A. J. WILSON.

AMUSEMENT DEVICE.

APPLICATION FILED MAR. 29, 1917.

1,248,770.

Patented Dec. 4, 1917.

3 SHEETS—SHEET 1.

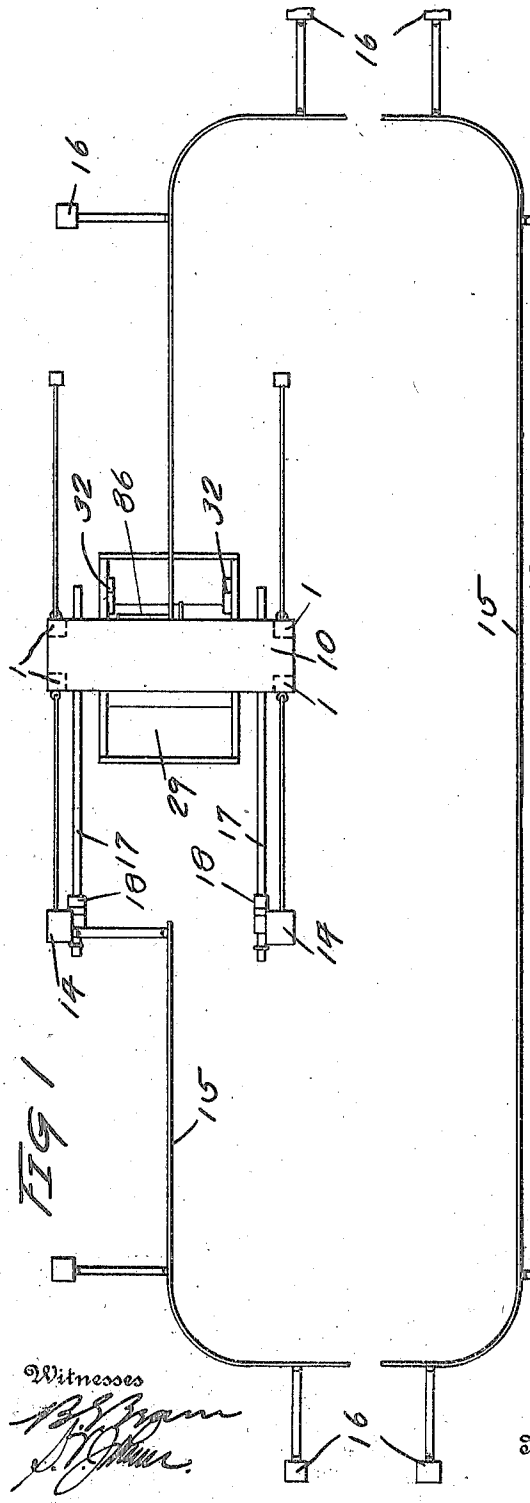

Fig. 1

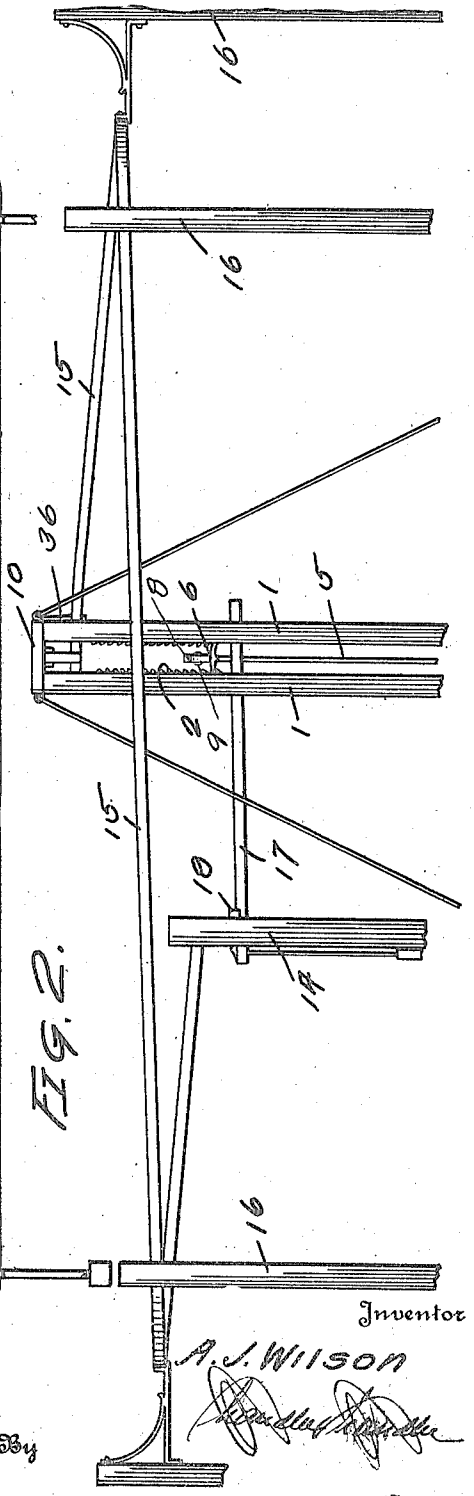

Fig. 2.

Witnesses

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3 SHEETS—SHEET 2.

