Aug. 17, 1943. W. H. BUCKNELL 2,327,169

CONCEALMENT DEVICE

Filed Aug. 30, 1941 2 Sheets-Sheet 1

Fig. 1

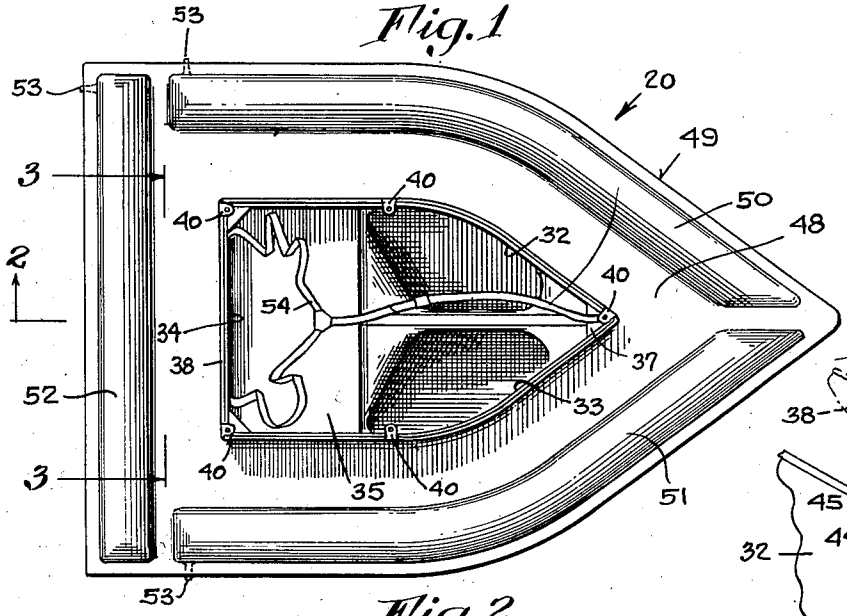


Fig. 4

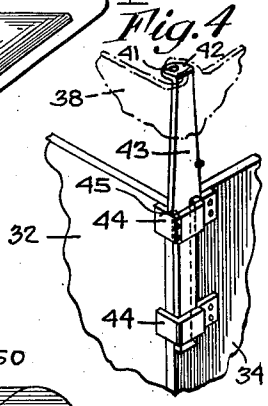


Fig. 2

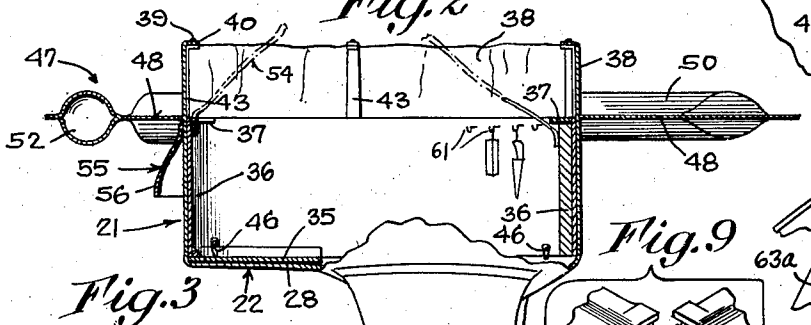


Fig. 3

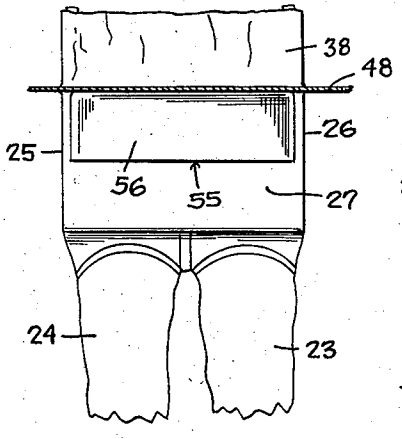


Fig. 9

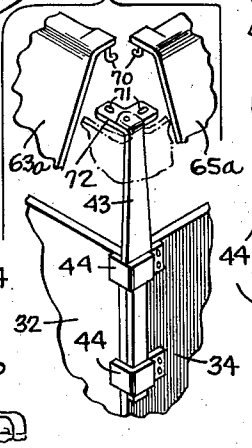
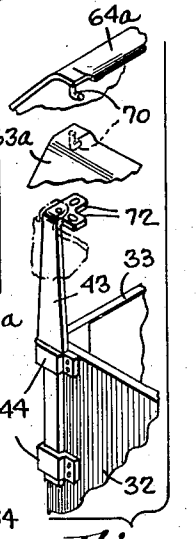


