March 1, 1938. P. F. MEYER 2,109,972

AMUSEMENT DEVICE

Filed June 26, 1937 3 Sheets-Sheet 1

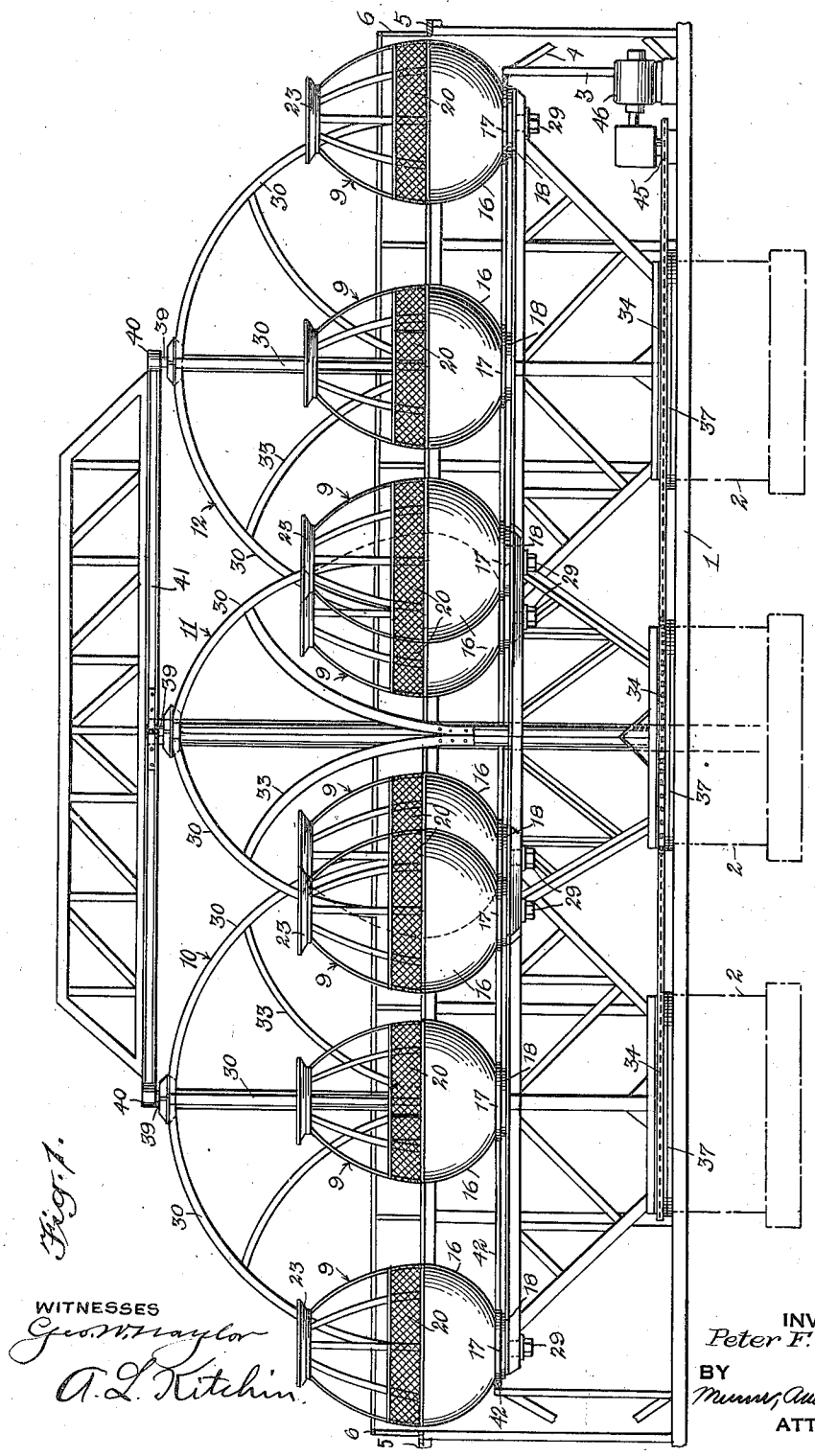

Fig. 1.

