A. P. LAUSTER.

AMUSEMENT DEVICE.

APPLICATION FILED JAN. 20, 1909.

921,416.

Patented May 11, 1909.

2 SHEETS—SHEET 1.

Fig. 1

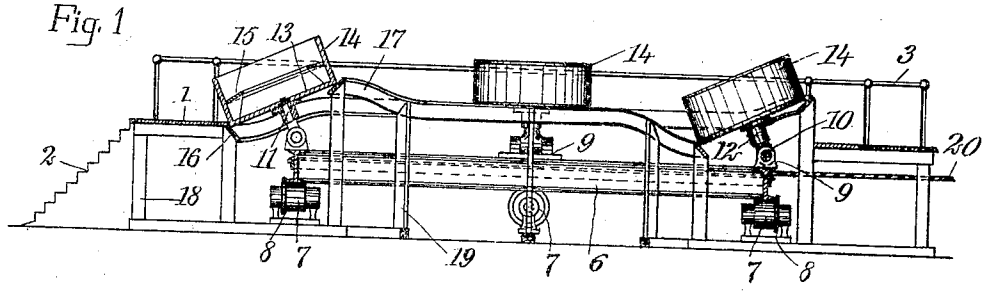
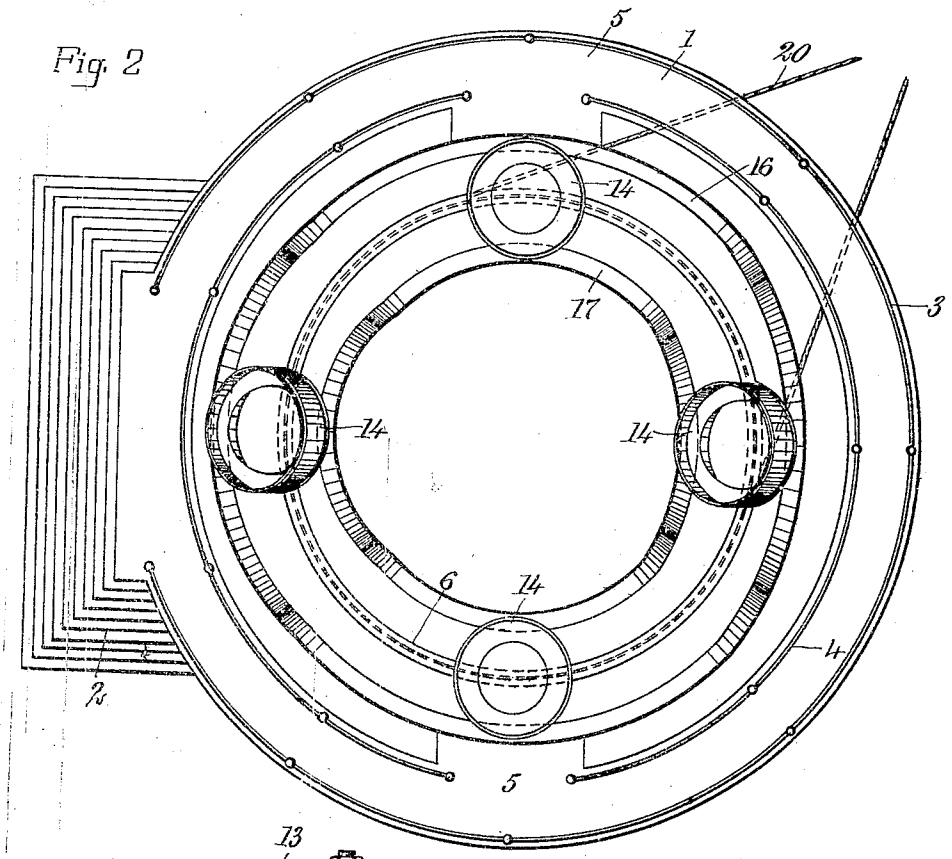


