

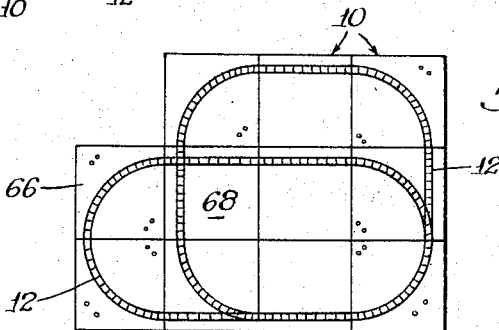
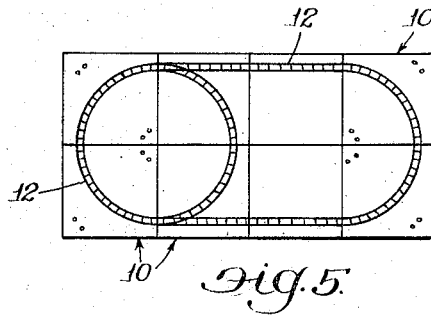
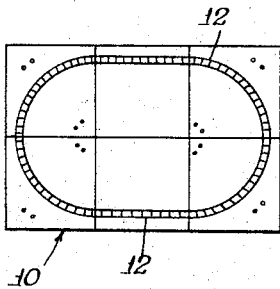
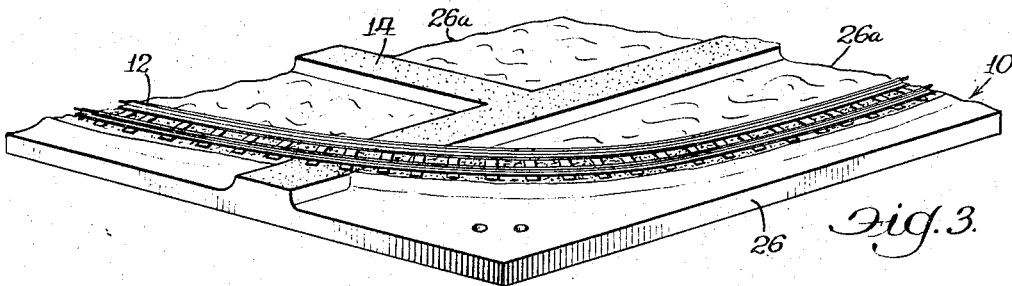
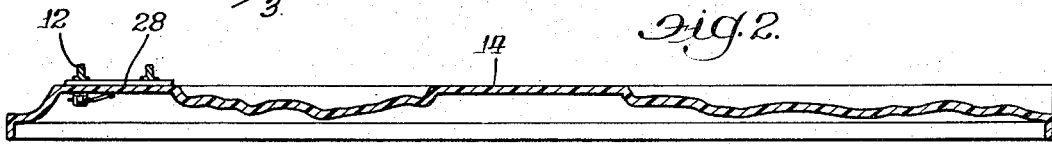
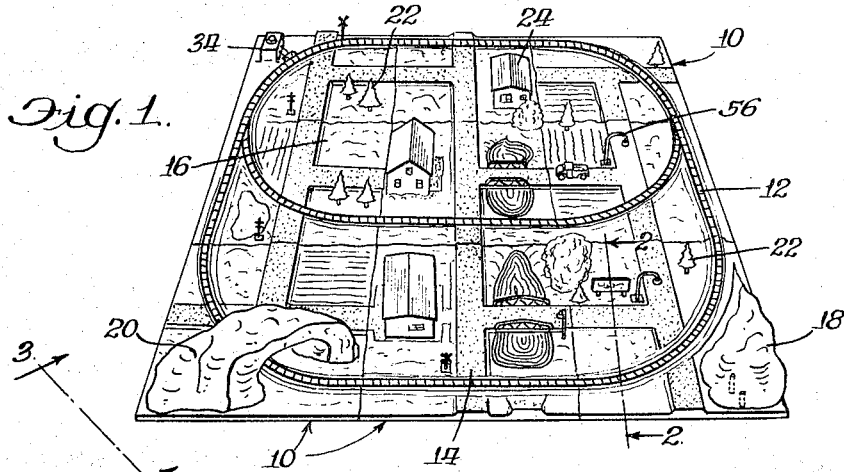
Nov. 14, 1967

