Nov. 1, 1960 J. L. HAXTON ET AL 2,958,306

BOAT

Filed June 29, 1956

Fig. 1.

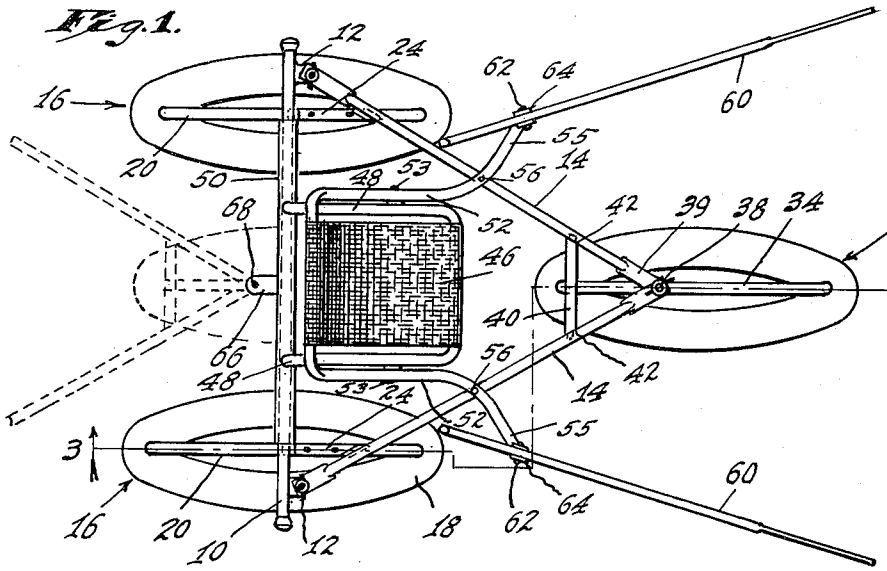


Fig. 2.

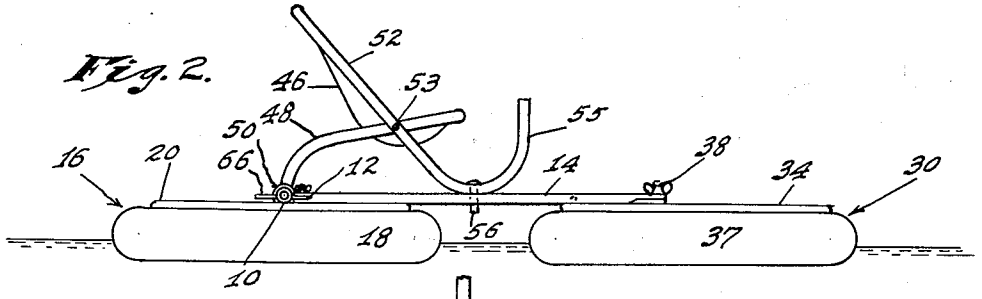


Fig. 3.

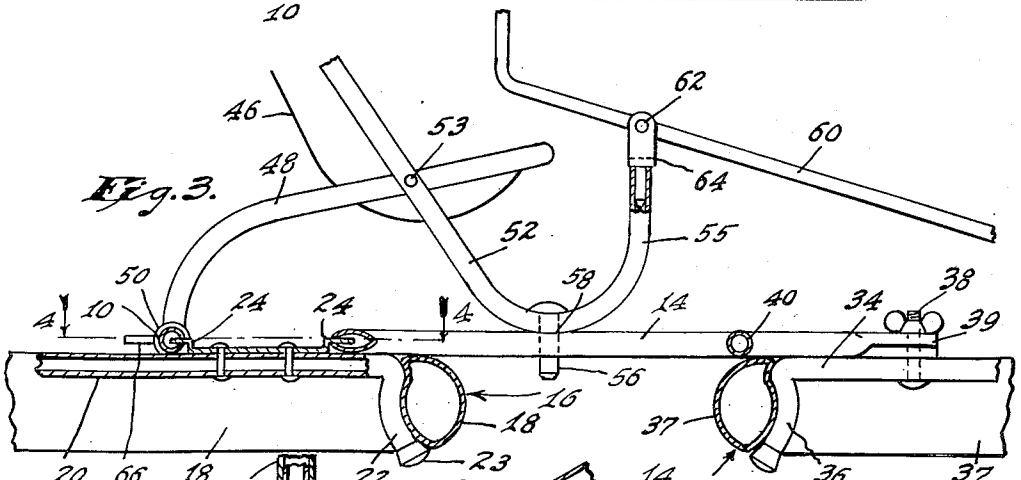
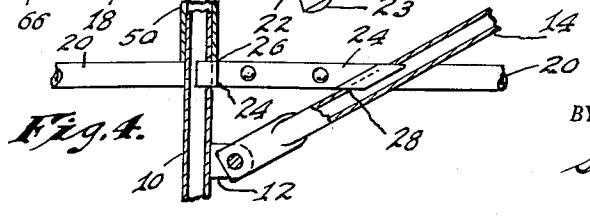


