A. KITTERMAN.

ROUNDABOUT SAILING APPARATUS.

APPLICATION FILED JAN. 24, 1920.

1,357,995.

Patented Nov. 9, 1920.

2 SHEETS—SHEET 1.

Fig. 1.

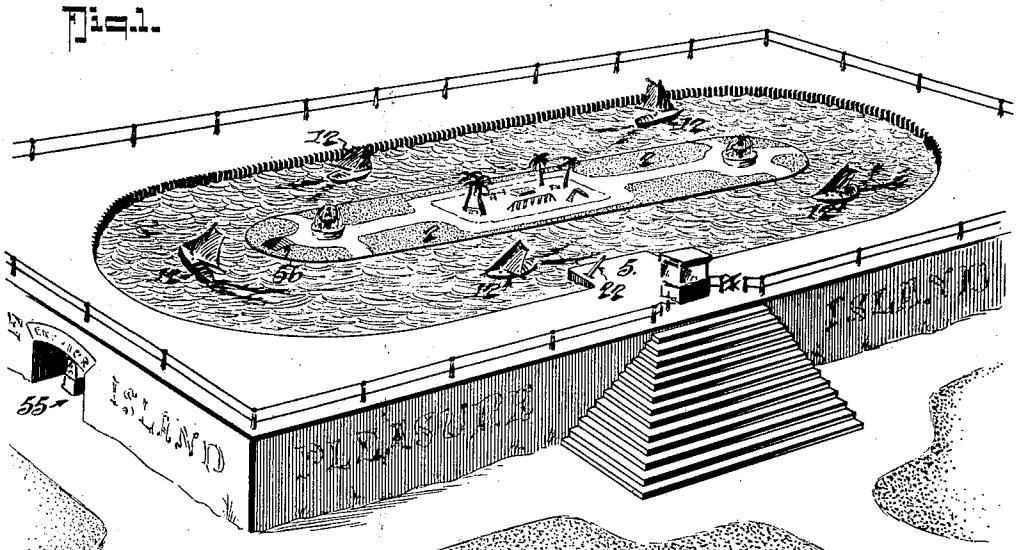
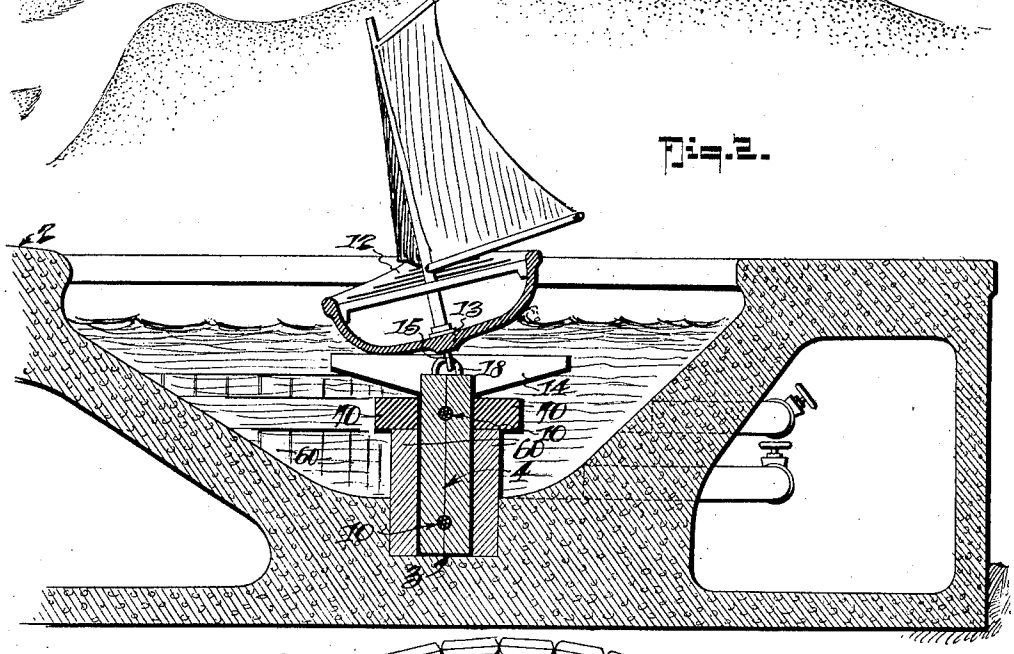


Fig. 2.



