

1,279,911.

Fig.1.

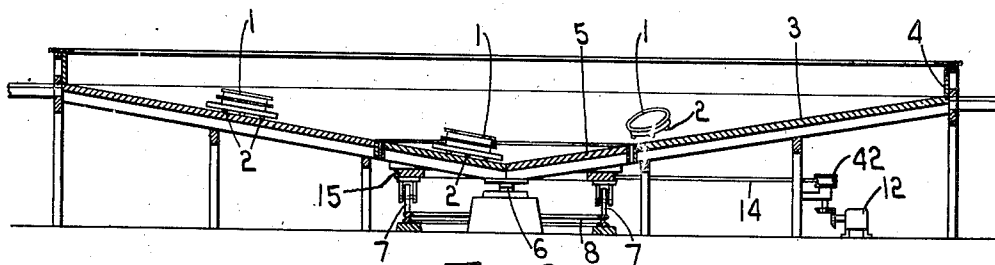
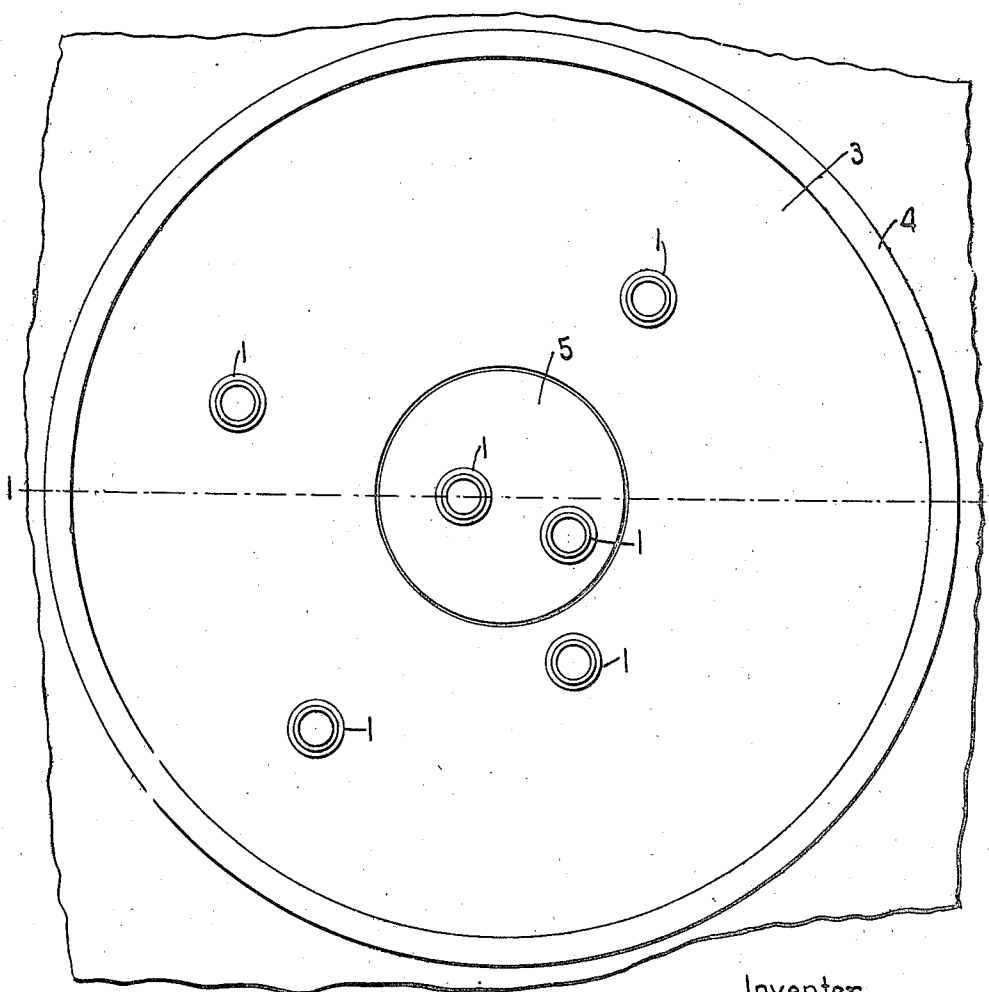


