



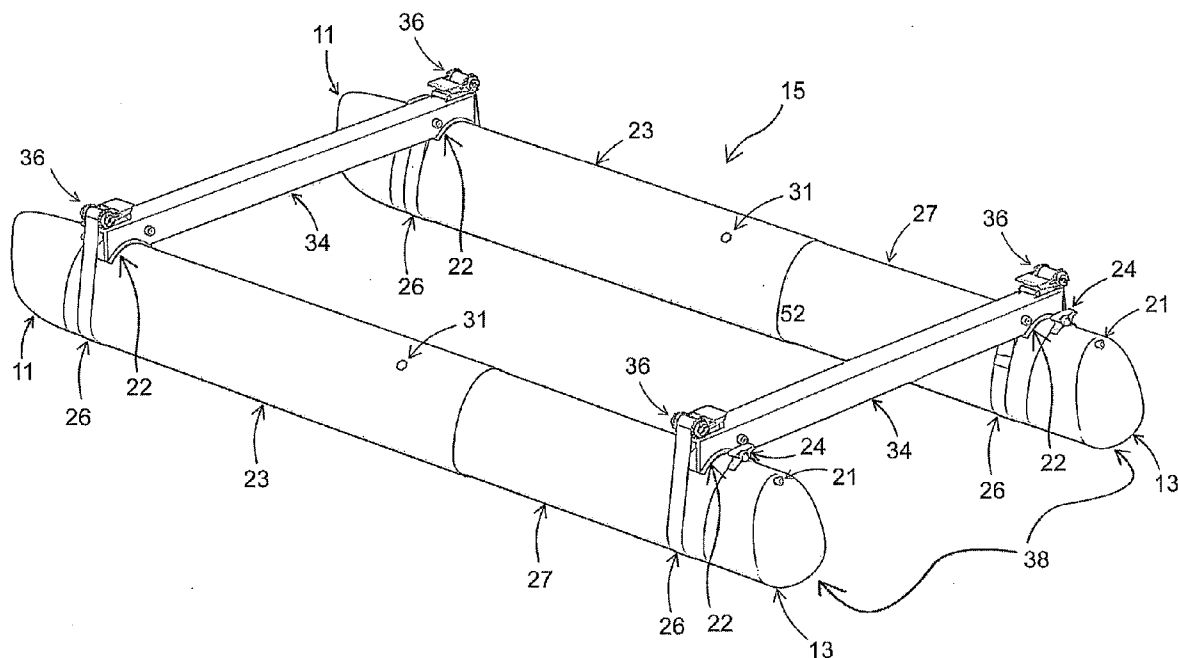
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(19) **United States**(12) **Patent Application Publication**
Wyman(10) **Pub. No.: US 2008/0236467 A1**(43) **Pub. Date: Oct. 2, 2008**(54) **MODULAR WATERCRAFT ASSEMBLY**(52) **U.S. Cl. 114/61.1**(76) **Inventor: Dennis G. Wyman**, Amelia Island,
FL (US)(57) **ABSTRACT**

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2110**AUSTIN, TX 78759 (US)**(21) **Appl. No.: 11/694,407**(22) **Filed: Mar. 30, 2007****Publication Classification**(51) **Int. Cl.**
B63B 1/00 (2006.01)

A modular watercraft assembly and apparatus. In one embodiment, the watercraft assembly includes a divided floatation support member that provides buoyant support. The divided floatation support member includes a first pontoon and a second pontoon that are both longitudinally extensible pontoons. The longitudinally extensible pontoons each include at least two substantially rigid tubes that are telescopically extensible and collapsible in an annularly nested manner. The assembly further includes multiple substantially rigid cross members and multiple cross member fasteners for transversely coupling the cross members between the first and second pontoons of the divided floatation support member. When assembled the watercraft assembly provides buoyant support for a variety of different craft designs including but not limited to a sailing catamaran, a pedaloe, and others.



