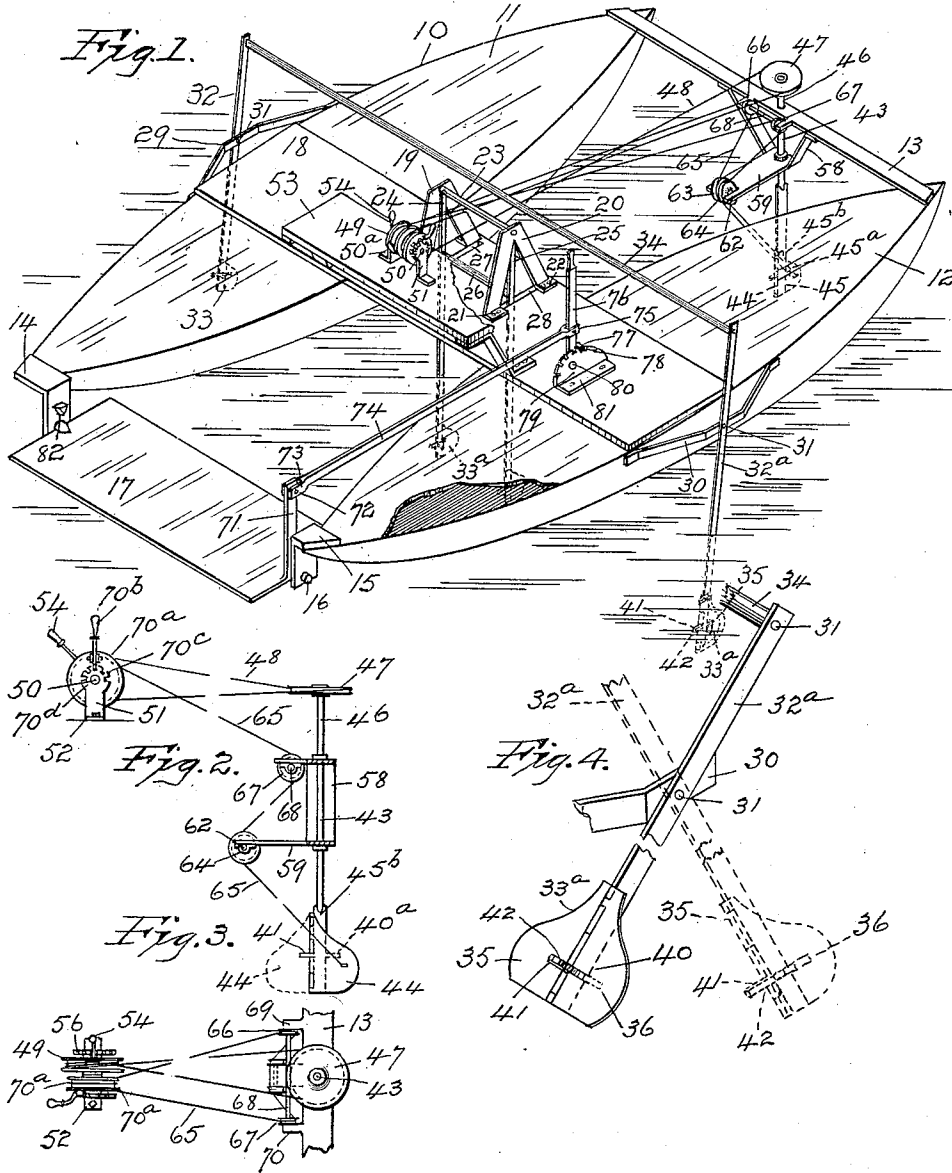


E. J. J. LEBLOND.
LIFE BOAT.
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1,005,563.

Patented Oct. 10, 1911.



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UNITED STATES PATENT OFFICE.

EUGÈNE J. J. LEBLOND, OF NEW YORK, N. Y.

LIFE-BOAT.

