

C. L. FELTMAN.

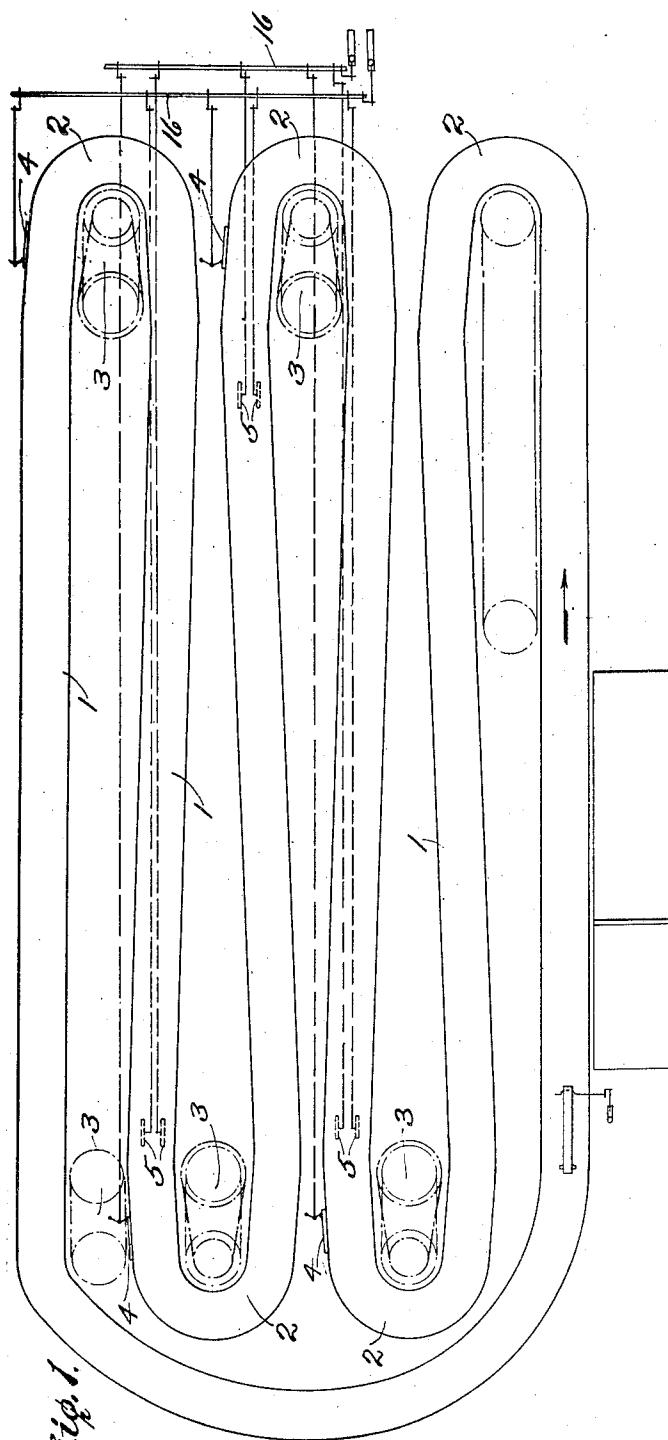
AMUSEMENT DEVICE.

APPLICATION FILED MAY 21, 1919.

1,358,305.

Patented Nov. 9, 1920.