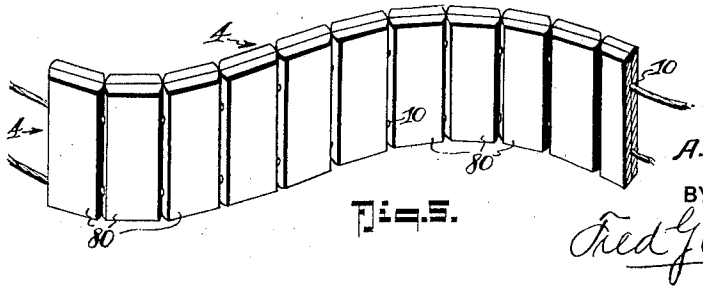


Fig. 3.

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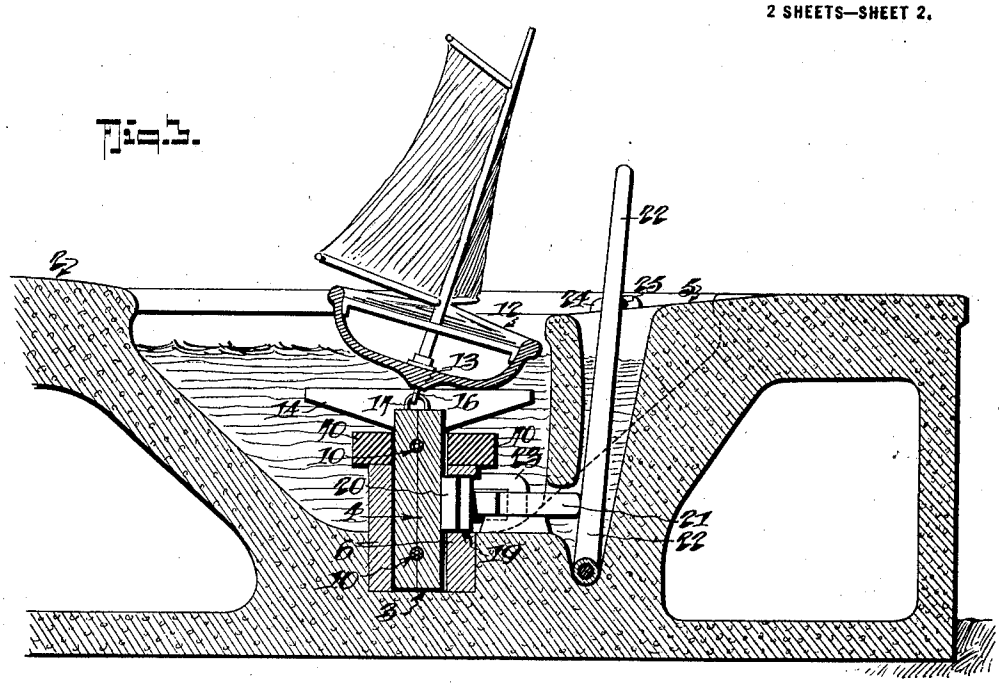
2 SHEETS—SHEET 2.

Fig. 3.



