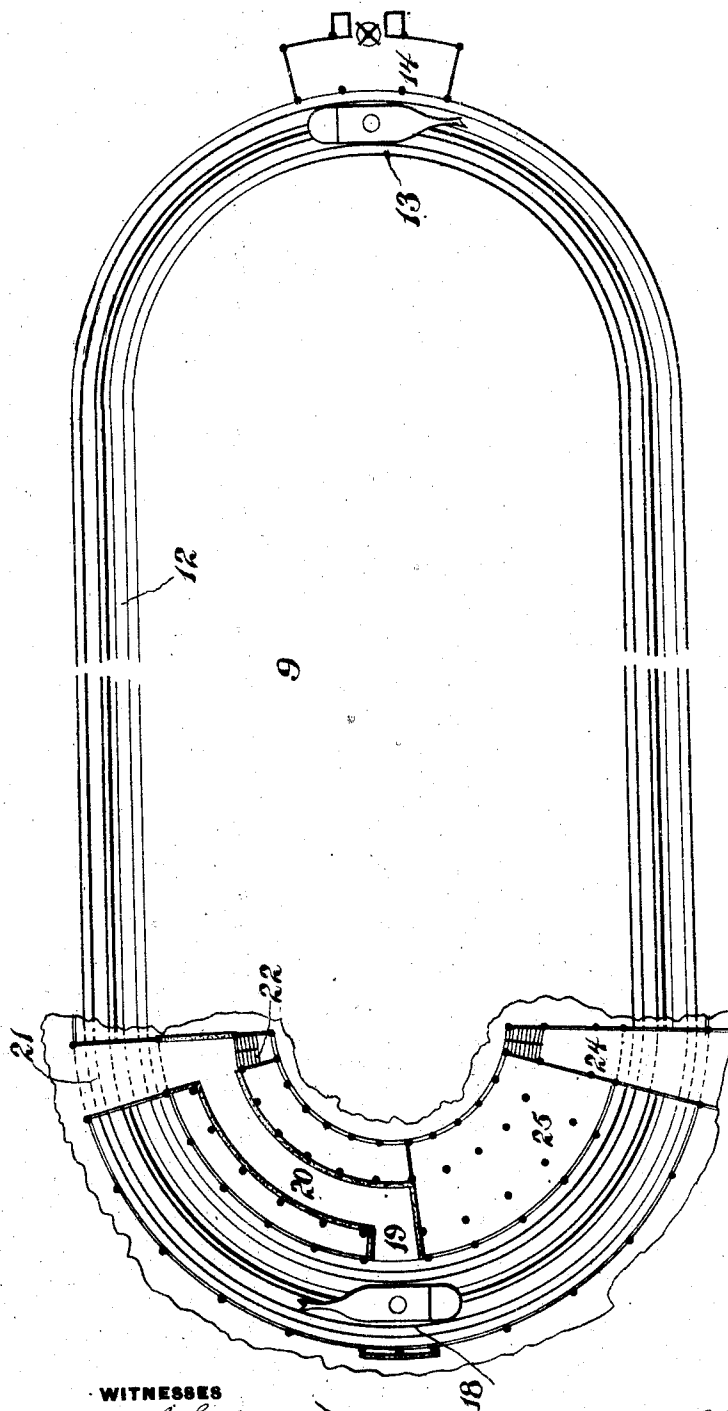


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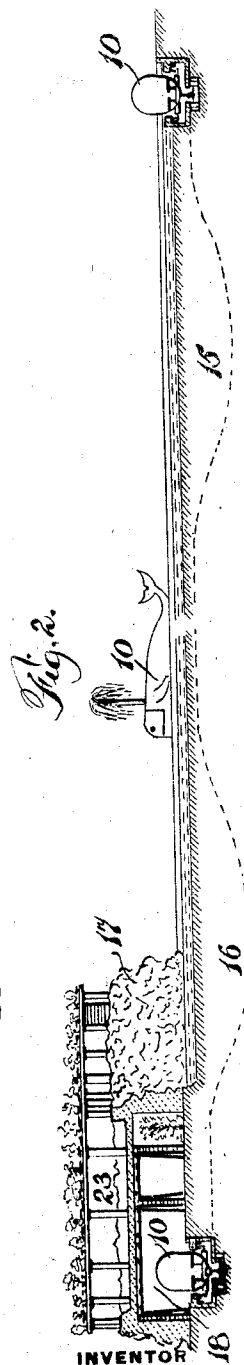
PATENTED MAR. 31, 1908.