WITNESSES

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Filed June 26, 1937 3 Sheets-Sheet 2

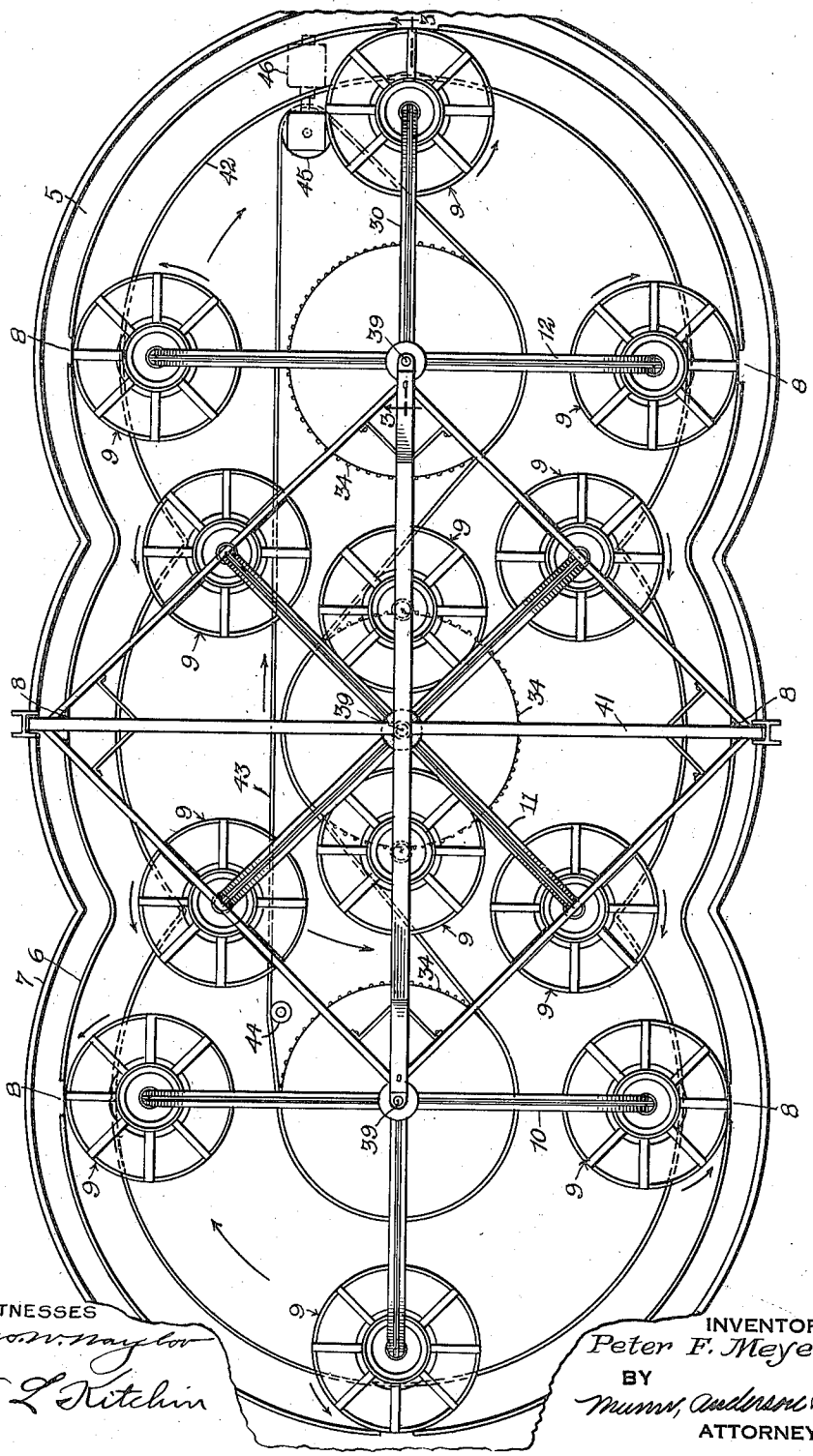

Fig. 2.

