Sept. 9, 1958 S. P. BOUCHARD, SR 2,850,747

AMPHIBIOUS CATAMARAN

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Fig. 1

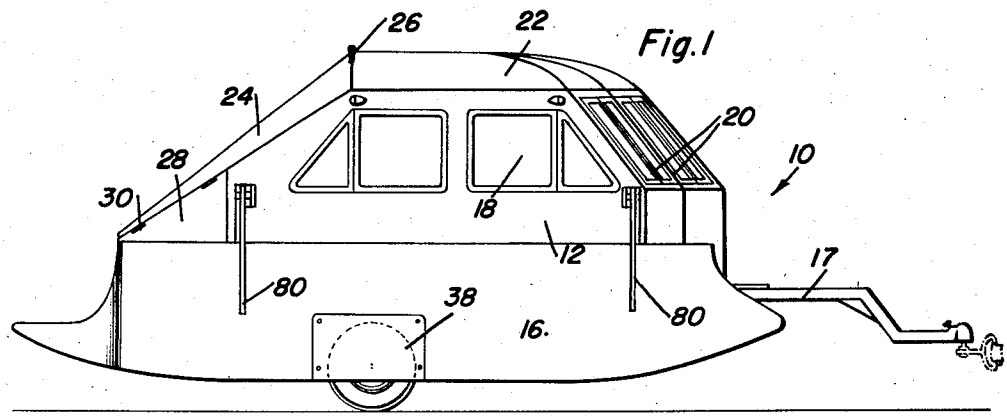
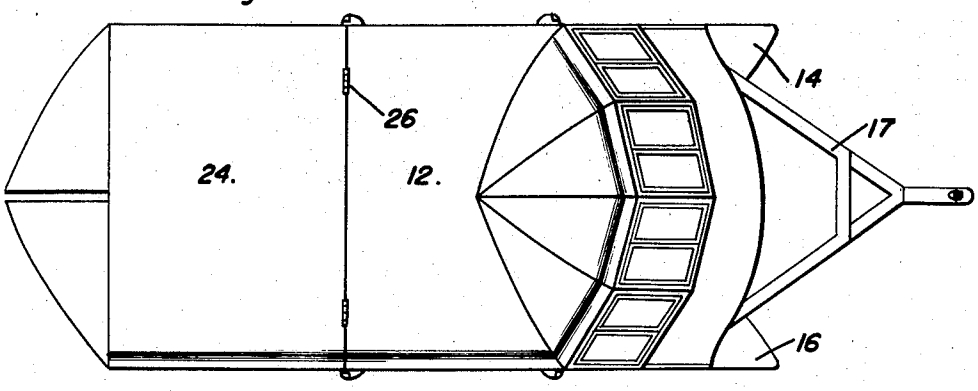


Fig. 2



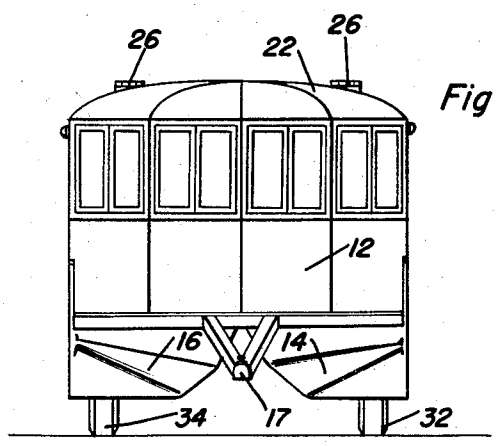


Fig. 3

Stewart P. Bouchard, Sr.
INVENTOR.

