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FOREIGN PATENTS

422,481 /1947 Italy 46/202

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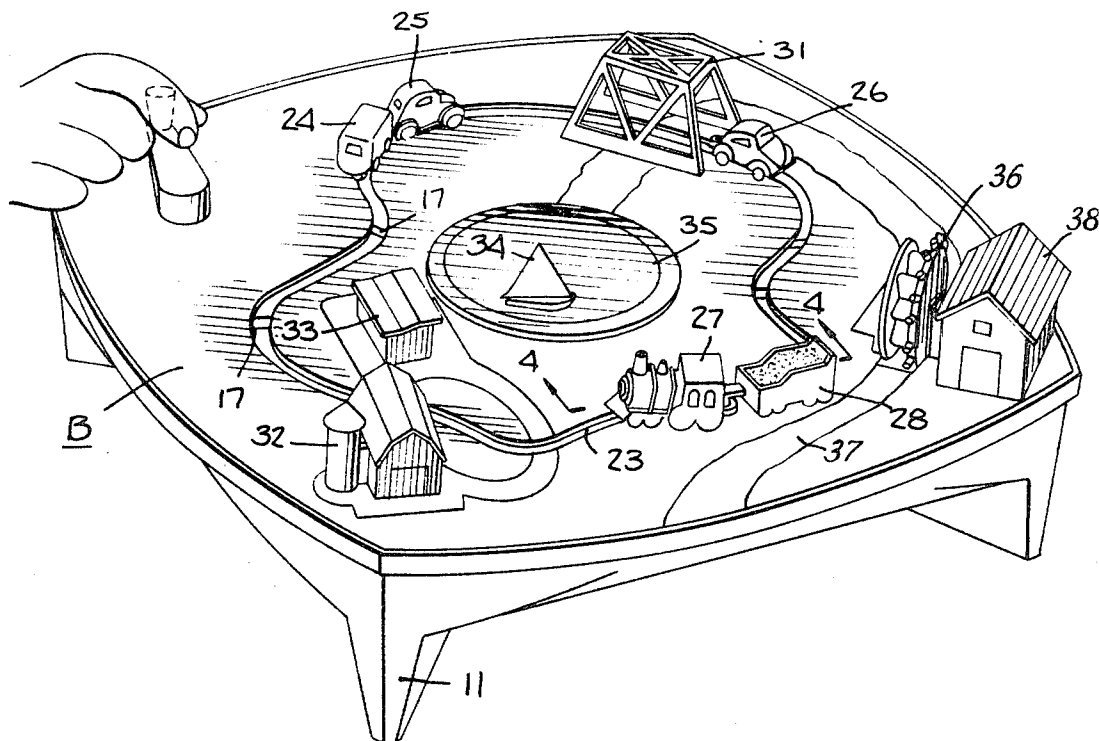
[54] **SCENIC ROAD TRAVEL TOY**
 5 Claims, 5 Drawing Figs.

