May 10, 1927. 1,627,876

J. B. WILLIAMS

OVER WATER CRAFT

Filed Aug. 24, 1922 4 Sheets-Sheet 1

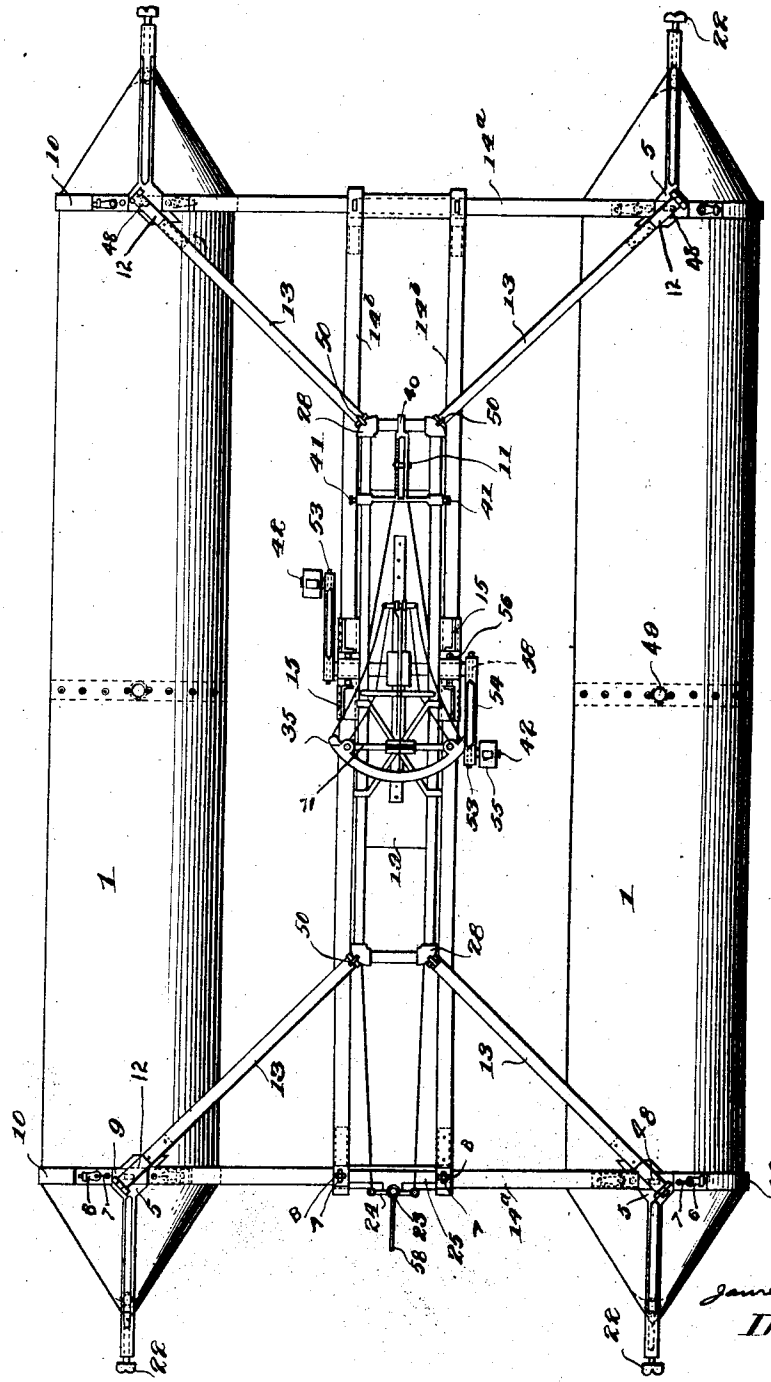


Fig. 1.