BY Clarence A. O'Brien and Harvey B. Jacobson
Attorneys

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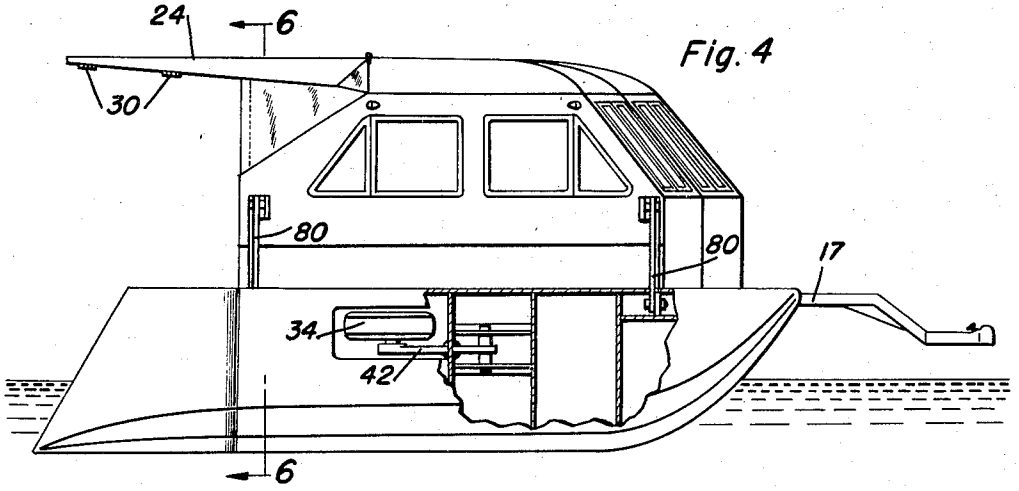


Fig. 4

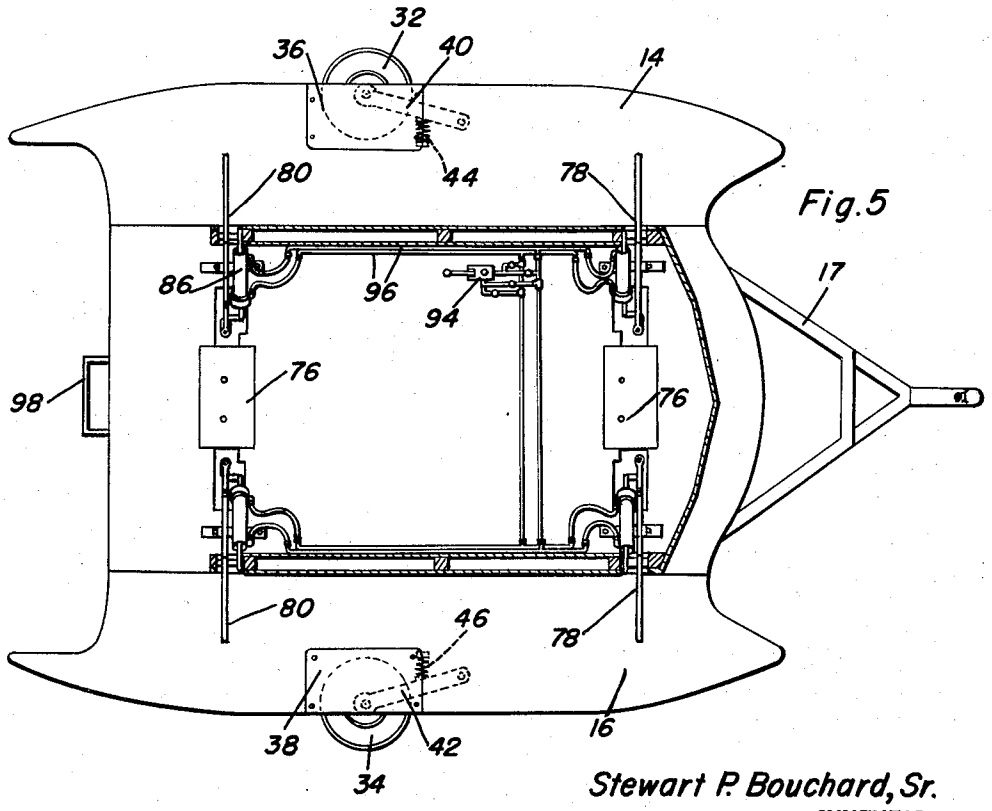


Fig. 5

Stewart P. Bouchard, Sr.
INVENTOR.

