

Sept. 22, 1931.

J. IRSCH

1,824,720

AMUSEMENT RIDE

Filed Sept. 6, 1928

3 Sheets-Sheet 1

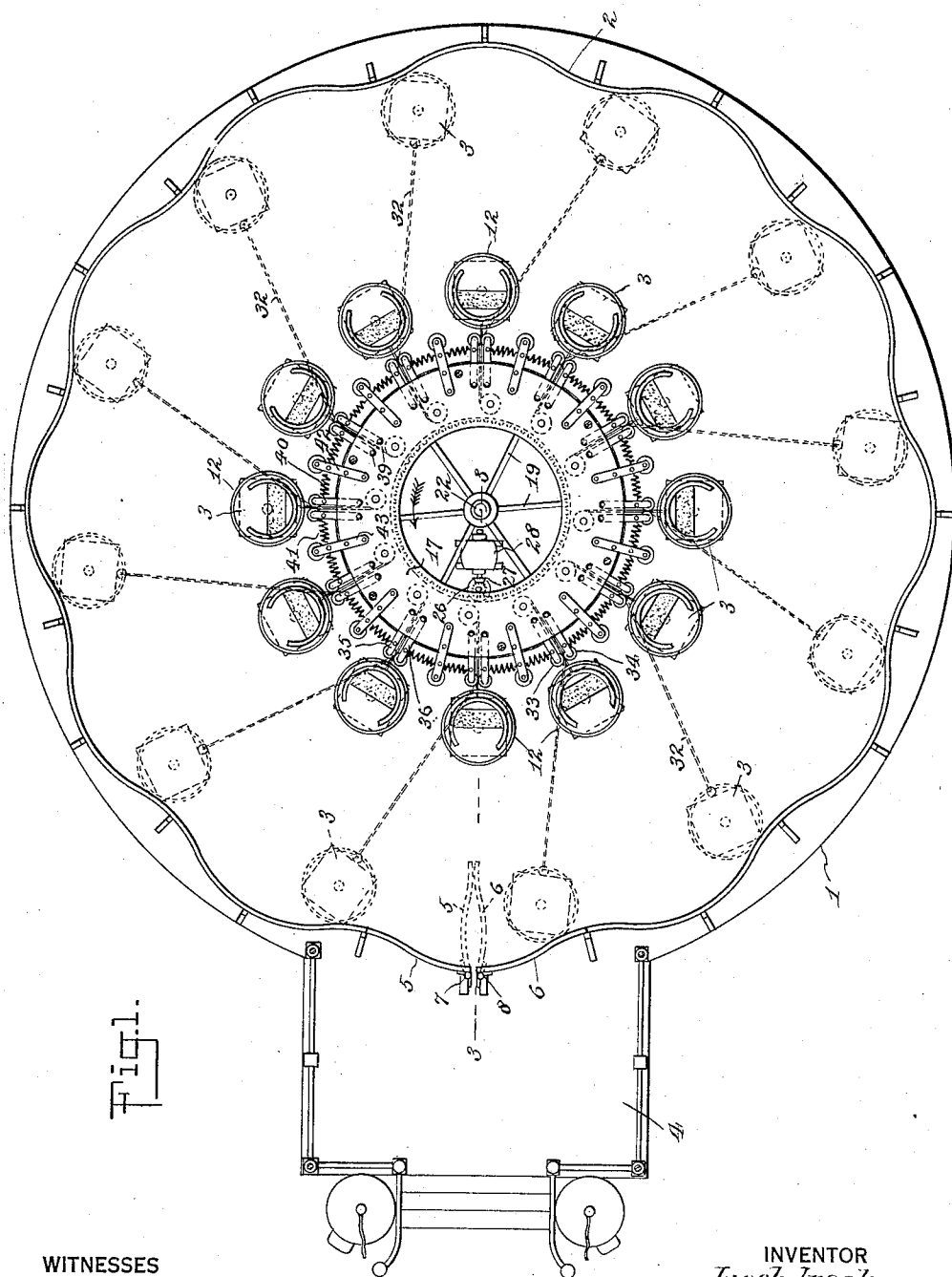


Fig. 1.

WITNESSES

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Fig. 2.

