Jan. 8, 1946. L. H. BURLIN 2,392,722

LOOP THE LOOP TOY

Filed May 14, 1945

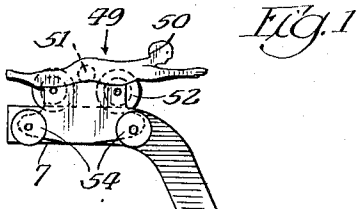


Fig. 1

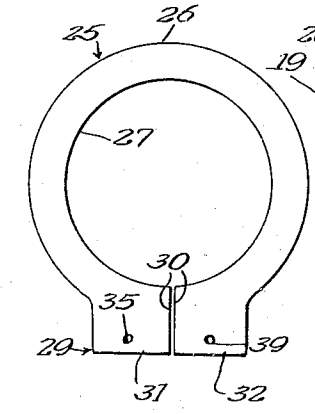


Fig. 4

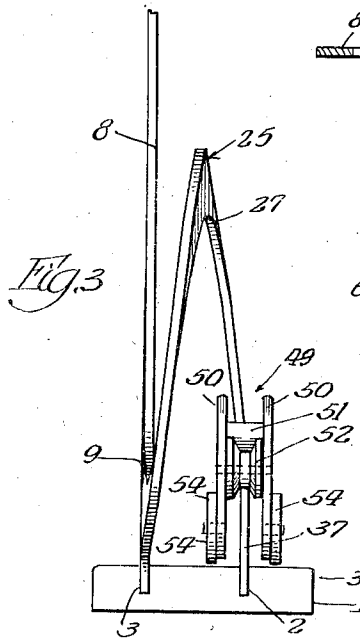


Fig. 3

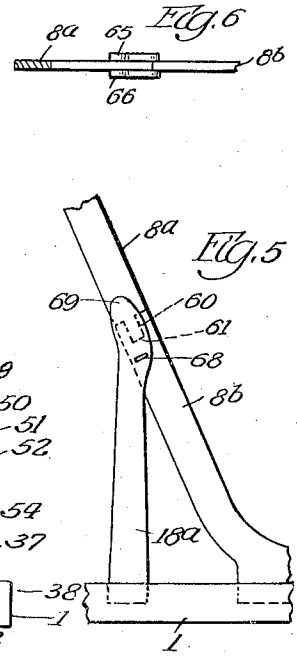


Fig. 5

Fig. 6

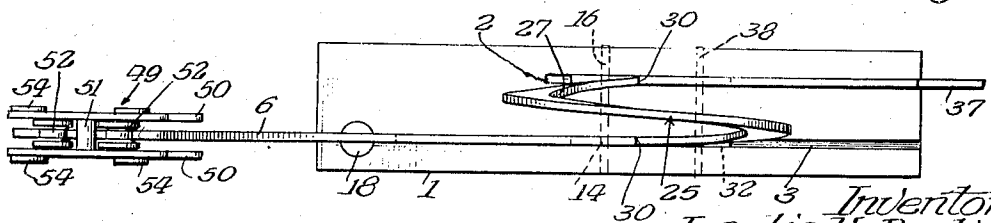


Fig. 2

Inventor
Leslie H. Burlin
By Morris Spector
Atty

Patented Jan. 8, 1946 2,392,722

UNITED STATES PATENT OFFICE

2,392,722

LOOP THE LOOP TOY

Leslie H. Burlin, Valparaiso, Ind., assignor to Milton L. Sturm, Evanston, Ill., doing business as Milton Sturm and Company

Application May 14, 1945, Serial No. 593,561

7 Claims. (Cl. 46—1)

This invention relates to toys of the type wherein a toy figure having wheels arranged so as to constitute the figure a monorail car may be caused to roll down an incline thereby gaining velocity, and then caused to speed along the ground on another set of wheels.

