

1,378,635.

M. UNGER.
AMUSEMENT APPARATUS.
APPLICATION FILED MAR. 11, 1921.

Patented May 17, 1921.

2 SHEETS—SHEET 1.

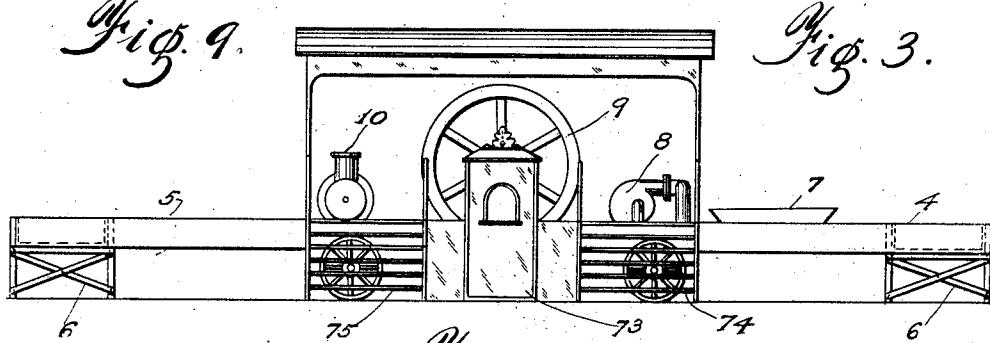
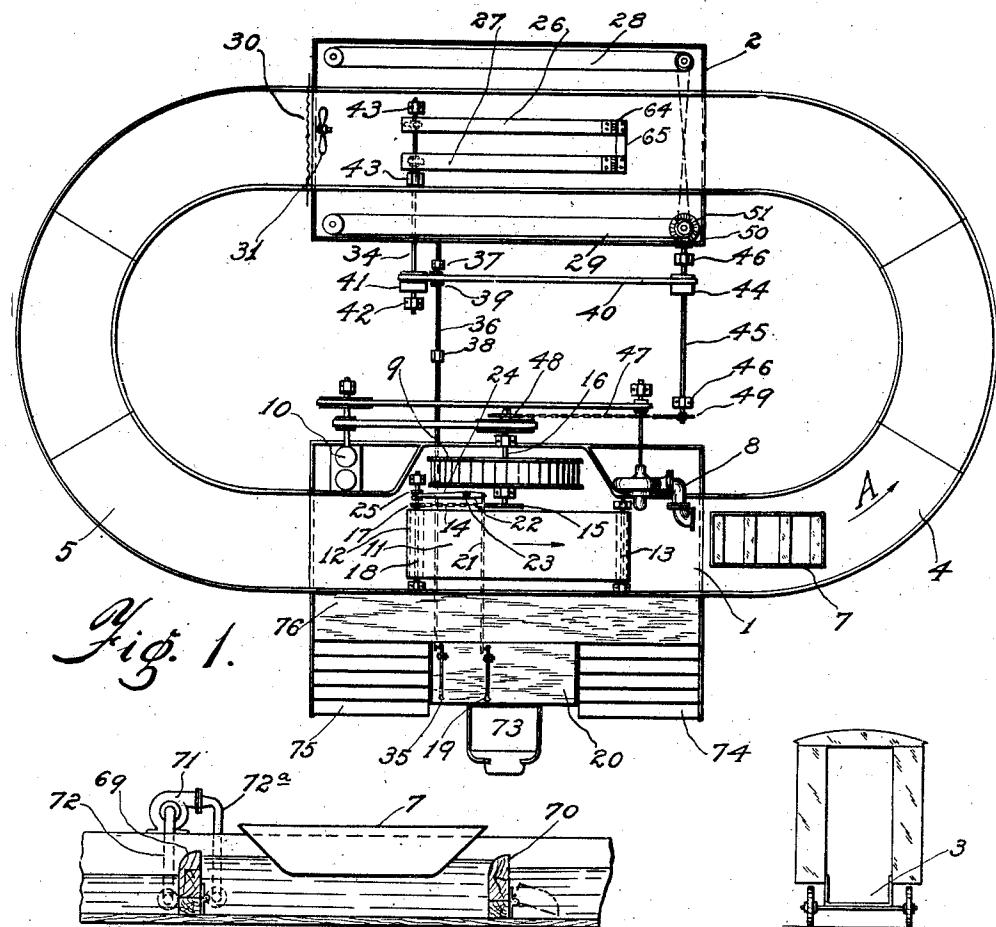


Fig. 2.