1,005,563.

Specification of Letters Patent.

Patented Oct. 10, 1911.

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To all whom it may concern:

Be it known that I, EUGÈNE J. J. LEBLOND, a citizen of the Republic of France, and a resident of New York, county and State of New York, have invented certain new and useful Improvements in Life-Boats, of which the following is a full, clear, and exact specification.

This invention relates to a class of boats or vessels of a type usually known as catamarans adapted to be manually propelled in the water.

My invention has for its primary object to provide a boat which will not sink or capsize when in the water so as to be especially adapted for use in saving the lives of persons, or for pleasure, or other uses in conjunction with boating; and to provide a form of boat which may be propelled with unusual rapidity and is capable of being operated when submerged under the water.

Another object of the invention is to provide means by which the boat may be propelled by separate employment of the feet or hands of the operator, or, if desired, the boat may be propelled by the hands and feet simultaneously.

Still another object of the invention is to provide a form of collapsible propellers, or oars having blades adapted to open when the operating means thereof is used to propel the boat and which will fold, or close in a manner as to relieve all pressure of the water thereon when the propellers are reversely directed.

A further object of the invention is to provide means by the use of which the boat when being propelled may be brought quickly to a standstill in cases of emergency; and furthermore to provide means whereby the boat may be submerged and driven under the water.

With these and other objects in view the invention will be hereinafter more particularly described with reference to the accompanying drawings, which form a part of this specification, and will then be pointed out in the appended claims.

In the drawing, Figure 1 is a perspective view of my improved life boat showing the submerged paddles or propellers in dotted lines and in closed position. Fig. 2 is a side view, partly in section, of the steering and stopping mechanism. Fig. 3 is a top plan view thereof, and Fig. 4 is a detail view showing one of the propellers and its

shaft in working position and illustrating in dotted lines the same propeller in its closed position.

The life boat or catamaran 10 has the usual form of spaced apart parallel arranged air-tight and water-tight hollow hulls or skiffs 11 and 12, which are substantially elliptical in shape and upon the stern or rear ends of said hulls is a cross-brace 13. At the bow or front ends of each of the hulls 11 and 12 is an angle-iron or bracket 14 and 15 provided with free downwardly directed end pieces in each of which is rotatably held the ends of a rod 16 and the center of a board 17 adapted to be swung to any desired angle is connected to said rod.

In approximately the center of the decks of both hulls or skiffs 11 and 12 is a cross-board or platform 18 which may be secured to said decks in any suitable manner. Midway of the top of the platform 18 are two inverted substantially V-shaped brackets or standards 19 and 20 each having a base flange, as 21 and 22, which are bolted or otherwise held to said platform. In the upper ends of the brackets 19 and 20 is journaled a transverse rod or shaft 23 and at the opposite ends of which are held vertical arms 24 and 25 of a swing having a foot-rest 26 held to said vertical arm at a slight distance above the platform 18. The vertical arms 24 and 25 are directed through two slots, as 27 and 28, arranged in the platform 18 so that the backward and forward movement of the swing may be properly guided thereby when swung by the feet of the operator of the boat. The vertical arms 24 and 25 are of sufficient length to extend below the surface of the water and upon the end of each of said arms is provided a collapsible or folding paddle or propeller as will be hereinafter more fully described.

Upon each of the extreme sides of the hulls 11 and 12 and adjacent to the ends of the platforms 18 is arranged a projecting bracket, as 29 and 30, and centrally of each of said brackets is pivoted, as at 31, a vertical shaft or oar bar 32 and 32^a. The shafts or oar bars 32 and 32^a extend below the surface of the water and to each lower end thereof is movably held a foldable paddle or propeller 33 and 33^a. To the upper ends of the vertical shafts or bars 32 and 32^a, and at a suitable distance above the platform 18, are connected the opposed ends of a hand-bar 34 which is adapted to impart a for-

ward and backward movement to the vertical shafts 32 and 32^a and also the propellers 33 and 33^a when said bar is moved by the hands of the operator for propelling the boat.