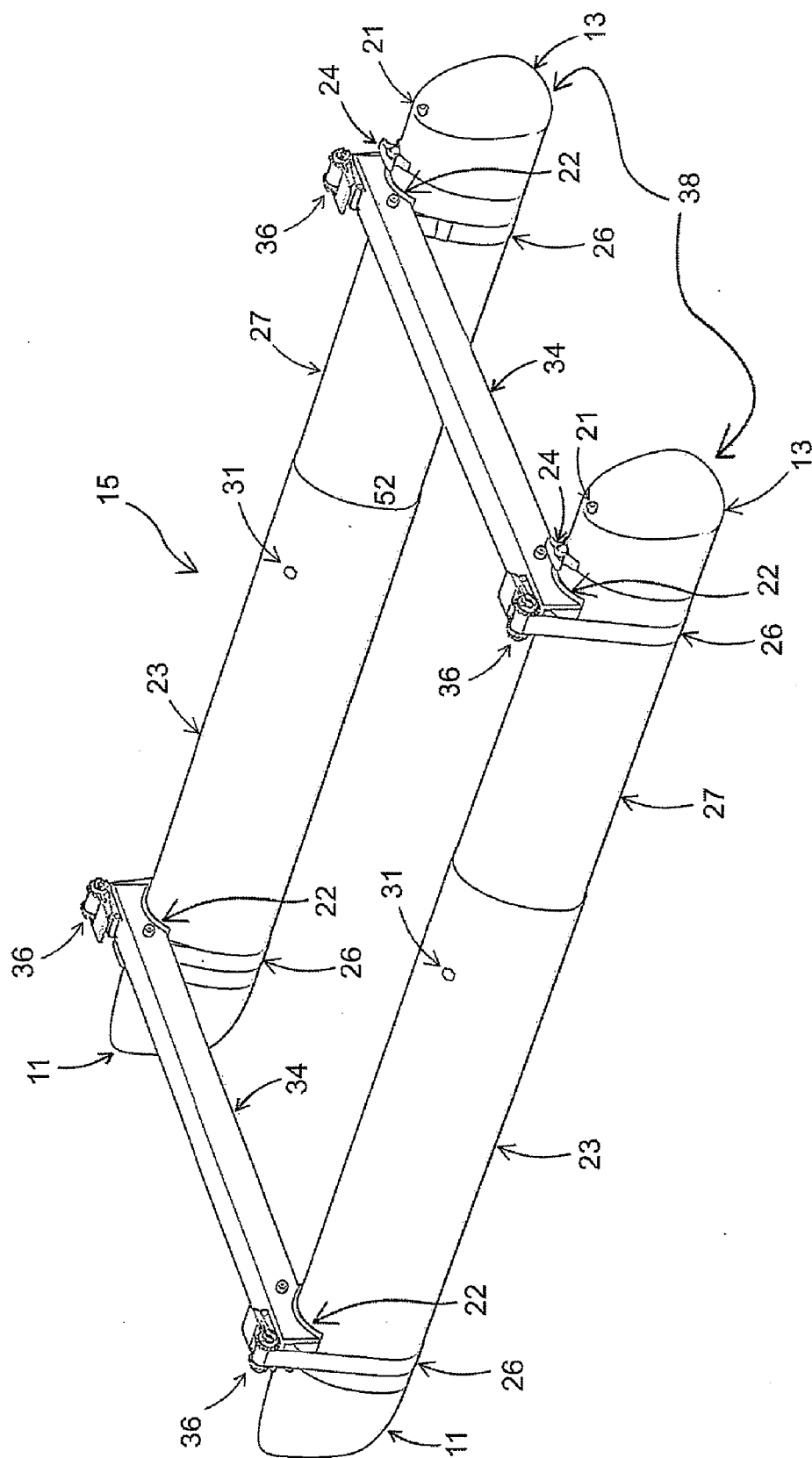


Figure 2

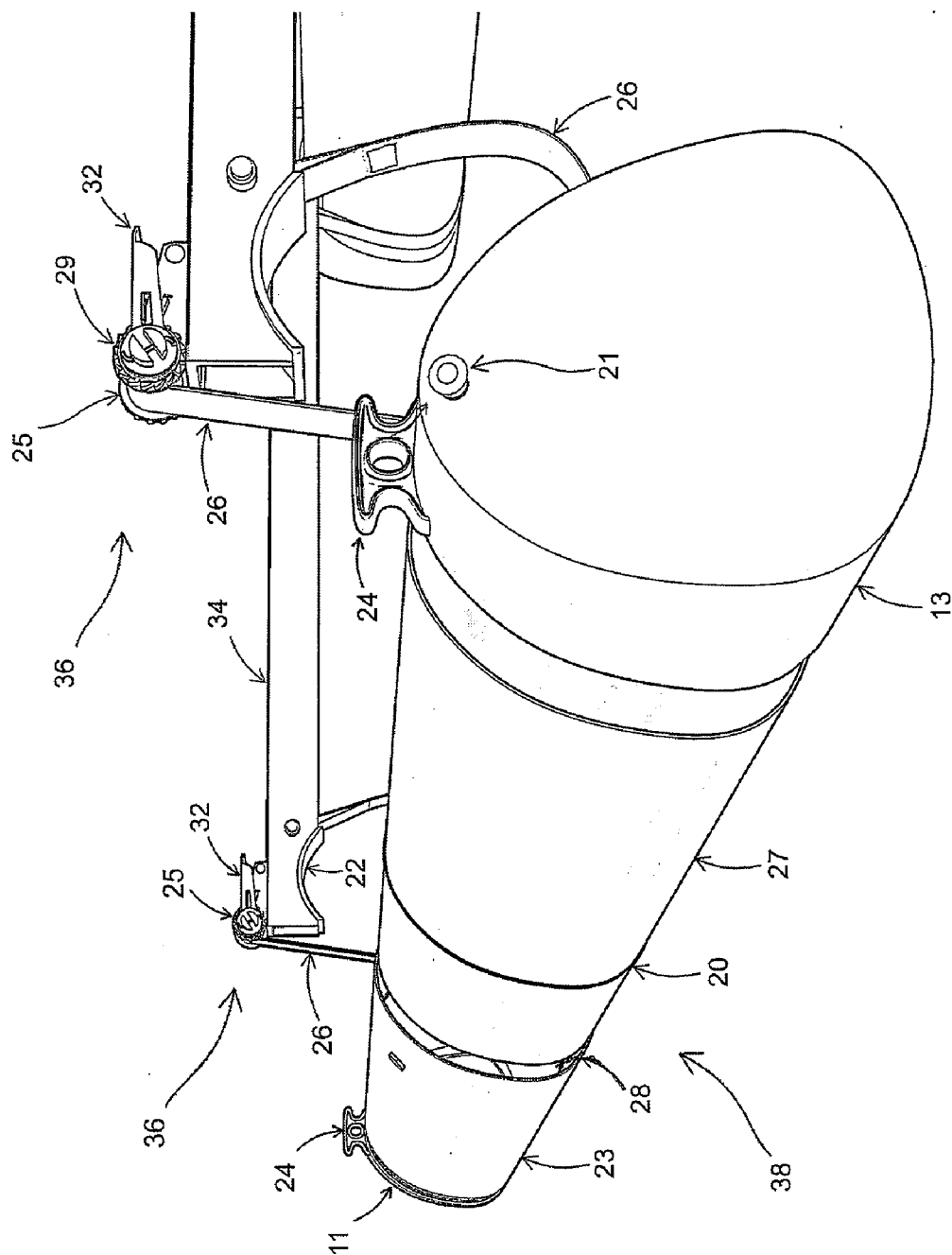


Figure 3

Figure 4

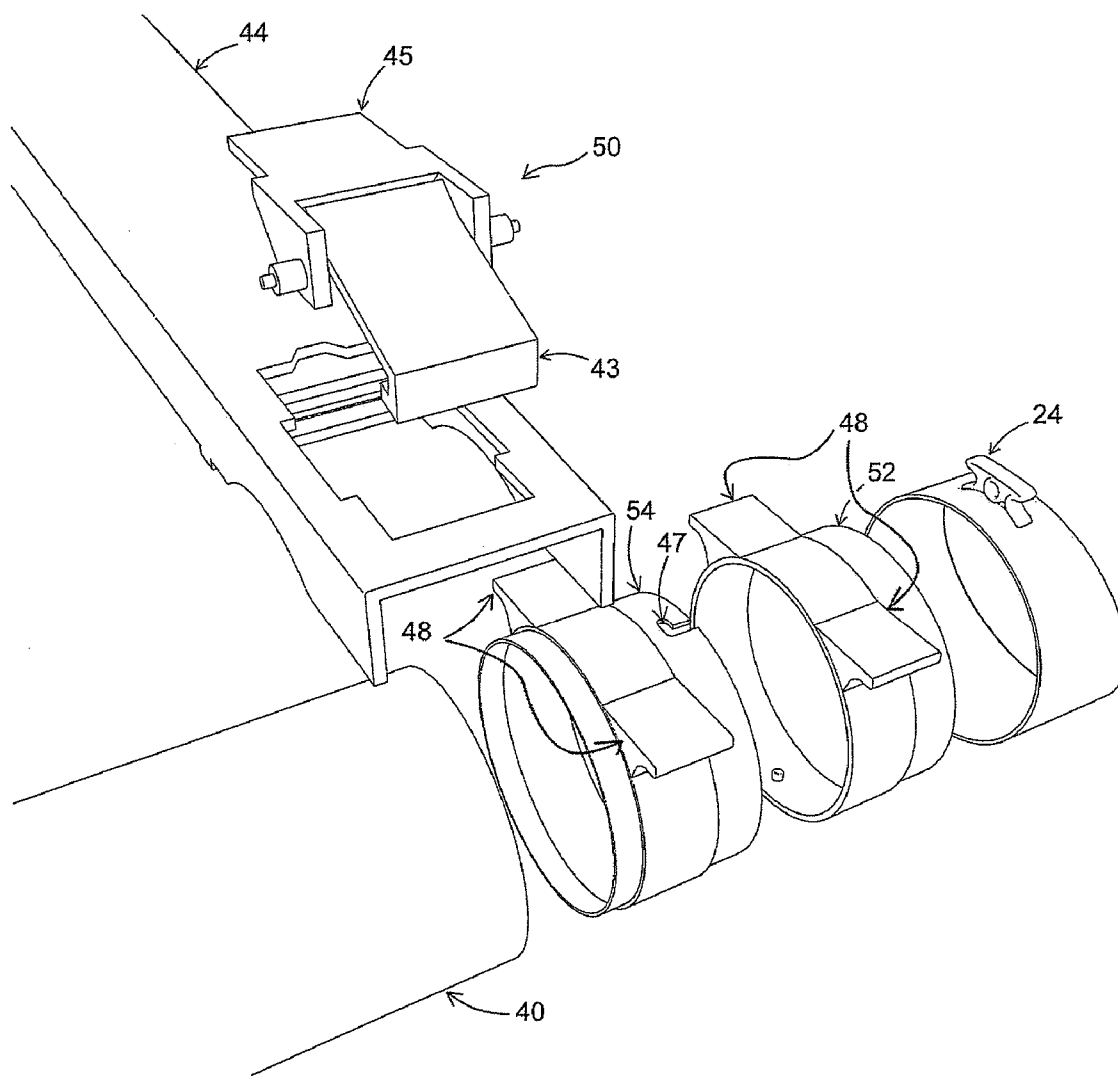


Figure 5

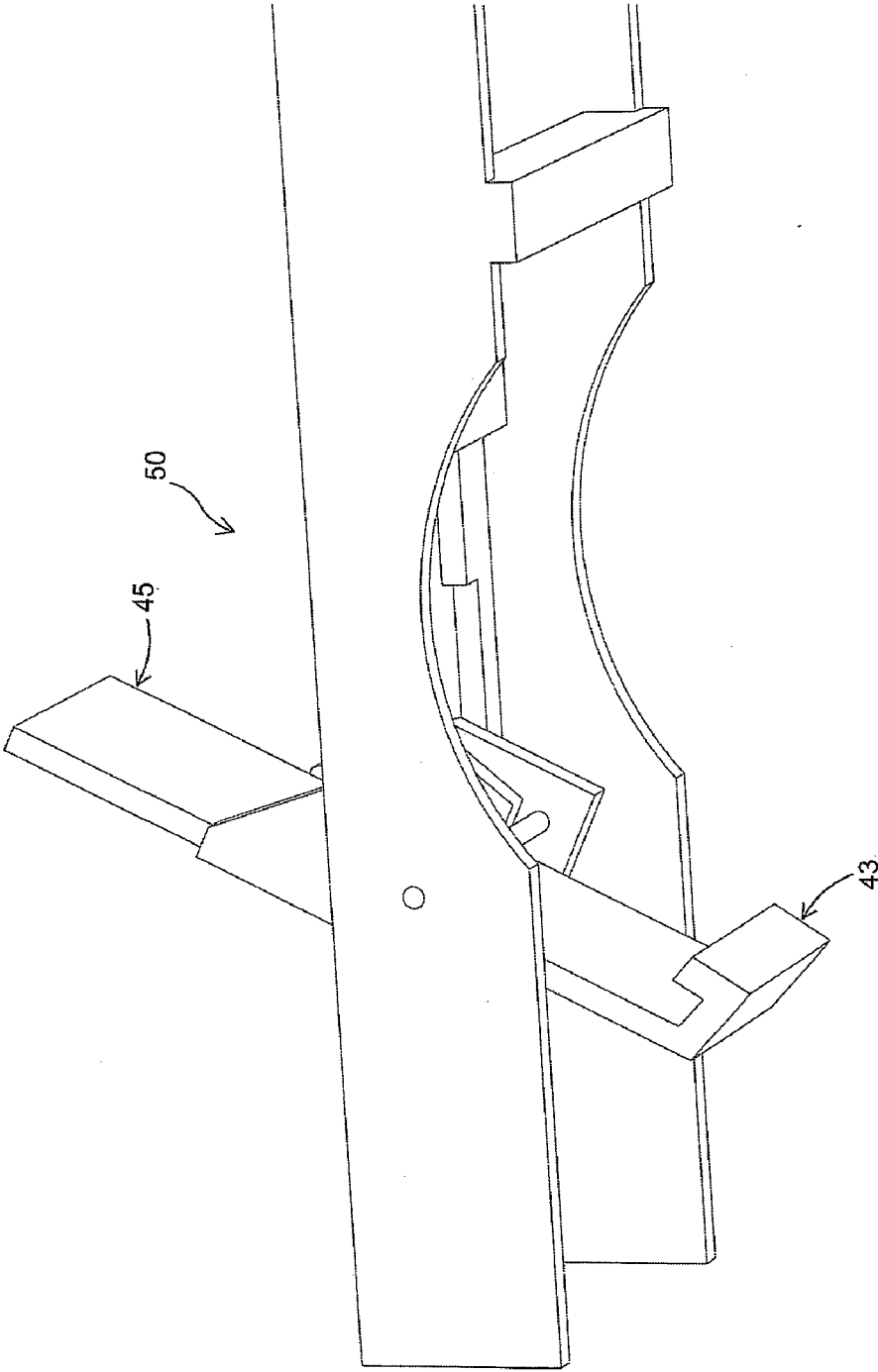


Figure 6

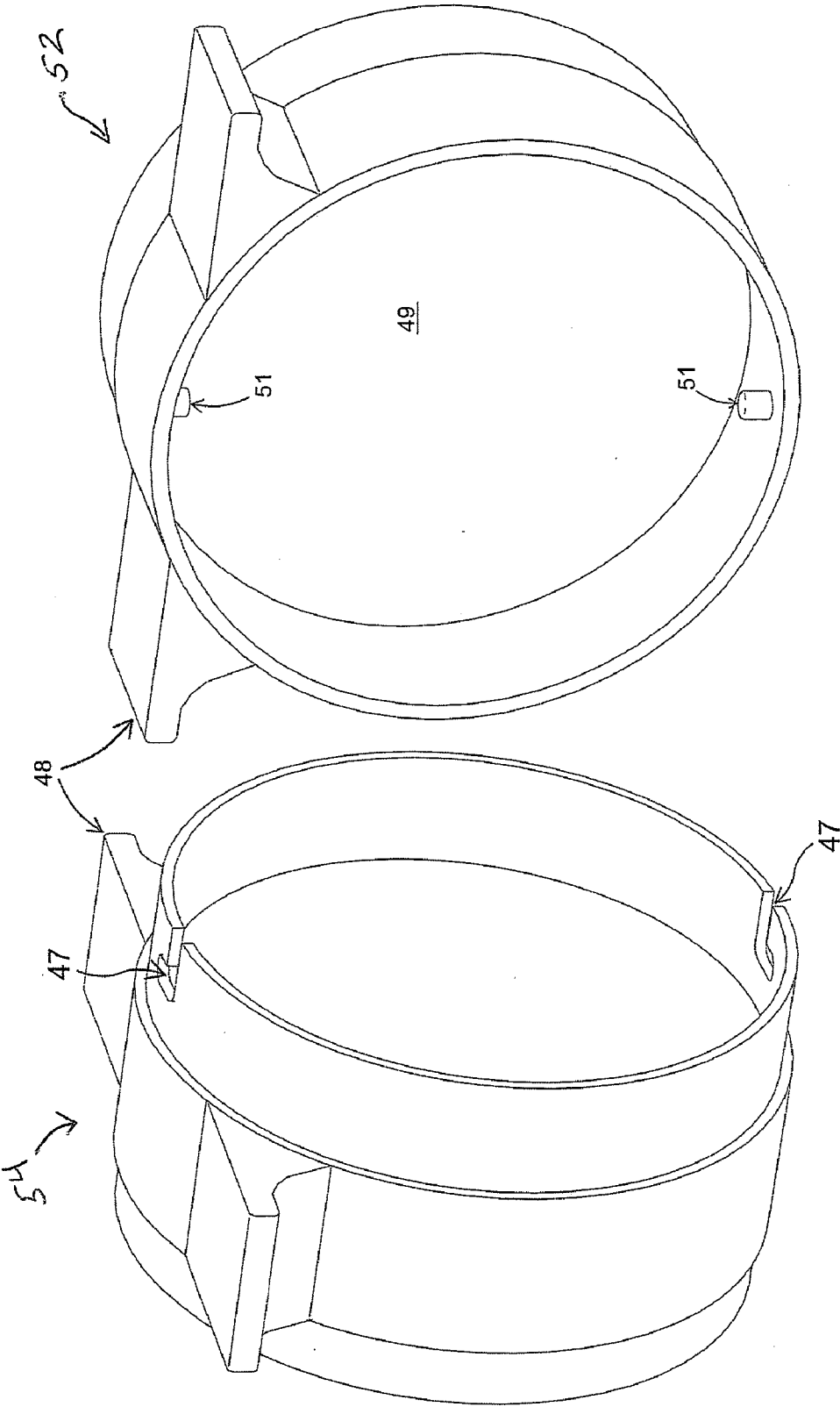


Figure 7

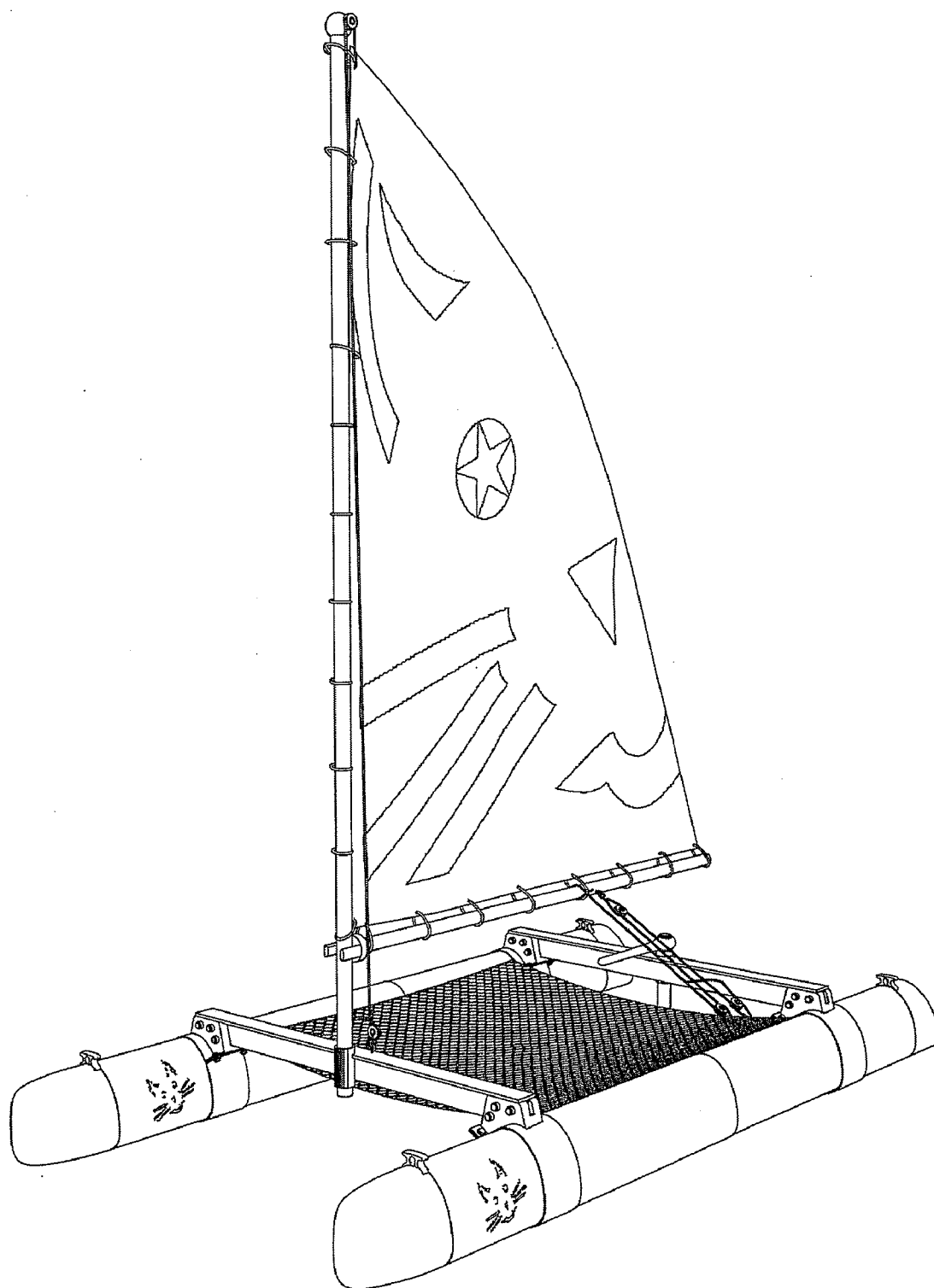


Figure 8A

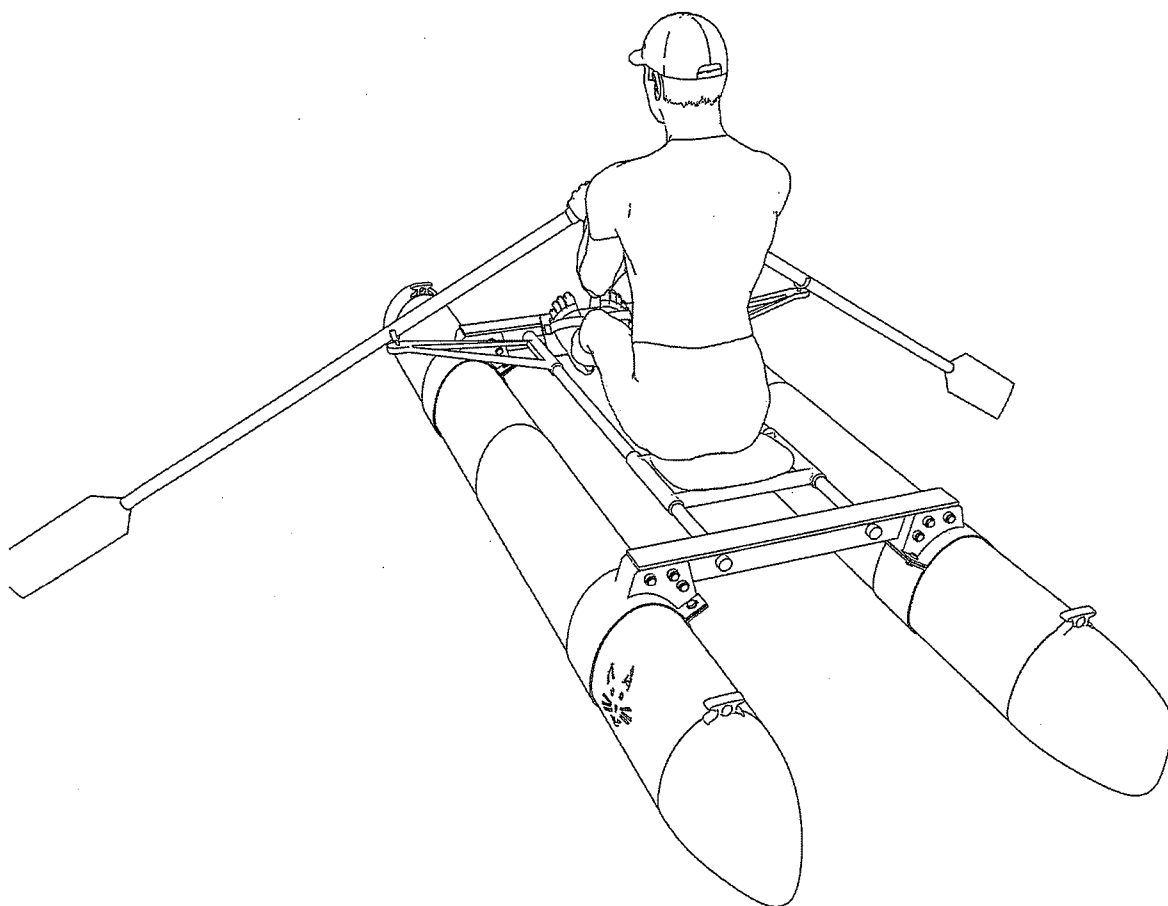


Figure 8B

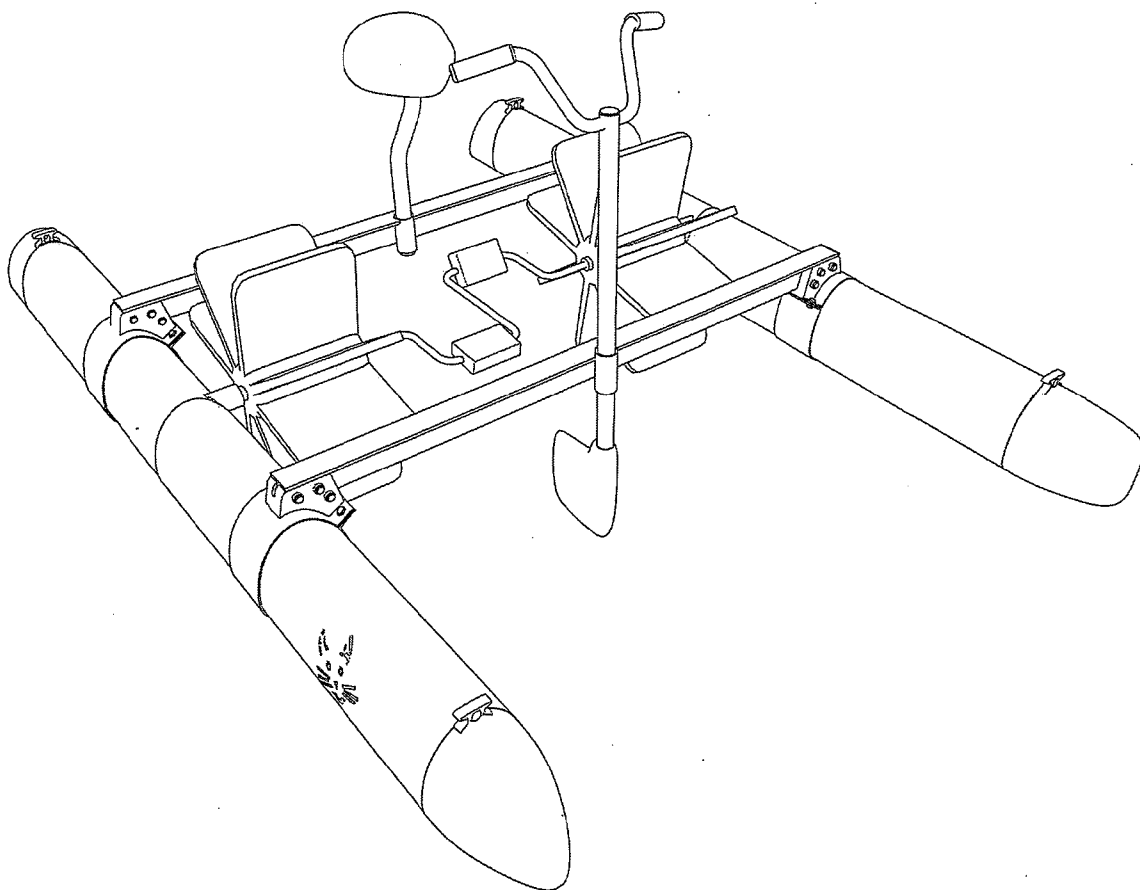


Figure 8C

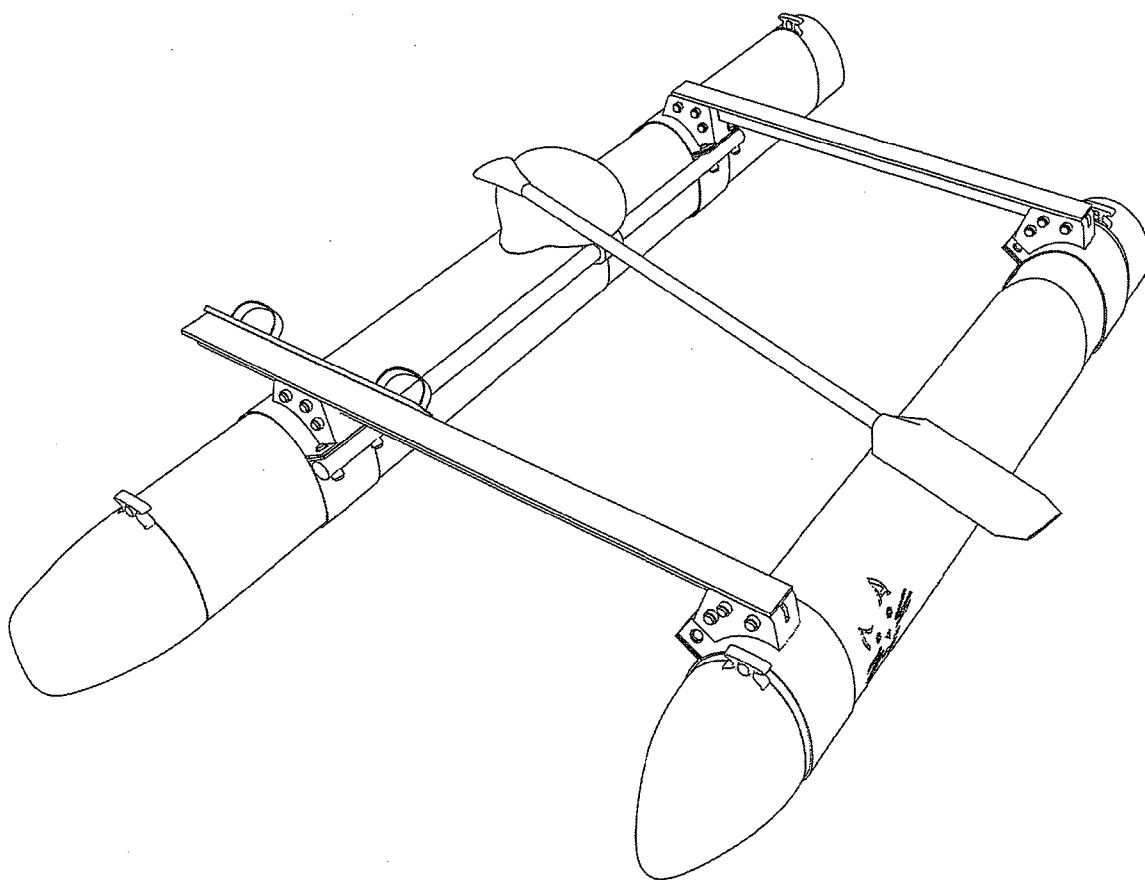


Figure 8D

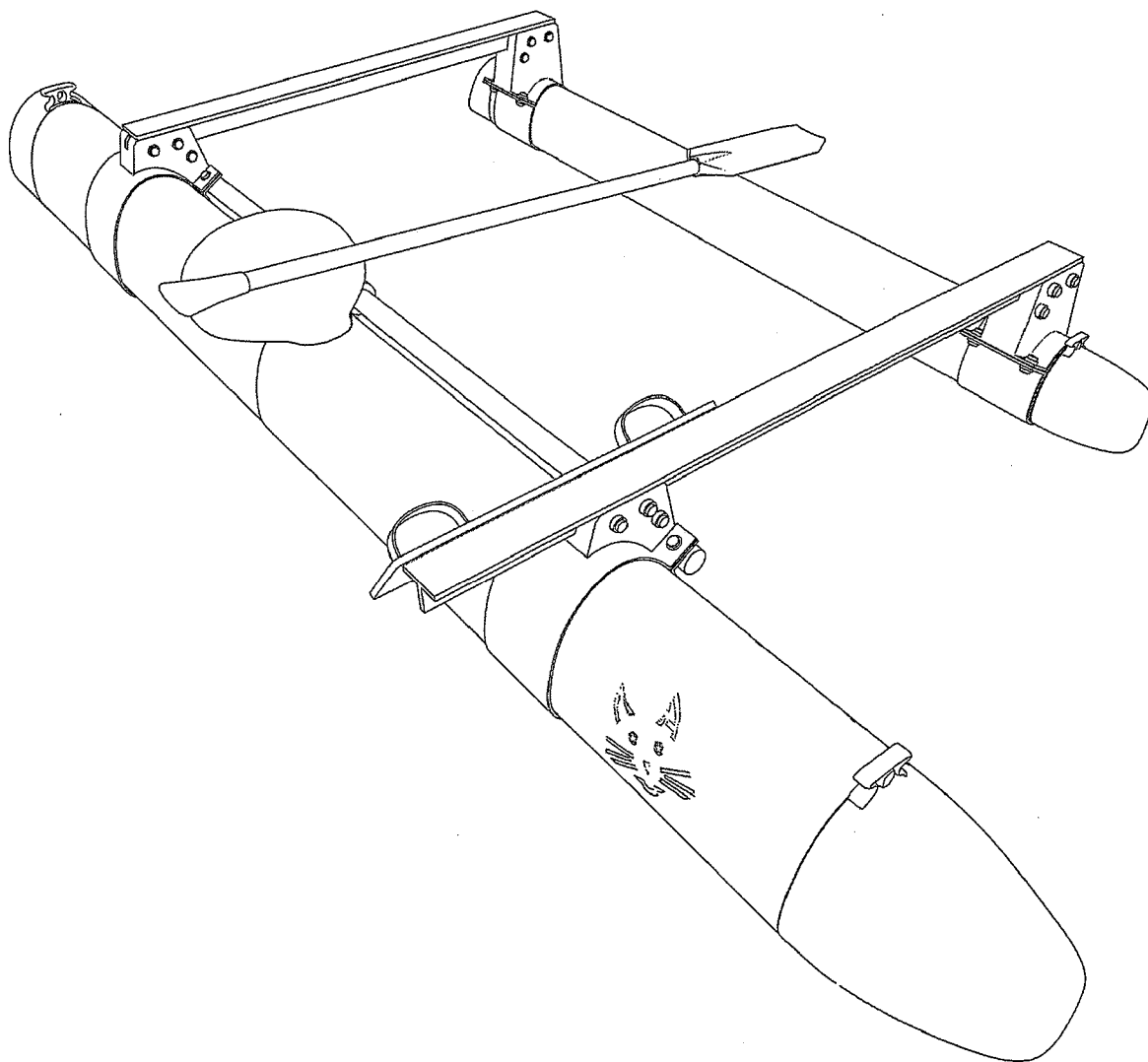


Figure 8E

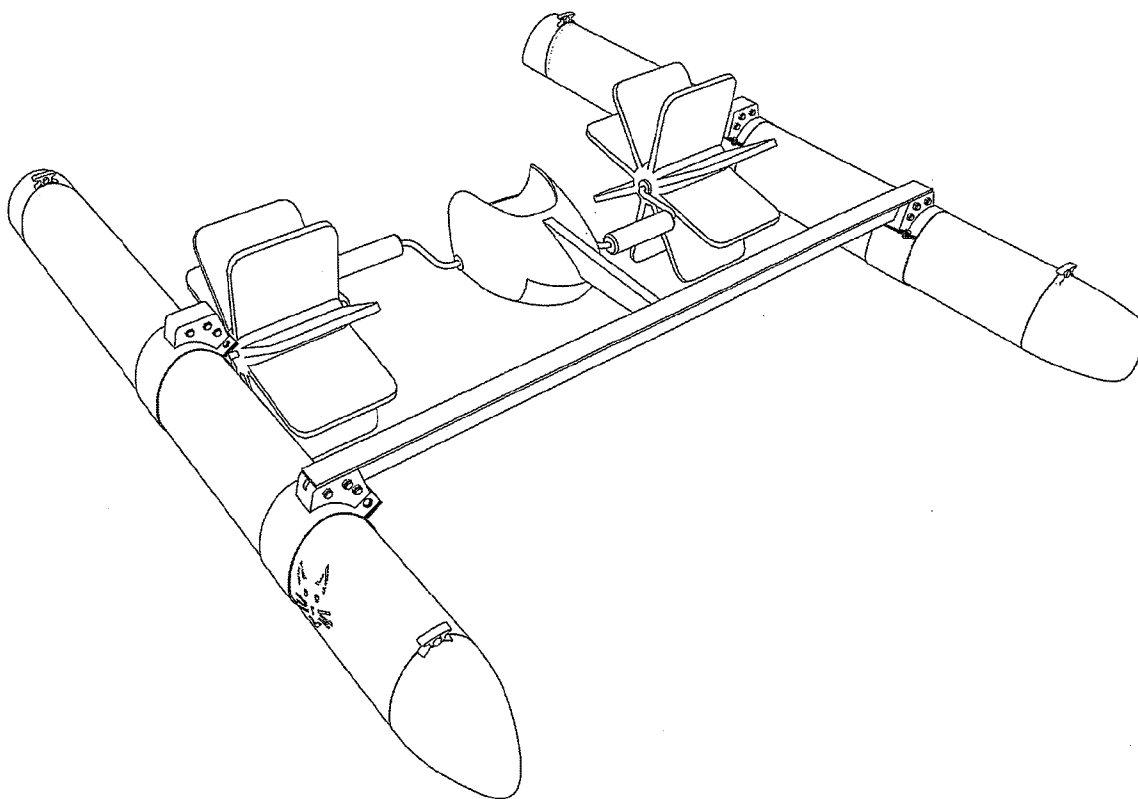


Figure 8F

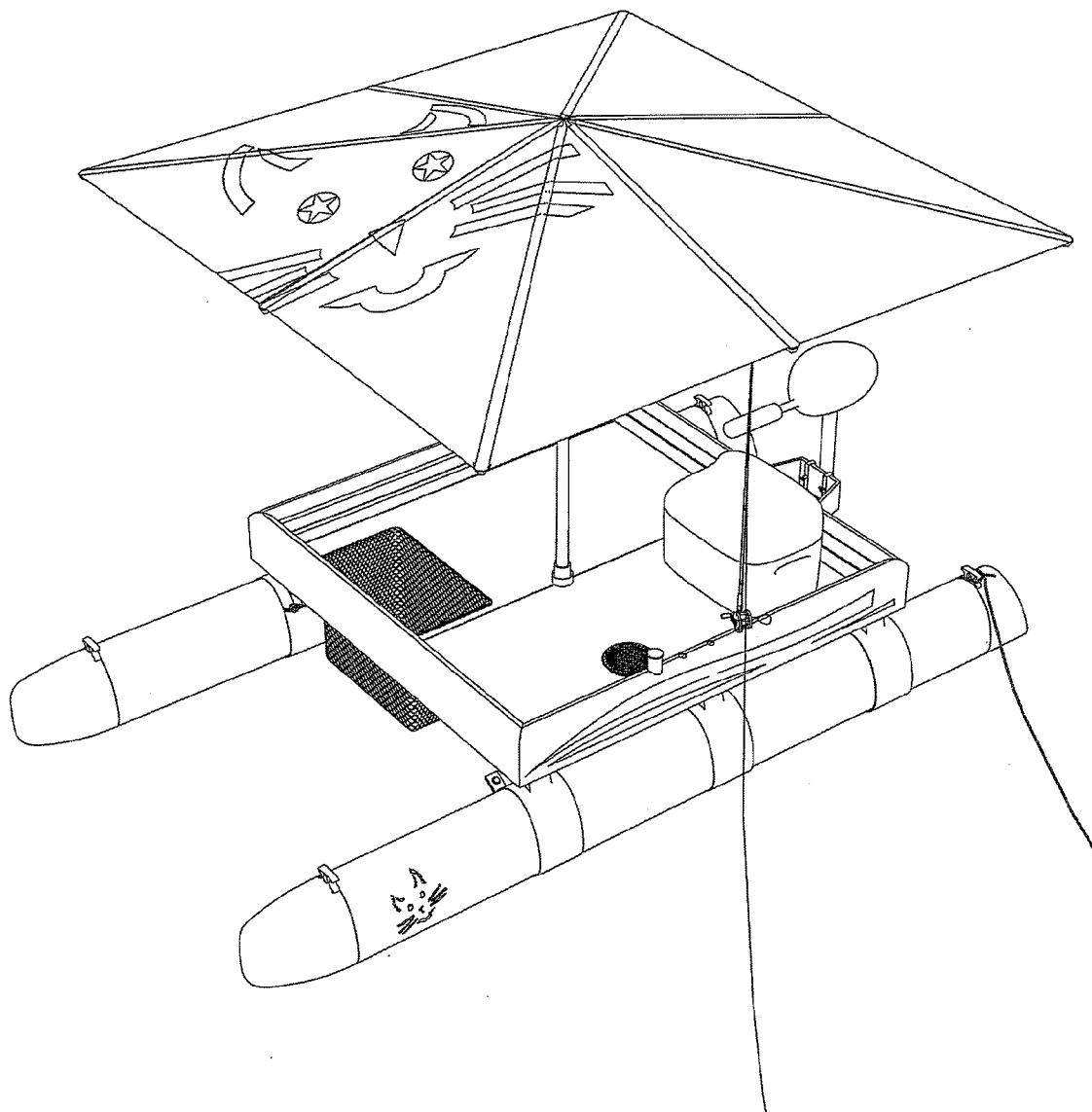


Figure 8G

MODULAR WATERCRAFT ASSEMBLY

BACKGROUND OF THE INVENTION

[0001] 1. Technical Field

[0002] The present invention relates generally to pontoon-type watercraft, and in particular to a watercraft assembly that may be readily assembled and disassembled prior to and following usage. More particularly, the watercraft assembly of the present invention includes a pair of pontoons each comprising annularly collapsible extruded tubes enabling the assembly to be stored and transported in a convenient, compact manner. Still more particularly, the present invention relates to a modular watercraft assembly which form a universal platform from which a variety of different watercraft can be assembled.

[0003] 2. Description of the Related Art

[0004] Many forms of recreational watercraft are known. Variations in propulsion mechanisms include sail driven, manual oar driven, motorized and engine driven designs. A corresponding variety of hull and deck designs accommodate the different propulsion mechanisms. Ultimately, the many hull and propulsion designs have been developed to achieve a desired recreational usage. Some vessel designs are highly specialized for a specific use. Examples include speedboats having a characteristic cigar shaped hull design and