

[54] SAILING OUTRIGGER FOR SMALL WATERCRAFT

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[58] Field of Search 114/121, 123, 103, 114/39, 102; 9/1 R

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[57] ABSTRACT

A small watercraft such as a canoe or the like is provided with a stabilizing outrigger which supports a sail-carrying mast. The sailing outrigger may include a lateral plane, and/or a rudder.

6 Claims, 4 Drawing Figures

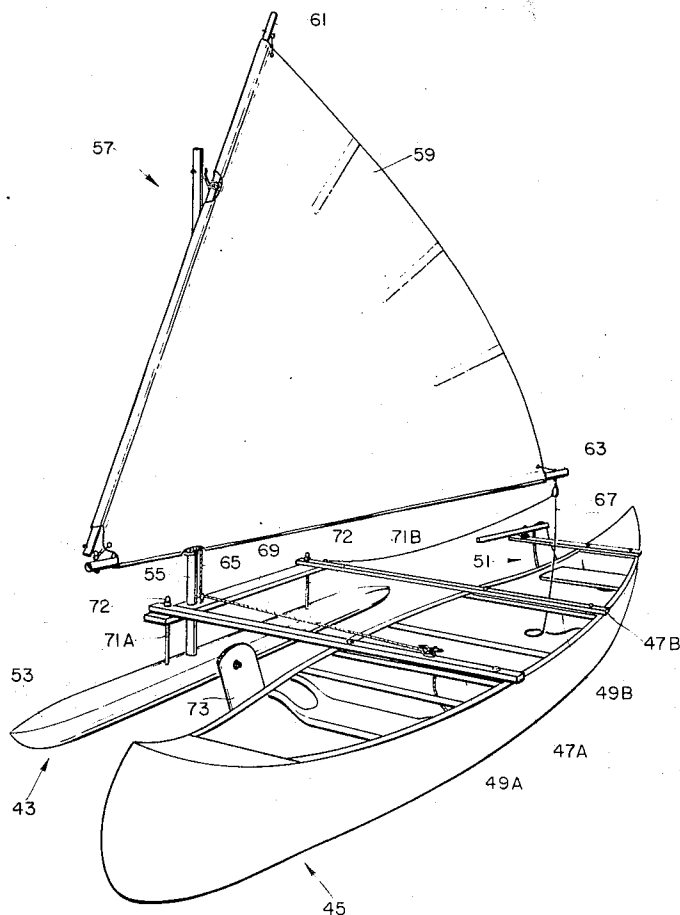


FIG. 1

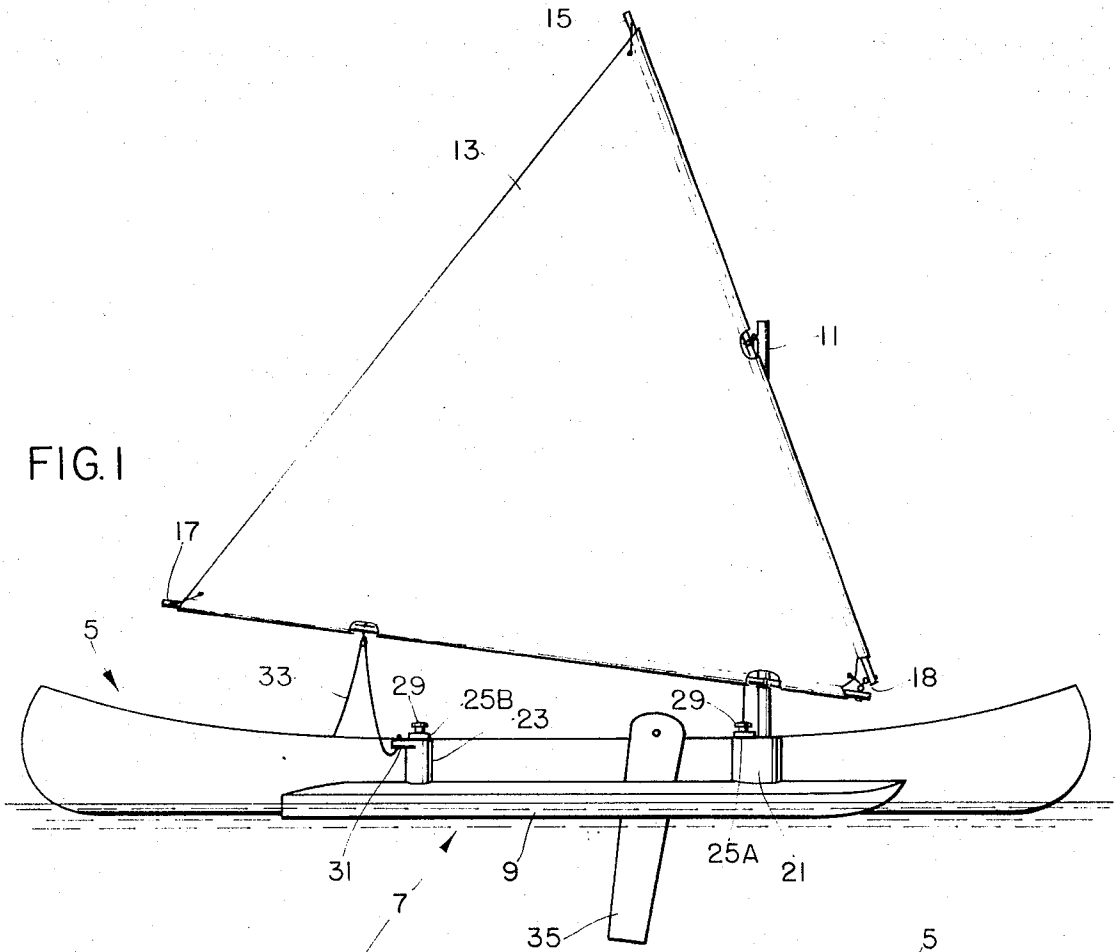


FIG. 2

