No. 852,149. PATENTED APR. 30, 1907.

N. G. WARTH.

AMUSEMENT APPARATUS.

APPLICATION FILED AUG. 4, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

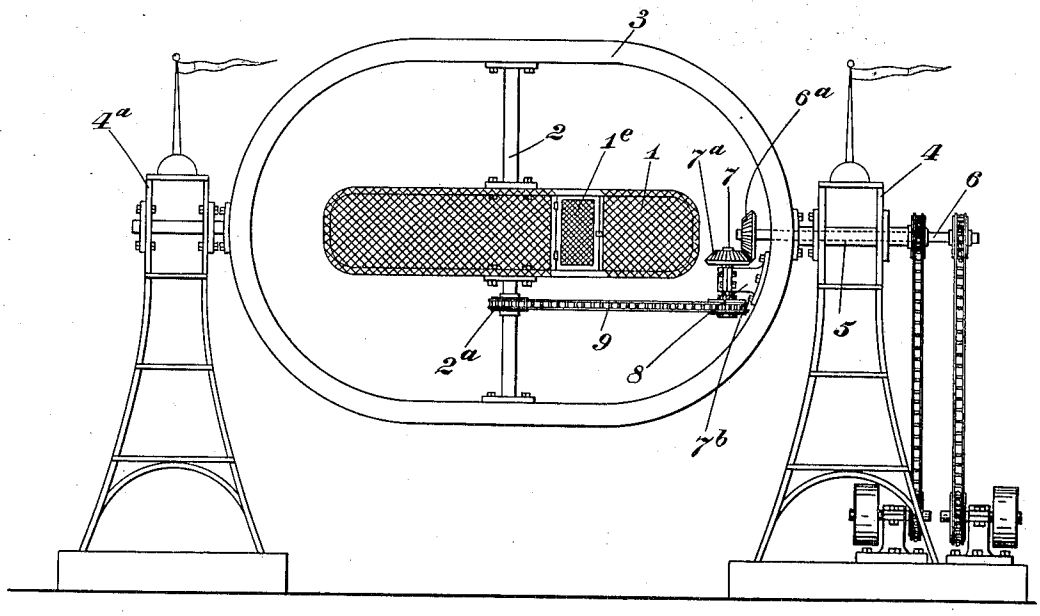
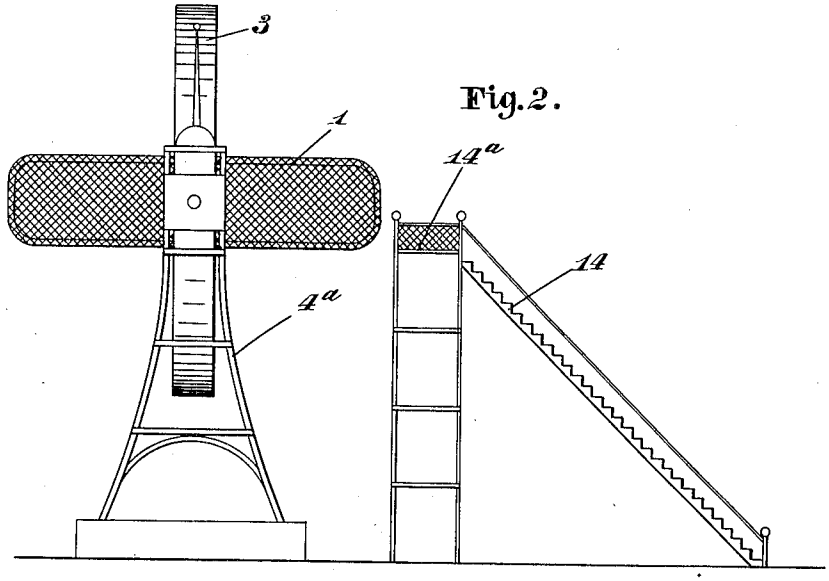


Fig. 2.



Witnesses
Benj. Finckel
Alice B. Cook.

Inventor
Nathaniel G. Warth
by Finckel & Finckel
his Attorneys

No. 852,149. PATENTED APR. 30, 1907.

N. G. WARTH.

AMUSEMENT APPARATUS.

APPLICATION FILED AUG. 4, 1905.

2 SHEETS—SHEET 2.

Fig.3.

