No. 891,388. PATENTED JUNE 23, 1908.

A. VISSER & H. GROTE.

AMUSEMENT DEVICE.

APPLICATION FILED NOV. 19, 1907.

2 SHEETS—SHEET 1.

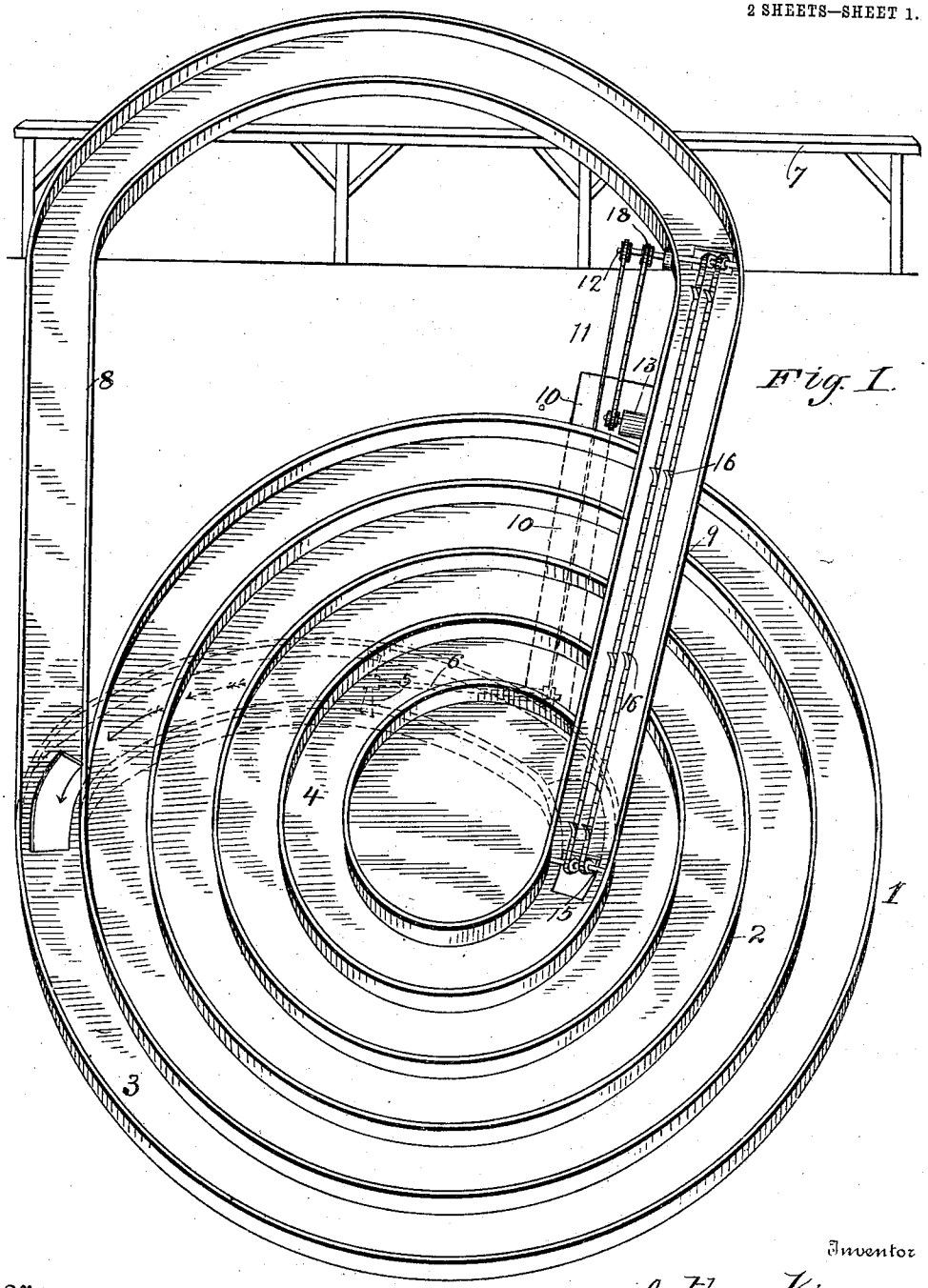

Fig. 1.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 2.

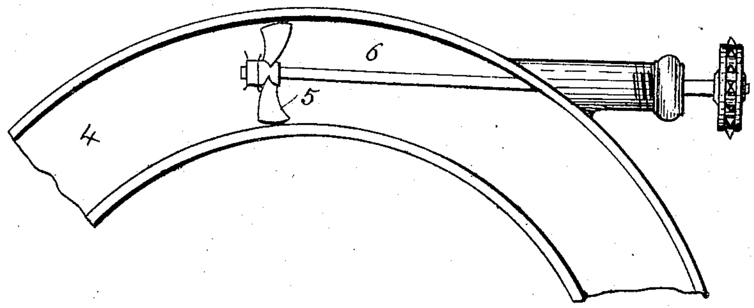


Fig. 3.