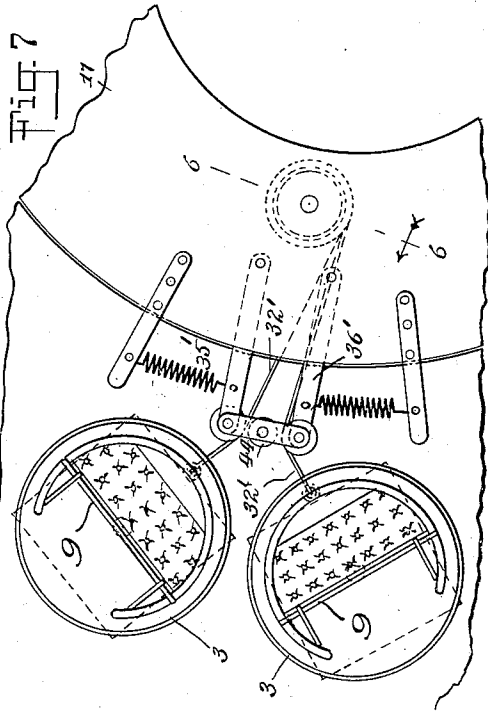
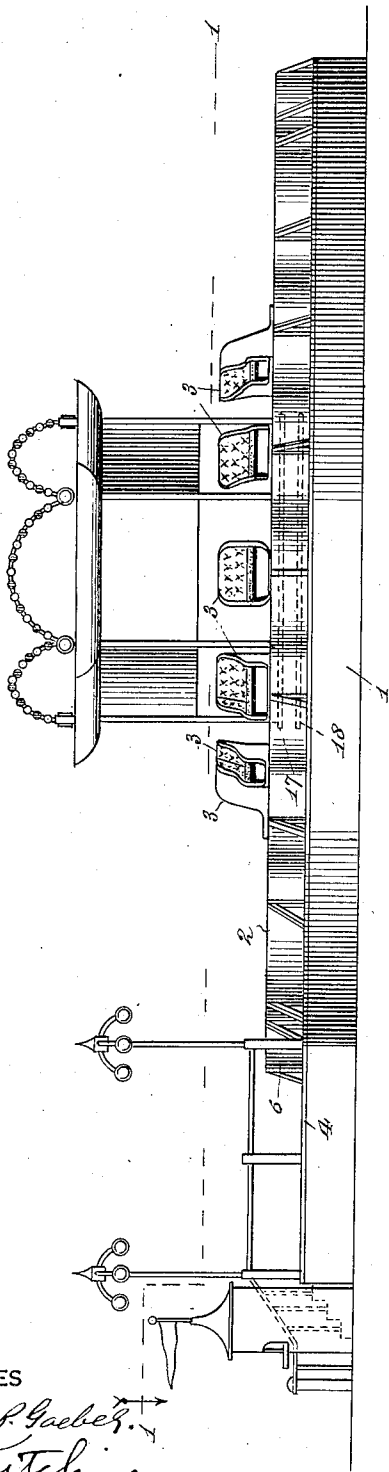


Fig. 6.

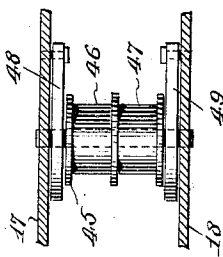
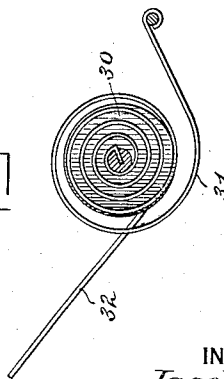


Fig. 5.



