No. 888,983. PATENTED MAY 26, 1908.

D. G. EXLEY.

PLEASURE BOAT.

APPLICATION FILED NOV. 20, 1906.

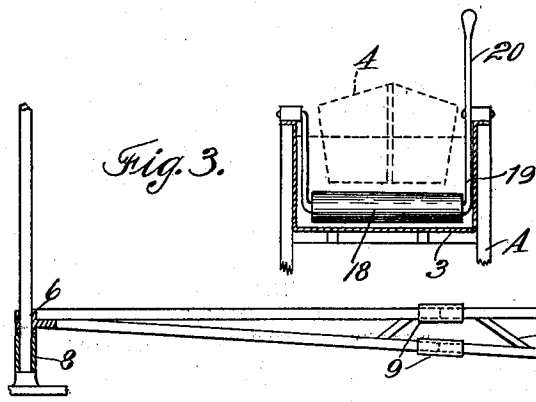

Fig. 3.

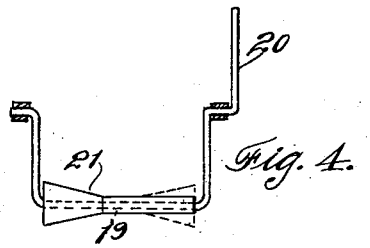

Fig. 4.

Fig. 2.

Fig. 5.

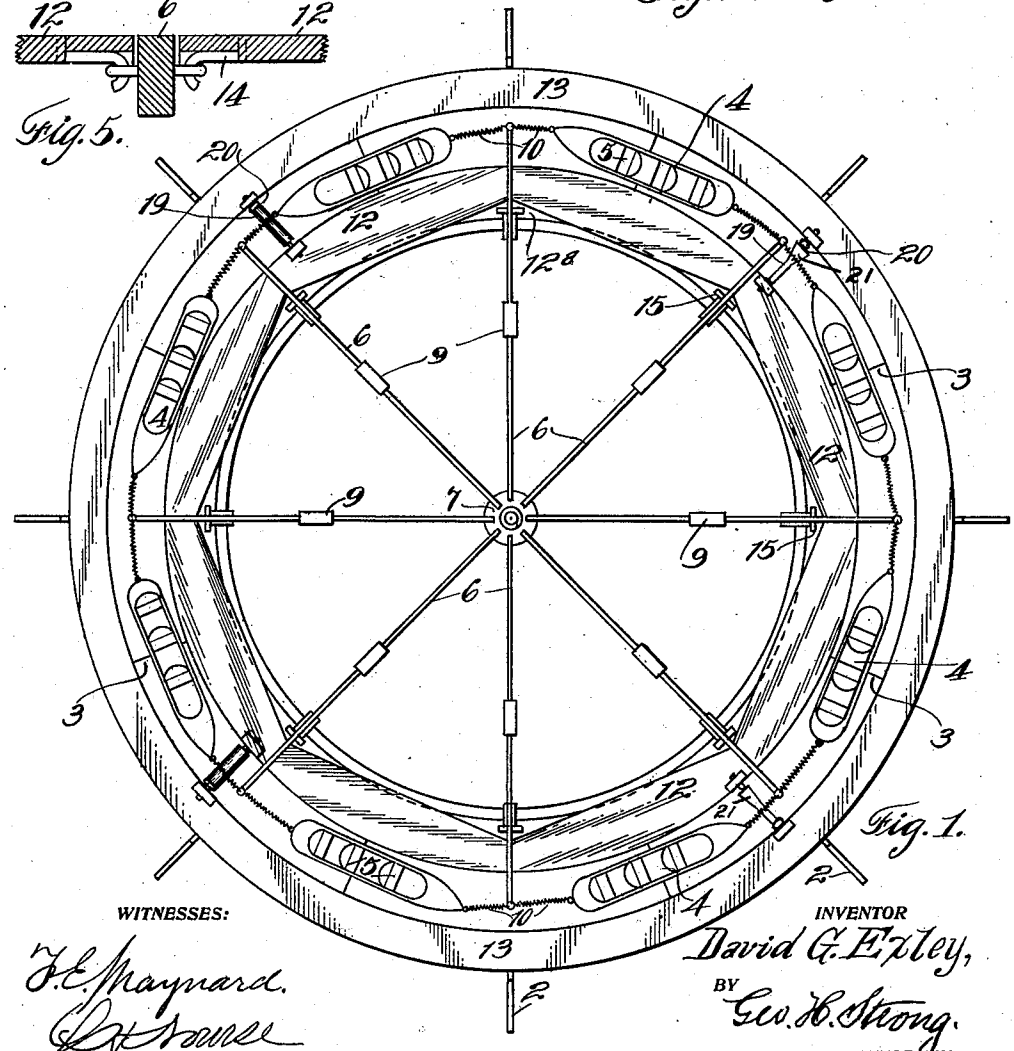

Fig. 1.

WITNESSES:

F. E. Maynard.

J. H. Bowell

INVENTOR

David G. Exley,

BY

Geo. H. Strong.

