Dec. 24, 1957 J. V. M. DIGIROLAMO 2,817,183

TRACKSIDE ACCESSORIES FOR TOY RAILROADS

Filed Nov. 17, 1953 3 Sheets-Sheet 1

Fig. 1.

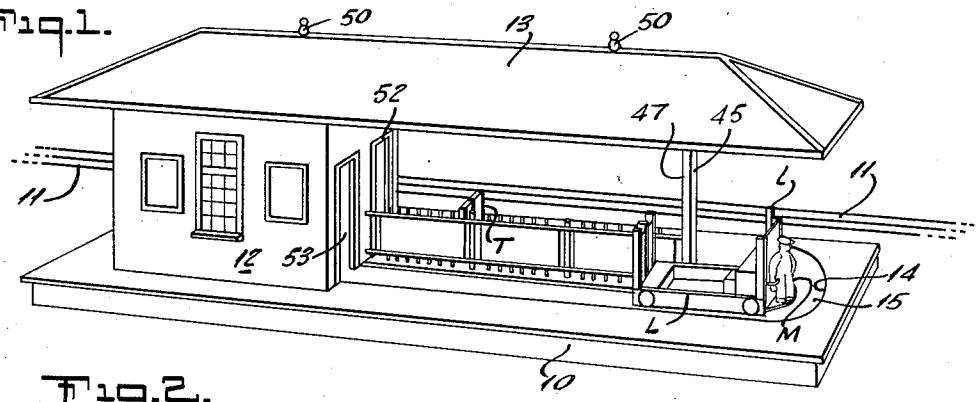


Fig. 2.

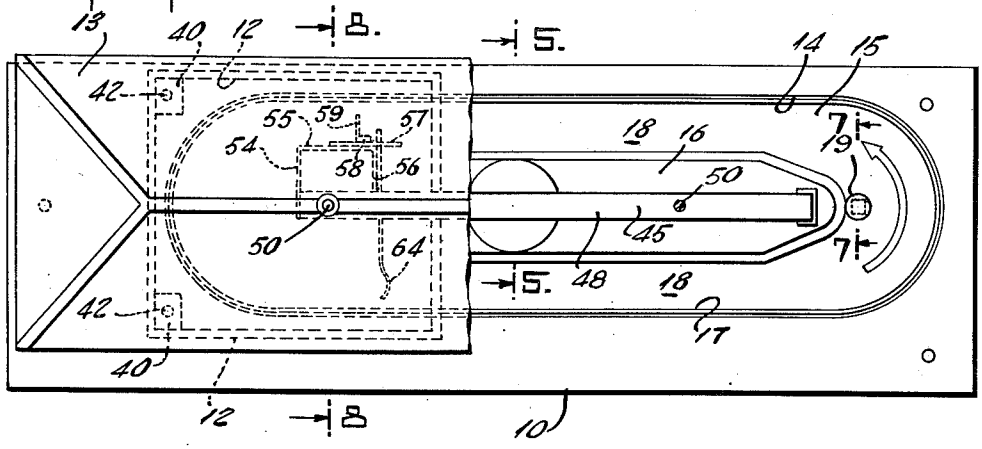
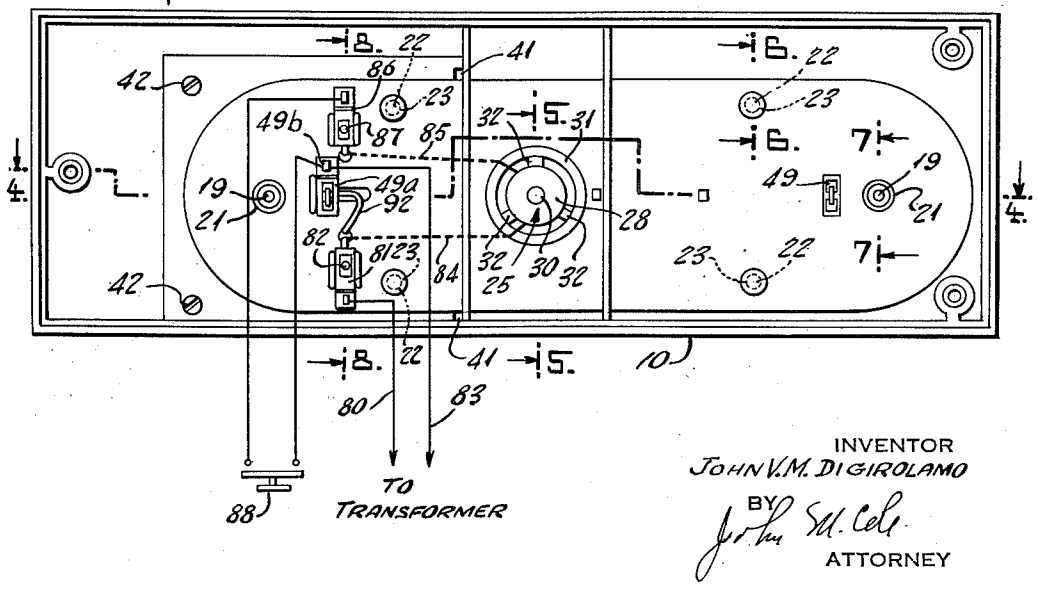