3 SHEETS—SHEET 1.



C. L. FELTMAN,

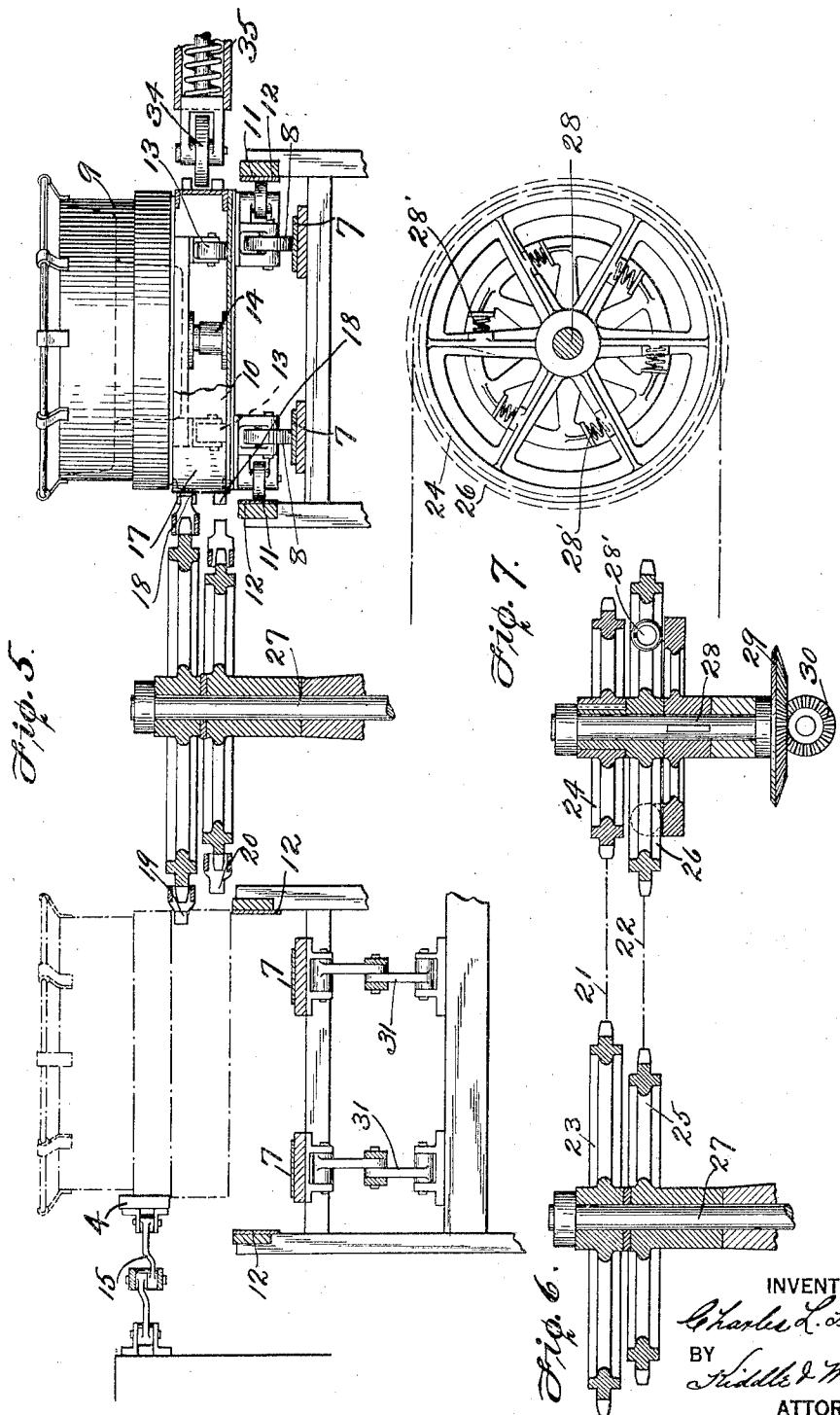
AMUSEMENT DEVICE,

APPLICATION FILED MAY 21, 1919.

1,358,305.

Patented Nov. 9, 1920.