A. G. ANDREWS.  
AMUSEMENT DEVICE.  
APPLICATION FILED DEC. 14, 1907.

3 SHEETS—SHEET 1.



WITNESSES  
Harvey L. Lechner  
Doerlag Bellinger, *Fig. 1*



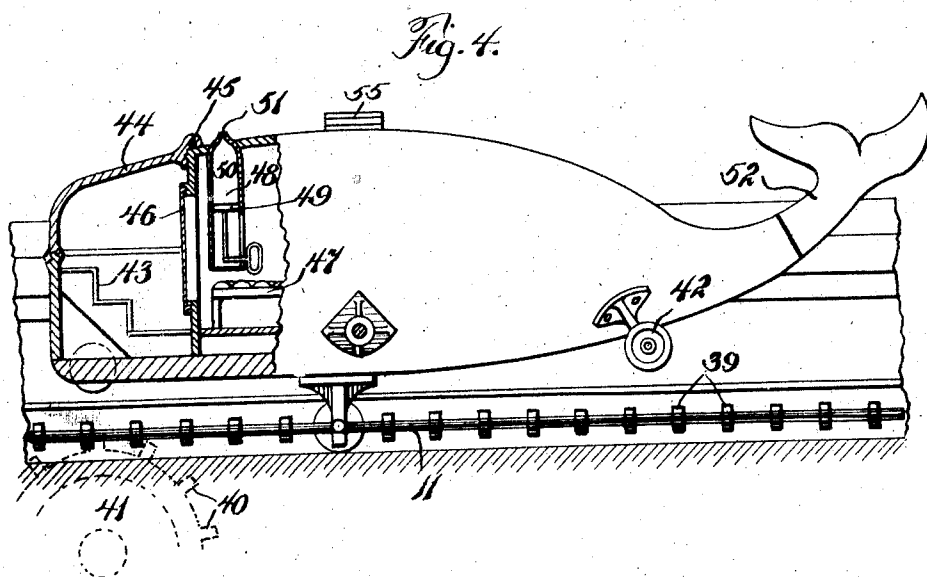
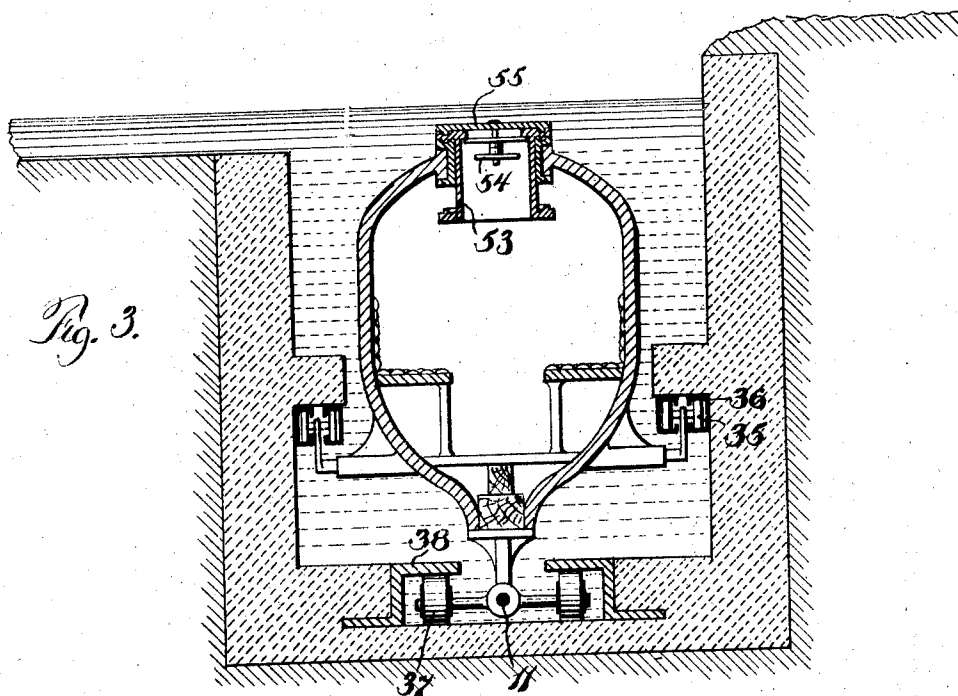
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3 SHEETS—SHEET 2.