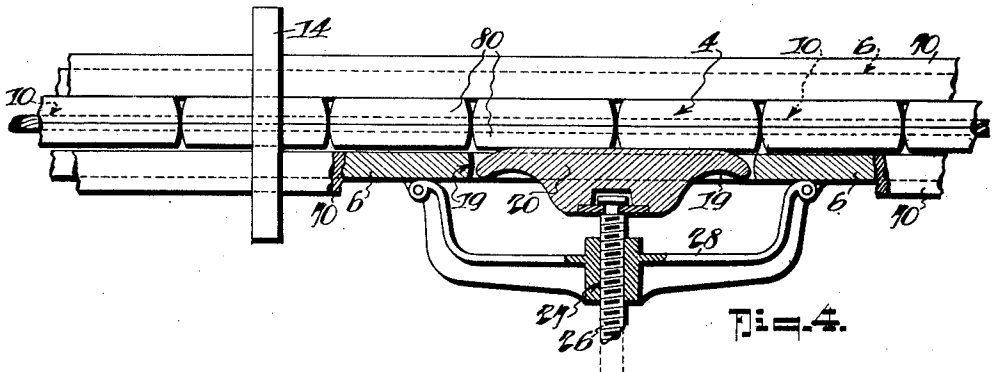
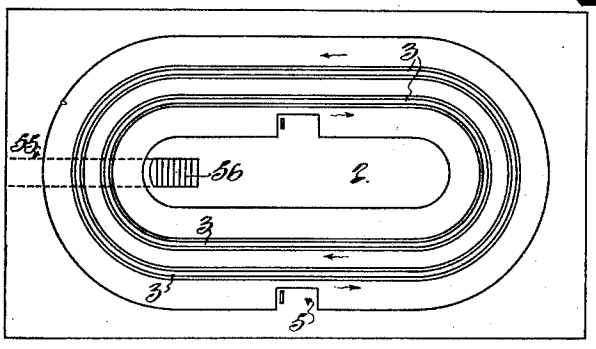
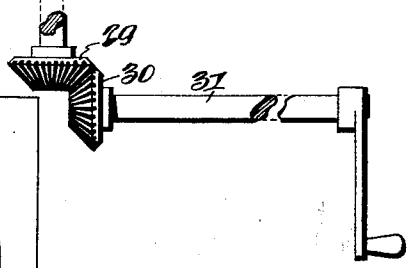


Fig. 4.

Fig. 5.





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UNITED STATES PATENT OFFICE.

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ROUNDABOUT SAILING APPARATUS.

1,357,995. Specification of Letters Patent. Patented Nov. 9, 1920.

Application filed January 24, 1920. Serial No. 353,837.

To all whom it may concern:

Be it known that I, ALEXANDER KITTERMAN, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented a new and Improved Roundabout Sailing Apparatus, of which the following is a specification.

My present invention comprehends an improved aquatic roundabout wherein a plurality of boats are caused to travel over a body of water and adapted for sailing on an elongated course in a manner simulating the passing of boats up and down the stream instead of in a circular path, as is usual in the practical application of aquatic carousels.

Generally, my invention seeks to provide an amusement apparatus of the character stated in which is embodied an endless flexible chain-like member that is suitably guided along an elongated and submerged path and to which a series of sail boats are flexibly connected in such manner that the entire series of sail boats are caused to travel, in apparent opposite directions and each boat, in the entire set of boats, individually impelled under wind power that is transmitted to the endless carrier or chain, it being understood that the sails of the boats traveling with the wind and those traveling against the wind are capable of being held to the wind, as in the ordinary manner of sailing.

Another object of my invention is to provide, in an apparatus of the kind stated, a simple and effective means for stopping the endless traveling member, with which all of the boats are individually connected, which means is preferably operable by the attendant at the landing for the pleasure seeking passengers.

With the above objects and other objects, to be hereinafter stated, in view, my invention consists in the peculiar arrangement and novel combination of parts embodied in the construction of pleasure apparatus as hereinafter set out in the detail description thereof, as specifically pointed out in the appended claims and illustrated in the accompanying drawings, in which:

Figure 1 is a perspective view that illustrates a general and practical arrangement of my invention.