Fig. 2



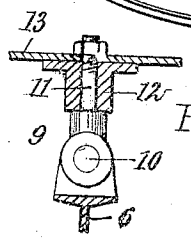


Fig. 3

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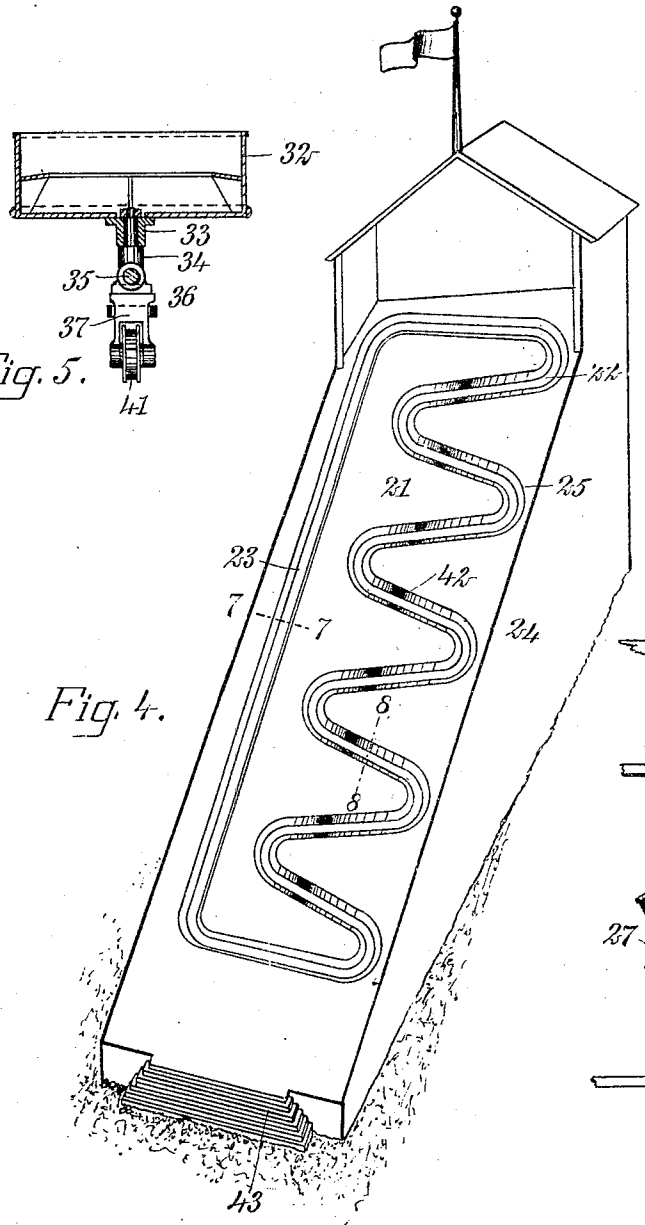

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AMUSEMENT DEVICE.

No. 921,416. Specification of Letters Patent. Patented May 11, 1909.

Application filed January 20, 1909. Serial No. 473,280.

To all whom it may concern:

Be it known that I, AUGUST P. LAUSTER, a citizen of the United States, and a resident of Paterson, in the county of Passaic and State of New Jersey, have invented a new and Improved Amusement Device, of which the following is a full, clear, and exact description.

This invention relates to amusement devices such as are installed at pleasure resorts for amusing visitors.

More specifically the amusement device is of that type which employs a car moving along a guide or track, and the object of the invention is to provide an improved construction which will be very simple but which will operate to give the cars a peculiar movement so that the occupants will have a novel experience.

The invention consists in the construction and combination of parts to be more fully described hereinafter and particularly set forth in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a vertical section through an amusement device constructed according to my invention; Fig. 2 is a plan of the device; Fig. 3 is a vertical section upon an enlarged scale taken through the point of support of the car and illustrating certain details of the construction; Fig. 4 is a perspective showing a modified form of the track or guide along which the car moves; Fig. 5 is a vertical section through a car of modified construction adapted to be used with the modified form of the device shown in Fig. 4; Fig. 6 is a side elevation of the car shown in Fig. 5; Fig. 7 is a cross section through the track or guide taken on the line 7—7 of Fig. 4; and Fig. 8 is a cross section through the track taken on the line 8—8 of Fig. 4, and illustrating the manner in which the track is constructed so as to give the peculiar and novel movement to the car.

