

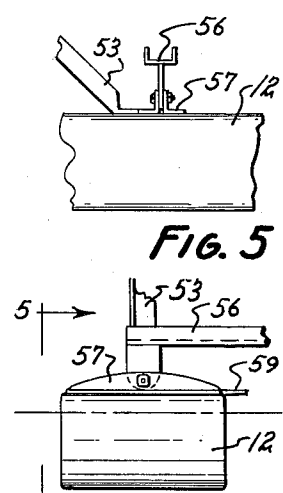
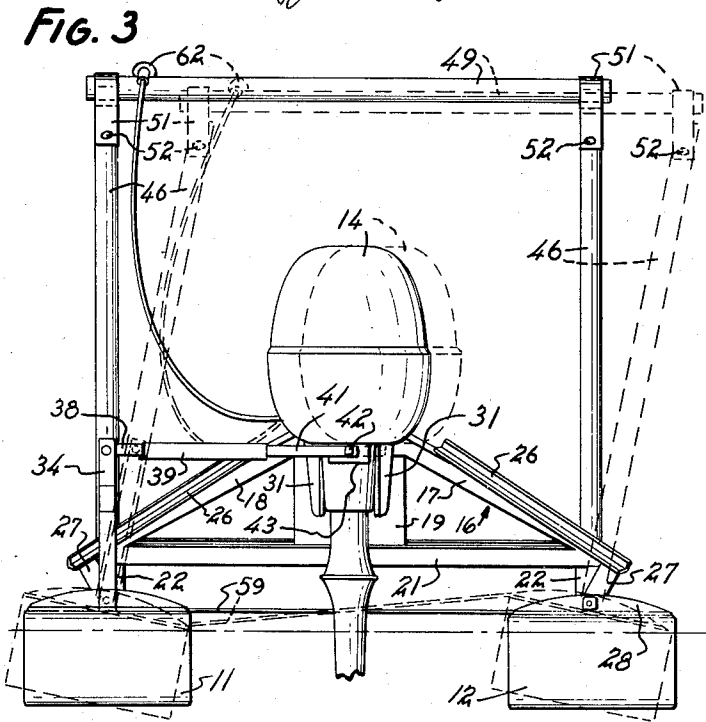
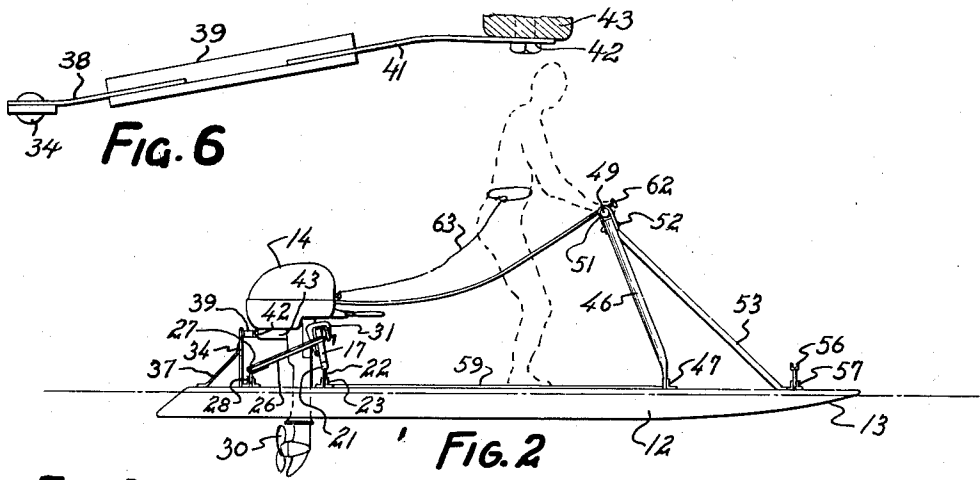
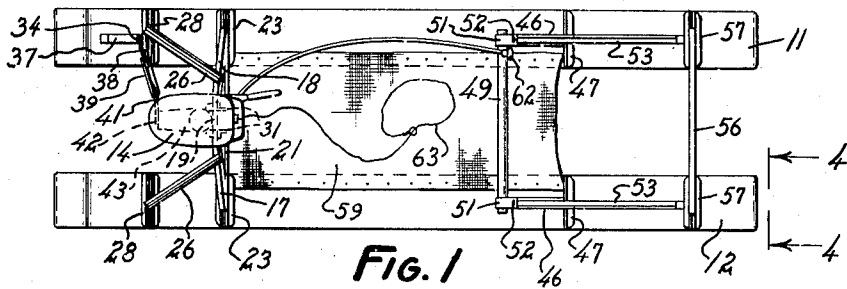
July 1, 1958

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2,840,832

AQUATIC DEVICE

Filed Dec. 5, 1955



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**AQUATIC DEVICE**

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Application December 5, 1955, Serial No. 550,996

4 Claims. (Cl. 9—1)

This invention relates generally to aquatic devices and more particularly to aquatic devices of the motor powered type.