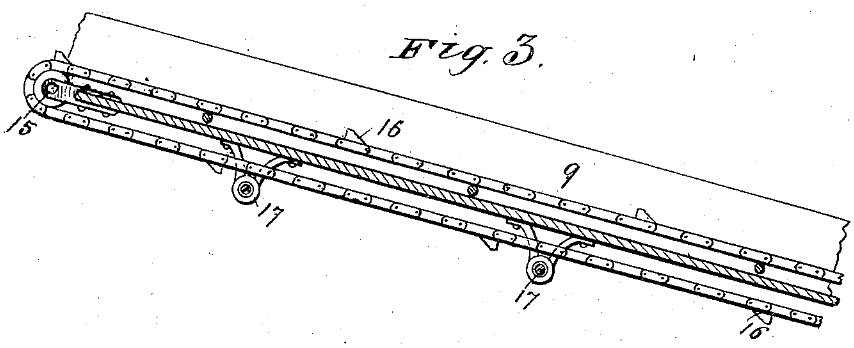


Fig. 4.

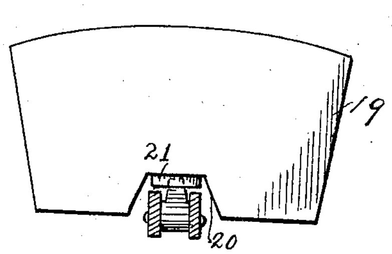
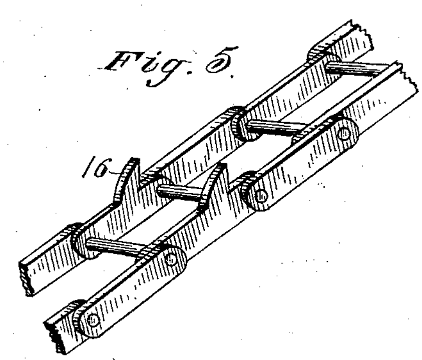


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

ARTHUR VISSER AND HENRY GROTE, OF HOLLAND, MICHIGAN.

AMUSEMENT DEVICE.

No. 891,388. Specification of Letters Patent. Patented June 23, 1908.

Application filed November 19, 1907. Serial No. 402,842.

To all whom it may concern:

Be it known that we, ARTHUR VISSER and HENRY GROTE, citizens of the United States, residing at Holland, in the county of Ottawa and State of Michigan, have invented certain new and useful Improvements in Amusement Devices, of which the following is a specification.

The present invention appertains to means for affording pastime and amusement, of the type in which water is caused to circulate in a prescribed channel or course and in which boats carry the pleasure seekers, said boats being elevated and then caused to descend an incline.

The purpose of the invention is to provide a novel structure of the character aforesaid comprising a basin or reservoir subdivided to provide a spiral channel or water course, inclines leading upwardly from opposite ends of the spiral channel or water course and terminating at their upper ends in an elevated platform, one of said inclines forming a chute and the other incline being provided with elevating means for carrying the boats upward from one end of the channel or water course to the elevated platform, all of said parts being arranged in a novel manner to provide a structure essentially different from similar amusement devices of the variety herein indicated.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction and the means for effecting the result, reference is to be had to the following description and accompanying drawings.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without departing from the spirit or essential features thereof, still the preferred embodiment is shown in the accompanying drawings, in which:

Figure 1 is a perspective view of an amusement device constructed in accordance with and embodying the essential features of the invention. Fig. 2 is a detail view of the tunnel or passage connecting opposite ends of the spiral channel or water course. Fig. 3 is a detail view of the upper portion of the return incline. Fig. 4 is a rear view of a boat or car. Fig. 5 is a detail perspective view of a portion of the elevating chain.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The device embodies a basin or reservoir 1 for containing a body of water, said basin being comparatively shallow and of large diameter and preferably of circular outline. A spiral wall 2 subdivides the basin or reservoir so as to provide a spiral passage or water course 3, which may be of any width. The basin and spiral wall 2 may be constructed of concrete or masonry so as to provide a substantial and durable structure. A tunnel 4 is constructed beneath a side portion of the basin and extends from the center to the outer edge and connects opposite ends of the spiral passage or water course 3. A water wheel 5 is located in the tunnel 4 and may be of any construction to insure a circulation of water through the tunnel and around the spiral channel or water course when set in motion. The water wheel is driven so as to cause the water to circulate from the periphery of the basin to the center, thence outward through the tunnel 4, as indicated by the arrows. The water wheel 5 is fast to a shaft 6 which is journaled in suitable bearings and is driven by means of a motor of any type conveniently located. An elevated platform 7 is located at one side of the basin and inclines 8 and 9 connect opposite ends of said platform with opposite ends of the spiral passage or water course 3. The incline 8 constitutes the chute upon which the boats or cars slide and receive an initial impetus before entering the outer end of the spiral passage or water course 3. The incline 9 returns the boats or cars to the platform and is provided with elevating means to carry the boats or cars upward along the same. The inclines 8 and 9 are mounted upon suitable trestle work. A pavilion or other structure is erected at one side of the basin preferably opposite and adjacent to the platform 7, so as to shelter the pleasure seekers from inclement weather or the rays of the sun, as also to provide a restful place

