No. 769,690. PATENTED SEPT. 13, 1904.

C. D. DANIELS & R. F. YOURTEE.

ROUNDABOUT.

APPLICATION FILED JAN. 18, 1904.

NO MODEL.

Fig. 1.

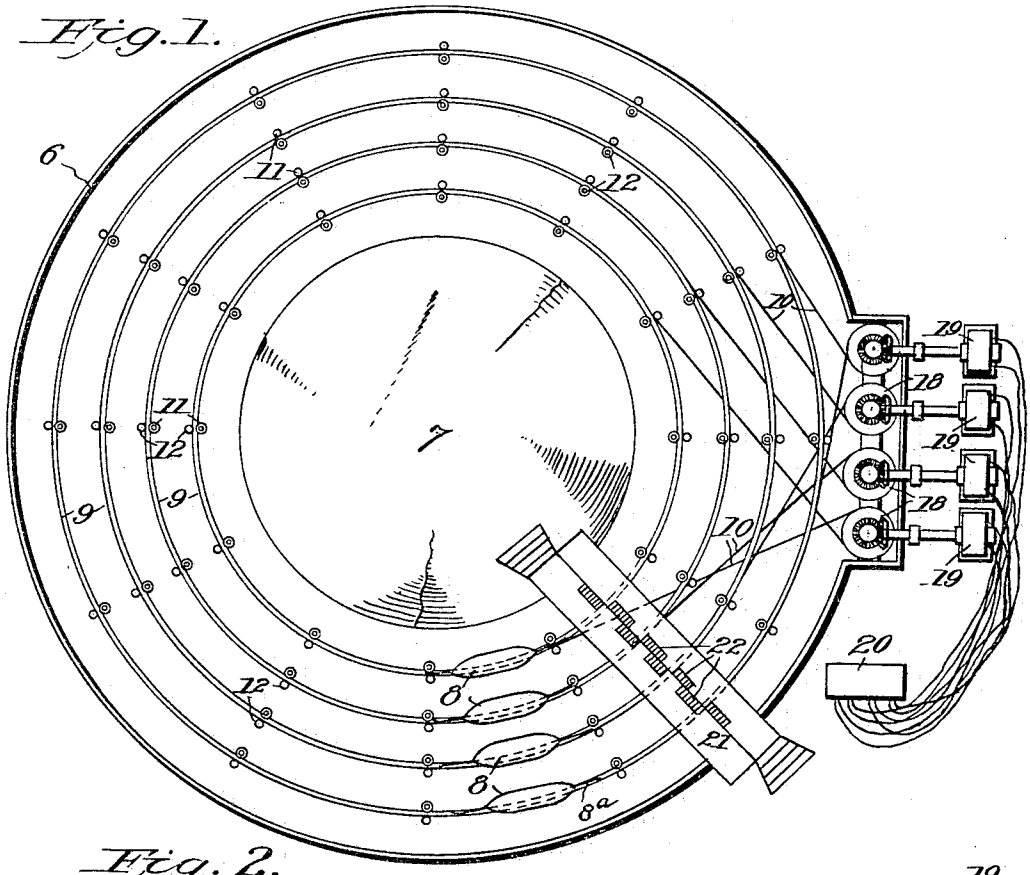


Fig. 2.

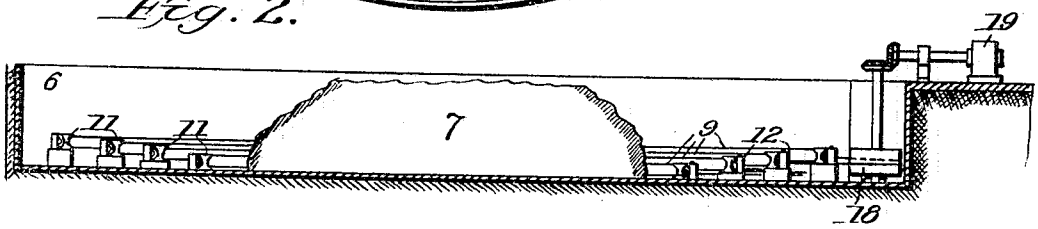
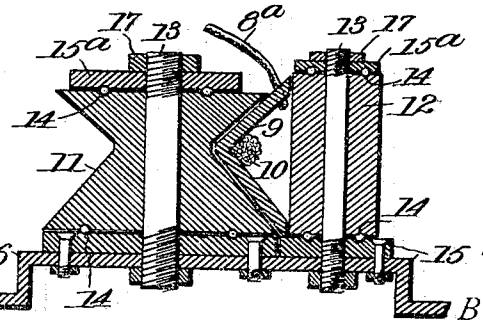


Fig. 3.



WITNESSES:

C. H. Walker.

Geo. B. Fennell

INVENTORS

Cyrus D. Daniels

Ralph F. Yourtee

BY

Miles B. Stevens & Co

Attorneys

No. 769,690. Patented September 13, 1904.

UNITED STATES PATENT OFFICE.