Fig. 4.



INVENTORS
JOHN L. HAXTON and
BY JERRY D. HAXTON,
Schley, Dach & Jenkins
ATTORNEYS

United States Patent Office 2,958,306 Patented Nov. 1, 1960

2,958,306

BOAT

John L. Haxton, 1616 S. Hawthorne Lane, and Jerry D. Haxton, 1614 S. Hawthorne Lane, both of Indianapolis, Ind.

Filed June 29, 1956, Ser. No. 594,729

12 Claims. (Cl. 115—22)

This invention relates to a boat, and more particularly to a collapsible boat.

It has heretofore been the practice in the construction of small light-weight boats either to employ a rigid non-collapsible frame structure mounted on a plurality of rigidly constructed floats, or to employ the use of an inflatable rubberized skin which forms both the buoyant structure and the supporting frame. The former structure has the inherent disadvantage of being non-collapsible, which necessitates the use of special equipment for transporting it on land from one location to another. The rubberized skin type of craft requires large quantities of air or gas for inflation to produce the necessary buoyancy, and has a further disadvantage in that it presents a large surface area in contact with the water making it difficult to maneuver and subjecting it to excessive drifting.

It is the general object of our invention to overcome the disadvantages of the structures referred to above by providing an inexpensive light-weight boat which is highly maneuverable in the water. It is an object of our invention to provide a boat having a collapsible frame structure which can be easily transported in a collapsed condition, and which can be simply and rapidly reassembled.

In accordance with this invention, there is provided a collapsible boat frame preferably having a generally triangular configuration and mounted on a plurality of pontoons interengaging the members of said boat frame to rigidly secure it in an assembled condition. Preferably, a pontoon having a float hanger adapted to receive a float, conveniently an inflated inner tube, is provided at each corner of said frame. One of said pontoons is adapted to engage a hitch on the frame of another boat such that a plurality of said boats may be joined together.

A foldable passenger chair is mounted on the boat frame. One pair of legs on said chair is pivotally connected to one member of the boat frame and the other pair of legs interlock with the other frame members to add further rigidity to the assembled frame structure. Desirably, a pair of oars are connected to the legs of said chair and are operable from said chair for propelling the boat.

The accompanying drawing illustrates our invention. In such drawing:

Fig. 1 is a plan view of a boat embodying our invention and showing in dotted lines a second boat connected thereto;

Fig. 2 is a side elevation of the boat shown in Fig. 1;

Fig. 3 is a longitudinal section taken on the line 3—3 of Fig. 1; and

Fig. 4 is an enlarged section taken on the line 4—4 of Fig. 3 and showing in detail the pontoon-frame mounting.

Desirably, our boat frame has a generally triangular configuration constructed from tubular stock, as shown in Fig. 1. A transversely extending stern member 10 is provided at each of its ends with a forwardly projecting flange 12 forming pivotal connections for joining a pair of diagonal frame members 14 to said stern member.

A pontoon 16 is disposed adjacent each end of the stern member 10. Each of said pontoons has a frame and a float 18, conveniently an inner tube. The pontoon frame is conveniently constructed of tubular stock and has an elongated arm 20 with a hook 22 extending downwardly from each of its ends. The arm 20 is of sufficient length that the float 18 may be placed on the pontoon frame in a deflated or partially deflated condition and then said float may be inflated to give the desired amount of buoyancy. Conveniently, the ends on the hooks 22 are provided with rubber caps 23 to prevent puncturing the float 18 extended around said hooks.

The pontoons are secured to the boat frame by upstanding tongues 24 inserted into notches 26 in the forwardly presented face of the stern member 10 and notches 28 in the inner faces of the diagonals 14. Thus, by engaging the adjacent sides of the frame the pontoons also serve as cross-braces between said sides.