Fig. 2 is a longitudinal section of one end thereof.

Fig. 3 is a transverse section of one side thereof taken at the passenger loading and unloading platforms, a preferred form of brake mechanism being also illustrated in this view.

Fig. 4 is a detail plan view, partly in section, of a modified arrangement of brake mechanism hereinafter specifically referred to.

Fig. 5 is a detail perspective view, partly in section, of a portion of the endless carrier or apron to which the sailing boats are individually attached.

Fig. 6 is a diagrammatic plan view that illustrates a modified arrangement of my amusement installation hereinafter specifically referred to.

In carrying out my invention, a suitable foundation is provided that is formed of a trough or bowl of elongated shape terminating in semi-circular ends, the outer edges or banks of which, in practice, may be covered with shrubbery, trees or other elements to give the water body the appearance of a natural lake and, to further add artistic effect, centrally of the lake is located a scenic island 2 which gives to the lake an appearance of separate water ways along which the sail boats, presently referred to, are caused to travel in one direction at one side of the island and in the opposite direction at the other side of the island, rounding the opposite ends of the island as they pass from one side to the other.

The bottom of the foundation, between each side and each end of the island and the surrounding banks, are dished, the inclined bottoms ending at a vertically projected shallow and submerged guideway 3 within which a flexible endless carrier or apron 4 travels, the construction of which and of the guideways constituting an essential feature of my invention.

At a suitable point along one or both of the side banks of the lake is located a platform 5 where the passengers are loaded and unloaded onto and from the boats, the loading and unloading operation being much like the "Ferris wheel" loading and unloading, a suitable brake mechanism being located alongside of the platform 5 and adapted for being conveniently actuated by the platform attendant in the manner presently described.

The guide way 3, before referred to, con-

sists of a pair of spaced side members 6—6 that may be formed of solid boards along the straight portions of the lake at the opposite sides of the center or island and of a series of short boards 60 placed edge to edge along the rounded ends of the water way, the said boards 6 and 60 being rigidly sustained on the trough bottom of the bowl or lake and to add rigidity to the sides 6—6 and the ends 60—60, the upper edges thereof are capped by top strips 70—70, as clearly shown in Figs. 2 and 3 of the drawings.

4 designates what I term an endless carrier or apron which travels within the vertical guide way or passage formed between the uprights 6 and 60 and the said carrier is formed of a series of vertical links, each composed of a pair of wooden pieces 80—80 and the said links are held in close edgewise relation by endless wire cords or cables which are located between the two pieces 80—80 of each piece before they are nailed together and the said cables are held for a limited longitudinal stretching by passing them freely through the transverse passages 10—10 formed between each pair of link pieces 80, the cords or cables, in practice, having sufficient slack in the direction of their length so that the meeting edges of the links may be readily opened up while passing around the curves, and as indicated in Fig. 5.

In my improved construction of sailing apparatus, I employ a series of sail boats 12, each of which has flexible connections with the endless carrier or apron.

By referring now particularly to Fig. 2 of the drawings, it will be observed that the bottom of each of the boats includes a keel 13 that rests on a transverse bearing 14 that is fixedly secured to the upper end of one of the links of the apron and at the stern and bow ends, the boat bottom has long pendent loops 15—16, the forward one of which freely engages a loop 17 projected upwardly from an adjacent one of the apron links while the rear or stern loop likewise engages a loop 18 on an adjacent apron link.

The transverse bearings 14 serve as laterally projected stop portions for limiting the side tilt of the boats that rest thereon in either direction to prevent capsizing.

It is understood that in the practical application of my invention, while the boats sail in apparently opposite directions, as indicated in Fig. 1, when a plurality of independent waterways are employed, as indicated in Fig. 6, the boats in the outer circle or way may have their sails set to travel in one direction (north) and the boats in the other or inner way set to travel in the opposite direction (south), the action of sailing being, as it were, automatic, since all that is required for the set of boats in each water way is to loosen the brakes used for stopping the boats, when loading and unloading them.