Referring more particularly to the parts, and especially to Figs. 1 to 3, inclusive, 1 represents an annular platform which is elevated so as to be reached by stairs 2, as shown. This platform is provided with a guard rail 3 at its outer edge, and is provided at its inner edge with a similar guard rail 4, presenting two oppositely disposed gate-ways 5 at which the passengers may get on or off the cars. Concentrically mounted with the platform 1, I provide a large wheel 6 which may be of eye-beam cross section, as indicated in Fig. 1. This wheel is supported on rollers 7 which are provided near their outer ends with flanges 8 which prevent the wheel from becoming dislodged, as will be readily understood. On the upper side of the wheel 6, at suitable points brackets 9 are rigidly secured, and these brackets have horizontally mounted knuckle pins 10 which are disposed substantially in vertical planes tangent to the wheel. These knuckle pins 10 support king bolts 11, the lower ends of which are formed into heads which receive the knuckle pins, as shown. These king bolts extend upwardly, as shown, and are provided with swivels or loose sleeves 12, said sleeves being rigidly attached to the bottoms 13 of cars 14. These cars are of circular form, having substantially the form of a tub. Each car is provided with an annular bench or seat 15 so that each car can receive a number of passengers sitting in a circle and facing inwardly. The means described for mounting the cars on the wheel 6 does not operate of its own accord to hold the cars in an upright position, and I provide means for periodically tilting the cars when the device is in operation, and this means operates also to rotate the cars on their vertical axes. For this purpose I provide an outer cam rail 16 and an inner cam rail 17. The outer cam rail 16 is supported on the inner side of the frame 18 which supports the platform, while the inner cam rail is supported on suitable studs 19, as shown. In the vicinity of the gate-ways 5, these cam rails 16 and 17 are disposed at the same level, and they pass under the edges of the cars when located near these points so as to support the cars in an upright position, the bottoms of the cars resting on the cam rails, as indicated in Fig. 1. At points of their circumference intermediate between the gate-ways 5, the cam rails 16 and 17 are at different levels, so that at the point where one cam rail is elevated, the other cam rail will be depressed, and vice versa. The cam rails 16 and 17 are preferably slightly inclined so that they diverge from each other upwardly. Upon the outer surface of the wheel 6, a driving cable 20 is coiled, and this cable will be driven by a suitable motor

when the device is in actual operation. As the wheel 6 rotates, the cars will advance and when they are in the vicinity of the gate-ways 5, they will be supported in an upright position. At intermediate points where the dips and elevations occur, the cars will be tipped or tilted into an inclined position by the cam rails, as indicated most clearly in Fig. 1. When a car is in the tilted position referred to, the lower edge of the inclined bottom will rest upon the depressed rail and will support more weight than the upper edge of the bottom resting on the elevated rail, and there will therefore be developed at this point a greater friction than at the opposite point, and this results in producing a rotation of the car upon the axis of its swivel sleeve, that is, upon its central axis. In this way the passengers in the car will have a novel experience.

While I have illustrated only four cars, it will be understood that there may be as many or as few of them as desired, and the guide rails or cam rails 16 and 17 may have as many dips and irregularities as desired.

Referring now especially to Figs. 4 to 8, inclusive, the modified form of the invention will be described. In this form of the invention I provide an inclined desk or floor 21, the face of which is provided with a guide track 22. This guide track has a straight ascending leg 23 and a crooked or zigzag descending leg 24. This descending leg is formed of straight inclined sections connected by curves or bows 25, as shown. The construction of the guide track at the straight sections is illustrated in Fig. 8. At these points the cam rails 26 and 27 which extend continuously through the entire length of the track, are at different levels, as shown, and as in the preferred form of the invention these rails diverge from each other in an upward direction. In this form of the device, as shown in Fig. 8, the framing 28 is so constructed as to present a guide channel or guide-way 29 formed between two parallel vertical guide strips 30. In the center of this guide-way 29, a guide rail 31 is laid longitudinally and this rail may have the form of an ordinary railroad rail, as shown. Each car 32 is of circular form as before, provided with a swivel sleeve 33 attached rigidly to its bottom, and this swivel sleeve 33 is rotatably mounted on a king pin 34. This king pin is mounted on a knuckle pin 35 on the horizontal axis, and this knuckle pin 35 is mounted on the bracket 36 which is secured to the upper side of the small truck 37. These details are clearly illustrated in Figs. 5 and 6. Each truck is elongated in the direction in which the track extends, and is provided with openings 38 in which guide rollers 39 are mounted rotatably upon centrally disposed pins 40. These rollers roll on the guide strips 30 so as to maintain the truck in an upright position. The lower part of the truck is provided with flanged wheels 41 which run on the rail 31, as indicated, the wheels 41 being arranged tandem, as shown. In this form of the invention the cars are elevated by any means desired along the ascending leg 23. Except at the points where the dips 42 occur in the straight sections of the descending leg, the track has the construction shown in Fig. 7, in which the cam rails 26 and 27 have the same elevations. When the cars are passing these portions of the track the rails 26 and 27 support their opposite sides at the same elevation so that the cars will be in substantially an upright position. When the cars are descending the leg 24, as they are passing the dips 42, the cars will tilt or tip into the position shown in Fig. 8, rotating on the axes of the knuckle pins 35 which are disposed longitudinally of the track. As soon as the car tilts in this manner it will be rotated by the friction at the lower edge of its bottom, as will be readily understood.