M. I. GLASS ET AL
CHANGEABLE TILE LAYOUT INCLUDING ELECTRICALLY
CONNECTABLE TRACK

3,352,054

Filed Feb. 4, 1965

2 Sheets-Sheet 1



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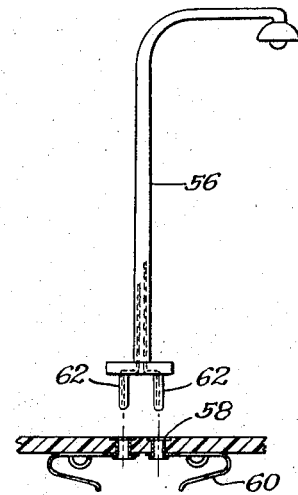
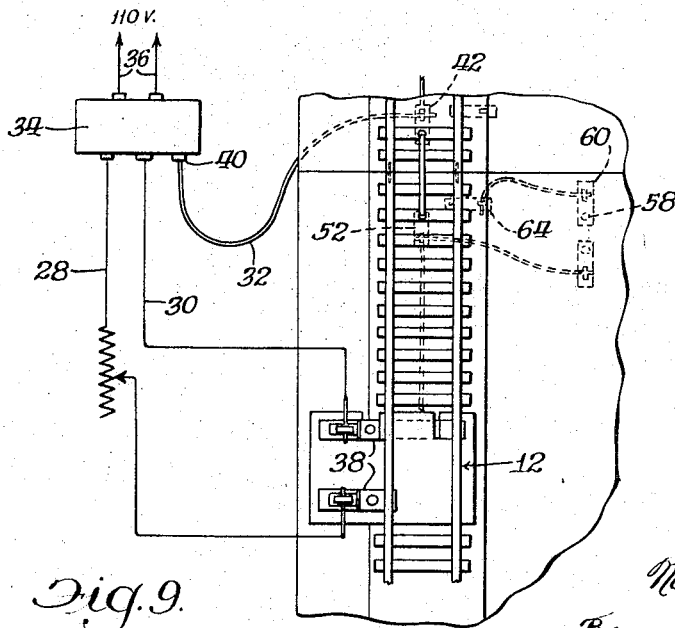
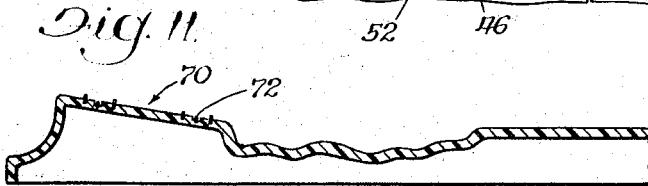
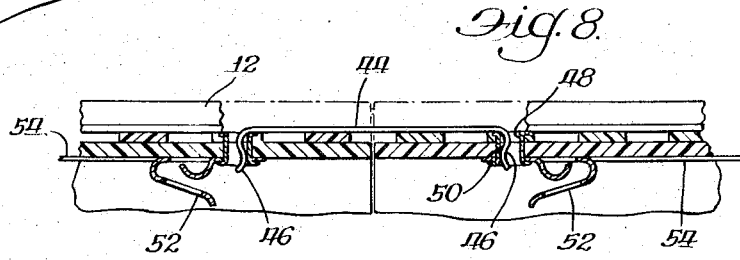
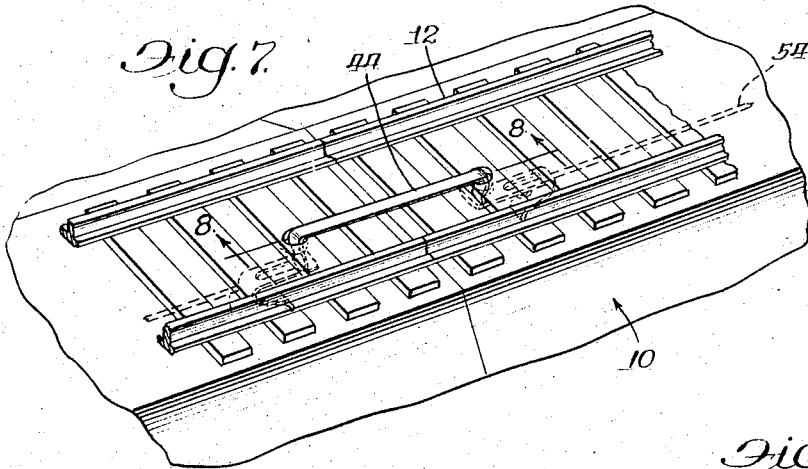


Fig. 9.

Fig. 10.

