

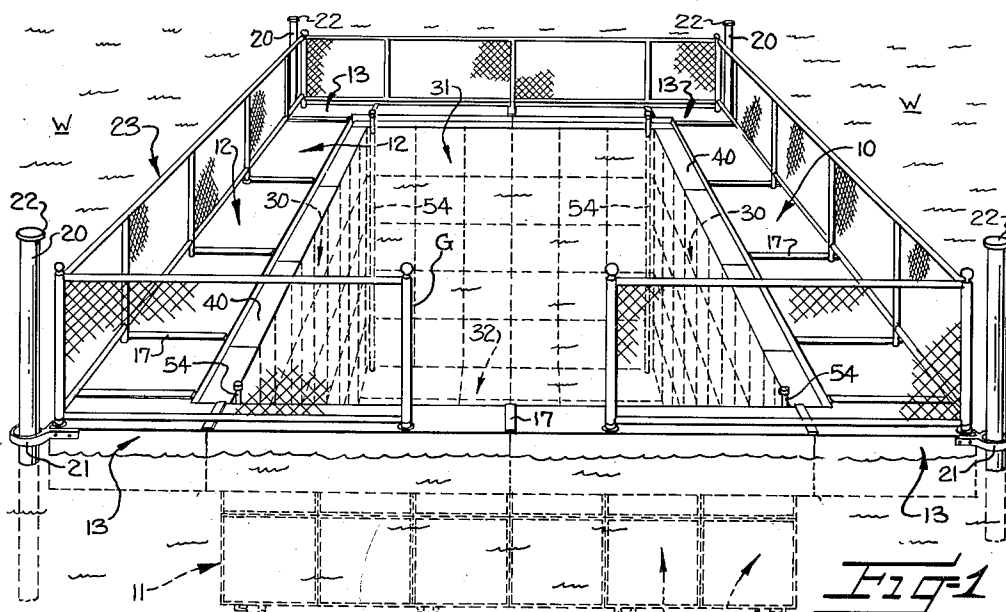
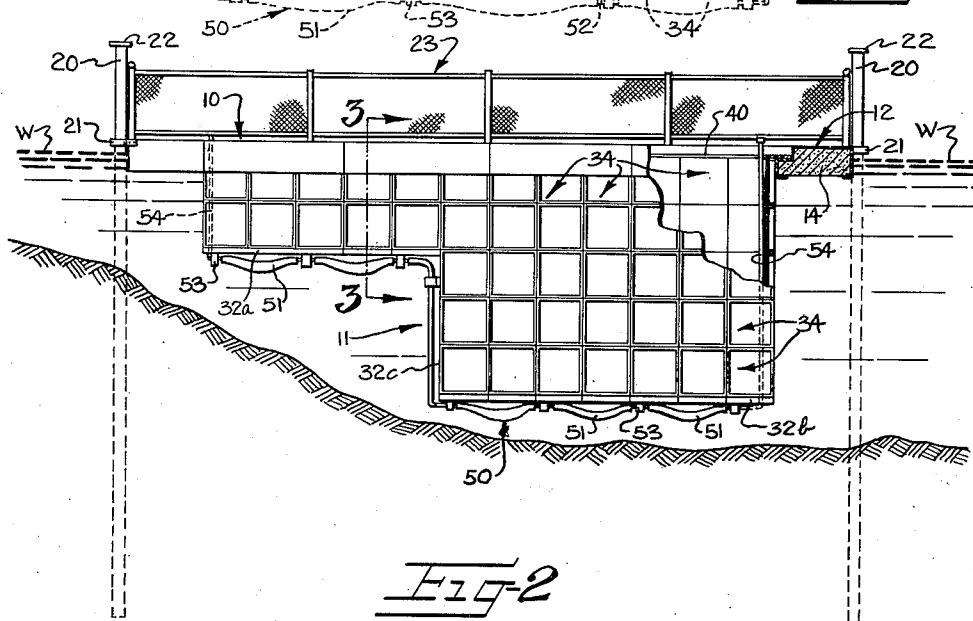
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F. P. BOYD ETAL
OUTDOOR SWIMMING POOL