FIG. 3.

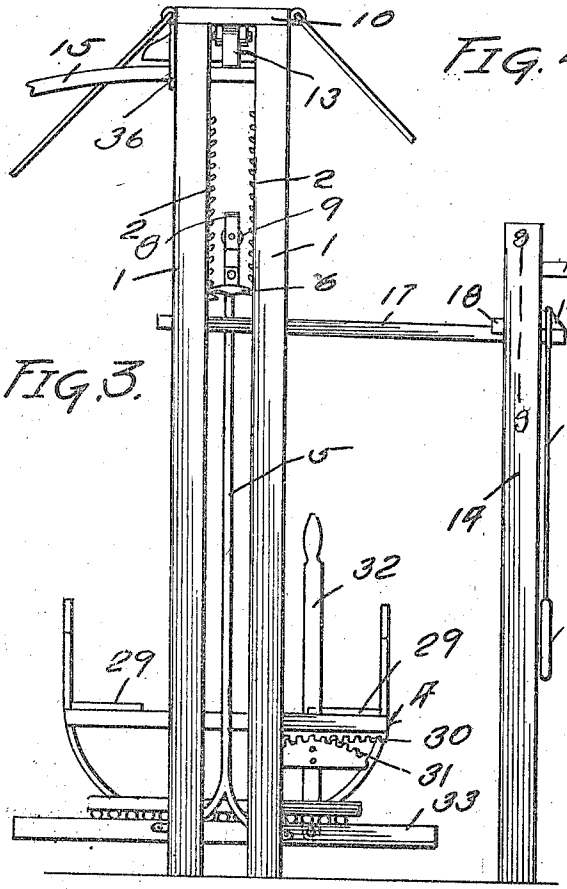



FIG. 4.

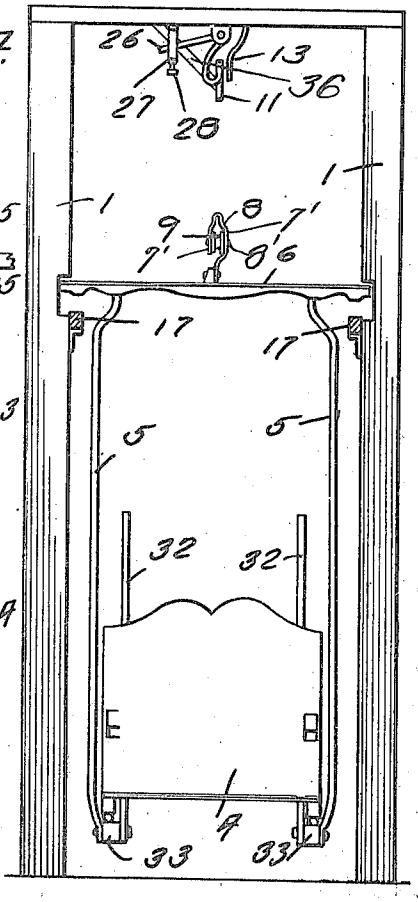
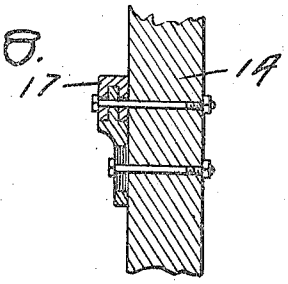



FIG. 8.



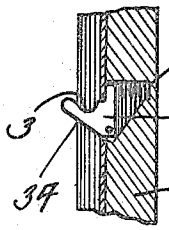
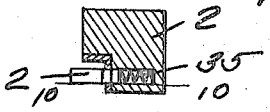




FIG 10

FIG. 9.

