United States Patent [19]

Dillon

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[54] **CATAMARAN**

[76] Inventor: **John N. Dillon,** 3022 Dorian Drive, Toledo, Ohio

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[52] **U.S. Cl.** ..... **114/61,** 9/310 R, 114/39

[51] **Int. Cl.** **B63b 1/100,** A63c 15/04

[58] **Field of Search** ..... 114/61, 144 A, 144 R, 114/153; 115/25, 26; 9/310 R, 310 D, 310 E, 310 F; 280/11.1–11.39, 15–16, 21, 47.11, 87.04 R, 87.04 A, 87.04 B

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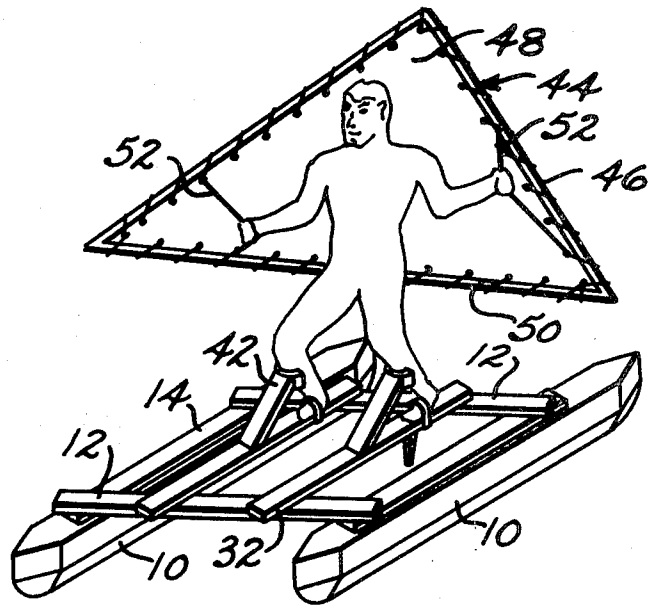
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Primary Examiner—Milton Buchler
Assistant Examiner—Jesus D. Sotelo
Attorney—William P. Hickey

[57] **ABSTRACT**

A pontoon water craft, the pontoons of which are connected together by a parallelogram linkage. The sailor of the craft stands upon the parallelogram linkage carrying a hand sail, and steers the craft with his feet by shifting the linkage. A rudder is affixed to the parallelogram linkage, so that movement of the parallelogram linkage turns the rudder.

4 Claims, 3 Drawing Figures



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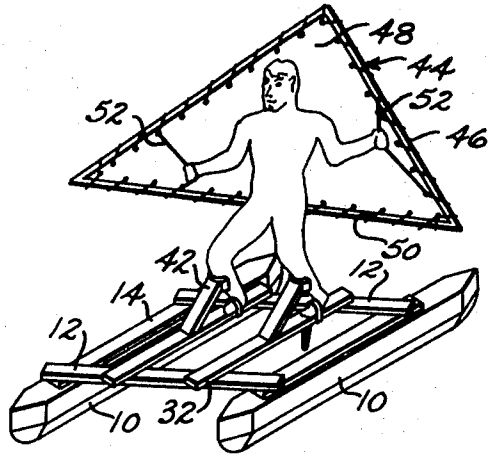


FIG. 1.

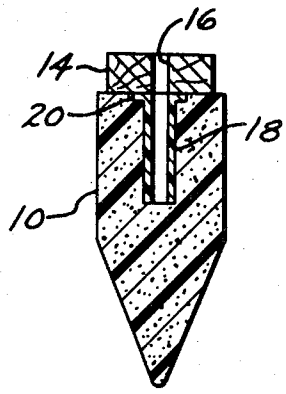


FIG. 3.

