Feb. 2, 1926.

1,571,434

W. RAY

AMUSEMENT TRACKWAY

Filed July 20, 1925

2 Sheets-Sheet 1

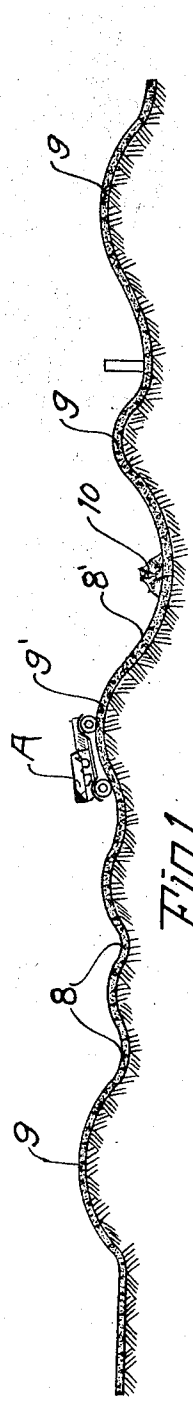

Fig. 1

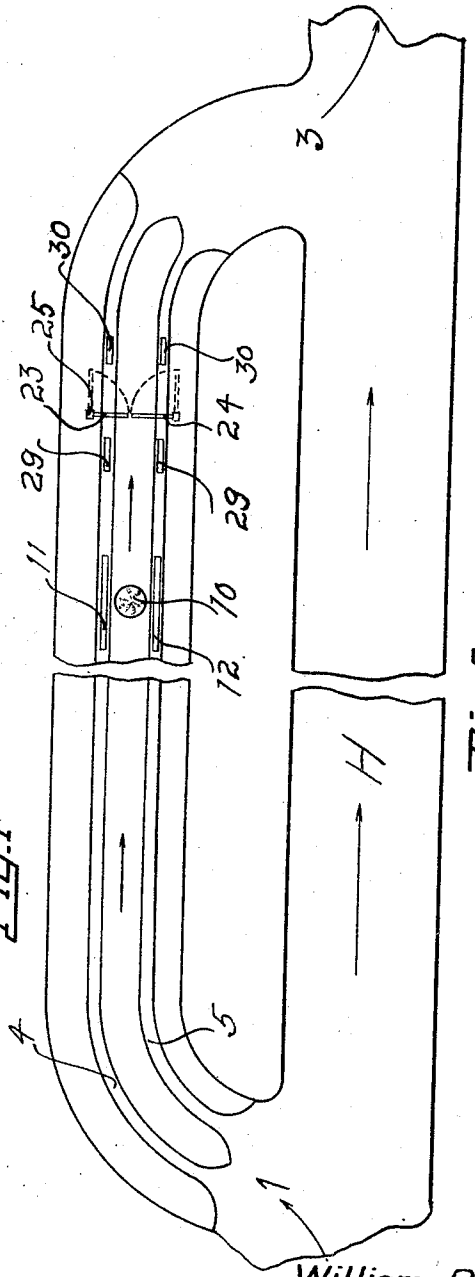

Fig. 2

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2 Sheets-Sheet 2

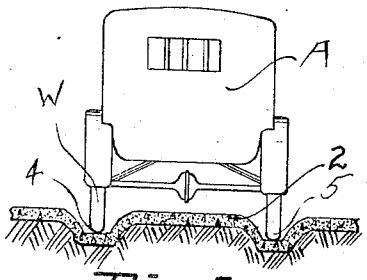

Fig. 3

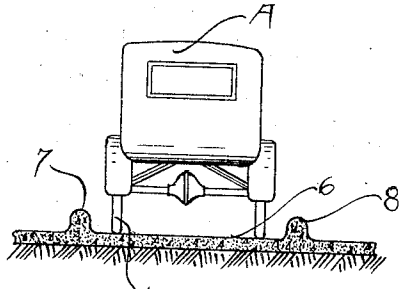

Fig. 4

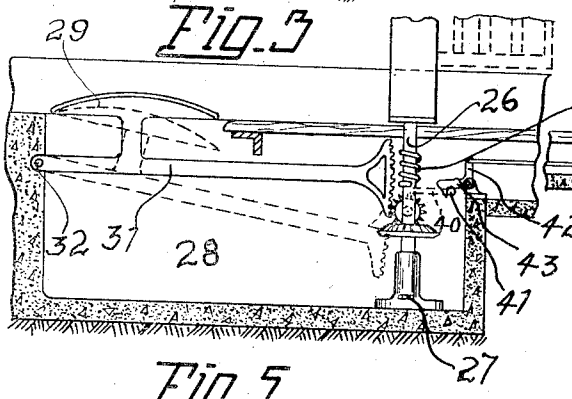

Fig. 5

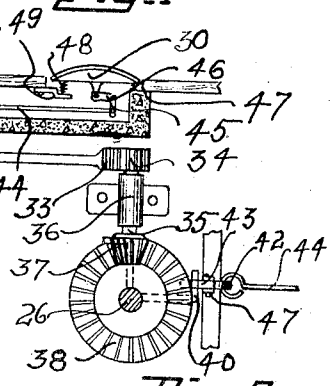

Fig. 6

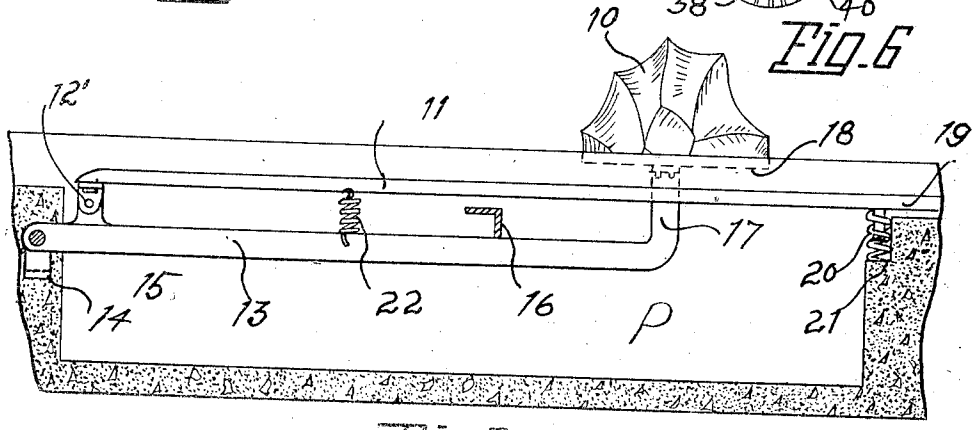

Fig. 7

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Patented Feb. 2, 1926. 1,571,434

UNITED STATES PATENT OFFICE.

WILLIAM RAY, OF SPOKANE, WASHINGTON.

AMUSEMENT TRACKWAY.

Application filed July 20, 1925. Serial No. 44,751.

To all whom it may concern:

Be it known that I, WILLIAM RAY, a citizen of the United States, residing at Spokane, in Spokane County and State of Washington, have invented certain new and useful Improvements in Amusement Trackways, of which the following is a specification.

My present invention relates to an amusement trackway especially designed for use in connection with a road or highway for vehicles and also adapted for use in amusement parks. The trackway may be built as a lateral turn-out or detour from a road or highway and extend for a suitable distance preferably parallel therewith, or the trackway may be incorporated in one of the main traffic ways of an amusement park for passage therethrough of automobiles.

Means in the form of fixed or permanent waves or undulations are arranged in the trackway or special road way, to cause movement of the traveling vehicle in a vertical plane and to produce surprising and pleasing shocks or thrills, as a source of innocent merriment for the occupants of the automobile, as well as for the spectators.