It is one of the objects of the present invention to provide a simple trackway for a toy of the above mentioned character. It is a further object of the present invention to provide an improved loop the loop trackway for a toy of this character. In accordance with the preferred embodiment of the present invention the trackway consists of a plywood board which is mounted on edge so that the edge of the board will constitute a track for the monorail wheels of the toy. The loop of the trackway, in accordance with the present invention, consists of a thin annular board which is slit radially and the two ends of the annulus spread apart so that the inner curve of the annulus becomes a trackway for the monorail toy figure. This very substantially reduces the cost of construction of the trackway.

The attainment of the above and further objects of the present invention will be apparent from the following specification taken in conjunction with the accompanying drawing forming a part thereof.

In the drawing:

Figure 1 is a side view of a toy embodying the present invention;

Figure 2 is a top view of the toy of Figure 1;

Figure 3 is a fragmentary view taken along the line 3—3 of Figure 1, with the toy figure at the bottom of the trackway just as it emerges from the loop;

Figure 4 is a front view of the board constituting the loop of the trackway; and

Figures 5 and 6 are, respectively, fragmentary side and top views of a modified track construction.

In the drawing like reference numerals designate like parts throughout.

The toy comprises a base 1 which consists of a rectangular block of wood or the like having two parallel longitudinally extending slots 2—3 on the top surface thereof. The slots are of a width approximately equal to the thickness of the board constituting the track.

The track of the toy of the present invention is made entirely of three separate flat pieces of plywood of the same thickness. One piece of plywood, indicated at 6, includes a horizontal top portion 7, an inclined portion 8 and a very short horizontal bottom portion 9, all joined along one smooth continuous curve and cut from a single flat piece of plywood board. Below and adjacent the track portion 9 the piece of plywood 6 has a downwardly projecting portion 14 which is an integral part of the piece of plywood and which extends downwardly into and fits snugly within the slot 3 in the base 1. This holds the board that constitutes the track 6 with the opposite sides thereof in vertical planes. A dowel pin 16 is driven through aligned holes in the base 1 and in the projecting part 14 to secure the track 6 to the base 1. A post 18, consisting of a circular wooden rod, is driven at its lower end into the base 1 and is slotted or forked at its upper end to receive a projection 19 which is integral with and extends from the under side of the track 6. A dowel pin 20 extends through the tines of the fork at the upper end of the rod 18 and through the projecting portion 19 and serves to secure the rod to the trackway 6, whereby the rod helps to support the trackway.

A loop for a circular track is indicated at 25. This loop comprises a flat annular piece of plywood having an outer circular periphery 26 and an inner periphery 27. The piece 25 has at its bottom a downwardly projecting mounting portion 29 integral therewith. The piece is cut along a radial line 30 so that the mounting part 29 is split into two similar halves 31—32 constituting loop mounting legs. After the piece 25 has been cut along the line 30 the two legs 31—32 are flexed apart, and the leg 32 is pressed into the slot 3 of the base 1 so that the line 30 thereof contacts the bottom vertical edge of the slide 6. The leg 31 of the annular piece 25 is pressed into the slot 2. The dowel pin 16 which is driven through the block 1 extends also through a hole 35 in the leg 31.

A flat strip of plywood 37 is driven into the forward portion of the slot 2 in the base 1, with the end of the strip 37 in contact with the cut edge 30 of the loop mounting leg 31. The top surface 9 is tangent to the inner annulus ring 27 at the edge 30 of the forward leg 32, and the top surface of the strip 37 is tangent to the inner annulus ring 27 at the edge 30 of the leg 31. Thus the inner edge surface 27 of the ring 25 constitutes a loop forming a smooth continuation or connection between the track 6 and the top surface of the strip 37, which also constitutes a track. A dowel pin 38 is driven through the base 1 and through a hole 39 in the leg 32 and through a corresponding hole in the strip 37 and thus serves to help hold the loop 25 and the strip 37 in place.