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3 SHEETS—SHEET 3.

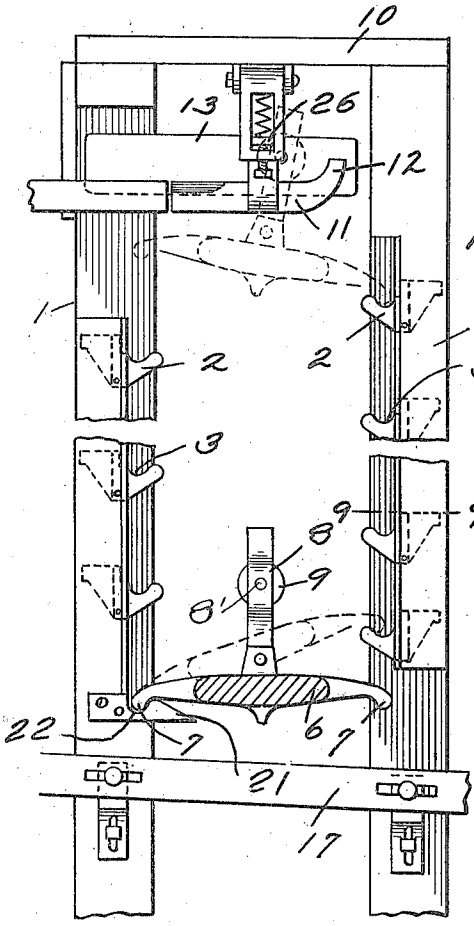



FIG. 5.

FIG. 6.

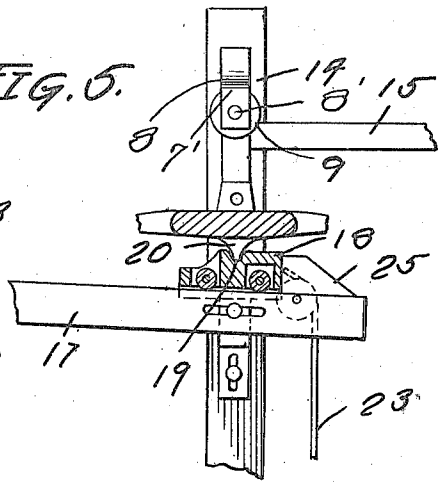



FIG. 11.

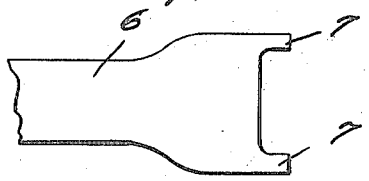
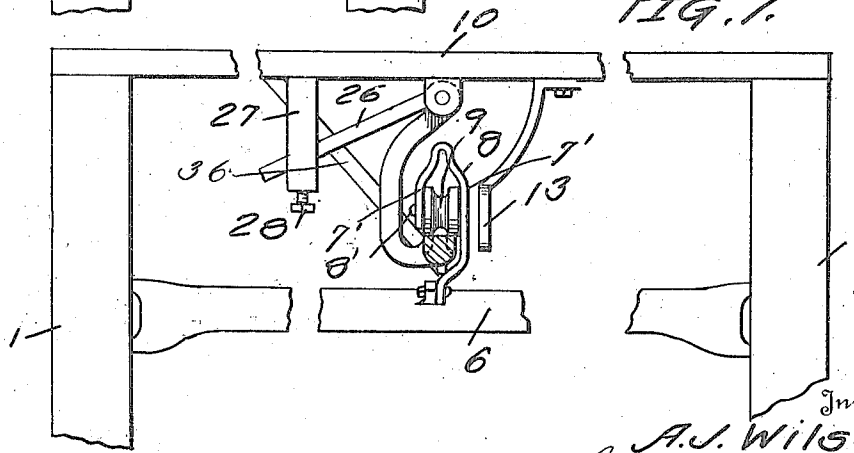



FIG. 7.

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# UNITED STATES PATENT OFFICE.

ADNEY J. WILSON, OF VANCOUVER, BRITISH COLUMBIA, CANADA.

## AMUSEMENT DEVICE.

1,248,770. Specification of Letters Patent. Patented Dec. 4, 1917.

Application filed March 29, 1917. Serial No. 158,307.

