United States Patent

Sade

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[54] **MOTOR DRIVEN AQUATIC DEVICE**

[72] Inventor: **Martin Sade,** 407 Rogers Ave., Glen Burnie, Md. 21061

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[52] **U.S. Cl.** **115/70**

[51] **Int. Cl.** **B63b 35/00**

[58] **Field of Search** 115/6.1, 70, 17, 41; 248/4; 114/62

[56] **References Cited**

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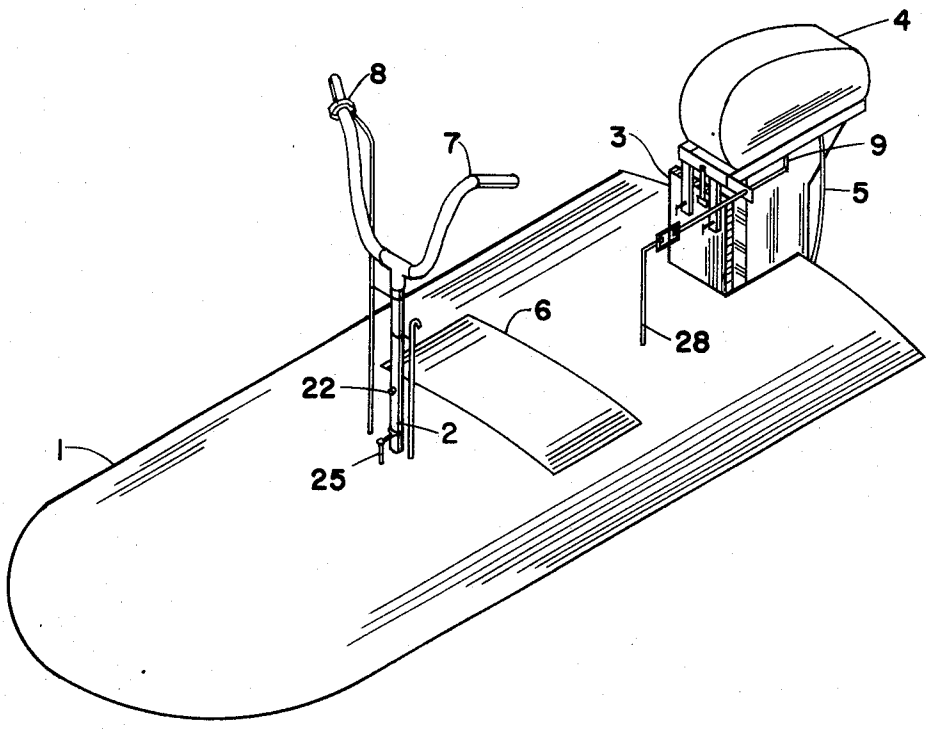
Primary Examiner—Trygve M. Blix

Attorney—John F. McClellan, Sr.

[57] **ABSTRACT**

A balance-steered motor-driven aquatic device having a single hull with a partial tunnel and adjustable height outboard motor mount means astern, and a rigid, vertically telescoping handle bar post for a standing operator forward, with a pressure-grip throttle control including deadman safety cut-off integral with a handle on the post.