The paddles or propellers 33 and 33^a may be of any desired shape, form, or material. As shown, each of said propellers preferably consists of two blades 35 and 36 each having a curved edge and a straight edge. The corresponding straight edges of the blades 35 and 36 of each of said propellers are hinged to a rod upon one lengthwise edge of each of the vertical shafts or oars 32 and 32^a, and to avoid the danger of the paddles 33 or 33^a from becoming inoperative by the blades 35 and 36 contacting and clinging together through suction upon each of the opposed faces of vertical shafts or oars approximately midway of the center of said blades is provided a projecting stop-blade 40 and 40^a each having a wide free end against which the blades 35 and 36 are directed when in folded positions. To limit the unfolding or opening of the blades 35 and 36 and retain the same in proper alignment during the working stroke of the paddles when propelling the boat two stops, as 41 and 42, are provided upon the opposed faces of each vertical shaft 32 and 32^a and are disposed in opposite directions to the stop-blades 40 and 40^a substantially centrally of the propeller blades 35 and 36. By this form of construction of the propellers or paddles 33 and 33^a it is evident that the blades thereof will readily close and offer practically no resistance against the water and progress of the boat when the oars 32 and 32^a are moved forward by drawing the hand-bar 34 in a reverse direction.

Between the hulls 11 and 12 of the stern of the boat 10 I provide a form of mechanism adapted to effectually steer the boat and also serve as a means for quickly stopping the movement of the boat especially in emergency cases. The rudder 44 of the steering mechanism 43 is, as indicated, similar to the paddles or propellers 33 and 33^a, having two blades 45 and 45^a of the same shape as the blades 35 and 36. The blades 45 and 45^a are hinged to a tubular shaft 45^b which forms a sleeve within which is rigidly held the lower part of the rudder-rod 46. The upper part of the rudder-rod 46 is directed through an opening centrally of the cross-brace 13 and upon the upper extremity of said rod is a grooved pulley 47. Around the grooved pulley 47 is guided an endless rope or chain 48 which is directed to and around a drum 49 rotatable upon a shaft 50 the ends of which are journaled in the upper part of the standards 50^a and 51 of a bracket 52 held upon a platform 53 which is superimposed upon one transverse edge of the platform 18 to allow free move-

ment of the foot rest 26 thereunder. As shown in Fig. 3, the drum 49 is adapted to be manually operated by a lever 54 pivotally held upon one face of the end of the drum 49, and said lever has a toothed end which engages the teeth of a sprocket 56 formed upon the head of one of the standards 50^a of the bracket 52. It is apparent that by moving the hand-levers 54 the drum 49 will be revolved sufficient distance to guide the rope 48 whereby the rudder 44 will be swung so as to steer the boat in the desired direction.

For the purpose of unfolding or opening both the blades 45 and 45^a simultaneously, in order to quickly stop the movement of the boat when desired a mechanism is provided consisting of a bracket 58 secured upon the underside of the brace 13 and supporting one end of a plate or arm 59 through which is also passed the rudder-rod 46. The opposite end of the plate or arm 59 is cut out and in the shoulders formed thereby are journaled the ends of a shaft 62 upon which are keyed two pulleys 63 and 64. A rope or chain 65 having one end thereof connected to the blade 45 and its other end fastened to the blade 45^a is trained over the pulleys 63 and 64, and guided over pulleys 66 and 67 which are held upon a shaft 68 journaled in arms 69 and 70 formed upon one edge of the cross-brace 13. The rope or chain 65 is then directed to and around a second drum 70^a provided upon the shaft 56. Like the drum 49 the second drum 70^a is adapted to be manually operated by a lever 70^b pivotally held upon one face of the end of the drum, 70^a, and said lever has a toothed end which engages the teeth of a sprocket 70^c formed upon the head 70^d of the standard 51 of the bracket 52. By releasing the lever 70^b from engagement with the teeth of the sprocket 70^c the blades 45 and 45^a will close by the pressure of the water exerted thereupon when the boat is again moved forward and the rudder 44 is normally re-formed for use as a steering medium.