*To all whom it may concern:*

Be it known that I, ADNEY J. WILSON, a subject of the King of England, residing at Vancouver, in the Province of British Columbia, Dominion of Canada, have invented certain new and useful Improvements in Amusement Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention is directed to improvements in amusement devices, and pertains more particularly to that type of device known as a "roller coaster".

The invention has for its object to provide an amusement device including a swing which is adapted to move vertically upon being swung, after which the swing will be automatically engaged with the track, whereby the swing will travel around the track to its starting point.

A further object of the invention is to provide a novel means for transfering the swing after moving upwardly vertically to the track so that the same will travel from its highest point of elevation to its lowest point of elevation.

A still further object of the invention is to provide novel means whereby the swing will be elevated in a vertical direction upon swinging movement being imparted to the swing.

A still further object of the invention is to provide a novel form of carriage for transferring the swing from the track of the coaster to the rails for supporting the swing in a position for beginning its vertical movement.

With these and other objects in view, this invention resides in the novel features of construction, formation, combination and arrangement of parts to be hereinafter more fully described, claimed and illustrated in the accompanying drawing, in which:—

Figure 1 is a top plan view of the device.

Fig. 2 is a side elevation of the same.

Fig. 3 is an enlarged side view of the swing.

Fig. 4 is an end view of the same.

Fig. 5 is a detail sectional view of the elevating means.

Fig. 6 is a detail sectional view of the carriage.

Fig. 7 is a detail view showing the hanger track section supporting device.

Fig. 8 is a sectional view on line 8—8 of Fig. 3.

Fig. 9 is a sectional view on line 9—9 of Fig. 5.

Fig. 10 is a sectional view on line 10—10 of Fig. 9.

Referring to the drawing 1 indicates a plurality of standards, said standards being arranged in spaced relation and in pairs. The standards may be formed from any suitable material and have dogs 2 pivoted thereto in any suitable manner, said dogs having seats 3 formed in their upper ends, the purpose of which will appear later.

It will be noted that the dogs 2 of one set of standards are arranged in staggered relation to those of the other set.

A swing 4 is provided, said swing being rigidly connected to the lower ends of the hangers 5, the upper ends of said hangers being engaged adjacent the ends of the beam 6, said beam having its ends provided with spaced fingers or extensions 7, as best shown in Fig. 11. It will be noted that the fingers 7 are spaced a sufficient distance apart so that the same will engage the seats 3 of the dogs 2 as the beam travels upwardly during the rocking of the swing 4.

Connected to the upper surface of the beam 6 is a hanger 8, said hanger having supported by its sides 7′ and axle 8′ on which is mounted a grooved pulley 9, the purpose of which will appear later.

Fixed to the upper ends of the standards 1 is a rectangular plate 10, said plate having pivotally connected to its under surface a track section 11 which has one end turned upwardly, as at 12, to prevent the pulley from disengaging the section 11. The track is adapted to be engaged by the pulley 9 after the beam 6 has moved to its highest point between the standards 1.

Mounted adjacent the track section 11 is a guide plate 13 which serves to push the section 11 laterally as the hanger engages therewith to guide the hanger 8 so that it will be in a position to swing under the pulley 9 as the hanger descends, which occurs after reaching the limit of its upward movement.

Mounted in spaced relation to the standards 1 are posts 14, one of said posts being adapted to support one end of the track 15,

which is bent into circular form, said track being supported by posts 16, whereby the track will be alined with the adjacent end of the track section 11, which forms in effect, the continuation of the track 15, whereby the pulley 9 of the hanger may ride over the track section 11 and on to the track 15. It will be noted that the end of the track 15, which is supported by the bracket 36 from the rectangular plate 10 is higher than the end supported by the post 14.

By gradually inclining the track in this manner it is obvious that the pulley 9, which suspends the swing 4, will gravitate therealong under its own weight, and that of the occupants of the swing.

The standards 1 and posts 14 are connected by spaced rails 17, and each rail has mounted thereon a carriage 18, each carriage having its upper edge provided with a recess 19, which is adapted to be engaged by the rib 20 formed longitudinally of the beam 6, said rails being adjustably connected to the standards 1 and posts 14 so that the inclination of the rails 17 can be adjusted at will.

The ends of the rails which are connected to the posts 14 are normally disposed under the adjacent end of the track 15, so that when the pulley 9 of the hanger 8 leaves the track 15 it will drop to the carriages 18 on the rails 17, whereby the ends of the ribs 20 of the beam 6 will engage the recess 19 of the carriages 18.

