No. 848,061. PATENTED MAR. 26, 1907.

E. A. SMITH.

AMUSEMENT APPARATUS.

APPLICATION FILED SEPT. 18, 1905.

Fig. 1,

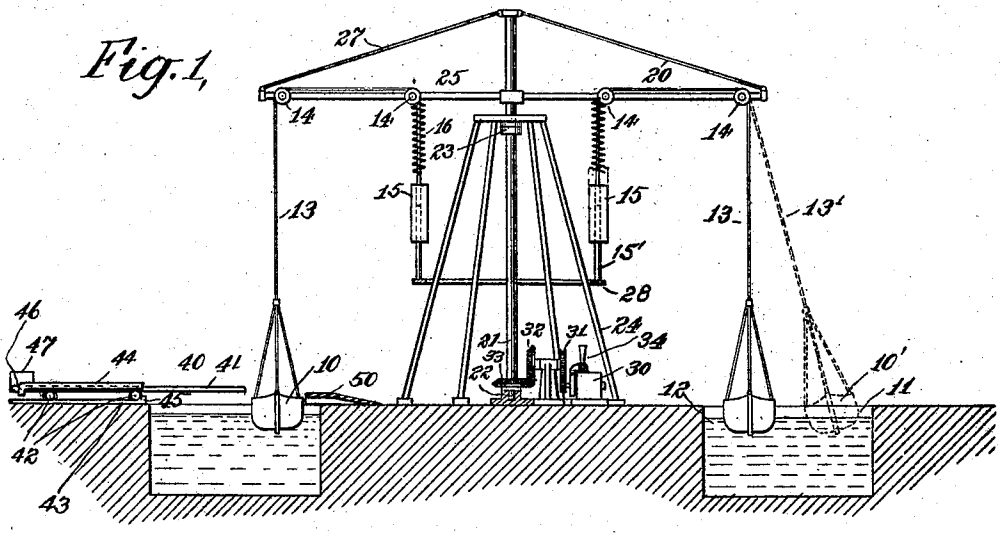


Fig. 2,

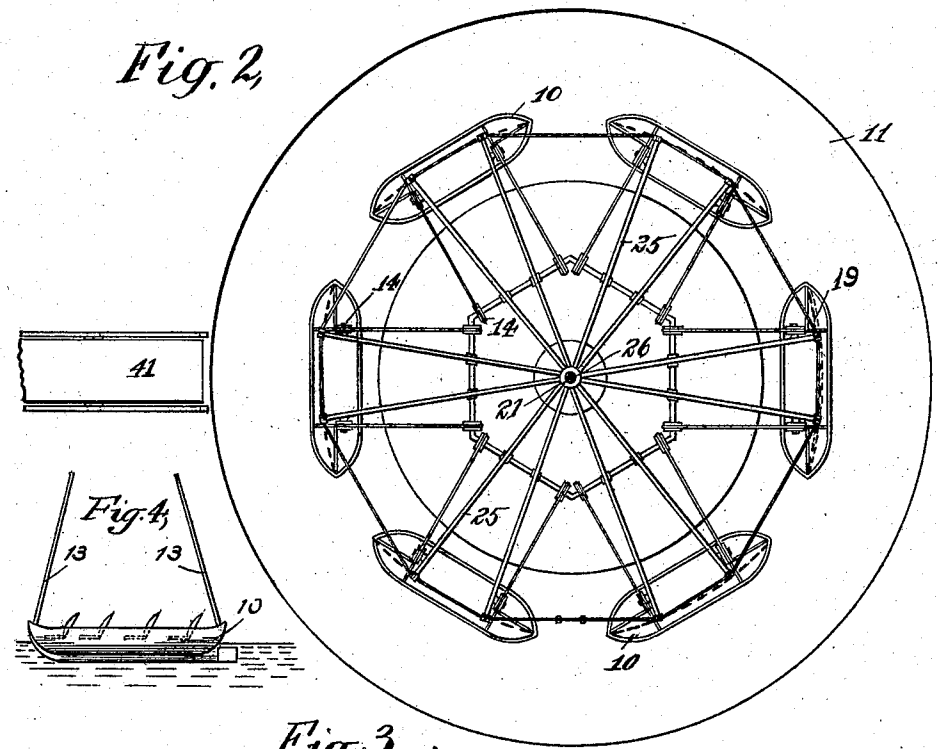
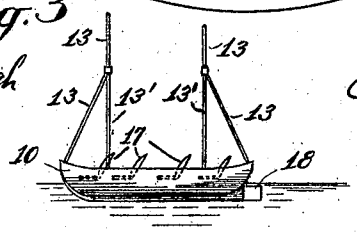


Fig. 4,

Fig. 3



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AMUSEMENT APPARATUS.

No. 848,061. Specification of Letters Patent. Patented March 26, 1907.

Application filed September 18, 1905. Serial No. 278,890.

To all whom it may concern:

Be it known that I, EDWARD ANDERSON SMITH, a citizen of the United States, and a resident of Yonkers, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Amusement Apparatus, of which the following is a specification.

My invention relates to amusement apparatus, end especially to that type of such apparatus which is driven about a central foundation. Its object is to provide a plurality of boats, the construction and arrangement of which will be described in the following specification and the novel features thereof pointed out in claims.

Referring to the drawings, Figure 1 is a side elevation, partly in section, of a preferred form of my invention, which I will call a "boat-swing." Fig. 2 is a plan view of the same, and Figs. 3 and 4 show certain details of construction.

Like characters of reference designate corresponding parts in all of the figures.