Fig. 10



INVENTOR
William Harlan Bucknell
BY Fegner and Mack
ATTORNEYS

Aug. 17, 1943. W. H. BUCKNELL 2,327,169

CONCEALMENT DEVICE

Filed Aug. 30, 1941 2 Sheets-Sheet 2

Fig. 7

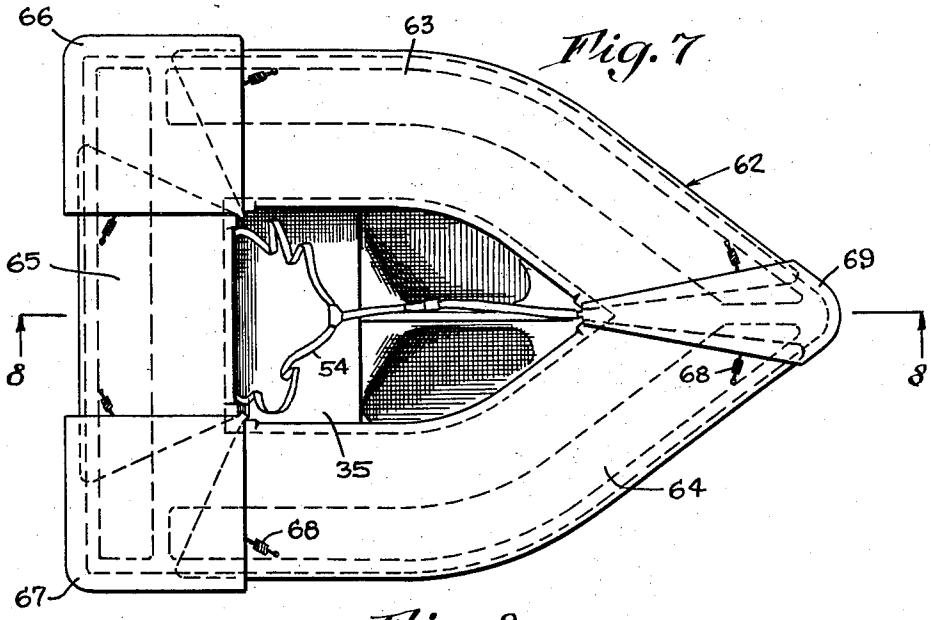


Fig. 8

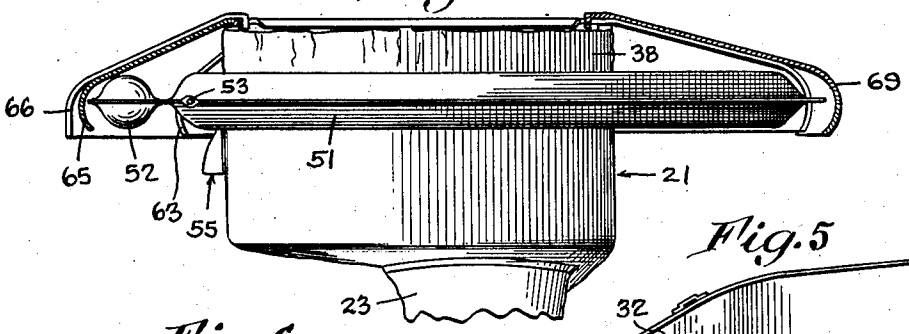


Fig. 5

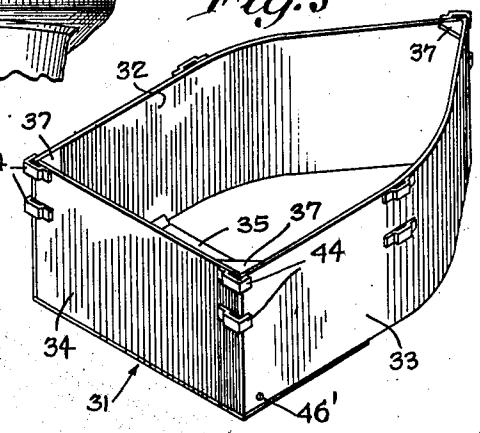
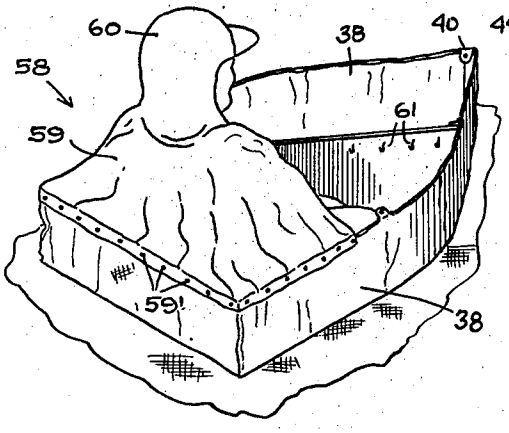


Fig. 6



INVENTOR
William Harlan Bucknell
BY Fryer and Mack
ATTORNEYS

Patented Aug. 17, 1943

2,327,169

UNITED STATES PATENT OFFICE

2,327,169

CONCEALMENT DEVICE

William Harlan Bucknell, Norwalk, Conn., assignor of one-half to Anita R. Bucknell, Norwalk, Conn.

Application August 30, 1941, Serial No. 408,952

14 Claims. (Cl. 9—5)

This invention relates to a concealment device which is particularly adapted for use in water but which may be used on land. This device is related to the one shown in my copending application Serial No. 377,783.

It is an object of this invention to provide a device which will most effectively shield an occupant from view when used in water and yet will be safe, relatively simple in construction, economical to manufacture, easy to transport, and take up a minimum of space in storage.

Other objects of the invention are to provide a concealment device which is adapted for use not only in peacetime pursuits, such as hunting, but also in war.

A feature of the invention resides in the provision of especialy advantageous means enabling the device to be used effectively in rough water even though a relatively small portion of the device projects above the water surface.

