

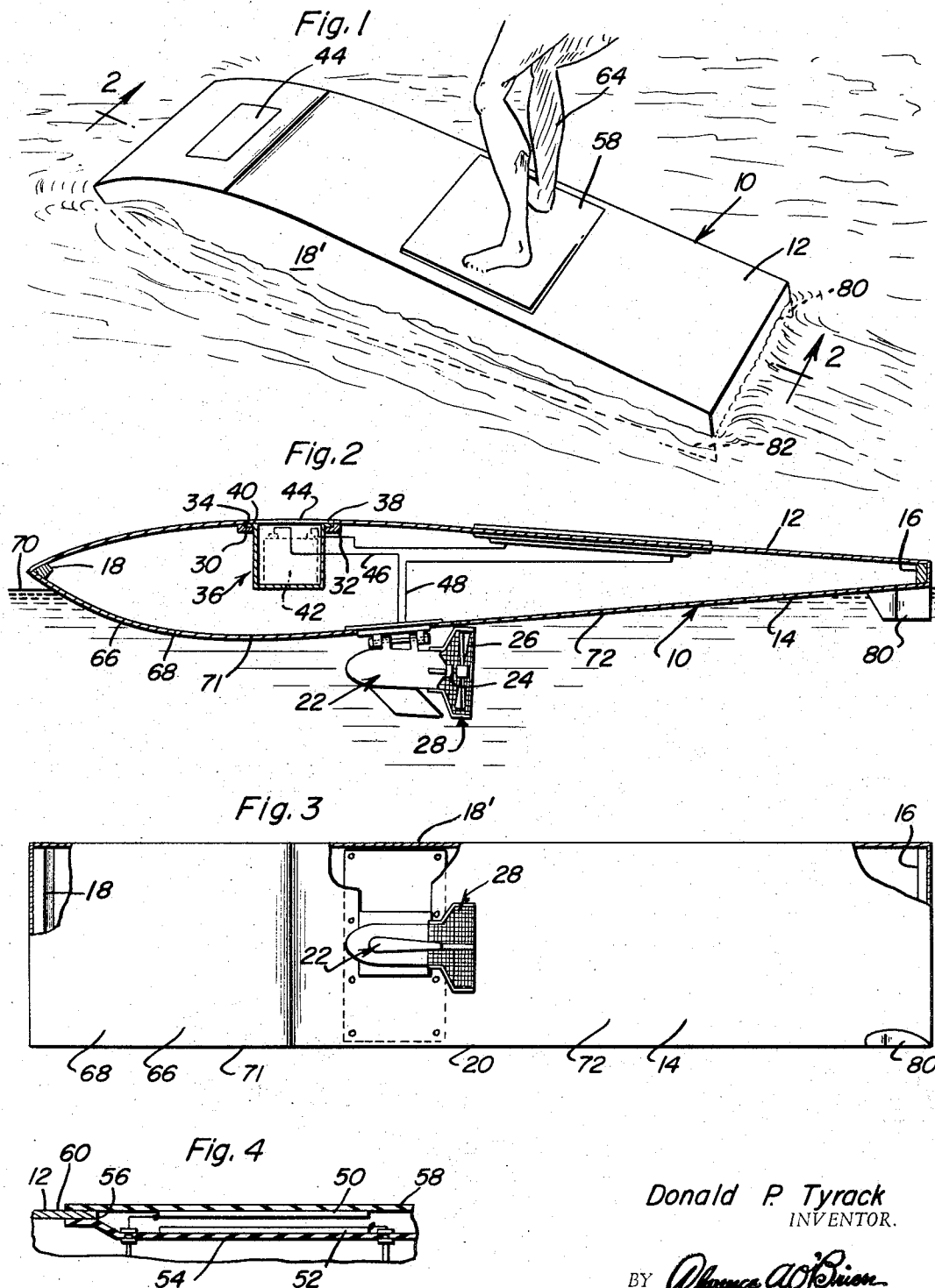
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D. P. TYRACK

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MOTORIZED WATER BOARD

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Donald P. Tyrack
INVENTOR.

BY *Alance A. O'Brien*
and *Harvey B. Jacobson*
Attorneys

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MOTORIZED WATER BOARD

Donald P. Tyrack, 5840 Avenida la Barranca NW.,

Albuquerque, N. Mex. 87114

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ABSTRACT OF THE DISCLOSURE

An elongated water planing body including a planing undersurface portion having a configuration similar to the upper surface of an airfoil in inverted position and including water propulsion means dependently supported from a central portion and depending opposite side fixed rudder means adjacent the rear end of the planing undersurface thereof, the water propulsion means being stationarily supported and not mounted for dirigible movement.