A toy monorail figure 44 may be placed on top of the track 6 to roll down the trackway and make a loop the loop turn at the bottom of the trackway. The toy figure consists of two flat boards 50—50 secured together in spaced parallel relationship by a thin wooden pin 51. A pair of grooved pulleys or wheels 52—52 are journalled between the boards 50, the grooves in the wheels being of width just right to enable those wheels to embrace and ride on the trackway previously described. Four wheels 54 are rotatably mounted on the outside of the boards 50. The boards 50 may be decorated or shaped to simulate a toy figure. The center of gravity of the entire figure is appreciably below the bottoms of the wheels 52—52.

The toy figure 49 has been illustrated in Figure 1 in a position on top of the trackway, with the boards 50—50 thereof straddling but spaced from the trackway, and the monorail wheels 52—52 resting on the trackway. If the figure is started rolling down the incline it will pass from the portion 8 of the incline to the loop formed by the annulus 25, traveling through the inside of the loop due to the momentum gained in traveling down the trackway 6, and then will travel along the track formed by the edge of the board 37. The forward edge of the board 37 is tapered, as indicated at 47, so that the forward moving toy is gradually brought closer to the ground until the wheels 54 thereof contact the ground, whereupon the toy continues its advance on the ground due to its momentum.

In Figures 5 and 6 I have shown a modified construction wherein the track 8 of Figure 1 is made of two separable parts to facilitate packing of the unit for shipment. In this construction the track comprises separable lengths 8*a* and 8*b* of plywood lying in the same plane and joined at the support 18*a*. The bottom of the board 8*a* rests on the top of the board 8*b* and has an inclined tongue 60 which enters into a correspondingly shaped slot 61 at the top of the board 8*b*. The support 18*a* comprises two similar flat sided boards 65—66 which are parallel to one another. The bottoms of the boards 65—66 fit into rectangular slots in the base 1 and are secured therein in spaced relationship. The distance between the boards 65—66 is equal to the thickness of the individual boards 8*a* or 8*b*. A staple 68 secures the support boards 65—66 to the track portion 8*b*. The tops of the boards 65—66 extend above the track portion 8*b*, as indicated at 69, and embrace and hold the bottom of the track portion 8*a* against transverse movement. The top of the track portion 8*b* and the bottom of the track portion 8*a* are of the same construction as that of the corresponding portions of the track 8 previously described.

The track portion 8*a* may be removed by a simple upward or lifting action.

From the above description it is apparent that I have provided a simple loop the loop type of monorail toy wherein the trackway constituting the incline is made in a simple manner and wherein the loop portion of the trackway is also constructed in a very simple manner.

In compliance with the requirements of the patent statutes I have here shown and described a preferred embodiment of my invention. It is, however, to be understood that the invention is not limited to the precise construction here shown, the same being merely illustrative of the principles of the invention. What I consider new and desire to secure by Letters Patent is:

1. A trackway for a loop the loop monorail toy vehicle, said trackway comprising a thin board mounted in a vertical plane with an edge of the board inclined and constituting a portion of the trackway, a loop at the bottom of said portion of the trackway, said loop comprising a thin board of annular shape slit by a line of cut extending from the inner circle of the annulus to its outer periphery, the cut edges being separated from one another to form the loop into a spiral of an arcuate extent substantially 360°, the loop being positioned with its axis at right angles to the plane of the said first mentioned board and with the inclined trackway tangent to the inner curve of the annulus, said inner curve of the annulus constituting another portion of the trackway and a continuation of said first mentioned portion of the trackway.

2. A toy including a trackway for a monorail toy vehicle, said trackway comprising a thin sheet mounted in a vertical plane with an edge of said sheet inclined and constituting a portion of the trackway, and a toy monorail car on said trackway, said car comprising two spaced apart substantially flat members embracing and spaced from the trackway and a pair of wheels journalled between said members, and said wheels having peripheral flanges embracing the trackway and holding the car against sideways movement off of the trackway.

