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[54] **SECTIONAL BOAT**

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[52] **U.S. Cl.** ..... **9/2 S**

[51] **Int. Cl.** **B63b 7/04**

[58] **Field of Search** ..... 9/2 S, 2 R, 2 C, 9/2 F, 6

[56] **References Cited**

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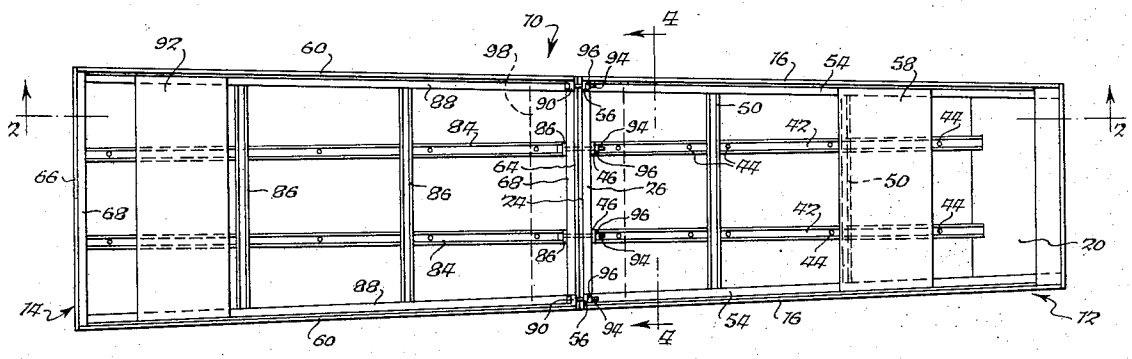
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[57] **ABSTRACT**

A sectional boat comprised of two detachable sections secured together in longitudinal alignment by interlocking means in a fluid tight relation. Each section comprises a bottom wall, a front wall, a rear wall and tapered side walls to form a self-contained buoyant unit. The side wall of each section are inclined outwardly at an angle relative to the longitudinal axis of the section in diverging relation from front to rear. The rear section is slightly larger than the front section and can be inverted over the front section in a nested relation to form an enclosed compact unit for convenient storage and transportation. Interlocking means in the form of bolts and nuts are employed to connect adjacent end walls of the sections together to form a boat of desired length.