high output engine-driven propulsion trains as well as wind surf boards and jet skis. Other recreational watercraft designs accommodate a variety of recreational uses such as fishing, skiing, and touring. A standard craft accommodating multiple uses is a single hull craft powered by an inboard or outboard engine.

[0005] Significant issues for most boat owners include storage and transport of the craft to and from water recreation sites. Most sizable boats require trailer transport which adds substantial additional complexity, inconvenience, and cost to any boating excursion. Furthermore, many boats used for cruising, fishing, skiing, etc., are 12 feet and longer and therefore require storage space comparable to or often greater than that required for a parked car. Given the impossibility or inconvenience of storing a watercraft in an enclosed garage and the typical inability, due to lack of property space or neighborhood restrictions, to store the craft outside an enclosure, craft owners are often compelled to seek remote storage. Typical remote storage sites include marinas or out of water storage at outdoor storage lots. In addition to substantial storage expense, remote storage may only address the transport issues with respect to only the single storage/usage site.

[0006] Inflatable craft and smaller dimension fixed hull designs alleviate many storage and transport issues. However, smaller craft impose limited uses and limit the numbers of passengers that may be accommodated. Inflatable craft also address storage and transport issues and may accommodate a substantial number of passengers. However, conventional inflatable watercraft have performance issues relating for example to lack of a stable deck and vulnerability to being breached by rough handling or contact with sharp objects. Furthermore, as with other hull designs, the usages of inflatable type watercraft are generally limited in scope.