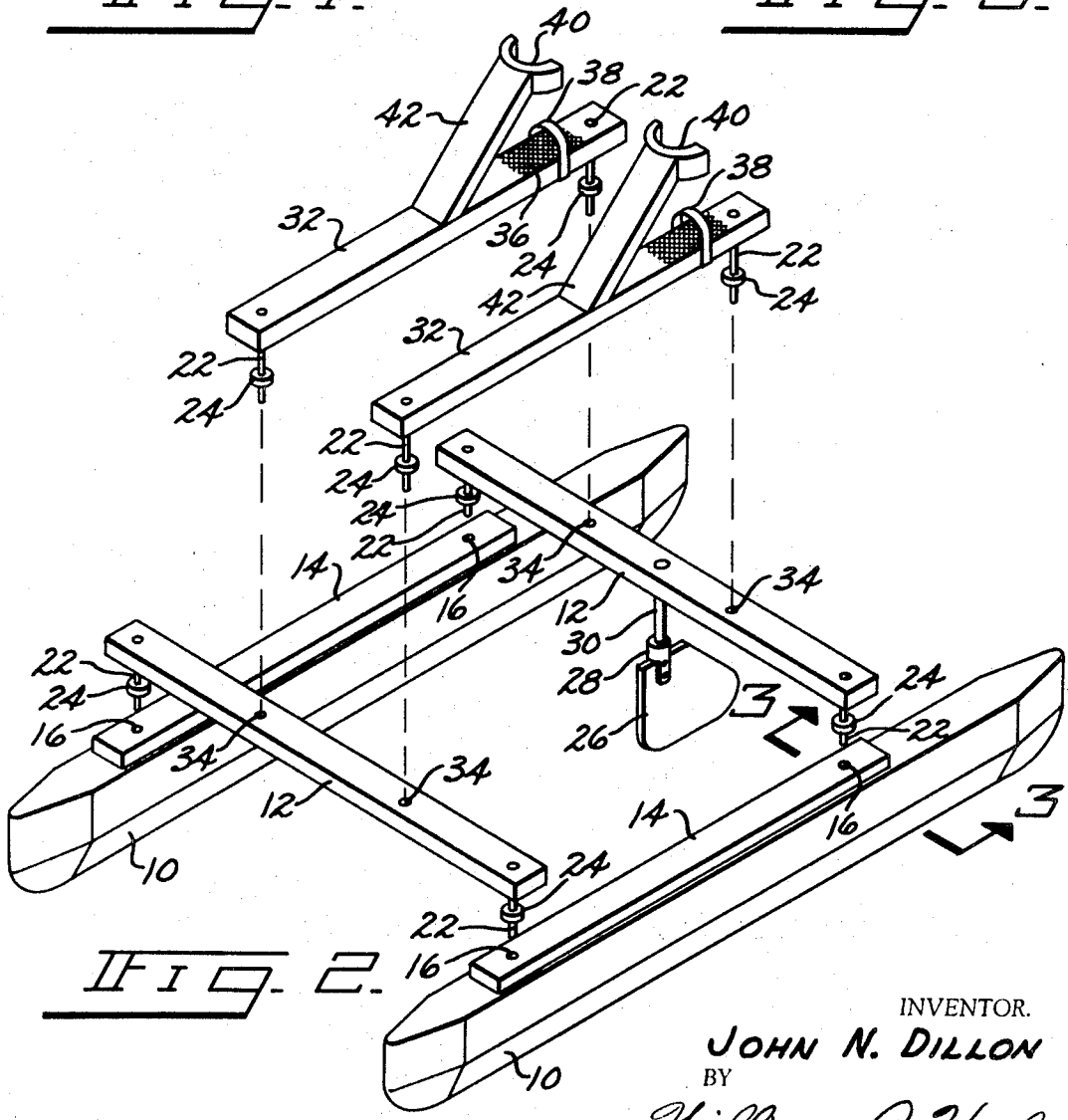


FIG. 2.

INVENTOR.
JOHN N. DILLON
BY
William P. Hickey
ATTORNEY

CATAMARAN

BACKGROUND OF THE INVENTION

The usual water craft that is propelled by a sail comprises a rigid floatation structure to which a sail is pivotally affixed. The sailor of such craft usually operates a tiller or rudder with one hand, and holds a securing rope for the sail with his other hand. Sailing such craft requires pulling or pushing the sail and rudder with opposite hands and a type of skill is required for such manipulation.

An object of the present invention is the provision of a new and improved type of sail propelled water craft, the sailor of which carries the sail with both hands while standing erect, and simultaneously steers the craft with his feet.

Another object of the invention is the provision of a new and improved water craft comprising a pair of pontoons connected together by a parellelogram linkage which carries a rudder and which is steered by moving the parallelogram linkage.

Another object of the invention is the provision of a sail craft of the above described type wherein the sailor stands erect on the parallelogram linkage, carries a sail in both hands and steers the craft with his feet by moving one pontoon forwardly or rearwardly relative to the other pontoon.

A further object of the present invention is the provision of a new and improved sail craft of the above described type which is simple and rugged in design and inexpensive to manufacture.