Fig. 3.



INVENTOR
JOHN V.M. DIGIROLAMO
BY
ATTORNEY

Dec. 24, 1957 J. V. M. DIGIROLAMO 2,817,183

TRACKSIDE ACCESSORIES FOR TOY RAILROADS

Filed Nov. 17, 1953 3 Sheets-Sheet 2

Fig. 4.

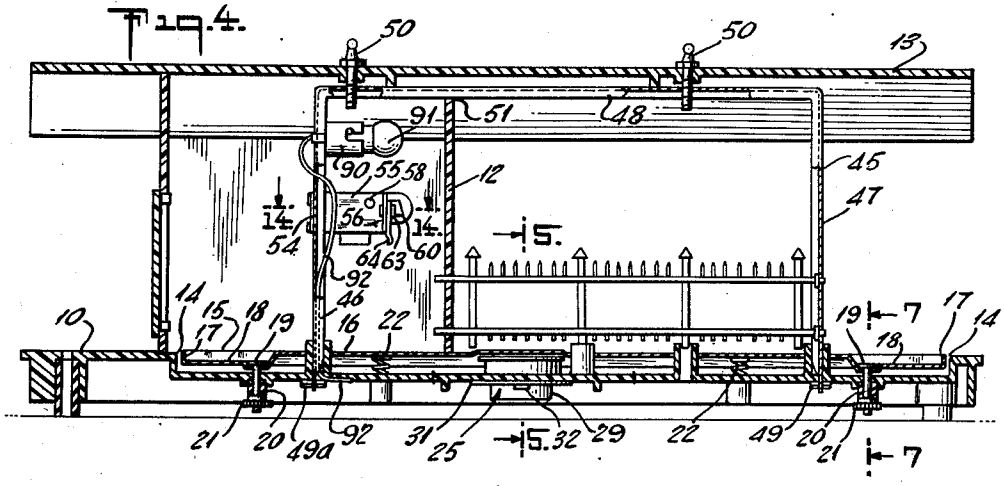


Fig. 5.

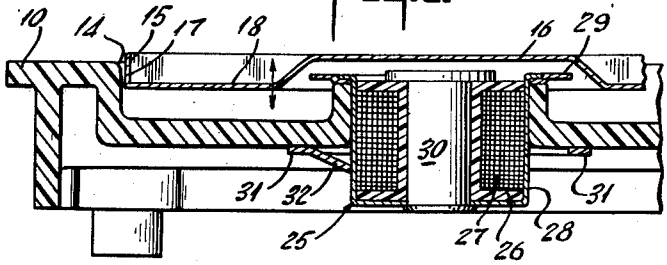


Fig. 6.

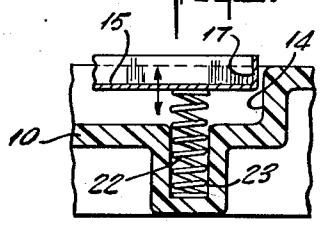


Fig. 9.