Other features of the device reside in the provision of a device having a main body of flexible material in which very effective means are provided for sustaining the flexible body in a predetermined shape and size; in the provision of a device, adapted to float in water, providing a water-excluding section in which a person may be effectively concealed and which has associated therewith air pocket means for stabilizing the device; and in the provision of an easily manipulatable device including protective armor, adapted to substantially conceal a person particularly when used in water, and at the same time permit the person while within the device to move about with ease either on land or in the water.

Other objects and features will hereinafter appear.

In the drawings:

Figure 1 is a top view of the device.

Fig. 2 is a partial sectional view taken substantially on the line 2—2 of Fig. 1.

Fig. 3 is a fragmentary sectional view taken on the line 3—3 of Fig. 1.

Fig. 4 is a fragmentary perspective view of a detail of the supporting unit of the device.

Fig. 5 is a perspective view of the supporting unit structure.

Fig. 6 is a fragmentary perspective view of the device in use.

Fig. 7 is a top view similar to Fig. 1, but showing the device embodying protective armor.

Fig. 8 is a fragmentary partial sectional view of the device taken substantially on the line 8—8 of Fig. 7.

Fig. 9 is a fragmentary exploded perspective view showing a rear corner of a modification of the supporting unit structure and protective armor construction shown in Figs. 7 and 8.

Fig. 10 is a view similar to Fig. 9 but showing the corresponding front corner of the supoprting structure and protective armor construction of that modification.