In general, it is an object of the present invention to provide an aquatic device which is self-propelled and which can be readily controlled by the rider.

Another object of the invention is to provide an aquatic device of the above character in which the pontoons are connected together for pivotal movement about their longitudinal axes.

Another object of the invention is to provide an aquatic device of the above character in which the device may be readily steered by the rider shifting his weight and tilting the pontoons about their longitudinal axes.

Another object of the invention is to provide a device of the above character in which a motor is mounted on the pontoons and in which the motor is steered by tilting of the pontoons about their longitudinal axes.

Another object of the invention is to provide a device of the above character in which means is provided for tilting the skis about their longitudinal axes.

Another object of the invention is to provide a device of the above character in which means is provided for protecting the motor from splashing water.

Another object of the invention is to provide a device of the above character in which means is provided for killing the motor when the rider falls from the pontoons.

Additional objects and features of the invention will appear from the following description in which the preferred embodiment has been set forth in detail in conjunction with the accompanying drawing.

Referring to the drawing:

Figure 1 is a plan view of an aquatic device embodying the present invention.

Figure 2 is a side elevational view of the device shown in Figure 1.

Figure 3 is an enlarged rear elevational view of the device shown in Figure 1.

Figure 4 is an enlarged view looking along the line 4—4 of Figure 1.

Figure 5 is a view looking along the line 5—5 of Figure 4.

Figure 6 is a plan view of a portion of the steering mechanism.

In general, the present invention consists of a pair of pontoons connected together for pivotal movement about their longitudinal axes and a motor mounted on the pontoons and steered by tilting of the pontoons about their longitudinal axes.

Referring to the drawing, I have shown a pair of pontoons 11 and 12 which are preferably hollow and are formed of a suitable material such as sheet aluminum or plywood. The pontoons 11 and 12 are substantially rectangular in cross section and are provided with a forward tapered portion 13 to facilitate planing of the pontoons on the water.

An outboard motor 14 is mounted upon an A-frame

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assembly 16 which is connected to the pontoons 11 and 12. The A-frame assembly 16 consists of a pair of members 17 and 18 which have their upper ends fastened to a mounting board 19 and their lower ends fastened to a channel shaped member 21. The lower end of the mounting board 19 rests in the channel member 21. The ends of the channel member 21 are fixed to lugs 22 which are pivotally connected to angle members 23 fastened to the pontoons. A pair of bracing members 26 are fixed to members 17 and 18 and extend rearwardly and are provided with lugs 27 which are pivotally connected to angle members 28 fastened to the pontoons.

The outboard motor 14 is of the conventional type which is pivotally mounted so that the propeller 30 and rudder 38 can be rotated about a vertical axis for steering and so that the propeller can be swung about a horizontal axis when the propeller strikes an object. The motor 14 is provided with a U-shaped mounting bracket 31 which fits over the mounting board 19 carried by the A-frame assembly 16 and supports the motor 14 and its propeller 30 in predetermined positions.

Means have been provided for steering the motor from one of the pontoons and consists of a substantially vertical member 34 which has its lower end fixed to the associated angle member 28 by suitable means such as welding. A bracing member 37 has one end fastened to the pontoon 11 and has the other end fixed to the vertical member 34. The upper portion of vertical member 34 is pivotally connected to one end of a linkage comprising a strap 38 and the other end of strap 38 is fixed to one end of a bar 39. The other end of bar 39 is fixed to one end of a strap 41, while the other end of strap 41 is pivotally connected to one end of a bar 42. The other end of bar 42 is connected to motor 14, as at 43. The motor 14 is rotated about its vertical axis when the bar 42 is moved. Thus, it will be apparent that when the pontoon 11 is tilted, the motor will be rotated about its vertical axis and so will apply additional turning movement to the connected pontoons.

Suitable means is provided for tilting the pontoons 11 and 12 about longitudinal axes and consists of a frame means comprising a pair of rods 46 which have their lower ends fixed to brackets 47 fastened to the pontoons. A horizontal hand rod 49 has its ends fastened to U-shaped clamps 51 which are pivotally connected to the upper ends of rods 46 by bolts 52. A pair of bracing members 53 have their lower ends fastened to the pontoons and their upper ends fastened to the rods 46.