[0007] Pontoon type watercraft have enjoyed explosive growth in popularity as a recreational vessel ideally suited for accommodating multiple passengers for a variety of water sport activities and leisure. The characteristic flat platform supported by opposing pontoon floatation members provides maximum stability and an ideally flat surface on which pas-

sengers may comfortably sit, stand, and walk with minimal instability. Pontoon type craft are widely utilized as a swimming or fishing platform as well as for leisure touring.

[0008] While ideally suited for various water recreation activities, the structural design of pontoon type craft, in terms of size and contour, pose particular problems relating to the aforementioned transport and storage issues faced by boat owners. Pontoon type craft are "boxy" and generally large, making them particularly inconvenient to tow on a trailer and store. Furthermore, as with other watercraft designs, conventional pontoon design is structurally fixed and is therefore limited in the number of different watercraft recreational activities which can be accommodated.

[0009] It can therefore be appreciated that a need exists for an improved water craft design that flexibly accommodates several widely different water recreation activities while overcoming issues relating to transport and storage and other problems encountered in the prior art. The present invention addresses these and other needs unresolved by the prior art.

SUMMARY OF THE INVENTION

[0010] A modular watercraft assembly and apparatus are disclosed herein. In one embodiment, the watercraft assembly includes a divided floatation support member that provides buoyant support. The divided floatation support member includes a first pontoon and a second pontoon that are both longitudinally extensible pontoons. The longitudinally extensible pontoons each include at least