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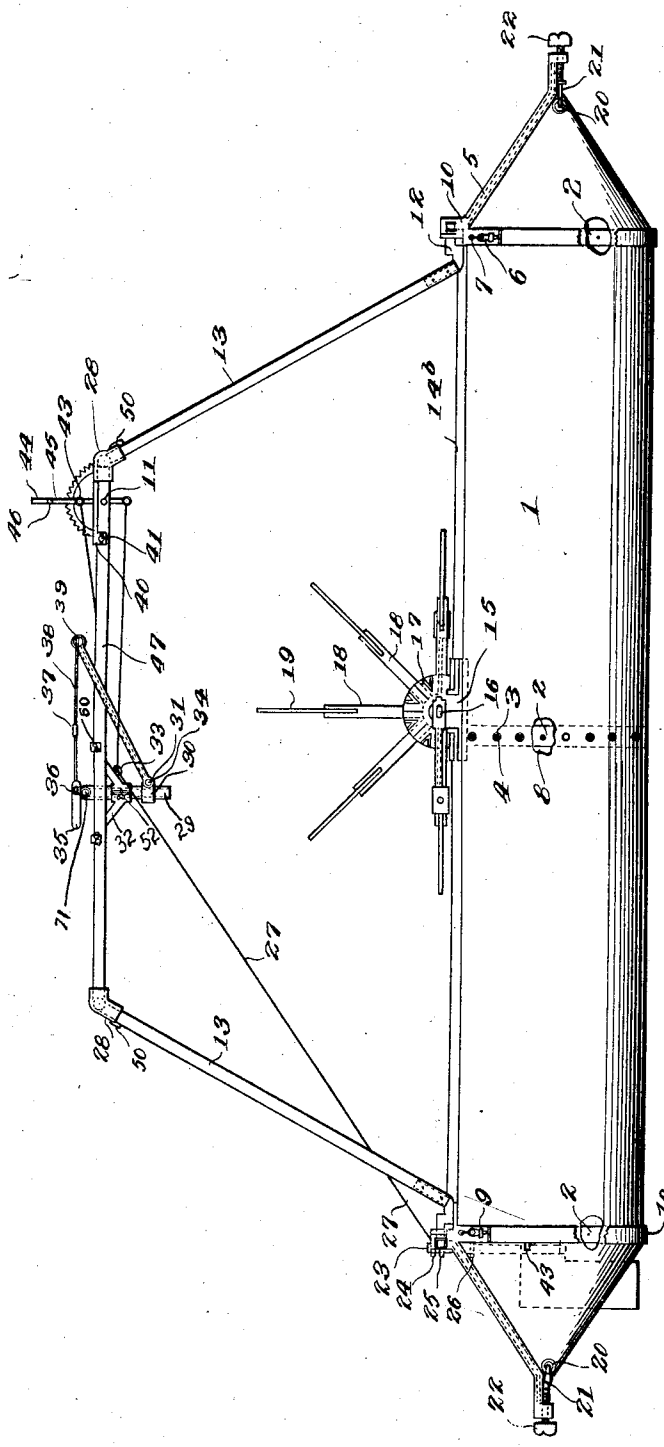


Fig. 2.

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Fig. 3.

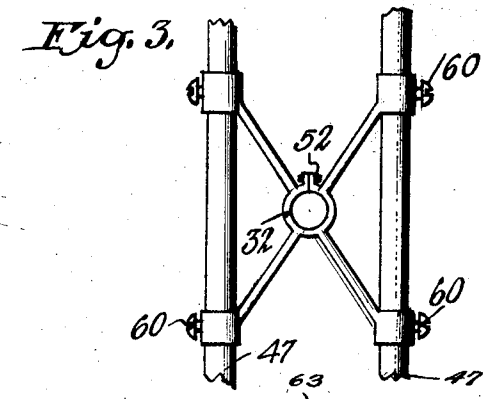
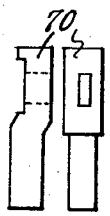


Fig. 14.



