

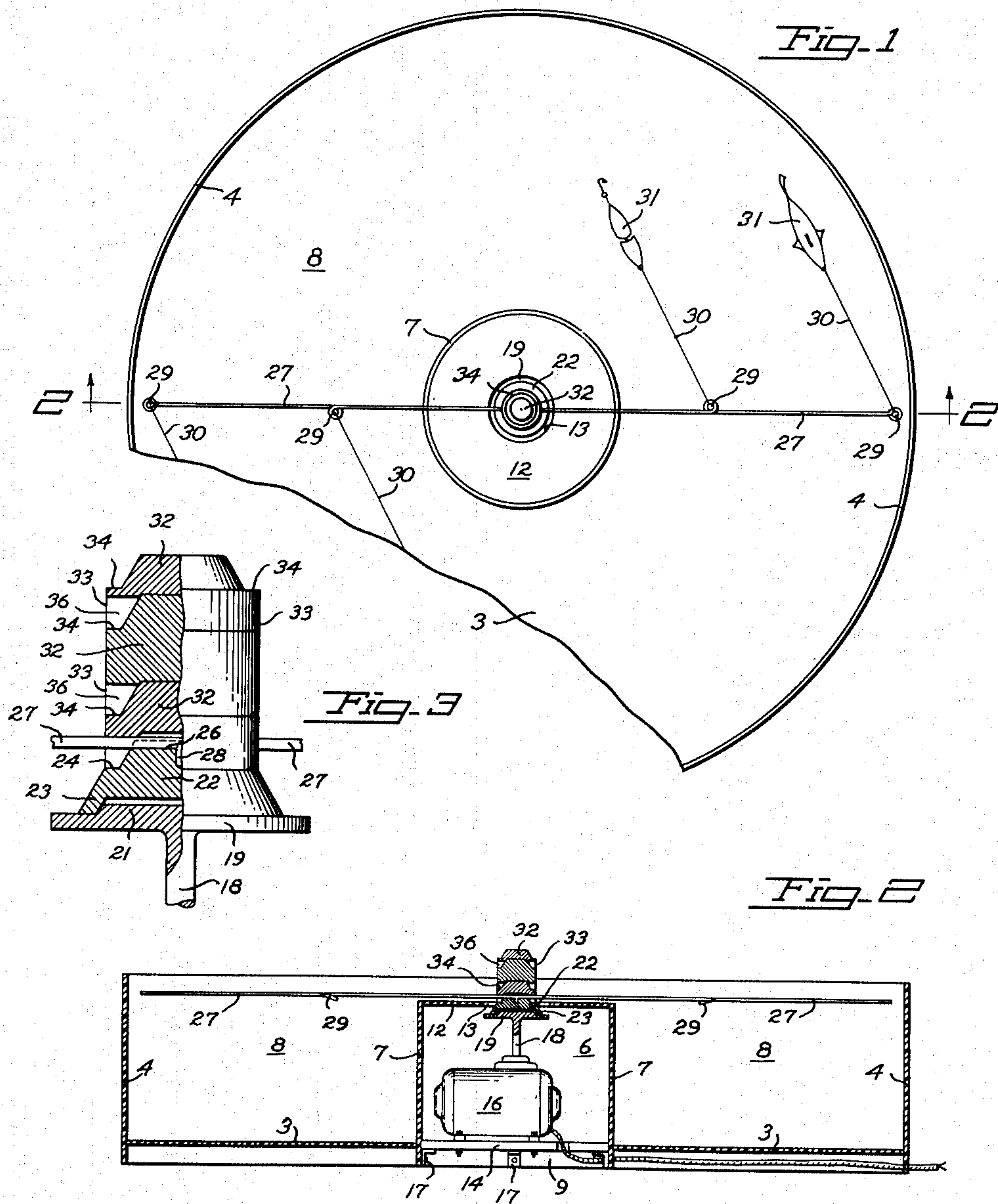
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C. S. RENWICK, JR

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DISPLAY TANK FOR LURES AND PROPULSION MEANS THEREFOR

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INVENTOR
CHARLES S. RENWICK, JR.
BY
Charles S. Evans
his ATTORNEY

UNITED STATES PATENT OFFICE

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DISPLAY TANK FOR LURES AND PROPULSION MEANS THEREFOR

Charles S. Renwick, Jr., Richmond, Calif.

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3 Claims. (Cl. 35-49)

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My invention relates to display tanks for fishing lures; and more particularly to display tanks having propulsion means for towing the lures about in the tank.

One of the objects of my invention is to provide a display tank in which fish lures may be towed at actual trolling speeds.

Another object is the provision of such a display tank in which the speed of the lures through the water may be selectively varied by the interposition of weights of varying mass.

Still another object is the provision of a device for transmitting power from a driving to a driven element and in which the transmitted power is variable by the selective use of weights of different mass.

The invention possesses other objects and features of value, some of which, with the foregoing, will be brought out in the following description of my invention. It is to be understood that I do not limit myself to the showing made by the said description, and the drawings, since I may adopt variant forms of my invention within the scope of the appended claims.