3 SHEETS—SHEET 2.



C. L. FELTMAN.

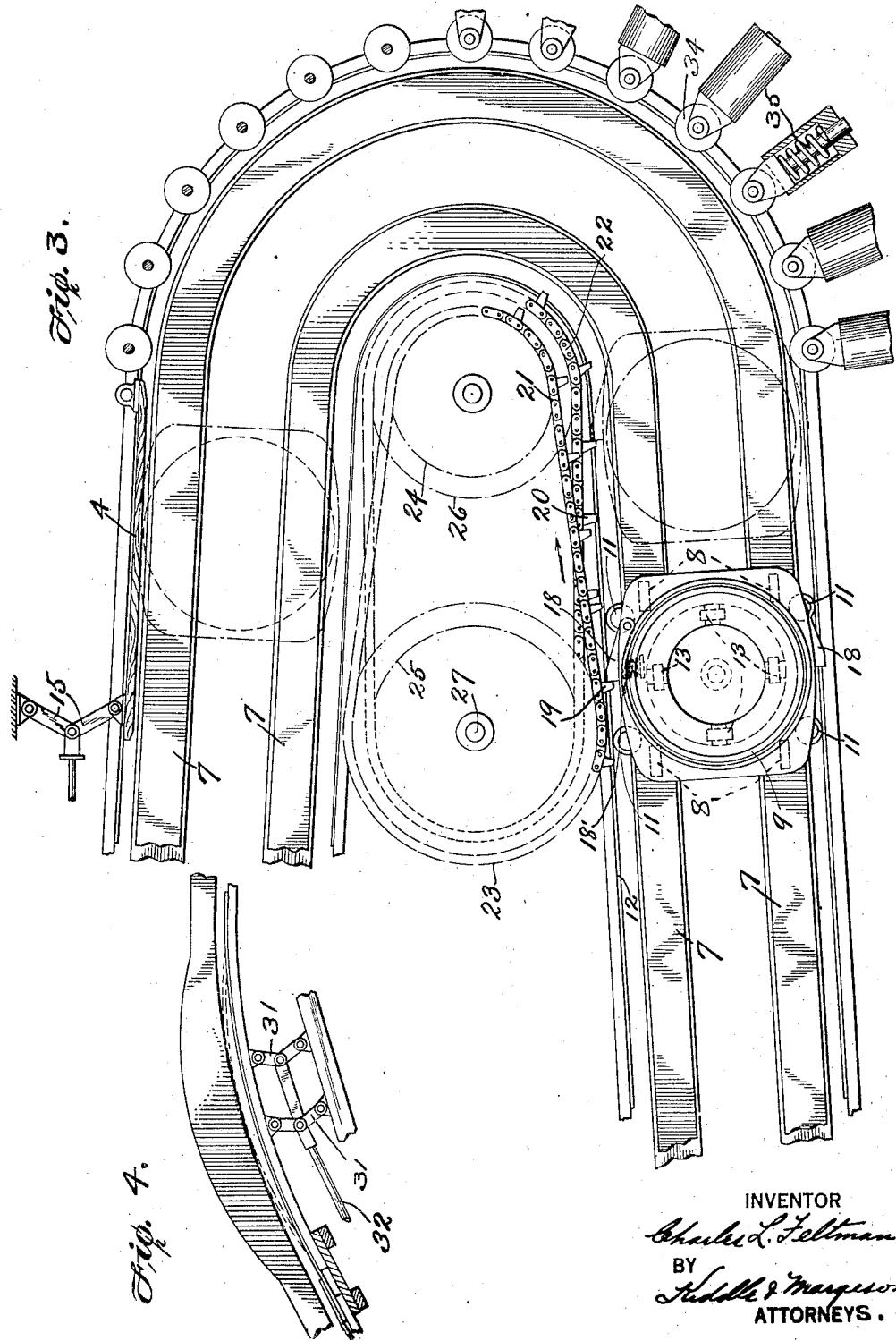
AMUSEMENT DEVICE.

APPLICATION FILED MAY 21, 1919.

1,358,305.

Patented Nov. 9, 1920.

3 SHEETS—SHEET 3.



INVENTOR

Charles L. Feltman.

BY

Kuhne & Marston
ATTORNEYS.

UNITED STATES PATENT OFFICE.

CHARLES L. FELTMAN, OF BROOKLYN, NEW YORK.

AMUSEMENT DEVICE.

1,358,305.

Specification of Letters Patent.

Patented Nov. 9, 1920.

Application filed May 21, 1919. Serial No. 298,684.

To all whom it may concern:

Be it known that I, CHARLES L. FELTMAN, a citizen of the United States and a resident of the borough of Brooklyn, in the city of New York, county of Kings, and State of New York, have invented certain new and useful Improvements in Amusement Devices, of which the following is a specification.

10 This invention relates to an improvement in amusement devices and one of the objects thereof is to provide a new and improved amusement apparatus for use in exhibition grounds, parks and the like, arranged to provide an enjoyable and exciting ride for the occupants of a car traveling over the course of the apparatus.