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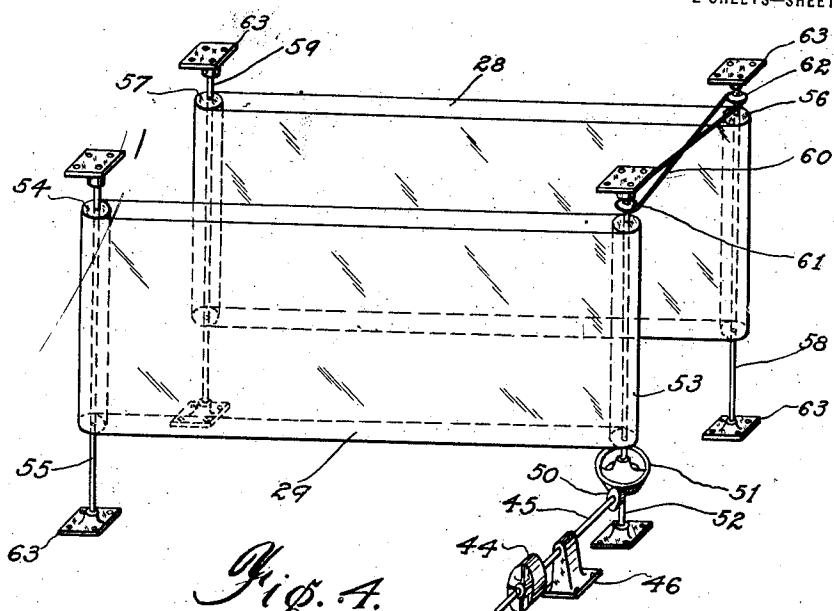


Fig. 4.

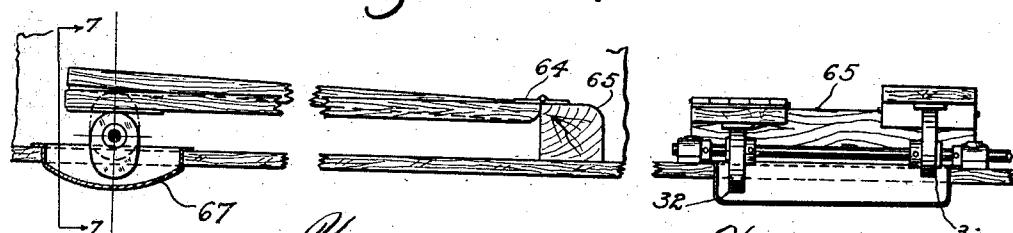


Fig. 6.

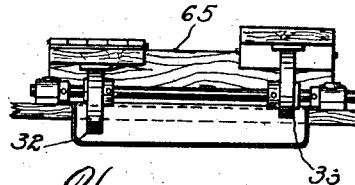


Fig. 7.