Before describing the present improvement and mode of operation thereof in detail it should be understood that the invention is not limited to the details of construction and arrangement of parts shown in the accompanying drawings, which are merely illustrative of the present preferred embodiments, since the invention is capable of other embodiments, and the phraseology employed is for the purpose of description and not of limitation.

Referring more particularly to the drawings there is shown in Figs. 1–6 a device 20 embodying one advantageous form of the present invention and adapted to receive an individual for the purpose of concealment. While the device is designed particularly for use in water it may be used on land.

As most clearly illustrated in Figs. 1–3, the device includes a main body 21, advantageously formed of flexible waterproof material, such, for example, as rubber, rubberized fabric or waterproofed canvas, to exclude water and at the same time to permit easy handling and manipulation of the device in use and permit ready collapsing and storage of the device when not in use. To most advantageously receive the individual desiring concealment, the body 21 of the device is constructed to provide a main seating portion 22 in which the individual may sit, and a pair of leg-receiving portions 23 and 24 facilitating movement of the individual in water, particularly shallow water, and on land.

Defining the main seating portion 22 are side walls 25, 26 and 27, and a bottom 28, the side walls and bottom preferably and as shown being designed to provide, when the device is in an open condition for use, a shape simulating that of a flat bottom boat with the side walls 25 and 26 converging forwardly to substantially a point from the side wall 27 constituting the back. Secured to the main seating portion and depending downwardly therefrom at a location spaced forwardly from the back side wall 27, are the leg-receiving portions which, as shown, terminate at their lower ends in boots 29 and 30.

To maintain the main seating portion in an open and noncollapsed condition when in use,

there is provided a supporting unit 31, see Figs. 4 and 5 in particular, preferably including side walls 32, 33 and 34 of a height corresponding to the height of the side walls 25, 26 and 27 of the main seating portion and disposed and shaped to provide the boatlike configuration above described. Advantageously a seat 35 is embodied in the supporting unit 31 and serves not only to prevent a bagging of the bottom 20 of the main seating portion when an individual is seated therein, but also to rigidify and aid in the shaping of the supporting unit as a whole.

As shown, the supporting sides 32, 33 and 34 and seat 35 of the supporting unit may be formed respectively of separate pieces of light but strong wood, such as plywood, suitably secured together at their meeting edges by nailing strips 36 and corner inserts 37. However, it is to be understood that other constructions and other means of assembly may be utilized in the formation of the supporting unit.

It is of particular importance that the body 21, including the main seating portion, which is maintained open in a predetermined shape by the supporting unit 31, and the leg-receiving portions, which are collapsed somewhat about the legs of the individual by water pressure when the device is employed to sustain an individual in water, preferably is so designed and proportioned that it will displace only slightly more than sufficient water to support the weight of an average individual and his equipment, with the upper portion of the side walls 25, 26 and 27 substantially level with the surface of the water and with the remaining portions of the body 21 wholly submerged.

As a further means of concealment, there is advantageously embodied in the device an upward extension 38 which, as shown, is preferably formed of the same flexible material as the side walls of the main seating portion and provides in effect a peripheral continuation thereof. Advantageously, fastening means, such as separable fasteners 39, may be secured to tabs 40 located along the upper edge of the extension 38, adapted to cooperate with complementary fasteners 41 secured to laterally offset fingers 42 on the upper ends of struts 43 carried at peripherally spaced points around the sides of the supporting unit 31 to maintain the extension 38 and the side walls of the main seating portion in an extended upward position.

A convenient manner of associating the struts 43 and the supporting unit 31 in such a way that they become, in effect, a part thereof, is shown as involving the securing of pairs of aligned brackets 44 to the side walls 25, 26 and 27 adjacent the two rear and one forward meeting edges thereof, and adjacent the points where the side walls 25 and 26 begin to converge forwardly. Shoulders 45 formed on the respective struts 43 and adapted to overlie and engage the upper side of the top bracket in each pair serve to arrest downward movement of the struts relative to the supporting unit, and the connected material of the main seating portion and of the extension serves to prevent the struts being pulled upwardly out of the brackets. Tie straps 46 adapted to pass through holes 46' in the supporting unit, may be and preferably as shown, are provided for securing the latter relative to the bottom of the main seating portion.