A third pontoon 30 is mounted at the bow of the boat. As shown in Fig. 3, this bow pontoon is of a construction similar to the pontoons 16, having an elongated arm 34 with a downwardly extending hook 36 at each of its ends and a float 37 extended around said hooks. Said pontoon is secured to the boat frame by means of a bolt 38 extending upwardly from the arm 34 and engaging the flattened overlapping ends 39 of the diagonals 14, thus rigidly securing the frame in an assembled relation. A transversely extending cross-brace 40 disposed rearwardly on the arm 34 is received in suitable holes 42 on the inner face of each of the diagonals 14; said brace serving as a foot rest for the boat's occupant and as a further means for interlocking the frame members together.

A chair 46 having a seat and back conveniently made of plastic or canvas fabric is mounted above the boat frame. The seat of the chair is supported by a rearwardly extending U-shaped pair of legs 48 whose ends are fixedly secured to a sleeve 50 rotatably mounted on the stern member 10. The back of the chair is supported on a generally U-shaped pair of legs 52. Said legs extend diagonally downward from the top of the chair back and are pivotally joined to the intersecting pair of legs 50, as by pins 53. The legs 52 are held in fixed position on the diagonals 14 by means of downwardly extending pins 56 received in holes 58 in said diagonals. An extension on each of the legs 52 extends upwardly and outwardly in an arc beyond the pins 56 and terminates at a height substantially level with the chair seat to form oar supports 55.

Conveniently, the boat is propelled by a pair of oars 60. Each oar is pivotally connected, as at 62, to a sleeve 64 rotatably mounted on the terminal upstanding end of the oar supports 55.

As shown in Fig. 1, a plurality of boats embodying our invention may be pivotally secured together. The sleeve 50 is provided with a rearwardly extending flange 66 having an aperture 68 which receives the locking-bolt 38 of another boat. By securing said bolt to the flange 66 the two boats are joined together, and in this manner a chain of boats may be formed with each boat being secured to one preceding it.

One of the principal advantages of our boat structure is its ability to be rapidly disassembled into a compact light weight unit which may be easily transported on land. In disassembling the boat, the oars 60 and their sleeves 64 are removed from the oar supports 55 and the chair legs are lifted, to disengage the pins 56 from the diagonal members 14. The bow pontoon is removed by removing the locking bolt 38 and separating the diagonals 14 to release the brace 40 therefrom. With said diagonals then free to pivot about the flange 12, the stern pontoons are removed by disengaging their upstanding

tongues 24 from the notches 26 and 28 in the frame members 10 and 14. The diagonals 14 are then pivoted rearwardly against the stern member 10, and the oars 60 with their sleeves attached thereto are placed on top of the collapsed boat frame. The floats are deflated and the three pontoons are placed on top of said frame. In this collapsed condition the boat may be carried as a unit using the folded chair assembly as a carrying handle.

While our invention has been described as an oar propelled boat, it is to be understood that it is within the scope of the invention to propel said boat by a motor. The motor may be mounted on a conventional mounting block secured to the stern member 10. It is further within the scope of the invention to make said boat into a sail boat by mounting a sail and retractable keel on the bow pontoon.

We claim as our invention:

1. A boat, comprising a triangularly shaped frame having two of its sides connected to the third side, a chair surmounting and secured to said frame, a pontoon mounted at each corner of said frame, one of said pontoons having a lock-bolt connecting said two sides of said frame for securing said frame in an assembled relationship, each of the other of said pontoons interlockingly engaging said third side and one of said two sides to interconnect and cross-brace the same, and means operable from said chair for propelling said boat.

2. A boat as defined in claim 1 with the addition that said chair has two pairs of legs extending obliquely downward therefrom in intersecting planes, and means pivotally interconnecting said pairs of legs.

3. A boat, comprising a triangularly shaped frame having two of its sides pivotally connected to the third side, a chair surmounting and secured to said frame, a pontoon mounted at each corner of said frame, each of said pontoons including an elongated arm having a hook at each end thereof and a collapsible float supported on said hooks, one of said pontoons having a lock-bolt connecting said two sides of said frame for securing said frame in an assembled relationship, each of the pontoons interlockingly engaging a pair of adjacent frame sides to interconnect and cross-brace the same, and means operable from said chair for propelling said boat.