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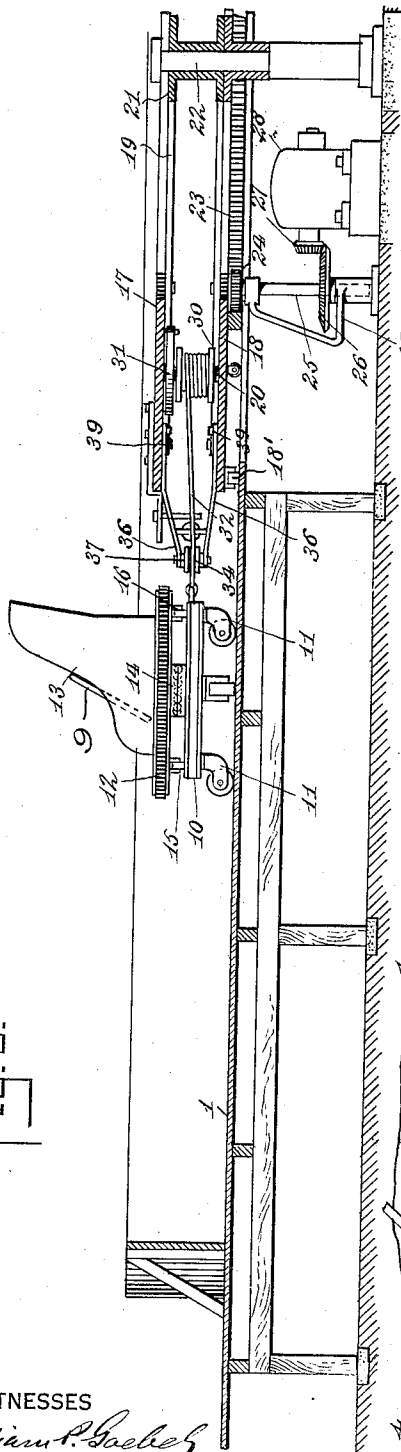
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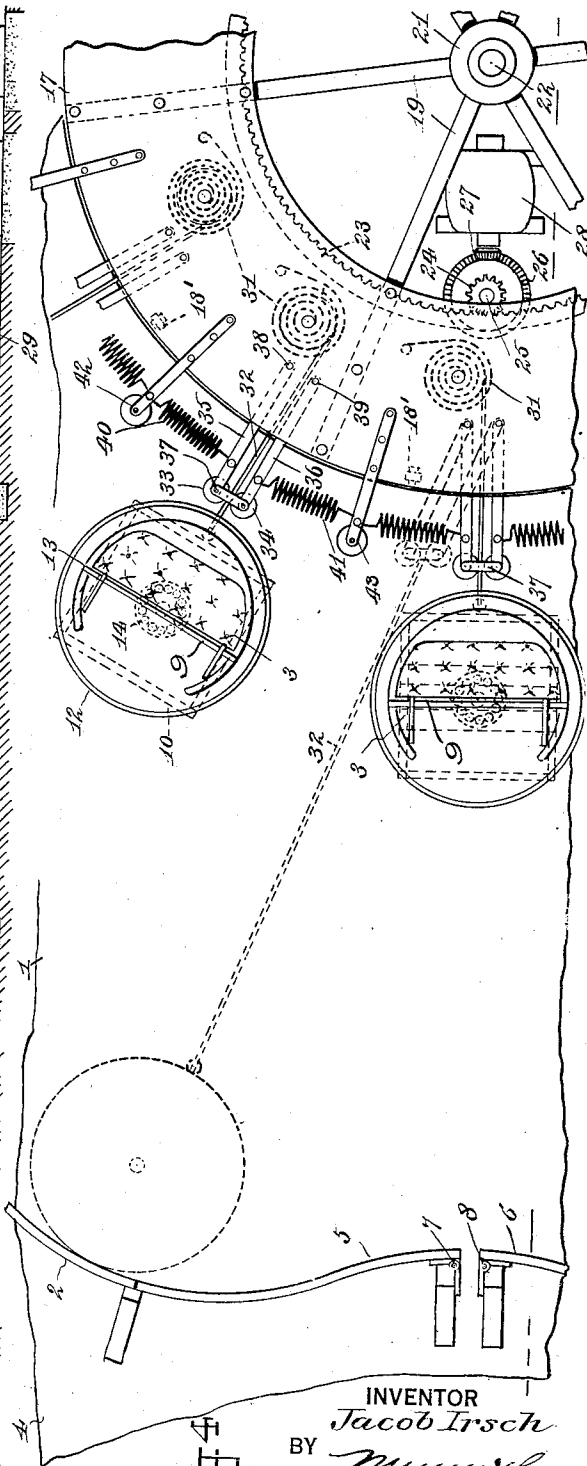
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Fig. 3.



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Fig. 4



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## UNITED STATES PATENT OFFICE

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## AMUSEMENT RIDE

Application filed September 6, 1928. Serial No. 304,323.

This invention relates to amusement rides, and has for an object to provide an improved construction wherein an easily actuated structure is presented, and one which acts in a pleasing manner.

Another object of the invention is to provide an amusement ride wherein cars are utilized with means for causing the cars to move inwardly and outwardly as the device operates and under some circumstances independently rotate.

A further object, more specifically, is to provide an amusement ride wherein means are provided for automatically swinging the cars outwardly and inwardly as they are pulled in a circle.

In the accompanying drawings,—

Figure 1 is a sectional view through Figure 2 approximately on the line 1—1 of Figure 2;

Figure 2 is a side view of an amusement ride disclosing an embodiment of the invention;

Figure 3 is a sectional view through Figure 1 approximately on the line 3—3, the same being on an enlarged scale;

Figure 4 is a top plan view of the structure shown in Figure 3, the same illustrating among other things the door formation;

Figure 5 is an enlarged plan view of a spring and certain other parts, disclosing certain features of the invention;

Figure 6 is a fragmentary sectional view showing a drum and a pair of springs in elevation, said drum and springs embodying certain features of the invention;

Figure 7 is a view similar to Figure 4 but disclosing a slightly modified form of the invention.