two substantially rigid tubes that are telescopically extensible and collapsible in an annularly nested manner. The assembly further includes multiple substantially rigid cross members and multiple cross member fasteners for transversely coupling the cross members between the first and second pontoons of the divided floatation support member. When assembled the watercraft assembly provides buoyant support for a variety of different craft designs including but not limited to a sailing catamaran, a pedaloe, and others.

[0011] The above as well as additional objects, features, and advantages of the present invention will become apparent in the following detailed written description.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] The novel features believed characteristic of the invention are set forth in the appended claims. The invention itself however, as well as a preferred mode of use, further objects and advantages thereof, will best be understood by reference to the following detailed description of an illustrative embodiment when read in conjunction with the accompanying drawings, wherein:

[0013] FIG. 1 depicts the disassembled constituent components of a watercraft assembly in accordance with one embodiment of the present invention;

[0014] FIG. 2 illustrates an assembled watercraft assembly in accordance with an alternate embodiment of the present invention;

[0015] FIG. 3 is a more detailed view depicting components of the watercraft assembly shown in FIG.2;

[0016] FIG. 4 illustrates components of a modular watercraft assembly in accordance with an alternate embodiment of the present invention;

[0017] FIG. 5 depicts further detail of the components shown in FIG. 4;

[0018] FIG. 6 illustrates a frame clamp such as may be utilized for coupling a cross member to a pontoon in accordance with an embodiment of the present invention;