3,026,538

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3 Sheets-Sheet 1



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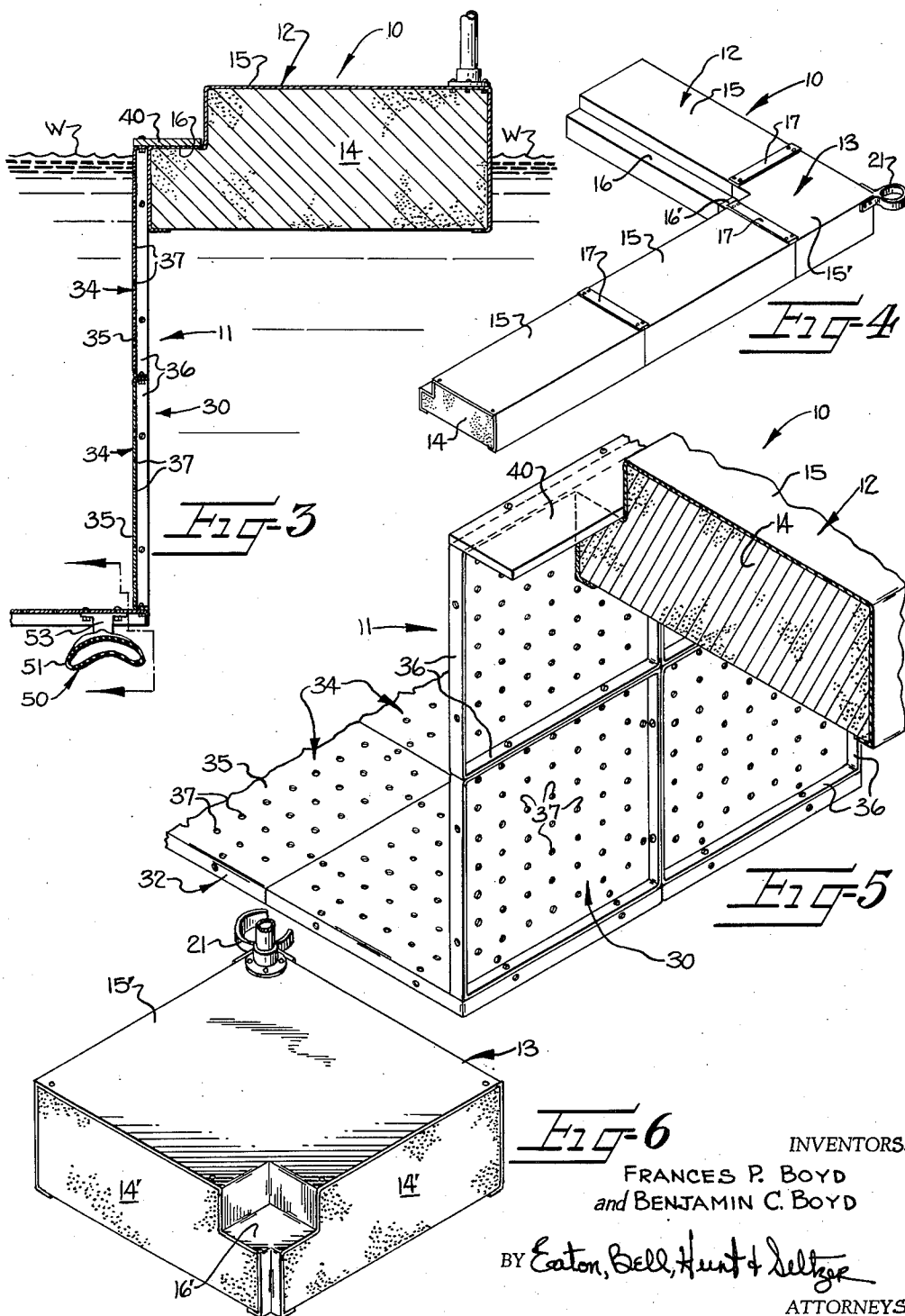