In carrying out my invention I preferably use a straight roadway having a tortuous alinement comprising rises and falls, and apparent obstructions are arranged in the roadway with vehicle actuated means for removing the obstructions, as will be hereinafter more fully set forth and claimed.

In the accompanying drawings I have illustrated one complete example of the physical embodiment of my invention, and a slight modification thereof, wherein the parts are combined and arranged according to one mode I have thus far devised for the practical application of the principles of my invention.

Figure 1 is a diagrammatic or profile view of the roadway showing the undulations and obstructions, and indicatng an automobile traveling through the roadway.

Figure 2 is a plan view of the roadway showing its installation alongside a portion of a highway or road.

Figure 3 is a transverse sectional view of the roadway showing the automobile wheels confined in depressed trackways or parallel grooves.

Figure 4 illustrates a modified form of the trackway where parallel curbs or copings are used as outer guards for the wheels of the automobile.

Figure 5 is a sectional view showing in detail the vehicle or car-actuated mechanism for removing an obstruction, as a pair of gates from the roadway.

Figure 6 is a plan view with parts in section of the car-actuated mechanism of Figure 5.

Figure 7 is a sectional view parallel with the roadway illustrating an apparent rock or large stone in the roadway, with car-actuated mechanism for depressing the obstruction.

In order that the general arrangement of parts may readily be understood I have shown in Figure 2 a stretch or section of a highway as H with a turn out indicated as 1 to the special roadway 2, and a turn-in as 3, by means of which the car may depart from the highway and travel through the special roadway and thence back to the highway again.

The roadway is provided with grooved tracks 4 and 5 of the standard gauge for vehicles, and a curved entrance and an exit for the car wheels W of the automobile A, and these grooved tracks are of sufficient depth to prevent the car either intentionally or accidentally from turning out of the grooved roadway after the latter has been entered, until the outlet is reached at the turn-in 3.

In the modification shown in Figure 4, the roadway 6 has a spaced pair of parallel concrete copings or curbs 7 and 8 to confine the wheels of the car to the roadway to insure safety to the occupants of the car as well as to the car itself. In some instances these curbs may be utilized instead of the grooved tracks of Figure 3.

As best seen in the profile view of Figure 1 successive undulations which comprise depressions 8 and hills 9 are constructed in the roadway. Preferably these undulations are irregular both as to depth and height and as to length, and some of the hills are of sufficient height as to prevent the driver and occupants of the car from seeing what is before them in the roadway. For instance in the depression 8′ what appears to be be a large stone or rock 10 is located in the depression which is of sufficient depth as to be invisible to the driver until the car rises over the crest of the hill 9′. As a result, at first glance, a harmless shock or

thrill is given the driver and other occupants of the car, which is immediately dissipated through the operation of car-actuated means for removing the obstruction.

This rock or obstruction may be an inflated casing or bag that simulates a rock, or it may be fashioned of rubber, or fashioned in other manner in order that the car may pass over it without danger to the safety of the car and its occupants. The car actuated mechanism is located over a pit P provided in the roadway into which pit the obstruction may be depressed, or the rock may be a bag partially filled with air or gas so that it may be depressed or collapsed by a passing wheel without material damage to either the wheel or bag.

The car-actuated devices as shown in Figures 2 and 7 include two depressible rails 11 and 12 which are located in the bottoms of the grooves 4 and 5 in the path of the car wheels W and preferably these rails are longer than the distance between the wheels of the car. Thus as the front wheels of the car roll on the front end of the rails the latter are depressed and held in this position until the rear wheels of the car pass from the rails. The front wheels depress the rails to cause the rock to disappear, and the passage of the rear wheels from the rails permits them to return to normal position and restore the rock to normal position.

As seen in Figure 7 the car-actuated mechanism includes a depressible rail 11 pivoted at 12′ on a beam 13 located in the pit P, and a support 14 in one of the pit-walls provides a pivot 15 for the beam. There are two of these beams 13 and they are preferably joined by a cross brace or angle bar 16, with the rock 10 secured in suitable manner on the upturned end 17 in an opening 18 in the center of the roadway.