[0019] FIG. 7 depicts seal caps such as may be incorporated in the design of a modular watercraft assembly in accordance with an embodiment of the present invention;

[0020] FIG. 8A illustrates a sailing catamaran configuration incorporating the watercraft assembly of the present invention;

[0021] FIG. 8B depicts a rowing shell configuration incorporating the watercraft assembly of the present invention;

[0022] FIG. 8C depicts a pedaloe configuration incorporating the watercraft assembly of the present invention;

[0023] FIG. 8D depicts an outrigger canoe configuration incorporating the watercraft assembly of the present invention;

[0024] FIG. 8E depicts an outrigger canoe with small outrigger pontoon configuration incorporating the watercraft assembly of the present invention;

[0025] FIG. 8F depicts a snorkel viewer configuration incorporating the watercraft assembly of the present invention; and

[0026] FIG. 8G depicts a fishing boat configuration incorporating the watercraft assembly of the present invention.

DETAILED DESCRIPTION OF ILLUSTRATIVE EMBODIMENT(S)

[0027] The present invention is described in a preferred embodiment in the following description with reference to the figures. While this invention is described in terms of the best mode for achieving this invention's objectives, it will be appreciated by those skilled in the art that variations may be accomplished in view of these teachings without deviating from the spirit or scope of the present invention. Furthermore, when used and unless otherwise stated, terms such as "horizontal," "vertical," "upper," "lower," "front," "rear," "over," and "under," and similar position related terms are not to be construed as limiting the invention to a particular orientation. Instead, such terms are to be construed only on a relative basis reflecting the relative position and orientation of the various components shown in the accompanying depicted embodiments.