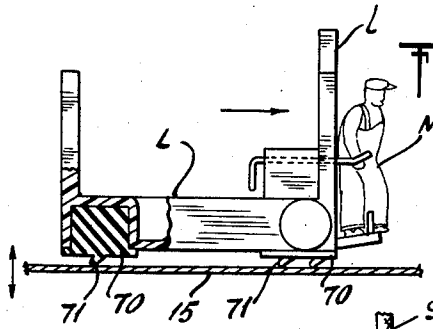
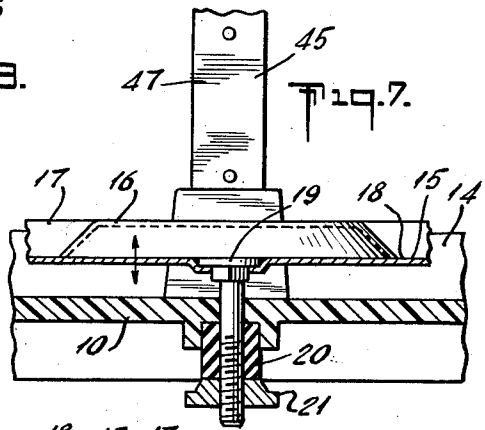


Fig. 7.



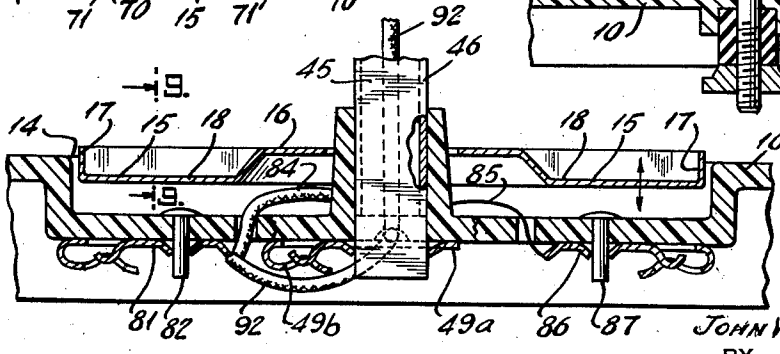


Fig. 8.

INVENTOR
JOHN V. M. DIGIROLAMO
BY
John M. Cole
ATTORNEY

Dec. 24, 1957 J. V. M. DIGIROLAMO 2,817,183

TRACKSIDE ACCESSORIES FOR TOY RAILROADS

Filed Nov. 17, 1953 3 Sheets-Sheet 3

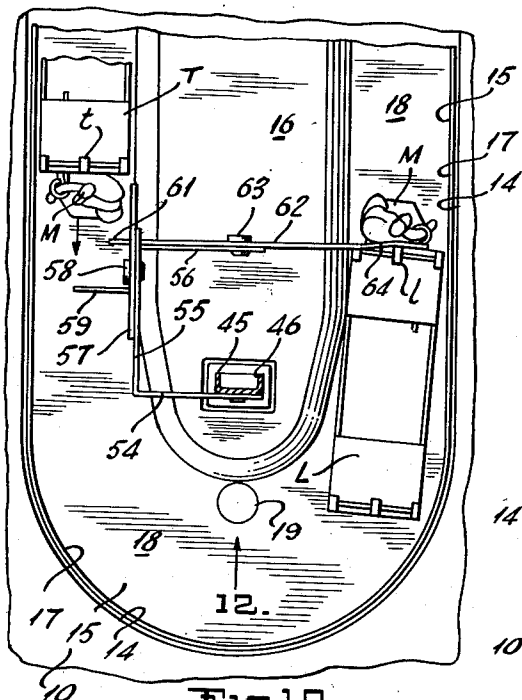


Fig. 10.