The free ends 19 of the rails 11 and 12 are resiliently supported on springs 20 located in pockets 21 of the wall of the pit, and the beams 13 are held in normal elevated position by means of springs 22 interposed between and secured at their ends to the complementary rails and beams. As the rails are depressed they encounter the cross brace 16 and they thus depress the beams to lower the rock. After the weight of the passing car is removed from the rails the rock returns to normal elevated position under action of the springs.

Other apparent obstructions, as for instance a pair of gates 23, 24, may be arranged across the roadway as seen in full and dotted lines in Figure 2. These are duplicate outwardly swinging gates with posts 25 having rotatable pintles 26 supported in bearings of base blocks 27 in the pits 28 at the sides of the roadway. The gates are swung open by action due to the passage of the car wheels over a pair of depressors or plates 29 preferably having rounded or arcuate top portions as indicated in Figure 5 and located in the grooves or tracks of the roadway. When depressed the plates are latched or retained during the short intervals for the passage of the car, and then by action due to the passage of the rear wheels over a pair of depressible plates 30 the gates are unlatched and permitted to automatically return to normal transverse position over the roadway.

Each depressor or plate 29 and 30 projects slightly above the bottom surface of the track, and the plate 29 is provided with an actuating lever 31 pivoted to a suitable support in the wall of the pit 28 at 32. At its free end the lever is fashioned with an arcuate rack 33 that meshes with the teeth of a rack wheel 34 on the horizontal shaft 35 journaled in bearings 36. The shaft 35 has keyed thereto a vertically arranged bevel pinion 37 that engages a horizontally disposed bevel gear 38 on the spindle 26 of the gate post. By this train of mechanism it will be apparent that the gates are swung on their spindles from the transverse full line position to the open, dotted line position in Figure 2, and thence back to the normal full line position, as shown. The gates are thus opened to permit the free passage of a car, momentarily retained in open position, and then automatically closed after the passage of the car.

After the passage of the car the gates are released by action due to the rolling of the rear wheels over the plates 30, and springs 39 on the gate spindles or pintles automatically return the gates and hold them in closed position.

The hinge pintles 26 of the gates are each provided with a radially extending, rigid latch hook 40 which turns with the pintle, and a latch or detent 41 forming part of a bell crank lever 42 is pivoted at 43 on a support in the wall of the pit 28. The bell-crank latch is pivotally connected by a rod 44 to a second bellcrank lever 45 which is pivotally supported at 46 in the wall of the pit, and the depressor plate 30 as seen in Figure 5 is pivoted to this second bell crank lever.

At one end the depressor 30 is pivoted to a support 47, and at its free end the depressor plate is resiliently supported by a spring 48 on the fixed bracket 49 beneath the trackway.

The roadway and tracks are built of suitable material, preferably cement concrete, and the walls of the pits may be of similar construction.

When the roadway is used alongside a highway, the former may be constructed in suitable length, say 500 to 600 feet, and the car after once having entered the roadway is compelled to traverse its entire length before

emerging from the distant end and coming back to the highway. When used in an amusement park the roadway may be constructed as a portion of a main way through the park, through which roadway the car is compelled to pass in entering or leaving the park.

The invention is capable of various changes and alterations, and such are contemplated, within the scope of my appended claims without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. A fixed undulating roadway having depressions of sufficient depth as to obscure the forward vision of a car-driver, a removable obstruction in a depression, vehicle actuated means for removing said obstruction, and means for returning said obstruction to normal position.

2. A fixed undulating roadway having depressions of sufficient depth to obscure the forward vision of a car driver, wheel confining tracks for a vehicle, a removable obstruction in a depression, vehicle actuated means for removing said obstruction, and automatic means for returning said obstruction to normal position.

In testimony whereof I affix my signature.

WILLIAM RAY.