Also of importance, there is embodied in the device 20 as a means for aiding in the support of camouflaging and/or protective material around the main body 21, and particularly as a means for preventing the entrance of water over the top of the very low-floating seating portion and extension should the surface of the water be rough or uneven, and as a means for stabilizing the device, a special means 47 including a weblike annulus 48 of flexible material, such as used in the construction of the main body 21, connected to the main seating portion on a line intermediate the top of the side walls 25, 26 and 27 and the bottom of the extension 31. Adapted to support the outer portions of this weblike annulus, which preferably is shaped to correspond with the shape of the main seating portion, is a float means 49 advantageously formed in a plurality of separate units 50, 51 and 52, one unit being spaced outwardly from each of the converging side walls 25 and 26 and the other unit being spaced outwardly from the back side wall 27.

With this construction, any one of the float units 50, 51 or 52, which are connected to each other and to the main body 21 of the device by the flexible weblike annulus 48, may rise and fall with waves at the water surface independently of each other or of the main body. This action of the special means 47 as a unit in rising and falling with uneven water at the surface and especially the substantially independent action of the several float units 50, 51 and 52, not only serves to stabilize the device as a whole but also to prevent waves from splashing over and into the main seating portion where the occupant is located.

Moreover, the float supported weblike annulus provides a safety means capable of sustaining the main body of the device should it later become overloaded or full of water, and, in addition, provides a shelf where camouflaging material such as branches, leaves, netting and the like may be disposed about the device to thus cause the same to substantially blend with the surface of the water and the surrounding country.

While preferably and as shown, the respective float units involve defined inflatable sections adjacent to the outer marginal portions of the weblike annulus, which may be specially treated to prevent the escape of air or other gas therefrom, it is recognized that float units of other constructions, as of cork, may be utilized. Inflatable units were illustrated because of the minimum weight thereof and because of the fact that when deflated they occupy a minimum of space. As shown, separate valves 53 of any suitable and conventional kind may be associated with each of the units to facilitate inflation of the same.

In using the device, an individual merely steps into the leg-receiving portions 23 and 24, locating his feet in the boots, and then pulls up the main seating portion 22 to a position where harness straps 54 may be fitted over his shoulders. As shown, this harness, which may be adjustable to the size of the particular person using the same, is secured, as by any suitable means, to the supporting unit.

With the device thus supported on the user by the harness he may walk about easily on land and into the water. When the device has been moved into water of a depth sufficient to float the same, the harness may be released from the shoulders and the occupant may sit down in the device with his legs extending downwardly into the portions 23 and 24.

To stabilize the device and cause the main seating portion thereof to float evenly in the water

when the occupant sits backwardly therein, there preferably is provided a supplemental buoying means 55 at the rear side of the body 21 below the weblike annulus 31. This means may be formed by an inflatable unit, for example of the nature of the unit 52, or as shown, by securing a strip 56 of preferably flexible waterproof material, as by stitching or cement, along its upper and side marginal edges to the back wall 27 of the seating portion, leaving the bottom marginal edge loose and unsecured. With this construction a pocket is formed which will hold air, the air being held against escape from the pocket by the water pressure against the open bottom thereof.

Also, advantageously and as shown, to enable adjustment of the total weight supported by the device and thus cause the main body thereof to displace approximately a predetermined quantity of water when used by persons of different weight and/or by persons with equipment of different weight, and to enable a further stabilization of the device particularly upon normal movement of the legs, removable weights in the form of inner sole inserts 57 may be provided for insertion in the boots 29 and 30. Thus, when a device is selected for use, special inserts 57 of different weight may be provided depending upon the weight of the particular individual and/or of his equipment.

The shape of the device, as explained above, simulates that of a boat and hence it may easily be moved about in the water by a paddle, a stick, the hands of the occupant or by any other suitable and convenient means.