A tie member 56 has its opposite ends pivotally connected between angle brackets 57 fastened to the pontoons and serves to connect the two pontoons into a unitary assembly.

Suitable means such as a rubberized canvas 59 is mounted between the pontoons 11 and 12 by tacking the edges of the canvas to the pontoons and extends forward of the motor to prevent water from splashing up on the motor as the pontoons are driven through the water.

Suitable means is also provided at the hand rod 49 for controlling the speed of operation of the motor such as a throttle 62 which is mounted upon the hand rod and connected to the outboard motor 14. A power cut-off cord 63 is provided which is adapted to be looped around the body of the rider and serves to ground the magneto on the motor to stop the operation of the motor when the rider accidentally falls from the pontoons.

The operation of my aquatic device may now be described as follows:

Let it be assumed that the rider has mounted the pontoons as shown in dotted lines in Figure 2 and has tied the power cut-off cord 63 around his body. The motor 14 is then started and the speed of operation of the motor is controlled by throttle 62. The rider grasps the

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hand rod 49 and gradually increases the speed of the motor. As the speed increases, the pontoons 11 and 12 will be forced through the water. Steering of the device is accomplished by shifting the weight of the body and at the same time moving the hand rod 49 in the same direction as the weight is shifted to cause the pontoons to be tilted about their longitudinal axes. It is apparent that clockwise tilting of the pontoons as viewed in Figure 3 will cause counterclockwise rotation of the motor 14 as viewed in plan and will cause the aquatic device to turn to the right. The tilting of the pontoons in itself causes some turning of the device and the rotation of the propeller about its vertical axis causes additional turning by changing the direction of force from the propeller.

When it is desired to turn in the opposite direction it is merely necessary to shift the weight in the opposite direction and move the hand rod 49 in the same direction. Thus, merely by shifting the weight of the body and moving the hand rod 49 the direction of travel of the device may be easily controlled. The speed of operation may be readily controlled by operation of the throttle 62. If the rider should accidentally fall from the pontoons, his body will break the power cut-off cord 63 and cause grounding of the magneto on the motor to stop operation of the motor. This acts as a safety measure and prevents the device from running away from the rider.

It is apparent from the foregoing that I have provided an aquatic device which can be readily steered and in which shifting the weight of the rider and tilting the pontoons actually serves to steer the device. The device is relatively simple to operate and economical to construct.

I claim:

1. An aquatic device comprising: a pair of relatively long, narrow pontoons disposed and spaced in substantially parallel relationship, each pontoon having an area on its upper side for receiving the foot of an operator standing on the pontoons at an operator's station intermediate the ends of the pontoons; a first vertically extending frame means provided forward of the operator's station and joining the pontoons together, said frame means being pivoted on the pontoons for movement by an operator standing at the operator's station, said movement being normal to the longitudinal axis of the pontoons to

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rotate each pontoon about its longitudinal axis both clockwise and counter-clockwise, a second frame extended between the pontoons rearward of the operator's station, a power unit including a motor and a propeller driven thereby, means mounting the power unit on the second frame for movement about a vertical axis, and linkage extending from one of said pontoons to a connection on the power unit spaced from said vertical axis for rotating the power unit in a horizontal plane upon rotation of one of said pontoons about its longitudinal axis.

2. An aquatic device as in claim 1 including a sheet-like member joined to the pontoons and extended across the upper portion of the space between the pontoons and extending substantially from the forward to the after frame means to protect the operator and motor.

3. An aquatic device comprising: a pair of relatively long, narrow pontoons disposed and spaced in substantially parallel relationship, an operator's station provided intermediate the ends of the pontoons; a first frame means provided forward of the operator's station and joining the pontoons together, a second frame means extended between the pontoons rearward of the operator's station, said first frame means for rotating said pontoons simultaneously and in the same direction about their respective longitudinal axis both clockwise and counter-clockwise, a power unit including a motor and a propeller driven thereby, means mounting the power unit between the pontoons for movement about a vertical axis, and linkage extending from one of said pontoons to a connection on the power unit spaced from said vertical axis for rotating the power unit in a horizontal plane upon rotation of one of said pontoons about its longitudinal axis.

4. An aquatic device as in claim 3 including a sheet-like member joined to the pontoons and extended across the upper portion of the space between the pontoons and extending substantially from the forward to the after frame means to protect the operator and motor.

#### References Cited in the file of this patent

##### UNITED STATES PATENTS

1,846,602	Lake	Feb. 23, 1932
2,458,775	Giacomelli	Jan. 11, 1949
2,612,859	Billman	Oct. 7, 1952