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1

3,352,054

**CHANGEABLE TILE LAYOUT INCLUDING
ELECTRICALLY CONNECTABLE TRACK**

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3 Claims. (Cl. 46—17)

ABSTRACT OF THE DISCLOSURE

A toy vehicle layout comprising a plurality of rectangular tiles having scenery formed thereon and including an integrally formed roadbed section with the track fixed thereto. The roadbed and track on a plurality of the tiles is similarly disposed, both vertically and horizontally with respect to the sides of each tile, so as to permit interchangeable mating of the tiles. A mechanical and electrical connection is provided for the ends of the track on adjoining tiles, including a metal eyelet disposed through the roadbed and a removable metal conductor having end portions disposable in each of the two eyelets on the adjoining tiles.

The present invention relates generally to a layout for miniature vehicles, and it is particularly directed to a layout including a plurality of prefabricated units each including model scenery and track or roadway and adapted to be assembled in a variety of different relationships to form a unitary layout for a model train or other powered vehicle.

While toy trains, and more recently toy road racing sets, have been very popular, probably the greatest deterrent to full enjoyment of the model layout is the time required to put a layout together and to disassemble the layout for storage purposes. Then too, there is very little realism provided with such layouts, unless considerable time is spent building model scenery on a board for the layout. Particularly with smaller children the providing of a scenic background for the layout is difficult because it is beyond their capacity and unless an adult does such work the child loses a great deal of the play value of the toy train or road racing set. The present invention is particularly directed to an arrangement whereby the toy train or road racing set is purchased with appropriate scenery and the track sections already placed on individual tiles or squares, so that the entire layout can be readily assembled and provide the finished appearance normally achieved only by the avid hobbyist.

It is a primary object of the present invention to provide a prefabricated miniature vehicle layout, including a plurality of geometrically complementary sections which can be matched in any of a number of ways to provide a continuous layout, with each section including scenic components and one or more sections of the vehicle track or road.

Another object of the invention is to provide a prefabricated vehicle layout as described above, wherein means is provided for removably securing the various components together in a manner such that the electric circuit for the layout is also thereby completed, so as to afford control of an electrically powered vehicle and layout accessories from a single control point. Other objects and advantages will be apparent from the following description of the embodiment illustrated in the drawings, wherein:

FIGURE 1 is a perspective view of a toy train layout made from nine rectangular components or tiles;

FIGURE 2 is an enlarged sectional view taken along the line 2—2 in FIGURE 1;

2

FIGURE 3 is an enlarged perspective view taken along the line 3—3 in FIGURE 1, with portions removed to illustrate the track section;

FIGURE 4 is a schematic illustration of another arrangement of six of the tiles seen in FIGURE 1;

FIGURE 5 is a schematic illustration of still another layout formed from eight of the tiles;

FIGURE 6 is a schematic illustration of a layout that is possible through the addition of two tiles to the set shown in FIGURE 1;

FIGURE 7 is an enlarged fragmentary perspective view illustrating the connection between the track sections on adjacent tiles;

FIGURE 8 is a sectional view taken along the line 8—8 in FIGURE 7;

FIGURE 9 is a fragmentary plan view illustrating the electrical connection between the power source and various components of the layout;

FIGURE 10 is an enlarged exploded view partly in section, illustrating the means for mounting accessories in the layout; and

FIGURE 11 is a sectional view similar to FIGURE 2 but illustrating the adaptation of the invention to its use with toy road racing sets.

As seen particularly in FIGURES 1, 4, 5 and 6, the present invention generally provides a plurality of prefabricated tile sections 10, each including one or more sections of track 12 and suitable scenic components, with the track secured in place on the tile and with each tile being self-containing as to the required electrical circuit for the layout. The tiles 10 are constructed so that they can be arranged in side-by-side relationship to provide a continuous circuit for the track and complete the electrical circuit required for the operation of the miniature vehicle. Furthermore, the track sections are disposed on the various tiles, and the edge portions of the tiles are constructed and formed, so that a number of different layouts can be achieved with a predetermined number of the tile sections. Each tile section is preferably moulded of a suitable material, such as plastic, and formed to provide roads and streets 14, plowed fields 16, lawns, etc. simulating a realistic landscape for the layout. The scenery may also include more elevated sections such as the hill 18, tunnel 20, trees 22, buildings 24, etc., in which case it is preferred that such elevated sections be removable and in some cases preferably collapsible or easily dismantled for storage purposes. In this way it will be seen that the tile layout can be stored with a shelf or cupboard arrangement requiring a floor area slightly larger than the area of one individual tile. Furthermore, the time and skill required for assembling or disassembling the layout is minimal and, consequently, the child is more apt to play with the toy train or race set more often than if he is required to completely assemble the layout each time.

