

[54] **TRACK FOR TOY AUTOS**

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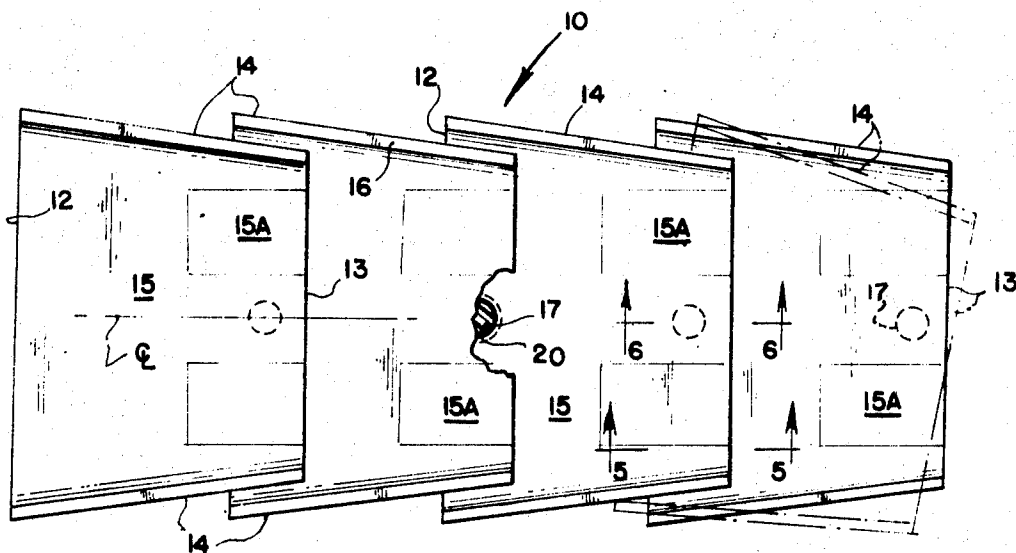
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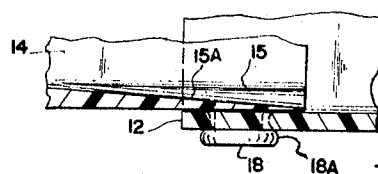
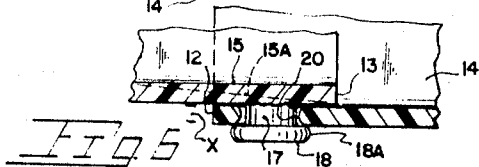
