Aug. 16, 1966 W. W. WINDLE 3,266,067

SECTIONAL BOAT CONSTRUCTION

Filed Feb. 25, 1965 2 Sheets-Sheet 1

FIG. 1

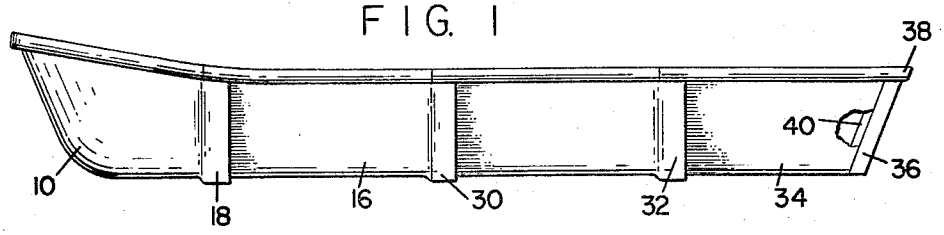


FIG. 2

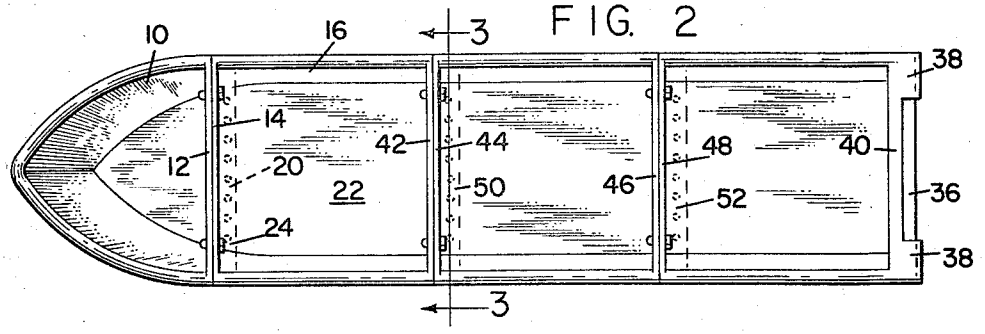


FIG. 3

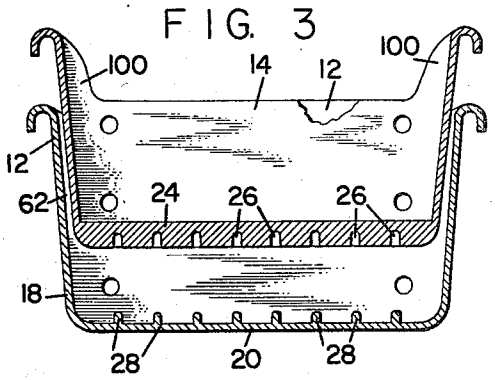


FIG. 4

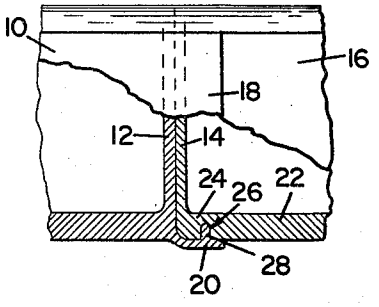
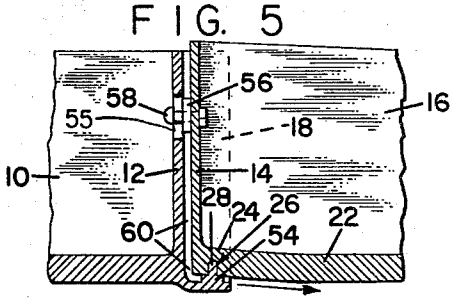