FIG-6

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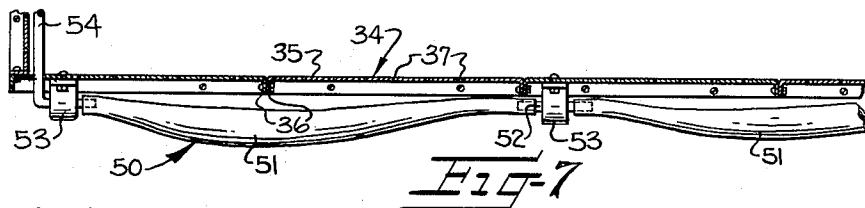
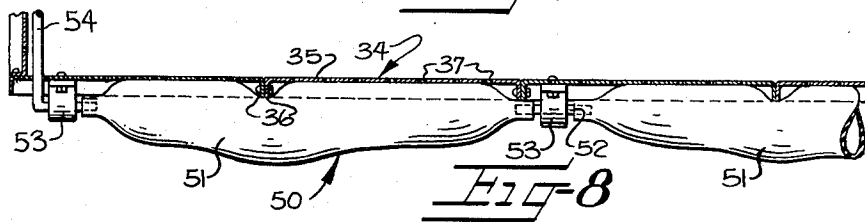
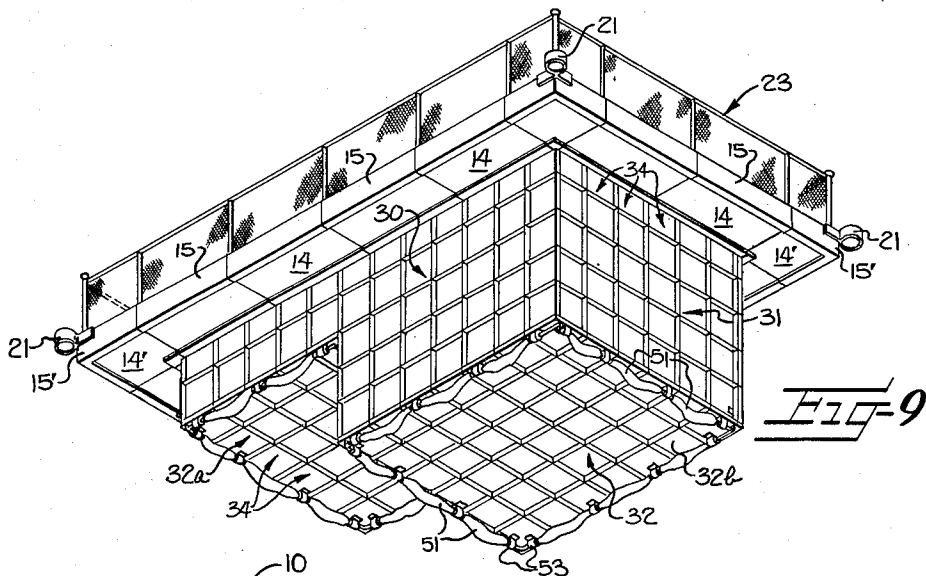
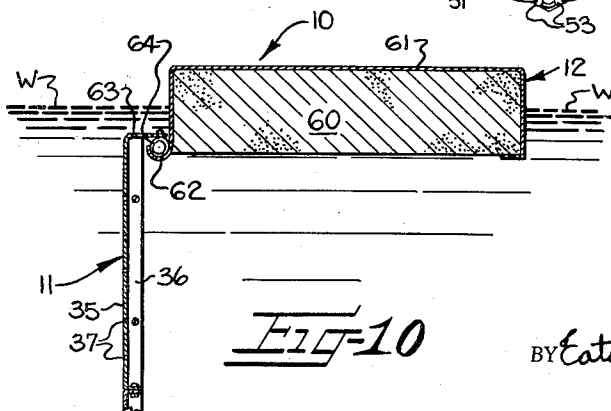
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OUTDOOR SWIMMING POOL

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This invention relates to an outdoor swimming pool of the type which may be moored in a river, lake or other body of water to provide safe conditions for swimming.

It is well known that rivers, lakes and other bodies of water present certain hazards to persons who may desire to swim therein. Often, the bed or bottom of the body of water is either muddy or rocky, the current of the water may be deceptive because of unknown drop-offs, and the water may harbor dangerous water life, such as reptiles. One or more of the disadvantages enumerated above is usually present in bodies of water which have not been especially developed for swimming purposes.