ATTORNEY

UNITED STATES PATENT OFFICE.

DAVID GEORGE EXLEY, OF SACRAMENTO, CALIFORNIA.

PLEASURE-BOAT.

No. 888,983. Specification of Letters Patent. Patented May 26, 1908.

Application filed November 20, 1906. Serial No. 344,197.

To all whom it may concern:

Be it known that I, DAVID GEORGE EXLEY, citizen of United States, residing at Sacramento, in the county of Sacramento and State of California, have invented new and useful Improvements in Pleasure-Boats, of which the following is a specification.

My invention relates to an apparatus which is designed for amusement of the public.

It consists of a circular water containing tank, a series of boats with elastic connections to propelling arms, and means whereby said boats may be agitated to produce movements similar to those produced by the wave-like action of the sea.

It further consists in details of construction which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a plan view. Fig. 2 is a section of the tank. Figs. 3 and 4 show rocking mechanism. Fig. 5 is a detail of construction.

In the construction of my apparatus I employ a trestle or support A, which is built in a circular form and is supported by suitable braces 2. Within this structure is fitted a tank formed of sections 3 which may be riveted or secured together at the ends so as to form a water-tight circular tank, within which water is contained sufficient to float boats, such as represented at 4. These boats having seats 5 for the accommodation of passengers.

The boats may be made of any suitable or desired size, dependent upon the size of the water-tank, and are propelled by means of arms or sweeps 6 which extend outwardly from a central shaft 7, turnable in a vertical sleeve or support 8.

The sweeps may be jointed and made in sections by means of suitable unions as at 9.

10 are springs by which the ends of the boats are connected with the ends of the arms or sweeps 6; and by means of this connection, power being applied to revolve the sweeps, the boats will be propelled around the channel within the tank. The sweeps are suitably trussed and braced as shown at 11, and thus form a sufficiently rigid structure for the propulsion of the boats.

Interior to the structure carrying the tank is a foot-walk 12 which serves for the convenience of a ticket collector, who has control of the passenger service of the boat. Exterior to the tank is a similar walk or promenade 13. These walks or promenades may be in sections connected together by hooks as at 14 and corresponding eyes upon the adjacent ends of the sections.

The outer ends of the sweeps project sufficiently over the central line of the water channel to allow the boats to be connected therewith, as previously described; and in order to properly support the sweeps I have shown rollers as at 15 journaled upon the short axles or shafts 16 and adapted to travel upon the inner horizontal surface 12^a by which the arms or sweeps are properly supported.

Power may be applied to revolve the apparatus either from the central shaft or preferably by means of a pulley 17 located near the outer ends of the sweeps and around which a rope or cable may be passed from any motor or other source of power.

In order to produce a pitching motion of the boats I have shown rollers 18 journaled in suitable carriers 19 across the bottom of the tank. These carriers 19 are connected by crank or other equivalent devices with levers 20 whereby the rollers may be raised so that the bottoms of the boats passing over the rollers will be raised at the front and afterwards depressed by pitching over the rollers as the rear of the boat passes. If it is desired to cause the boat to rock only, rollers 21 may be raised so that the boat in passing over the roller will be tilted to one side and recover its normal position after leaving the roller.

The rollers 18 and 21 are turnably mounted upon carriers or cranks 19 which extend downward into the circular tank 3 as shown in Figs. 1, 3 and 4. These cranks are journaled above the edges of the tank and have lever arms 20 projecting in such a manner as to be manipulated in any desired manner to swing the cranks into such positions that the boats may pass over the rollers without contact, or so that the boats will contact with the rollers, and be caused to pitch or rock at will. The pitching movements may be produced by plain cylindrical rollers, and the rocking or rocking and pitching movements, by rollers 21 made conical and larger at one end than the other, as plainly shown in Figs. 1 and 4. Any desired interval may occur between the rollers, as indicated in Fig. 1, and the larger ends of the rollers may be

alternately at the inner and the outer sides of the tank, thus causing the boat to rock first to one side and then to the other.

The spiral connecting springs 10 in addition to forming an elastic connection between the boats and the sweeps, also admit of the rocking and pitching motion of the boats without interfering with their constant travel while the apparatus is in motion.

It will be understood that various modifications of the apparatus may be made without departing from my invention; the size of the tank, the number of boats adapted to travel therein, and the means for producing the pitching, rocking or other movements may be varied.

Having thus described my invention, what I claim and desire to secure by Letters Patent, is—

In an amusement apparatus, a circular water containing tank, boats floatable therein, centrally pivoted sweeps projecting over the tank, elastic connections between the ends of the boats and the ends of the contiguous sweeps, rollers journaled transversely of the tank below the bottoms of the boats, said rollers being larger at one end than the other and means whereby the rollers may be raised and brought into contact with the bottoms of the passing boats to produce the rocking and pitching motion, said means including crank arms upon which the rollers are journaled transverse to the line of travel of the boats, and levers by which the rollers are raised to present their surfaces at inclines with the bottom of the boat.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

DAVID GEORGE EXLEY.

Witnesses:
J. A. ELSTOR,
R. M. FRYER.