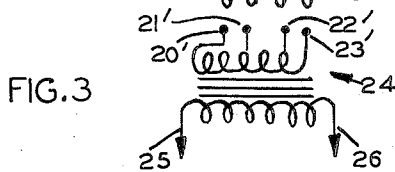
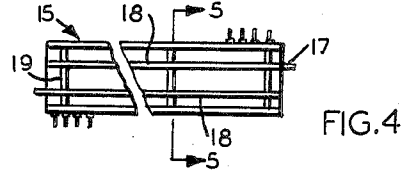
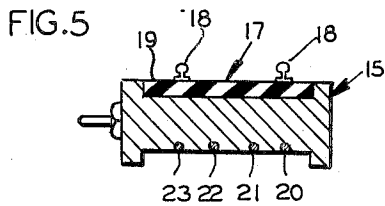
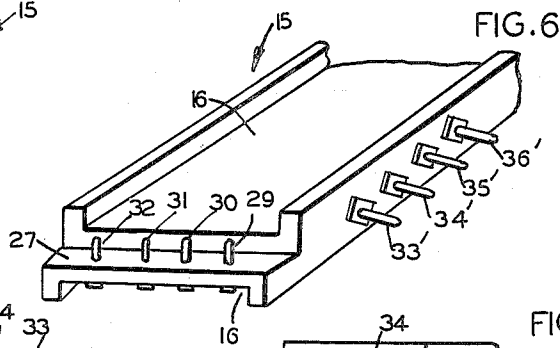
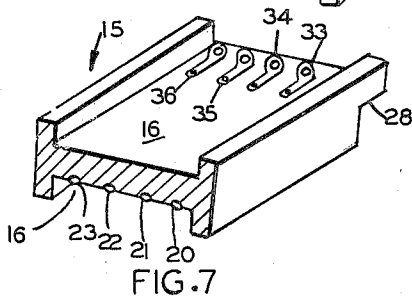
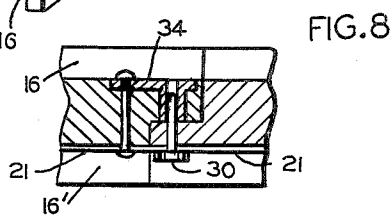


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 BASE FOR SUPPORTING A MINIATURE RAILROAD TRACK
 AFFORDING POWER OUTLETS THEREALONG
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2,969,919



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2,969,919

BASE FOR SUPPORTING A MINIATURE RAILROAD TRACK AFFORDING POWER OUTLETS THEREALONG

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9 Claims. (Cl. 238—10)

The present invention relates to miniature electric railroad systems and more particularly to road bed construction offering various electrical and mechanical advantages and conveniences to attain train and track stability and of prime importance, to provide for the distribution of power to accessory apparatus stationed at various sites along or in the vicinity of the track.

In usual train sets, the track is in sections, releasably joined end to end and arranged in an endless format. The rails mounted on cross ties, are insulated from each other and receive power from a house-current-operated step-down transformer having terminals for different outputs. At various vicinities along the road, accessories of various kinds are positioned. These may be signal, loading and dumping means of diverse sorts, operable at different voltages respectively. Wires are used to connect these auxiliary mechanisms to proper output terminals of the transformer. Since the length of track and the track-enclosed area may be considerable, these connecting wires are rather long and cluttering, detract from the appearance of the set up, and if the installation is on the floor, are tripped over, thereby dismantling parts, with tumbling, damage and physical hurt possibly resulting.

An object of this invention is to avoid the mentioned objectionable occurrences.

Another object of this invention is to provide a novel and improved road bed structure offering power outlets of the various transformer outputs at many points along the track system so that the length of connecting wires to the accessories is minimized.

A further object is to provide novel and improved road bed construction which holds the track assembled and avoids disassociation of track sections due to the centrifugal action of a train moving around a bend or curve.