When the occupant bends forward, it will be appreciated, he is concealed by the float units 50, 51 and 52, and the extension 31, and chiefly by the portion of the device which is substantially entirely submerged in the water. If desired a concealment unit including a spray and concealment hood 59 suitably secured as by fasteners 59′ to the back and side portions of the extension, and a head and neck covering hood 60, may be utilized. Any convenient means such as straps or the like may be provided for securing the hood 59 to the back or shoulders of the person using the same.

It is to be noted that the main seating portion provides ample room for a gun or other equipment the particular user may wish to have with him. Hooks 61 or other supporting means may be conveniently disposed about the inside of the unit 31 for locating various articles the occupant might wish to use.

In Figs. 7 and 8, the device shown in Figs. 1–6 is shown as especially adapted for use in combat, as in war. To that end protective armor 62 is provided to shield those portions of the device which project above the surface of the water, although it also may be provided to shield submerged portions of the device. In the form illustrated this armor 62 provides a protective annulus extending laterally from the upper portion of the extension 38 to and over the outer margin of the float means 49 and weblike connecting section 48.

In order that the several functions of the float and weblike means, including the stabilizing of the device, the compensating for uneven water at the surface, and the preventing of uneven water at the surface from flowing over and into the main body of the device, may not be impaired in an appreciable or substantial manner, the protective armor advantageously is constructed in a plurality of main sections 63, 64 and 65 adapted to extend respectively from the two forwardly converging sides 25 and 26 and the back 27 of the main body 21. Overlying adjacent marginal portions at the rear of the sections 63 and 64 and at the ends of the section 65 are rear corner sections 66 and 67 which preferably are flexibly connected, as by springs 68, to the main sections 63 and 65, and 64 and 65 lapped thereby. Overlying the adjacent forward marginal portions of the main sections 63 and 64 is a forward corner section 69 which, similarly to the rear corner sections 66 and 67, preferably is flexibly connected to the main sections 63 and 64 lapped thereby.

As shown best in Fig. 8, the upper margins of the armor sections 63, 64 and 65 are turned downwardly, except adjacent the ends thereof, so as to hook over and be supported by the upper edge of the body extension 38. Also, preferably the rear corner sections 66 and 67 and the forward corner section 69, are formed with hooked portions respectively adapted to hook over the two rear corners and the forward corner at the top of the body extension 38. The lower or outer margins of the main sections 63, 64 and 65, as shown, are curved around the outer margins of the float and weblike means, and the corresponding margins of the corner sections are curved in a similar manner.

With the foregoing construction it will be appreciated that while the protective armor is effectively maintained in position, the desired independent movement of the several float units relative to each other, nevertheless, is permitted.

A modified arrangement for mounting protective armor relative to the main body of the device is illustrated in Figs. 9–10. There hooklike pins 70 are provided adjacent the ends of the respective armor sections 63*a*, 64*a* and 65*a* adapted to fit in elongated slots 71 formed in the ends of angle shaped carrying pieces 72 associated with the upper ends of the supporting unit struts 43. The relation and construction of adjacent armor sections 63*a* and 65*a* at the rear of the device is shown in Fig. 9, while the relation and construction of adjacent armor sections 63*a* and 64*a* at the forward end of the device is shown in Fig. 10. It will be appreciated that the relation and construction of the sections 64*a* and 65*a* at the rear of the device corresponds to that of the sections 63*a* and 65*a*, and that corner sections like the corner sections 66, 67 and 69 shown in Figs. 7–8 will be provided to lap adjacent marginal portions of the main sections and will be associated with the main sections and with the device as a whole in a manner corresponding to the illustration in those figures. Advantageously, the hooked portions of the corner sections may be hooked over the inner V portions of the angle shaped carrying pieces 72.

With the modified armor plate mounting and construction, which apart from the details described immediately above is the same as that shown in Figs. 7–8, it is seen that a more substantial support is provided for the main armor sections while at the same time pivotal and limited sliding movement of the main armor sections relative to each other and to the main body of the device is permitted by the pin and slot connection provided by the hooklike pins 70 and elongated slots 71.