Outdoor swimming pools of the type to which this invention pertains have in the past involved cumbersome structures requiring wooden slats or floor boards forming walkways held afloat by barrel-like float members containing pressurized air. In general, the submerged pool enclosure depending from the floating walkway is comprised of a plurality of interconnected woden slats or wire mesh material offering uncomfortable surfaces for engagement with the bare feet of swimmers. Often, the pool enclosures are open at the bottom, affording no relief from the muddy or rocky condition of the bed of the body of water while permitting the entry of dangerous water life into the pool enclosure.

The cleaning of such pool enclosures is also a difficult and time-consuming project in that no provision is generally made for raising the submerged pool enclosure for this purpose. In instances where such provision has been made, it usually takes the form of a chain and windlass construction subject to mechanical defects hastened by the corrosive action of the water on the chains and troublesome to operate, in any event. When emergency situations arise, as for example when a swimmer suffers an injury or becomes cramped in the submerged pool enclosure, the inefficiency of the means commonly employed to raise the pool enclosure becomes strikingly evident. Furthermore, although most of the known outdoor swimming pools may be described as portable in that they may be dismantled and transferred to another location, such an undertaking is an extremely laborious task—involving considerable work and time because of the cumbersome nature of the construction.

It is an object of the present invention to provide an improved outdoor swimming pool overcoming the above-described difficulties, the present invention residing in a sectional swimming pool of simplified construction to allow for easy disassembly and transfer to a different location, while permitting the future addition of more sections for increasing the size of the swimming pool.

It is another object of this invention to provide an improved outdoor swimming pool utilizing a submergible swimming basket or pool enclosure having inflatable tubular means disposed across its bottom wall for imparting buoyancy to the swimming basket when inflated to quickly raise the basket to a floating position atop the body of water when an emergency occurs or for general cleaning purposes.

It is another object of this invention to provide an outdoor swimming pool having improved means for supporting a pool enclosure or swimming basket in a depending submerged position from a buoyant walkway, wherein the pool enclosure is loosely attached to the buoyant walkway to define a ledge therebetween for as-

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sisting persons in entering and leaving the water within the pool enclosure.

Some of the objects of the invention having been stated, other objects will appear as the description proceeds when taken in connection with the accompanying drawings, in which—

FIGURE 1 is a perspective view of the improved outdoor swimming pool embodying the present invention, submerged portions of which are shown in phantom lines;

FIGURE 2 is a side elevational view of the swimming pool shown in FIGURE 1, partially broken away to illustrate portions of the swimming basket and buoyant walkway in section;

FIGURE 3 is an enlarged fragmentary vertical sectional view taken along the line 3—3 in FIGURE 2;

FIGURE 4 is a fragmentary perspective view of one corner construction of the buoyant walkway;

FIGURE 5 is a fragmentary perspective view of the pool enclosure or swimming basket as loosely attached to the buoyant walkway;

FIGURE 6 is an enlarged perspective view of a corner section for the buoyant walkway;

FIGURE 7 is an enlarged fragmentary elevational view of the bottom wall for the pool enclosure or swimming basket, showing the inflatable tubular member extending across the bottom wall as it appears when in deflated condition;

FIGURE 8 is an enlarged fragmentary elevational view similar to FIGURE 7, but showing the tubular member in inflated condition;

FIGURE 9 is a perspective view of the outdoor swimming pool when fully assembled, showing the disposition of the inflatable tubular member across the bottom wall of the pool enclosure or swimming basket; and

FIGURE 10 is a fragmentary sectional view similar to FIGURE 3, but illustrating a modified means for supporting the pool enclosure or swimming basket in a depending submerged position from the buoyant walkway.

Referring more specifically to the drawings, it will be seen that the outdoor swimming pool broadly comprises a walkway 10 and a pool enclosure or swimming basket 11, the pool enclosure 11 being submerged in a body of water W and being rimmed along its upper edge portions by the walkway 10.

The walkway 10 is buoyant and forms a floating platform upon which persons may stand or sit during periods when they are not swimming. The walkway 10 includes a plurality of identical intermediate walkway sections 12 forming the intermediate portions of the sides and ends of the walkway 10. To complete the walkway 10, four identical corner walkway sections 13 are provided (see FIGURE 6) to connect the sides and ends of the sectional walkway 10, thereby resulting in a continuous sectional walkway 10 rimming the swimming basket 11.