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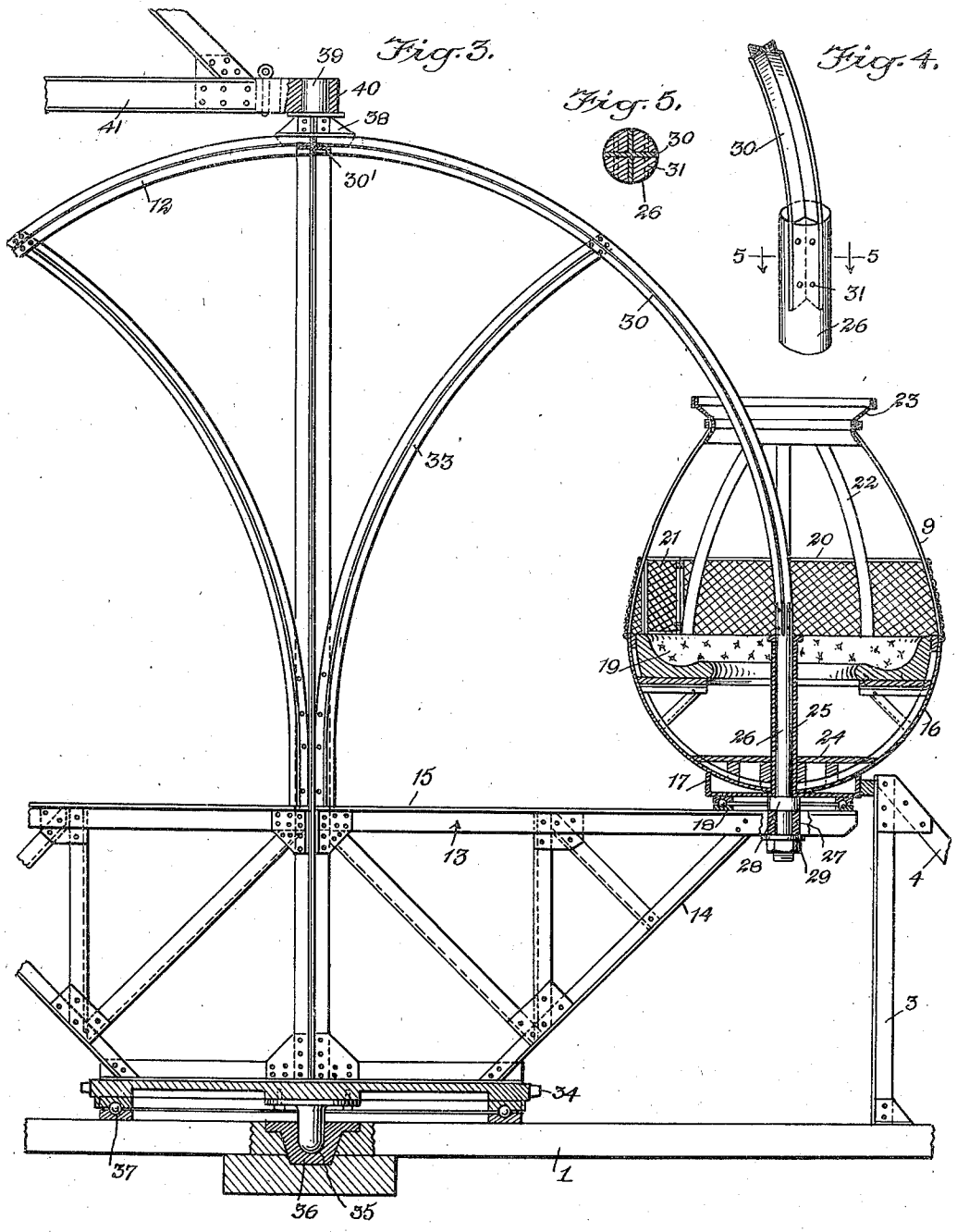
Filed June 26, 1937 3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

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AMUSEMENT DEVICE

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8 Claims. (Cl. 272—37)

This invention relates to an amusement device and particularly to an improved ride, the object being to provide a construction wherein a comparatively large number of persons may use the device at one time and be in view of each other at all times.

Another object of the invention is to provide an amusement device involving passenger carrying cars and means for moving the cars in a circle and rotating the same individually.

An additional and more specific object is to provide an improved ride wherein individual passenger carrying cars are provided and moved in such a way as to more or less weave in and out as the various cars move in their respective paths.

In the accompanying drawings:

Fig. 1 is a side view of an amusement device disclosing an embodiment of the invention, the end portions being broken away;

Fig. 2 is a top plan view of the amusement device shown in Fig. 1;

Fig. 3 is an enlarged fragmentary sectional view through Fig. 2 approximately on the line 3—3;

Fig. 4 is an enlarged perspective view of a connection embodying certain features of the invention;

Fig. 5 is a sectional view through Fig. 4 on the line 5—5.