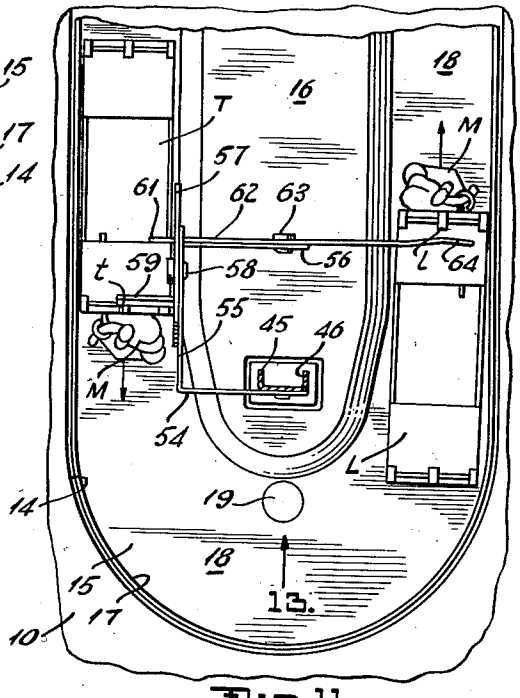


Fig. 11.

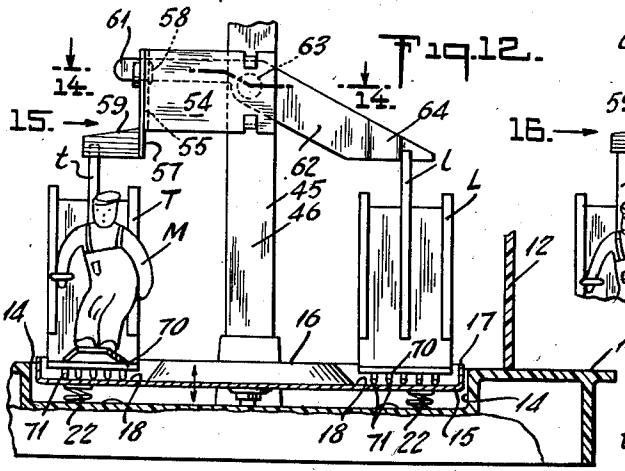


Fig. 12.

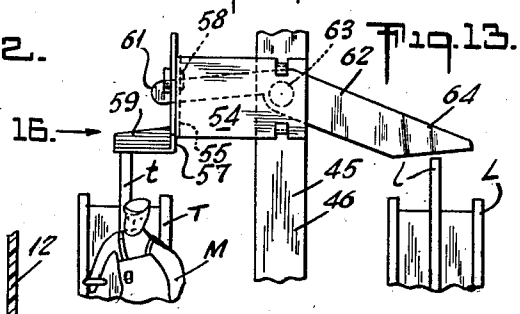


Fig. 13.

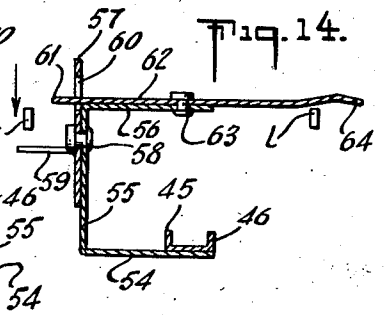


Fig. 14.

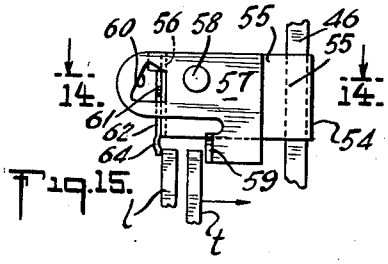


Fig. 15.

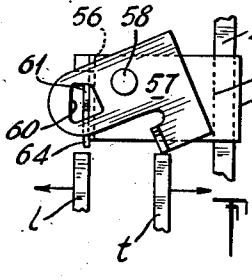


Fig. 16.

INVENTOR
JOHN V. M. DIGIROLAMO
BY John M. Cole
ATTORNEY

United States Patent Office 2,817,183
Patented Dec. 24, 1957

2,817,183

TRACKSIDE ACCESSORIES FOR TOY RAILROADS

John V. M. Digirolamo, Orange, N. J., assignor to The Lionel Corporation, New York, N. Y., a corporation of New York

Application November 17, 1953, Serial No. 392,598

9 Claims. (Cl. 46—12)

The present invention relates to trackside accessories for toy railroads, and is more particularly directed toward an accessory for simulating the handling of express, freight, or baggage.