Each of the intermediate walkway sections 12 comprises a block-like core 14 formed from a buoyant material, such as styrofoam. The buoyant core 14 is partially covered by a protective jacket or shell 15, which may be sheet aluminum or other suitable material. The jacket 15 fully covers the top surface of the buoyant core 14 exposed above the surface level of the water W and is adapted to withstand the wear imposed upon the intermediate walkway section 12 by the continued movement of persons and objects, such as lounge chairs and the like, across the floating walkway 10.

It will be observed that the side of each intermediate walkway section 12 facing inwardly toward the pool enclosure or basket 11 is recessed to form a step 16 disposed below the uppermost surface of the intermediate walkway section 12. Thus, the intermediate walkway sections 12

along the sides and ends of the pool enclosure 11 provide a plurality of complementary merging steps 16 to define a shelf which extends lengthwise of the respective sides and ends of the pool enclosure 11.

Referring to the four corner walkway sections 13, it will be seen that each corner section 13 comprises a block-like buoyant core 14' partially covered by a protective jacket or shell 15', the corner walkway sections 13 differing from the intermediate walkway sections 12 only as to shape. In this respect, the right-angled end edge of each corner walkway section 13 facing inwardly toward the pool enclosure 11 is recessed to provide a right-angled step 16' disposed below the uppermost surface of the corner walkway section 13 and forming a connecting link between the steps 16 provided by the intermediate walkway sections 12 positioned on adjacent sides of the corner walkway section 13. In this way, the shelf defined by the steps 16, 16' rims the boundaries of the pool enclosure or swimming basket 11.

Suitable means are provided to secure adjacent intermediate walkway sections 12 and corner walkway sections 13 together, such means being shown in FIGURE 4 as connector strips 17, each strip 17 overlapping respective abutting walkway sections and fastened to each of them by bolts or the like. The connector strips 17 are preferably made of sheet aluminum or other suitable material to correspond with the material forming the protective jackets 15, 15' for the individual sections comprising the walkway 10.

Upright posts or standards 20 are located along the outer perimeter of the sectional walkway 10, it being noted that the posts 20 are driven into the bed forming the bottom of the body of water W (FIGURE 2). In FIGURE 1, these posts 20 are illustrated as being positioned adjacent each of the four corner walkway sections 13. Means are provided on each corner walkway section 13 for slidably receiving the upright post 20 adjacent thereto in order to permit vertical upward and downward movement of the assembled sectional walkway 10 relative to the upright posts 20. Thus, such means comprises a bracket 21 rigidly secured to the outwardly jutting right-angled corner edge of each corner walkway section 13, the bracket 21 loosely receiving the adjacent upright post 20 for slidable vertical movement therealong. Each of the upright posts 20 includes an enlarged cap 22 which acts as a stop means to prevent the respective bracket 21 from being disengaged from the post 20 as the bracket 21 travels in an upward direction. It is therefore apparent that the lower ends of the posts 20 are passed through the brackets 21 when initially assembling the swimming pool in a desired location on the body of water W.

A fence or guard rail 23 is mounted on top of the sectional walkway 10 along its outer perimeter, as best shown in FIGURE 1. If desired, each of the sections 12, 13 comprising the walkway 10 may be suitably apertured to receive one fence column so that individual fence sections may correspond to the respective sections of the walkway 10. However, the fence or guard rail 23, as illustrated in FIGURE 1, includes one wall having an open gateway G therethrough to provide an entrance or exit from the swimming pool, the fence sections comprising this wall being shown as somewhat longer in length than the length of any individual walkway section on which they stand.

The swimming basket or pool enclosure 11, like the walkway 10, is also of sectional form. In this respect, it will be seen that the pool enclosure 11 comprises side and end walls and a bottom wall forming an open-topped enclosure—the side walls being designated by reference numerals 30, end walls 31, and bottom wall 32. As shown in FIGURES 2 and 9, the bottom wall 32 may comprise shallow and deep bottom wall segments 32a, 32b, respectively, connected by a bottom wall segment 32c extending perpendicular thereto. The shallow bottom wall segment 32a is useful in providing a wading pool area for small children or persons learning to swim.

