

July 26, 1960

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2,946,068

FLOAT FOR PERSONAL USE

Filed May 2, 1957

2 Sheets-Sheet 1

FIG. 1

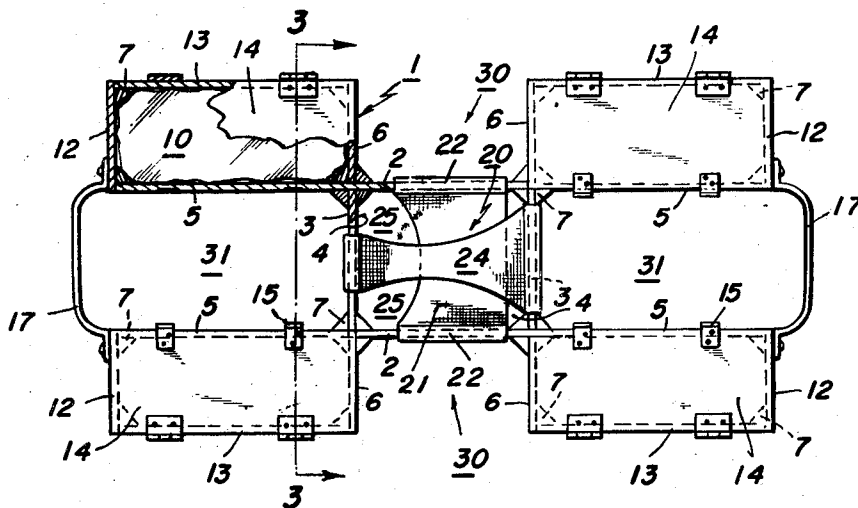
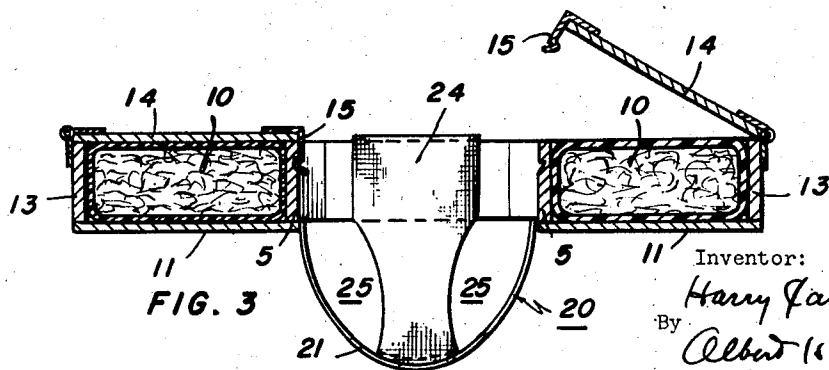
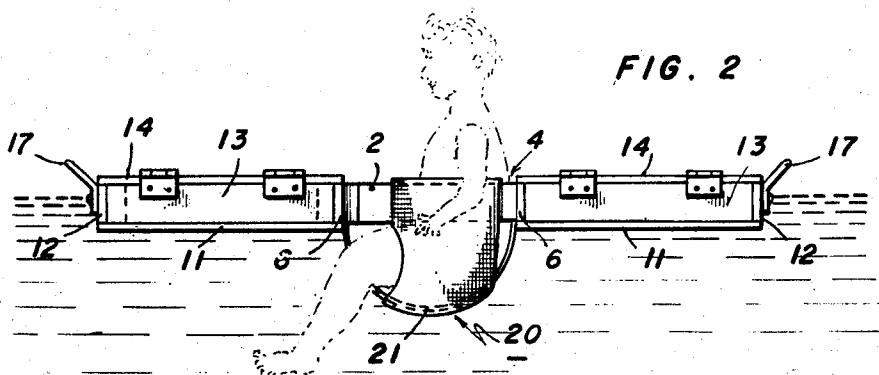