6 Claims, 5 Drawing Figures



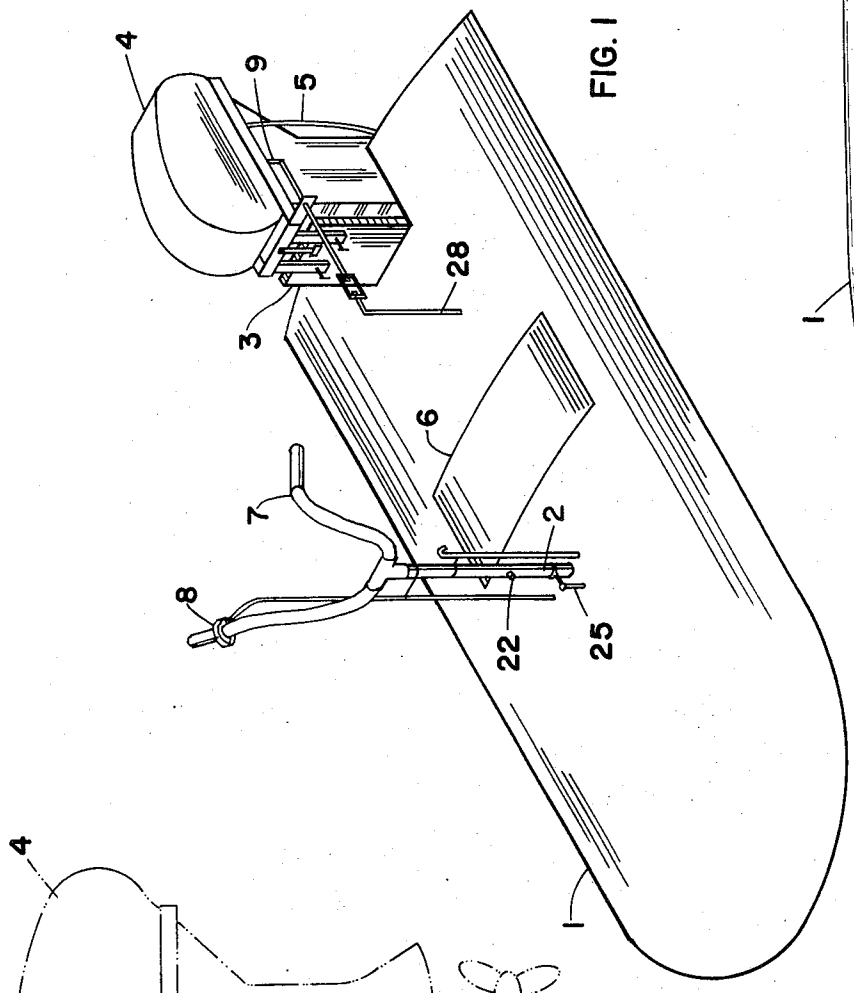


FIG. 1

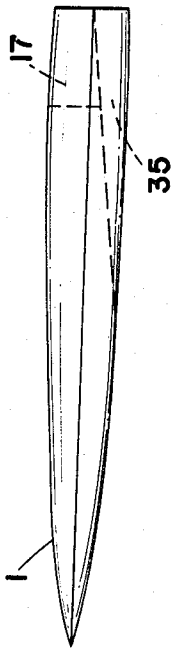


FIG. 5

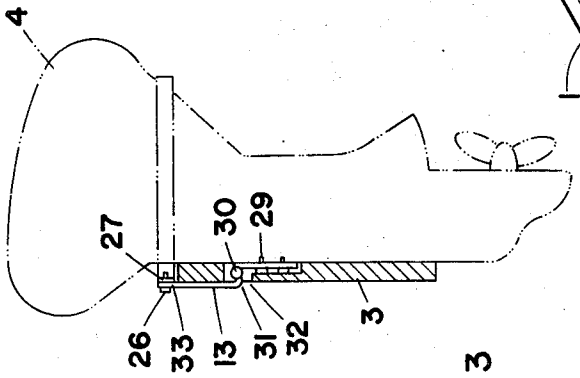


FIG. 3

INVENTOR.
MARTIN SADE
BY
John F. McClellan Sr
ATTORNEY

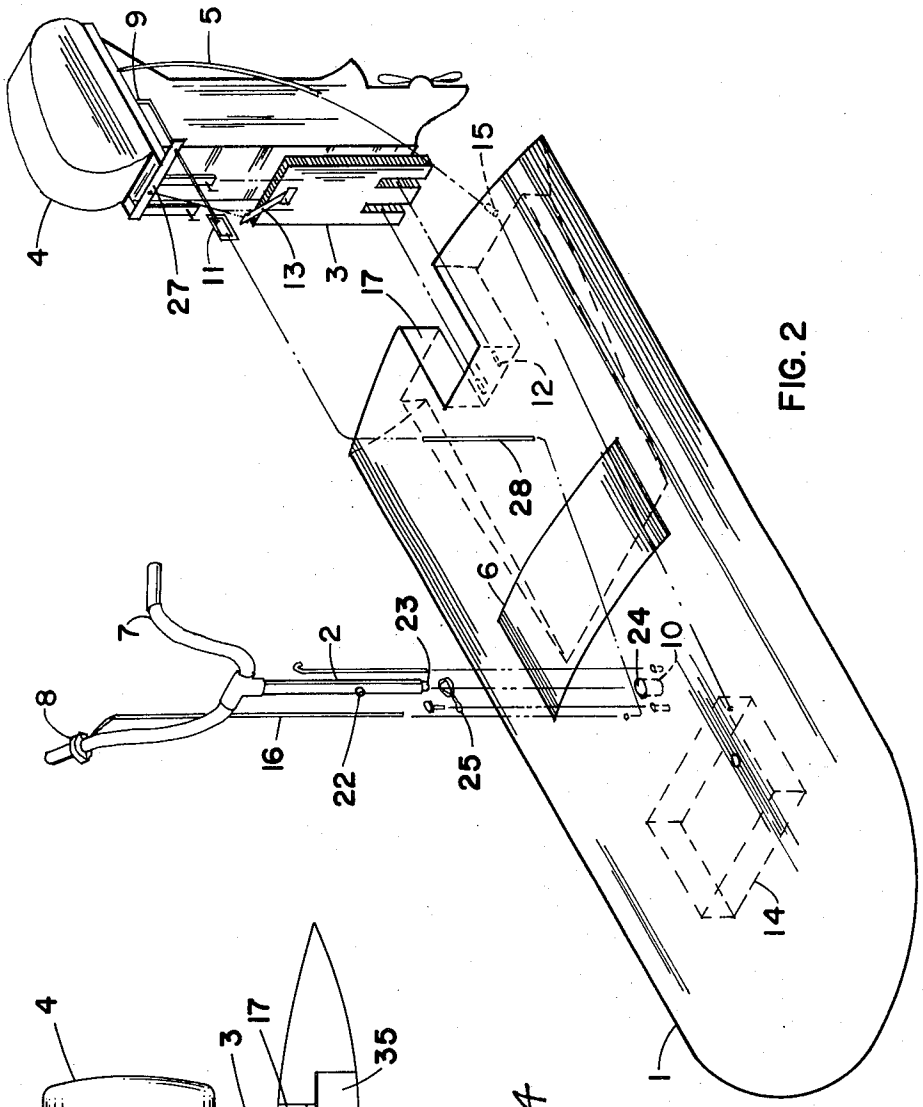


FIG. 2

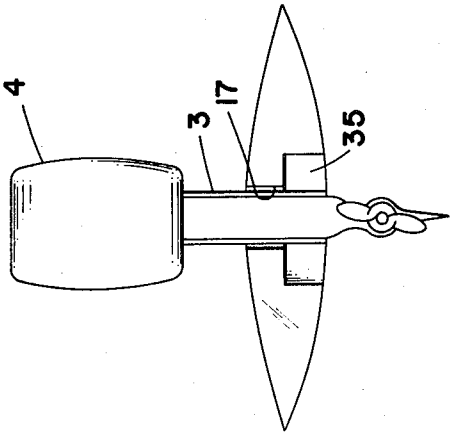


FIG. 4

MOTOR DRIVEN AQUATIC DEVICE

This invention relates generally to aquatic devices and concerns more particularly an improved motor-driven aquatic device that is in the form of a surf-board.

Conventionally, the sport of surfing requires physical coordination and agility and waves the size of which are found only in the ocean. Surfing provides one with the enjoyment of high speed travel over the water and the satisfaction of being able to control one's direction at high speeds by the mere shifting of one's weight. However, the necessity for waves, and for physical agility and great stamina severely limits the opportunity for surfing.

The primary object of the present invention to which whenever appropriate I shall refer as the "Aqua Glider," is to provide a novel surfing device which is self-propelled, which is simple in construction, and very easy to operate and which will provide all the thrills of surfing.

Another object of this invention is to provide a device that can be propelled forward by any standard outboard motor mounted astern with the thrust of the motor controlled by hand at an amidship support post.

A further object of this invention is to provide a motor-driven aquatic device in which all accessories needed for forward propulsion and safe operation are completely removable from the main surf-board-like member or hull, thus providing maximum ease for one-man handling and transportation of the device.

Yet another object is to provide a device as described in which both the motor mount and the operator support are height-adjustable.

In accordance with these and other objects which will become apparent hereinafter, the Aqua Glider will now be described with reference to the accompanying drawings illustrating preferred embodiments.

In the drawings:

FIG. 1 is an isometric view of the Aqua Glider assembled;

FIG. 2 is an exploded drawing of the Aqua Glider showing removable parts and the general means of attachment to the main body.

FIG. 3 is a side elevation, partly in section, of a latch detail at a motor;

FIG. 4 is detail of the stern of the assembly of the device; and,

FIG. 5 is a side view of the body or hull of the device.