4. A boat, comprising a triangularly shaped frame having two of its sides pivotally connected to the third side, a chair surmounting and secured to said frame, said chair being pivotally connected to one side of said frame and having supporting means interengaging the other two sides of said frame whereby said chair interconnects and cross-braces the frame sides when the frame is in assembled relationship, a pontoon mounted at each corner of said frame, one of said pontoons having a lock-bolt connecting said first two mentioned sides of said frame for securing said frame in an assembled relationship, and means operable from said chair for propelling said boat.

5. A boat, comprising a triangularly shaped frame having two of its sides pivotally connected to the third side, a chair surmounting and secured to said frame, a pontoon mounted at each corner of said frame, each of said pontoons having tongue members interengaging two adjacent sides of said frame, a lock-bolt on one of said pontoons engaging two sides of said frame for securing said frame in an assembled relationship, and a pair of oars pivotally attached to said chair.

6. A boat, comprising a triangularly shaped frame having two of its sides pivotally connected to the third side, a pontoon mounted at each corner of said frame, each of said pontoons having tongue members interengaging two adjacent sides of said frame, and a lock-bolt for securing said frame in an assembled relationship, said lock-bolt and each of said tongue members releasably interlocking a pair of adjacent frame sides in assembled position.

7. A boat, comprising a triangularly shaped frame having two of its sides connected to the third side, a chair surmounting and secured to said frame, two of the legs on said chair being turned upwardly from said frame to receive a pair of oars, and a pontoon mounted at each corner of said frame, one of said pontoons being secured to the frame by a lock-bolt which secures said frame in assembled relationship, the legs on said chair being interlockingly received in the frame sides to interconnect and cross-brace each of said two frame sides to said third side.

8. A collapsible boat structure, comprising a supporting frame, the sides of said frame being pivotally joined together, a plurality of pontoons supporting said frame and interlockingly engageable with adjacent sides of said frame for securing the frame in an assembled position, a chair mounted on said frame, and means operative from said chair for propelling said boat.

9. A collapsible boat, comprising a supporting frame, the sides of said frame interlocking upon their movement to assembled position, a pontoon mounted at each corner of said frame, each of said pontoons including a generally U-shaped frame and an inflated annulus stretched over said frame, and interlocking means on at least one of said U-shaped frames engageable with said supporting frame for interconnecting at least two adjacent sides of said supporting frame and securing said supporting frame and U-shaped frames in assembled relation.

10. A collapsible boat, comprising a supporting frame, the sides of said frame interlocking upon their movement to assembled position, a collapsible passenger chair on said frame having one pair of legs pivotally connected to said frame and another pair of legs interengaging said frame, a pontoon mounted at each corner of said frame, each of said pontoons including a generally U-shaped frame and an inflated annulus stretched over said frame, and locking means on at least one of said U-shaped frames engageable with said supporting frame for securing said supporting frame and said U-shaped frames in an assembled position.

11. A boat, comprising a frame including a transverse member, a pair of forward members respectively pivoted to said transverse member adjacent its ends and movable to a position in which their forward ends are adapted to be interconnected, a plurality of pontoon frames adapted to receive floats thereon and to support the boat frame, each of said pontoons engaging at least two of said boat-frame members and interlocking therewith whereby said boat frame and pontoon frames are secured in an assembled relation, and a chair surmounting said frame and secured thereto.

12. A boat, comprising a frame including a transverse member, a pair of forward members respectively pivoted to said transverse member adjacent its ends and movable to a position in which their forward ends are adapted to be interconnected, a plurality of pontoon frames adapted to receive floats thereon and to support the boat frame, each of said pontoons engaging at least two of said boat frame members and interlocking therewith whereby said boat frame and pontoon frames are secured in assembled relation, a chair having a pair of legs pivotally mounted on said transverse frame member and another set of legs engageable with said forward frame members when the forward ends of said forward members are moved into position for interconnection.

References Cited in the file of this patent

UNITED STATES PATENTS

2,010,371	Perri	Aug. 6, 1935
2,162,134	Squier	June 13, 1939
2,253,936	Karst	Aug. 26, 1941
2,470,725	Rydner	May 17, 1949
2,495,190	Stewart	Jan. 17, 1950
2,685,270	Pieraccioni	Aug. 3, 1954

FOREIGN PATENTS

199,634	Switzerland	Aug. 31, 1938
958,590	France	Mar. 13, 1950