Referring to the accompanying drawings by numerals, 1 indicates a stationary platform which may be of any desired kind and preferably made from wood and provided with a wall 2 which is scalloped or serpentine and which acts as the bumper for the various

cars 3 hereinafter fully described. An entrance platform 4 merges into the platform 1 and adjacent to the platform 4 are provided suitable ticket booths or lamps and other necessary devices. The wall 2 at the platform 4 is provided with sections or portions 5 and 6 which are really gates, as illustrated in Figure 4. These sections or gates are hinged respectively at points 7 and 8 to suitable uprights permanently secured in place. When a new supply of customers are to be accommodated these portions or gates 5 and 6 are opened, as shown by dotted lines in Figure 1, and the people are allowed to select any of the cars 3. As soon as the people are properly seated in the cars the safety bars 9 on the respective cars are lowered into position and then the device is started. As the device moves, as hereinafter fully described, the various cars move in a circle on the platform 1, but as the momentum increases centrifugal action will cause the various cars to move outwardly, as indicated by dotted lines in Figures 1 and 4. If the speed is sufficient, the cars will eventually strike the wall 2 and move along this wall instead of in a true circle. Each of the cars 3 is provided with a body 10 supported by suitable casters 11. Platform 12 is mounted on the body 10, said platform having a suitable seat 13. Suitable ball bearing members 14 support the platform 12 and suitable rollers 15 act to prevent any tilting of the platform. In this way the platform 12 and seat 13 are rotatable independently of the body 10, so that when the rubber band or covering 16 on platform 12 strikes wall 2 the platform and seat will begin to rotate independently. A suitable retaining king-pin or other member is used for maintaining the connection between platform 12 and body 10. Arranged centrally of the platform 1 or spaced therefrom is a pair of superimposed platforms or rings 17 and 18. These rings may be of wood, metal or a combination of wood and metal and connected to

gether through the use of suitable rotating members or spokes 19, as well as drum shafts 20. Suitable connecting braces may be added, if desired, though the connection just described is thought to be sufficient. The spokes 19 converge into a hub 21 which is loosely fitted over a fixed shaft or axle 22. A gear ring 23 is rigidly secured to platform 18 and continually meshes with the pinion 24 which is rigidly secured to shaft 25. The beveled gear 26 is rigidly secured to shaft 25 and meshes continually with the beveled pinion 27 secured to the armature of the electric motor 28. This motor is supplied with current from any suitable supply and the current is controlled by any kind of a switch at any desired point. Shaft 25 is supported by a suitable bracket or standard 29 which is secured in place in any desired manner. By reason of the construction just described the platforms 17 and 18 may be rotated, as desired. Between the platforms 17 and 18 there is provided a drum 30 for each of the cars 3 and for each drum there is provided a retractile for rewinding the spring which is secured respectively to the drum and platform 17, so that when the spring is substantially unwound the parts will be substantially in the position shown in Figure 3. When the car moves outwardly to the dotted position shown in Figure 4 the unwinding of the cable 32 will cause the drum to rotate and to wind the spring 31. This spring is sufficiently powerful to pull the car when loaded to substantially the position shown in Figure 3, if the rings 17 and 18 are stationary. As these rings rotate the pull produced by the car will gradually overcome the action of the spring, so that the car will move outwardly as it also moves in a circle. The cable is guided by rollers or pulley wheels 33 and 34, which pulleys are rotatably mounted on their respective bars 35 and 36. A connecting bar 37 connects the outer ends of bars 35 and 36, so that the bars 35 and 36 will always remain parallel but may swing on their pivotal supports 38 and 39. A spring 40 is connected at one end to bar 35 and a similar spring 41 is connected at one end to bar 36. Spring 40 is also connected at one end to a bar 42 rigidly secured to ring 17, while one end of spring 41 is connected with a bar 43 rigidly secured to ring 17. By reason of the springs and associated parts as just described, the bars 35 and 36 will swing to one side as the device is first started, but when the rings 17 and 18 stop these members will again assume a central position. Each of the cars 3 and associated parts are identical, and therefore, the description of one applies to all.