To submerge the boat 10 the front board 17 is provided with a post, as 71, to the upper free end of which is pivotally held, as at 72, the forked end 73 of an operating rod 74 the opposite likewise forked end of which, as at 75, is connected to the lower part of a hand-lever 76. The hand-lever 76 is provided with a lateral tooth 77 adapted to be gripped between the teeth 78 of a segmental bracket 79 to which it is pivotally connected, as at 80, said segmental bracket having a foot-flange 81 which is fastened to the platform 18 in any well-known manner. It is clear that by moving the hand-lever 76 toward the bow of the boat the board 17 will swing upon its supporting rod 16 to an angle whereby it will be directed under the

surface of the water when the boat is in motion and by force of pressure of the water the hulls 11 and 12 will be submerged and may be operated at any desired depth there-
 5 under. To prevent the submerging means from being guided in the wrong direction by limiting the upward movement of the board 17 a stop as 82, is provided upon the bracket 15 and a similar stop is provided
 10 upon the bracket 14.

It is to be understood that changes may be made in the form and the arrangement of the parts forming my improved life-boat and in the manner and place of connecting
 15 said parts without departing from the scope and purpose of my invention, therefore I do not wish to be limited to the particular form herein described and shown.

Having thus described my invention, I
 20 claim as new and desire to secure by Letters Patent:

1. In a life boat of the character de-
 scribed; two hulls; a cross-brace connecting the rear end of the hulls and a central open-
 25 ing therethrough; a platform supported upon the decks of said hulls in approxi-
 mately the center thereof and spacing the same in proper relation to each other; a rudder-rod extending vertically through the
 30 central opening in said rear brace; a rudder arranged upon the extreme end of the rod below the surface of the water and having a sleeve within which said rod is firmly se-
 cured; a horizontal pulley connected to the
 35 upper free end of said rod above the connecting brace; a bracket having one end se-
 cured to the underside of said brace; an arm projecting from said brace; two vertically
 40 disposed pulleys rotatably held at the free end of said arm; two spaced pulleys ar-
 ranged upon a shaft rotatably held upon the front edge of said brace; an endless chain directed over the horizontal pulley; an end-

less chain guided over the vertically disposed pulleys; a superimposed platform provided
 45 upon the platform centrally of the decks of the hulls; a drum rotatably held upon a shaft journaled in a bracket upon the super-
 imposed platform and around which the chain from the horizontal pulley is guided; 50
 a second drum also rotatably held upon the same shaft and around which the chain from said vertical pulleys is directed, the other
 end of said chain being connected to both
 55 blades of the steering rudder; and levers adapted to operate both drums and chains, one of which to steer the boat and the other to open the blades of said rudder for the purpose of stopping the forward movement
 60 of the boat in cases of emergency.

2. In a life-boat of the character de-
 scribed; two hulls; a bracket provided at the front of each of the hulls and having a bearing; a rod journaled in the bearings;
 a board held upon the rod; and means
 65 adapted to adjust said board in an inclined position in the water for the purpose of submerging the boat.

3. In a life-boat of the character de-
 scribed; two hulls; a bracket provided at the
 70 front of each of the hulls and having a bearing; a rod journaled in the bearings, a board held upon the rod; means provided upon the rod and adapted to adjust the hulls in an in-
 75 clined position in the water for the purpose of submerging the boat; a hand lever adapted to operate the submerging means; and means to prevent the submerging means from being guided in the wrong direction.

This specification signed and witnessed
 80 this fifteenth day of September A. D. 1910.

EUGÈNE J. J. LEBLOND.

Witnesses:

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 S. SAHNER.