

No. 888,247.

PATENTED MAY 19, 1908.

J. DE LA MAR.
FREE CARRIAGE MERRY-GO-ROUND.

APPLICATION FILED JAN. 2, 1908.

2 SHEETS—SHEET 1.

Fig. 1.

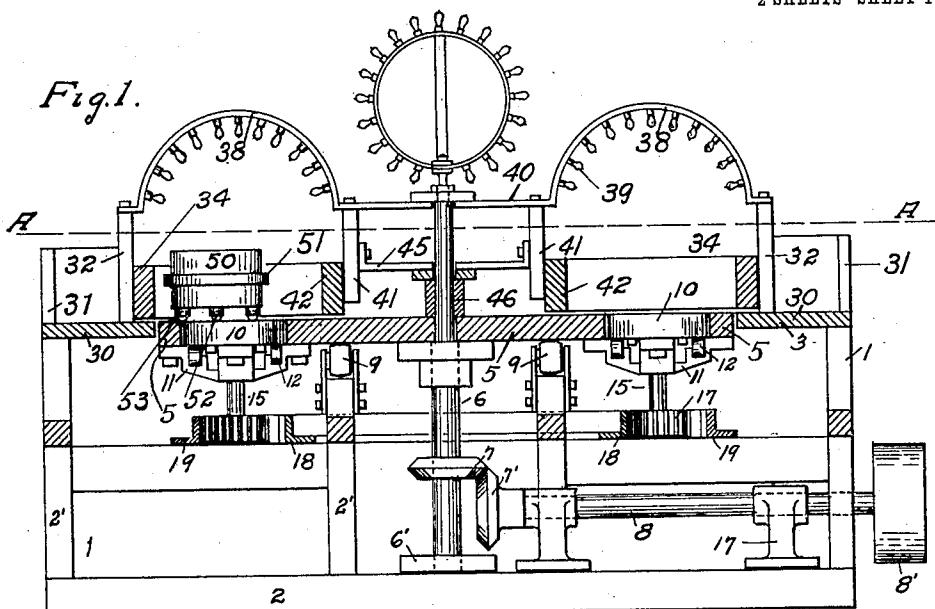
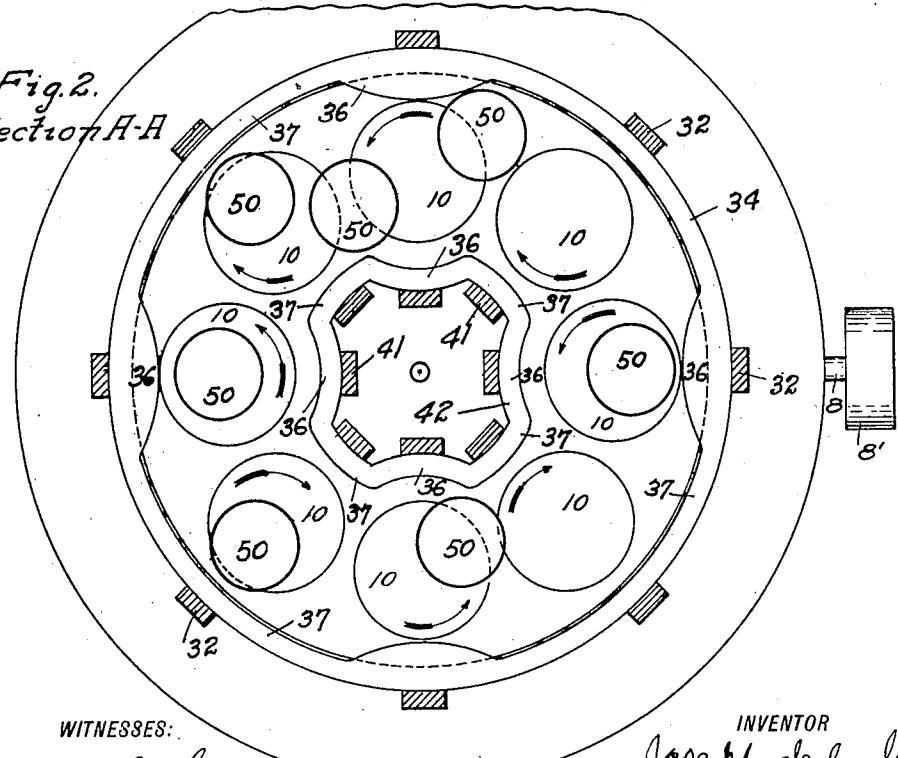