[0028] The present invention is generally directed to a watercraft characterized in one aspect as having a divided floatation support means such as is used in pontoon-type craft. In this aspect the watercraft of the invention comprises a pair of elongated pontoons coupled together by detachable cross members. The divided floatation support provides optimally stable support for a deck surface and which is substantially resistance to sources of instability such as passenger movement or other load shifts.

[0029] While ideally suited for various water recreation activities, the structural design of traditional pontoon-type craft, in terms of size and contour, pose particular problems relating to transport and storage of the craft. The present invention addresses such problems and furthermore enhances the breadth of usage of such craft with a watercraft design that facilitates ease of transport and storage and which enables the craft to accommodate a wide variety of topside configurations. Furthermore, the invention provides a buoyant frame on which a variety of different types of watercraft can be deployed from.

[0030] As depicted and explained in further detail below with reference to the figures, the present invention is in one

aspect directed to a watercraft assembly and kit that when disassembled into constituent components may be packed in a compact manner within a portable carrying case for ease of storage and transport to and from a site of usage. Furthermore, the watercraft assembly is designed to accommodate multiple topside configurations such as may be ideally suited for different water recreation activities such as leisure touring, swimming, fishing, etc. Examples of such activity-specific top-side design that can be advantageously deployed are depicted in further detail with reference to FIGS. 8A-8G.

[0031] With reference now to the figures, wherein like reference numerals refer to like and corresponding parts throughout, and in particular with reference to FIG. 1, there is depicted a disassembled watercraft assembly 10 in accordance with one embodiment of the present invention. Watercraft assembly 10 generally comprises a pair of pontoons 2, a pair of cross members 4, and two pair of cross member fasteners 6. As shown in the depicted embodiment, pontoons 2 are preferably mutually discrete components that can be independently moved and positioned when the watercraft is disassembled. Given the pontoon-type configuration of the watercraft when assembled, pontoons 2 collectively comprise a divided floatation support member 5 that when the watercraft is assembled, provides buoyant support for the watercraft.

[0032] Cross members 4 and cross member fasteners 6 form the primary means for coupling pontoons 2 together in the familiar parallel pontoon boat floatation configuration. In the depicted embodiment, each of cross members 4 comprises a T-bar having multiple fastener holes on each distal end as shown in the figure. Cross members 4 are preferably constructed as a molded unit from a high-strength polymer or lightweight metal alloy.

[0033] Each of cross member fasteners 6 generally comprises a coupling bracket 16 and a ring clamp 14 that fits around the outer contour of a respective one of pontoons 2. During assembly of the component parts of watercraft assembly 10, pontoons 2 are fitted within ring clamps 14 which are comprised of a wide semi-flexible band of plastic, metal or other material that is tightened around the substantially curvilinear-contoured outer surface of pontoons 2 either by screw or ratchet action. The cross member fasteners 6 are then positioned so that the respective coupling brackets 16 are positioned on the top side of pontoons 2 where they may engage the ends of cross members 4. Cross members 4 are then positioned so that the ends of the T-bar having the mechanical fastener holes are slidably placed within the depicted slots 7 within the brackets 16 where they are coupled using mechanical fasteners 18 such as threaded bolts. When fastened in this manner, cross member brackets 16 provide cantilevered support for the respectively fastened cross member 4 against the pontoons 2.

[0034] With pontoons 2 mutually coupled in a parallel, dual-pontoon configuration, such as that shown in the following figures, floatation support member 5 provides buoyant support for a passenger support apparatus (examples depicted in FIGS. 8A-8G) supported by the top T-surface of cross members 4. When assembled, watercraft assembly 10 provides a universal floatation platform ideally suited for a variety of different passenger support applications including a sailing catamaran, fishing craft, pedaloe, etc.

[0035] To facilitate ease of storage and transport, the watercraft of the present invention may be readily disassembled into the constituent components shown in FIG. 1. In the

depicted embodiment, for example, the watercraft may be disassembled such that the lengthwise and widthwise pontoon and cross member components **2** and **4** are no longer interconnected, thus greatly reducing the containment space required to accommodate the assembly during transport and storage. When disassembled, the components of watercraft assembly **10** may be conveniently packed into one or more storage containers that may then be transported to a water recreation site, such as a lake or river, where the watercraft may be quickly and easily assembled using a minimum if any hand tools.

[0036] In addition to being mutually uncoupled as well as uncoupled from cross members **4**, pontoons **2** preferably include additional features enabling further compaction and/or disassembly of the watercraft assembly. Namely, at least one and preferably both of pontoons **2** comprise an elongated tube member **8** capped at each end by end caps **12**. Tube members **8** are preferably cylindrically or otherwise curvilinear contoured and include a hard (i.e., non-pliant) protective outer shell that may be constructed of a rigid polymer or metal alloy. In one embodiment, end caps **12** are molded parts that may be glued, welded, or otherwise adhesively coupled onto each of the opposing ends of elongated tube member **8**. In alternate embodiments, end caps **12** are preferably fastened to the ends of elongated tube members **8** using removable mechanical fasteners such as threaded fasteners. The end caps reduce water resistance and may contain an air lock equalizer (not depicted) which allows air pressure to change as air is pumped into or release from the inner pontoon volume. As further shown in FIG. 1, cleats **24** are preferably integrally molded to the top side of each of end caps **12**.

[0037] Referring to FIG. 2, there is illustrated an assembled watercraft assembly **15** in accordance with an alternate embodiment of the present invention. Similar to watercraft assembly **10** depicted in FIG. 1, watercraft assembly **15** is a dual pontoon type craft generally comprising a divided floatation support member comprising a pair of parallel disposed pontoons **38** transversely coupled by a pair of substantially rigid cross members **34**. Pontoons **38** each include front (i.e. bow) and rear (i.e. stern) end caps **11** and **13**, respectively, which are preferably individually removable when watercraft assembly **15** is disassembled.

[0038] A key feature of watercraft assembly **15** is the composition of pontoons **38** as comprising telescopically extensible tubes which, in the depicted embodiment, comprise a first tube **23** and a second tube **27**. First and second tubes **23** and **27** are substantially rigid tube members that are mutually coupled in an annularly nested manner in which second tube **27** is of slight smaller diameter than and slides within first tube **23**. Further details depicting the slidable engagement between first and second tubes **23** and **27** are shown in FIG. 3. Namely, an external gasket **20**, which in one embodiment comprises an elastic O-ring, is disposed annularly around the outer contour of second tube **27** to provide an airtight and watertight seal at the region of engagement between gasket **20** and the inner surface of first tube **23**. Providing a similar airtight and watertight seal is a gasket **28** disposed annularly within the inner circumferential surface of first tube **23**. Disposed as shown in FIG. 3, gaskets **20** and **28** provide a seal and bearing surface along which second tube **27** slidably engages first tube **23** while not expressly depicted in the figures, the depicted gaskets **20** and **28** are preferably supported within a housing slot fabricated onto the corresponding tube surface.

[0039] When watercraft assembly **15** is disassembled in a manner similar to that depicted for the assembly shown in FIG. 1, first and second tubes **23** and **27** may be telescopically collapsed so that the combined assembly, with or without end caps **11** and **13** attains a minimal length and can therefore be more compactly stored. During assembly of the component parts of watercraft assembly **15**, second tube **27** is extended from first tube **23** so that the overall length of the combined assembly is determined by such extension. The extended position, such as that depicted in FIG. 2 is securely maintained by one or more locking mechanisms such as set screws **31**.

[0040] In a preferred embodiment, the extension between first and second tubes **23** and **27** may be achieved by manually pulling one of the tubes with respect to the other to achieve the desired extension. In an alternate embodiment, the pontoon assembly extension may be achieved using pneumatic means such as by applying air pressure to the inner chamber formed within the annularly nested tubes. As illustrated in FIG. 2, each of rear end caps **13** may include an air valve **21** through which air pressure may be applied to inflate and pressurize the inner chamber within the pontoons. Air valve **21** preferably also serves as an air pressure outlet or relief valve for regulating the air pressure within the pontoons to facilitate extension and retraction of the assembly. In an alternate embodiment, one or both of tubes **23** and **27** contain a foamed plastic to provide floatation aid for emergency situations such as a collision or other forceful trauma that breaches the outer skin of one or both of pontoons **38**.

[0041] In the depicted embodiment, cross members **34** are disposed transversely between the pontoons and include curved support pads **22** through which force is transmitted from cross members **34** to the respective pontoons. Cross members **34** are preferably substantially rigid members having cross member fasteners **36** designed in accordance with an alternate embodiment of the present invention.