Another object is to have the road bed power distributor structure in detachable sections so that the whole of the railroad apparatus and its fittings may be dismantled for shipping and storage.

A further object thereof is to provide a road bed structure adaptable for use with existing train sets.

Still a further object of this invention is to provide novel and improved road bed and power distribution structure which is simple to make and use, reasonable in cost and efficient in carrying out the purposes for which it is designed.

Other objects and advantages will become apparent as this disclosure proceeds.

For the practice of this invention, one form it may assume, is to have a base member for each track section respectively. It is preferred that each base member be a channel of dielectric material, into which the associated track section sets in sliding fit. There are as many spaced conductors along each base member as there are output terminals on the transformer. Each end of these conductors on each base member is connected to a terminal element at the ends of such member

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respectively. The terminal elements of adjacent base members serve as releasable engagement means for such members. Preferably, the movement for attachment and detachment of the base members, is vertical. Each base member, at one or both side edges thereof, has terminal elements which are respectively connected to the conductors which are lengthwise of such member. These last mentioned terminal elements serve as the outlets along the track for connection to accessories in their vicinity.

In the accompanying drawings forming part of this specification, similar characters of reference indicate corresponding parts in all the views.

Fig. 1 is a top plan view of assembled base sections embodying the teachings of this invention. The assembly is of course in the format of the track system.

Fig. 2 shows the electrical wiring diagram of a base member's conductors, connectors and outlets.

Fig. 3 shows a wiring diagram of one form of step-down transformer offering different outputs.

Fig. 4 is a top plan view of a base member holding a track section.

Fig. 5 is an enlarged section taken at lines 5—5 in Fig. 4.

Fig. 6 is a fragmentary perspective view of one of the base members, showing in particular an end position thereof.

Fig. 7 is similar to Fig. 6, but of an adjacent base member.

Fig. 8 is an enlarged section taken at lines 8—8 in Fig. 1, showing one manner of construction to effect mechanical connection of successive base members and electrical connection of corresponding conductors carried by said base members. This construction is employed in the embodiment illustrated in this case.

In the drawings, the numeral 15 designates generally a base member of dielectric material which in the particular embodiment shown is of H-shaped cross-section, in whose top channel 16, a track section 17 is slidably fitted. The track section comprises the spaced rails 18 mounted on dielectric cross ties 19. It is these cross ties that are fitted into said channel. The length dimension of each base member is such that the length it occupies in the assembly of base members is equal to the length occupied by the rail section on it in the assembly of the track sections. Further preferred, the shape of the base member shall conform with the track section it carries.

Suitably mounted along the lower channel 16', are the spaced conductors 20, 21, 22, 23, one for each of the output terminals 20', 21', 22', 23' of the transformer 24 whose primary leads 25, 26 are for connection to the house power line. At the ends of each base member there are terminal elements in uniformly spaced relation and identically spaced on each, in line with said conductors respectively. Each end of each conductor is connected to one of said contact elements which are in its line, respectively. Such terminal elements also serve as the detachable connecting means for adjacent base members.

The ends of each base section are preferably formed with a step as indicated at 27, 28, so that adjacent base members set in lap joint formation. The terminals 29, 30, 31, 32 are through the step 27 and extend upwardly therefrom. The terminals 33, 34, 35, 36 are tubular elements through the step 28 to receive in slide fit, the terminal elements 29—32 respectively. Thus the cooperative pairs of terminal elements serve to mechanically join adjacent base members and to electrically connect the conductors respectively of adjacent base members. It is evident that the track sections are joined and disjoined by horizontal movement as is usual, but the base

members are joined and disjoined by vertical movement. Also provided, is that each or some of the base members have one or more sets of connection terminals extending from a side thereof, or one such set from each side. These terminals as the set indicated by the numerals 33', 34', 35', 36' are respectively connected to the conductors carried on their base member. The sequence of the terminals in each such set of terminals should be identical on each of the base members wherever they are. To use this apparatus, the base members and the track members are assembled separately. Then the composite track is set onto the composite base. The output terminals 20', 21', 22', 23' of the transformer are respectively connected to a nearby set of terminals 33'-36' respectively. The terminals of the several accessories (not shown) along the track system, are respectively connected to the proper terminals of a set of terminals like 33'-36' nearest them. It is evident that all connections are made with short wires. Connections to apply power to the rails is made in the usual fashion already provided for such purpose.