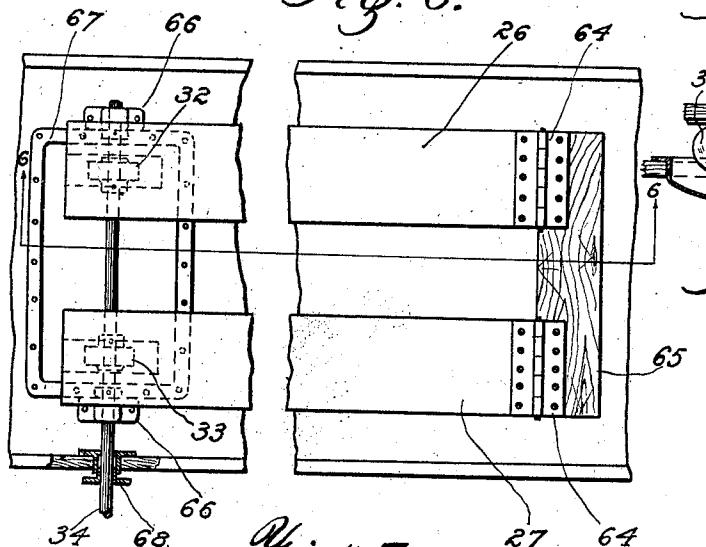


Fig. 5.

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UNITED STATES PATENT OFFICE.

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AMUSEMENT APPARATUS.

1,378,635.

Specification of Letters Patent. Patented May 17, 1921.

Application filed March 11, 1921. Serial No. 451,431.

To all whom it may concern:

Be it known that I, MORRIS UNGER, a citizen of the United States, residing at Pittsburgh, in the county of Allegheny and State 5 of Pennsylvania, have invented certain new and useful Improvements in Amusement Apparatus, of which the following is a specification.

This invention relates to amusement devices and more particularly to aquatic amusement devices used on fair grounds or in amusement parks.

One of the principal objects of this invention is to provide such aquatic amusement devices which can be easily erected, dismounted and transported. Another object is to provide such a device of compact, design, and on which the pleasure seeker is subject to the illusion of traveling a greater 20 distance than the actual length of the course of travel. A further object is to provide such a device which is of simple construction and which can be manufactured at a relatively small cost. Other objects and advantages of this device will appear from the following description and from the drawings which form a part of this application.

In the drawings:

Figure 1 is a plan view of the most simplified construction of my device.

Fig. 2 is a front elevation corresponding to Fig. 1.

Fig. 3 is a diagrammatic end view of the type of wagons used in connection with 35 this amusement device.

Fig. 4 is a perspective representation of an endless scenery-curtain used in this device and of the driving mechanism thereof.

Fig. 5 is a plan view of a so called boat-brake used in my device.

Fig. 6 is a sectional elevation taken along line 6—6 of Fig. 5.

Fig. 7 is a cross-sectional elevation taken along line 7—7 of Fig. 6.

Fig. 8 is a detail cross-section showing the boat-brake in in-operative position.

Fig. 9 is a representation of a modified construction for starting the boats used in connection with my invention.

Referring to Figs. 1 and 2, my amusement device consists primarily of the two parallelly disposed wagons 1 and 2 provided with open ends and having a depressed bottom 3 in the form of a channel of suitable depth and width. These two wagons are connected together by curved channels 4 and 5, sup-

ported on the horses 6, of equal cross-section as the channel 3 provided in the bottom of each wagon. For the purpose of facilitating the erection and transportation of the 60 installation, these connecting channels 4 and 5 are preferably made in sections suitably connected together to form with the wagon a continuous course. The course is filled with water to the required level and boats 7 are 65 installed to operate in said course.

A continuous flow of water in the direction indicated by the arrow A is created by any suitable means such as by the centrifugal pump 8 which may be assisted by the 70 ornamental water-wheel 9 both driven by any suitable motor 10. The circulation of water may also be stimulated by giving to the bottom of the water channel a slight slope; but it is found in actual practice that 75 either the centrifugal pump, or the water wheel, or both combined, are sufficient to create a current of water in the desired direction of adequate strength to carry along the boats without the assistance of paddling. 80

The public enters the boat when the latter is stopping in the middle of wagon 1; and when the boat has been properly loaded it is started on its trip by means of the endless conveyer 11 running over the rotatably 85 mounted drums 12 and 13 actuated by the motor 10 by means of the chain connection 14 engaging a sprocket 15, mounted at the end of the shaft 16 of the water wheel, and the sprocket 17 loosely mounted on the shaft 18 of the drum 12. The latter is selectively actuated by means of a lever 19, installed on the platform 20, which operates by means of the connecting rod 21 another lever 22 rockably mounted on fulcrum 23. The long arm 90 18 of lever 22 terminates with a fork which engages a claw-coupling 25 slidably mounted on shaft 18 and guided by a feather key inserted therein, in a similar manner as usually employed for couplings of this type, and which therefore need not be illustrated in detail.

