Dec. 1, 1942. H. D. STONEBACK 2,303,770

AMUSEMENT DEVICE

Filed Aug. 4, 1940 2 Sheets-Sheet 1

FIG. 1.

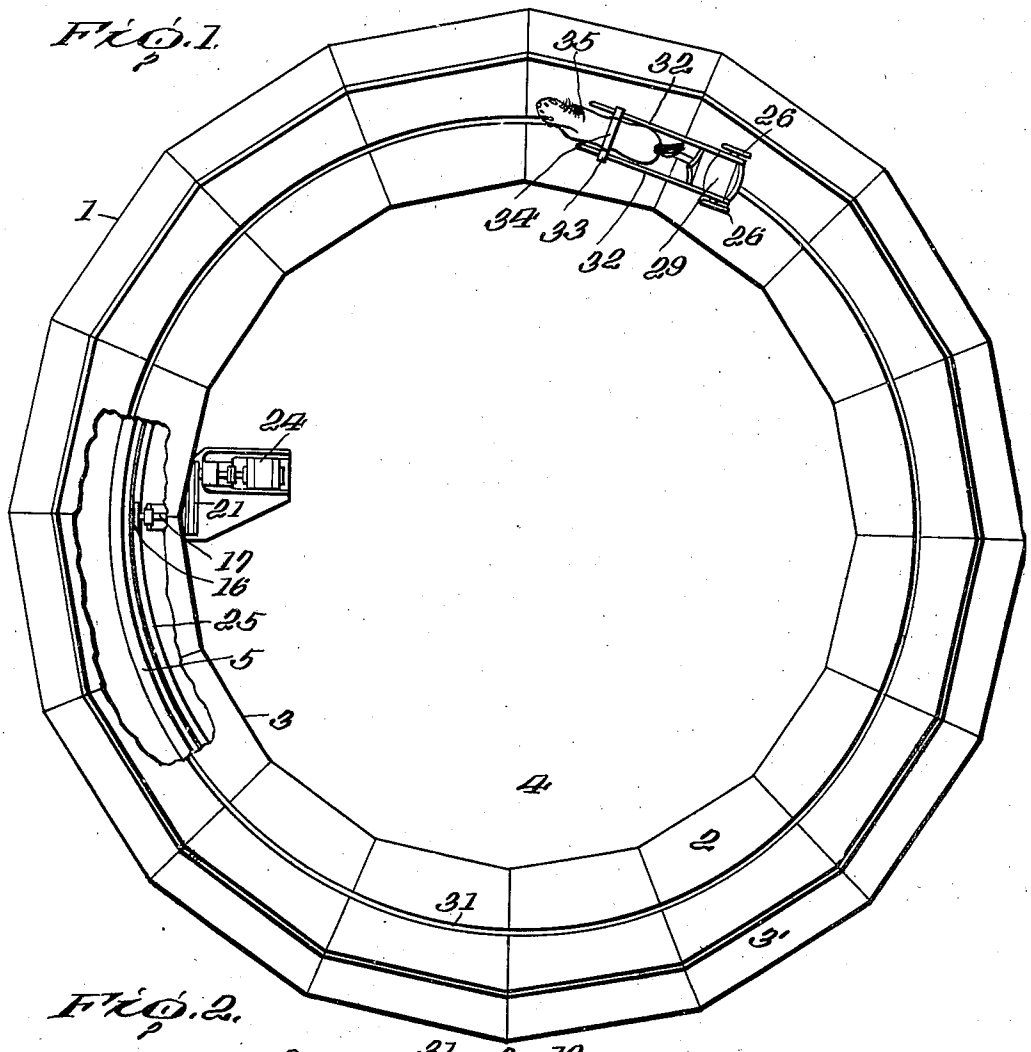
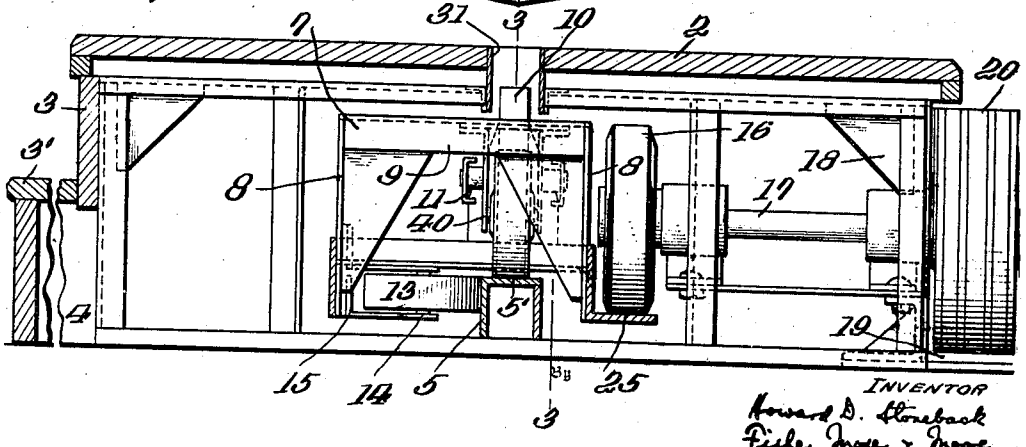