Fig. 2.
Sectrograph



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2 SHEETS—SHEET 2.

Fig. 3.

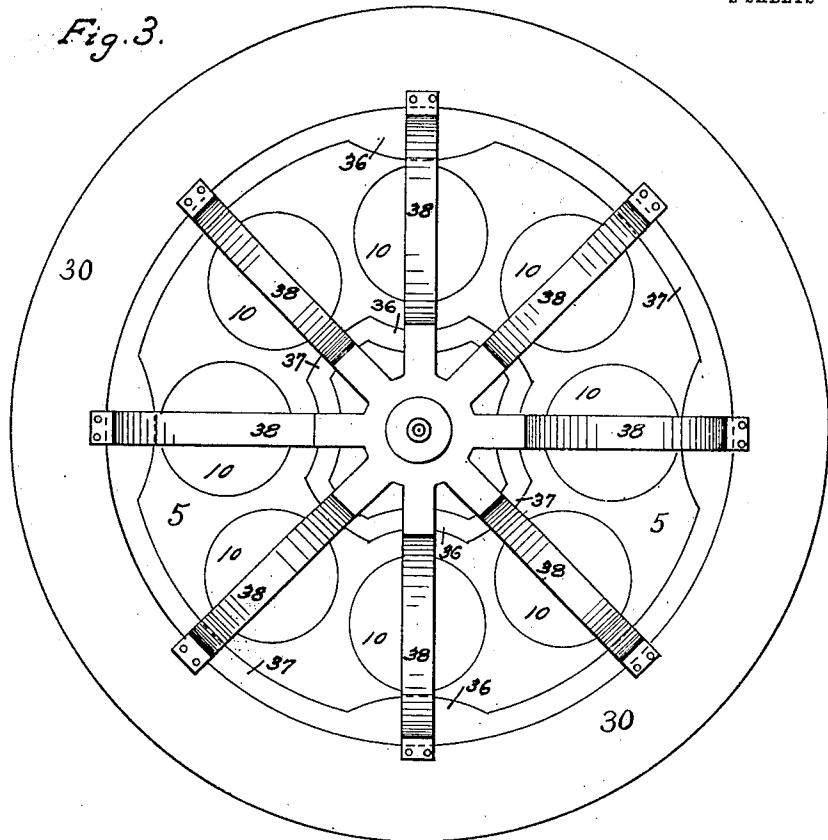


Fig. 4.

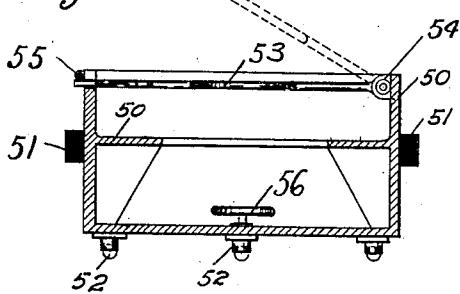
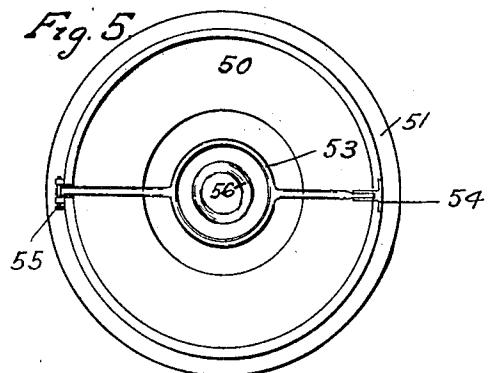


Fig. 5.