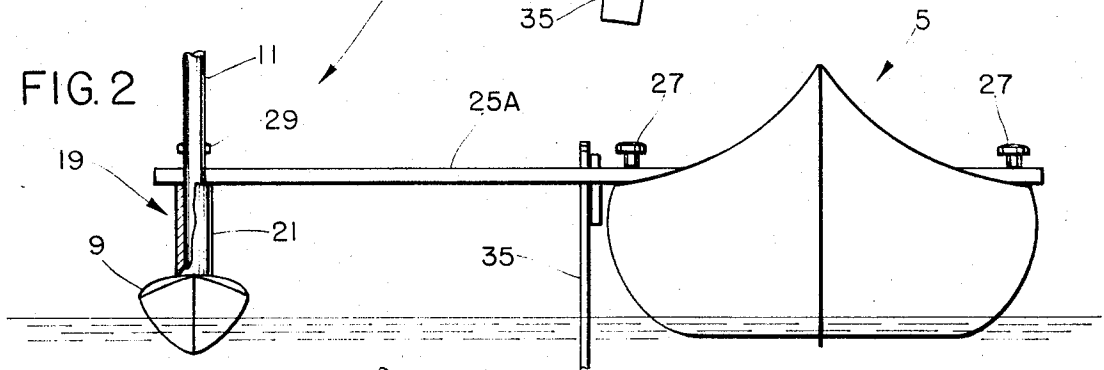
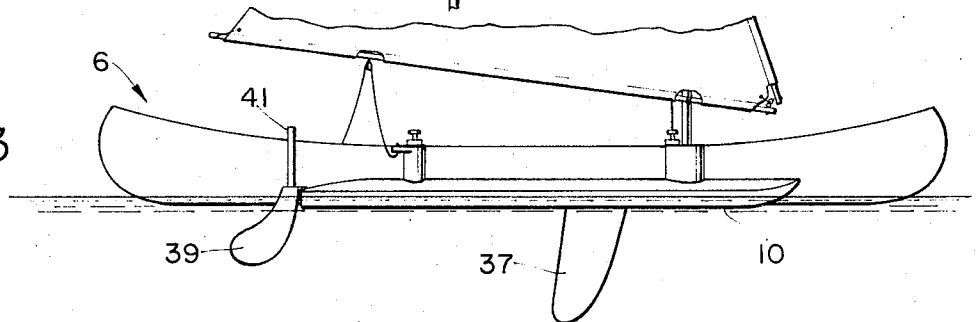
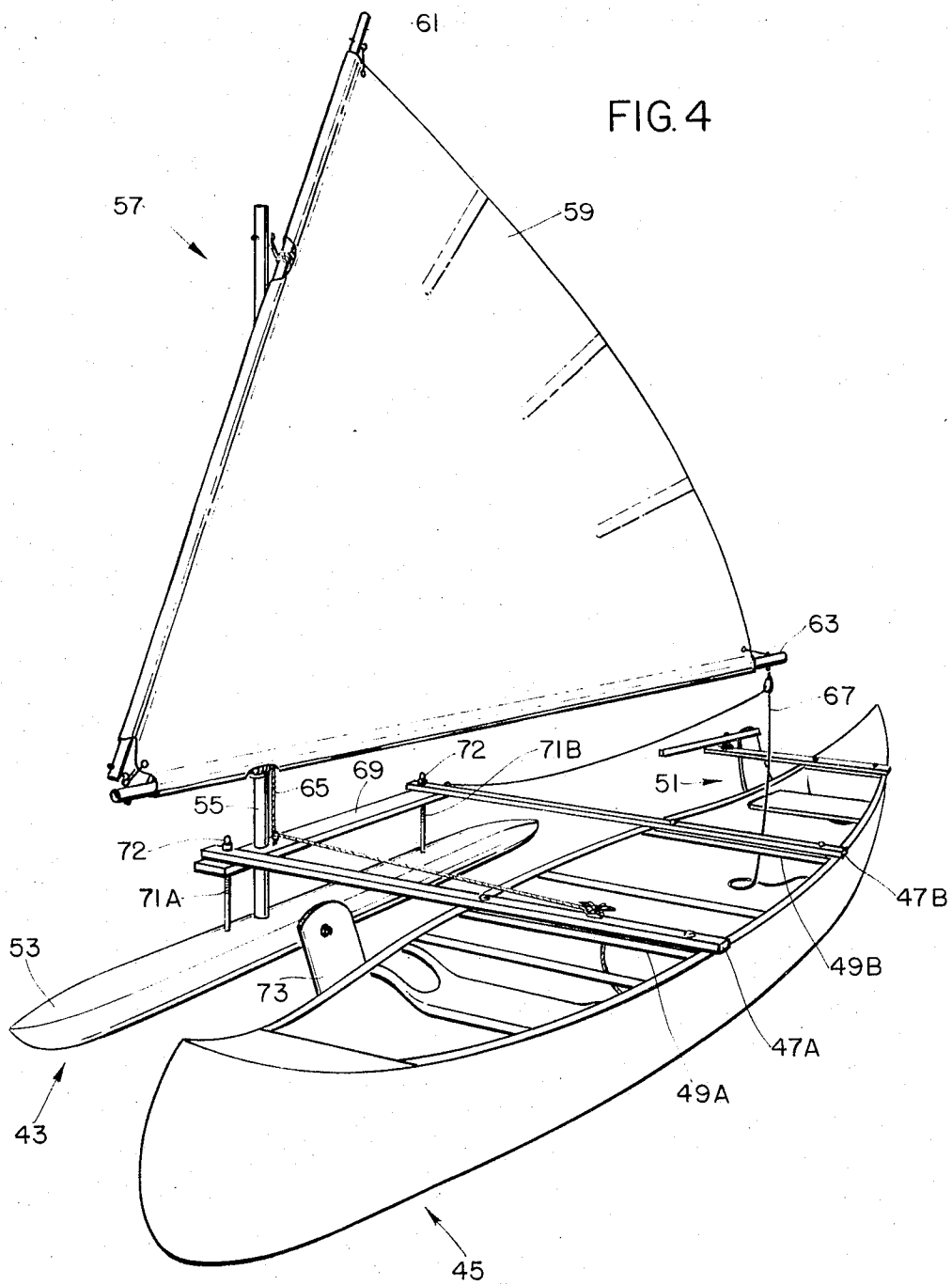


FIG. 3





SAILING OUTRIGGER FOR SMALL WATERCRAFT

BACKGROUND OF THE INVENTION

This invention relates to small sailing craft such as sailing canoes and the like.