FIG. 2.

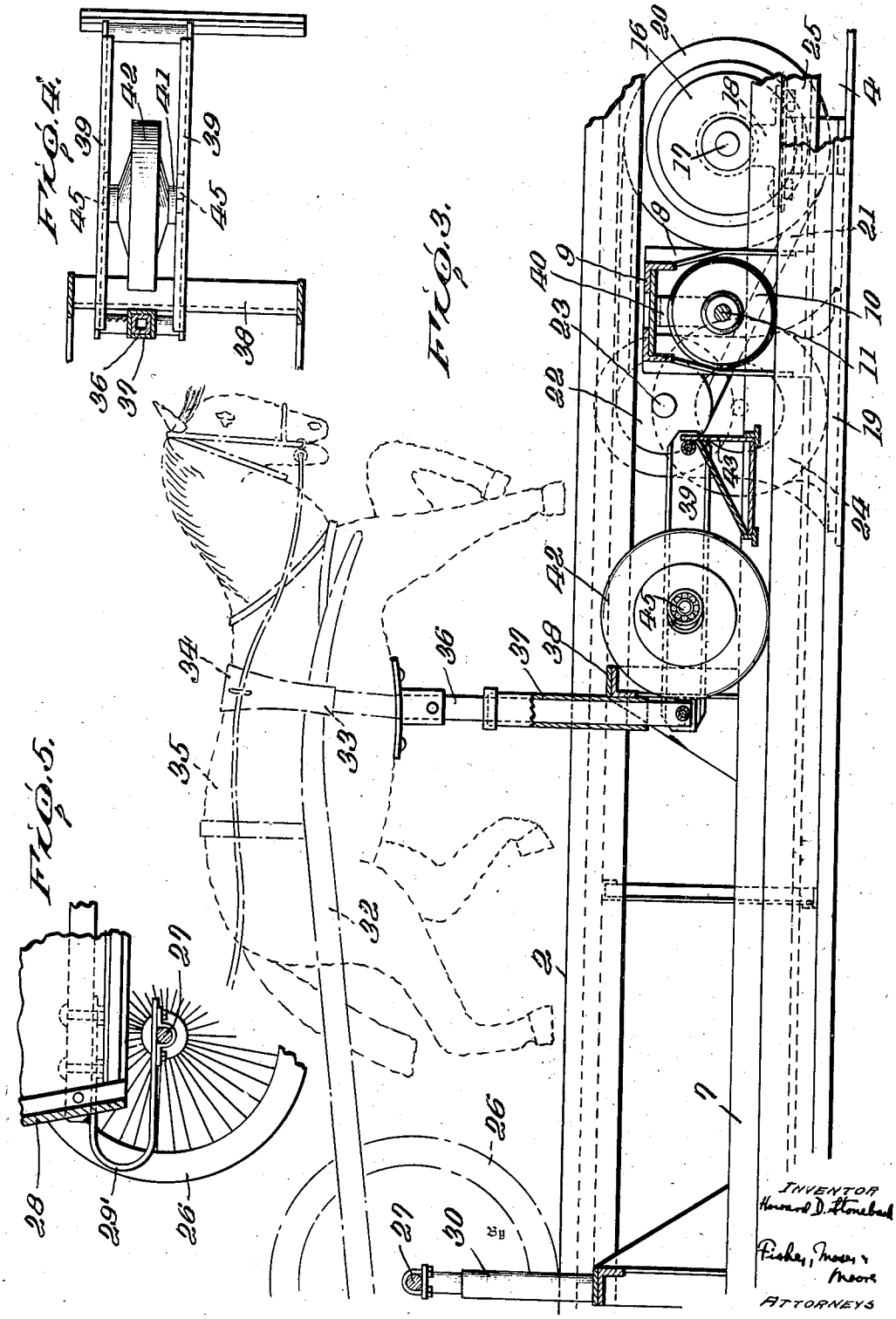


INVENTOR
Howard D. Stoneback
Fisher, Mosser & Moore
ATTORNEYS

Dec. 1, 1942. H. D. STONEBACK 2,303,770

AMUSEMENT DEVICE

Filed Aug. 4, 1940 2 Sheets-Sheet 2



Patented Dec. 1, 1942 2,303,770

UNITED STATES PATENT OFFICE

2,303,770

AMUSEMENT DEVICE

Howard D. Stoneback, Cleveland, Ohio, assignor to The Humphrey Company, Cleveland, Ohio

Application August 4, 1940, Serial No. 351,315

4 Claims. (Cl. 104—53)

This invention relates to a mechanical amusement device and the operating mechanism therefor.

The principal object of the present invention is to provide an amusement device having a series of carriages movable upon and adapted to carry passengers around a circular course.

Another object is the provision of a mechanical amusement device wherein a series of carriages are simultaneously moved over and are adapted to carry passengers around a circular course.

Another object is the provision of novel means for simultaneously moving a series of passenger carrying carriages around a circular course and imparting a rocking motion thereto.

A further object is to provide a novel operating mechanism for supporting and frictionally moving a series of passenger carrying carriages around a circular course and simultaneously imparting a rocking motion thereto.

A still further object is to provide a novel means for supporting a series of carriages on and frictionally moving the same around a circular track, during which a rocking movement is imparted to the carriages.

Still another object is the provision of a mechanical amusement ride, particularly adapted for children, wherein the operating mechanism is mounted within the supporting platform thereby leaving the center of the device open and unobstructed, which makes the ride easier to operate and also gives a neater appearance thereto.

These and other objects and advantages will be apparent as the specification is considered with the accompanying drawings, wherein:

Figure 1 is a plan view of the platform and one of the carriage units positioned thereon, the platform being partly broken away to show the rotatable base frame;

Figure 2 is a cross section through the platform showing the fixed rail, floating base frame and the friction drive for rotating the same;

Figure 3 is a section on the line 3—3 of Figure 2, showing the supporting and operating mechanism for a horse of one of the carriage units, the floating base frame, and associated driving mechanism therefor;

Figure 4 is a plan view of one of the eccentric friction wheels for imparting a vertical movement to the horses of each of the carriage units; and

Figure 5 is a cross section through a portion of one of the wheeled carriages.