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JOSEPH DE LA MAR, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO SIMON HENRY, OF BROOKLYN, NEW YORK.

FREE-CARRIAGE MERRY-GO-ROUND.

No. 888,247.

Specification of Letters Patent.

Patented May 19, 1908.

Application filed January 2, 1908. Serial No. 408,898.

To all whom it may concern:

Be it known that I, JOSEPH DE LA MAR, a citizen of the United States, residing in the borough of Manhattan, county, city, and State of New York, have invented a certain new and useful Improvement in Free-Carriage Merry-Go-Rounds, of which the following is a specification such as will enable others skilled in the art to which it appertains to make and use the same.

The object of my invention is to provide a merry-go-round or roundabout, comprising a main rotatable floor-disk, carrying adjacent to the periphery a plurality of secondary floor-disks also rotatable, usually rotated as though forming a circular closed gear-wheel train, as the main-floor-disk is rotated, an inner buffer-rail within the circle of secondary floor-disks, an outer buffer-rail without the circle of secondary floor-disks, (each of such rails being provided with sinuous curves,) and a plurality of cars mounted upon suitable universal anti-friction casters adapted to be thrown from one rail to the other by centrifugal force as the main-floor-disk is rotated, a buffer-ring for contacting with the rails surrounding each car to lessen the shock of impact, seats within the cars, a hinged manual holding ring frame, and a foot holding device within the car; although it is not to be understood that my invention is necessarily limited to an apparatus including at once all of the before mentioned devices and parts, as my said invention consists in the particular construction of certain devices and parts, and in the particular combination and arrangement of certain devices and parts, and in the particular construction, combination and arrangement of certain devices and parts, all as hereinafter more particularly set forth in the specification and pointed out in the claims.

My said invention is fully shown and described in the following specification, of which the accompanying drawings form a part, wherein similar numerals of reference designate like or equivalent parts wherever found throughout the several views, and in which:

Figure 1 is a side view partially in central vertical section of a device embodying my invention. Fig. 2 is a top plan view thereof, in section on the line *a*—*a* of Fig. 1. Fig. 3

is a top plan view of the device shown in Fig. 1; and Figs. 4 and 5 are views in detail, one a top plan, and the other a view in central vertical section, of the free carriages or cars which are carried by and thrown about on the disks, by their rotation.

Referring to the drawings;—the reference numeral 1 designates the supporting frame work built up, usually of the timbers 2 and 2' in the manner shown in Fig. 1; and supported on this frame is usually a stationary outer flooring 30 upon which is mounted the sinuous annular buffer-fence or rail 34, against which the cars will be thrown by centrifugal force, on the rotation of the main and secondary floor disks, each carriage being provided with the annular buffer-fence or ring 51, as shown. This main-floor-disk 5 is circular in form, and is supported at the center on the revoluble upright shaft 6 rotating in the step-journal 6' supported by the frame 1, and this shaft is in actuating connection through the gear-wheels 7 and 7', with the drive-shaft 8 provided with the drive-pulley 8'. At any suitable points, this main-floor-disk 5 is supported on suitable roller-bearings 9, and supported on and carried by such main-floor-disk are a plurality of secondary rotating floor-disks 10, of any desired number eight being shown in the drawing arranged in any desired manner, usually in that shown; that is with the axes thereof alternately arranged so that one half will be on the line of a circle of the great disk adjacent to the periphery, while the remaining half will have their axes lying on a like circle concentric with and slightly within the axial circular line of the first mentioned half of such secondary floor-disks.