In the drawings, Fig. 1 is a plan view of the display tank; and Fig. 2 is a vertical section taken in the plane indicated by the line 2-2 of Fig. 1. Fig. 3 is an enlarged fragmentary elevation partly in section showing the arrangement of parts of the propulsion means.

Broadly, the structure of my invention comprises a cylindrical tank in which an annular channel is formed for water by a secondary caisson-like compartment disposed within the tank and preferably concentric therewith. Propulsion means are provided within the compartment and include a horizontal platen with driving means therefor. Power is taken off from the platen by a friction block gravitationally engaging it. A beam fixed on the block and extending transversely over the channel provides means for attaching one or more lures so that with rotation of the platen, the lures are towed around the annular channel. Weights of varying mass adapted to nest on the block and on each other are provided for varying selectively the gravitational engagement of the block with the platen, and therefore the speed of the lures through the water.

There are many instances where a safe and controlled source of power is desirable, especially where children are concerned, or for the display of certain types of commercial goods. In both of these applications, safety and only nominal supervision are important.

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As an illustration, it is desired to display a certain type of fishing lure in circumstances which closely simulate the behavior of the lure in actual use. For this purpose an annular channel is required through which the lures may be towed, and also a means of towing the lures. One embodiment comprises a tank, cylindrical in shape, and formed with a bottom 3 and side walls 4. A caisson-like cylindrical compartment 6, having a wall 7 concentrically disposed in the tank, forms an annular channel 8 adapted to hold water and through which the lures are towed. The cylindrical compartment extends through the bottom of the tank in a portion 9, and is securely cemented thereto, while at its upper extremity the compartment is provided with a top 12 having a central aperture 13.

Fitting within the compartment 6 is a bed plate 14 on which is mounted a motor 16 of any desired type. The weight of the bed plate and motor assembly is carried by flanged legs 17 which are secured at intervals to the extending portion 9 of the compartment wall below the bed plate. The motor is positioned permanently on the bed plate so that in any position of the bed plate the axis of the drive shaft 18 of the motor will be centered with respect to the aperture 13 in the top of the compartment.

Fixed on the drive shaft 18 of the motor and located preferably slightly below the top 12, is a horizontal platen 19 having a low circular pad 21 formed thereon concentric with the shaft axis.

A friction block 22 having an annular flange 23 on its lower face gravitationally engages the platen as shown, with the flange surrounding the pad. The block is preferably formed of metal in the shape of two concentric superimposed frustums in which the lower base of the top frustum is of less diameter than the top base of the lower frustum, thus providing an annular shoulder 24 around the side of the block. A groove 26 of rectangular cross section is formed in the top surface of the block and extends thereacross providing a secure seat for the retention of a beam 27.

The beam extends over the channel on both sides of the center of the tank and is held against lengthwise movement by a pin 28 fixed at the center of the beam and extending into a hole formed in the floor of the groove. Since the load is light the beam may be formed of wire in which eyes 29 are formed for securement of towing lines 30 fastened to the lures 31.

As the motor rotates the platen at constant speed, the block and beam tend to rotate with it.

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With a load, or in this case lures, attached to the beam and dragging in the water, the drag of the load tends to overcome the gravitationally imposed friction between the platen and block, causing relative rotation therebetween. The drag of the load and the gravitationally imposed friction between the block and platen determine the velocity of relative rotation. Means are provided for increasing the gravitational engagement between the block and platen to vary the velocity of rotation of the block and beam, and therefore the lures.

Formed so as to nest concentrically on the block and on each other, are a plurality of weights 32, each having an annular extension 33 formed around its bottom. The proportions are such that the extension seats on the shoulder 24 of the block and on a shoulder 34 formed on each of the weights.

In order that the weights may nest on the block, diametrically opposed slots 36 of a size to easily slip over the beam are formed in the annular extension of each weight. Thus, different combinations of weights of varying mass may be assembled on the block to vary the gravitational engagement between the block and platen to render the proper or desired speed of rotation of the lures in the channel.

I claim:

1. The combination with a tank providing an annular channel, of propulsion means for towing a lure through the channel comprising a platen constituting the driving element, a block gravitationally engaging the platen and constituting the driven element, means for rotating the platen,

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and a beam fixed on the block and extending over the channel and to which the lure is secured.

2. The combination with a tank providing an annular channel, of propulsion means for towing a lure through the channel comprising a platen constituting the driving element, a block gravitationally engaging the platen and constituting the driven element, means for rotating the platen, a beam fixed on the block and extending over the channel and to which the lure is secured, and a weight on the block for effecting an increase in the gravitational engagement of the block and platen.

3. The combination with a tank providing an annular channel, of propulsion means for towing a lure through the channel comprising a platen constituting the driving element, a block gravitationally engaging the platen and constituting the driven element, means for rotating the platen, a beam fixed on the block and extending over the channel and to which the lure is secured, and a plurality of nesting weights of varying mass on the block for effecting a predetermined gravitational engagement of the block and platen.

CHARLES S. RENWICK, JR.

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