Nov. 20, 1923 1,474,962

J. O. GREENBERG

PLEASURE RAILWAY

Filed Jan. 12, 1922 2 Sheets-Sheet 1

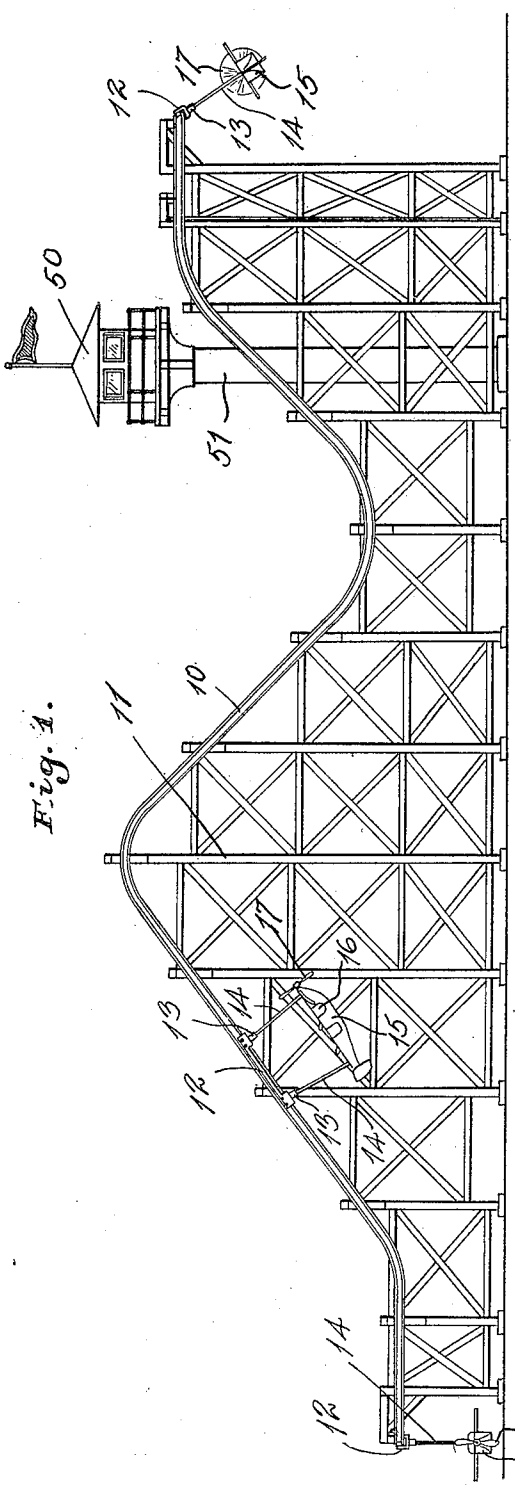

Fig. 1.

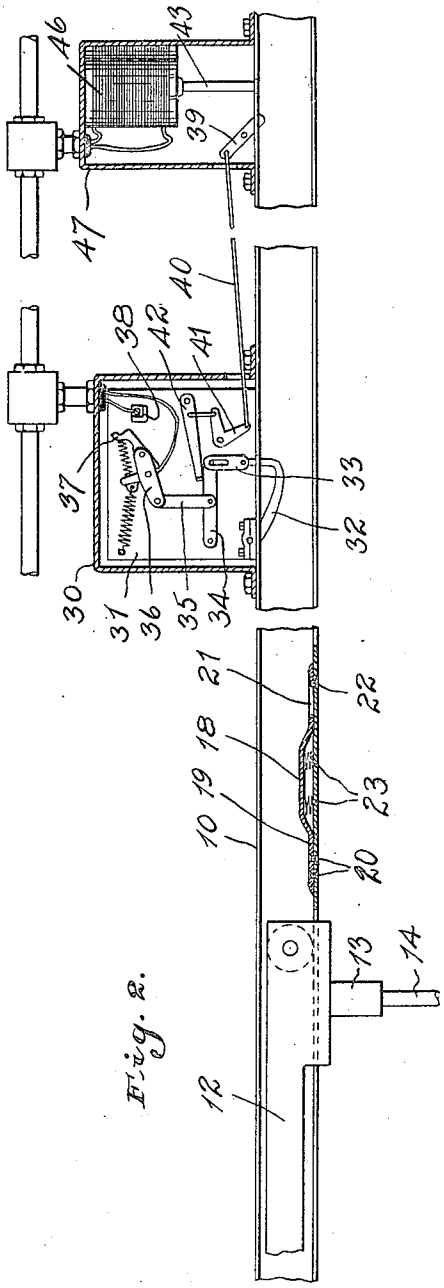

Fig. 2.