BY Clarence A. O'Brien and Harvey B. Jacobson
Attorneys

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Fig. 6

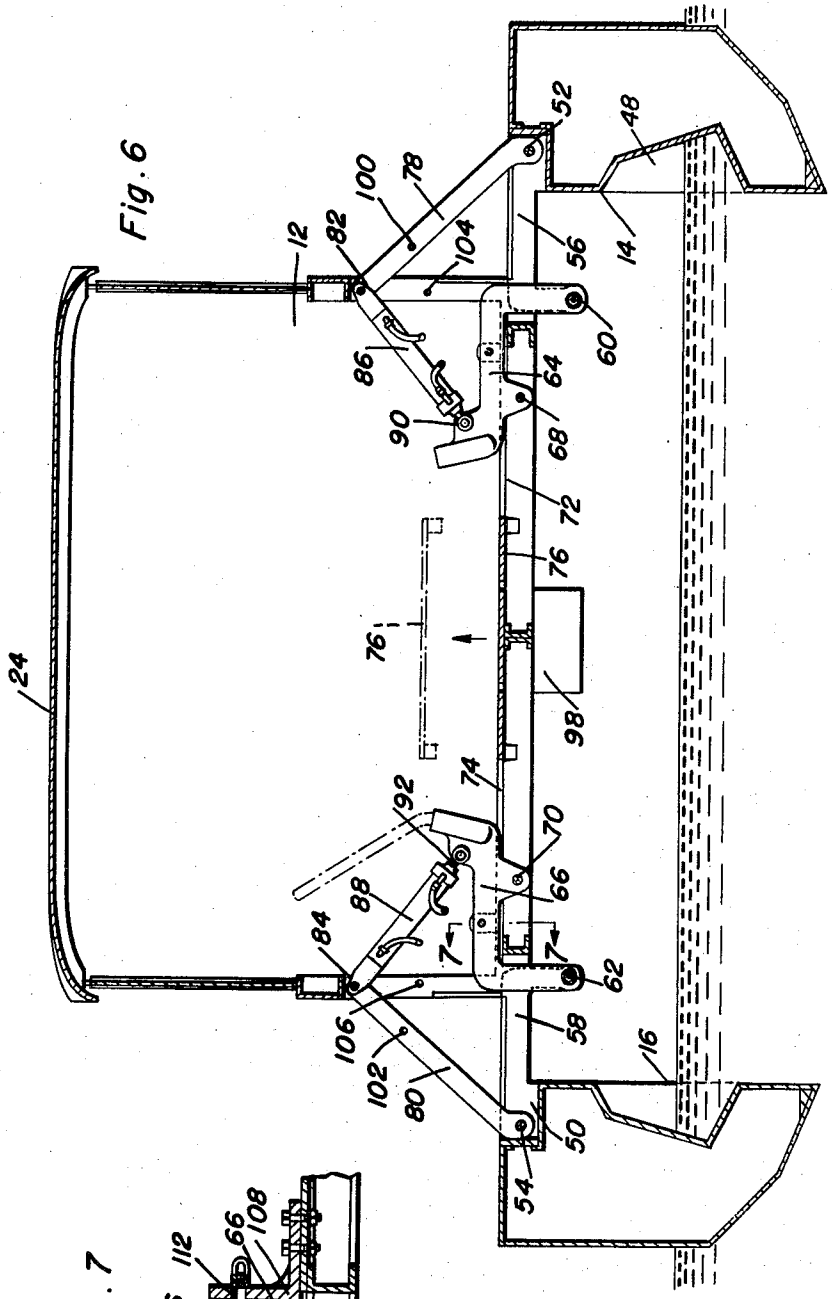
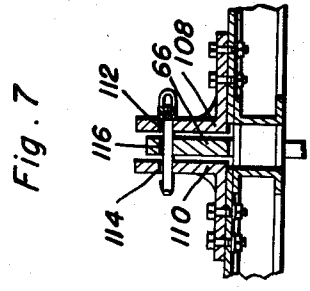


Fig. 7



Stewart P. Bouchard, Sr.
INVENTOR.