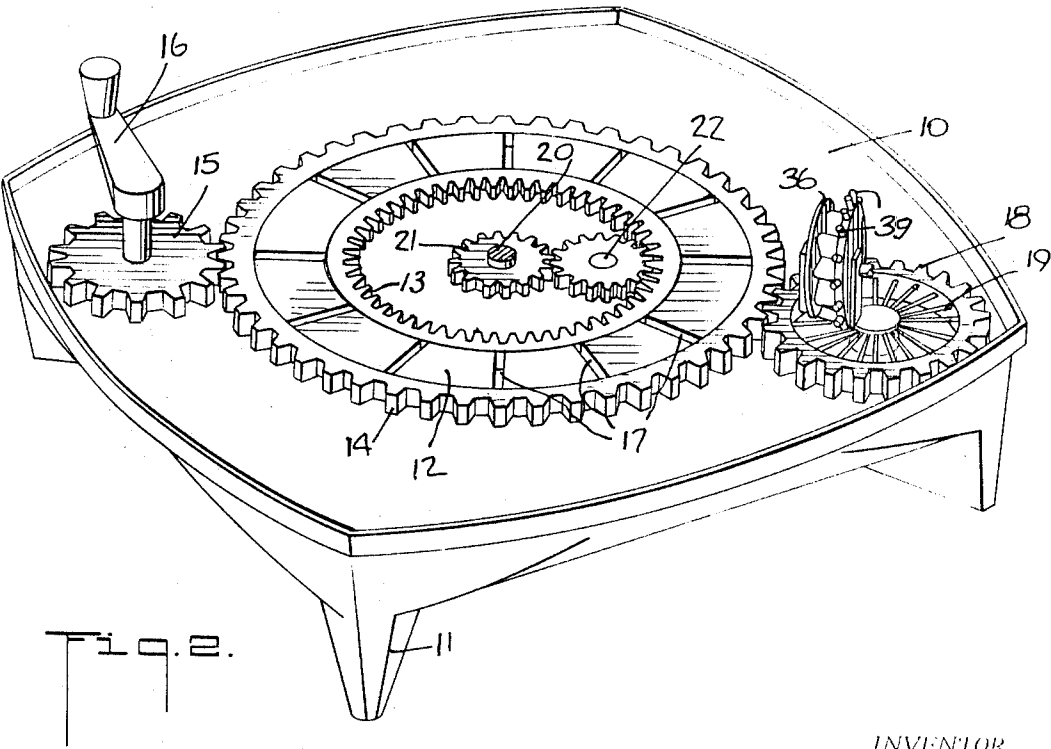
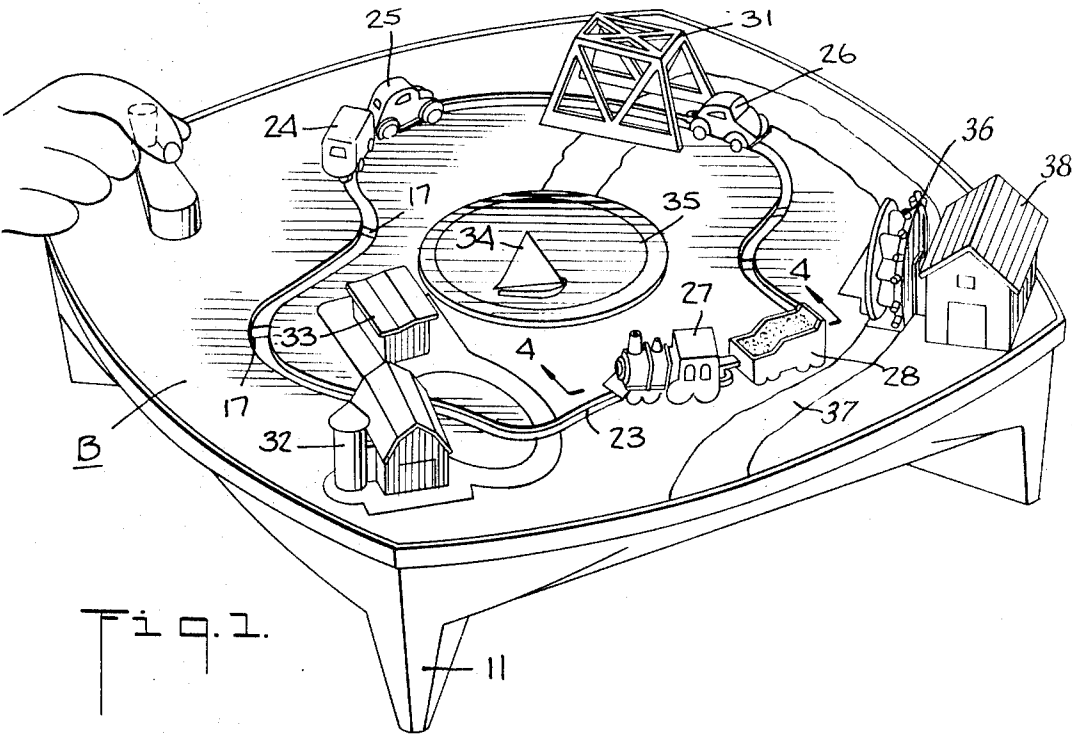
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 [50] Field of Search 272/31;
 46/202, 122, 216

[56] **References Cited**
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ABSTRACT: A scenic road travel toy in which vehicles such as automobiles and trains move along an undulating road about whose sides are disposed barns, houses and other structures normally encountered in the course of travel. The toy is constituted by a hand-operated turntable having radial slots formed therein. Overlying the turntable is a board providing the scenic terrain, the board having a continuous channel cut therethrough which undulates in a path intercepting all of the radial slots in the turntable to define an endless road. Also provided are vehicles having follower pins projecting therefrom which are receivable in said slots, such that as the turntable rotates, each pinned vehicle is caused to travel along the undulating road.