Variations and modifications may be made within the scope of this invention and portions of the improvements may be used without others.

Having thus described the invention, what is claimed as new is:

1. In a device of the character described, the combination of a body adapted to receive an occupant, having a main seating portion with a bottom and with a pair of forwardly located flexible leg-receiving portions extending therefrom; flexible weblike means extending laterally outwardly from said body; and a plurality of separate float means disposed about and spaced laterally from said body, said float means being flexibly connected to each other and to said body by said weblike means, said body extending below said weblike means and said body extending below said weblike means being proportioned to alone support the occupant in water, whereby said float means are adapted to raise and lower said weblike extension independently of said body.

2. In a device of the character described, the combination of a body adapted to receive an occupant, having a main seating portion with side and bottom walls and with a pair of flexible leg-receiving portions extending therefrom, said body being proportioned to alone support the occupant in water; flexible weblike means extending outwardly from and connected to said body perimetrically thereof, said body extending below said weblike means; float means spaced laterally from said body and connected to said weblike means; and means on said body, back of said seating portion and below said weblike means for providing compensating and equalizing float support for that part of the body when the occupant sits in the seating portion with his legs in the leg-receiving portions.

3. In a device of the character described, the combination of a body adapted to receive an occupant; flexible weblike means extending laterally outwardly from and peripherally of said body; and a plurality of separate float means disposed about and spaced laterally from said body, said float means being flexibly connected to each other and to said body by said weblike means and said body extending below said float means and said weblike means.

4. In a device of the character described, the combination of a baglike body of flexible material, having side and bottom portions and adapted to receive an occupant; an extension on said body, adapted to extend upwardly from and providing a continuation of the side portions of said body; supporting means for maintaining said side portions in a laterally spread condition relative to each other and in a supported condition extending upwardly relative said bottom portion; a seating section associated with said supporting means and overlying said bottom portion; flexible weblike means extending laterally outwardly from said body intermediate said side portions and said extension; and float means disposed about said body, and spaced laterally from and connected to said body by said weblike means.

5. In a device of the character described, the combination of a water-excluding body adapted to receive an occupant, having a main seating portion with side walls and with a pair of forwardly located flexible leg-receiving portions extending therefrom, said body being proportioned to alone support the occupant in water; a peripheral upward extension connected to and forming a continuation of said side walls; flexible weblike means extending outwardly from and connected to said body intermediate said side walls and said extension; float means spaced laterally from said body and connected to said weblike means; and pocket means having an open bottom, on the outside of said body, back of said seating portion and below said weblike means, for providing compensating and equalizing float support for that part of the body when the occupant sits in the seating portion with his legs in the leg-receiving portions.

6. In a device of the character described, the combination of a baglike body of flexible material, having a main seating portion with a bottom and side walls and with forwardly located leg-receiving portions, said body being proportioned to alone support the occupant in water; a peripheral upward extension, connected to said side walls of the main seating portion; supporting means for maintaining said side walls in a laterally spread condition relative to each other and in a supported condition extending upwardly relative to said bottom; a seat associated with said supporting means rearwardly of said leg-receiving portions and overlying said bottom; flexible weblike means extending laterally outwardly from and connected to said body intermediate said side walls and said upward extension; and float means disposed around and spaced laterally outward from said body, connected to said weblike means.

7. In a device of the character described, the combination of a body adapted to receive an occupant, having a main seating portion with laterally opposed side walls converging relative to each other forwardly from a rear side wall; a pair of forwardly located leg-receiving portions of flexible material extending from said main seating portion, having bootlike foot-receiving closures on the ends thereof, said body being proportioned to alone support the occupant in water; a peripheral upward extension, connected to said side walls; flexible weblike means extending outwardly from and connected to said body intermediate said side walls and said extension; separate float means respectively spaced laterally outward from said opposed side walls and said rear side wall, connected to said weblike means; and weight means in said bootlike closures, adapted to adjust the total weight of the device to compensate for occupants of different weight, within certain limits, and cause the device to displace approximately a predetermined quantity of water when used by different occupants.