6 Claims, 6 Drawing Figures



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SHEET 1 OF 2

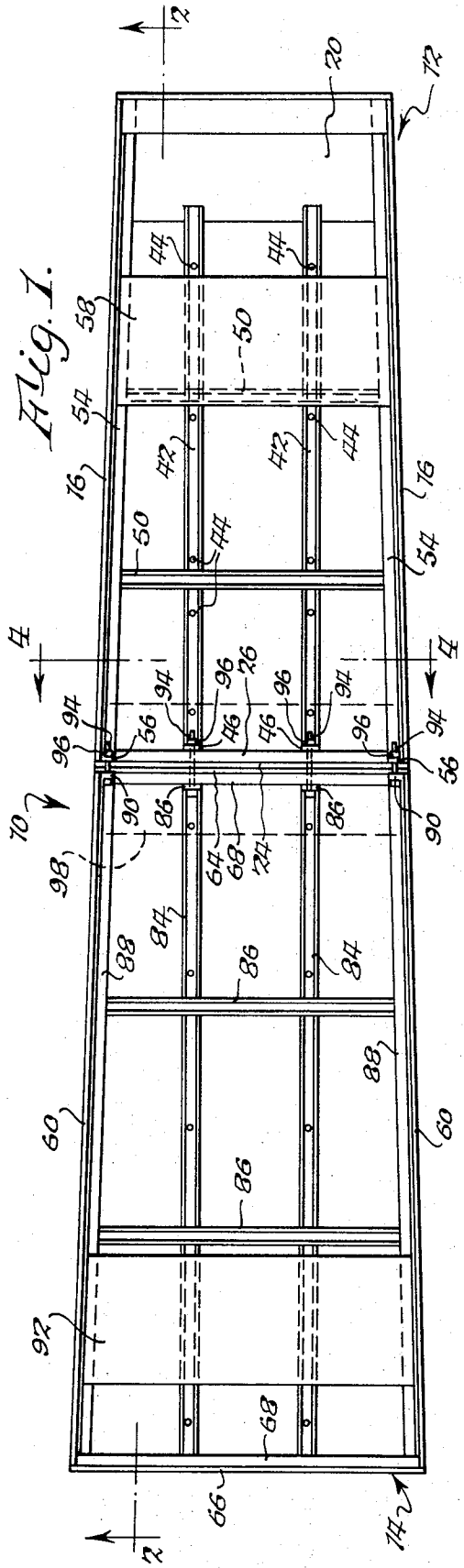


Fig. 1.

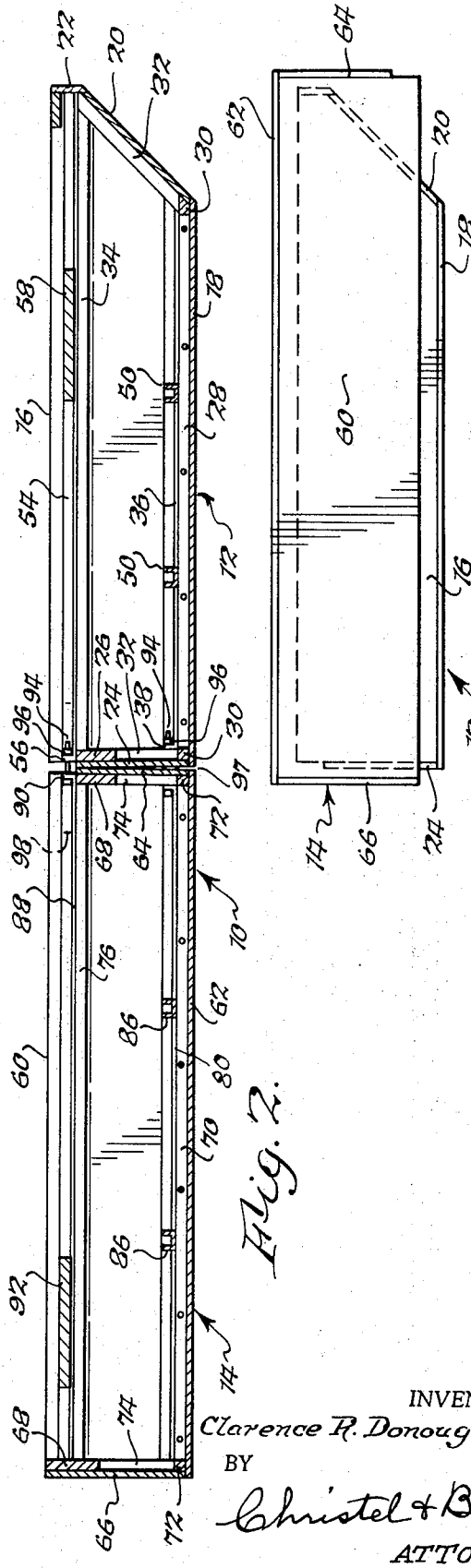


Fig. 2.

Fig. 3.

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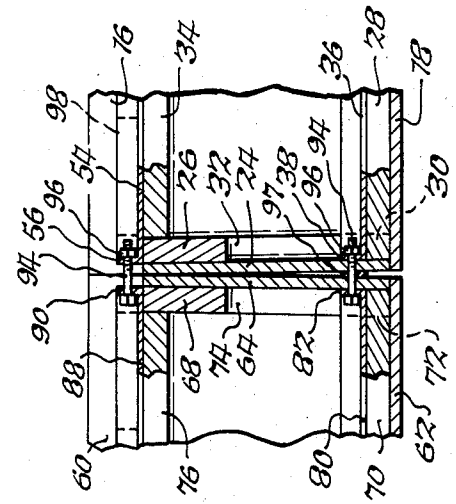


Fig. 5.