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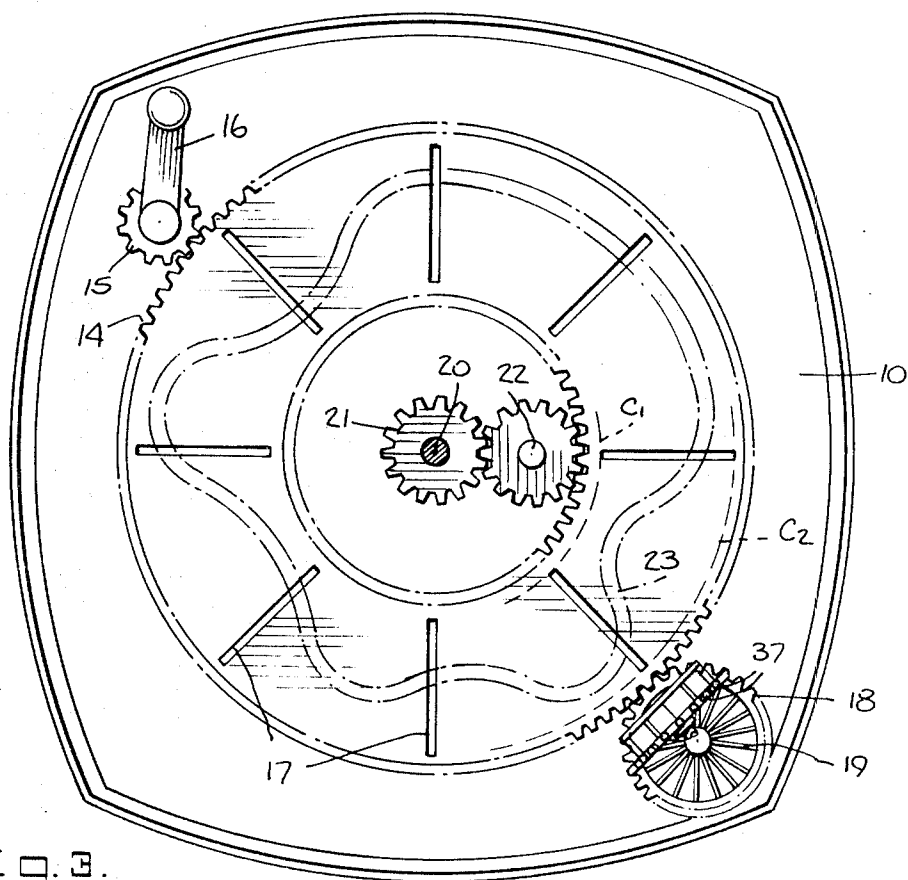


FIG. 3.

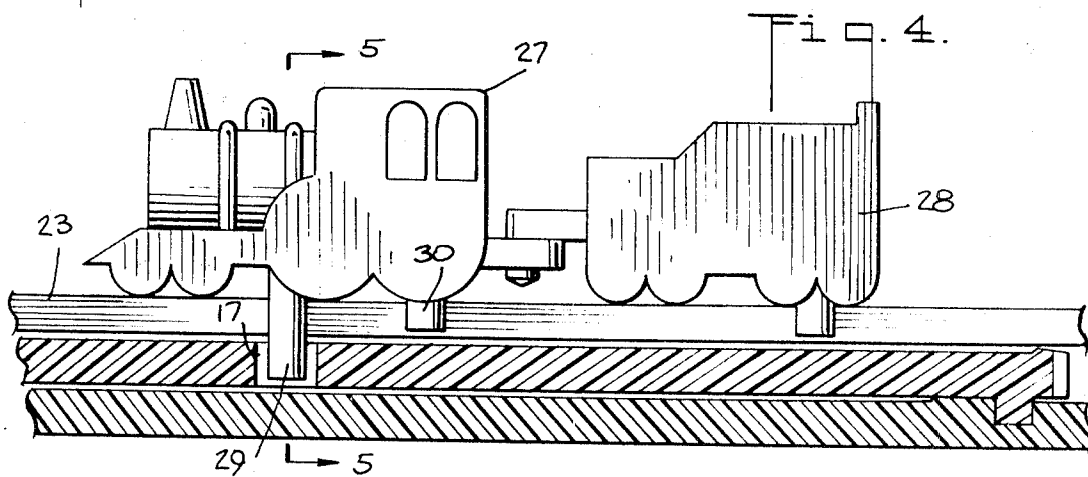


FIG. 4.

