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Patented July 11, 1899.

L. SIMMONS.
MARINE MERRY-GO-ROUND.

(Application filed Jan. 26, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

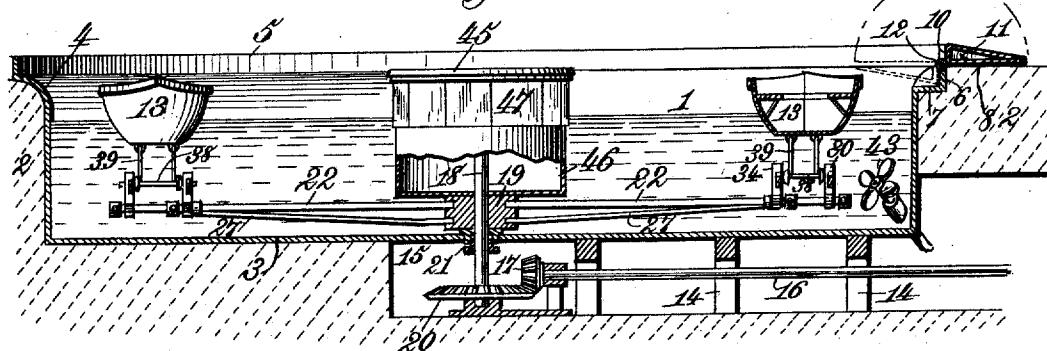
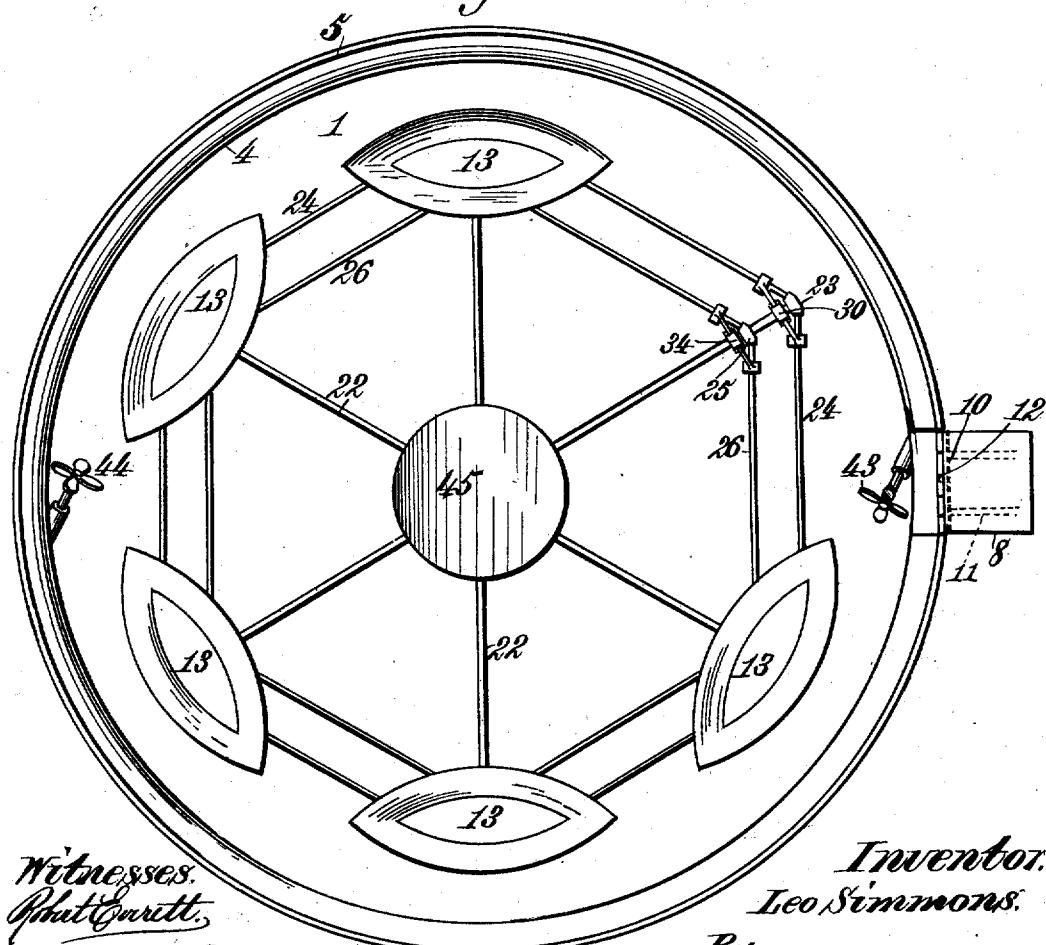