Mounted on one pair of standards 1 are plates 21, said plates having seats 22 formed in their upper edges and are adapted to engage the adjacent lugs 7 of the beam when said beam is in a position to travel upwardly between the standards, or in other words the plates 21 serve as an initial rocking fulcrum for the beam.

Now assuming that the carriages 18 are adjacent the standards 1, and swinging movement is imparted to the swing 4, it is obvious that the beam which is fulcrumed on the carriages will be rocked until the lugs on the opposite ends thereof will engage the seats of the lowermost plates 21. Continued rocking movement of the beam will cause the lugs to disengage the plates and successively engage the seats 3, whereby said beam moves upwardly between the standards until the hanger 8 carried thereby is pushed by the plate 13 to a position to engage the track section 11, and since the adjacent end of the track 15 is alined with the track section, the pulley will travel from the track section 11 to the track 15.

The weight of the swing and occupants will cause the swing, which is suspended by the hanger 8, to travel around the track until it reaches the end which is supported by the posts 14, whereupon the pulley 9 will pass over the track 15, thus permitting the pulley to drop downwardly until the end of the rib 20 of the beam engages the recess 19 of the carriage 18, and at which time certain fingers 7 of the beam are again engaged in the recess 22 of the plates 21 so that the operation can be again resorted to.

The carriages 18 have attached thereto cords 23, the lower ends of which have fixed thereto weights 24, said weights serving to return the carriages to the outer ends of the rails 17 immediately after the weight of the swing has been taken from the carriages, and the beam starts its upward movement.

It will be obvious that the momentum of the swing will be such that as soon as the beam 6 drops from the lowest end of the track 15, and engages the recesses of the carriages, that the carriages will travel over the rails 17 until the fingers 7 of the beam are engaged with the recesses of the plates 21. It will be of course understood that the weight and cord can be eliminated if desired, since the inclination of the rails 17 may be such that the carriages will return to the outer ends of the rails after disengaged from the beam, and to limit the travel of the carriages, the outer ends of the rails are provided with stops 25.

The track section 11 is provided with an extension 26 which extends between the arms of the U-shaped bracket 27, said bracket being supported by the plate 10.

An adjusting bolt 28 is engaged in the bight of the bracket and has its upper end engaged with the extension, said bolt serving to regulate the swinging movement of the track section so that the same will drop back into direct alinement with the adjacent end of the track 15. It is obvious that the swinging movement can be imparted to the swing upon the occupants swaying backwardly and forwardly, which action will cause the beam 6 to rock at the desired point. However, the seats 29 of the swing are provided with rack teeth 30 which engage the teeth of the rack segments 31, said segments being fixed to the hand levers 32, which have their lower ends pivotally connected to the bottom 33 of the swing. Thus it will be seen that upon moving the levers 32 backwardly and forwardly that rocking movement will be imparted to the swing.

It will be noted that the dogs 2 have their lower edges beveled, as at 34, whereby the fingers 7 can ride freely thereover, previous to the engagement thereof with the seats 3, and if desired the dogs can be held yieldably extended by the springs 35, although it is obvious that the dogs may depend entirely upon gravity for returning the same to their normal or operative position.

What is claimed is:—

1. In a device of the class described, the combination with spaced pairs of standards, dogs pivotally supported by the standards

and having seats, a beam having fingers on its ends, a swing supported by the beam, said fingers being adapted to successively engage said seats when the swing is rocked to elevate the same, and a track associated with the standards for slidably supporting the swing when the beam disengages the uppermost dogs.

2. In a device of the class described, the combination with spaced pairs of standards, dogs pivotally connected to the standards, a beam having fingers for successively engaging the dogs when the beam is rocked, a swing supported by the beam, a track section pivotally associated with the standards, a roller connected with the beam for engaging the track section when the beam disengages the uppermost dogs, an inclined track having one end alined with the track section for engagement with the roller after leaving the track section, rails associated with the standards, carriages on the rails, said carriages being adapted to receive the beam when the roller thereof leaves the other end of the track to guide the same to the standards for engagement with the dogs.

In testimony whereof, I affix my signature, in the presence of two witnesses.

ADNEY J. WILSON.

Witnesses:
JOHN F. FISHER,
JOS. ROMANG.