The term "canoe" applies to a wide variety of watercraft, ranging from the most primitive single log dugout to the great double canoes of catamaran configuration used by the Polynesians. However, the present invention is specifically designed for use with modern versions of the canoe that has evolved from the birchbark creations of the North American Indians. The Indian-type canoe is today variously constructed of such materials as aluminum, fiberglass, wood and canvas. These canoes are increasingly popular in the United States and Canada where they are widely used for camping, fishing, sailing and other recreational activities.

When used for sailing, the Indian-type canoe is usually provided with a lateen sail or a Gunter rig, although the sloop and two-masted yawl rig are also seen. Canoe manufacturers supply sailing accessories which are engineered so that the desired sailing rig can be easily installed on their particular craft. Typically, the mast is stepped well forward on the canoe's keel-line and leeboards are hung on opposite sides of the canoe to provide a degree of stability in addition to offsetting leeway.

Stability can be added to a sailing canoe by other means than the use of leeboards. For example, canoes used for racing may have a sliding outrigger seat that allows the canoeist to act as shifting ballast by sliding out to windward. Another balancing system involves the use of elongated floats or outriggers which may be anything from a log to a scientifically designed hull form. Outriggers may be installed on one or both sides of a canoe and are held alongside but apart from it by arm-like cross members. Sailing canoes of the outrigger type have been used for centuries by the native inhabitants of the South Pacific, but seem to have been completely lacking in the Americas. The single-outrigger sailing canoe or proa has two hulls but they are not the twin hulls which are characteristic of a catamaran. The outrigger hull of a proa is shorter and narrower than its main hull. Moreover, the sail-carrying mast of a proa is stepped on the main hull, while in a catamaran it is supported by the wing-like structure that connects the two hulls. In the United States, the proa is represented among the numerous sailing classes by the "Malibu Outrigger". It may be noted that the present day trimaran is a contemporary version of the Indonesian double-outrigger sailing canoe.

OBJECTS OF THE INVENTION

The primary object of the present invention is to provide a sailing outrigger for canoes or the like watercraft whereby the craft is stabilized and rigged for sailing without loss of onboard space and accommodations.

Another object of the invention is to provide a sailing outrigger which can be easily attached or removed and is inexpensive to produce and maintain.

The present invention discloses a simple device for accomplishing the above-stated objects and others ancillary thereto. The device comprises a sailing outrigger for small watercraft, such as canoes, that is basically a low-drag float having the dual design function of stabilizing the craft and supporting a sail-carrying mast. The

sailing outrigger may be detachably connected to the craft by cross arms or one or more equivalent structural members.

BRIEF DESCRIPTION OF THE DRAWINGS

The novel features considered characteristic of the invention are set forth with particularity in the appended claims. The invention itself, however, both as to its organization and method of operation, together with additional objects and advantages thereof, will best be understood from the following description of specific embodiments when read in connection with the accompanying drawings wherein like reference characters indicate like parts throughout the several figures and in which:

FIG. 1 is a starboard-side elevational view of a sailing craft utilizing the present invention;

FIG. 2 is a fragmentary bow-on elevational view, broken away in part, of the same embodiment of the invention shown in FIG. 1;

FIG. 3 is a fragmentary starboard-side elevational view similar to FIG. 1 of a modified form of the present invention; and

FIG. 4 is a view in perspective of a canoe with another version of the sailing outrigger attached on its starboard side.

DETAILED DESCRIPTION OF THE INVENTION

Referring in detail to the drawings, in FIGS. 1 and 2, a watercraft of the canoe type is generally designated with the numeral 5 and is illustrated with a sailing outrigger 7 detachably connected on its starboard side. The sailing outrigger 7 can of course be attached on whichever side is preferable. Numeral 9 designates an elongated float designed to stabilize the canoe and support the sail-carrying mast 11. The sailing rig shown consists of a simple lateen-type sail 13 which is attached to a gaff 15 and a boom 17. These spars 15 and 17 are linked together at a point 18 forward of the mast 11.