Fig. 2.



Witnesses.

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2 Sheets—Sheet 2.

Fig. 3.

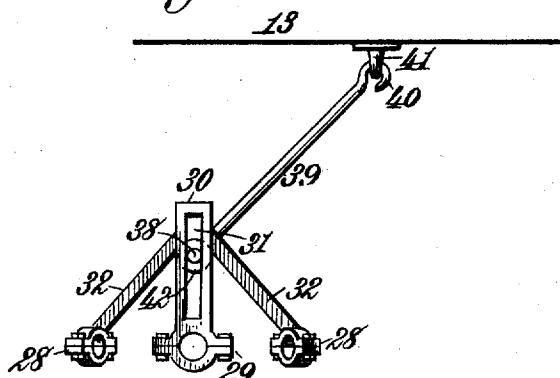


Fig. 4.

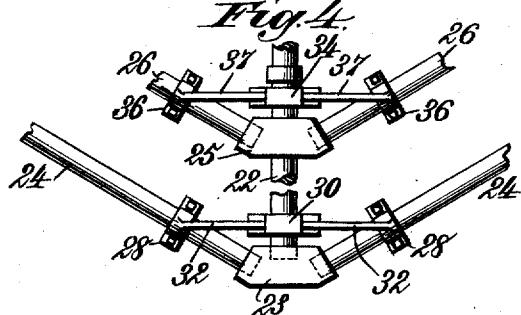
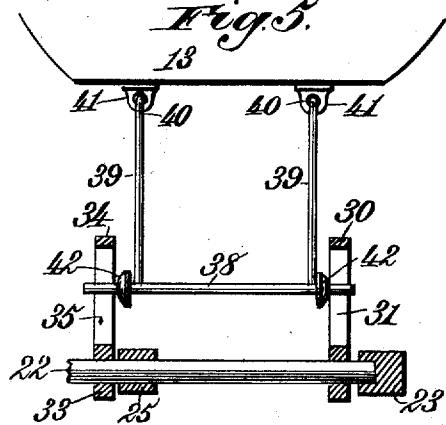


Fig. 5.



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UNITED STATES PATENT OFFICE.

LEO SIMMONS, OF WASHINGTON, DISTRICT OF COLUMBIA.

MARINE MERRY-GO-ROUND.

SPECIFICATION forming part of Letters Patent No. 628,679, dated July 11, 1899.

Application filed January 26, 1899. Serial No. 703,467. (No model.)

To all whom it may concern:

Be it known that I, LEO SIMMONS, a citizen of the United States, residing at Washington, in the District of Columbia, have invented 5 certain new and useful Improvements in Marine Merry-Go-Rounds; 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 app- 10 pertains to make and use the same.

My invention relates to a marine merry-go-round.

It is the main object of my invention to provide an apparatus for affording amusement 15 and pleasure wherein a number of boats are caused to travel over an artificial body of water in a circular path by means operated from a central source of power.

A further object of the invention relates to 20 the arrangement and operation of the power mechanism for moving the boats, whereby said mechanism will be entirely hid from view and the boats have the appearance of being moved by motive power carried by each boat 25 or by other means not readily discovered, thus serving to perplex as well as amuse those using the device.

A further object of the invention relates to 30 improved means for producing an artificial agitation, commotion, or undulation of the water, whereby the boats will be rocked or wave-tossed more or less severely in a manner similar to the action of a natural body of "rough" water, this unexpected action of the 35 water serving, further, to amuse and entertain the occupants.