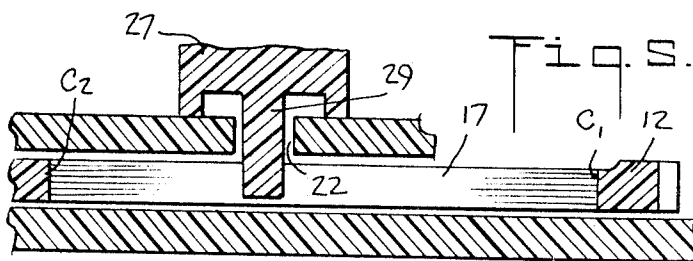


FIG. 5.

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SCENIC ROAD TRAVEL TOY

BACKGROUND OF INVENTION

This invention relates generally to toys in which vehicles travel along a track or road, and more particularly to a scenic road travel toy in which automobiles, railroad engines and other vehicles move along an undulating road in an endless path.

In a toy merry-go-round, animal figures and other objects mounted on a turntable and are caused thereby to move in a circular path. In other toys based on the merry-go-round principle, miniature railroad trains or automobiles are caused to move in a circular track. This type of operation is of very limited interest to a child, for the repetitive travel of a railroad engine or other vehicle in an endless circular track is unvaried, monotonous and ultimately tedious, so that the child quickly loses interest and discards the toy.

In his play, a child searches for verisimilitude and seeks to create in a miniature scale, a situation which resembles full-scale reality. Thus, in playing with vehicles, the child's interest is in having the car travel along a road which, in the adult world, is never a symmetrical circular track (except in a sport speedway), but which is curved or irregular and is related in some way to the terrain.

On the other hand, in designing a simple, low cost toy, the least expensive mechanism for producing movement is a rotary turntable, for ordinarily in order to cause a toy vehicle to travel in an asymmetrical track, a relatively complex mechanism is required.

BRIEF DESCRIPTION OF THE INVENTION

In view of the foregoing, the main object of this invention is to provide a scenic travel toy in which miniature vehicles under the control of a player are made to move along an undulating road which simulates travel under realistic circumstances, the mechanism for this purpose being of simple, low cost design.

More particularly, it is an object of the invention to provide a toy of the above type in which the movement of the vehicles is effected by a crank-operated turntable which rotates in a circular path, and yet causes the vehicles driven thereby to travel in any undulating path.

Also an object of the invention is to provide a toy of the above type in which the undulating road over which the vehicles travel, passes under a bridge and through terrain having replicas of barns, lakes, streams, mills and other natural and manmade objects one is likely to encounter in the course of travel on a country road.

Briefly stated, these objects are attained in a scenic travel toy in which a crank-operated circular turntable has a series of radial slots formed therein, the turntable being covered by a board providing the scenic terrain and having a continuous channel cut therethrough which undulates in a path intercepting all of the radial slots in the turntable to define an endless road. Also provided are vehicles having follower pins projecting therebelow which are receivable in said slots. The vehicles move along the board surface and as the turntable is cranked, each pinned vehicle is caused to follow the undulations of the road.

BRIEF DESCRIPTION OF DRAWING

For a better understanding of the invention, as well as other objects and further features thereof, reference is made to the following detailed description to be read in conjunction with the accompanying drawings, wherein:

FIG. 1 is a perspective view of a scenic travel toy in accordance with the invention;

FIG. 2 is the same view as FIG. 1, with the board removed;

FIG. 3 shows in plan view the relationship of the undulating endless road to the underlying turntable;

FIG. 4 is a section taken through the toy in the plane indicated by line 4-4 in FIG. 1; and

FIG. 5 is a section taken in the plane indicated by line 5-5 in FIG. 4.

DESCRIPTION OF INVENTION

Referring now to the drawings, the toy in accordance with the invention comprises a generally rectangular table 10 supported on four legs 11. Lying on the table in the central region thereof is a ring-shaped turntable 12 whose inner periphery has gear teeth 13 formed thereon, and whose outer periphery has gear teeth 14 formed thereon. Outer teeth 14 are engaged by a pinion 15 also resting on the table and adjacent a corner thereof. Pinion 15 is operated by a crank 16 having a handle such that manual rotation of crank 16 causes the turntable to rotate about its central axis.