Bolted to the underside of the main-floor-disks beneath each of the secondary floor-disks is a four armed bracket 11 of the form shown, having at the arm end the roller-bearings 12, upon which rests and rotates the peripheral edge of such secondary floor-disks; and at the center with the journal-box 13, through which passes the secondary floor-disk depending-shaft 15, rigidly secured thereto. To bring about the rotation of these secondary floor-disks as the main-floor-disk is rotated, any desired form of gearing may be employed, but I prefer to use the simple and cheap form shown, wherein an

inner stationary annular gear-rail 18 and also a like outer rail 19 is located below the main-floor-disk.

Secured on the depending-shafts 15 of the secondary floor-disks at the lower end is a gear-wheel 17 which is at all times kept pressed tightly against its gear-rail,—those on the outer circle co-acting with the outer rail and those on the inner with the inner rail as shown in Fig. 1.

Outside of the main-floor-disk is an outer stationary floor 30, having the outer fence 31, on the inner annular edge of which are suitable supporting posts 32, to which are secured the outer buffer-rail 34, provided with the sinuosities 36 and 37. Supported by the post 32 are arch girders 38 usually provided with electric lamps 39, having the central girders 40, supported by the top of the main shaft; and from the inner ends of these arches depend the posts 41, to which are rigidly secured the inner sinuous buffer-rail 42, having on the outer side the concavities 36', radially coincident with the convexities 36 of the outer rail 34, and also the like convexities 37' radially coincident with the concavities 37 of the outer rail. A spider 45 resting on a loose sleeve 46, is preferably used to centrally brace the posts 41, and the central main shaft is usually provided with an ornamental globe 47.

The free carriages 50 are usually of the cylindrical form shown, and are provided on the exterior with the annular buffer ring 51, usually of soft rubber, which is usually provided on the outer edge with corrugations (not shown). Each of these carriages is supported upon universal casters 52, usually of the form known as "ball-casters", or any other suitable caster capable of universal motion.

Within the car are seats, usually four in number for the persons using the device, and a manual holding ring 53 is hinged at 54, to one side of the carriage, so as to be capable of being lifted up to permit of people stepping down into the car; and when the persons have entered, be secured in position so that they can grasp the same with the hand, by means of a suitable lock or catch 55.

The carriages 50 are of considerable less diameter than are the secondary floor-disks, and it is evident upon an examination of the drawings, that when the persons have taken their seats, they can take firm hold of the hand rail, and place their feet under the foot-racks 56; and that upon rotation of the main-floor-disk, this will bring about rotation as though in a meshed circular gear-wheel train of the secondary floor-disks; and that when this rotation is made sufficiently rapid, the centrifugal force of the main-floor-disk and of the secondary floor-disks will cause the cars 50 to be gyrated in various directions, and 65 whirled about by contact with the outer and

inner sinuous buffer-rails, from one to the other, and likewise by contact with one another; and that thus an exhilarating and amusing pastime, is afforded for the users thereof.

What I claim is:—

1. In a device of the class described, a main revoluble floor-disk, means for rotating the main floor-disk, a plurality of secondary revoluble floor-disks carried by the main floor-disk arranged adjacent to the periphery, a shaft depending from each secondary floor-disk, a suitable gear wheel carried by each shaft for rotating the same, an annular rail co-acting with the gear wheels so as to bring about rotation thereof as the main floor-disk is rotated, a sinuous inner buffer-rail, and a like sinuous outer buffer-rail, supported above the main floor-disk so as to form a sinuous annular path above the secondary floor-disks. 75

2. In a device of the class described, a main revoluble floor-disk, means for rotating the main floor-disk, a plurality of secondary revoluble floor-disks carried by the main floor-disk arranged adjacent to the periphery, a shaft depending from each secondary floor-disk, a suitable gear wheel carried by each shaft for rotating the same, an annular rail co-acting with the gear wheels so as to bring about rotation thereof as the main floor-disk is rotated, a sinuous inner buffer-rail, a like sinuous outer buffer-rail, supported above the main floor-disk so as to form a sinuous annular path above the secondary floor-disk, and a car or cars, mounted upon universal 95 casters located in the sinuous path. 100