Among the operations carried on by railroads is the placing of express, baggage, or freight in a building for safekeeping and storage and its removal for shipment. The shipments are loaded on trucks and taken into the building or removed from it as desired. The present invention contemplates a toy for simulating the transportation of the shipments into and out of a toy building. Accordingly, there is associated with an unloading platform and building, means for causing accessory toys simulating baggage trucks to enter the building and to come out of it.

In carrying out the objects of the present invention, it is preferable to space the toy trucks so that the operation appears more realistic.

In the preferred embodiment of the present invention, the accessory toys such as the baggage trucks are provided with resilient feet all facing in one direction and these are received on a vibratory plate with a loop-like trackway partly in and partly outside the building. Inside the building, the toys are preferably provided with an arresting device which normally stops the progress of an accessory toy in the building and this arresting device is coupled to a releasing mechanism actuated by another accessory toy as it enters the building. These mechanisms are designed to be actuated by the relatively weak forces which can be had from the vibration responsive elements employed.

The accompanying drawings, show, for purposes of illustrating the present invention, one embodiment in which the invention may take form, it being understood that the drawings are illustrative of the invention rather than limiting the same.

In the accompanying drawings:

Figure 1 is a perspective view of the toy railroad trackside accessory;

Figure 2 is a top plan view with a portion of the roof broken away;

Figure 3 is an inverted plan view of the device;

Figure 4 is a longitudinal vertical section on the line 4—4 of Figure 3;

Figure 5 is an enlarged fragmentary vertical section on the line 5—5 of Figures 2, 3 and 4, showing the vibrator coil;

Figure 6 is an enlarged fragmentary vertical section on the line 6—6 of Figure 3, showing the compressed springs between the vibratory track-forming plate and the base;

Figure 7 is an enlarged fragmentary vertical section on the line 7—7 of Figures 2, 3 and 4, showing the securement of the plate to the base;

Figure 8 is an enlarged fragmentary vertical section on the line 8—8 of Figures 2 and 3;

Figure 9 is a section on the line 9—9 of Figure 8, illustrating an accessory toy, such as a toy baggage truck on the vibratory plate;

Figures 10 and 11 are top plan views, Figure 10 showing one accessory toy arrested in the freight house enclosure and a second one entering it and about to release the first, and Figure 11 showing the arrested accessory toy released and the other passing by the release mechanism;

Figure 12 is an elevational view taken in the direction of the arrow 12 of Figure 10, with parts in section;

Figure 13 is a fragmentary view taken in the direction of the arrow 13 of Figure 11;

Figure 14 is a section on the line 14—14 of Figures 4, 12 and 15, illustrating the arresting and releasing mechanism; and

Figures 15 and 16 are fragmentary elevational views taken in the direction of the arrows 15 and 16, respectively, of Figures 12 and 13.

The trackside accessory shown herein has a base 10 adapted to be placed alongside the toy railroad track as indicated at 11. The platform 10 carries a houselike structure generally indicated at 12 and is covered by a roof, generally indicated at 13.

The base or platform 10 is a plastic molding having an elongated recess 14 which receives a magnetizable plate 15. This plate has a raised, central portion indicated at 16 and upwardly flanged edges indicated at 17 which provide a loop-shaped channel or trackway 18. The plate 15 is secured to the base by two bolts indicated at 19, 19 as shown more particularly in Figure 7. These bolts pass through resilient grommets 20 and receive thumb screws 21 by which the magnetizable plate is held floating above the base member and free to vibrate relative to it. Between the magnetizable plate 15 and the base 10 are compression springs, as indicated at 22 and shown more particularly in Figure 6. These springs enter recesses 23 and urge the magnetizable plate upwardly.

Near the center of the base 10, the base carries a coil assembly 25, Figure 5. This coil assembly includes a coil form 26, a coil 27, a magnetizable shell 28, top disk 29 and magnetizable core 30. The assembly is held in place by a ring 31, Figure 3, having friction prongs 32. The upper end of the fixed magnetizable structure is spaced slightly from the magnetizable platform 10, so that when alternating current is supplied to the magnet structure, the plate acts as a vibrating armature moving up and down in response to the attraction of the magnet and the repulsion secured by the grommets and springs.