A further object of the invention is to provide a continuous multiform reflecting device in the center of the body of water, operating, 40 as will be understood, to confuse the occupants of the boats as to the number of boats on the water and as to the distance across the body of water.

Still further objects of the invention relate 45 to certain details of construction and operation of parts which will more clearly herein-after appear.

I have illustrated my invention in the accompanying drawings, in which— 50 Figure 1 is a sectional elevation of an apparatus constructed according to my invention. Fig. 2 is a top plan view of the same.

Figs. 3 and 4 are detail views of parts of the devices for operatively connecting the boats to the propelling means. Fig. 5 is a sectional view 55 on the line 5 of Fig. 3.

Like numerals of reference indicate corresponding parts throughout the several views.

The numeral 1 indicates a tank, which is preferably of circular form and is seated in 60 and surrounded by a wooden, cement, or other framing 2, affording at one side of the tank a foundation 3 for the bottom of the tank to rest upon. Throughout the greater portion of the extent of the tank the upper edge or 65 rim thereof is preferably curved or rounded over the adjacent inner edge of the framing, as shown at 4, and at the extremity of the curved portion is provided an integral vertically-extending wall 5, forming an annular 70 guard or dashboard. At that side or part of the tank where it is designed that persons shall enter the boats the wall 5 is cut away for a short distance and the rim portion 4 is flattened, as shown at 6, and extends at right 75 angles to said flattened portion, as shown at 7, whereby to provide an annular seat, the framing 2 being correspondingly shaped at this point.

The numeral 8 indicates what I will term 80 a "gang-plank" and which comprises a relatively thick platform having secured at its inner end, to extend at right angles thereto, a flange 10, said platform and flange being braced by one or more brace-bars, as shown 85 at 11. The gang-plank 8 is of a width to fit snugly in the cut-away portion of the rim, as shown in Fig. 2, and at the angle formed by the flange 10 and platform 8 it is pivotally secured in any suitable manner to the straight 90 edge of said rim, as indicated at 12 in said Fig. 2. In the position of the gang-plank shown in Fig. 1, in which it is turned back or out of operative position, the flange 10 provides a continuation of the dashboard 5. When 95 turned into operative position, as shown in dotted lines in said figure, the flange 10 rests against the flat side 6 of the rim of the tank, and thus operates as a support to hold the platform in a horizontal position above the 100 water, so that persons may walk out upon the same and enter the boats as they are successively moved to the gang-plank.

The numerals 13 indicate the boats. Six

or more boats are intended to be used with the device, as represented in the drawings, and these are operated by the mechanism now to be described.

5 At one side the bottom of the tank is supported by a number of beams 14, and a central space 15 is provided beneath the tank. Extending from the central space to the outer edge of the tank is another space, forming a 10 passage-way, and through the said way is extended a shaft 16, having at its inner end a bevel-gear 17, and at its opposite end being connected with suitable driving mechanism for turning it, the driving mechanism not being shown. Extending upward through the center of the tank is a shaft 18, secured to which within the tank is a hub 19. On the lower end of the shaft 18 is secured a relatively large horizontally-disposed bevel-gear 20, which is in mesh with the bevel-gear 17. A stuffing-box 21 on the bottom of the tank surrounds the shaft 18 and prevents leakage of water at this point, as will be understood. Secured at their inner ends in the hub 19 and 25 at equal distances around its periphery are six or more arms 22, which extend outward from said hub in the manner of the spokes of a wheel, except that they are horizontally disposed. The outer end of each arm 22 is seated in a socket-block 23, and in opposite sides of each socket-block are secured the ends of connecting-rods 24, which extend between each pair of arms 22, and thus firmly connect and brace the arms. Secured on each 30 arm 22, at a suitable distance from the outer end, is a second socket-block 25, and a second series of connecting-rods 26 have their ends secured in these socket-blocks to further brace the arms 22. To prevent the arms 40 22 from sagging, a brace-rod 27 extends beneath each of said arms, to which it is connected at one end, as shown, its opposite end being secured in the hub 19. It will be seen that the series of connecting-rods 24 and 26 45 are connected in such manner as to form a framework of polygonal shape. Secured near opposite ends of each connecting-rod and on each side of a socket-block 23 is a clamping-nut 28. Secured on each arm 22, near 50 the outer end thereof, is a clamping-nut 29, formed integral with the upper member of which and rising vertically therefrom is an upright 30, having a vertically-disposed slot 31. Extending upward from each clamping-nut 28 is a brace-rod 32, which brace-rods at 55 their outer ends are connected to the upright 30 on opposite sides and near the top thereof. On each arm 22, at a point where the socket-block 25 is secured, is a clamping-nut 33, from 60 which rises an upright 34, having a slot 35, these parts being shown in Fig. 5, and on each connecting-rod 26 are clamping-nuts 36, from 65 which brace-rods 37 extend and are connected to the upright 34. It will thus be seen that by this construction I provide near the outer end of each radial arm 22 two vertical paral-