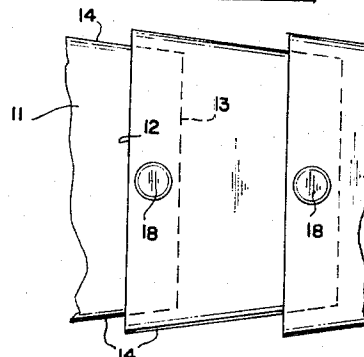
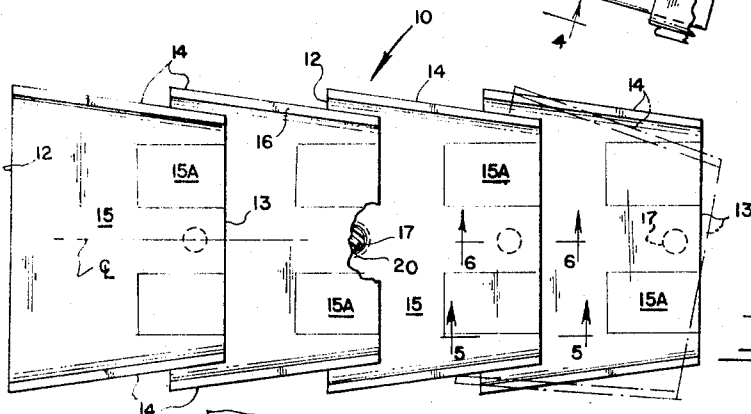
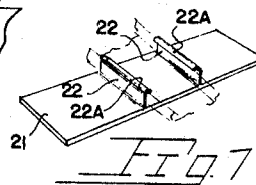
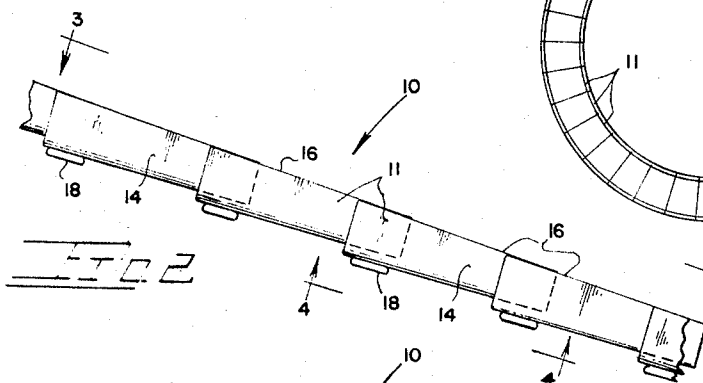
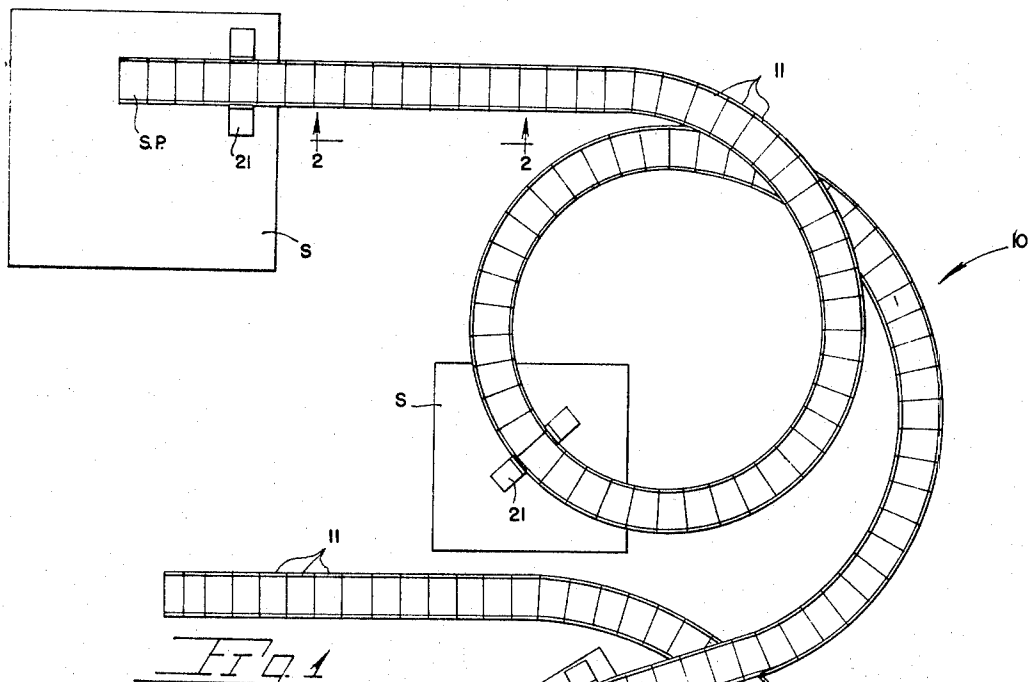
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ABSTRACT