FIG. 5



INVENTOR
WINFRED W. WINDLE

BY Charles R. Fay.
ATTORNEY

Aug. 16, 1966 W. W. WINDLE 3,266,067

SECTIONAL BOAT CONSTRUCTION

Filed Feb. 25, 1965 2 Sheets-Sheet 2

FIG. 7

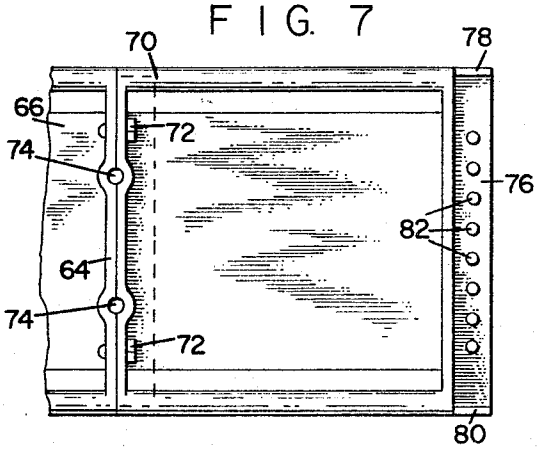


FIG. 6

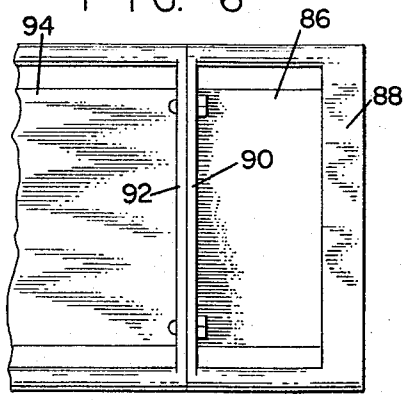


FIG. 8

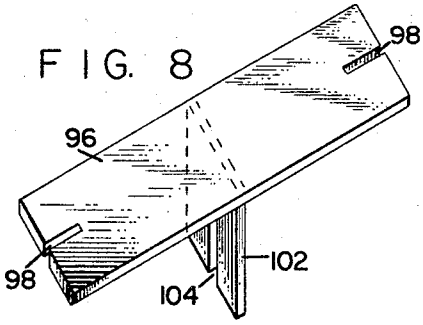


FIG. 9

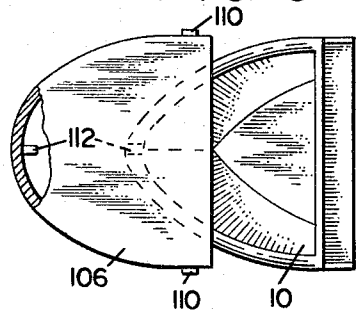
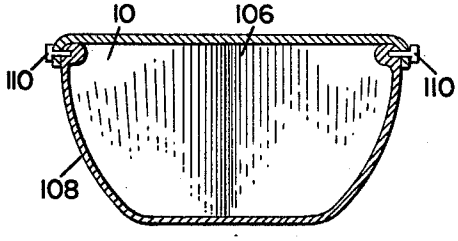


FIG. 10



INVENTOR
WINFRED W. WINDLE

BY Charles R. Joy
ATTORNEY

United States Patent Office 3,266,067 Patented August 16, 1966

3,266,067

SECTIONAL BOAT CONSTRUCTION

Winfred W. Windle, Winwood Road, Sutton, Mass.

Filed Feb. 25, 1965, Ser. No. 435,197
5 Claims. (Cl. 9—2)

This invention relates to new and improved sectional boats. The primary object of the invention resides in the provision of generally box-like parts which are compatible and preferably can be nested and which are adapted to be secured together to form the boat. The parts can be carried separately and the boat can be erected where desired.

Further objects of the invention include a sectional boat as described having a separate bow portion and a separate transom portion, these taking different configurations. For instance the bow portion may have a deck or it may be preferred to assemble the boat not having a deck, or a bow portion can be provided with means for stepping a mast, etc., and the transom section can be assembled for rowing or for an outboard motor, e.g. The owner of these different portions may therefore assemble his boat as he sees fit with the particular bow or transom wanted at the time, the rest of the boat containing as many sections as may be desired to make the boat longer or shorter to suit conditions.

A further important object of the invention resides in the provision of air passages between the different sections so that air is induced in a downward direction and under the bottom of the boat, or at the sides thereof also if this should be desired, the sections of the boat overlapping to provide steps and the air being introduced just at the step, breaking the suction between the step and the surface of the water contacted, so that the boat can be driven a great deal faster with less power, the air curtain acting as a buffer or cushion between the water and the hull of the boat. Also, means is provided for adjusting the degree or vertical height of the step and amount of air which may be thus induced while any desirable or convenient means may be utilized for connecting the parts rigidly together.

Another object of the invention resides in the provision of a special new and improved supplementary transom section which is comparatively short and can be bolted to the rearmost section of the boat for the purpose of mounting the outboard motor in a separate compartment from the rest of the boat, this transom section being usable or not as the owner of the boat may see fit and also acting as a splash well or the like.

Further objects of the invention include the provision of a takeoff bow deck and means for temporarily securing it in position as may be desired, and a similar structure for the transom section of the boat, the differences being that in the transom section of the boat the deck is substantially rectangular, whereas the bow section is shaped to conform to the shape of the bow.

The invention further relates to arrangements and combinations of parts which will be hereinafter described and more particularly set forth in the appended claims.