Once started, the boat will be carried along by the current of water and enter the wagon 2 where it is imperceptibly arrested in its motion by the brakes 26 and 27 hingedly mounted on the bottom of the channel and operated by a system of cams more fully illustrated in Figs. 5 to 8.

As the boat enters the wagon 2, the endless curtains 28 and 29 upon which any suitable panorama has been painted, are set in

motion in an opposite direction to that of the travel of the boat, so that the public has the illusion that the boat is still traveling forward. To accentuate this illusion, 5 the forward end of the wagon is closed by a slidable curtain 30; a fan 31, preferably of the electric type, is often provided to create a draft of air toward the occupants of the boat. As will be understood the interior of the wagon must be properly illuminated to enable the public to see the moving panorama. After the latter has been completely exposed, the curtain 30 is opened, the lights in the wagon are turned 10 off and the brakes are released from the boat, which will then continue in its travel by the action of the water current until it reenters the wagon 1 where it is stopped to enable the passengers to disembark. 15 The cams 32 and 33, Fig. 5 are preferably disposed on the cam shaft 34 in opposite direction so that when said shaft is rotated the brakes will alternately act upon the bottom of the boat, thus giving to the latter 20 a noiseless rocking motion which further assists in illusioning the public.

The cams for braking the boat in wagon 2 are commanded from the platform 20 by the operator by means of lever 35 which actuates a pull-rod 36 slidably guided in supports 37 and 38 and carrying a belt-shifting fork 39 engaging the drive-belt 40 running over the tight and loose pulleys 41 mounted on shaft 34 between the bearings 42 and 43 and over pulley 44 keyed upon shaft 45, supported in bearings 46, and which is actuated from the shaft 16 of the water wheel through the drive chain 47 connecting the sprockets 48 and 49. 30 It will also be noted from Figs. 1 and 4 that the shaft 45 is used to operate the endless curtains 28 and 29, and for this purpose the farther end of said shaft is provided with a bevel gear 50 meshing with bevel gear 51 secured on the vertical shaft 52 upon which the driving drum 53 for curtain 29 is mounted. The other end of curtain 29 is guided by a drum 54 mounted upon shaft 55. The curtain 28, running 45 over drums 56 and 57 mounted respectively on the shafts 58 and 59, is driven by means of the crossed-belt 60 passing over the pulleys 61 and 62 mounted respectively on the shafts 52 and 58. The vertical shafts for 50 the endless curtains are suitably guided by the bearings 63 secured on the floor and the ceiling of wagon 2.

The construction of the boat-brakes is further illustrated in Figs. 5 to 8. It will 60 be noted therein, that the brakes 26 and 27 are provided at one end with the hinges 64 secured on a cross-tie 65 mounted on the floor of the channel.

The cam shaft 34, carrying the cams 32

and 33, is rotatably mounted close to the 65 bottom of the channel in bearings 66, in order to provide sufficient room for the passage of the boats over the brakes when inoperative. In order to provide sufficient room for the rotation of the cams 33, a depressed pan 67, of any suitable material, is set within the bottom of the channel and secured thereto in a leak-proof manner. The 70 passage of the cam shaft 34 through the side wall of the water channel is made leak-proof in the usual manner by using an ordinary stuffing box arrangement 68 as shown in Fig. 5.

For the purpose of starting the boats, other devices than that of the belt conveyer 11 shown in Fig. 1 may be used. The device illustrated in Fig. 9 for achieving the same purpose is built on the principle of a water lock. Two hingedly mounted gates 69 and 70 are mounted across 80 the channel and are so hinged as to swing backward when struck by the bottom of the boat, when traveling in the direction of the arrow A. These gates are made of light material so that owing to their buoyancy 85 they will normally occupy the vertical position shown in Fig. 9.