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PATENTED MAR. 31, 1908.

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3 SHEETS—SHEET 3.

Fig. 5.

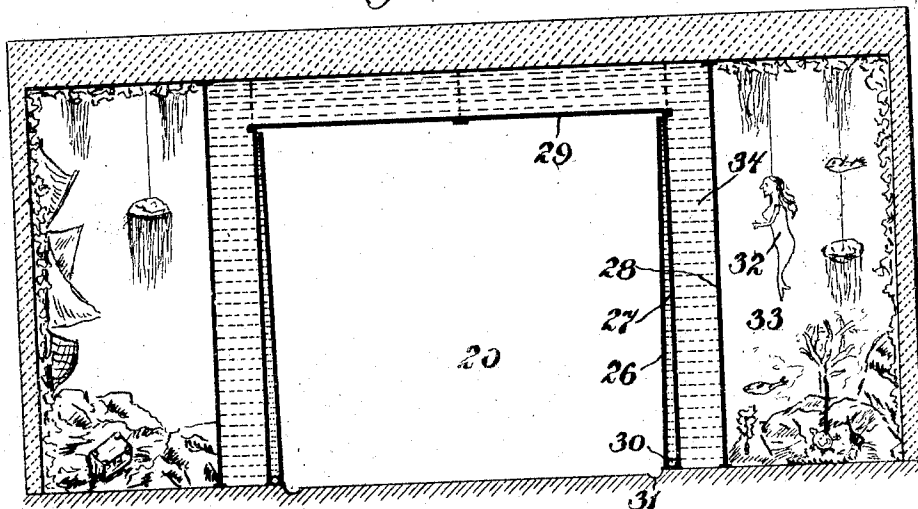


Fig. 6.

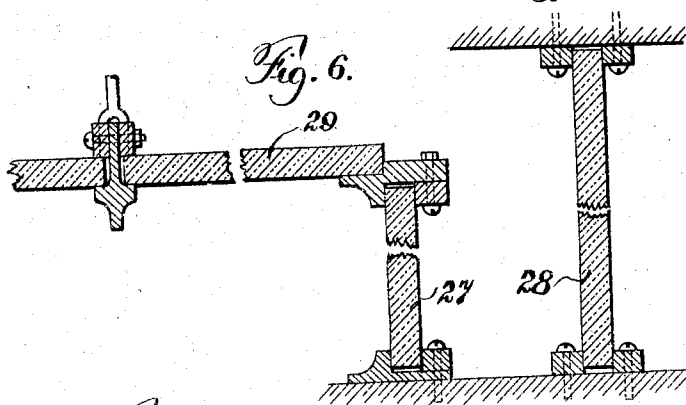


Fig. 7.

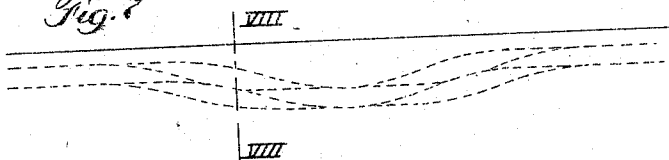
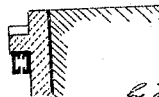
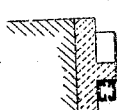


Fig. 8.



WITNESSES

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# UNITED STATES PATENT OFFICE.

ALBERT G. ANDREWS, OF PITTSBURG, PENNSYLVANIA.

## AMUSEMENT DEVICE.

No. 883,441.

Specification of Letters Patent.

Patented March 31, 1908.

Application filed December 14, 1907. Serial No. 406,406.

*To all whom it may concern:*

Be it known that I, ALBERT G. ANDREWS, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Amusement Devices, of which the following is a specification.

The invention relates to amusement devices for use in pleasure parks. It has for its principal objects; the provision of a submarine passenger-car or boat which shall be constructed to be positively guided, above and below water in a novel and improved manner; the provision of an improved safety device for the car; the provision of a construction adapted to give the impression of a submarine passage when the car lands, and the passengers disembark; the provision of a tank or pond for the car requiring a minimum amount of water; and the provision of a novel and effective exit passage. One embodiment of the invention is illustrated in the accompanying drawings, in which:—

Figure 1 is a plan view of the device partly in section, showing the general arrangement of parts,

Figure 2 is a longitudinal section through Fig. 1,

Figure 3 is a transverse section through the passenger-car and the deepest part of the channel,

Figure 4 is a side elevation of the car partly in section,

Figure 5 is a transverse section through the glass-enclosed passageway,

Figure 6 indicates certain detailed construction employed in mounting the glass forming the sides and roof of the glass-enclosed passageway;

Figure 7 is a diagrammatic view indicating certain undulations in the track for producing a wavy or undulating motion of the submarine car, and

Figure 8 is an enlarged sectional view taken on the line VIII—VIII of Figure 7, showing the means whereby such undulating movement of the car is obtained.