FIG. 2



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FIG. 4

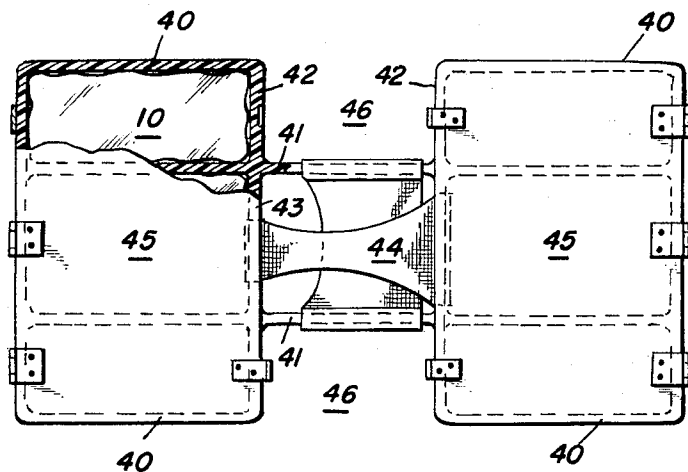


FIG. 5

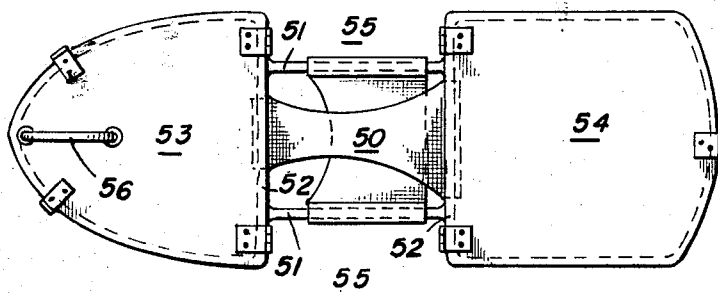
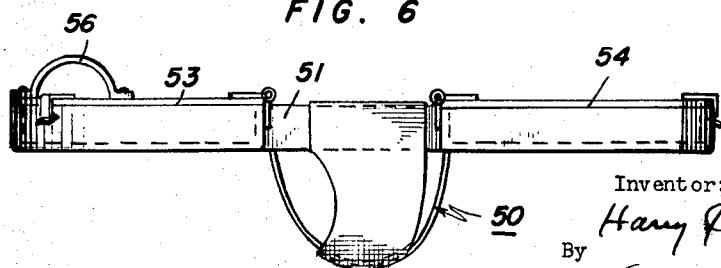


FIG. 6



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FLOAT FOR PERSONAL USE

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1 Claim. (Cl. 9—347)

The present invention relates to floats for supporting persons on the surface of a body of water and more particularly provides the combination of a frame and buoyant elements and a seat mounted in or on the frame.

A principal object of the invention is to provide a float for supporting an occupant, such as a child or a physically incapacitated person, in upright floating position on the surface of a body of water. Structures contemplated by the invention are thus adapted to be used as recreational devices by which very young children may be supported, safely and with a minimum tendency to become frightened, in upright position in the water of a swimming pool or the like; and in substantially the same construction, made in larger proportions, the device may be used by adult invalids for recreational floating at bathing resorts or as a physiotherapy adjunct, e.g., for sitz bath use, for floating the patient in curative spring waters, etc.

One object of the invention is to provide a float of the class indicated whose buoyancy may readily be increased when required to support a person of larger size or weight, or for the purpose of submerging the body of the same person to a greater or less depth in the water.

Another object is to provide a float of the class indicated which will allow the hands and arms of the occupant to have ready access to the water on each side of the float while the body is partly submerged in the water, and allowing the legs free motion in the water, and in a preferred embodiment fore and aft of the seat also, in order to paddle or propel himself about.

A further object is to provide a float of the class indicated which will be remarkably stable when in operative position in the water so as to be entirely safe for use with very young children, physically handicapped persons, and others whose safety might be jeopardized, or who might tend to become frightened, by such prior art devices as water wings, buoyant jackets, annular shaped floats, etc.

Other related objects are to provide a float capable of accomplishing the foregoing and other useful objects which will be simple and inexpensive to manufacture and foolproof and durable in use, and which will require no skill, instruction or special care for practical use by the occupant or on the part of a person attending the occupant.

Further objects and advantages will be apparent from the following description of certain preferred forms of embodiment in which the invention has been reduced to practice and which have been found to be entirely satisfactory and which are accordingly selected to illustrate the invention in the accompanying drawings, in which:

Figure 1 is a plan view of one embodiment of the invention comprising a frame, a plurality of buoyant elements and an occupant-supporting seat assembled in operative relationship;

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Fig. 2 is a side elevational view of the structure shown in Fig. 1, showing an occupant supported in the seat;

Fig. 3 is a cross-sectional view taken on the line 3—3 of Fig. 1, with one of the pontoon lids shown in open position;

Fig. 4 is a plan view of a modification;

Fig. 5 is a plan view of a further modified form of construction; and

Fig. 6 is a side elevational view of the embodiment shown in Fig. 5.

Referring now to these views, the invention comprises generally a basic frame, a seat carried by the frame, and a plurality of buoyant means or elements mounted on the frame and symmetrically related to the seat so that an occupant seated therein will be supported in highly stable position in a body of water in which the device is floated.