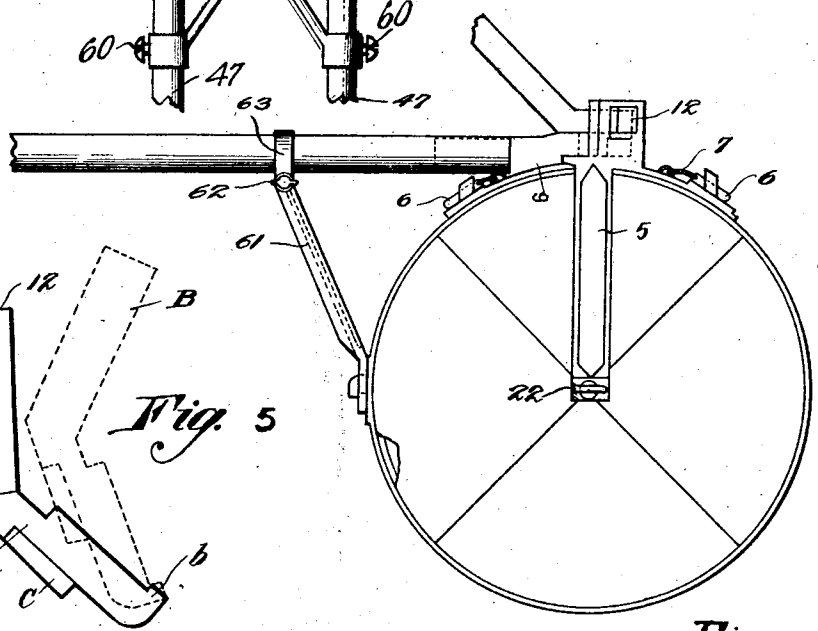


Fig. 4

Fig. 5

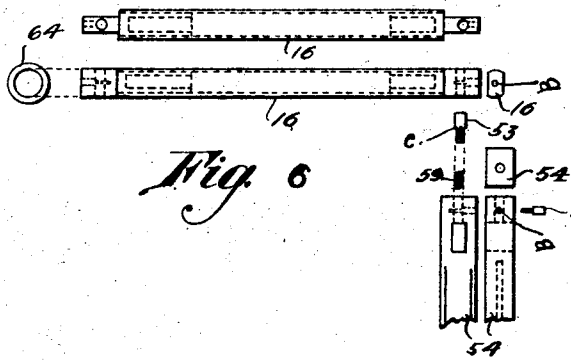


Fig. 6

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OVER WATER CRAFT

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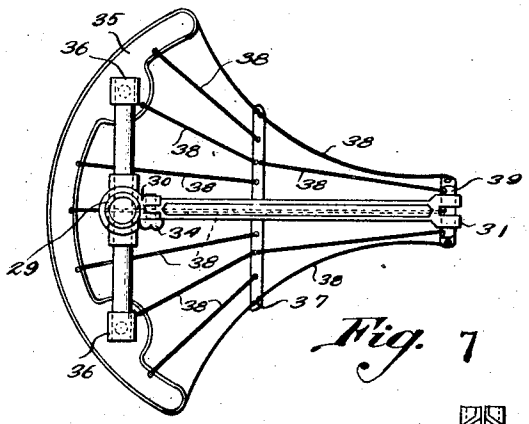


Fig. 7

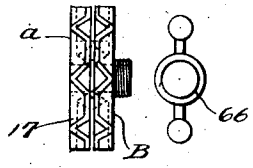


Fig. 8

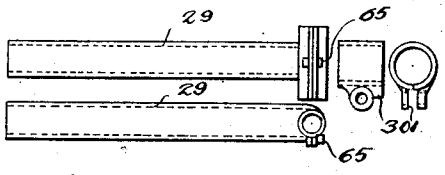


Fig. 9



Fig. 10

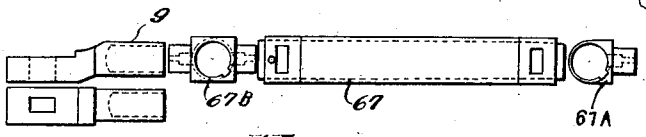


Fig. 11

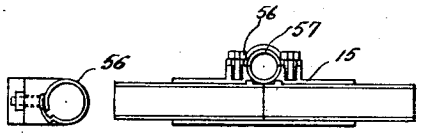


Fig. 12

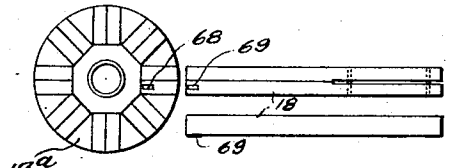


Fig. 13

Inventor:
James B Williams

Patented May 10, 1927. 1,627,876

UNITED STATES PATENT OFFICE.

JAMES B. WILLIAMS, OF TAMPA, FLORIDA.

OVER-WATER CRAFT.

Application filed August 24, 1922. Serial No. 584,008.

The invention relates to water-borne craft of the catamaran type arranged to be propelled by the occupant.

It is an object of the invention to provide a craft of that type having its floats so arranged that they readily and easily may be collapsed and its other parts so formed that they may be disassembled for compact packing for transportation and storage and reassembled to constitute a complete craft ready for use.

When considered in connection with the description herein, the characteristics of the invention are apparent from the accompanying drawings, forming part hereof, wherein an embodiment of the invention is disclosed, for purposes of illustration.

Although the disclosures herein exemplify what now is considered to be a preferable embodiment of the invention, it is to be understood that it is not the intention to be limited necessarily thereto in interpretation of the claims, as modifications and adaptations within the limits of the claims can be made without departing from the nature of the invention.