Reference is to be had to the accompanying drawings in which:

FIG. 1 is a view in side elevation illustrating the new boat;

FIG. 2 is a top plan view thereof;

FIG. 3 is a section on line 3—3 of FIG. 2 but showing the sections of the boat slightly separated for clarity of illustration thereof;

FIG. 4 is a partial section illustrating how the parts of the boat are secured together;

FIG. 5 is a view similar to FIG. 4 showing the air passage and how it may be adjusted;

FIG. 6 is a plan view showing the supplementary transom construction;

FIG. 7 is a plan view illustrating the use of conduits for introducing the air between the sections of the boat;

FIG. 8 is a perspective view of a seat;

FIG. 9 is a view illustrating the sliding bow deck, and

FIG. 10 is a transverse section through the bow showing the deck locked in position.

In carrying out this invention, the various parts of the sectional boat to be described may be made of any suitable material but it is preferred that glass fabrics be used as such materials are lightweight, substantially indestructible, waterproof, vermin-proof, etc. The invention contemplates the use of a plurality of box-like members which may be bolted together to form the main body of the boat, utilizing a similar but prow-shaped bow section together with a supplementary or removable transom section if this should be desired to be used.

All of these members may take many different shapes and forms without departing from the scope of the present invention and it is pointed out that they may be made in different shapes and sizes; the bow may have a deck or a partial deck if desired, or it may be completely open, and it may be provided with means for stepping a mast. A certain section may be provided with a center board and this section can then be inserted in the boat or removed therefrom as may be desired by the user, and the same is true with respect to the transom portion of the boat, and other departures and variations may be made in this case.

One of the main advantages of the present invention resides in the fact that when the sections of the present boat are secured together, a space is provided between the sections although the parts are firmly secured together. This space extends to the bottom of the boat so that a cushion of air is induced to flow in a downward direction toward the bottom of the hull in effect impinging upon the water and lifting the hull from the water. At the points where this happens, the sections of the boat are nested slightly so as to form steps, and the flow of air extends through the steps into the water, breaking the suction at these points, and allowing the boat to be driven as on a cushion of air a great deal faster with less power.

Referring now to FIGS. 1 and 2, there is here shown a boat made of four sections although of course it is clear that any number of sections can be used from one to any maximum number which is desirable. The bow section is indicated at **10** and it will be seen that it comprises the side walls as shown, which form a more or less triangular shaped enclosure, and there is a rear wall at **12**. This rear wall may not be as high as the bow of the boat as will be explained hereinafter but in any event this forms a waterproof bow. The rear wall **12** is adapted to have secured to it the forward wall say **14** of the next following section **16**.

Extending rearwardly from the rear wall of the bow portion there is a partial rim **18** which includes a bottom member **20**. This rim extends about the wall **12** except at the top portion thereof and the forward portion of the succeeding boat section **16** extends into this rim and overlaps it as is perhaps best shown in FIG. 2, these parts being shaped to interfit.

The forward end of the bottom **22** of section **16** is provided with a portion **24** having a series of downwardly opening apertures therein at **26** and these are adapted to fit onto pins or dogs **28** which extend upward from the bottom portion **20** of the extension rim **18**, see particularly FIG. 3. This construction is repeated throughout the boat, see for instance the rim construction at **30** which is similar to that at **18** and **20** and also at **32** which is again similar.

The succeeding sections at **16** are substantially the same except for the fact that the transom section **34** can be as long or as short as is desired to make it, the transom itself being shown at **36**. This transom is removable

somewhat as previously described, being held by means of the projections at **38**, which are on the partition **40**, similar to wall **12**. Bolts can be used to secure the transom to partition **40**. Partitions **14**, **44**, **48** at the forward parts of the sections may be secured in any desired manner to the adjacent rear partitions **16**, **42**, **46**, or the gunwales alone can be connected. The pin and hole construction may extend throughout the boat, see for example reference numerals **50** and **52**.

It will be seen from FIG. 4 that this construction forms a step including the parts **20**, and it is the general purpose of this invention to provide a stream of air which will go downwardly between partitions or walls **12** and **14** and out to the rear over the shelf provided by the bottom member **20**. This construction is repeated throughout the boat.

These passages may be formed by providing spacers or shims such as is indicated at **54** in FIG. 5, so that the bottom **22** of any section is spaced somewhat from the top surface of the adjacent shelf **20**. By the same token, the partitions **12** and **14**, etc. may be separated by the use of washers or spacers **56** on bolts **58**.