In this embodiment of the invention, the mast 11 is held upright by stepping it in the mast hole 19 that extends from top to bottom of the forward strut 21. The forward strut 21 and the after strut 23 are formed solid with the float 9.

Disposed athwart the craft 5 are two cross arms 25A and 25B. These cross arms rest on the gunwales of the canoe and extend laterally beyond its starboard side. The cross arms 25A and 25B may be secured to the craft 5 by any suitable means, such as clamping bolts which are drawn tight by means of the handwheels 27 to thereby secure the cross arms to the gunwales. Additional handwheels 29 are provided for connecting the cross arms 25A and 25B to stud bolts which protrude from the top of the struts 21 and 23. The after strut 23 has a short extension 31 through which is drilled a vertical hole for securing one end of the mainsheet 33.

A leeboard 35 provides the required lateral plane to offset leeway. One or more leeboards may be pivotally hung on the canoe by means of any of the standard leeboard-attachment devices. Alternatively, the required lateral plane can be combined with the sailing outrigger. Such a combination is illustrated in FIG. 3 wherein numeral 37 designates a centerboard incorporated in the float 10. Sailing canoes are often paddle-steered, however, rudder mechanisms of various types can be used with the present invention. For example, in FIG.

3, a rudder 39 is shown attached to the trailing edge of the float 10. The rudder 39 can be made operable from the canoe 6 by a cable mechanism or by means of a tiller 41 that extends inboard to within easy reach of the canoeist.

Referring now to FIG. 4, another sailing outrigger 43 is shown attached to the starboard side of a canoe 45. In this embodiment of the invention, the cross arms 47A and 47B are secured to the craft 45 by bolting them to strips 49A and 49B respectively. These strips extend across the craft and bear on the underside of the gunwales. A tiller-operated rudder assembly 51 is similarly attached to the craft 45. The sailing outrigger 43 comprises a low-drag float 53 which supports the sail-carrying mast 55. The sailing rig 57 includes a lateen sail 59, a gaff 61 and a boom 63. The sail is hoisted by means of the halyard 65 and controlled by the main-sheet 67 which has one end fastened to the after end of the raised plank 69. The mast 55 is stepped in the float 53 and is held upright by the raised plank 69. The raised plank itself is adjustably supported on the threaded rods 71A and 71B by locknuts which are not shown. The threaded rods extend upward through the raised plank and pass through holes drilled vertically in the end of the cross arms 47A and 47B. The cross arms are bolted down on the raised plank 69 by screwing suitable cap nuts 72 or the like on the threaded rods 71A and 71B. In this embodiment of the invention, the necessary lateral plane is provided by combining a lee-board 73 with the float 53.

The shape and size of the sailing outrigger and its location, beamwise and lengthwise, in relation to the watercraft are important among the several factors that determine the overall performance and stability achieved. In designing to achieve certain specific results it is obvious that sailing outriggers differing from

those illustrated will be made, employing the inventive concept without departing from it; therefore, it is to be understood that the invention is not limited by the specific exemplary embodiments illustrated herein, but includes all equivalents within the scope of the appended claims.

I claim:

1. In combination with a small watercraft, such as the canoe type, a sail propulsion arrangement whereby said craft can be sail propelled without loss of on-board space and accommodations, said sail propulsion arrangement comprising an elongated float positioned alongside of and spaced laterally from the watercraft, a mast supported by and upstanding only from said float, means mounting said mast to said float to project upwardly therefrom, a sail secured only to said mast, and means for detachably connecting said float to the watercraft, said connecting means holding said float alongside and laterally spaced from the watercraft, so that the watercraft is stabilized and rigged for sailing without loss of onboard space and accommodations.

2. A sailing outrigger as set forth in claim 1 including a lateral plane depending from said float.

3. A sailing outrigger as set forth in claim 2 wherein said lateral plane is a leeboard.

4. A sailing outrigger as set forth in claim 2 wherein said lateral plane is a centerboard.

5. A sailing outrigger as set forth in claim 1 including a rudder operable from the watercraft but carried by said float, whereby the watercraft is stabilized and rigged for sailing without loss of onboard space and accommodations.

6. A sailing outrigger as set forth in claim 2 including a rudder operable from the watercraft but carried by said float.

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