Referring more particularly to the drawings, wherein similar reference characters designate like parts throughout the several views, the numeral 1 designates generally an elevated substantially ring-shaped or circular hollow platform or track comprising a flat top wall 2 and side walls 3 supported by a floor 4. A step 3', extending around and suitably attached to the outer side wall 3, is preferably provided to enable the passengers of the device to mount the platform. Arranged within the platform 1, intermediate the side walls, is a substantially circular, U-shaped rail 5 which is suitably fixedly secured by bolts or the like, not shown, to the floor 4.

A circular base frame 7, comprising two spaced angle iron walls 8 secured together at spaced intervals by upstanding, substantially U-shaped housings 9, is rotatably mounted upon and supported by the rail 5. Thus, a vertically disposed caster or roller 10, carried by a stub shaft 11 journalled in a bracket 40 on the underside of each of the housings 9, frictionally engages with and rides upon the flat top face 5' of the rail 5. Each of the series of casters 10 is retained in position thereon by a horizontally disposed caster or roller 13, mounted on a stub shaft 14 journalled in a bracket 15 secured to one side wall of housing 9. As the casters 13 frictionally engage one side wall of the rail 5, the frame 7 is held in proper alignment with respect to the rail 5 and the casters 10 are prevented from slipping from the rail, during the rotation of the frame 7, as presently described. The base frame 7 is rotated, relative to the fixed rail 5, by means of a vertical friction wheel 16 keyed to the outer end of a horizontal drive shaft 17 journalled in an upstanding bracket 18 of a stationary motor supporting frame 19 mounted on the floor 4. Keyed on the inner end of shaft 17 is a pulley 20 which is drivingly connected by a flexible belt 21 to a pulley 22 on the main horizontal drive shaft 23 of an electric motor 24 suitably mounted on frame 19. The friction wheel 16 frictionally engages a circular flange 25 on the inner wall 8 of the frame 7 and upon rotation of the drive shaft 17 in a counterclockwise direction viewing Figure 1, rotates the base frame 7, in a corresponding counterclockwise direction.

The flat top wall 2 of platform 1 serves as a support for a pair of rubber tired wheels 26, mounted on the axles 27, of each of a series of carriages 28 having seats 29 thereon adapted to accommodate children or other passengers. The seats 29 are preferably mounted on the axles by pairs of suitable shock absorbing springs 29'. While I have found it satisfactory to use six carriages, any desired number of the same may be employed. The wheels of the carriages are prevented from slipping or sliding on the platform by a downwardly depending tube or the like 30, suitably secured to each axle 27 intermediate the ends thereof, which projects into a slot 31 formed in the top wall 2 and extending circumferentially therearound. Each carriage is provided with a pair of forwardly projecting, spaced, parallel shafts 32 pivotally connected, at their forward

ends, to suitable harness rings 33, carried by a conventional harness 34 fastened, in the usual manner, to an upstanding preferably wooden horse 35. The wooden horses are each supported slightly above the top surface of the platform 1 by a series of vertical rods 36, suitably connected to the horses and extending downwardly through the circular slot 31 in the platform. The lower ends of the rods 36 are each sleeved through a vertically disposed bearing 37 carried by each of a series of upstanding brackets 38, secured to the circular frame 7 adjacent each of the caster supporting housings 9. Each of the rods 36 are pivotally connected, at their lower ends, to the outer ends of each of a series of horizontally disposed levers 39, each of which is connected, intermediate its ends, to eccentric pins 45 on the ends of each of a series of stub shafts 41, journalled in the levers 38 of the circular frame 7. Mounted on each of the shafts 41 is a vertical caster or roller 42 which frictionally engages the circular rail 5, in spaced relation to each other, and the inner ends of the lever 39 are each fulcrumed to an upstanding bracket 43 secured to the side walls 8 of the frame. By virtue of the eccentric connections between the levers 39 and casters 42, when the frame 7 is rotated on the rail 5, the outer ends of the levers 39 are rocked, thus raising the rods 36 substantially vertically, through their bearings 37. As the rods 36 are pivotally connected to the rotating frame 7 and move in unison, due to the rotation of the casters 42 on rail 5, the horses 35 and carriages 29 are advanced over the flat top surface of the platform 1. During the travel of the horses and carriages, the substantially vertical movement of the rods 36 causes the wooden horses 35 to be raised and lowered, in a corresponding direction, which in turn simultaneously rocks the shafts 32 of the carriages 29. The occupants of the carriages are thus rocked or swayed in an exhilarating manner during the rotation of the same around the platform.