Referring now more particularly to Figures 1 and 2, it will be seen that in carrying out my invention I provide a large lake or pond indicated at 9, which in its middle part is preferably shallow, just sufficient water being employed to produce the proper appearance, but the deeper part being arranged at the sides called the channel, wherein is designed to be drawn a conveyance or sub-

marine car marked 10 which in the present instance I prefer to shape in representation of a whale, the detailed structure whereof will appear in description to be hereinafter adduced.

The submarine car 10 is fastened to a cable 11 (see Figs. 3 and 4) and caused to travel along around the track indicated at 12, being above the water at the place marked 13 which is opposite the loading platform 14, but so guided by the rails and track and guiding devices, as to pass entirely under the water in various places during the progress of the car around the track, as indicated in Figure 2, for example, at 15 and 16 where occur the deepest parts of the channel, the deeper part at 16 providing means for passing the car under a representation of a bluff indicated at 17, which is preferably made of concrete or other like material simulating rocks or other bank rising from the water, the car being then raised out of the water again by an elevation of the track, into the position indicated inside of the bluff or ground at the point marked 18 on Figure 1, opposite which there is a platform or landing 19 where the passengers can disembark and walk through the passage-way 20 and either out an exit opening 21, or upward by means of the stairs 22 to a kind of roof garden or other amusement place indicated at 23 on Figure 2, from which an exit passage 24 is provided through which they can leave the said amusement place. Within the space 25 can be arranged certain necessary lighting machinery or other mechanism adapted to be used in connection with the scheme, while along the sides and over the ceiling of the passageway 20 I arrange certain glass mounted as indicated in detail in Figures 5 and 6, there being an inner wall 26 preferably of large sheets of plate glass; another wall 27 closely adjacent to the inner wall, and a third wall 28 between which and the wall 27 there is a stationary body of water which extends up over the ceiling above another glass plate 29, in the manner shown in Figure 5.

The plate 26 is preferably arranged on a slight incline as shown in Figure 5, and at the bottom of the space between the plates 26 and 27 is arranged a pipe 30 adapted to supply a constant flow of water which will rise through the space between said plates 26 and 27 and overflow around the top of the plate 26 and down along the side of said plate on the inside of the passageway 20, and escape

by means of the drain channel 31 shown in Figure 5, thus causing a constant downward flow of water along the surface of the glass and heightening the effect to the people, of being under the water.

In order to still further produce the effect of submergence, exhibit devices such as a mermaid 32 are provided in the space marked 33 on either side of the passageway 20, which said objects will be seen by the passengers, through the body of water 34, as well as through the running water which comes down over the surface of the sheet of glass 26, whereby the effect will be greatly heightened.

In order to produce an undulating or waving motion of the submarine car 10 as it passes around the track, the track is constructed with lateral guides shown most clearly in Figure 3, having wheels 35 running in tracks 36, the whole arrangement being as indicated diagrammatically in Figures 7 and 8, that is, so as to produce an oscillation or side motion to the car. The car itself is preferably secured fast to the cable 11 and the cable 11 is provided with the guiding wheels 37 held in place under the rails 38, as clearly shown in Figure 3, and as a means for driving the cable 11, suitable buttons or other devices 39 may be attached to the cable in position to be engaged by the teeth 40 of a driving gear 41, or, if preferred, other driving mechanism can be employed.

The submarine car as shown in Figure 4 is provided at either end with steadying rollers 42 to prevent too much inclination of the car in case there is more weight on one end than the other, and it is also provided with the stair 43 as a means of ingress and egress, and a doorway or door opening covered by a swinging door 44 which is pivoted at 45 and adapted to form a tight joint all around the opening after the passengers are inside, so that the car may be submerged without any water leaking in. As an additional protection a plate 46 is provided as indicated in Figure 4. Within the car, seats 47 are provided. A device 48 is provided, which is submerged as the car is submerged, and the piston 49 can be drawn down from within the car as the car is under way, sucking water into the chamber 50, from which it can be forcibly ejected through the orifice 51 when the car comes again above the surface, increasing the effect of the blowing of the whale. The tail 52 can be mounted upon a pivotal support, with means of any preferred kind for moving it, so as to further produce the desired optical illusion.