By reason of connecting the boats to the endless apron in the manner shown and described, the said boats, as they sail along, assume practically all of the longitudinal up and down and sidewise motion incident, when sailing in the ordinary way, thereby giving the occupant the benefit of a genuine sail without the slightest danger of upsetting.

As before noted, a suitable brake mechanism is provided for holding up the series of boats while loading and unloading one of the boats.

In the preferred construction shown in Fig. 3, the outer wall of the guideway, next the platform, has a horizontal slot 19 through which a horizontally extended brake shoe 20 is projectable to bear against the endless apron and for conveniently applying the brake shoe 20. The said shoe is provided with an outwardly projected abutment 21 adapted for being engaged by a hand lever 22 that is suitably fulcrumed and has its upper end positioned for moving along a guide 24 apertured for receiving a wedge key 25 which, when applied, holds the lever to the brake adjusted position, see Fig. 3.

Instead of using a lever device for applying the brake shoe, the said shoe may be provided with brake applying means such as is shown in Fig. 4, in which 26 designates a screw shank that swivelly connects with the brake shoe and has a bearing in a threaded aperture 27 in a U-shape bracket 28, the opposite ends of which are secured to the guide frame.

In this latter arrangement, the screw shank 26 has a bevel gear 29 with which engages another bevel gear 30 on a crank operated shaft 31 that is suitably journaled in bearings on the landing platform.

The amusement installation arranged as hereinbefore described and as generally shown in Fig. 1, is open to various modifications that come within the scope of the appended claims, for example instead of having one runway and one endless apron, a plurality of runways or guides may be located between the banks at each side of the lake and the respective opposite banks of the center part of the island, as diagrammatically indicated in Fig. 6. In this latter illustration, a second guide or runway is located between the outside runway or guide and the island, and in which an endless apron or chain travels the same as does the other chain or apron in the outer run or guide way, it being understood that boats are attached to the second endless apron the same as are the outer series of boats to the outer endless apron.

When the double or duplex system of sail-

ing boats is employed, the landing (or landings) for the second set or supplemental boats is located along the island bank with a brake mechanism conveniently located to the platform or platforms, as is indicated in the aforesaid Fig. 6.

When using the modified arrangement, a tunnel starts at 55 under the shore bank at one end of the island, and extends under the island where the said tunnel, through suitable stairways, opens to the top of the island, as indicated by 56.

From the foregoing description taken in connection with the drawings, the complete construction, the manner of its use and the advantages of my amusement installation or pleasure apparatus will be readily apparent to those familiar with the use of similar installations.

What I claim is:

1. In an aquatic roundabout, the combination with a stationary basin, an island relatively centrally disposed in the basin, an endless stationary vertical and submerged runway that extends around the island, a flexible endless submerged carrier, the said carrier consisting of a series of strips sustained within and adapted for movement along the runway, and endless flexible strands that pass horizontally through all of the said strips and provide loose flexible joints between the adjacent edges with the strips, a series of sail boats independently and flexibly attached to the upper end of the endless carrier for a limited vertical and lateral rocking movement, a landing for the boats and brake mechanism operable from the landing for holding the endless conveyer from movement, while loading or unloading a boat at the landing.

2. In an aquatic roundabout, the combination with a stationary basin, an island disposed within the basin, an endless runway that extends around the island, a flexible submerged endwise carrier movable within and guided by the runway, the said carrier consisting of a continuous series of vertically disposed strips abutting one another and joined by flexible connections, a plurality of sail boats independently and flexibly attached to the upper end of the flexible carrier, a landing for the boats and a brake mechanism operable from the landing adapted for being moved into engagement with the carrier to arrest its movement while loading or unloading any one of the said boats at the landing.

ALEXANDER KITTERMAN.