A series of radial slots 17 is formed in turntable 12, the slots being equispaced. Lying adjacent another corner of the table is a gear 18 having a series of radial slots 19 formed therein. Centrally disposed within turntable 12 on an axle 20 is a gear 21 which intermeshes with an idler wheel 22 whose teeth engage the inner teeth 13 on the turntable. Thus, as the turntable is cranked, gears 18 and 21 are simultaneously caused to rotate.

Overlying the turntable and the gears associated therewith, is a board B forming the terrain of the scenic toy. Board B has a channel 23 cut therethrough, whose configuration is undulating to define a highly varied and endless trackway. As best seen in FIG. 3, the geometry of the channel 23 is such with respect to radial slots 17 formed in the underlying turntable that the channel intersects all of the slots. At no point does the channel extend beyond circular boundaries C₁ and C₂, the first of which is coincident with the inner limit of the slots, and the second of which is coincident with the outer limit thereof.

Hence as the turntable rotates, the points of intersection between slots 17 on the turntable and channel 23 vary within the boundaries established by circles C₁ and C₂. Riding along the road defined by channel 23 are miniature vehicles such as automobiles 24, 25 and 26, and a railroad locomotive 27, linked to a coal car 28.

Each vehicle, such as locomotive 27, is provided with a follower pin 29, as shown in FIG. 4, which extends through channel 23 and is received in a slot 17. Thus as the turntable is caused to turn, the vehicle follower pin 29 received by the slots cause the associated vehicles to travel along the endless track. Since the pins lie at the points of intersection of the channel and slots, and as these points vary their position between circular boundaries C₁ and C₂, the pins as they are advanced, also shift laterally in the course of vehicle travel to follow the undulations of the road.

The vehicles may also be provided with a shorter guide pin 30 which enters only the channel 23 and serves to prevent rotation of the vehicle about the follower pin 29. However, in the case of coal car 28, since it is linked by a hinged coupling to the locomotive 27 which has a guide pin, the coal car has only a guide pin 30, for it is drawn by the locomotive.

In order to simulate scenic effects of the type encountered along the road, a bridge 31 is placed across the road, and about the sides are situated a barn 32 and a house 33. A sailboat sailing on the lake is simulated by boat 34 mounted on disc 35 disposed within the open center of board B. The disc is secured to shaft 20 of gear 21 so that as the turntable rotates, the shaft causes disc 35 to turn and thereby to give the effect of a boat in movement.

A water wheel 36 is placed in a stream 37 painted on scenic board B adjacent a millhouse 38. As best seen in FIG. 2, water wheel 36 is provided with pins 39 which engage the slots 19 on gear 18; hence as the turntable rotates, the water wheel which lies above the board, is seen to rotate.

It will be appreciated that the arrangement of vehicles on the road and the spacing therebetween is under the control of the player, for he may choose to place a vehicle in any available slot.

While there has been shown and described a preferred embodiment of scenic road travel toy in accordance with the in-

vention, it will be appreciated that many changes and modifications may be made therein without, however, departing from the essential spirit of the invention.

I claim:

1. A scenic travel toy comprising:

A. a turntable having a continuous series of radial slots formed therein, the slots extending between a circular inner boundary and a circular outer boundary;

B. a board overlying the turntable and having a channel cut therein to define in endless undulating road which lies between said boundaries and intersects all of said slots,

C. at least one removable vehicle movable along said road, said vehicle having a follower pin projectable into any one of said slots, and being shiftable therein within a radial range limited by said boundaries, and

D. means to turn said turntable to cause said pinned vehicle to travel along said undulating road.

2. A toy as set forth in claim 1, wherein said vehicle is also

provided with a shorter guide pin which enters only said channel to prevent rotation of said vehicle about said pin.

3. A toy as set forth in claim 1, wherein said turntable is a ring having inner and outer teeth, further including a hand-cranked pinion engaging said outer teeth to turn said turntable.

4. A toy as set forth in claim 3, further including a gear centrally mounted within said ring and operatively coupled by an idler wheel to the inner teeth thereof, and a disc within said board connected to said gear to turn therewith, a boat being mounted above said disc.

5. A toy as set forth in claim 3, further including a second gear positioned to engage the outer teeth of said ring, said second gear having radial slots formed therein, and a water wheel disposed above said board and having pins thereon received within the slots in said second gear to cause said water wheel to rotate as the turntable is turned.

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