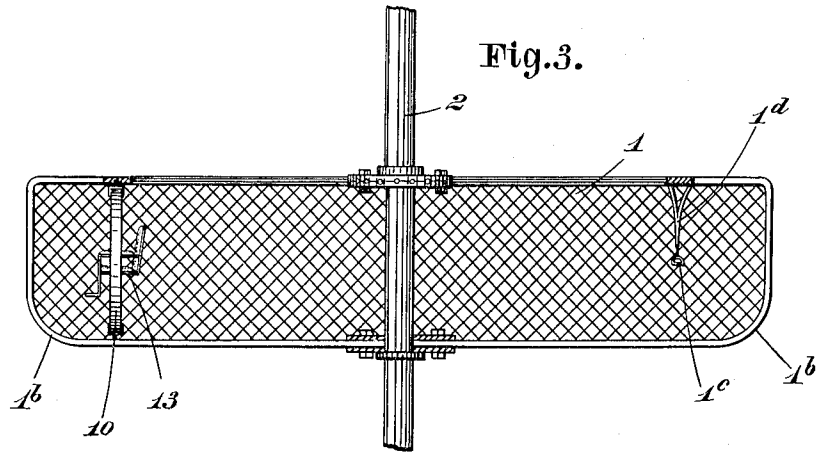


Fig.4.

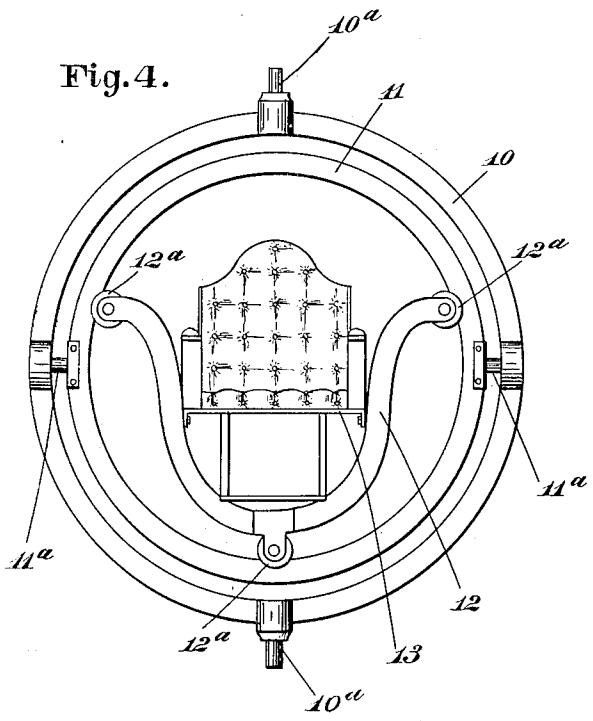
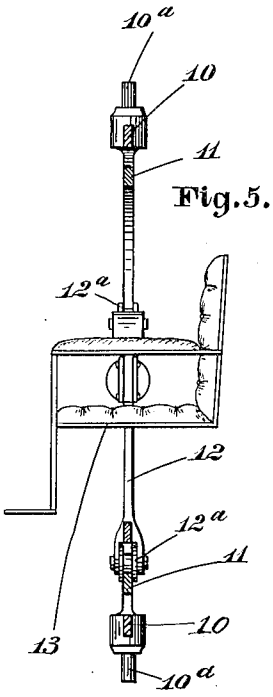


Fig.5.



Witnesses
Benj. Finckel
Alice B. Cook.

Inventor
Nathaniel G. Warth
by Finckel & Finckel
his Attorneys

UNITED STATES PATENT OFFICE.

NATHANIEL G. WARTH, OF COLUMBUS, OHIO.

AMUSEMENT APPARATUS.

No. 852,149. Specification of Letters Patent. Patented April 30, 1907.

Application filed August 4, 1905. Serial No. 272,686.

To all whom it may concern:

Be it known that I, NATHANIEL G. WARTH, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Amusement Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The chief object of this invention is to provide a novel amusement apparatus of the kind in which passengers are carried, but the invention can be embodied in the form of a toy.

The invention consists in apparatus and parts and combinations thereof as hereinafter described and pointed out in the claims, the invention not being confined to the particular embodiments thereof shown in the accompanying drawings.

In said drawings—Figure 1 is an elevation viewed from a point where both the supporting towers are seen; Fig. 2 is a similar view seen from a plane at right angles to that from which Fig. 1 is seen; Fig. 3 is a view partially in section on a larger scale of the carriage, but with modifications in the form; Fig. 4 is a front view of a universally movable seat that can be used in the carriage; Fig. 5 is an edge view of the same.