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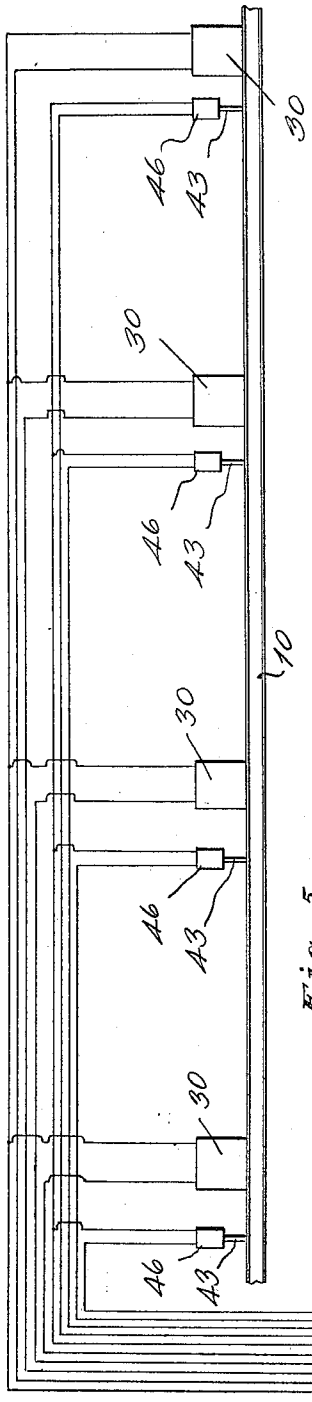


Fig. 5.

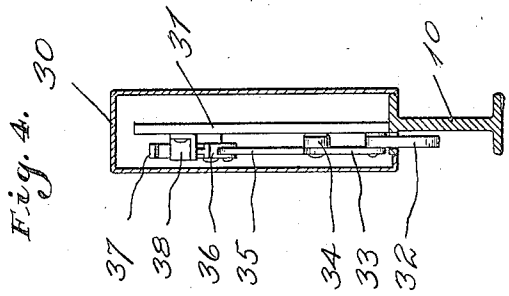


Fig. 4.

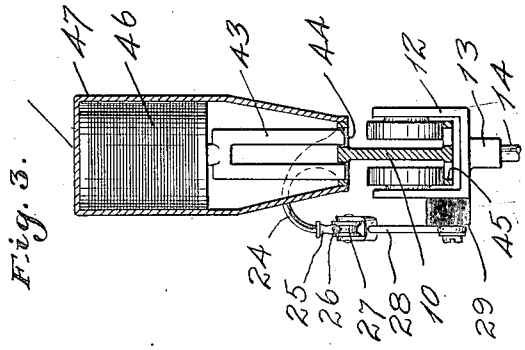
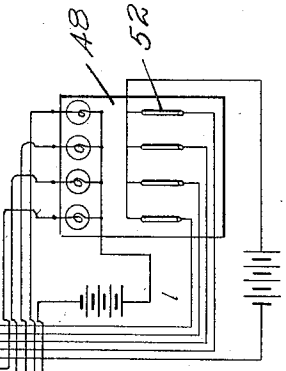


Fig. 3.



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Patented Nov. 20, 1923. 1,474,962

UNITED STATES PATENT OFFICE.

JAMES O. GREENBERG, OF NEW YORK, N. Y.

PLEASURE RAILWAY.

Application filed January 12, 1922. Serial No. 528,677.

To all whom it may concern:

Be it known that I, JAMES O. GREENBERG, a citizen of the United States, and resident of the borough of Manhattan, in the city, county, and State of New York, have invented certain new and useful Improvements in Pleasure Railways, of which the following is a specification.

This invention relates to improvements in pleasure railway and has for its principal objects to provide a device for use at amusement parks which produces the effects of an airplane in flight.

Another object in the invention is to provide a block signalling system which is so arranged so that the position of any car may be readily ascertained by the individual in authority so that should trouble occur at any point and one of the cars become stopped the knowledge of such stoppage may be instantly transmitted to the central station.

Another object of the present invention resides in the provision of a novel means for bringing the cars on the track to a stop and avoid collisions and the consequences thereof.

As a further object the invention contemplates the provision of a novel braking means by which excessive speed of the cars may be reduced and retained within reasonable limits. With these and other objects in view, which will become more apparent as the description proceeds, the invention consists in a novel construction, combination and arrangement of parts which will be fully set forth in the following specification, claimed, and illustrated in the accompanying drawings, in which;—

Figure 1 is a side view of this improved pleasure railway.

Figure 2 is a detail view of the track showing the braking means together with the signal setting mechanism, the resetting mechanism and the stopping device.

Figure 3 is a transverse sectional view through the track showing the stopping device and illustrating in detail the carriage, together with the trolley by which power is transmitted to the propellor driving mechanism.

Figure 4 is a view similar to Figure 3 illustrating the signal trip mechanism in detail and,

Figure 5 is a wiring diagram showing the signalling system and the stop control system.