As seen particularly in FIGURES 2 and 3, each of the individual layout components or tiles 10 is preferably rectangular, although other geometrical forms might be used so long as they can be matched together to provide a continuous surface. The rectangular or square tile is obviously preferably, since it is adapted for storage in a more efficient manner and with a minimum amount of space required. Each tile is formed with a raised edge portion 26 which preferably elevates the main top surface of the tile above the supporting surface a sufficient distance to accommodate electrical wiring in a concealed position below the tile. The road bed 28 for the track is a somewhat elevated and flat surface and the track 12 is fixedly secured in position on the road bed. The end of the track section on each tile must, of course, be positioned relative to the edge 26 of the tile so as to properly mate with one or more track sections on other tiles. Then

3

too, the elevation of the end of the track 12 on each tile must be essentially identical with the elevation of at least one of the ends of the track sections on the other tiles. The surface portions of the remainder of the tile can be provided with contours to simulate plowed fields, hills, rolling lawns, etc., and they may also be provided with flat regular sections simulating streets, air strips, and roads. In the latter instance, of course, it is important that the streets or roads 14 be related to the edges 26 of the tile in a manner similar to that on one or more other tiles to provide for continuity of the streets or roads in the layout.

Certain of the tile sections 10 are particularly intended to have one or more generally straight end or side sections, as seen in FIGURE 3, and certain of the other tiles may have irregular or contoured edges, as indicated by the numeral 26a. More particularly, those tiles which are generally to be used as corners or sides of the various layouts can have one or more edge portions which are not contoured but are generally straight in configuration. The remaining edge portions of such tiles can be irregular or contoured, as illustrated in FIGURE 3, with the irregularities of the contoured edges being generally similar with respect to irregular edges of other tiles.

In the illustrated embodiment, the toy train layout utilizes a two-wire circuit 28, 30 to provide power for the train, and a third line 32 is provided for supplying power to the various accessories. This is illustrated particularly in FIGURE 9, wherein the transformer 34 is connected through lines 36 to an ordinary house circuit of 110 volts, and the pair of electrical wires 28, 30 extend from terminals on the transformer to conventional clips 38 providing electrical connection with each of the two rails of track 12. The transformer 34 is conventional and includes a rheostat for controlling the speed of the toy train. Electrical current to the accessories is provided by a third terminal 40 on the transformer having the wire 32 leading to a spring clip connector 42 on the under side of the layout. In particular, the tracks on adjacent tile sections are fitted together by the usual connector pins in the ends of the rails to provide for continuity of the electrical circuit providing power to the train. A further mechanical and electrical connection is provided by an elongated metal clip 44 (FIGURES 6-7) having rebent end portions 46 which are adapted to be fitted in openings 48 formed in metal eyelets 50 or the like adjacent the ends of the adjoining tracks. These eyelets, in conjunction with clips 44, also provide mechanical means for securing the track sections in position on the tile. Integrally formed with the eyelets 50 and suitably fixed thereto are conventional spring clip connectors 52, which are positioned beneath the surface of the tile in concealed positions. As the elongated spring clips 44 are positioned in place, they secure the adjoining tile sections together and also provide an electrical connection between the clip 52 on one tile and the clip 52 on the adjacent tile, as seen in FIGURE 8. A conduit or wire 54 is fixed to the under side of the tile and extends lengthwise of the track section between the eyelets 50 on each tile and at a position intermediate the rails. The wire 32 leading from the transformer is fastened to any one of the spring clips 52 and thereby provides a continuous source of power extending around the track layout and available for operation of accessories, such as the lamp post 56 shown in the illustrated embodiment.

The accessories are also arranged so that the electrical wiring for each accessory is disposed beneath the tile sections. For example, as illustrated in FIGURES 8 and 10, a plurality of lamp posts or lights 56 can be arranged around the layout and are readily removable for storage purposes. At selected positions along the track or road way on the layout, there is fixed to the tile a pair of metal eyelets 58 having spring clip connectors 60 fastened to such eyelets at positions beneath the tile surface. The lamp

4

posts 56 or other accessories are provided with a pair of generally rigid electrical conductors 62 which fit into the eyelets 58 and which may also provide the mechanical means for removably supporting the accessory in position. A wire can be readily positioned between each of the clip connectors 60 and a connector 52 on the accessory power line and also with a connector 64 having electrical connection with one of the rails. It will be seen that this connection for the accessory can be permanently installed and the accessory can be mounted in position for immediate operation and use whenever desired or another accessory substituted. Furthermore, such connection is concealed and in no way mars the appearance of the surface of the layout.