Thus, in the embodiment of the invention shown in Figs. 1-3, the frame, generally designated 1, is shown made up of a pair of spaced parallel longitudinal strips 2 and a pair of spaced parallel transverse strips 3 connecting the strips 2 considerably short of their ends so as to form a central enclosure 4 of square or substantially square outline, defined by the central or intermediate portions only of the strips, with appreciable lengths of the longitudinal strips extending fore and aft from the enclosure 4, as shown at 5, and with somewhat shorter lengths of the transverse strips extending laterally beyond the enclosure 4, as shown at 6.

The purpose of arranging the framing strips to form the central enclosure 4 is to provide a mounting for a seat for the occupant of the float, and the purpose of extending the strips in spaced parallel relation fore and aft of the enclosure and laterally thereof is to provide mounts for elements that will appreciably augment the buoyancy of the structure and to locate these elements in such symmetrically spaced relationship to the seat that the whole assembly will float in the water with extraordinary stability and thus be practically insured against upsetting or even substantial tilting regardless of any extreme leaning movements of the occupant of the seat.

To accomplish these objects it is convenient to fashion the frame 1 with the strips extending right-angularly to each other beyond the central enclosure 4, as shown at 5 and 6. The intersection of the portions 5 and 6 at each of the four corners of the central enclosure 4 thus forms a right angle in which may be seated a body of some light, bulky material adapted to impart a high degree of buoyancy to the assembly, as will be hereinafter explained.

Because the structure relies on the several bodies, hereinafter to be described, for imparting the desired high degree of buoyancy to the float, the materials of which the frame 1 is constructed need not be light enough to float in water. Thus the framing strips may be made of metal, either solid or in flat tubing form, or they may be wooden or plastic. They may be molded to form or cut to shape, depending of course on the specific material of which they are made. A satisfactory construction involves the use of wooden strips, each notched half way through at their intersections and there secured together as by waterproof glue, with the joints reinforced, if desired or thought necessary, by small corner cleats 7.

The buoyant bodies which, in the embodiment of the invention shown in Figs. 1-3, are mounted at the four corners of the float consist of blocks 10 made of any light, bulky material which will not become waterlogged on extended exposure to the water but which will be effective to keep the whole structure, including the occupant, floating at a desired height in the water,

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For this purpose the bodies 10 may be blocks of cork or light wood, such as balsa wood, or they may be hollow cans or boxes of sheet metal or plastic. A very acceptable material is solidified foam plastic, such as the preparation sold under the trademark "Lockfoam," Type B-605, by Nopco Chemical Company, of Harrison, New Jersey. This is a resin in liquid form which in use is mixed with a liquid foaming agent and is molded into block form, in which shape it quickly solidifies. Another material that can be used to advantage is air-expanded polyethylene, such as that sold under the trademark "Styrofoam." Because the solid body is highly porous the blocks should be enclosed in a watertight skin, such as one formed of polyethylene sheet or film stock. One satisfactory method of making the blocks is to pour the liquid mixture of resin and foaming agent into open box-like receptacles formed of plastic sheets and then cementing or otherwise securing plastic sheet lids on the filled boxes. The resultant is a very buoyant watertight block of predetermined shape for fitting into the spaces provided at the corners of the float, as has been explained.

The block-receiving spaces at the four corners of the float may be formed as box type enclosures into which the blocks may be inserted and removed at will, as for the purpose of substituting more or less buoyant blocks to vary the height at which the float will support its occupant in the water, or for any other purpose. To this end each of the spaces may be provided with a bottom 11, an outer end wall 12, an outer side wall 13, and a lid 14 conveniently hinged to one of the walls and provided with a snap latch 15 or equivalent means for holding the lid in closed position on the enclosure.

In this form of construction a handle 17 of metal or the equivalent may be mounted in bridging relation on the two box type enclosures at each end of the float, thus providing means by which an attendant of the occupant may pull or push the float through the water and incidentally bracing the extreme fore and aft ends of the structure.