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

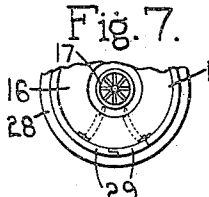
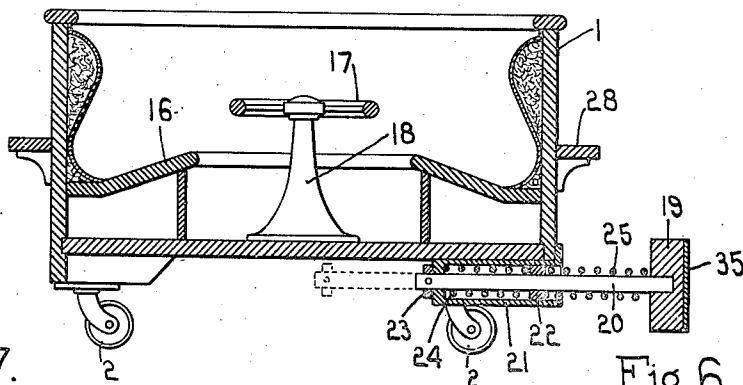


Fig. 4.

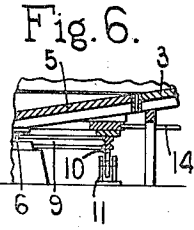
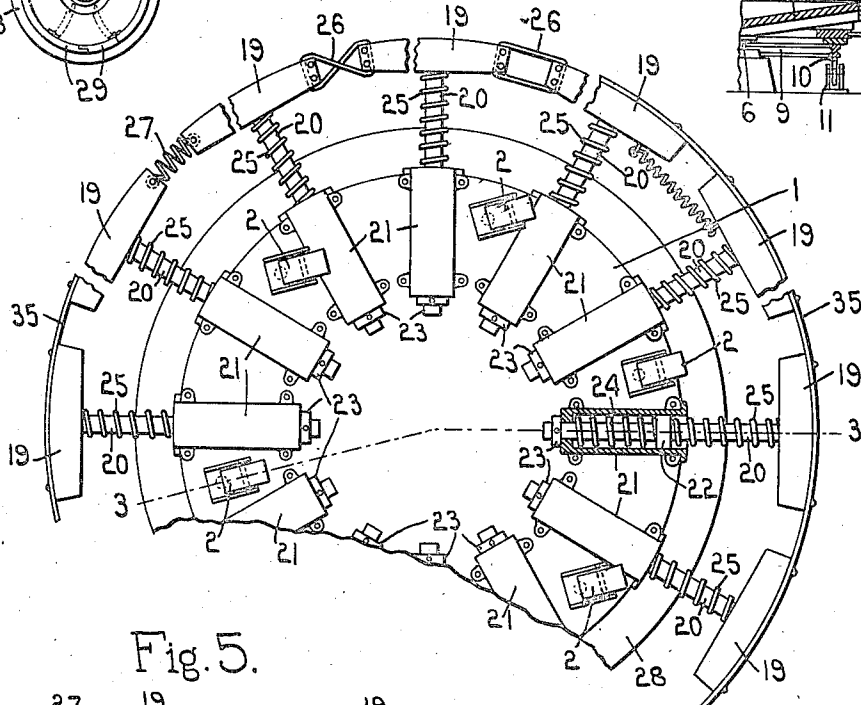
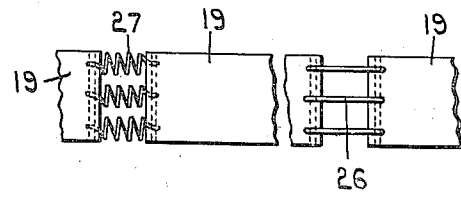


Fig. 5.