This invention relates to a novel and useful water board and more specifically to a water board including an elongated body member having a longitudinally extending bottom planing surface which is substantially transversely straight throughout its entire length and which includes a forward section inclined downwardly and rearwardly from a forward end portion thereof disposed above the normal line of said body member and which smoothly curves rearwardly to a point at which the bottom surface is generally horizontally disposed and then smoothly curves upwardly into a substantially straight and slightly upwardly and rearwardly inclined after or stern portion.

The configuration of the bottom planing surface of the water board of the instant invention is not unlike that of the upper surface of an airfoil such as a wing section. By having the bottom surface of the body of the water board of such configuration, the latter may be readily steered over the surface of a body of water without the use of movable rudder means merely by the operator of the board shifting his weight to one side of the board or the other in a manner to be more fully hereinafter set forth.

The water board of the instant invention may be utilized as a surfboard to ride waves without being propelled by any motive force acting upon the water. However, if it is desired, the water board may be provided with suitable propulsion means for propelling the board in calm water.

The main object of this invention is to provide a water board constructed in a manner whereby it may be readily steered by the rider thereof merely by the rider shifting his weight from one side of the board to the other.

Another object of this invention is to provide a water board whose construction adapts it for use without a water propulsion assembly or with a water propulsion assembly if the latter is desired.

Yet another object of this invention is to provide a water board including a propulsion assembly provided with dead-man controls which will be operative to maintain the propulsion assembly in operation only as long as the weight of the rider of the board is disposed upon a predetermined area of the upper surface of the board. A further object of this invention is to provide a motorized water board utilizing an electric motor driving a screw-type propeller or the like and with the board including a recess which is readily accessible from the upper surface of the board and in which a storage battery may be disposed and enclosed for providing a source of electrical potential for the electric motor of the water board.

A final object of this invention to be specifically enu-

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merated herein is to provide a water board in accordance with the preceding objects which will conform to conventional forms of manufacture, be of simple construction and easy to use so as to provide a device that will be economically feasible, long lasting and relatively trouble-free in operation.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a perspective view of the water board illustrated floating upon a body of water and with a portion of the rider of the board also being illustrated;

FIGURE 2 is an enlarged longitudinal vertical sectional view taken substantially upon the plane indicated by the section line 2—2 of FIGURE 1;

FIGURE 3 is a bottom plan view of the water board with portions thereof being broken away and illustrated in horizontal section; and

FIGURE 4 is a fragmentary enlarged vertical sectional view taken substantially upon a longitudinal plane passing through the weight responsive control assembly for the electric motor of the board.

Referring now more specifically to the drawings, the numeral 10 generally designates the water board of the instant invention.

The water board 10 includes a top wall 12 and a bottom wall 14. A transverse brace 16 extends between and interconnects the rear ends of the top and bottom walls 12 and 14 and the forward ends of the latter curve downwardly and upwardly, respectively, toward each other and are interconnected at their forward ends and braced by means of an internal transverse brace 18 to which both the top and bottom walls 14 are secured in any convenient manner.

The board 10 includes a pair of longitudinally extending opposite side walls 18' and 20 which interconnect corresponding pairs of opposite longitudinal side edge portions of the top and bottom walls 12 and 14 and extend between the transverse braces 16 and 18 to form a hollow housing-like structure.

If the water board 10 is to be motorized, an electric motor assembly generally referred to by the reference numeral 22 is dependently supported from the bottom wall 14 in any convenient manner and includes a rotatable output shaft 24 on which there is mounted a screw-type marine propeller 26. In addition, the motor assembly 22 includes a shroud assembly generally referred to by the reference numeral 28 and which encloses the marine propeller 26.

The top wall 12 of the board 10 has a pair of support flanges 30 and 32 dependently supported from the undersurface thereof and which define therebetween an opening 34 in the top wall 12. An open top receptacle generally referred to by reference numeral 36 is provided and is receivable in the opening 34 and provided with out-turned flanges 38 and 40 for support from the support flanges 30 and 32. A storage battery 42 is disposed within the receptacle 36 and a water-tight cover panel 44 is provided for the opening 34 and may be removably secured therein over the flanges 38 and 40 in any convenient manner.