Like reference-characters refer to corresponding parts in the views of the drawings, of which—

Fig. 1 is a plan view;

Fig. 2 is a side elevation;

Fig. 3 is a plan view of the seat-supporting frame;

Fig. 4 is a fragmentary end elevation;

Fig. 5 is a detail view of one of the separable connections;

Fig. 6 is a view of the paddle-wheel shaft and associated parts;

Fig. 7 is a bottom view of the seat structure;

Fig. 8 is a view of the paddle-wheel hub;

Fig. 9 is a view of the seat-supporting post;

Fig. 10 is a view of the seat-brace;

Fig. 11 is a view of frame-connecting elements;

Fig. 12 is a side elevation of a paddle-wheel shaft journal-box and frame-member connection;

Fig. 13 are detail views of a paddle-wheel hub member and arms associated therewith; and

Fig. 14 are detail views of frame-connecting members.

Two oppositely-disposed floats of the craft are maintained in substantially parallel relation. They are formed of cylindrical members 1, having conical ends, made of any suitable watertight and collapsible fabric secured by rivets or the like 4 to internal ribs 2. They have rings or eyelets 20 at their ends, to each of which is connected a threaded shank 21, having thereon a thumb-nut 22. The shanks extend through the outer end portions of members 5 extending forwardly and rearwardly from saddles, and by turning the thumb-nuts the members 1 are drawn to and maintained in extended condition. Each of the floats has an air-valve 49 to permit inflation and deflation of the members 1. Annular ribs 10 extend around the end portions of the members 1 at the end internal ribs 2.

Saddles, of which the members 5 are parts, rest on the rings 10, which have lugs formed with passageways and extend upwardly through the saddle, to which they are secured by wedges 6 disposed in the lugs.

Transverse tubular end frame members 14^a extend between and are secured to opposite saddles in a manner hereinafter explained. Each of the members 14^a is connected near each of its outer ends to a brace 61 by a split collar 63 and a bolt having a thumb-nut 62, and the other end of each brace is connected to the inner side of a ring 10 by a hook-headed member 61′, which extends through an opening in the brace.

Each of the transverse frame members 14^a has fast thereon a sleeve 67 (as seen in Fig. 11). The front sleeve has fixed thereon near its ends flat top collars 67^a carrying upstanding lugs A, with turn-buttons B, and the rear sleeve has thereon similar collars 67^b with upstanding and depending lugs.

Longitudinal tubular frame members 14^b are connected with the transverse members 14^a by having slotted ends of members 70 thereof resting on the flat top collars 67^a and 67^b engaged with the upstanding lugs A and held thereon by turn-buttons B. The terminal members 70 extend into and are connected permanently with the tubular members 14^b.

Each of the members 14^b is of two parts, which are connected detachably by a sleeve 15. This sleeve carries journal-box parts 56 and 57 containing a collar 64 in which a paddle-wheel shaft 16 is mounted to rotate.

Each end of the shaft 16 is reduced and squared and extends into a slot in a crank-

arm 54. The arm is held on the shaft by a spring 59 in the end portion of the arm held in place by pins 51 and 53 in an opening in the end portion of the shaft. Each crank-arm has a pedal 55 on its outer end.

The paddle-wheel of the craft includes a hub 17 on shaft 16, which carries radially-extending arms 18 having blades 19 thereon. The hub comprises part *a* permanently fixed to the shaft 16 and having an exteriorly-threaded boss *c* extending through the other hub part *b*, the two parts being held together by a nut 66 on the boss. The hub parts hold the arms 18 between them, and each of the arms has a spring catch 69 at its inner end, which engages into a slot in the hub when the arm is inserted and prevents its displacement. The paddle-wheel parts may be disassembled by loosening the nut 66 and withdrawing the arms 18.

Each transverse tubular member 14^a has extending into and permanently connected to it a terminal member 9, by which it is connected detachably with a saddle on the ring 10. Each of the members 9 has a seat into which a lug 48 of the saddle extends, whereby horizontal displacement of the parts is prevented. Each saddle also has an upwardly-extending projection F having a seat arranged to receive the end portion of a terminal member 12, which is inserted into the seat by tilting to the position shown by dotted lines in Fig. 5 and then swung downwardly against the top of terminal member 9, on which it then rests. A shoulder *c* of the member 12 engages a side of member 9. These parts constitute an interlocking corner connection for the frame of the craft, which can be released for disassembly by swinging the members 12 upwardly and withdrawing them from the part F, when the terminal members 9 may be lifted off from the saddle.

The members 12 are the lower terminal portions of corner brace members 13 supporting the upper and seat-carrying frame of the craft. The upper ends of the brace members fit into unions 28 of an upper frame 47, in which they are held by catches 50.

The longitudinal members of the upper frame have slidable thereon a seat-carrying member that includes a central spit sleeve 32 controlled by a thumb-clamp 52. The seat-carrying member is held in place by set-screws 60, and it may be adjusted longitudinally of the frame or removed therefrom after loosening the set-screws.