3. In a device of the class described, a main revoluble floor-disk, means for rotating the main floor-disk, a plurality of secondary revoluble floor-disks carried by the main floor-disk arranged adjacent to the periphery so that the centers of each alternating disk lie upon two different concentric circumferential lines of the main-floor disk, a shaft depending from each secondary floor-disk, a suitable gear wheel carried by each shaft for rotating the same, an inner annular rail co-acting with the gear wheels of the disks having their centers on the inner line to bring about rotation thereof as the main floor-disk 105 is rotated, and a like outer annular rail co-acting with the gear wheels of the disks having their centers on the outer line to rotate the same in the opposite direction, a sinuous inner buffer-rail, and a like sinuous outer 110 buffer-rail supported above the main floor-disks so as to form a sinuous annular path above the secondary floor disks. 115

4. In a device of the class described, a main revoluble floor-disk, means for rotating the main floor-disk, a plurality of secondary revoluble floor-disks carried by the main floor-disk arranged adjacent to the periphery so that the centers of each alternating disk lie upon two different concentric circumfer- 125

ential lines of the main-floor disk, a shaft depending from each secondary floor-disk, a suitable gear wheel carried by each shaft for rotating the same, an inner annular rail co-acting with the gear wheels of the disk having their centers on the inner line to bring about rotation thereof as the main floor-disk is rotated, and a like outer annular rail co-acting with the gear wheel of the disks having their centers on the outer line to rotate the same in the opposite direction, a sinuous inner buffer-rail, a like sinuous outer buffer-rail supported above the main floor-disk so as to form a sinuous annular path above the secondary floor-disk, and a car or cars, mounted upon universal casters located in the sinuous path.

5. In a device of the class described, a main revoluble floor-disk, means for rotating such main floor-disk in a horizontal plane, a plurality of secondary revoluble floor-disks flush with the surface of the main floor-disk arranged adjacent to the periphery thereof, a shaft depending from each of the secondary floor-disks, a gear wheel secured to each of said shafts, a stationary annular rail co-acting with such gear wheels to bring about rotation of the secondary floor-disks upon rotation of the main floor-disk, a sinuous annular pathway formed by inner and outer buffer-rails located above the circular path traversed by the secondary floor-disks upon the rotation of the main floor-disk, and a car or cars mounted upon universal casters located in the sinuous path and carried around the same upon the rotation of the main floor-disk.

6. In a device of the class described, a main revoluble floor-disk, means for rotating such main floor-disk in a horizontal plane, a plurality of secondary revoluble floor-disks flush with the surface of the main floor-disk

arranged adjacent to the periphery thereof, a shaft depending from each of the secondary floor disks, a gear wheel secured to each of said shafts, a stationary annular rail co-acting with such gear wheels to bring about rotation of the secondary floor-disks upon rotation of the main floor-disk, a sinuous annular path formed by inner and outer buffer-rails located above the circular path traversed by the secondary floor-disks, upon rotation of the main-floor disk, and a car or cars located in the sinuous pathway and in gravitational contact with the floor-disks.

7. In a device of the class described, a car mounted upon universal casters and having a centrally located manual holding ring, means movably securing the holding ring to the car so as to permit the same to be lifted to permit of ingress and egress to and from the car, and a centrally located foot holding device within the car underneath which the toes of the passengers may be thrust.

8. In a device of the class described, a car mounted upon universal casters and having a centrally located manual holding ring, and means movably securing the holding ring to the car so as to permit the same to be lifted to permit of ingress and egress to and from the car.

9. In a device of the class described, a car mounted upon universal casters and having a centrally located foot holding device within the car underneath which the toes of the passengers may be thrust.

Signed at the borough of Manhattan in the county, city and State of New York, this 28th day of December A. D. 1907.

JOSEPH DE LA MAR.

Witnesses:

ROMOLA GORDON,
CHAS. HERRMANN.