Each wall of the pool enclosure or swimming basket 11 is comprised of a plurality of identical basket sections 34 interconnected in a manner to be hereinafter described. Each basket section 34 comprises a flat body 35 of rectangular shape, being illustrated as substantially square, and sides and ends extending laterally at right angles to the flat body 35 to define a continuous flange or skirt 36 protruding perpendicularly from the flat body 35. The flat body 35 has a plurality of openings or perforations 37 therethrough, the perforations 37 affording the free flow of the water W into and out of the swimming basket 11 to promote a sanitary condition without being large enough to admit unwanted reptiles or other dangerous water life into the basket 11. Preferably, the individual basket sections 34 are made from a substantially non-corrosive material, such as aluminum which is light in weight and resists the corrosive action of water thereagainst even when the water is salty, should the outdoor swimming pool be located in an open sea.

Referring to FIGURE 5, the adjacent basket sections 34 for each of the walls comprising the pool enclosure 11 are positioned with the corresponding lateral sides and ends thereof forming the skirt 36 about the flat body 35 in abutting relationship. The adjacent basket sections 34 are secured together by suitable fastener means, such as screws or bolts, penetrating the abutting lateral skirt portions 36. The side, end and bottom walls 30, 31 and 32, respectively, when fully assembled are then joined together in a similar manner, except that the skirt portions 36 along one wall, such as side wall 30 in FIGURE 5, abut the opposed surface provided by the flat bodies 35 of the adjacent wall, such as the bottom wall 32 in FIGURE 5, being rigidly secured thereto by suitable fastener means as above described.

The pool enclosure or swimming basket 11 is adapted to be loosely attached to the buoyant walkway 10 so as to be dependently supported thereby in fully submerged position in the water W. To accomplish this loose attachment between the walkway 10 and the swimming basket or pool enclosure 11, means in the form of a sectional frame 40 is rigidly secured to the upper edge portion of the pool enclosure 11 so as to extend laterally outwardly from the perimeter thereof into overlapping engaged position with the shelf defined by the steps 16, 16' on the walkway sections 12, 13 respectively. Thus, in FIGURES 3 and 5, a section of frame 40 is attached to the uppermost skirt portion 36 on each of the highest basket sections 34 for the side and end walls 30, 31 of the pool enclosure 11—the frame sections forming the continuous sectional frame 40 adapted to overlie the shelf provided by the steps 16, 16' in the intermediate and corner walkway sections 12, 13. It will be apparent that the weight of the pool enclosure or swimming basket 11 causes it to sink in the water W, allowing the frame 40 to be moved into engagement with the shelf formed in the walkway 10, whereupon the floating walkway 10 is effective to support the pool enclosure or swimming basket 11 in fully submerged position within the water W. The shelf and the overlying frame 40 define a ledge which rims the boundaries of the pool enclosure or swimming basket 11 and is disposed below the top surface of the walkway 10 to assist persons in entering and leaving the pool enclosure 11.

The depth of water W in the swimming basket or pool enclosure 11 will remain constant at all times, inasmuch as the buoyant walkway 10 although anchored against horizontal movement by the upright posts 20 will move vertically upward or downward in response to changes in the surface level of the water W. The swimming basket or pool enclosure 11 is so constructed to maintain the bottom wall 32 thereof in spaced relationship with respect to the bed or bottom of the body of water W, while the perforations 37 through the individual basket sections 34 allow for free flow of water through the pool enclosure 11 at all times.

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Despite the continuous free flow of water into and out of the pool enclosure 11, there will nevertheless be occasions when cleaning of the pool enclosure 11 is necessary, making it advantageous to raise the pool enclosure 11 from fully submerged position—also desirable when emergencies arise, such as an injury to a swimmer within the pool enclosure 11 or in the event a person has difficulty in keeping his head above water. Thus, means are provided to raise the pool enclosure 11 with respect to the water W in which it is submerged and the buoyant walkway 10 by which it is supported, such means being effective to raise the pool enclosure 11 to a floating position, thereby allowing all of the water contained therein to drain off through the perforations 37 provided in the individual basket sections 34.