A seat-supporting post 29 is held and is adjustable vertically in the sleeve 32. A cross member 71 extends through a split sleeve in the upper end of the post, in which it is held by a screw-clamp 65. The cross member has near its ends upstanding bearings or pins 35, by which there is connected to it a rear member 36 of a seat-frame. This frame includes an intermediate cross-strip 37 and wires 38 connected to the parts 36 and 37 and to a front cross member 39. The member 39 extends through the front end of a brace 31, whereby the front portion of the seat frame is supported. The other and lower end of the brace is connected to the post 29 by a split sleeve 30, which may be raised and lowered on the post to alter the tilt of the saddle.

A frame 40, including a longitudinal arm having a hook terminal detachably engaging the front cross member of the frame 47 and a transverse arm held by set screws 41 on the longitudinal members of the top frame, carries a lever 44 swingable on the pivot 11 and arranged to cooperate through part 46 with a rack, whereby the lever may be held in adjusted position. Cables or the like 27 are attached to the lever above and below its pivot, they run on sheaves 33, and one of them is connected to each end portion of an arm 24 attached to the top of a post 23 carrying a rudder-blade 58. The rudder-post is stepped in a top bearing 25 connected to the rear cross member 14^a under the terminals of the longitudinal members 14^b by the upper lugs of parts 67^b and in a brace and bearing 26 supported by the lower lugs of parts 67^b, the rudder-blade being secured to the post by a fastener 43. The structural parts of the craft can be disassembled into comparatively small elements for packing into compact form for storage and transportation. The floats can be removed from the saddles by removing rings 10 and disconnection from the eyes 20. The longitudinal members may be disconnected from the transverse members, and with them come the paddle-wheel, which may be disassembled as hereinbefore explained. The two parts of the longitudinal members may be withdrawn from the sleeves 15. The top frame may be disconnected by withdrawing unions 28 from the braces 13 after release of the fasteners 50, and then the lower terminals 12 may be removed from the saddles and the terminals 9 then lifted off. The seat-carrying member that includes the split collar 32 may be removed from the longitudinal members of the upper frame after loosening of the screws 60, and the parts of the saddle may be disassembled by loosening its several screws and split collars or sleeves. The frame carrying the rudder-lever 44 may be disconnected from the upper frame, and the rudder may be removed from the lower frame.

The seat-frame ordinarily will carry a cushion or the like (not shown), its position with relation to the pedals 55 may be adjusted by longitudinal movement on the upper frame, and its tilt may be adjusted by movement upwardly or downwardly on the seat-post of the rear end of the seat-brace.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A water craft comprising two floats detachably connected in substantially parallel relation by front and rear transverse members, longitudinal members detachably connected to and supported by said transverse members, a paddle-wheel detachably mounted on said longitudinal members, upwardly-extending braces having lower terminals bearing on and holding said transverse members in association with said floats, an upper frame supported by said braces, and a seat on said upper frame.

2. A water craft comprising two floats having saddles on their end portions, an upstanding lug and a member having a seat on each of said saddles, transverse members connecting said floats having seats in their end portions engaging with said lugs, upwardly-extending braces having lower terminals engaged in the seats of said saddle members and bearing on the end portions of said transverse members, and a seat-carrying frame supported by said braces.

3. A water craft comprising two floats detachably connected in substantially parallel relation by front and rear transverse members, two-part longitudinal members detachably connected to and supported by said transverse members, a sleeve connecting the two parts of each of said longitudinal members, a journal-box on each of said sleeves, a shaft rotatable in said journal-boxes, and a paddle-wheel detachably mounted on said shaft.

4. In a water craft including a frame, a float formed of a collapsible fabric casing, and screw-threaded members in said frame connected with ends of said casing and arranged to draw the latter to and maintain it in extended condition.

5. In a water craft, a frame comprising alined ribs and members extending oppositely beyond said ribs, a float formed of a collapsible fabric casing disposed in said ribs and comprising internal ribs near its ends positioned substantially at said frame-ribs when said casing is extended, and means associated with said frame members whereby said float is drawn to and maintained in extended condition.

6. In a water craft, a float comprising a collapsible fabric casing, a frame resting on said float and having members extending beyond the ends thereof, and means on said members whereby said float is drawn to and maintained in extended condition.

7. In a water craft, a float comprising a collapsible fabric casing having internal distention-ribs near its ends, a frame resting on said float and having members extending beyond the ribs thereof, and means on said members whereby said float is drawn to and maintained in extended condition.

In witness whereof I affix my signature.

JAMES B. WILLIAMS.