A track for toy autos comprising pivotally linked track pieces each in alternate underlapped and overlapped supporting relationship at its ends with adjacent track pieces. The lapped portions include pivot means permitting articulated adjustment of each piece to provide track curves of various radii. Sidewalls of each piece confine the toy auto on the track. The traction surface of each piece includes beveled areas for an uninterrupted continuous traction surface for the track.

2 Claims, 7 Drawing Figures





TRACK FOR TOY AUTOS

BACKGROUND OF THE INVENTION

The present invention relates generally to a segmented track for toy autos down which the same may coast through a wide variety of turns and inclines permitted by track structure.

While various tracks for the coasting of toy autos are in the prior art they, for the most part, do not permit a wide variety of track configurations and lengths. Prior art track segments are, at best, made of deformable material with preformed curved and straight sections. Track comprised of such sections by reason of its weight requires support throughout its assembled length thus limiting its use to a supporting floor surface or large table.

Well known in the prior art are other trackways for toy autos formed in continuous elongate flexible strips which do not lend themselves to shaping into various configurations and thus are limited in their use to straight inclines.

Other toy auto tracks I am aware of include preformed curved sections which may or may not be banked and are of a complex nature as regards their interfitting end portions. Accordingly, the cost of manufacture, durability and use are adversely affected.

SUMMARY OF THE PRESENT INVENTION

The instant track structure embodying the present invention comprises a multitude of track pieces linked in a manner permitting a wide variety of track configurations to be formed.

The track pieces, preferably of a high impact type, resinous plastic, are readily linked with one another by the child to provide the track length and shape desired. No intricate assembly effort or tools are required for such assembly thus permitting the track to be set up and dismantled quickly each time the child desires to use same thus obviating use of a special supporting board or other surface.

The track pieces partially overlies one another to provide a degree of linear rigidity to permit unsupported lengths of linked pieces to extend substantial distances without requiring support. The child may accordingly configure the track structure to provide curved and spiral segments of various radii and differing inclination with support for the elevated segments being required only at widely spaced intervals. Inclusive with the track structure are transversely attachable clips enabling convenient resting of the track segments on any available raised surfaces.

The track pieces are of uniform size and shape with each including interengageable means for pivotally linking the pieces to one another. As earlier noted, the joined pieces partially overlies one another to provide coacting planar surfaces for joint supporting thereof. The means, pivotally attaching the pieces, retain same in closely overlying surface contact with one another. Accordingly, linear rigidity of the track structure is provided for with supports for the track being required only at widely spaced intervals.

With continuing attention to the pivot means interengaging each of the track pieces the same permits a wide range of angular adjustment between adjacent track pieces desirably between ten and fifteen degrees. The pivot means is embodied within a snap type coupling comprising a pintle terminating in a flanged rim for

temporary inserted engagement with a correspondingly sized opening in the adjacent track piece. Upturned sidewall portions of each piece confine the toy auto for downward travel with said sidewalls directed inwardly and terminating intermediate the sidewalls of an adjacent piece. Each track piece has a beveled area adjacent its lower end to provide, in effect, a continuous traction surface for the toy auto.

To assist in retaining the track structure in place on a raised supporting surface I provide means engageable with track pieces and extending transversely therebelow for resting placement on said surface.

BRIEF DESCRIPTION OF THE DRAWING

In the accompanying drawing,

FIG. 1 is a plan view of a typical track arrangement possible with the present track components,

FIG. 2 is a side elevational view of a segment of track taken along line 2—2 of FIG. 1,

FIG. 3 is a plan view of FIG. 2 taken along line 3—3 thereof,

FIG. 4 is a bottom plan view of a track piece and adjacent pieces taken along line 4—4 of FIG. 2,

FIG. 5 is a sectional elevational view of cooperating portions of two track pieces taken along line 5—5 of FIG. 3,

FIG. 6 is a view similar to FIG. 5 taken along line 6—6 of FIG. 3 showing details of the cooperating pivot means on adjacent track pieces, and

FIG. 7 is a perspective view of a clip engageable with the track structure to assist in retaining same on a raised supporting surface.

DESCRIPTION OF PREFERRED EMBODIMENTS

With continuing reference to the accompanying drawing wherein applied reference numerals indicate parts similarly identified in the following specification, the reference numeral 10 indicated generally a continuous length of track shaped in a typical track configuration.

The length of track 10 is of a segmented nature comprising pivotally attached pieces 11 each being independently articulated to permit a wide variety of track configurations. With attention to a single track piece 11, the same is of trapezoidal shape in plan view having parallel upper and lower edges (when part of an inclined track structure) 12 and 13. Non-parallel sidewalls at 14 extend inwardly in a converging direction. With reference to FIG. 2 it will be seen that the sidewalls 14 additionally taper in a downward direction from upper to lower edges to provide a sidewall upper edge 16 substantially coplanar with like edges of adjacent sidewalls. The track pieces when joined accordingly have an attractive, uninterrupted appearance as viewed from the side with no undesirable sharp projections.