In general, the apparatus comprises an endless track provided with inclined portions along which a passenger car is adapted to travel by gravity, means having been provided whereby the car after having traversed an incline is automatically picked up and gradually accelerated until the next incline or dip is reached, through which the car passes by gravity. The track along which the car travels is provided with a series of devices whereby the motion of the car may be varied at the will of the operator 30 of the device, these variations consisting in elevating or depressing portions of the track to cause the car to tip and in elevating one track while leaving the other in its normal position so that the car will be given a tilt 35 to the side. Other means have been provided whereby devices may be interposed in the path of travel of the car to cause the same to rotate while traveling along the tracks.

40 One embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a diagrammatic view showing in plan the arrangement of tracks, together with the various devices heretofore mentioned.

Fig. 2 is an elevation of the track.

Fig. 3 is an enlarged plan view showing a curved portion of the track.

50 Fig. 4 shows in elevation, a portion of the track with means for varying the contour thereof.

Fig. 5 shows in part sectional elevation a

car in position on the tracks, together with a portion of one of the pick-up devices here- 55 tofore referred to.

Fig. 6 shows in sectional elevation one of the pick-up devices, and

Fig. 7 shows one of the pick-up devices in plan.

Referring to the drawings in detail, 1 designates the runway along which the car is adapted to travel, the runway being shown disposed in a series of transverse bends or loops 2. 3 designates pick-up devices for the car, 4 the devices adapted to be moved into and out of the path of travel of a car traversing the runway 1 to cause the car to rotate about a vertical axis, and 5 designates a device adapted to alter the contour of the 70 runway as desired. It is to be understood that the dips or inclines 6 in the runway may be of varying depths to cause the car to pass through one dip at a faster speed than through others. 75

As will be seen from Figs. 3 and 5, for example, rails 7 have been provided in the bottom of the runway and comprise flat metal strips upon which the wheels 8 of a passenger car are adapted to travel. 80

The car comprises an upper and a lower portion designated 9 and 10 respectively, the lower portion being hereinafter referred to as a platform, while the upper portion 9 will be referred to as the car. With respect to the platform 10 it will be seen that the same is provided with rollers 11 set at right angles to the wheels 8, which rollers are adapted to engage rails 12 on the sides of the runway 1 so that derailing of the car as it 90 traverses the tracks is prevented.

The car 9 is supported by wheels 13 resting upon the platform 10, four having been shown, and may be rotated on the platform about a vertical pivot 14. In order that the car may be rotated in the manner just mentioned, I have provided the bars 4 herefore referred to and shown in the enlarged view in Fig. 3, which devices are adapted to be moved into and out of engagement with the car by 100 means of toggle mechanism 15 operable by bars 16. In this manner a car traveling in the direction of the arrow in Fig. 3 after passing about the curve to the dotted line position shown in the upper part of said figure 105 may be engaged by a bar 4 to cause the car

to rotate in a clock-wise direction as viewed in said Fig. 3. This rotation may continue until the car is engaged by the next bar and given an additional spin, or if desired the bar 5 may be maintained in its outward position to allow the car, so far as rotation is concerned to come to rest. It will be obvious that, if desired, these devices 4 may be so arranged along the tracks as to cause the car 10 to be rotated first in one direction and then in the other, or, if desired, the devices may be left in their outward position and not engage the car at all.

The side wall 17 of the platform 10 is 15 provided with yielding lugs 18 maintained in their outward position, Fig. 3, by means of springs 18'. These lugs are adapted to be engaged by pick-up lugs 19 and 20 on the sprocket chains 21 and 22 respectively, which 20 sprocket chains are mounted upon gears 23, 24 and 25, 26. The gears 23 and 25 which are 25 of different diameters are mounted upon a common shaft 27, and the gears 24 and 26 are also of different diameters and mounted upon a common drive shaft 28 driven by suitable beveled gears 29 and 30, the power for driving the same being derived from any suitable source, and means such as springs 28' having been provided to take up the 30 shock of transfer from one chain to the other. From the arrangement of the gearing just referred to it will be seen that the chain 21 travels slower than the chain 22, so 35 that a car after having traversed an incline in the track such as shown in Fig. 2 will be picked up first of all by the slower traveling lug 19 and by it will be passed to the lug 20 on the faster traveling chain 22 to gradually accelerate the car without any undue shock 40 to the passengers therein.