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# UNITED STATES PATENT OFFICE.

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## AMUSEMENT DEVICE.

1,279,911.

Specification of Letters Patent.

Patented Sept. 24, 1918.

Application filed March 1, 1918. Serial No. 219,769.

*To all whom it may concern:*

Be it known that I, HERBERT N. RIDGWAY, a citizen of the United States, residing at Winthrop, county of Suffolk, State of Massachusetts, have invented an Improvement in Amusement Devices, of which the following description, in connection with the accompanying drawing, is a specification, like characters on the drawing representing like parts.

This invention relates to amusement devices of the type which include one or more passenger-carrying cars constructed so that they are free to travel in any direction, and means for giving movement to said cars in various directions.

In my present invention I have provided a relatively large stationary platform onto which the cars may be projected and means situated at the center of said platform for projecting the cars onto the stationary platform. Said stationary platform is preferably so constructed that the cars which are projected thereonto will gravitate back to the projecting means after the projecting force has been expended, and the car-projecting means is so constructed that it will receive the cars which gravitate back toward it and then will act on the returned cars to project them onto the stationary platform again. The cars may be projected onto the stationary platform in any direction, and the amusement which is derived from the apparatus will result not only from the pleasure and excitement of being carried about in the cars, but also from the exhilaration due to the unexpected directions in which the cars may be projected.

In order to give an understanding of my invention I have illustrated in the drawings a selected embodiment thereof which will now be described, after which the novel features thereof will be pointed out in the appended claims.

Figure 1 is a vertical sectional view of an apparatus embodying my invention taken on substantially the line 1—1, Fig. 2;

Fig. 2 is a top plan view of Fig. 1;

Fig. 3 is a vertical sectional view through one of the passenger-carrying cars taken on the line 3—3, Fig. 4;

Fig. 4 is a bottom plan view of one of the cars showing parts thereof in section;

Fig. 5 is a fragmentary view showing different ways of flexibly connecting the bumper elements;

Fig. 6 is a view showing a different way

of supporting the rotary platform from that shown in Fig. 1;

Fig. 7 is a view showing one way of constructing the doors for the car.

The passenger-carrying cars are indicated at 1 and may have any suitable or usual construction, they being mounted on casters 2 so that they are free to travel in any direction. The particular construction of the cars will be more fully described hereinafter.

3 indicates a relatively large stationary platform or floor onto which the cars may be projected. I will preferably make this stationary platform or floor circular in shape, and if desired it may be surrounded by a suitable railing 4 to prevent the cars from being thrown off therefrom. Situated at the center of the stationary platform or floor 3 is a car-projecting device constructed to throw or project cars 1 outwardly onto the stationary platform 3. While any suitable car-projecting means adapted to thus project the cars may be employed, I will preferably use a rotating platform 5 which is situated centrally of the stationary platform 3 and which has a relatively small diameter compared to that of the platform 3. The stationary platform 3 is provided with an opening in which the rotating or car-projecting platform 5 is received and the top surface of the car-projecting platform forms a continuation of the surface of the stationary platform. The car-projecting platform 5 is rotatably mounted to turn about its own center or axis, and any suitable means may be provided for rotating it. The rotary motion of the platform 5 will give movement to any car 1 which may be thereon and the centrifugal force developed will throw or project the car 1 outwardly onto the stationary platform 3.

The stationary platform is arranged not only to receive the cars thus projected, but also to cause the cars to gravitate back to the rotary car-projecting platform 5 after the projecting force has been expended. One way of providing for this is to make the stationary platform 3 so that the central portion immediately circumjacent the rotary platform is on a lower level than the outer or peripheral portion.