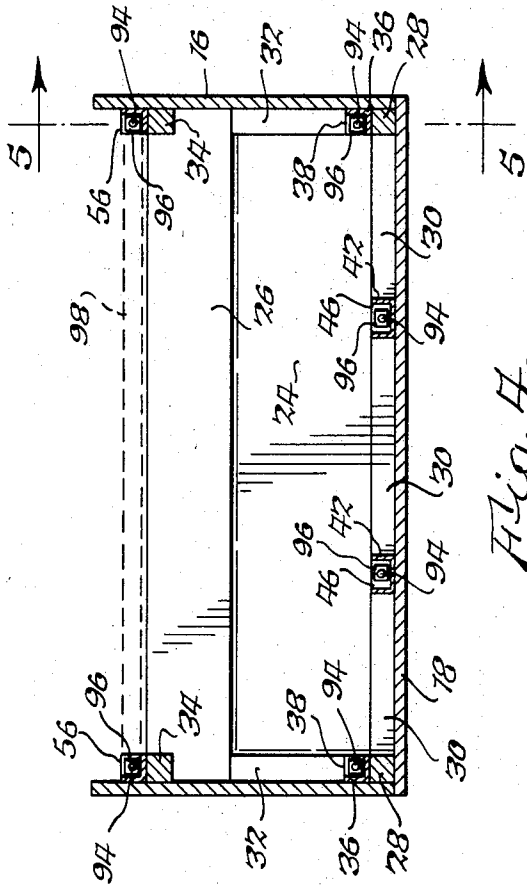


Fig. 4.

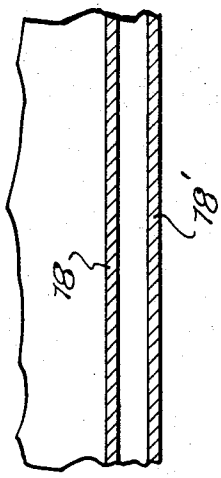


Fig. 6.

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SECTIONAL BOAT

BACKGROUND OF THE INVENTION

This invention relates to a sectional boat and, more particularly, to a boat formed of a plurality of sections adapted to be interlocked for use and adapted when separated to be nested for transportation.

Sectional boats have heretofore been proposed in various forms in which a plurality of sections are connected together to form a boat and which sections can be dismantled for easy handling and transportation. Generally, these boats employ complex and expensive interlocking means to secure the sections together in a fluid tight relation. Often, the interlocking means project outwardly or inwardly of the boat and can be easily damaged while also presenting hazardous obstructions. Also, when disposed in a nested relation, the open or inner side of the sections are exposed.

SUMMARY OF THE INVENTION

An object of the present invention is to provide an improved sectional boat which is simple and strong in construction, low in cost, durable in use, and which incorporates simple and inexpensive interlocking means.

Another object of this invention is to provide a sectional boat which can be easily assembled and readily dismantled for convenient storage and transportation.

A further object of the present invention is to provide a sectional boat comprises of two sections which can be positioned in nesting interrelationship with one section inverted over the other to provide a cover for the compact package.

The foregoing and other objects, advantages and characterizing features of the present invention will become clearly apparent from the ensuing detailed description of an illustrative embodiment thereof, taken together with the accompanying drawing wherein like reference characters denote like parts throughout the various views.

Brief Description of the Drawing

FIG. 1 is a top plan view of a sectional boat of the present invention shown in an assembled relation;

FIG. 2 is a vertical sectional view taken about on line 2—2 of FIG. 1;

FIG. 3 is a side elevational view showing the boat disassembled with one section inverted over the other;

FIG. 4 is an enlarged transverse vertical sectional view taken about on line 4—4 of FIG. 1;

FIG. 5 is a fragmentary vertical sectional view taken about on line 5—5 of FIG. 4; and

FIG. 6 is a fragmentary sectional view illustrating another form of the invention.

DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT

Referring now in detail to the illustrative embodiment shown in the drawings, FIG. 1 shows a sectional boat, of the runabout type, generally designated **10**, comprising a bow or front section **12** and a rear section **14**. Although sections **12** and **14** can be formed of various materials as hereinafter explained, preferably the material of boat **10** is wood. Boat **10** is formed of two sections but, if desired, can be formed of any number of sections with the additional sections interposed between front section **12** and rear section **14**.

Front section **12** includes tapered side walls **16** extending longitudinally of section **12** in a diverging relation toward the rear of section **12**. Side walls **16** are connected by a flat bottom wall **18**, a transverse, upwardly tapered bow or front wall **20** having an upstanding vertical wall portion **22** at the forward end, and a transverse upstanding, rear wall **24** at the rear end. Rear wall **24** is provided with a wooden plank reinforcement **26** across its upper ends. The rear wall **24** terminating short of the upper surfaces of side walls **16** for a purpose hereinafter explained. Section **12** constitutes a self-contained buoyant unit capable of floating on water and can be used separately as a boat, if desired.

In order to provide stability and reinforcement for front section **12**, a plurality of wood and metal structural members forming a structural support and reinforcement assembly is provided in front section **12**. Such assembly comprises a pair of generally horizontally extending side bars **28** extending lengthwise of section **12** and secured adjacent the corners of bottom wall **18** and side walls **16**. Side bars **28** are connected at their ends to cross bars **30** extending transversely of section **12** adjacent the lower ends of front wall **20** and rear wall **24** and the junctures thereof with bottom wall **18**. Also, upright bars **32** are provided at each corner formed between side walls **16**, front wall **20** and rear wall **24** and are connected at their lower ends to the intersection of side bars **28** and cross bars **30**. A pair of longitudinally extending bars **34** spaced above side bars **28** are secured to side walls **16** and the upper edges of upright bars **32** and extend lengthwise of section **12**. Bars **28, 30, 32** and **34** are formed of wood and are generally square in cross section.

A pair of metal angle menbers **36** are affixed to the upper surfaces of side bars **28** and are substantially coextensive therewith. Angle members **36** have upstanding ends **38** abutting against upright bars **32** adjacent rear wall **24** and are provided with openings aligned with openings in said upright bars **32** and said rear wall **24** for receiving bolts to secure section **12** to section **14**. At least two laterally spaced, longitudinally extending channel members **42**, disposed between side bars **28** and extending lengthwise of section **12** are secured to bottom wall **18** as by fasteners **44**. The rear ends of channel members **42** have upstanding portions **46** provided with openings in registry with openings in cross bars **30** and rear wall **24** to receive bolts for securing section **12** to section **14**.

A plurality of channel members **50** are supported on channel members **42** and extend transversely thereof between side bars **28**. Channel members **42** and **50** preferably are formed of metal. A pair of metal angle members **54** are secured to the upper surfaces of bars **34** and are substantially coextensive therewith. The rear ends of angle members **54** are provided with upstanding ends **56** having openings therein for receiving interlocking means as will hereinafter become apparent. A seat **58** in the form of a wooden plank is adapted to rest on the horizontal legs of angle members **54**, the opposite ends of seat **58** being tapered to conform to the tapering slope of side walls **16**.

Rear section **14** is constructed similarly to front section **12** and comprises tapered side walls **60** extending longitudinally of section **14** in a diverging relation toward the rear of section **14**. Side walls **60** are connected to a flat bottom wall **62**, a transverse, generally

vertical forward wall **64** and a transverse, generally vertical rearward wall **66.** Forward wall **64** terminates inwardly of the upper edges of side walls **60** for a purpose which will hereinafter become apparent. Reinforcement members, in the form of wooden planks **68** are provided on the inner sides of walls **64** and **66** across their upper ends. Section **14** also constitutes a self-contained buoyant unit and can be used alone as a boat, if desired.