In both forms of the invention, the cars are preferably of round form, as shown. The passengers ascend to the lower end of the deck 21 by a suitable staircase 43 and they will get on and off the cars at the lower part of the track.

Special attention is called to the fact that in the operation of this amusement device the cars advance in an upright position and by a movement of translation normally, that is, the cars normally advance without turning on their vertical axes. At certain points, however, the cars suddenly become tilted so that their central axes become inclined. At this time they are rotated violently on their central axes, but they are not continuously rotated, that is, they are not rotated in this way when in an upright position. This peculiar mode of operation increases the effectiveness of the novel sensation.

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

1. In a device of the class described, in combination, a car, means for normally advancing said car by a movement of translation solely, means for periodically tilting said car, and means for periodically rotating said car on its central axis.

2. In a device of the class described, in combination, a car, a joint under the center of said car having a horizontal axis of rotation and having a substantially vertical axis of rotation, and rails disposed under the edges of said car normally supporting the same in a horizontal position, said rails being disposed at intervals at different levels and affording means for moving said car on said horizontal axis to support the same in

an inclined position, one of said rails being adapted to support a substantial part of the weight of said car and affording means for rotating the same on the central axis thereof.

3. In a device of the class described, in combination, a car, means for supporting said car to rotate on a horizontal axis and on a vertical central axis, means for normally supporting said car in an upright position, means for tilting said car, and means for rotating said car on said vertical axis only while in a tilted position.

4. In a device of the class described, in combination, a car, means for mounting said car to rotate on a vertical axis and also on a horizontal axis, and cam rails disposed opposite to each other guiding said car and normally supporting the same in an upright position said cam rails having irregularities therein adapted to tilt said car on said horizontal axis and affording means for rotating the same on said vertical axis only when said car is tilted.

5. In a device of the class described, in combination, a support for a car presenting a horizontal knuckle pin, a king pin attached to said knuckle pin, a car having a swivel connection with said king pin, and guiding members normally supporting said car in an upright position and having irregularities adapted to tilt said car, said guiding members engaging the bottom of said car for rotating the same.

6. In a device of the class described, in combination, a car support presenting a horizontal knuckle pin, a king pin mounted on said knuckle pin, a circular car having a swivel connection with said king pin, and cam rails disposed oppositely to each other normally at the same level and having irregular portions where said rails are disposed at different elevations adapted to tilt said car.

7. In a device of the class described, in combination, a wheel, a plurality of cars supported on said wheel to rotate on a horizontal axis and on a vertical axis, and cam rails normally supporting said cars in an upright position and having dips and elevations therein adapted to tilt said cars and rotate the same on said vertical axis.

8. In a device of the class described, in combination, a wheel, a plurality of cars supported on said wheel to rotate on a horizontal axis and on a central axis, cam rails normally supporting said car in an upright position and having dips and elevations therein adapted to tilt said car and rotate the same on said central axis, said rails presenting supporting faces diverging from each other in an upward direction, and means for rotating said wheel.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

AUGUST P. LAUSTER.

Witnesses:
F. D. AMMEN,
EVERARD B. MARSHALL.