When the boat has reached a position intermediate the two locks, the water level between them is suitably raised by means of 90 the centrifugal pump 71 of which the suction pipe 72 and the delivery pipe 72^a communicate with the channel on either side of the gate 69. When the boat is loaded with passengers, it is pushed forward, in the direction of the arrow A by the operator and sent on its travel around the channel. Gate 70 is forced downward, in the position indicated by dot and dash lines, by the bottom of the boat, and owing to the difference of 95 water levels on both sides of the gate 70, the boat will be given a sufficient initial speed to complete a trip. As soon as the boat has cleared the gate 70, the latter will assume its vertical position shown in Fig. 9 owing 100 to its buoyancy. In Figs. 1 and 2 I have shown the usual accessory features required for such amusement devices. 73 represents the ticket booth and 74 and 75 are stairs leading up to the platform 76 which is generally built level with the bottom of 105 wagon 1.

As will be understood, the number of scenic wagons similar to wagon 2 may be enlarged at will, when so desired, in order 110 to increase the duration of the ride and the number of panoramic scenes.

It may be found desirable in practice to resort to slight changes in construction and arrangement of the details of my invention 115 without departing from the field and scope of the same, and I intend to include all such variations, as fall within the scope of the 120

appended claims, in this application in which a preferred form only of my invention is disclosed.

What I claim is:

5 1. In an amusement device of the character described, the combination of a plurality of transportable wagons provided with a channel-like bottom, and of water channels connecting said wagons.

10 2. In an amusement device of the character described, the combination of a plurality of transportable wagons provided with a channel-like bottom, and of water channels connecting said wagons to form an 15 endless water course.

3. In an amusement device of the character described, the combination of a plurality of transportable wagons provided with a channel-like bottom; of water channels connecting said wagons and boats 20 navigable therein.

4. In an amusement device of the character described, the combination of a plurality of transportable wagons provided with a channel-like bottom; of water channels connecting said wagons and boats navigable within said endless channel. 25

5. In an amusement device of the character described, the combination of a plurality of transportable wagons provided with a channel-like bottom, of water channels connecting said wagons to form an endless water course filled with water, and means for circulating said water within said 35 channel.

6. In an amusement device of the character described, the combination of a plurality of transportable wagons provided with a channel-like bottom; of water channels connecting said wagons and boats navigable therein; means positioned in one of 40 said wagons to start said boats and means provided in the other wagons for arresting the movement of said boats.

45 7. In an amusement device of the character described, the combination of a plu-

rality of transportable wagons provided with a channel-like bottom; of water channels connecting said wagons and boats navigable therein; means positioned in one of 50 said wagons to start said boats and means provided in the other wagons for selectively arresting the movement of said boats.

8. In an amusement device of the character described, the combination of a plurality of transportable wagons provided with a channel-like bottom; of water channels connecting said wagons and boats navigable therein; means positioned in one of 55 said wagons to start said boats; brakes positioned in the bottom of the channel of the other wagons for arresting the movement 60 of said boats and endless scenic curtains positioned within the latter wagons.

9. In an amusement device of the character described, the combination of a plurality of transportable wagons provided with a channel-like bottom; of water channels connecting said wagons and boats navigable therein; means positioned in one of 65 70 said wagons to start said boats; brakes positioned in the bottom of the channel of the other wagons for arresting the movement of said boats; endless scenic curtains positioned within the latter wagons and means 75 for operating said scenic curtains.

10. In an amusement device of the character described, the combination of a plurality of transportable wagons provided with a channel-like bottom; of water channels connecting said wagons and boats navigable therein; means positioned in one of 80 85 said wagons to start said boats; brakes positioned in the bottom of the channel of the other wagons for arresting the movement of said boats; endless scenic curtains positioned within the latter wagons; means for operating said scenic curtains and means for generating artificially within said wagons a current of air. 90

In testimony whereof I affix my signature.

MORRIS UNGER.