The improved means for raising the swimming basket 11 comprises an inflatable tubular member 50 extending across the bottom wall 32 of the pool enclosure 11. As shown in FIGURES 7 and 8, the inflatable tubular member 50 comprises a plurality of resilient tubular segments 51, made of rubber or like material, extending beneath the bottom wall 32 and joined together by suitable connectors, such as rigid pipes 52 of short lengths forced into the opposed ends of adjacent tubular segments 51, to form the composite tubular member 50. In mounting the inflatable tubular member 50 beneath the bottom wall 32 of the pool enclosure 11, a plurality of hanger elements 53 are rigidly secured to the bottom wall 32 at appropriate spaced locations and depend downwardly therefrom, the hanger elements 53 being of substantially similar form to the brackets 21 on the walkway 10 which slidably receive the upright posts 20. The hanger elements 53 loosely encircle corresponding rigid connector pipes 52 joining adjacent resilient tubular segments 51 to retain the composite inflatable tubular member 50 in a position disposed beneath the bottom wall 32 of the pool enclosure 11, as best shown in FIGURE 9.

The opposite ends of the inflatable tubular member 50 are connected to rigid conduits 54, 54 which extend upwardly above the top surface of the floating walkway 10. A suitable source of compressed air or other fluid pressure may be connected to the conduits 54, 54 to admit fluid pressure to the tubular member 50 for inflating the individual tubular segments 51 thereof, as shown in FIGURE 8, thereby imparting buoyancy to the pool enclosure or swimming basket 11 and causing the basket 11 to be raised in the water W as desired, depending upon the degree of inflation of the individual tubular segments 51. When the tubular segments 51 are fully inflated, the swimming basket 11 is raised to a fully floating position, as may be necessary under certain emergency conditions or for general cleaning purposes.

FIGURE 10 shows a modification of the outdoor swimming pool illustrated in FIGURES 1-9, inclusive, and described hereinbefore, it being noted that the means by which the sectional floating walkway 10 supports the pool enclosure 11 in depending submerged position has been modified. In this respect, the individual intermediate and corner walkway sections of the modification disclosed in FIGURE 10 include a buoyant core 60 and a protective jacket 61 therefor, the side of the jacket facing the pool enclosure 11 being provided with a hook 62 on the lower edge portion thereof. The hooks 62 on the plurality of sections comprising the walkway 10 define a continuous groove extending along the perimeter of the pool enclosure 11 adjacent the top edge portion thereof. The upper most row of basket sections comprising the side and end walls of the pool enclosure 11 is modified to include an outward frame portion 63 integral with each basket section and extending perpendicular to the upper edge portion of the pool enclosure so as to define a sectional frame along the perimeter of the pool enclosure 11. Means, such as respective hollow tubes 64 of rigid material, are secured by suitable fastening means along the lower surface of the sectional frame 63, the hollow tubes

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64 presenting a cross-sectional shape corresponding to that possessed by the hooks 62 on the protective jackets 61 of the individual walkway sections. As shown in FIGURE 10, each of the tubes 64 is loosely received within the groove portion defined by the hook 62 on an individual walkway section so as to support the pool enclosure 11 in depending submerged position beneath the floating walkway 10. The hooks 62 defining the groove in the walkway 10, the tubes 64 and the sectional frame 63 to which the tubes 64 are secured cooperate to define a ledge rimming the boundaries of the pool enclosure 11, such as provided by the supporting means for the pool enclosure illustrated in FIGURES 1-9, inclusive. In the modified form of supporting means shown in FIGURE 10, it can be observed that some saving of styrofoam material which comprises the buoyant cores 14 for the individual walkway sections may be accomplished, since the portion of each walkway section forming the step 16 can be eliminated. Again, the pool enclosure 11 is loosely supported from the buoyant walkway 10 by the modified means shown in FIGURE 10 and may be raised with respect thereto by inflating the tubular member 50, as described hereinbefore.