From the foregoing it will be noted that due to the annular shape of the platform and the mounting of the frame track and associated operating mechanism within or beneath the platform, the center or that portion of the floor or base encircled by the platform is unobstructed thus permitting of maximum freedom of movement on the part of attendants, and at the same time obviating the necessity of obstructing the view of onlookers.

While I have shown and described my amusement device as comprising a series of horses and carriage units, it is to be understood that various other types of conveyances may be employed, wherein the same are rotated over a stationary surface and simultaneously rocked. Various changes and improvements may be made without departing from the spirit and scope of the appended claims.

What I claim is:

1. In an amusement device of the character described comprising a substantially circular platform, a substantially circular supporting track mounted in said platform, a frame member having a rotatable means on and supported by said track, a circular flange on said frame, and rotatable driving means frictionally engaging with said flange for rotating said frame on said track, a carriage on said platform, rigid members fixedly connected to said carriage, and means connected to said members having a downwardly depending rod, a lever pivotally connected to said frame, said rod being pivotally connected at its lower end to said lever, a roller eccentrically mounted on said lever and engageable with said track for vertically moving said rod and said means whereby said carriage is rocked and said means and carriage are simultaneously propelled along said platform.

2. In an amusement device of the character described comprising a substantially circular platform, a substantially circular supporting rail mounted in said platform, a frame member having a roller rotatably mounted on and supported by said rail, and means for holding said roller on said rail, said frame having a circular flange thereon, a wheel frictionally engaging with said flange for rotating said frame on said rail, a carriage on said platform, rigid members fixedly connected to said carriage and a horse connected to said members and having a downwardly depending rod secured thereto, a lever pivotally connected to said frame, said rod being pivotally connected at its lower end to said lever, a roller eccentrically mounted on said lever, said roller riding on and rotating over said rail whereby said rod and horse are moved vertically to rock said carriage and said horse and carriage are simultaneously propelled along the platform.

3. In an amusement device of the character described comprising a substantially circular platform, a substantially circular supporting rail fixedly mounted in said platform, a frame member having a roller rotatably mounted on and supported by said rail, and means engageable with the side of said rail for holding said roller on said rail, said frame having a laterally extending circular flange thereon, a wheel frictionally engaging with said flange and means for rotating said wheel for rotating said frame on said rail, a carriage on said platform, rigid members fixedly connected to said carriage, and a horse connected to said members and having a downwardly depending rod secured thereto, a lever pivotally connected to said frame, said rod being pivotally connected at its lower end to said lever, a roller eccentrically mounted on said lever, said roller riding on and rotating over said rail whereby said rod and horse are moved vertically to rock said carriage and said horse and carriage are simultaneously propelled along the platform.

4. In an amusement device of the character described comprising a substantially circular platform, a substantially circular supporting rail fixedly mounted in said platform, a frame member having a vertically disposed roller rotatably mounted on and supported by said rail, and rotatable means engageable with the side of said rail for holding said roller on said rail, said frame having a laterally extending circular flange thereon, a vertically disposed wheel frictionally engaging with said flange and means for rotating said wheel for rotating said frame on said rail, a carriage rotatably mounted on said platform, rigid members fixedly connected to said carriage, a horse connected to said members and having a downwardly depending rod secured thereto, a lever pivotally connected to said frame, said rod being pivotally connected at its lower end to said lever, said roller riding on and rotating over said rail whereby said rod and horse are moved vertically to rock said carriage and said horse and carriage are simultaneously propelled along the platform.

HOWARD D. STONEBACK.