As many of these spacers as is necessary may be utilized. A series of holes can be made so that the spacing for the air as described above and as indicated at **60** can be adjusted to the degree desired to provide for a curtain or flow of air according to the direction of the arrow in FIG. 5. This breaks the suction at the step formed by the members **20** and therefore provides that the boat shall go easier and faster. This construction can also be utilized at the sides of the boat in the areas at **18**, **30** and **32** because ordinarily boats of this nature are tapered slightly downwardly as indicated in FIG. 3 and thus any slight separation of the bottom portions as indicated in FIG. 3 will result in a gap as indicated by the reference numeral **62** in FIG. 3.

As an alternative form for this invention, see FIG. 7, the rear partition **64** on a boat section **66** may be firmly and flatly secured to the forward partition **68** on the succeeding boat section **70** by means of conventional bolts **72**, **72**, if the partitions are shaped to provide air passages as at **74**, **74** and otherwise the construction is the same as previously described. These passages lead to widened throats **75**. Also in FIG. 7 as shown the boat section **70** is provided with a rearwardly extending three-part shelf **76**, **78**, **80**, as before described, and has dogs **82**. This construction is the same as that described as for the shelf at **20** and it will be seen that this will provide for a take-apart fixed strong transom which may be inserted in position here and bolted the same as previously described if such should be desired, and therefore the transom can be applied to any section of the entire sectional boat. It is also pointed out that the construction just recited is repeated in the area **84** as to the forward boat portion **66**.

The FIG. 6 showing merely shows a shortened transom portion **86**. It is not intended for a person to sit or stand in the area between the transom **88** and the partition **90** which is secured to the partition **92** of the forward section **94** of the boat. This transom section is merely auxiliary to form a well and in which tools etc. can be placed, together with the gasoline can, etc.

As stated above, the partitions can be of any height desired commensurate with providing a dry boat. If these partitions are of short height, a seat construction as is shown in FIG. 8 may be utilized. The seat is shown in general at **96** and it has slits in the ends **98**, **98** which fit over the side portions **100** (FIG. 3) of the various partitions, holding them together. A support **102** can also be slit as at **104** to fit over the short central portions of the partitions. On the other hand, if the partitions are high, then the seat can be applied to it in any manner desired and the partition itself can be utilized to form a backrest.

As shown in FIGS. 9 and 10, this invention contemplates the provision of a slide-on bow deck which is indicated generally by the reference numeral **106**. This conforms to the shape of the bow at **108** and can be slid over the same as indicated in FIG. 10 to be seated in a position where conventional types of snap-in spring fingers at **110** secure the deck in position. There can of course be as many of these spring connections as may be necessary to be used but in any event the point is that the bow portion **108** can be provided with a takeoff deck and this deck can be of any length desired. The same construction but rectangular in form can be utilized for the transom section if this should be desired. Dog and hole construction can also be used here, as at **112**, if desired or found convenient.

Having thus described my invention and the advantages thereof, I do not wish to be limited to the details herein disclosed, otherwise than as set forth in the claims, but what I claim is:

1. A sectional boat comprising a series of separate sections each of which includes a bottom, a forward wall, a rearward wall, and side walls connecting the same,

means securing and holding in spaced relation at least one of said forward walls with respect to the rearward wall of the next forward section,

said secured walls forming between them a passage for the induction of air to an area at the bottom of the boat, between the sections, the induced air tending to break suction between the bottom and the water as the boat progresses.

2. The sectional boat of claim **1** including a shelf at the bottom of the rearward wall of the boat section that is secured in spaced relation to a following boat section, said shelf extending toward the rear.

3. The sectional boat of claim **1** including a shelf at the bottom of the rearward wall of the boat section that is secured in spaced relation to a following boat section, said shelf extending toward the rear and overlapping the bottom edge of the forward wall of the following section.

4. The sectional boat of claim **1** including a shelf at the bottom of the rearward wall of the boat section that is secured in spaced relation to a following boat section, said shelf extending toward the rear and overlapping the bottom edge of the forward wall of the following section, the means securing the sections including means on the shelf engaging the forward portion of the bottom of the following section.

5. The sectional boat of claim **1** wherein said boat sections are separable.

References Cited by the Examiner

UNITED STATES PATENTS

1,831,697	11/1931	Ziegler	114—67
2,271,338	1/1942	Hamlin	9—2
2,443,768	6/1948	House	9—2
2,518,091	8/1950	Stopkevyc	9—2
2,585,344	2/1952	Plaziak	9—6

MILTON BUCHLER, *Primary Examiner.*

D. NOON, A. H. FARRELL, *Assistant Examiners.*