In the views 1 designates the carriage which is preferably of circular form and built up out of metallic bars and wire netting so as to be not only light and strong, but also permit the passengers to look out and spectators to look in. The carriage or carrier as shown is of flattened basket form with a circular main floor 1^e radiating from the axis of its rotation and having at its periphery a circumambient rim floor. The edge of the rim floor has opposite the main floor an inward extension toward the axis of rotation as seen at 1^f that serves as a guard to prevent passengers from falling out should the motion of the carriage be stopped or slackened while the carriage is in its overturned position. The carriage as shown is secured on a spindle 2 that extends through the center of the carriage. This spindle 2 is journaled in the opposite sides of an outer frame or ring 3 and this outer ring 3 is journaled in the standards or towers 4 and 4^a. The journaling of the outer ring 3 is preferably such that the axis of rotation of the outer frame is at right angles to the axis of rotation of the carriage. The journal designated 5 of the outer ring is hollow or tubular and through this extends a rotatable shaft 6 which has keyed to its inner end a miter gear 6^a. Mounted in a suitable bracket 8 secured to the inner side of the outer ring is a shaft 7 having keyed to one end a miter gear 7^a that meshes with the gear 6^a, and at its other end a sprocket wheel 7^b from which runs an endless sprocket chain 9 to a sprocket wheel 2^a on the shaft 2. By the application of proper power to the shaft 6, therefore, the carriage 1 can be rotated or rocked independently of the outer ring; and by the application of proper power to the tubular shaft 5 the outer ring can be rotated or rocked independently of the carriage. I have shown the tubular shaft 5 of the outer ring and the shaft 6 of the carriage as each provided with sprocket wheels to which separate sprocket chains run from sprocket wheels on independent power shafts. By this or any other appropriate means the carriage and the outer ring can be driven either independently of each other or simultaneously. In the practical use of the apparatus, however, I propose to drive the carriage with such velocity that persons therein will be impelled by centrifugal action toward the rim with sufficient force to overcome gravity and enable them to stand on their feet on the inner side of the rim. The rim thus becomes a floor. The velocity necessary to do this is a matter of simple calculation. In operation the carriage will be started, of course, with a slow motion which will be accelerated until the required speed is attained, and to facilitate the change of the passengers from the vertical to the horizontal position I incline or curve the corner of the carriage between the floor of the side and the rim floor as seen at 1^b Fig. 3.

For timid passengers a hand-hold strap 1^c can be provided. In order that this strap 1^c may be within reach of the passengers, whether standing on the side floor, the curved corner, or the rim, it can be suspended from the end of a fixed bracket 1^d as seen in Fig. 3.

I may also provide the carriage with seats. In Figs. 4 and 5 I show a seat which is universally movable, that is, a seat that will remain in an upright position whatever be the position of the carriage. It comprises an outer ring 10 furnished at diametrically op-

posite edges with stud journals 10^a to engage appropriate bearings in the opposite sides of the carriage, an inner track ring 11 having at diametrically opposite edges stud journals 11^a to engage appropriate bearings in the outer ring 10, and a frame 12 having grooved wheels 12^a to run on the track-ring 11, the seat 13 being secured in the frame 12. The frame and seat are appropriately constructed or weighted so that the seat itself shall normally stand in the ordinary upright position and if deemed desirable turn to a horizontal position when the carriage is whirled.

The carriage is provided with a door 1^e, through which passengers pass into and out of the carriage, and a stairway 14 with a platform 14^a at the top thereof can be provided to enable passengers to ascend to and descend from the point of entrance to and exit from the doorway.

In practice I propose that the outer frame 3 shall be rotated with a very slow motion while, as before stated, the carriage itself shall be moved with great velocity. It will be observed, therefore, that when the carriage and its frame are thus rotated a given point in the rim of the carriage (or a passenger) may be carried through all the points of an imaginary sphere.

The invention may also be embodied in the form of a toy with weighted toy embodiments of persons, animals, or other objects to assume a horizontal position on the rim when whirled.

By the term "rotate" and its inflections, I include and mean either a partial or whole rotation or rotations.

Matters herein shown and described but not claimed will be claimed in a pending application filed March 28, 1907, Serial No. 365,105.

What I claim and desire to secure by Letters Patent is:

1. In an amusement apparatus, the combination of a rotary carriage, a rotary frame in which said rotary carriage is mounted, the axis of rotation of the carriage being fixed angularly with reference to the axis of rotation of the frame, and said carriage constructed to carry passengers and permit them to move with unobstructed freedom substantially from its center to its circumference.

2. In an amusement apparatus, the combination of a rotary carriage adapted to receive passengers and having a seat adapted to sustain a passenger in upright position, and a rotatable frame in which the carriage is supported, the axis of rotation of the carriage being substantially at right angles to the axis of movement of the frame, the line of the axis of rotation of the frame intersecting the rotary carriage.