A pair of longitudinal side bars **70** and a pair of transverse cross bars **72** forming a generally box-like structure are secured in the corners adjacent the marginal edges of bottom wall **62.** Upright bars **74** are secured at each vertical corner of section **14.** A pair of longitudinally extending side bars **76** spaced vertically above side bars **70** are secured to side walls **60** and the upper ends of upright bars **74** and extend lengthwise of section **14.** Bars **70, 72, 74** and **76** are formed of wood and are generally square in cross section.

A pair of metal angle members **80** are affixed to the upper surfaces of side bars **70** and are substantially coextensive therewith. Angle members **80** have upstanding ends **82** (FIG. **5**) abutting against upright bars **74** adjacent forward wall **64** and are provided with openings aligned with openings in said upright bars **74** and said forward wall **64** for receiving bolts to secure section **14** to section **12.** In a construction similar to that of section **12,** a plurality of longitudinally extending channel members **84** and transversely extending cross channel members **86,** formed of metal, are connected together in a grid like frame assembly along bottom wall **62** to support and reinforce the framework of section **14.** The forward ends of channels **84** have upstanding portions **86** provided with openings in registry with openings in cross bar **72** and forward wall **64** to receive bolts for securing section **14** to section **12.** A pair of metal angle members **88** are secured to the upper surfaces of bars **76** and are substantially coextensive therewith. The forward ends of angle members **88** are provided with upstanding ends **90** having openings therein for receiving interlocking means as will hereinafter become apparent. A seat **92** having tapered opposite ends to conform to the slope of side walls **60** rests upon the horizontal legs of angle members **88.**

Interlocking means are provided to secure sections **12** and **14** together, such interlocking means comprising bolts **94** extending through the aligned openings provided in the ends of angle members **36,** channel members **42,** cross bar **30** and rear end wall **24** of section **12** and through the openings provided in forward end wall **64,** cross bar **72,** and the end portions of angle members **80** and channel members **84** of section **14.** Likewise, bolts **94** are passed through the end portions of angle members **54** and **88.** Nuts **96** are threaded onto the ends of bolts **94.** As shown in FIGS. **2** and **5,** resilient, yieldable washers **97,** formed of rubber or any other synthetic elastomeric material, such as neoprene for example, are disposed about the lower bolts **94** between the exterior surfaces of abutting end walls **24** and **64** to form a fluid tight seal. With sections **12** and **14** assembled, a seat **98** having tapered opposite ends can be placed on adjacent ends of angle members **54** and **88** of sections **12** and **14,** respectively, overlying the abutting end walls **24** and **64.** Recesses are provided at the opposite ends of seat **98** for accommodating the upstanding ends of angle members **54** and **88** and the fastening means extending therethrough. The purpose for having end walls **24** and **64** terminate below the upper surfaces of side walls **16** and **40** is to accommodate seat **98** and to enable the same to be disposed in the same general horizontal plane of seats **58** and **92.**

A significant feature of this invention is that the side walls of the assembled sectional boat **10** are tapered outwardly and rearwardly at an inclined angle relative to the longitudinal axis of the boat from bow to stern and the same angle of inclination is continued from section **12** to section **14.** Thus, the outer wall surfaces of side walls **16** and **60** form a substantially continuous, uninterrupted tapered surface with no interlocking members or other elements projecting outwardly therefrom. This feature is also important when fitting section **12** within section **14** in a nested relation since the side walls **16** will be equally spaced inwardly from side walls **60** the entire length of such walls. Thus, a very slight divergence or taper of the side walls of sectional boat **10** will permit tolerable clearance between the side walls of sections **12** and **14** to form a compact unit having a relatively large storage area defined by the space within the walls of front section **12.**

Another important feature of this invention is that the larger, rear section **14** can be inverted and placed over section **12** to provide a cover therefor as shown in FIG. **3.** Various articles, such as camping and sporting equipment, traveling gear, luggage etc., can be stored in section **12** with section **14** inverted and placed thereover to provide a compact unit protected against precipitation and other ambient elements and which can be easily transported in such a compact form on the roof of an automobile.