Referring to the drawings in detail the numeral 10 designates the track which preferably consists of an I-beam supported as illustrated in Figure 1 on a suitable structure 11. As shown the beam 10 is bent at various points to simulate the evolutions performed by an airplane in flight and it will be noted that a twist is formed in the beam at various curves to cause the carriage tilt and swing the car outwardly to simulate and give the effect of banking.

The carriage is designated by the numeral 12 and consists of a substantially U-shaped frame having at opposite ends depending sockets 13 in which the upper ends of the body suspending rods 14 are secured. The car is designated by the numeral 15 and is shaped to simulate the fuselage of an airplane. Suitable doors 16 are arranged on the outer sides of the car and it is to be understood that these doors will be secured by safety latches which are preferably locked at the time the car is started. A propeller 17 is arranged at the forward end of each car and is designed to be operated by a suitable mechanism hidden within the forward end of the car body so that the effect produced will be as realistic as possible.

In order to control the speed of the car and prevent excessive headway as illustrated in detail in Figure 2 at various points I provide a series of inverted U-shaped plates 18 the ends of which are outturned as at 19. One outturned end is riveted as at 20 to the flanges of the track while the opposite end is slotted as at 21 to receive a guide pin 22. In order to assist in returning the plate 18 to original position I provide a plurality of compression coil springs 23 as clearly illustrated in Figure 2.

Secured at spaced intervals on the upper side of the track are brackets 24 supporting at their lower ends insulators 25 which in turn are arranged to support a trolley wire 26. A trolley 27 supported at the upper end of a trolley pole 28 is arranged to run against the wire and the lower end of the trolley pole is pivotedly secured to an insulating block 29 attached to the carriage 12.

Mounted at spaced intervals along the upper side of the tracks are housings 30 each of which is provided with a board 31 of suitable insulating material such as marble or compressed fibre. Pivotally mounted near the lower end of the board and extending downwardly through a slot in the upper flange of the track is an arm 32

the rear end of which has pivotally connected thereto a link 33 which in turn connects through a pin and slot connection with a lever 34 which is pivoted to the board 31. An insulating link 35 is connected intermediate the ends of the lever 34 and its upper end is pivoted to a rocking arm 36 carrying a contact member 37 which is adapted to engage a stationary contact 38 to complete an electrical circuit and light one of the signal lamps. It will thus be seen that as the carriage passes beneath the housing 30 the trip arm 32 will be engaged and the signal given to indicate that a certain block is occupied.

In order to return the switch to an original position a resetting mechanism is provided which consists of a pivoted lever 39 the lower end of which is arranged to be struck by the carriage when passing. Secured to the upper end of said lever is a rod 40 which in turn is connected to a bell crank lever 41 mounted on the board 31 previously mentioned. This bell crank lever is arranged to operate the lever 42, the free end of which engages the lever 34 in such a manner that when the lever 39 is struck the said lever 34 will be pulled downwardly into original position, thereby resetting the switch mechanism and extinguishing the lighted lamp thereby indicating that the block is clear.

In order to stop the motion of the carriage and the car mounted thereon I provide an inverted U shaped member 43, the legs of which are arranged to pass through openings 44 and 45 in the upper and lower flanges of the track 10. This U shaped member 43 is secured and carried by the core of a solenoid 46 which is arranged within a housing 47 above the track. It will be understood that in order for the track to remain clear and allow the carriage to pass the stop the solenoid 46 must remain energized to hold the inverted U shaped member 43 in elevated position.

In operation it will be understood that the carriage is drawn up the first incline of track 10 through any suitable mechanical means (not shown). The rest of the trip is made preferably by gravity and as it rounds the curves the tilting of the track will cause the car to swing outwardly as illustrated in Figure 1. The signal board 48 is preferably arranged within a house 50 mounted at the upper end of a suitable supporting column 51 in such a position as to give the occupant of the house a view of the entire apparatus. It will thus be seen that the operator may tell at a glance at the board the condition of the entire track and by manipulating the switches 52 stop any or all of the cars.

From the foregoing it will be seen that the device is at all times under control so that should trouble develop at any point prompt action on the part of the operator may avert serious damage.

While in the foregoing there has been shown and described the preferred embodiment of this invention, it is to be understood that certain minor changes in the details of construction, combination and arrangement of parts may be resorted to without departing from the spirit and scope of the invention as claimed.

What is claimed;—

1. A pleasure railway comprising, a suspended track, a carriage movably mounted on the track, a car rigidly suspended from the carriage, the track being arranged at various points to cause the car to swing laterally.

2. A pleasure railway comprising, a continuous suspended track, said track being bent to form inclines and curves such as are commonly experienced in airplane flights, the track being twisted at the curves to give the effect of banking, a carriage designed to move along the track and to closely follow the contour thereof, a car rigidly suspended from the carriage a propeller on the car, and means for driving the propeller.

Signed at N. Y. C. in the county of N. Y. and State of New York, this 3rd day of Jan'y 1922.

JAMES O. GREENBERG.