In order that one of the rails 7 may be elevated, or both if desired, I have provided the toggle mechanism 31 shown in Fig. 4, which toggle mechanism is directly connected 45 to each rail or track and is operable through the medium of a rod 32 which has been shown connected to the rods 16 of Fig. 1. By this mechanism I may elevate one track leaving the other in its normal position so as to cause 50 the car in passing over the rails to be given a side-wise tilt, or obviously both rails may be elevated at the same time to cause the car to be given a pitching motion.

In order to prevent the passengers from 55 being shaken up when the car strikes a curve I have provided buffers or shock absorbers, such as shown in Fig. 3, and which comprise a series of rollers 34 carried on spring-pressed shafts 35 whereby as the car 60 is thrown outwardly by centrifugal force when traversing a curve the shock of the same will be substantially eliminated.

By having the tracks laid out as shown in Fig. 1 the entire ride may be witnessed from 65 the ground as distinguished from the usual

roller coaster and scenic railway. It will be obvious that if desired the tracks may be laid out in a circle or other suitable shape and the cars propelled by power as by means of an endless chain, for example, the devices however, for varying the motion of the car being retained.

It will be obvious that many changes may be made in the construction of the apparatus and also in the arrangement of the different 75 parts of the system without avoiding the spirit and scope of the invention, and the invention is therefore not considered to be limited to the precise arrangement and structures shown and described herein.

I claim as my invention:—

1. An amusement device comprising rails, a car adapted to travel on said rails, and means for varying the position of one rail independently of the other to cause the car 85 to be tilted.

2. An amusement device comprising rails, a car adapted to travel on said rails, and means for varying the contour of the rails to elevate and depress the same and to vary 90 the position of one rail independently of the other, to vary the motion of the car.

3. An amusement device comprising rails, a platform adapted to travel on said rails, a car rotatably mounted on said platform, and means for varying the position of one rail 95 relatively to the other to cause the car to be tilted while rotating on said platform.

4. An amusement device comprising rails, a platform adapted to travel along said rails, 100 a car rotatably mounted on said platform, and means movable into the path of said car as the platform is traversing said rails to cause the car to rotate relatively to said platform.

5. An amusement device comprising rails, a platform adapted to travel along said rails, a car rotatably mounted on said platform, means movable into and out of the path of said car, means for varying the relative position of the rails, and a controlling device for controlling the two last named means whereby the movement of the car and platform and the movement of the car relatively to the platform may be varied.

6. An amusement device comprising rails, means for varying the relative position of one rail to another, means movable into and out of the path of travel of cars on said rails, and means controlling the two first-named 120 means whereby movement of a plurality of cars along said rails may be varied simultaneously.

7. An amusement device comprising rails having a series of dips therein, a car adapted 125 to travel along said rails, and yielding pick-up devices disposed in the path of travel of said car for picking up the car after the same has traversed a dip and before coming to rest, whereby the car may be kept in motion,

the yielding pick-up devices traveling at different speeds relatively to each other to gradually accelerate the car.

8. An amusement device comprising curved rails, a car adapted to travel along said rails, and shock absorbers disposed along the outer side of the curves of said rails to cushion the car as it is swung outwardly by centrifugal force in traversing the curves of the rails.
10. 9. An amusement device comprising an endless looped rail having inclines or dips in that portion of the rail lying between the loops, a car adapted to travel along said rail, and yielding pick-up devices disposed in

each loop for picking up the car after the 15 same has traversed an incline.

10. An amusement device comprising a runway, a system of rails in the bottom of the runway, a car adapted to travel on said rails, and means for altering the position of 20 the rails in the runway to cause the car to move about horizontal axes.

This specification signed and witnessed this 20th day of May, A. D. 1919.

CHARLES L. FELTMAN.

Signed in the presence of—

W. C. MARGESON,
G. McGANN.