It will be obvious that in carrying out my invention, as many submarine cars can be used as desired, and it is preferable to mount them so that while one is going under the water another will be coming out, so that the force required to move them will be somewhat counterbalanced, and as many de-

pressed places in the track as indicated at 15 and 16 may be employed as desired, or as the room available will permit. By the use of a very shallow pond all around the center and a deep passageway or track through which the car travels, it is obvious that only a comparatively small amount of water need be used, and the mechanism can be readily drained if necessary.

Referring to Figure 3 it will be seen that as a means for providing for the safe escape of the passengers in case the car should become stuck anywhere under the water, I have provided a sliding outlet tube 53 arranged with a wheel 54 constructed with a kind of manhole cover 55, all of which is normally in the position shown in Figure 3, but which if necessary can be pushed outward so as to elevate the plate 55 above the water at any time that may be necessary, when the plate 55 can be removed by unscrewing the wheel 54, so as to provide a safe exit for the passengers. Any preferred means for moving or sliding the tube 53 upward can be used, the main object being to have some telescopic or slidable outlet tube or passage which can be pushed upward so as to have the upper end of it above the surface of the water to provide a safe escape opening for the passengers in case it should become necessary for them to get out of the car in this manner. This sliding motion does not need to be very much in degree, because the plate 55 is at no time more than a small distance below the surface of the water.

Having thus described my invention and illustrated its use, what I claim as new and desire to secure by Letters Patent is the following:—

1. The combination in an amusement device, of a passage-way of glass surrounded by water, a body of water, a submarine car, and means whereby the car is moved beneath the surface of the body of water and brought to a position for unloading in the said passage above the surface of the body of water.

2. The combination in an amusement device, of a body of water, a submarine car, a track beneath the water on which the car rides, means for moving the car along the track beneath the surface of the water and a passage way of glass surrounded by water to which the track leads, and in which passage-way the track brings the car to the surface of the body of water to permit a landing of the passengers.

3. In combination, a submarine boat in the form of a fish, a transverse partition intermediate the ends of the boat provided with a water-tight door, and a water tight swinging door representing the upper jaw of the fish and giving access to the front compartment.

4. In an amusement device, a passage-way of glass, a casing of glass spaced away

from the passage-way, a body of water interposed between the passage-way and the casing, and an exhibit in the space outside the casing.

5 5. In an amusement device, a passage-way of glass, a casing of glass spaced away from the passage-way, a body of water interposed between the passage-way and the casing and means for causing a thin sheet of water to flow down in front of the glass of the passage-way.

10 6. In an amusement device, a passage-way of glass, a casing of glass spaced away from the passage-way, a body of water interposed between the passage-way and the casing, means for causing a thin sheet of water to flow down in front of the glass of the passage-way and an exhibit in the space outside of the casing.

20 7. In an amusement device, a passage-way of glass having a substantially vertical side wall, a sheet of glass spaced away from the vertical side wall, and means for supplying water between the side wall and the sheet of glass whereby the space is filled and overflows down the front of the sheet of glass.

25 8. In an amusement device, a passage-

way of glass having a substantially vertical side wall, a sheet of glass spaced away from the vertical side wall and means for supplying water between the side wall and the sheet of glass whereby the space is filled and overflows down the front of the sheet of glass, a second sheet of glass on the side of the side wall opposite to the first sheet of glass, an interposed body of water and an exhibit back of such second sheet of glass.

9. In an amusement device, a passage-way of glass having a substantially vertical side wall, a sheet of glass spaced away from the vertical side wall, means for supplying water between the side wall and the sheet of glass whereby the space is filled and overflows down the front of the sheet of glass, a second sheet of glass on the side of the side wall opposite to the first sheet of glass and an interposed body of water.

In testimony whereof I have hereunto signed my name in the presence of the two subscribed witnesses.

ALBERT G. ANDREWS.

Witnesses:

HARVEY L. LECHNER,  
PAUL SYNNESTVEDT.