Thus, it will be seen that we have disclosed a new and improved outdoor swimming pool of simplified sectional construction capable of being assembled in a suitable location on a body of water to provide swimming recreation. The simplicity of our sectional construction makes it an easy matter to dismantle the swimming pool for transfer to another location, if desired. It can also be appreciated that the swimming pool may be enlarged by adding appropriate sections thereto, since the sections forming the walkway 10 and the pool enclosure 11, respectively, are uniform in size so as to be interchangeable. Also, the outdoor swimming pool disclosed herein eliminates the hazards commonly associated with bodies of water which have not been developed for swimming, while providing the additional safeguard of an inflatable tubular member to impart buoyancy to the submerged pool enclosure for raising the pool enclosure to a floating position under emergency conditions or when necessary to clean the pool enclosure.

In the drawings and specification there have been set forth preferred embodiments of the invention and, although specific terms are employed, they are used in a generic and descriptive sense only and not for purposes of limitation, the scope of the invention being defined in the claims.

We claim:

1. In an outdoor swimming pool having a submergible pool enclosure and a buoyant walkway, means loosely attaching said walkway to the top edge portions of said pool enclosure for supporting said enclosure in depending submerged position in the water, said enclosure having a plurality of openings therethrough to accommodate the free flow of water into and out of the enclosure, means to raise said enclosure with respect to said walkway and the water in which the enclosure is submerged, said raising means comprising an inflatable tubular member disposed about said enclosure, and means for admitting fluid into said tubular member to inflate said tubular member for imparting buoyancy to said enclosure, whereby said enclosure may be raised with respect to said walkway and the water.
2. In an outdoor swimming pool having a submergible swimming basket and a buoyant walkway, means freely supporting said basket from said walkway in depending submerged position in the water with respect to said walkway, means to raise said basket with respect to said walkway and the water in which the basket is submerged, said raising means comprising a plurality of inflatable tubular segments disposed beneath the bottom wall of said basket, pipe connectors interposed between adjacent tubular segments and linking said plurality of tubular segments together, hanger elements secured to

the bottom wall of said basket and extending downwardly, each of said pipe connectors being received by a corresponding hanger element for supporting said plurality of linked tubular segments in suspended position beneath the bottom wall of said basket, and means for admitting fluid into said linked tubular segments to inflate said tubular segments for imparting buoyancy to said basket, thereby raising the basket with respect to said walkway and the water in which the basket is submerged.

3. A portable outdoor swimming pool comprising a sectional swimming basket having openings therethrough to afford the flow of water into and out of the basket, a sectional floating walkway extending around the boundaries of said basket along the upper edge portions thereof, means freely supporting said basket from said floating walkway in depending submergible position, elongated posts adapted to be seated in the bed forming the bottom of a body of water, said posts being located at spaced positions along the perimeter of said floating walkway, means on said floating walkway slidably receiving each of said posts to anchor the outdoor swimming pool against horizontal movement, said walkway being movable upwardly and downwardly with respect to said posts in response to changes in the surface level of the body of water, and means to raise said basket with respect to said walkway and the water in which said basket is submerged, said raising means comprising an inflatable tubular member extending beneath the bottom wall of said basket, and means for admitting fluid into said tubular member to inflate said tubular member for imparting buoyancy to said basket, whereby said basket may be raised with respect to said walkway and the water.

4. An outdoor swimming pool comprising a submergible swimming basket, a buoyant walkway attached to the top edge portions of said swimming basket, upright posts adapted to be seated in the bed forming the bottom of a body of water, said posts being disposed at spaced

locations along the outer perimeter of said buoyant walkway, means connecting said buoyant walkway to said posts for vertical movement of said walkway with respect thereto in response to changes in the surface level of the body of water, said swimming basket having a bottom wall, side walls, and end walls defining an open-topped pool enclosure, each of said walls comprising a plurality of sections having openings therethrough, each of said sections having a flat body with sides and ends extending laterally at right angles to said flat body, said right-angled sides and ends of each section engaging corresponding right-angled sides and ends on adjacent sections, means rigidly securing the engaged right-angled sides and ends of adjacent sections together, and means to raise said basket with respect to said walkway and the water in which the basket is submerged, said raising means comprising an inflatable tubular member extending beneath the bottom wall of said basket, and means for admitting fluid into said tubular member to inflate said tubular member for imparting buoyancy to said basket, whereby said basket may be raised with respect to said walkway and the water.

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