3. In an amusement apparatus, the combination of a rotary carriage and a rotatable frame in which the carriage is mounted, the axis of rotation of the rotatable frame being substantially at right angles to the axis of rotation of the rotary carriage, the line of the axis of rotation of the frame intersecting the rotary carriage.

4. In an amusement apparatus, a rotary carriage adapted to carry persons as passengers on its interior and having the interior of a side and its rim substantially at right angles to each other and adapted as floors to receive said passengers in standing position combined with means for rotating said carriage at a speed sufficient to enable a passenger to be held by centrifugal action upon the rim floor.

5. In an amusement apparatus, a rotary carriage adapted to carry persons as passengers on its interior and having the interior of a side and the rim substantially at right angles to each other and adapted as floors to sustain said passengers in standing position and a curved foot-way connecting the side and rim floors said curved way blending with both said floors.

6. In an amusement apparatus, a rotary carriage adapted to carry persons as passengers on its interior and having the interior of a side and the rim substantially at right angles to each other and adapted as floors to receive passengers in standing position and a curved foot-way connecting the side and rim floors, said side floor being flat and said curved connecting floor blending with both said side and rim floors.

7. In an amusement apparatus, a rotary carriage adapted to carry persons as passengers on its interior and having the interior of a side and the rim adapted as floors to receive passengers in standing position and a hand-hold for the passenger while standing on the rim floor.

8. In an amusement apparatus, the combination with a rotary carriage and a rotatable frame in which the carriage is mounted, the axis of rotation of the frame being at an angle to the axis of rotation of the carriage, of a universally movable seat mounted in said carriage.

9. In an amusement apparatus, the combination with a rotary carriage and a rotatable frame in which the carriage is mounted, the axis of rotation of the frame being at an angle to the axis of rotation of the carriage, of a universally movable seat structure mounted in said carriage, said seat structure being weighted to hold it normally in upright position.

10. In an amusement apparatus, the combination of a rotary carriage adapted to carry passengers, a movable frame supporting said carriage, the axis of rotation of the carriage being at an angle to the axis of rotation of the frame means for operating said carriage and means for operating the frame independently of the carriage.

11. In an amusement apparatus, the combination of a rotary carriage adapted to carry persons as passengers on its interior and having a side and its rim adapted as floors to sustain such passengers, a curved connecting floor between and blending with said side and rim floors and a guard or inclosure opposite the side floor to prevent accident to a passenger or his egress from the carriage in that direction.

12. In an amusement apparatus, the combination of a rotary carriage having a substantially flat side floor extending outward from the axis of rotation of the carriage and adapted to sustain passengers, and a circumambient rim floor standing substantially at right angles to said first-named floor and also adapted to sustain passengers and a curved or inclined foot-way intermediate the aforesaid floors.

13. In an amusement apparatus, the combination of a horizontally rotatable carriage or support for passengers, a track in said carriage, a seat adapted to be occupied by a passenger mounted on said track carriage or support and adapted to change its inclination with reference to the carriage under the influence of centrifugal action by the rotation of said carriage or support.

14. In an amusement apparatus, the combination of a rotary carrier, a guide rail or track in said carrier, and a seat movably supported on said rail or track to normally rest in a horizontal position thereon, and adapted by rotation of the carrier to move outwardly, and upon reduction or cessation of the motion of the carrier to tend to return to horizontal position.

15. In an amusement apparatus, the combination of a rotary carriage having its axis of rotation at right angles to the plane of the body of the carriage, and a rotatable frame in which the carriage is supported, the axis of movement of the frame being substantially at right angles to the axis of rotation of the carriage, the line of the axis of rotation of the frame intersecting the carriage.

16. In an amusement apparatus, the combination of a carriage adapted to receive a passenger and having a side floor extending outwardly from the axis of rotation of the carriage, and a rim floor, said side and rim floors being approximately at right angles to each other and connected by a blending intermediate floor, combined with means adapted to rotate said carriage with such velocity that the passenger therein will be impelled by centrifugal action toward the rim floor with sufficient force to enable him to be held thereon.

17. An amusement device, comprising a rotatable carrier, means operating in connection therewith whereby passengers are retained in position thereon by centrifugal force and means for turning the axis of rotation thereof from vertical to horizontal.

In testimony whereof I affix my signature, in presence of two witnesses.

NATHANIEL G. WARTH

Witnesses:
U. R. PETERS,
GEO. M. FINCKEL.