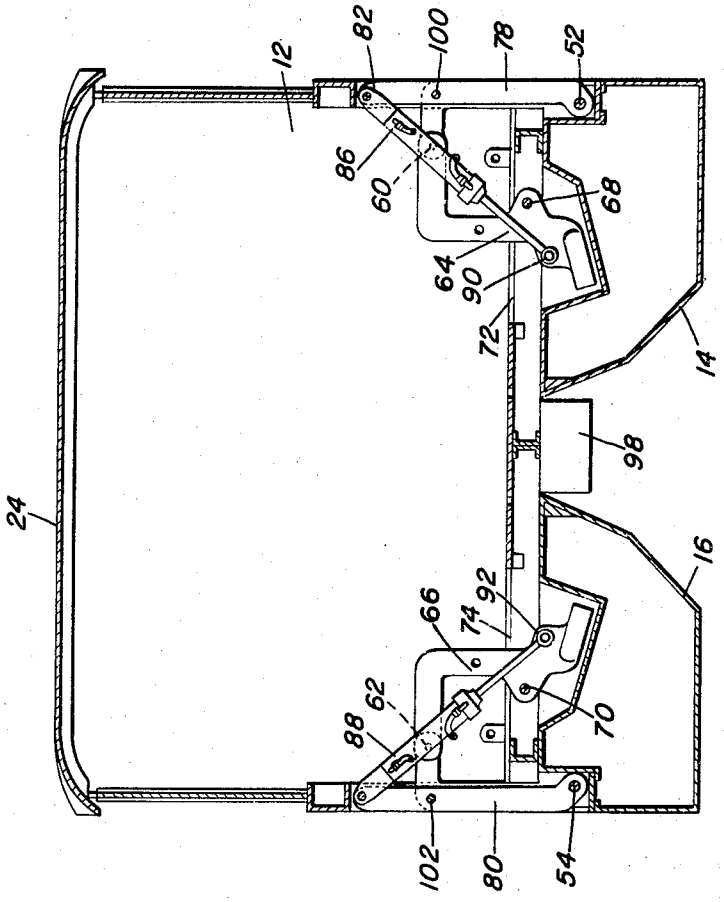
BY Clarence A. O'Brien and Harvey B. Jacobson
Attorneys

Sept. 9, 1958 S. P. BOUCHARD, SR 2,850,747

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Fig. 8



Stewart P. Bouchard, Sr.
INVENTOR.

BY Thomas A. O'Brien and Harvey B. Jacobson
Attorneys

United States Patent Office 2,850,747 Patented Sept. 9, 1958

2,850,747

AMPHIBIOUS CATAMARAN

Stewart P. Bouchard, Sr., Stowe, Vt.

Application July 29, 1954, Serial No. 446,540

3 Claims. (Cl. 9—1)

This invention relates to an amphibious vehicle and more particularly to a novel catamaran which is also adapted for land travel.

The primary object of the present invention resides in the provision of a vehicle adapted for both travel on land and in the water and which includes a pair of floats which are adapted to be locked outwardly of the body of the amphibious catamaran in a manner so as to provide maximum buoyancy and maximum stability.

A further object of the invention resides in the provision of novel hydraulically or manually operated means for moving the floats from a position whereby they are arranged outwardly of the body to and from a position where the floats are mounted beneath the body and in a manner so as to continuously maintain the floats outwardly of the body for a maximum period of time.

Another object of the invention resides in the provision of an amphibious catamaran having a novel convertible roof which can also be used as an awning when the vehicle is being utilized at sea.

Still further objects of this invention reside in the provision of an amphibious catamaran that is strong and durable, simple in construction and manufacture and which is highly pleasing in appearance while being adapted to be readily towed over the highway or to support an outboard motor or the like for propulsion when on water.

These, together with the various ancillary objects and features of the invention which will become apparent as the following description proceeds, are attained by this amphibious catamaran, a preferred embodiment of which has been illustrated in the accompanying drawings, by way of example, wherein:

Figure 1 is a side elevational view of the amphibious catamaran shown in use as a land vehicle;

Figure 2 is a top plan view of the amphibious catamaran;

Figure 3 is a front elevational view of the vehicle comprising the present invention and illustrating the arrangement of the floats when the device is used as a land vehicle;

Figure 4 is a side elevational view of the amphibious catamaran with parts thereof being broken away to show other parts in detail and with the floats lowered for use on water;

Figure 5 is a horizontal sectional view of the invention illustrating the actuating controls for moving the floats;

Figure 6 is a vertical sectional view as taken along the plane of line 6—6 in Figure 4;

Figure 7 is a sectional detail view as taken along the plane of line 7—7 of Figure 6 illustrating the means for locking the floats in their extended position; and

Figure 8 is a vertical sectional view similar to Figure 6, but illustrating the floats in a retracted position.

With continuing reference to the accompanying drawings wherein like reference numerals designate similar parts throughout the various views, reference numeral

10 generally designates the amphibious catamaran comprising the present invention which includes a body 12 having floats 14 and 16 attached thereto in a novel manner. Further attached to the body 12 is a draw bar 17 for use in towing the amphibious vehicle 10 when used as a land vehicle.