Referring to the accompanying drawings by numerals, 1 indicates a support or supporting frame which may be placed on the ground or on suitable foundation supports 2. The frame 1 may be made from wood, metal or a combination of wood and metal and provided with suitable braces. The support 1 is provided with a number of uprights 3 which may be suitably braced by members 4 and which carry a loading platform 5 having an inner rail 6 and an outer rail 7. Inner rail 6 is discontinued or open at certain points, as for instance point 8 whereby various cars 9 may be loaded.

As shown in Fig. 2, there are provided three rotating frames, as for instance frames 10, 11 and 12, although if desired more or even less could be used without departing from the spirit of the invention. These frames are shown more in detail in Fig. 3 from which it will be seen that each frame has a lower framework 13 suitably braced with angle braces 14 and suitable connecting braces. The frame 13 is provided with four horizontal beams 15 which presents four arms and at the outer end of each arm there is provided a car 9. The respective cars may be made in different sizes but preferably there is provided a bowl-shaped bottom 16 which is preferably of metal suitably braced and which is welded or otherwise rigidly secured to a circular friction member or ring 17 supported by suitable ballbearings 18.

The car is provided with an annular seat 19 with a suitable rail 20 having a door 21 which permits ingress and egress. The rail 20 with its screening is supported by suitable arms 22 extending upwardly from bottom 16 and connected together by a suitable annular ring 23. A flooring 24 is carried by the bottom 16 to which is rigidly secured the tubular member 25, which member is also secured to bottom 16 and rotates therewith. A journal shaft 26 is rotatably mounted in the sleeve or tube 25 and extends exteriorly of the car and through a bearing 27 carried by frame 13. An abutment 28 is secured to the shaft 26 and arranged immediately above the arm or bar 15, while a suitable washer and nut 29 is connected with the lower end to hold the parts together. The bearing shaft 26 is clamped rigidly to the frame 13 and the car 9 rotates around the same. A semi-circular beam 30 cross-shaped in cross section has one end extending into the slots in the bearing shaft 26 and is secured thereto by suitable rivets 31. It will be understood that the bar 30 extends over and into the opposite car 9, while a similar cross bar 30' connects the two other cars 9 mounted on frame 13.

Suitable arc-shaped bracing bars 33 are connected together at the center and to frame 13 as well as to the bars 30 and 30'. At the lower end frame 13 is provided with a sprocket wheel 34 which has a central bearing 35 fitting into a bearing socket 36 carried by frame 1. The peripheral part of the sprocket wheel 34 is suitably supported by ballbearings 37 so that the parts will rotate freely but be held centered by the bearing 35 which takes up only a small part of the weight. At the top the bars 30 and 30' are provided with bracing members 38 carrying a journal member 39 fitting into a socket 40 carried by the top bracing frame 41. The bracing frame 41 as shown in Fig. 2 is square and is connected through bearing 39 to the respective rotating frames 10, 11 and 12. By the construction shown at the bottom in Fig. 3 and by the use of the frame 41, the rotating frames are all braced and held in proper position in relation to each other so that the various arms 15 on which the passenger cars 9 are mounted may properly pass each other as shown in Fig. 2 without permitting the cars to strike.

As heretofore set forth, each of the cars 9 is provided with a friction ring or member 17 and this member or ring bears against the stationary arc-shaped rail 42 which is shown continuous in Fig. 2, although if desired it could be interrupted. However, each of the passenger cars leaves this rail at one point of its travel but continues to spin by reason of the momentum gained during the contact of the ring and rail. It will be understood that the various rotating frames 10, 11 and 12 move at the same speed, although it is possible

that the passenger cars may individually rotate at different speeds after leaving the rail 42. In order that this action may take place there is provided a sprocket chain 43 which fits over the various sprocket wheels 34 and also fits over an adjusting idler 44 and a driving sprocket wheel 45. A suitable motor, as for instance an electric motor 46, is used for driving the sprocket wheel 45. It will be noted from Fig. 2 that the chain passes over the respective sprocket wheels in a tortuous zigzag manner, but the return line extends straight from the idler 44 to the power sprocket wheel 45.