Further objects and advantages of the invention will become apparent to those skilled in the art to which the invention relates from the following description described with reference to the accompanying drawings forming a part of the specification.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an isometric view of a catamaran embodying principles of the present invention and showing a sailor carrying a triangular hand sail;

FIG. 2 is an exploded isometric view of the craft shown in FIG. 1; and

FIG. 3 is a sectional view taken approximately on the line 3—3 of FIG. 2.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The water craft shown in the drawing comprises a pair of pontoons **10** that are connected together by two or more parallel cross members or spacers **12.** In the embodiment shown in the drawing, the pontoons **10** are inexpensively made of a closed cell foam as for example styrofoam. In order to prevent wear of the styrofoam by the cross members **12,** a plate **14** is cemented to the top of each pontoon, and a hole **16** is provided through the plate to receive a pin connection of the cross member **12** as will later be described. A plastic pipe or tube **18,** preferably having a flange **20** on its upper end, is embedded into the foam of the pontoons beneath each hole **16** in the plate **14.** The respective ends of the cross members **12** have a pin **22** fixed thereto which extends into a tube **18** of a respective pontoon to provide a pivotal connection to the pontoon. An annular bearing **24** is positioned around each pin **22** between the plate **14** and the cross member **12** to reduce friction during rotation of the cross members

12 relative to the pontoons. The rear cross member **12** is provided with a rudder **26** carried by a braket **28** and shaft extension **30,** and the upper end of which is rigidly fixed to the rear cross member **12.** Rotation of the rear cross member **12** relative to the pontoons **10** causes the rudder to assume an angular position relative to the pontoons **10.** The cross members **12,** and pontoons **10,** therefore, form a parallelogram linkage which by the shifting thereof steers the craft.

According to a further aspect of the invention, a pair of foot supports are provided by parallel longitudinal stringers **32,** the opposite ends of each of which are pivotally connected to respective ones of the cross members **12.** The opposite ends of each stringer is provided with a fixed pin **22,** and an annular bearing **24** in the same manner as were the opposite ends of the cross members **12.** The depending ends of the pins **22** of the longitudinal stringers **32** are received in openings **34** in the cross members **12.** Each of the stringers **32** are provided with a foot support for receiving the foot of the operator or sailor of the craft. The foot support, may be made in various ways, and as shown in the drawings comprises an antiskid surface **36** and foot strap **38.** It will usually be desirable to provide some means for aiding the sailor in maintaining his balance, and in the embodiment shown in the drawing, a pair of knee rests **40** are provided. The knee rests **40** are supported from the stringers **32** by means of angular brackets **42.**

While in some instances, a sail can be rigidly secured to the craft above described, a unique sport is had when the sailor holds a hand sail **44.** The hand sail **44** shown in the drawing comprises a triangular frame **46** having sail material **48** secured thereto by lacing **50.** A pair of hand bars **52** is provided to enable the operator to carry the sail in back of his shoulders. The sailor adjusts the position of the sail relative to the wind by manipulating his hands and body. Simultaneously therewith the sailor steers the craft through the water by shifting his feet forwardly and rearwardly relative to each other. It will now be seen that a unique sport is had by feeling the wind in the sail, and simultaneously adjusting the feet and hands in response thereto.

Numerous other embodiments of the invention will occur to those skilled in the art. As for example, the rudder may be supported from a cross bar carried by extensions of the longitudinal stringers **32.** Such means can be used to position the rudder rearwardly of the craft.

It will also be seen that the embodiment shown can be easily assembled and disassembled by simply lifting the securing pins **22** out of the receiving openings, so that the craft can be easily transported in a knocked-down condition and quickly and easily reassembled where the use is to occur. In still other instances a sail rest can be provided, so that the operator need only adjust the angular position of the sail with his hands.

While the invention has been described in considerable detail, I do not wish to be limited to the particular embodiments shown and described; and it is my intention to cover hereby all novel adaptations, modifications, and arrangements thereof which come within the practice of those skilled in the art to which the invention relates.

I claim:

1. A water craft comprising: a pair of generally parallel pontoons, a pair of cross bars each pivoted at one of its ends to one pontoon and pivoted at its other end

to the other pontoon, said cross bars being spaced forwardly and rearwardly of each other, a pair of stringers the front ends of which are pivoted to said front cross bar and the rear ends of which are pivoted to said rear cross bar, a foot support on each stringer, said foot supports being positioned in side-by-side relationship to support a man standing thereon, and a rudder supported in such manner as to remain generally normal to said cross bars, and whereby said rudder is rotated by moving said stringers forwardly and rearwardly of each other by force transmitted through said foot supports and without rotating the feet in said foot supports.

2. The water craft of claim **1** including: a body rest constructed and arranged to bear against a body during movement of said stringers forwardly and rearwardly of each other when both feet are on said foot supports.

3. The water craft of claim **1** including a sail.

4. The water craft of claim **1** wherein said pontoons comprise a main body portion of a plastic foam, and said pivoted ends of said cross bars comprise a pin on said cross bars received in a tube embedded in said plastic foam.

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