CYRUS DAVIED DANIELS AND RALPH FISHER YOURTEE, OF ST. LOUIS, MISSOURI.

ROUNDABOUT.

SPECIFICATION forming part of Letters Patent No. 769,690, dated September 13, 1904.

Application filed January 18, 1904. Serial No. 189,546. (No model.)

To all whom it may concern:

Be it known that we, CYRUS DAVIED DANIELS and RALPH FISHER YOURTEE, citizens of the United States, residing at St. Louis, in the State of Missouri, have invented new and useful Improvements in Roundabouts, of which the following is a specification.

This invention relates particularly to aquatic roundabouts, wherein a plurality of boats are caused to travel over a body of water.

It is characterized especially by improvement with respect to the means for driving the boats and for producing a simulation of a race therebetween.

A further feature and object is to produce a construction whereby the movements of the various boats may be controlled exterior to the body of water, as by an operator located at a stand or position adjacent the tank.

A further object is to provide means whereby a number of boats may be driven abreast, or nearly so, each boat or line of boats being under separate control and actuated by separate driving devices.

Further objects and advantages will be apparent from the following description.

In the accompanying drawings, Figure 1 is a plan view of an apparatus embodying the invention. Fig. 2 is a sectional view thereof. Fig. 3 is an enlarged detail in section.

Referring specifically to the drawings, a tank to contain the water is indicated at 6. This tank is preferably circular in form, but may within the scope of our invention be made of any size or shape. It preferably contains in the middle a scenic island or mountain, (indicated at 7,) forming an annular channel or way for the passage of the boats. The tank is of sufficient depth to float the boats (shown at 8) and also to cover and conceal the driving apparatus for the boats.

In the embodiment shown the driving apparatus consists of a series of concentric rings 9, which are a specific embodiment of the broad idea of our invention. Each ring is shown as formed of angle-iron, with the base presented outwardly, so that it forms a groove for the driving-cable, (indicated at 10.) The ring revolves upon inner angular rollers, as indicated at 11, the bearing-faces of which are shaped to receive the point or apex of the angle-iron forming the ring. Opposite each of said rollers is a guiding and retaining roller 12, against the face of which the edges of the flanges of the angle-iron bear. The rollers are mounted upon vertical spindles 13, and are preferably provided with ball-bearings, (indicated at 14,) which run in races formed between the ends of the rollers and plates 15 and 15^a by circular grooves therein. The lower plates 15 are secured to brackets 16, fixed to the bottom of the tank, which brackets also serve to support the spindles and the rollers. The top plates 15^a are screwed onto the upper ends of the spindles and held by nuts 17. As many of these bearing and guiding rollers are placed around the course as are needed to guide and support the rings.

The multiple driving-rings are disposed concentrically in the tank, and in the attachment of the boats thereto a line of boats may be attached to each ring, preferably so that they will be disposed in rows with the boats of each row abreast, or nearly so. The boats are connected at front and back to the rings, as by ropes 8^a, which are attached near the outer edge of the upper flange of the ring, so that the ropes will pass between the rollers and not be fouled thereby.

Each ring is provided with an individual or separate driving device comprising in each instance a drum 18, around which the driving-cable 10 is bent, and the drum is driven by appropriate connection with a motor, preferably an electric motor, (indicated at 19.) The motors are under separate and individual control by an operator positioned at the operator's table 20, suitable electrical and controlling connections being provided to drive each motor at any speed desired. As shown in Fig. 2, the successive rings from the inner one outwardly are supported at increasing elevations, so as to give clearance for the driving-ropes 10 to reach the various drums, the ropes from the inner rings passing under the outer rings. To load and unload the boats, a bridge 21 is disposed over the course, having steps 22 leading down to each ring.

In operation the rings are individually driven by the means indicated, and by driving one ring faster than the other the appearance of a race is produced, since the boats of one ring will forge ahead or drop back, according to the speed at which the ring is driven. The control being under a single operator, a very effective means is afforded for producing the interest and amusement which is the object of such devices, and the apparatus is particularly effective for this purpose, because the driving means are submerged and concealed. The boats thus race without cause or means obvious to the occupants thereof, which adds much to the novelty and enjoyment.

Various applications of the ideas disclosed in this application may be made without departing from the scope of the invention, which is not limited except as indicated by the following claims.

What we claim as new, and desire to secure by Letters Patent, is—

1. The combination with the ring angular in cross-section the flanges of which extend outwardly to form a groove for a driving-cable, of rollers having angular faces in which the inner side of the ring fits, and retaining-rollers on the outer side of the ring.

2. The combination with a water-tank, of a series of concentric rigid independently-rotatable rings submerged therein, at levels successively higher from the inner ring to the outer, boats connected to each ring, and independent driving-cables extending around and in engagement with the several rings.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

CYRUS DAVIED DANIELS.
RALPH FISHER YOURTEE.

Witnesses:
S. T. YOURTEE,
SEELY C. BUNN.