10 designates a boat arranged to carry passengers. There is preferably a plurality of these boats, as shown in Fig. 2. They are situated in a tank 11, which may be circular in form and which is adapted to contain water or other fluid 12, in which the boats 10 10 are partially immersed. The boats are also suspended by flexible ropes or cables 13 13. These ropes run to and are connected with a revoluble frame 20. They may be connected with the frame, as shown in the drawings, by being run over pulleys 14 14 and down to counterweights 15, to which they are attached. The two ropes 13 13 from any one boat are preferably connected to the same counterweight, so that each boat has an independent counterweight. These pulleys 14 may be rigidly attached to the frame 20, or, if desired, they may be attached with a swivel. The counterweights are somewhat lighter than the weight of the boat. They may be arranged to run on guides 15′, which are a part of the frame 20. Above the counterweights I sometimes place buffer-springs 16. The ropes 13 may be directly connected to the ends of the boats, as shown in Fig. 4, or they may be used in conjunction with other ropes 13′, run to the gunwales of the boats, if desired.

I will now describe somewhat in detail the construction of the revoluble frame 20. It comprises a vertical shaft 21, the lower end of which rests in a stationary bearing 22 and an intermediate point of which is supported in another bearing 23, which is held in a stationary position by a supporting-frame 24, of structural iron or other suitable material. A number of horizontal bars 25 are rigidly attached at 26 to the shaft 21, and these may be further supported by braces 27, which are shown running from the top of shaft 21 to the ends of the bars 25. The guides 15′ may be attached to the bars 25 at their upper ends and to a supporting-ring 28 at their lower ends, and the ring 28 may be suitably cross-braced to the rest of the frame in any desired manner.

30 designates a motor, which may be connected, by means of suitable gearing 3, to drive a bevel-gear 32. This bevel-gear 32 is shown in mesh with a similar bevel-gear 33, which is rigidly mounted upon shaft 21. A brake 34 is sometimes provided and arranged to act upon some of the movable parts of the apparatus—as, for example, the shaft of motor 30.

At one or more places on the outer side of tank 11 movable bridges 40 may be provided and arranged to span all or a part of the width of tank 11. One of these bridges is shown in Figs. 1 and 2. It comprises a platform 41, mounted upon wheels 42 42, which are arranged to run upon tracks 43, above which are placed stationary guard-rails 44. Both the tracks 43 and the guard-rails 44 may be provided with stops 45 46 to limit the movement of platform 41, and the inner end of platform 41 may be provided, if desired, with a counterbalance-weight 47. An overhanging platform 50 is also shown in Fig. 1 on the inner side of tank 11. One or more of these may be provided, if desired, and they may be arranged to be movable, similar to bridge 40.

Referring now to Fig. 3, it will be seen that the boats 10 may be provided with seats 17. I sometimes fit them with rudders 18. The boats may be of any preferred construction and shape. They may be built with curved keels 19, as shown in dotted lines on one of the boats in Fig. 2. This of course is for the purpose of guiding them and causing them to take the proper course through the water.

The operation of this device is obvious. Passengers may be taken onto the boats 10 over bridge 40, or they may be taken across the tank on bridge 40 and then taken onto the boats from the inner side of the tank,

either directly or over platform 50. After this is done the bridges may be moved back out of the way and the motor 30 started. This will cause movable frame 20 to revolve, and with it the boats 10. Centrifugal force will carry the boats outward in the tank 11, when they will assume a position like that shown at 10′ in Fig. 1. The suspending-rope will also change its position to that shown at 13′. This will raise the counterweight 15, as shown by dotted lines. The buffer-spring 16 is arranged to limit the upward movement of the counterweight 15, and when the counterweight 15 abuts against this spring and compresses it a further outward swing of boat 10′ will cause the pressure on the spring 16 to increase, and consequently will increase the tension on rope 13′, which will cause it to partially lift the boat out of the water, and thus decrease its friction. When it is desired to stop the apparatus, the power may be shut off from the motor and brake 34 may be applied.

It is obvious that many changes may be made in the construction of this apparatus.

What I claim is—

1. A boat, a revoluble frame, a counterweight, a pulley on said frame, a rope or cable passing over the pulley and connecting the boat and the counterweight, and a spring supported by the frame and arranged to coact with the counterweight.

2. A plurality of boats, a revoluble frame, independent counterweights for each of the boats, guides for said counterweights, pulleys on said frame, and ropes or cables passing over said pulleys and connecting the boats and the counterweights.

3. A plurality of boats, a revoluble frame, means for connecting the boats to said frame, counterweights arranged to counteract the effect of centrifugal force on each of the boats when they are in motion.

4. A plurality of boats, a revoluble frame, a shaft therefor, a motor for driving the shaft and frame, movable counterweights for the boats, guides for the counterweights, said guides forming a part of the frame, pulleys on the frame, ropes or cables passing over the pulleys and connecting the boats and the counterweights, and springs in the path of the movement of the counterweights.

5. A plurality of boats, a tank therefor, a revoluble frame, independent counterweights for each of the boats, guides for the said counterweights, pulleys on said frame, and ropes or cables passing over said pulleys and connecting the boats and the counterweights.

6. A plurality of boats, a circular tank therefor, a revoluble frame, a shaft therefor, a motor for driving the shaft and frame, movable counterweights for the boats, guides for the counterweights, said guides forming a part of the frame, pulleys on the frame, ropes or cables passing over the pulleys and connecting the boats and the counterweights, and springs in the path of the movement of the counterweights.

7. A boat, a revoluble frame, pulleys upon said frame, a counterweight, and a rope or cable attached to one end of the boat and to the counterweight over one of the pulleys and another rope or cable connected to the other end of the boat and to the counterweight over another of the pulleys.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDWARD A. SMITH.

Witnesses:

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