The occupant-supporting seat is positioned in the space 4 formed in the center of the float by the intermediate portions of the longitudinal and transverse framing strips 2 and 3. Although within the broad principles of the invention as defined by the broader of the appended claims any one of a wide variety of seat means may be used, I prefer the sling type shown in the drawings. This seat, generally designated 20, consists simply of two specially shaped sheets of stout fabric slung between the intermediate portions of the framing strips and crossing each other in their mid portions with sufficient slack to sag into deep pocket shape for supporting an occupant in sitting position with openings for accommodating the occupant's legs, all as shown to best advantage in Figs. 1, 2 and 3. Specifically the seat there shown includes a transverse sheet 21 of somewhat less width than the longitudinal dimension of the enclosure 4 having its margins 22 turned over the center portions of the longitudinal strips 2 and there suitably hemmed and secured in place as by tacking or otherwise, with sufficient space left between at least one transverse edge of the sheet and the adjacent transverse framing strip 3 to provide an opening for penetration by the legs of the occupant. Cooperating with this transversely extending sheet 21 is a longitudinally extending sheet 24 which is similarly hung, from however the transverse framing strips 3, and which has its central portion engaged with and preferably sewed to the central portion of the sheet 21. The sheet 24 is relatively narrow, at least in what may be regarded as its forward end portion, so as to divide the leg-receiving space between the strip 21 and the adjacent portion of the framing strip 3 into the two openings each of a size appropriate for passing a leg of the occupant, as shown at 25.

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It will be appreciated that, with a buoyant block 10 or the like installed in each of the corner box enclosures, an occupant of the seat will be supported in sitting position as the float rides in the water at a depth depending on the weight of the occupant and the buoyancy of the blocks and their enclosures, which together may be regarded as pontoons. Important features of the invention, particularly when embodied in a form intended for use by very young children, are the fore and aft spacing of the pontoons at each side of the structure, leaving openings 30 at each side of the float, each opening extending along the full length of the seat enclosure, and, in the Figs. 1-3 embodiment, the lateral spacing of the pontoons, leaving openings 31 in front of the occupant and behind him. Thus the child has immediate and ready access to the water into which he can dip his hands and arms for the purpose of paddling and propelling himself about. The effect is to produce a feeling of very close and intimate exposure to the water (actually there is nothing between the child and the water except the narrow framing strips 2 and 3), and yet the outward extension of the structure, comprising the pontoons fore and aft of the spaces 30, and laterally of the spaces 31, is productive of a stability that insures against upsetting or even appreciable tilting.

As has been suggested hereinabove, the depth to which the occupant will be submerged in the water can be varied by substituting for the blocks 10 some other blocks of different specific gravity. Further adjustment can be made by installing additional blocks in the spaces 31. A slight modification of the structure shown in Figs. 1-3 is best made in order to accommodate such additional blocks. Such form of the invention is shown in Fig. 4, where four corner pontoons 40 are formed by crossed, spaced framing strips 41, 42, defining box type enclosures for buoyant blocks and outlining a central space 43 in which a seat 44 is slung, all in a manner like the corresponding features of the Figs. 1-3 construction. However, in the Fig. 4 embodiment the spaces between the corner pontoons at the front of the float and at the rear of the float are filled, i.e., are boxed and covered with lids 45 that can be opened for insertion of buoyant blocks like the blocks 10. Such a float, containing a buoyant block in each of its six pontoon members, will float a much heavier person in its seat than the four pontoon members of the Figs. 1-3 form of the invention, and the occupant still has arm and hand access to the water in the spaces 46 at the sides of the seat.

Figs. 5 and 6 show a further modification in which a seat 50, made like those previously described, is supported from framing strips 51, 52, arranged to provide a single forward pontoon 53 and a single aft pontoon 54. Each of these pontoons may be made in the form of a box-like enclosure for a buoyant block and be covered by a hinged lid, and both of these pontoons are, in accordance with an important principle of the invention, specifically considered, extended laterally beyond the sides of the seat enclosure to provide spaces 55 affording access of the occupant's hands and arms to the water while the outward projection of the pontoons provides a high degree of stability, as has been explained in connection with the discussion of the other embodiments selected to exemplify the invention. A handle 56, generally like the handles 17, may be mounted on one or both of the pontoons 53, 54, and other features of the earlier described constructions may be adopted to the extent applicable or desired, as will be understood.

It is believed to be clear from the foregoing that the inventive features of the new float are capable of being incorporated in a wide variety of specific forms of construction without departing from the spirit of the invention as defined by the broader of the appended claims.

I claim:

A float for supporting a person on the surface of a body of water comprising a plurality of framing strips arranged in two spaced parallel pairs secured in right-angularly intersecting relation to provide a rectangular central opening with right-angularly related strip portions extending outwardly from each of the four corners of the opening and defining the sides and ends of a buoyant-element enclosure disposed diagonally outwardly beyond each corner of the central opening, an occupant-supporting seat mounted in the opening, and a buoyant element secured in each of said enclosures.

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