A web portion at 15 of each track piece provides a traction surface for the toy autos and is provided with a beveled surface 15A contiguous with the lower edge 13 of each piece. Said beveled surfaces provide for a more or less continuous running surface for the toy autos and avoid causing the same to bounce as they move from one piece to another.

Referring to FIG. 6, pivot means are disclosed for articulated engagement of adjacent track pieces with said means additionally providing for surficial, abutting engagement of said pieces. In particular, a pintle is indi-

cated at 17 terminating downwardly a distance X in an enlarged rim or end 18 the latter having a curved surface 18A. Pintle 17 is desirably integral with the web portion 15 of the track piece thus lending same to economical, high volume production. The depending pin-
 5 tle 17, located adjacent the lowermost edge 13 of the track piece, is located on a track piece center line for inserted engagement with an aperture 20 adjacent the uppermost edge 12 of subjacent track piece. The diam-
 10 eter dimensions of rim 18 and cooperating opening 20 are such to permit a snap type coupling operation with finger pressure resulting in the corresponding surfaces of the two pieces being retained in surface engagement. Additionally, the pivot means so provided permit man-
 15 ual coupling and uncoupling of the pieces all without the aid of tools. Further, the pivot means permits a wide range of arcuate positioning of one track piece relative to an adjacent piece. The joined track pieces, regardless of their angular relationship, have planar
 20 areas in abutting contact with one another whereby the abutting surfaces are retained in a desired substantially coplanar relationship. Further, the sidewalls 14 contribute to the rigidity of each track piece reinforcing same against gravitational loads borne by unsupported
 25 track segments. The inherent flexibility of the material used for the track pieces, desirably a high impact type plastic, in combination with the pivoted coupling means permits some downward deflection of such track segments.

With attention being directed to FIG. 1 a length of track is shown supported at intervals by randomly
 30 placed supports S with the unsupported portions of the track inclining downwardly from a starting point at SP to provide a varying gradient for the track structure 11. For purposes of retaining the track in place on one of
 35 said supports are transversely attached clips 21. Each of said clips includes a pair of upwardly projecting walls 22 which closely confine the opposing sidewalls of a track piece 11 and have inwardly directed edges 22A to frictionally engage the upper edges 16 of a track
 40 piece or pieces. The clips 21 provide a surface area which may receive a weighted article to prevent displacement from the supporting surface.

Within the scope of the present track structure the

pivot means provided may have varying degrees of clearance as for example a series of several pieces more or less permanently interconnected with somewhat re-
 5 stricted pivot means clearance with end located track pieces with greater pivot means clearance adapted for ready coupling and uncoupling with the end pieces of other like series of several track pieces. Accordingly, if
 10 desired, the track structure may be conveniently assembled and stored in sections.

While I have shown but a few embodiments of the invention it will be apparent to those skilled in the art that the invention may be embodied still otherwise without departing from the spirit and scope of the in-
 15 vention.

Having thus described the invention what is desired to be secured under a Letters Patent is:

1. A track structure inclined for the gravitational travel of toy automobiles therealong, said track struc-
 20 ture comprising a multitude of track pieces of rigid synthetic resinous material each in partial under and overlapped relationship with adjacent track pieces, each of said track pieces including interengagable pivot means
 25 located on the lapped portions of the track pieces, said pivot means including a pintle for inserted downward engagement within an aperture formed within the overlapped portion of an adjacent track piece, said pintle
 30 terminating downwardly in an enlarged rim, said rim being of slightly greater diameter than the aperture for snap type engagement therewith to retain the lapped portions of said track pieces in surfacial contact with
 35 one another and permitting cantilevered lengths of joined track pieces while permitting pivotal motion therebetween, each of said track pieces having inwardly directed sidewalls terminating in the direction
 40 track inclination in inwardly spaced relationship to the outwardly disposed sidewalls of a subjacent track piece to permit pivotal adjustment between two track pieces for shaping of the track structure into curves as desired.

2. The track structure as claimed in claim 1 wherein the track surface is beveled adjacent its lowermost edge to provide uninterrupted transition of a toy automobile from one track piece to another.

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