Under some circumstances one set of bars 35' and 36' acts to guide two of the cables 32' connected to two adjacent cars 3. When this structure is used (Figure 7) a central pulley 44 is used to prevent the cable from

tangling. Also, when this form of the invention is used a double drum structure 45 is used, as shown in Figure 6. The respective section or drum members 46 and 47 are connected to the rewinding springs 48 and 49.

When the parts are stationary, as shown in Figures 1, 2 and 3, and it is desired to use the ride the patrons move up onto the platform 4 and then the sections of doors 5 and 6 are opened. The various patrons are distributed among the various cars 3 which are made to accommodate one or two persons, but after the cars are filled the doors or gates 5 and 6 are closed and then the power is turned on to the motor. As the rings 17 and 18 begin to rotate the cars will move with these rings in substantially the same circle as they are in Figure 1. As the speed of rotation increases, however, the drag of the cars will naturally retard them and centrifugal action will begin to function, so that the cars will gradually move outwardly until they strike the wall 2, if the speed continually increases up to a certain point. As the cars move along the wall 2 the platforms 12 will independently rotate and thereby give a different motion from the movement produced by the pulling of the cables. By slacking down the speed the cars will remain near the wall 2 but not in contact therewith and when the device is operating in this manner the cars are moving in a circle but the platforms 12 are not rotating independently. To produce different motions the device may be gradually caused to function at a high speed and then a low speed, and in this way the cars will move back and forth across the platform 1, in addition to moving in a circle. After the time has expired for the first ride the power is shut off and the parts will gradually come to a stop, whereupon the patrons will leave the cars in a reverse manner to which they entered and new patrons will use the cars. This action is repeated as often as necessary or desired. In order to prevent any unnecessary swinging up and down movement of the rings 17 and 18 casters or rollers 18' are mounted on the under surface of ring 18 and rest on the platform 1.

What I claim is:—

1. An amusement ride, comprising a stationary platform, a rotary platform arranged centrally of the stationary platform, means for rotating said central platform, a plurality of cars supported by casters mounted on the stationary platform, a spring-rewound drum mounted on said rotary platform for each of said cars, a cable connected with each of said drums and with the respective cars, whereby when said central platform rotates said cars will be swung in a circle and caused to move radially outwardly under the action of centrifugal force, and a guiding structure carried by said ro-

5 tary platform for each of said cables, said guiding structure acting to cause said cables to extend substantially radially from the drums to a point beyond the periphery of the rotary platform.

10 2. An amusement ride, including a platform, a rotating ring, a plurality of cables connected to said ring at spaced points, a car connected to the free end of each of said cables, so that as the ring increases the speed of its rotation the cars will be moved over said platform and gradually swing outwardly under the action of centrifugal force, and a guiding structure carried by said ring for each of said cables, said guiding structure acting to cause said cables to extend substantially radially from the drums to a point beyond the periphery of said ring.

15 3. An amusement ride, including a stationary platform, cars mounted on the platform, a power driven ring, a cable extending from each car to the ring, a drum carried by the ring for each of said cables, means for causing said drums to automatically rewind when the ring becomes stationary, and a guiding structure carried by said ring for each of said cables, said guiding structure acting to cause said cables to extend substantially radially from the drums to a point beyond the periphery of the ring whereby the cables will not cross each other when the ring is in operation.

20 4. An amusement ride, including a platform, a plurality of cars mounted on the platform, a cable connected to each of the cars, means connecting one end of the cables to a rotating member, whereby said cars will be moved generally in a circle but permitted by said cables to move radially under centrifugal action until the cables are extending substantially radially, and a guiding structure for said cables guiding the cables in a radial direction for part of their length, and a drum for each cable arranged opposite said guiding structure and radially inwardly therefrom.

25 5. An amusement ride, including a stationary platform, a ring arranged centrally of the platform, power operated hand-controlled means for driving said ring, a plurality of cars mounted on said platform, a drum on said ring for each of said cars, a cable connecting the respective drums to the respective cars, a spring associated with each drum for rewinding the drum and swinging resiliently supporting means guiding the cable to a point beyond the periphery of said ring.

30 6. An amusement ride, including a platform, a plurality of cars adapted to move over the platform, and driving means for moving said cars, said driving means including a power driven ring, a cable for each of the cars connecting the cars with the ring, a pair of guiding rollers for each cable, a pair

of pivotally mounted parallel bars for supporting said rollers, a strap for connecting the bars together at one end, a spring acting on each of the bars, said springs acting in opposite directions, and a fixed bar connected with said power driven means for supporting said springs.

Signed at New York in the county of New York and State of New York this 31st day of August, 1928, A. D.

JACOB IRSCH.

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