lel uprights having coinciding or registering slots. Slidably secured within the respective slots of each pair of uprights 30 34 are opposite ends of a rod 38, to which are secured two arms 39, having at their upper ends hooks 40, engaging in eyelets 41, secured on the bottom of each boat. The rod 38 is held from lateral movement in the slots by means of two stops 42, secured on said rod and bearing 70 against the inner sides of the respective uprights 30 34, the sides of said stop adjacent to the uprights being rounded, as shown, to permit the rod 38 to assume positions other than horizontal, and thus not interfere with 75 the rocking motion of the boats.

The peculiar connection of the boats just described will allow them to have a free movement both vertically and radially and will entirely obviate shocks and jars incident to 80 starting and stopping the boats.

I have shown two propellers 43 44 respectively located on opposite sides of the tank and inclined upward toward the path of the boats or in a manner to propel currents or 90 rolling waves of water against the bottom of each boat as it reaches the vicinity of either propeller, said currents or waves of water being projected in a direction with that of the boat, thus reducing the initial force of 95 propulsion. By this arrangement the force of the current created by the propellers will create a rolling wave, thus lifting either the forward or rearward portion or end of the boats as they run forward, giving them a natural and even rocking motion, it being understood that the propellers are driven with sufficient force to agitate the whole body of water in the tank. The roughest portions, however, would of course be in the vicinity of 100 the respective propellers.

The operation will be readily understood. The parts being assembled as described, the shaft 16 is revolved by any source of power, and through the medium of bevel-gears 17 and 20 and shaft 18 the hub 19 is thereby revolved, carrying around with it the arms 22, having the boats 13 connected thereto in the manner described. In the initial operation as each boat is brought opposite gang-plank 110 8 the motion is stopped until the desired number of persons have entered the boat, when the apparatus is again started and the next boat brought opposite the gang-plank. After all the boats have been filled the gang-plank 115 is turned back to the position shown in full lines in Fig. 1. If so desired, a like gang-plank may be placed in various places around the tank, thus providing means for loading and unloading quickly. The shaft 16 is again 120 revolved and the speed gradually increased until the boats are caused to travel at the desired rate through the water. The propellers 125 43 44 are at the same time or subsequently set in motion to agitate the water.

In order to confuse those in the boats as to the true size of the body of water and as to

the number of boats thereon, I provide in the center of the tank a multiform reflecting device, (indicated by the numeral 45.) This device comprises a frame 46, suitably secured to the shaft 18 and hub 19 to turn therewith and supporting a structure of polygonal shape above the body of water, on the faces of which are secured a number of mirrors 47, which project below the surface of the water, as shown.

Any desired ornamental style of top may be employed for the structure. The mirror 47 will operate by reflection to produce the result indicated, as will be clearly understood without further description.

Having thus fully described my invention, what I claim is—

1. A marine merry-go-round comprising a tank containing water, a hub centrally and revolvably mounted in said tank, a series of radial arms carried by the hub, a boat loosely connected to each of said arms, means for revolving said hub, and an upwardly-inclined propeller or propellers submerged in the body of water and having the blades thereof directed in the path of the boats so as to project currents of water against the bottom of each boat as it passes in the vicinity of the propellers so as to impart a rocking motion to the boats.