The layout illustrated in FIGURE 1 is formed from nine rectangular tile sections 10. The layout illustrated in FIGURE 4 provides a smaller layout formed from six of such sections. In FIGURE 5 there is illustrated a layout which utilizes eight of the nine tile sections of FIGURE 1 to change the form of the layout and, consequently, the disposition of the scenery. FIGURE 6 illustrates how an owner of the layout in FIGURE 1 can achieve further variations through the addition of two tiles, one tile 66 including a section of curved track and the other tile 68 having a track crossover. It should be apparent that various other layout designs can be achieved by utilizing a given number of tiles and shifting their relationship to each other. Further the owner can continue to add to the number of variations possible through the addition of one or more tiles to his set at any time.

FIGURE 11 is another embodiment of the invention illustrating its use in connection with a road racing set. In such embodiment, the type of scenery provided might be changed from that used in connection with the toy train layout, in order to provide a more realistic surrounding or atmosphere for the road race. Insofar as the individual tiles are generally concerned, the road bed is altered to accommodate the type of track section 70 used with toy autos wherein the tracks 72 are in a depressed portion of the road. A particular advantage of this invention with road racing sets is that those tiles providing the curved portion of the road way can be formed with sharply inclined or banked curbed sections as illustrated in FIGURE 11, and hills can be formed along the direction of the road, in order to more realistically illustrate race tracks or cross-country road racing courses.

Although shown and described with respect to particular apparatus, it will be apparent that various modifications might be made without departing from the principles of this invention.

What is claimed is:

1. A toy vehicle layout comprising a plurality of rectangular tiles having mutually perpendicular borders and adapted to be placed in side-by-side relation to provide a continuous rectangular layout, each of said tiles having scenery formed thereon and including an integrally formed roadbed section with a track fixed thereto, each of said tiles including a non-planar, contoured upper surface and having at least one edge portion of irregular cross-section corresponding substantially with an irregular edge contour of a plurality of the other tiles to provide for interchangeable mating of the several tiles, the roadbed and track on a plurality of said tiles being similarly disposed both vertically and horizontally with respect to the sides of said tile so as to permit interchangeable mating of the tiles, and means at each of the ends of the track on each tile providing for a mechanical connection between adjoining tiles and an electrical connection between tracks on said adjoining tiles including a metal eyelet disposed through a cross-tie on said track and through said roadbed, and a removable metal conductor having end portions positionable in each of two of said eyelets on adjoining tiles to provide

for continuity of the electrical circuit across adjoining tiles.

2. A toy vehicle layout comprising a plurality of rectangular tiles having mutually perpendicular borders and adapted to be placed in side-by-side relation to provide a continuous rectangular layout, each of said tiles having scenery formed thereon and including an integrally formed roadbed section with a track fixed thereto, each of said tiles including a non-planar, contoured upper surface and having said borders of sufficient depth to provide space between the contoured, inner portion of the tile and its supporting surface, the roadbed and track on a plurality of said tiles being similarly disposed at the end portions thereof, both vertically with respect to the lower edge of the border and horizontally with respect to the sides of said tile, so as to permit interchangeable mating of the tiles, means affording a mechanical connection between adjoining tiles and an electrical connection between tracks on said adjoining tiles, said means including a metal eyelet disposed through a metal cross-tie on said track and through said roadbed, and a removable metal strap having end portions positionable in each of two of said eyelets on adjoining tiles to provide for continuity of the electrical circuit across adjoining tiles on the upper surface thereof, whereby the electrical wiring for said track and accessories is essentially entirely concealed beneath said tiles except for said connection between the tracks on adjacent tiles.

3. A toy train layout comprising a plurality of rectangular tiles having mutually perpendicular borders and adapted to be placed in side-by-side relation to provide a continuous rectangular layout, each of said tiles having scenery formed thereon and including an integrally formed roadbed section with a track fixed thereto, each of said tiles including a non-planar, contoured upper

surface and having at least one edge portion of irregular cross-section corresponding substantially with the edge contour of a plurality of the other tiles to provide for interchangeable mating of the several tiles, the roadbed and track on a plurality of said tiles being similarly disposed both vertically and horizontally with respect to the supporting lower edge and sides of said tile, respectively, so as to permit interchangeable mating of the tiles, means at each of the ends of the track on each tile providing for a mechanical connection between adjoining tiles and an electrical connection between tracks on said adjoining tiles including a metal eyelet disposed through a metal cross-tie on said track and through said roadbed, and a removable metal strap having end portions positionable in each of two adjacent eyelets to provide for continuity of the electrical circuit across adjoining tiles, and means defining openings in said tiles for supportingly receiving portions of electrically operated accessories and placing said accessories in electrical communication with said track, whereby the electrical wiring for said track and accessories is essentially entirely concealed beneath said tiles except for said connection between tracks on adjoining tiles.

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