It is evident that once the track system is set onto the base structure 14, it will not come apart accidentally or by action of centrifugal force occasioned when the train turns a bend in the road.

The base members may be of wood, plastic, rubber, ceramic or other suitable material, and may be disengageably associated in any suitable manner. The disengageable contact elements are most practical when in pin and socket form as shown in Fig. 8 and any suitable manner may be used to connect the conductors which are carried along the base members to their terminal elements at the ends of such members. The outlet terminals along the sides of the base members may be of any suitable form, other than the binding post structure shown in Fig. 6. The conductors 20-23 may be metal ribbon, wire or accomplished by printed techniques.

This invention is capable of various forms and numerous applications without departing from the essential features herein disclosed. It is therefore intended and desired that the embodiment shown herein shall be deemed illustrative and not restrictive and that the patent shall cover all patentable novelty herein set forth; reference being had to the following claims rather than to the specific description herein to indicate the scope of this invention.

I claim:

1. A base structure for supporting a miniature railroad track made of detachable lengthwise sections which can be assembled in a plurality of formations and to afford electric power outlets therealong for connection to accessories, comprising a plurality of base members set end to end in successive extension; the shape of each base member conforming with that of the track section it shall carry, sets of electrical conductors, one such set of conductors carried insulated from each other on each base member along each track member respectively, means on each base member automatically electrically connecting corresponding conductors on adjacent base members when such base members are associated in extension of each other, means on each of the

base members for physically connecting them in successive extension and a set of electrically-conductive terminal elements on at least some of the base members, respectively electrically connected to the conductors carried by the base section they are on; such terminals being accessible for making connections thereto respectively and positioned that such connections permit passage of a train along the track.

2. The base structure as defined in claim 1, wherein the conductor connecting means comprises contact elements carried at each end of each of the base members; each conductor on each base member being electrically connected at each end to one of said contact elements; the contact elements on one end of every base member being in contact with those on an adjacent base member when adjacent base members are joined in extension of each other, and wherein the base members are releasable from each other.

3. The base structure as defined in claim 2, wherein the contact elements of one base member which contact the contact elements of another base member, are releasably engageable respectively with the contact elements of such other base member, whereby such releasably engageable contact elements of both base members also serve as the means to physically connect such base members in extension of one another.

4. The base structure as defined in claim 3, wherein the releasably engageably related contact elements are engageable and disengageable by relative movement in a direction which is angular with the horizontal.

5. The base structure as defined in claim 4, wherein said direction of movement is substantially along the vertical.

6. The base structure as defined in claim 1, wherein the means for physically connecting the base members, connect such members releasably and wherein engagement and disengagement is permitted upon relative movement of said base members in a direction in angular relation with the horizontal.

7. The base structure as defined in claim 6, wherein said direction of movement is substantially along the vertical.

8. The base structure as defined in claim 1, wherein at least some of the base members present a channel on top; such channels being adapted to receive the track therein.

9. The base structure as defined in claim 1, wherein at least some of the base members present a channel on top; such channels being adapted to receive the track in slidable fit therein.

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Notice of Adverse Decision in Interference

In Interference No. 93,785 involving Patent No. 2,969,919, P. Kornberg,
BASE FOR SUPPORTING A MINIATURE RAILROAD TRACK
AFFORDING POWER OUTLETS THEREALONG, final judgment adverse to the patentee was rendered Mar. 30, 1965, as to claims 1, 2 and 3.
[*Official Gazette May 18, 1965.*]

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