2. A marine merry-go-round comprising a tank containing a body of water, a hub centrally and revolvably mounted in said tank, a series of radial arms carried by said hub, boats connected respectively to the outer end of each of said arms, a multiform reflecting device supported on said hub, the reflecting-faces of which extend from a point below the water-level to a suitable distance above the water-level so that the body of water will be reflected in the reflecting device for the purpose specified, and means for revolving said hub.

3. A marine merry-go-round comprising a tank containing water, a hub centrally and revolvably mounted in said tank, a series of radial arms carried by said hub, a pair of uprights carried by each arm and having registering slots, a rod having its opposite ends slidably mounted in said slots, arms secured to and extending upward from said rod, a boat connected to the outer ends of said arms, and means for revolving said hub, substantially as described.

4. A marine merry-go-round comprising a tank containing water, a hub centrally and revolvably mounted in said tank, a series of radial arms carried by said hub, a pair of uprights carried by each arm and having registering slots, a rod having opposite ends slidably mounted in said slots, stops on said rod having rounded surfaces bearing respectively on opposite inner sides of said uprights, arms secured to and extending upward from said rod, a boat connected to the outer ends of said arms, and means for revolving said hub, substantially as described.

5. A marine merry-go-round comprising a

tank containing water, a hub centrally and revolvably mounted in said tank, a series of radial arms carried by said hub, a series of pairs of spaced connecting-rods uniting said arms, 70 clamping-nuts on said connecting-rods, a pair of uprights secured on each of said arms and having slots in alinement, brace-bars connecting opposite sides of said uprights and said clamping-nuts, a rod having opposite ends slidably mounted in said slots, arms secured to and extending upward from said rod and having outer hooked ends, a boat having on its bottom eyelets engaging said hooked ends, and means for revolving said hub, substantially 80 as described.

6. In an apparatus of the class described, the combination with a tank having a surrounding flange provided with a cut-away portion, and a rim affording a flat side, of a gang-plank pivotally secured in said cut-away portion and having at said pivoted end a flange extending at right angles thereto and designed in the operative position of the gang-plank to rest against said flat side of the rim and thereby support the gang-plank in a horizontal position and when folded back out of operative position the said flange forming a continuation of the surrounding flange of the tank, substantially as described. 95

7. A marine merry-go-round comprising a tank containing water, a revolvable hub mounted centrally in said tank, a series of radial arms carried by said hub, a plurality of boats arranged within the tank, a pair of arms 100 loosely connected at their upper ends to the bottom of each boat so that the boats will have a free movement thereon independent of the movement of the arms, and said arms being slidably connected at their lower ends 105 to the said radial arms, and means for revolving said hub.

8. A marine merry-go-round comprising a tank containing a body of water, a revolvable frame submerged within the body of water, 110 a plurality of boats arranged within the tank and adapted to travel over said body of water, arms loosely connected at their upper ends to the bottom of each boat so that the latter will have a free movement independent of the movement of the arms, and said arms having a slideable connection at their lower ends with the said frame, and means for revolving the latter to propel the boats. 115

9. A marine merry-go-round comprising a 120 tank containing a body of water, a plurality of boats arranged to travel in a circular path over the said body of water, means for propelling said boats, and upwardly-directed rotary propellers, submerged within the body 125 of water in the tank, the blades of said propellers being arranged to project currents of water against the bottom of each boat during its passage in the vicinity of the said propellers, to impart a rocking motion to said 130 boats.

10. A marine merry-go-round comprising a

5 tank containing a body of water, a multiform reflecting device supported in the center of the tank and having the reflecting-faces thereof extending from a point below the water-level to a suitable distance above the water-level so that the body of water will be reflected in the reflecting device for the purpose specified, a plurality of boats arranged

to travel over the body of water, and means for propelling the boats.

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

LEO SIMMONS.

Witnesses:

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WILFRED HEARN.