Although the material of which boat **10** if formed preferably is wood, it should be understood that other materials including lightweight metals and synthetic plastics can be used, such as aluminum, fiberglass, pressed impregnated paper bulb, plastic impregnated fabric or any other material having the requisite stability and structural strength. Should any of these materials be employed, the longitudinal and horizontal reinforcement bars, angle members, and channel members can be composed of the same material as the boat and formed integral with the body of the sections. Also, with the use of these lightweight materials, a false bottom such as shown at **18'** in FIG. **6** can be provided for each section **12** and **14** to form buoyancy or flotation chambers to maintain the boat afloat in the event of leakage or if the boat should be swamped in heavy waters during a storm. The false bottom **18'** can be structurally reinforced and spaced from the bottom of sections **12** and **14** by a suitable grid support structure similar to that used for the bottom walls **18** and **72** of sections **12** and **14.**

As hereinbefore mentioned, each section constitutes a self-contained buoyant unit and can be used alone as a boat. In such use, the openings provided for the interlocking means can be closed by a suitable filler.

From the foregoing, it is apparent that the objects of the present invention have been fully accomplished. As a result of this invention, an improved sectional boat of a simple and strong construction, comprises of detachable sections, is provided for use as a boat of the runabout type when the sections are interlocked and which can be readily dismantled and nested with one section inverted over the other to provide a closed, compact unit having ample storage space and capable of being easily transported.

A preferred embodiment of this invention having been disclosed in detail, it it to be understood that this has been done by way of illustration only.

I claim:

1. A sectional boat comprising: a first section and a second section adapted to be connected together in longitudinal alignment to form a boat; each of said sections having a bottom wall, a front wall, a rear wall, and a pair of vertically straight side walls inclined outwardly at an angle relative to a longitudinal axis passing through the respective sections whereby said side walls form a pair of opposite, substantially continuous tapered side walls extending lengthwise of said boat in a diverging relation from front to rear thereof when said sections are connected together in longitudinal alignment; said second section being larger than said first section and invertable over said first section in a nested relation to close the open upper end of said first section and form a compact package for storage and transport; said second section side walls surrounding said first section side walls in said nested relation; means detachably connecting said second section front wall to said first section rear wall in an abutting, fluid tight relation to form a multiple section boat; and reinforcement means including a pair of vertically spaced reinforcement bars secured to each side wall of each section at the bottom thereof and adjacent the top thereof, respectively; a plurality of laterally spaced channel members extending lengthwise of each section and secured to the bottom wall thereof; and a vertically extending reinforcement bar secured to each corner formed at the first section rear wall and the second section front wall, respectively.

2. A sectional boat according to claim 1 wherein said connecting means comprises a plurality of bolts extending through aligned openings formed in said first section rear wall and said second section front wall; and sealing means interposed between said front and rear walls about at least those of said bolts located below the water line of said boat.

3. A sectional boat according to claim 1 including a removable seat extending transversely of said sections across and overlying said front and rear walls.

4. A sectional boat according to claim 1 including a plurality of removable seats extending transversely across said sections and having opposite ends supported on said side wall reinforcement bars.

5. A sectional boat according to claim 2 including a removable seat extending transversely of said sections across and overlying said front and rear walls.

6. A sectional boat according to claim 2 including a plurality of removable seats extending transversely across said sections and having opposite ends supported on said side wall reinforcement bars.

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