In the construction shown the platform 3 is shaped so that it inclines downwardly toward the rotary platform on all radial lines. The rotary car-projecting platform 5 is also preferably made somewhat dish-

shaped so that it is lower in the center than at its periphery. As a result of this construction it will be seen that a car located at any position on the stationary platform 5 will, if left to itself, gravitate to the center of the rotary platform. The rotation of the car-projecting platform 5 will give movement to any car which is supported thereon and will develop sufficient centrifugal force to throw or project the car outwardly onto the stationary platform. As soon as the projecting force has been expended, then the projected car will gravitate back onto the car-projecting platform 5 again when it will be again thrown outwardly onto the stationary platform.

The rotary or car-projecting platform 5 may be supported and operated in any suitable way. I have herein shown it as rotating about a central pivot 6, and in Fig. 1 it is provided on its under side with a plurality of rollers 7 which travel on a circular track 8. In Fig. 6 I have shown a reversal of this construction wherein the car-projecting platform is provided on its under side with a circular track 9 which rests on and rolls over supporting rollers 10 that are mounted in fixed supports 11.

While any suitable means may be provided for rotating the car-projecting platform 5, I have illustrated herein a motor 12 which is connected to a driving pulley 42 around which runs a driving belt 14, the latter passing around a belt-receiving groove 15 formed on the underside of the car-projecting platform 5.

The cars I may have any suitable construction, but I will preferably make them of circular shape with the circular seat 16 on which the passengers may sit, all the passengers thus facing toward the center of the car. At the center of the car is a hand-hold 17 in the form of a wheel which is rigidly sustained on a post 18. The purpose of this hand-hold is to provide a solid support to which the passengers may cling during their ride.

I propose to use a plurality of cars, in which case the various cars are liable to bump into each other as they are thrown off from the car-projecting platform, or as they are gravitating back to said platform again. In order to cushion the impact of one car against another, I propose to equip each car with a resilient buffer which extends completely around the car. In the construction herein shown each buffer is in the form of a plurality of blocks 19, each carried by a rod 20 which extends into and is slidable through a housing 21 secured to the underside of the car. Each housing 21 is shown as having a guiding collar 22 slidably mounted therein through which the rod 20 extends, and a cushion spring 24 is interposed between the collar 22 and the

inner end of the housing, while another cushion spring 25 is interposed between said collar and the block 19. The collar 22 serves as a guiding means for the rod, and the two springs act as cushion springs. The inner end of the rod or stem 20 is provided with a collar 23 which by its engagement with the inner end of the housing limits the outward movement of the stem and its block. The various blocks may be connected together either by a spring or by a flexible member, and the blocks will preferably be of such length that the space between any two adjacent blocks is less than the length of the block. In Fig. 4 I have shown some of the blocks connected by a flexible tape or strap-like member 35; some connected by flexible cords 26; and some connected by springs 27.

Since each car is provided with a buffer device of this nature, the passengers in the car will suffer no disagreeable jar due to the impact of one car against another.

Each car is herein shown as provided with a ledge 28 which encircles it above the bumper and which constitutes a support on which the passengers may step as they enter the car. The blocks 19 of the bumper apparatus also provide a step so that said bumper and the ledge 28 make a flight of steps surrounding the car to facilitate the passengers entering the same.

If desired I may make each car with doors 29 through which persons may enter the car.

In using the apparatus, the rotating platform 5 will be brought to rest and the various cars will then all gravitate back onto said platform 5 as near the center thereof as possible. The passengers who desire to gain amusement from the apparatus will then be given admission to the stationary platform and will walk thereover and enter the waiting cars. After all the passengers who wish to ride are seated in the cars, then the platform 5 will be set in rotation. Owing to the fact that the cars are provided with casters, the inertia of the cars will prevent them from immediately partaking of the rotary movement of the platform 5, but the cars will gradually acquire a rotary movement with the platform 5 which will develop centrifugal force, and which will tend to throw the cars toward the periphery of the platform 5. Owing to the fact that the platform 5 is dish-shaped a considerable centrifugal force will have to be developed before the cars will be thrown upwardly to the periphery of the rotary platform, but as soon as sufficient centrifugal force has been thus developed, the cars will be carried off from the platform 5 onto the stationary or receiving platform 3 and will travel a greater or less extent toward the periphery of the platform 3, dependent on

the amount of centrifugal force with which they are projected from the platform 5.