8. In a device of the character described, the combination of a water-excluding body adapted to receive an individual, having a main seating portion with side walls, and having a leg-receiving portion, said body being proportioned to alone support the individual in water; a peripheral upward extension connected to and forming a continuation of said side walls; float means disposed peripherally of and spaced laterally outward from said body; and flexible weblike means disposed peripherally of said body, connected to said float means, and connected to said body intermediate said side walls and said upward extension.

9. In a device of the character described, the combination of a body adapted to receive an occupant, having a main seating portion with side walls and having a pair of forwardly located flexible leg-receiving portions extending therefrom; a peripheral upward extension, connected to the side walls of the main seating portion; float means disposed around and spaced laterally outwardly from said body; flexible means extending from said body and connected to said float means; and protective means disposed peripherally of said body and extending laterally from the upper por-

tion of said extension to a position overlying said float means.

10. In a device of the character described, the combination of a baglike body of flexible material, adapted to receive an occupant, having a main seating portion with a bottom and side walls and with a pair of leg-receiving portions depending from adjacent the forward part thereof; a peripheral upward extension of flexible material, connected to said side walls; flexible weblike means disposed peripherally of said body and extending outwardly therefrom intermediate said side walls and said extension; a plurality of separate float means disposed peripherally of and spaced outwardly laterally from said body, connected to said weblike means; protective means with inner and outer portions, having flexibly connected sections disposed peripherally of and extending outwardly from the upper portion of said extension, the outer portion of said protective means being supported by said float means; and means for maintaining said side walls and said extension against collapsing and for supporting the inner portion of said protective means.

11. In a device of the character described, the combination of a baglike body of flexible material having a main seating portion with a bottom and side walls, and having a pair of leg-receiving portions depending therefrom adjacent the forward part thereof; an upward extension of flexible material, connected to and providing a continuation of said side walls; supporting means in and connected to said body, for maintaining flexible material of said side walls and said extension in an expanded condition laterally and also in a position supported upwardly relative to said bottom; an occupant-supporting seat associated with said supporting means and overlying said bottom; flexible weblike means extending laterally from said body intermediate said side walls and said extension; and float means disposed peripherally of said body and connected to said weblike means.

12. In a device of the character described, the combination of a body adapted to receive an occupant, having a main seating portion with laterally opposed side walls converging relative to each other forwardly from a rear side wall; a pair of forwardly located leg-receiving portions of flexible material extending from said main seating portion, having bootlike foot-receiving closures on the ends thereof, said body being proportioned to alone support the occupant in water; a peripheral upward extension, connected to said side walls; flexible weblike means extending outwardly from and connected to said body intermediate said side walls and said extension; and separate float means respectively spaced laterally outward from said opposed side walls and said rear side wall, connected to said weblike means.

13. In a device of the character described, the combination of a body adapted to receive an occupant, having a main seating portion with laterally opposed side walls converging relative to each other forwardly from a rear side wall; a pair of forwardly located leg-receiving portions of flexible material extending from said main seating portion, said body being proportioned to alone support the occupant in water; a peripheral upward extension, connected to said side walls; flexible weblike means extending outwardly from and connected to said body intermediate said side walls and said extension; and float means respectively spaced laterally outward from said opposed side walls and said rear side wall, connected to said weblike means.

14. In a device of the character described, the combination of a baglike water-excluding body of flexible material, adapted to receive an individual, having a main seating portion with side walls, and having a leg-receiving portion, said body being proportioned to alone support the individual in water; a peripheral upward extension connected to and forming a continuation of said side walls; flexible weblike means disposed peripherally of said body and connected to said body intermediate said side walls and said upward extension; and a plurality of separate float means connected to said weblike means and disposed peripherally of and spaced laterally outward from said body.

WILLIAM HARLAN BUCKNELL.