The body 12 includes a cabin 18 provided with suitable windows, as at 20 therein and a roof 22. A roof section 24 is hingedly secured to the roof 22 as at 26 and likewise a pair of side members 28 are hingedly attached to the roof section 22 and when the roof section 24 is in a lowered position as is shown in Figure 1, the side portions 28 form a portion of the cabin 18.

Referring now to Figure 4, it will be seen that the roof section 24 may be raised to form an awning for the boat and the side sections 28 may be rotated inwardly and locked by any suitable means beneath the roof section 24 because of the hinge mounting 30.

The floats 14 and 16 carry wheels 32 and 34 which are positioned within housings covered by plates 36 and 38 which may be removed therefrom for access to the wheels 32 and 34. The wheels 32 and 34 are mounted on shafts which in turn are secured to supports 40 and 42 which are spring mounted as at 44 and 46. If desired, shock absorbers, not shown, may be provided.

Referring now more particularly to Figure 6, it will be seen that the floats 14 and 16 are attached in a novel manner to the body 12 so as to be held a considerable distance outwardly of the body 12 for greatest stability of the amphibious catamaran when used on water. The floats 14 and 16 have wells as at 48 and 50 therein and pivotally mounted on pins as at 52 and 54 are L-shaped mounting members 56 and 58 which are pivotally attached as at 60 and 62 to pairs of crank arms 64 and 66 pivotally mounted as at 68 and 70 on the body 12. The body 12 is provided with apertures as at 72 and 74 through which the crank arms can extend and a removable plate 76 may be provided for extending the apertures 72 and 74 as may be necessary.

Also pivotally attached by means of the pins 52 and 54 are links 78 and 80 which are also attached as at 82 and 84 to the body 12. Hydraulic cylinders 86 and 88 are also pivotally attached as at 82 and 84 to the body 12 and the piston rods 90 and 92 actuated thereby are pivotally attached to the crank arms 64 and 66. Hence, actuation of the cylinders 86 and 88 will first rotate the crank arms 64 and 66 so as to cause the pivot points 60 and 62 to trace a path outwardly and upwardly with respect to the position as is shown in Figure 6 thus holding the floats 14 and 16 outwardly until the latter portion of the movement thereof. This is highly advantageous since it maintains the amphibious catamaran with a greater degree of stability during the change-over from sea to land use and from land to sea-going position. A hydraulic control system 94, see Figure 5, is provided and is connected through suitable conduits 96 to the double-ended cylinders 86 and 88 which are arranged in pairs.

On the stern of the body 12 there may be mounted a support 98 for an outboard motor or the like so as to provide propulsion for the amphibious catamaran when used on water.

In order to lock the floats 14 and 16 in each of their positions, the links 78 and 80 are provided with apertures 100 and 102 which align with apertures 104 and 106 in the body 12 and pins are adapted to be positioned therethrough. Locking means is also provided for holding the floats 14 and 16 in their extended position and these include a pair of angle shaped plates 108 and 110 arranged on either side of the crank arms 64 and 66 having apertures as at 112 and 114 therethrough for reception of a pin which also extends through an aperture 116 in the crank arms 64 or 66.

From the foregoing, the construction and operation of the device will be readily understood and further explanation is believed to be unnecessary. However, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the appended claims.

What is claimed as new is as follows:

1. An amphibious catamaran having a body and having a pair of floats with wheels mounted therein in combination with an actuation mechanism, said actuation mechanism including pairs of crank arms pivotally attached to said body, pairs of L-shaped mounting members pivotally attached to said crank arms and said floats, links terminally pivotally attached to said floats and said body, operating means for actuating said crank arms to position said floats relative to said body engaging said crank arms, and locking means for locking said floats in a selected position securing said actuation mechanism against movement from and to said body.

2. The construction of claim 1 wherein said operating means includes sockets in said crank arms, a lever detachably received in said sockets, said body having a deck, said deck having an opening therein through which said lever can pass, and a closure plate removably secured to said deck closing at least a part of said opening.

3. The construction of claim 1 wherein said operating means includes hydraulic cylinders pivotally attached to said body, and piston rods actuated by said cylinders pivotally attached to said crank arms.

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