for observing the results of the device as a whole. A tunnel 10 extends beneath the basin and accommodates a drive chain 11 by means of which motion is transmitted from a countershaft 12 to the shaft 6, said drive chain passing around pulleys fast to the respective shafts 6 and 12. A motor 13 of any type is connected with the countershaft 12 to impart motion thereto and is located in a pit in communication with or forming a part of the tunnel 10.

The elevating means for carrying the boats or cars upward along the return incline 9 is supported at its ends upon pulleys mounted upon shafts 14 and 15 located at opposite ends of the said incline 9. The elevating chain consists of bars or links connected by rods, certain of the links having cogs 6 which are adapted to engage with the boats or cars and move the same upward along the incline 9. The lower run or portion of the elevating chain is supported upon pulleys 17 to prevent its sagging and to hold it close to the underside of the incline. The upper portion of the run of the elevating chain is supported by the bottom of the incline, thereby preventing casual displacement of the cogs 16 from the boats or cars. A drive chain 18 connects the shaft 12 with the shaft 15 and serves to operate the elevating chain.

The boats or cars 19 may be of any construction and are flat bottom and formed with a medial channel 20 in its bottom to receive the elevating chain. Cogs 21 located near the rear end of the boat or car and extended into the channel 20 are adapted to be engaged by the elevating cogs 16 of the elevating chain when the latter is carrying the boat or car upward along the incline 9. The cogs 16 automatically engage with and disengage themselves from the cogs 21.

In the operation of the device, the water wheel 5 and the elevating chain are set in motion, the water wheel causing the water to circulate outwardly through the tunnel 4, thence around the spiral passage or water course from the outer edge of the basin to the center, thence into the tunnel 4 and again around in a circle. A boat or car 19, after receiving passengers, is started from one end of the platform 7 down the chute 8, whence it enters the spiral passage or water course 3 and travels the length thereof from the outer edge of the basin towards the center at which point it automatically engages with the elevating chain and is returned to the platform 7 along the return incline 9, when the passengers disembark and the boat is again ready to receive other passengers to again start on its journey.

Having thus described the invention, what is claimed as new is:

1. An amusement device comprising a spiral water course, and an incline extended from the inner end of said water course upward across the convolutions thereof.

2. An amusement device comprising a spiral water course, a tunnel leading outward from the inner end thereof and beneath the convolutions, and an incline extended over said convolutions and connecting with the inner end of the water course.

3. An amusement device comprising a spiral water course, an incline forming a continuation of the inner end of said water course and extended over the convolutions thereof, and a tunnel extended across and beneath the convolutions of the water course and connecting with the inner end thereof at the foot or point of branching of the said incline.

4. A spiral water course having its inner and outer ends connected by a tunnel extended across and beneath the convolutions of the water course, and an incline extended upward over the convolutions from the inner end of the water course.

5. In an amusement device, a spiral water course having inclines extended upward from the inner and outer ends thereof, the one forming a chute, the other a return way, said inclines being connected at their upper ends, a tunnel extended beneath and across the convolutions of the water course and in communication with the inner and outer ends thereof about at the points of connection of the aforesaid inclines therewith, and means located in the said tunnel to effect a positive and direct circulation of the water therethrough and around the water course.

6. In an amusement device, a spiral water course, a tunnel extended beneath and across the convolutions of the water course and connecting the inner and outer ends thereof, means located in said tunnel to effect a circulation of the water through said tunnel and around the water course, a second tunnel extended beneath the convolutions of the water course and across the same, a motor located within the outer end of said second tunnel, and connecting means between said motor and the water circulating means located in the first mentioned tunnel for operating the same.

7. In an amusement device, a spiral water course, a tunnel extended beneath and across the convolutions of the water course and connecting the inner and outer ends thereof, an incline extended over the convolutions of the water course and forming a continuation of the inner end thereof, and a chute forming connecting means between the outer end of the water course and the upper outer end of the aforesaid incline.

8. In an amusement device, the combination of a spiral water course, a tunnel extended beneath and across the convolutions thereof and connecting the inner and outer ends, an incline extended upward and over the convolutions of the water course and in communication with the inner end thereof, elevating means coöperating with said incline to move cars along the same, a platform in communication with the upper end of said incline, and a chute leading from said platform to the outer end of said water course.

In testimony whereof we affix our signatures in presence of two witnesses.

ARTHUR VISSER.
HENRY GROTE.

Witnesses:
ANTHONY J. VAN RAULT,
WILLIAM VERKEY.