Referring more particularly to the drawings, FIGS. 1 and 2 show, corresponding parts being designated by the same numeral, an aquatic device having a main body 1. The main body has an adjustable plate 3 mounted on the stern to which any standard outboard motor 4 can be attached. The motor has as an optional feature a gasoline system consisting of line 5 attached to a tank 14 built into the main body 1. The main body is so designed that steering is accomplished by the shifting weight or balance of the operator who stands on non-skid pad 6 positioned behind support post 2. The method of steering is thus similar to the method used in steering water skis and surf-boards. The speed or thrust of the motor is controlled by twisting or turning a spring restored hand grip 8 mounted to the cross bar of the support post, which tensions a wire line 16 running from the handle to the throttle of the motor at 9 through a casing in the hull. A fairlead 28 mounted in the deck may be used if desired. Handlebar 7 provides a rigid grip for the operator.

An important aspect of this invention is illustrated by FIG. 2. All parts and accessories needed for the operation of the Aqua Glider are easily detached from the main body. The support post 2 is attached to the main body at 10 by being inserted into a cup 24 which is flush with the top surface of the main body yet totally sealed off from the inside of the body. It is retained by a clamp 25. The throttle cable is detachable from the main body at 11. A standard outboard motor is mounted to an adjustable plate 3 which in turn is attached by screws 12 in a recess in the stern of the main body at 17. The outboard motor, to prevent pivoting on plate 3, is steadied by a metal latch 13 attached to the plate 3 and to the motor, as will be seen. Rubber line 5 running from the gas tank to the motor, is detachable from the main body at 15, a sleeve connection.

The height of the support post 2 is adjustable by means of a set screw 22 which fixes the telescoping tube 23 within the support post 2 at the desired extension from the bottom of the support post, where it is received in cup 24 and retained by clamp 25.

FIG. 3 is a side view of a motor 4, illustrating the method of attachment to plate 3, here shown in section. Metal latch 13 which is attached to the motor by screws 29, is hinged at 30 and bent 31 where it passes through a slot 32. The upper part has a screw hole 33 by means of which it is secured to an extension 27 of the motor by a screw 26.

FIGS. 4 and 5 show a further feature of the invention, a rectilinear-section hull tunnel 35, used to impart running stability to the device by inhibiting skidding in the manner of a keel, but without protrusion. The tunnel starts amidships and runs to the stern, getting progressively deeper as it goes aft. It is made wider than the recess 17 to allow room for passage of water on either side of plate 3 and the motor structure.

It can be seen that many advantages accrue to the structure described. The motor height, being adjustable, accommodates safely and conveniently various operator heights. The support post is rigid and supports the operator in place regardless of rolls and pitches of the craft in operation, but will shear away flush with the deck on sudden grounding, leaving a substantially unobstructed deck area ahead of the operator. The twist-type, spring restored throttle will stop the thrust of the motor when released, so that the operator will never be abandoned if pitched off, or threatened by his own craft. When the accessory devices are removed, the hull is perfectly free of protrusions and thus optimally adapted for transportation without damage to itself or to other surfaces. At the same time it is adapted to be stabilized by flow of water in the rectilinear-section tunnel in the hull, which extends with the hull behind much of the motor structure, imparting additional flotation and stability at the stern without sacrifice of quick detachability, or of single hull safety.

Obviously many modifications and variations of the present invention are possible in light of the above teachings. It is, therefore, to be understood that within the scope of the appended claims the invention may be practiced otherwise than as specifically described.

I claim:

1. An aquatic device comprising an: elongate single hull having a vertical notch centrally through the stern thereof, operator support-means comprising a vertical post having clamp-adjustable overlapping vertical

lengths for thereby adjusting the height of said operator support means, means for mounting an outboard motor at an adjustable height in the vertical notch, comprising an plate adapted for vertically slotted attachment at the forward portion of the notch with an opening therein for attachment to an outboard motor, a hinge member adapted for protrusion through the opening in the plate and having a first motor-engagement means at one end thereof and a second motor-engagement means pivotally connected with the opposite end thereof.

2. An aquatic device as recited in claim 1, wherein the elongated single hull has a central, rectilinear-section tunnel in the underside thereof extending rearwardly from an intermediate portion of the length of the hull to intersection with the lower part of the vertical notch at the stern.

3. An aquatic device as recited in claim 2, wherein the rectilinear-section tunnel in the hull is progressively deeper toward the stern.

4. An aquatic device as recited in claim 3, wherein the width of the rectilinear-section tunnel is greater than the width of the vertical notch in the stern at said intersection.

5. An aquatic device as recited in claim 4, wherein the operator-support means comprises spaced hand-grips, one of the hand-grips being rigid and the other of the hand-grips having resilient control-means thereon for connection with a said outboard motor.

6. An aquatic device as recited in claim 5 wherein the operator-support means includes a cup affixed in the hull and adapted to receive one of said overlapping vertical lengths.

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