The house, generally indicated at 12 is a plastic molding having flanges 40, Figure 2, and downwardly extending feet 41, Figure 3. The flanges 40 are fastened down by screws indicated at 42, Figure 3, and the feet 41 pass through openings in the base 10 as indicated in that figure. The base carries a yoke 45 made of channel-shaped stock. This yoke has a post-like member 46 inside the house, a post-like member 47 outside the house and a horizontal connecting bar 48. The posts are held down by friction-type fasteners indicated at 49 and 49*a*, the latter including a wire clip 49*b*.

The roof 13 is secured to the yoke by bolts indicated at 50, 50 and the yoke fits into a notch 51 in the house 12 to hold it down. The house has two doorways 52 and 53, Figure 1, for entrance and exit, respectively, of the toy accessory articles. The post 46 carries a bracket 54 which extends to the rear, as indicated in Figure 2, or to the left, as indicated in Figures 10 to 14, inclusive. It has an extension 55 which is adjacent the rear portion of the loop-like channel 18 and a forward extension 56 which, as shown more clearly in Figure 14, comes past the center line of the structure.

The extension 55 of the bracket 54 carries a lever 57 pivoted at 58. This lever is provided with a side arm 59 which extends out over the rear part of the trackway or channel 18 and has an opening 60 which receives the rear

end **61** of a lever **62** pivoted at **63** to the portion **56** of the bracket **54**. The front end **64** of this lever extends out across the near or front portion of the channel or trackway **18**.

A suitable form of accessory toy for use with the vibratory structure above described is shown in duplicate in the drawings—one marked "L," indicating the leading accessory toy, and the other marked "T" for the trailing accessory toy. These accessory toys are made of plastic moldings and of the proper size to travel along the trackway. They may simulate baggage trucks and have at the front an upwardly extending element marked "*l*" on the lead truck and marked "*t*" on the trailing truck and carry a manikin M. These auxiliary toys carry rubber-like pads **70,70** which have feet **71, 71**, all leaning in the same direction. These feet are integral with the soft plastic material used for the body of the pad and are effective upon vibration of the support such as the plate **15** to propel the accessory toy in one direction only. In the device here shown, propulsion is in a counter-clockwise direction, as indicated by the arrow at the right of Figure 2, and by arrows adjacent the accessory toys in Figures 15 and 16.

When two such accessory toys are placed on the trackway facing in the proper direction, they will be shifted in counter-clockwise direction along the trackway whenever the magnet coil is energized with alternating current.

The leading accessory toy will pass through the doorway opening **52** and as the extension *l* (Figure 15) approaches the arm **59** on lever **57**, it swings this lever from the position shown in Figure 15 to the position shown in Figure 16. This operation will shift the lever **62** from the full line position of Figure 12 to the full line position of Figure 13. The leading truck *l* will then pass about the left end of the trackway and will continue around toward the right on the front part of the trackway or channel until the extension *l* is now at the position indicated at the left of Figure 15 or at the right of Figures 12 and 13. The lever **62** is in the lower position of Figure 12 and is engaged by the approaching extension *l* on the truck so that movement of the truck *l* is stopped. This accessory toy truck is now inside the house **12** facing the exit doorway **53** and remains there until released. Release is effected by the trailing truck T which now brings its extension *t* against the arm **57** to move it from the position shown in Figures 15 to 16. This time the movement of the lever **57** and the lever **62** releases the leading truck L so that it can start to move and pass its extension *l* beyond the lever **62**.

As a consequence, the toy is able to simulate the movement by the manikin of the toy truck into the storehouse and the movement of another truck out of the storehouse when the first one goes in. The operation, of course, may be controlled by turning on and off the circuit for the vibrator.

The low side of the transformer which supplies power to the track accessories is connected by wire **80** with a terminal **81** carried on a mounting post **82** and by a wire **83** with the terminal **49***b* carried by the spring clip **49***a* which holds down the left post **46**. One side of the coil **27** is connected to the clip **81** by a wire indicated at **84**. The other side of the coil **27** is connected by wire **85** with a smaller spring clip **86** carried on a mounting post **87**. The slips **49***b* and **86** are connected to an external switch **88** for control of the magnetic vibrator. The post **46** also carries a lamp socket **90** and lamp **91**. The socket is connected by wire **92** with the clip **81**. The lamp is adapted to be lighted continuously.