3. A toy including a trackway for a monorail toy vehicle, said trackway comprising a thin sheet mounted in a vertical plane with an edge of said sheet inclined and constituting a portion of the trackway, and a toy monorail car on said trackway, said car comprising two spaced apart substantially flat members embracing and spaced from the trackway and a pair of wheels journalled between said members, and said wheels having peripheral flanges embracing the trackway and holding the car against sideways movement off of the trackway, said car having in addition four bottom wheels adapted to support and advance the car as it leaves the trackway.

4. A toy including a trackway for a loop the loop monorail toy vehicle, said trackway comprising a thin board mounted in a vertical plane with an edge of the board inclined and constituting a portion of the trackway, a loop at the bottom of said portion of the trackway, said loop comprising a thin board of annular shape slit by a line of cut extending from the inner circle of the annulus to its outer periphery, the cut edges being separated from one another to form the loop into a spiral of an arcuate extent substantially 360°, the loop being positioned with its axis at right angles to the plane of the said first mentioned board and with the inclined trackway tangent to the inner curve of the annulus, said inner curve of the annulus constituting another portion of the trackway and a continuation of said first mentioned portion of the trackway, and a toy monorail car on said trackway, said car comprising two spaced apart substantially flat members embracing and spaced from the trackway and a pair of wheels journalled between said members, said wheels having peripheral flanges embracing the trackway and holding the car against sideways movement off of the trackway.

5. A trackway for a loop the loop toy vehicle, said trackway comprising a base having a pair of spaced approximately parallel slots in the top thereof, a thin board mounted in one of the slots and extending from the base in a vertical plane with an edge of the board inclined and constitut-

ing a portion of the trackway, a loop at the bottom of said portion of the trackway, said loop comprising a thin board of annular shape slit by a line of cut extending from the inner circle of the annulus to its outer periphery, the cut edges being separated from one another to form the loop into a spiral of an arcuate extent substantially 360°, the separated ends of the loop being mounted one in each slot of the base, the loop being positioned with its axis at right angles to the plane of the said first mentioned board and with the inclined trackway tangent to the inner curve of the annulus, said inner curve of the annulus constituting another portion of the trackway and a continuation of said first mentioned portion of the trackway.

6. A toy including a trackway for a loop the loop toy vehicle, said trackway comprising a base having a pair of spaced approximately parallel slots in the top thereof, a thin board mounted in one of the slots and extending from the base in a vertical plane with an edge of the board inclined and constituting a portion of the trackway, a loop at the bottom of said portion of the trackway, said loop comprising a thin board of annular shape slit by a line of cut extending from the inner circle of the annulus to its outer periphery, the cut edges being separated from one another to form the loop into a spiral of an arcuate extent substantially 360°, the separated ends of the loop being mounted one in each slot of the base, the loop being positioned with its axis at right angles to the plane of the said first mentioned board and with the inclined trackway tangent to the inner curve of the annulus, said inner curve of the annulus constituting another portion of the trackway and a continuation of said first mentioned portion of the trackway, and a toy monorail car on said trackway, said car comprising two spaced apart substantially flat members embracing and spaced from the trackway and a pair of wheels journalled between said members, and said wheels having peripheral flanges embracing the trackway and holding the car against sideways movement off of the trackway.

7. A trackway for a loop-the-loop monorail toy vehicle, said trackway comprising thin sheet material having an upper starting portion downwardly inclined and lying in substantially a vertical plane and a lower terminal portion also substantially in a vertical plane but spaced from the plane of the starting portion, said trackway having also an intermediate loop portion extending through an arc of substantially 360° between the starting and terminal portions, said loop being in spiral form and of a pitch substantially equal to the distance between said planes, the edge of the thin sheet material constituting the track for the vehicle, and the inside of the loop being tangent to the upper edge of the sheet material at the bottom of the incline and to the upper edge of the sheet material at the lower terminal portion, and means for holding the lower terminal portion of the trackway and the part of the loop spaced 360° therefrom in spaced apart vertical planes.

LESLIE H. BURLIN.