[0042] FIG. 3 is a more detailed view depicting components of watercraft assembly **15** and particularly illustrating the constituent parts of cross member fasteners **36**. As illustrated in FIG. 3, cross member fasteners **36** comprise a ratchet assembly **25** attached to a respective distal end of a cross member that adjusts the tension on a compression strap **26** to secure the respective cross members **34** to the tube portion of the pontoons. Ratchet assembly **25** may be any device used to allow motion in one direction while simultaneously restricting motion in the opposing direction to effectuate a secure coupling. In the depicted embodiment, ratchet assembly **25** includes geared ratchet spindle **29** having gear teeth set off at an angle, and a pawl (not expressly depicted) that rests against the gears. When ratchet spindle **29** is rotated using a ratchet lever **32** in the "tighten" direction, the pawl traverses along the gears until the rotation is stopped at which point the pawl rests in place to lock the assembly. Manual actuation of ratchet lever **32** controls rotation of the spindle to tighten or loosen the assembly.

[0043] With reference to FIGS. 4-7, there are depicted various aspects of a watercraft assembly in accordance with an alternate embodiment of the invention. Namely, FIGS. 4-7 illustrate aspects of a dual pontoon modular watercraft assembly that includes modularly assembled pontoons. A pair of pontoons **42** is shown in FIG. 4, with the pontoons **42** depicted in states of assembly (top) and partial assembly (bottom). Each of pontoons **42** is modularly constructed of a pair of substantially rigid, hollow tube members **40**. FIG. 5 is

an exploded view illustrating further detail of one end of one of pontoons 42. Coupled to both ends of each of tube members 40 are a pair of seal caps which are illustrated and described in further detail below with reference to FIG. 7. In the depicted embodiment, tube member 40a is capped at each end by seal caps 52 and tube member 40b is capped at each end by seal caps 54.

[0044] FIG. 7 depicts seal caps 52 and 54 such as may be incorporated in the design of a modular watercraft assembly in accordance with one embodiment of the present invention. Both of seal caps 52 and 54 are substantially cylindrical members having a gas and liquid impermeable barrier plate 49. When adhered or fastened to both ends of a tube member 40, seal caps 52 and 54 prevent water from entering the inner volume of the tube. Seal caps 52 and 54 are preferably molded pieces that are molded, adhered, or otherwise fastened to the cylindrical ends of tubes 40.

[0045] Seal caps 52 and 54 further include mutually complementary locking features that enable the caps to be locked together so that multiple of tubes 40 can be modularly coupled end-to-end as shown in FIG. 4. Specifically, and as shown in FIG. 7 in conjunction with FIG. 5, seal cap 52 includes a pair of lugs 51 projecting from its interior annular surface and seal cap 54 has a pair of correspondingly positioned keyhole slots 47. Lugs 51 slide within keyhole slots 47 when end cap 52 is placed and rotated against end cap 54 thus locking the seal caps together and forming a linkage between the respective tube members. In this manner, one or more such tube and seal cap assemblies can be coupled together to form pontoons such as pontoons 42.

[0046] A further aspect of the depicted embodiment is illustrated particularly with reference to FIGS. 5 and 6. As depicted in FIG. 5, seal caps 52 and 54 further comprise lip members 48 extending tangentially and laterally from the top of the respective seal caps. Lip members 48 of both of seal caps form a stable anchor point on which cross member 44 may be fastened to the pontoon assembly. As further shown in FIGS. 5 and 6, a frame clamp 50 is formed at the ends of cross members 44. Frame clamp 50 includes a lever handle 45 that pivotally actuates a latch lip 43 that is secured over lip members 48 to secure a given end of cross member 44 to a pontoon assembly.

[0047] When assembled each of the watercraft assemblies depicted in the foregoing figures provides a universal support platform ideally suited for deployment of a variety of activity-specific top-side watercraft configurations. Exemplary of such configurations are those depicted in FIGS. 8A-8G which depict several activity-specific watercraft configurations incorporating the watercraft support design described and depicted above with reference to FIGS. 1-7. Specifically, FIG. 8A illustrates a sailing catamaran configuration; FIG. 8B depicts a rowing shell configuration; FIG. 8C depicts a pedaloe configuration; FIG. 8D depicts an outrigger canoe configuration; FIG. 8E depicts an outrigger canoe with small outrigger pontoon configuration; FIG. 8F depicts a snorkel viewer configuration; and FIG. 8G depicts a fishing boat configuration incorporating the watercraft assembly of the present invention. As illustrated in FIGS. 8A-8G, the watercraft assembly includes several features such as adjustable length pontoons providing great flexibility in appearance and/or buoyancy characteristics. In addition to the standard pontoon design, monohull, catamaran & trimaran configurations can be deployed from the assembly.

[0048] While the invention has been particularly shown and described with reference to a preferred embodiment, it will be understood by those skilled in the art that various changes in form and detail may be made therein without departing from the spirit and scope of the invention. These alternate implementations all fall within the scope of the invention.

1. A modular watercraft assembly comprising:

a divided floatation support member comprising a first pontoon and a second pontoon, at least one of said first and second pontoons comprising a longitudinally extensible pontoon, wherein said at least one longitudinally extensible pontoon comprises at least two substantially rigid tubes that are telescopically extensible so as to define an elongated use configuration and collapsible in an annularly nested manner so as to define a shortened storage configuration;

a plurality of substantially rigid cross members; and

a plurality of cross member fasteners for transversely coupling said cross members between said first and second pontoons of said divided floatation support member.

2. The modular watercraft assembly of claim 1, wherein said first and second pontoons have a substantially curvilinear transverse outer cross section contour, and wherein said cross member fasteners include a collar member for annularly fitting over and around the outer cross section contour of said first and second pontoons.

3. The modular watercraft assembly of claim 1, wherein said cross member fasteners include a coupling bracket to which a cross member is fastened, said coupling bracket providing cantilevered support for the fastened cross member against one of said first and second pontoons.

4. The modular watercraft assembly of claim 1, wherein said longitudinally extensible pontoon further comprises end caps coupled to the ends of said at least two substantially rigid tubes, said end caps containing a buoyant filler material.

5. (canceled)

6. The modular watercraft assembly of claim 1, wherein the at least two substantially rigid tubes comprise a first tube and a second tube, said first tube having an outer sleeve portion that slides over said second tube when the first and second tubes are telescopically extended or collapsed, said modular watercraft assembly further comprising at least one o-ring gasket disposed between the exterior surface of said second tube and the interior surface of said first tube to form a water impermeable seal between the exterior surface of said second tube and the interior surface of said first tube.

7. The modular watercraft assembly of claim 6, further comprising a locking member for locking the first and second tubes in an extended position.

8. A modular watercraft assembly comprising:

a divided floatation support member comprising a first pontoon and a second pontoon, at least one of said first and second pontoons comprising a longitudinally extensible pontoon, said longitudinally extensible pontoon comprising at least two substantially rigid tubes that are telescopically extensible and collapsible in an annularly nested manner;

a plurality of substantially rigid cross members coupled between said first and second pontoon members said cross members comprising a curved support pad at each distal end, said curved support pads resting on said first and second pontoons; and

a plurality of cross member fasteners for transversely coupling said cross members between said first and second

pontoons of said divided floatation support member, each of said plurality of cross member fasteners comprising:

a flexible compression strap; and

a compression strap tightening mechanism for adjustably tightening said compression strap around the outer surface of one of said first or second pontoons.

9. The modular watercraft assembly of claim **8**, said compression strap tightening mechanism comprising a hand-actuated ratchet assembly coupled to each distal end of each of said cross members.

10. The modular watercraft assembly of claim **8**, wherein each of said first and second pontoons further comprises an air pressure valve for inletting and releasing air pressure from the interior volume of said first and second pontoons.

11. The modular watercraft assembly of claim **8**, wherein said longitudinally extensible pontoon further comprises end caps coupled to the ends of said at least two substantially rigid tubes, said end caps containing a buoyant filler material.

12. The modular watercraft assembly of claim **8**, wherein the at least two substantially rigid tubes comprise a first tube and a second tube, said first tube having an outer sleeve portion that slides over said second tube when the tubes are telescopically extended or collapsed, said modular watercraft assembly further comprising at least one o-ring gasket disposed between the exterior surface of said second tube and the interior surface of said first tube to form a water impermeable boundary.

13. The modular watercraft assembly of claim **12**, further comprising a locking member for locking the first and second tubes in an extended position.

14. A modular watercraft assembly comprising:

a divided floatation support member comprising a first pontoon and a second pontoon, at least one of said first and second pontoons comprising a modularly assembled compound unit comprising multiple, lengthwise attached tube members;

a plurality of substantially rigid cross members coupled between said first and second pontoon members said cross members comprising a frame clamp at each distal end; and

wherein each of said lengthwise attached tube members includes a seal cap member coupled to each distal end, said seal cap member comprising:

a water impermeable plate that prevents water from entering a tube member;

a seal cap locking mechanism for mechanically engaging to an adjacent seal cap; and

a lip member extending substantially tangentially from the outer circumferential surface of said seal cap, wherein said lip member is mechanically engaged by one of said frame clamps to affix said cross member to one of said first or second pontoons.

15. The modular watercraft assembly of claim **14**, further comprising end caps coupled to the ends of said first and second pontoons, said end caps containing a buoyant filler material.

* * * * *