A pair of electrical conductors 46 and 48 are electrically connected at one pair of corresponding ends to the storage battery 42 and to the motor assembly 22 at the other end, the conductors 46 and 48 being suitably insulated and passing through the bottom wall 14 in water-tight sealed engagement therewith. The conductor 48 has a pair of normally spaced apart contacts 50 and 52 dis-

posed therein, the contacts 52 being supported from a resilient support panel 54 recessed below and closing the bottom end of a second opening 56 formed in the top wall 12 and the contact 50 being supported from a resilient closure panel 58 secured over the upper surface 60 of the top wall 12 defining the second opening 56. The resiliency and unbiased positioning of the panels 54 and 58 is such that the contacts 50 and 52 are normally spaced apart. Further, the resiliency of the top panel 58 is such that it will not yield sufficiently to lower the contact 50 into engagement with the contact 52 until such time as a predetermined weight approximating the weight of the rider 64 is disposed upon the central portion of the top panel 58 in registry with the opening 56. Therefore, operation of the motor assembly 22 may be readily controlled by the operator or rider 64 and operation of the motor assembly 22 will be immediately terminated should the rider 64 fall from the board 10.

With attention now invited more specifically to FIGURE 2 of the drawings it may be seen that the undersurface 66 of the bottom wall 14 includes a forward portion or section 68 that is inclined downwardly and rearwardly from a point disposed above the water level 70 and that the forward section 68 curves smoothly rearwardly to the point 71 at which it is substantially horizontally disposed and then curves smoothly upwardly into a substantially planar aft section or portion 72 which extends rearwardly from the point 71 and which is only slightly upwardly inclined toward its rear end. The inclination of the aft portion or section 72 of the undersurface 66 relative to the water line 70 is considerably less than a generally horizontally disposed plane passing through the bottom wall 14 where it intersects with the water line 70 and at the point 71.

Of course, rapid movement of the board 10 over the water will enable the forward section 68 of undersurface 66 to effect an upward thrust upon the board 10. Additionally, should the water board 10 be tilted to one side or the other, the same upward thrust will have a slight lateral vector and thus serve to steer the board 10 as the operator or rider 64 shifts his weight from one side to the other, the rearwardly and downwardly inclined forward section 68 of the undersurface 66 being disposed on the extreme forward end of the board 10.

The board 10 additionally includes a pair of stationary depending rudders 80 and 82 which are disposed on the opposite side marginal edge portions of the rear end of the bottom wall 14. Accordingly, even if the board 10 is excessively tilted to one side by the rider 64 shifting his entire weight to that side of the board 10, one of the rudders 80 or 82 will always be maintained in the water upon which the board 10 is floating. Therefore, while the curvature of the forward section 68 of the under or bottom surface 66 and the bottom walls 14 will act to laterally deflect a forward end of the board 10 during its movement over a body of water when the board 10 is tilted to one side, there will always be one rudder member disposed in the water to guide the rear end of the board 10.

In addition to the board 10 being usable with or without the motor assembly 22, the motor 22 may be re-

placed by any other suitable source of motive power such as a water jet assembly or an air propeller assembly driven by a suitable prime mover.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A water board comprising an elongated body member including a longitudinally extending bottom planing surface, said planing surface being substantially transversely straight throughout substantially its entire length, said body member including a normal water line when loaded, said bottom planing surface including a forward section inclined downwardly and rearwardly from a forward end portion thereof disposed above said water line and smoothly curving rearwardly to a point at which said surface is generally horizontally disposed and then smoothly curving upwardly into a substantially straight section disposed at an angle relative to the horizontal considerably less than the inclination of a plane bisecting said forward section at said water line and said point, the rear end of said aft section terminating adjacent said water line and said body member including depending opposite side fixed rudder means adjacent said rear end of said aft section, and water propulsion means fixed to and depending from said bottom surface and disposed rearwardly of a vertical plane extending transversely of said body member and in which said point is disposed.

2. The combination of claim 1 wherein said body member includes motor means operatively associated with said water propulsion means for operation of the latter and control means for operation of the latter and control means for said motor means, said body member including operator supporting means adapted to support the operator of said board thereon and operatively connected to said control means for actuation of said motor means in response to being loaded in excess of a predetermined weight and termination of operation of said motor means responsive to being loaded with a weight less than said predetermined weight.

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MILTON BUCHLER, *Primary Examiner*.

DUANE A. REGER, *Examiner*.

T. M. BLIX, *Assistant Examiner*.