Since it is obvious that the invention may be embodied in other forms and constructions within the scope of the claims, I wish it to be understood that the particular form shown is but one of these forms, and various modifications and changes being possible, I do not otherwise limit myself in any way with respect thereto.

What is claimed is:

1. A trackside accessory for toy railroads comprising an elongated base simulating a loading and unloading platform, a four-walled enclosure simulating the walls of a building at one end of the platform and having doorways facing the opposite end of the platform, a roof secured above the enclosure, a rigid plate, means for resiliently supporting said plate substantially at the level of the platform for vertical vibratory movement relative thereto, the plate being elongated in the same direction as the base and having a depressed loop-shaped channel extending under the doorways, said channel having one end in the enclosure and the remainder outside the enclosure said resilient supporting means including a plurality of compression springs between said base and said plate, and alternating current operable, electromagnetic means for vibrating the plate whereby the plate acts as a vibrating armature moving up and down in response to the attraction of the magnet and the repulsion of the compression springs and an accessory toy article having resilient feet facing in one direction and disposed in the channel to be propelled along the channel by the vibrating plate and through the enclosure.

2. A trackside accessory such as claimed in claim 1, having inside the enclosure adjacent the exit doorway an arresting device biased to a position to prevent release of an accessory article of predetermined size in the enclosure and prevent its egress through the exit doorway.

3. A trackside accessory such as claimed in claim 2 having inside the enclosure means responsive to the entrance of a similar article through the entrance doorway to release the arresting device so that when one article enters the enclosure another leaves it.

4. In a toy, a horizontal platform having a loop-shaped depressed trackway along which accessory toy articles are movable, an electromagnetically operable vibrator for vibrating the platform vertically, a plurality of accessory toy articles having resilient feet supporting them in the trackway in a position for movement in a common direction therealong whereby the articles lead and trail one another, a gravity operated arresting device in the form of a lever pivoted on a horizontal axis parallel with and above the trackway and disposed between the sides of the loop and engageable with one of the accessory toy articles to stop its movement and a release device in the path of a trailing accessory toy article for stopping the latter and releasing the arresting device to release the leading article, the release device including a lever pivotally supported above one side of the trackway and having an arm engageable with said trailing article to lift it and an arm engageable with the first lever to shift the same.

5. A toy such as claimed in claim 4, wherein the arresting device and releasing device are opposite one another transversely of the trackway.

6. A toy such as claimed in claim 4, having an enclosure about one end of the loop and the arresting and releasing devices to conceal the operation thereof, the enclosure having openings facing the other end of the loop through which the articles may enter and leave the enclosure.

7. A toy comprising two vehicles, a loop track about which the vehicles are adapted to travel, one behind the other, means for impelling each vehicle along the track in a forward direction only, a movable, gravity-operated stop member extending transversely across a first portion of the loop track and normally in a position to engage an oncoming vehicle and stop it, a second movable member extending transversely across a second portion of the loop track behind the stopped vehicle and normally in a position to be engaged by the other vehicle as it approaches the same, said second portion of the loop track being diametrically opposite said first portion of the loop track, the second movable member and the vehicles having cooperative parts which shift the second movable member as the vehicle passes by it, and means connecting the two movable members to effect a lifting of the first movable

member to release the stopped vehicle when the moving vehicle is passing the second movable member.

8. A toy as claimed in claim 7, wherein the first movable member is pivoted on an axis parallel with the direction of movement of the stopped vehicle and the second movable member is pivoted on an axis transverse of the direction of movement of the vehicle moving past the same.

9. A toy as claimed in claim 8, wherein the first movable member has an extension which passes through an opening in the second movable member to provide the said connection.

References Cited in the file of this patent

UNITED STATES PATENTS

2,167,985	Levay	Aug. 1, 1939
2,416,473	Fields	Feb. 25, 1947
2,618,888	Hoff	Nov. 25, 1952
2,660,001	Smith	Nov. 24, 1953
2,664,831	Fields	Jan. 5, 1954

FOREIGN PATENTS

673,321	Great Britain	June 4, 1952
489,082	Canada	Dec. 23, 1952