When the device is in use it must be stopped before passengers can enter or leave the respective cars. It is desired to stop the device, for instance in the position shown in Fig. 2, and passengers may leave the loading platform 5 at any of the openings 8. As shown in Fig. 2 there are six openings 8 and consequently when the parts are in the position shown in Fig. 2 passengers may get on or leave six cars. If it is desired to load the device fully it is moved slowly until the other six cars come to the various openings 8 and then passengers may enter the empty cars. After this has been done the device is started and continually actuated for a certain length of time according to the advertised length of ride to be given. After the ride has ended it is necessary to discharge six of the cars first and then move the device a short distance for discharging the other six cars.

I claim:

1. An amusement ride comprising a support, a plurality of overlapping rotating frames arranged in a row and carried by said support, a plurality of independently rotatable passenger carrying cars carried by each of said frames said cars being positioned on said frames so that by reason of the overlapping of the frames the path of the respective cars on one frame will overlap the path of the cars of the next adjacent frame, each of said cars having a circular friction member, and an arc-shaped stationary rail positioned to be engaged by said circular friction members as the respective frames rotate for independently rotating said cars.

2. An amusement ride comprising a support, a plurality of rotating frames supported by said support, a plurality of independently rotatable passenger carrying cars carried by each of said frames, means for rotating said frames so as to move the cars of each frame in an independent circle, a friction ring secured to each of said cars, and arc-shaped stationary members positioned to engage said friction rings for part of the time as said frames rotate for independently rotating said cars.

3. An amusement ride comprising a support, a plurality of rotatable frames carried by said support, a horizontally positioned sprocket wheel secured to each of said frames, an endless sprocket chain having one run extending in a zig-zag path and engaging the first sprocket wheel adjacent one side of said support, the second sprocket wheel adjacent the opposite side of said support, and the third sprocket wheel on the same side as the first so that two of the frames will rotate in one direction and the center frame will rotate in the opposite direction, means for driving said chain, a plurality of cars on each of said frames, and means independent of said sprocket wheels for independently rotating said cars as said frames rotate.

4. An amusement ride comprising a plurality of aligned rotating frames, each of said frames having a plurality of radiating arms, the arms of each frame being of a length to project into the zone of adjacent frames as the frames rotate, driving means for rotating said frames in timed relation to each other so that the arms will readily pass each other, a rotatable passenger carrying car carried at the outer end of each of said arms, the cars of one frame by reason of the overlapping of said arms passing into the zone of the cars of adjacent frames from time to time, and means coacting with said cars to individually rotate each car independently.

5. An amusement ride comprising a plurality of aligned rotatable frames, each of said frames having a plurality of radiating arms of a length to project into the zone of the adjacent frame, means for rotating said frames at the same speed, a passenger carrying rotatable car carried at the outer end of each of said arms whereby as said arms move the cars of one frame will move into and out of the zone of the cars of the adjacent frame, and friction means at certain zones along the travel of said cars for frictionally engaging and rotating said cars as the frames rotate.

6. An amusement ride comprising a plurality of rotatable frames arranged in a straight line, means for rotating all of said frames at the same time and at the same speed, each of said frames having a plurality of arms of a length to extend into the zone of the adjacent frames, a rotatable passenger carrying car carried at the outer end of each of said arms, a friction ring rigidly secured to each of said cars, and an arc-shaped friction member for each of said frames, said arc-shaped friction members being positioned so that said friction rings will from time to time frictionally engage the same for individually rotating said cars.

7. An amusement ride comprising a support, a plurality of rotatable frames carried by said support and arranged in a row, a rotatable passenger car mounted on each of said frames, said frames being positioned so that portions thereof will overlap from time to time as the frames rotate whereby the path of the cars of one frame will overlap the path of the cars of the next adjacent frame, means for rotating said cars independently of said frames, and means for rotating said frames at the same speed, said cars being positioned so as to be timed to enter and leave adjacent zones without striking the cars of adjacent frames.

8. An amusement ride including a support, a plurality of frames carried by said support, each of said frames comprising a plurality of arms radiating from a central point, a bracing framework for holding said arms in functioning position, said bracing framework including a large circular member having sprocket teeth on its periphery, and a superstructure above said bracing framework, said superstructure being formed with a pair of semi-circular bracing members having their respective ends secured respectively to the outer ends of said arms and bracing members extending from said center point to the respective semi-circular bracing members, a car rotatably mounted on the outer end of each of said arms, and means including a sprocket chain engaging said sprocket teeth for rotating said frame.

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