When the projecting force with which each car is thrown off from the car-projecting platform has been expended, then the car will gravitate back toward and onto the rotating car-projecting platform again, and as soon as some of the casters of each car pass onto the rotating platform there will be a tendency to cause the car to rotate about its axis and also to carry the car around with the rotating platform. If the car gravitates clear onto the rotating platform, it will again be subjected to centrifugal action which will throw or project it outwardly onto the stationary platform and the above operations will then be repeated. Where there are a plurality of cars in use at the same time the various cars will bump into each other and the course which any car takes will be partly due to the rotation of the platform 5, partly due to the centrifugal action thereon, partly due to the action of gravity thereon, and partly due to the impact of the car with other cars. The final result is a most exhilarating and exciting ride for the passengers.

The provision of a dish-shaped car-projecting platform 5 is important because the dish shape thereof prevents the cars from being thrown off therefrom until sufficient centrifugal force has been developed to cause the cars to be carried some distance toward the periphery of the stationary platform 3. It is also important because in order to get the best effect it is desirable that the cars should start from the center of the platform 5, and by making the platform with the dish shape shown the returning cars are subjected to the action of gravity until they reach the center of the platform.

While I have illustrated herein some selected embodiments of my invention, I do not wish to be limited to the constructional features shown.

I claim:

1. In an amusement device, the combination with a stationary platform, of a passenger-carrying car adapted to travel over on said platform, and means at the center of said platform to project said car over said stationary platform.

2. In an amusement device, the combination with a stationary platform, of a passenger-carrying car adapted to travel over on said platform, and means at the center of said platform to project said car thereover, the center of said platform being at a lower level than the periphery thereof whereby each car will gravitate back to the car-projecting means after the force with which it was projected has been expended.

3. In an amusement device, the combina-

tion with a stationary platform, of a passenger-carrying car adapted to travel over on said platform, and means at the center of said platform to project said car thereover, said platform being inclined downwardly from the periphery toward the center whereby the cars which are projected onto the stationary platform will gravitate back toward the projecting means again.

4. In an amusement device, the combination with a circular stationary platform having a relatively large diameter, of a rotary car-projecting platform having a relatively small diameter and situated at the center of the stationary platform, and means to rotate said car-projecting platform whereby a car on said car-projecting platform will be projected outwardly onto the stationary platform, the latter being so shaped that said projected cars will gravitate back onto the car-projecting platform after the projecting force has been expended.

5. In an amusement device, the combination with a circular stationary platform having a relatively large diameter, of a rotary car-projecting platform of relatively small diameter situated at the center of the stationary platform and having a dish-shaped surface, and means to rotate said car-projecting platform whereby a car on said car-projecting platform will be projected outwardly by centrifugal force onto the stationary platform.

6. In an amusement device, the combination with a circular stationary platform having a relatively large diameter, of a rotary car-projecting platform of relatively small diameter situated at the center of the stationary platform and having a dish-shaped surface, and means to rotate said car-projecting platform whereby a car on said car-projecting platform will be projected outwardly by centrifugal force onto the stationary platform, the latter being so shaped that said projected cars will gravitate back onto the car-projecting platform after the projecting force has been expended.

7. In an amusement device, the combination with a circular stationary platform having a relatively large diameter, said platform inclining downwardly from the periphery toward the center on all radiating lines, of a rotary car-projecting platform of relatively small diameter situated at the center of the stationary platform and having a dish-shaped surface, and means to rotate said car-projecting platform whereby a car on said car-projecting platform will be projected outwardly by centrifugal force onto the stationary platform.

In testimony whereof, I have signed my name to this specification.

HERBERT N. RIDGWAY.