July 30, 1963 W. A. O'CONNELL 3,099,018

FLOATING SWIMMING POOL

Filed Sept. 4, 1962 2 Sheets-Sheet 1

Fig. 1.

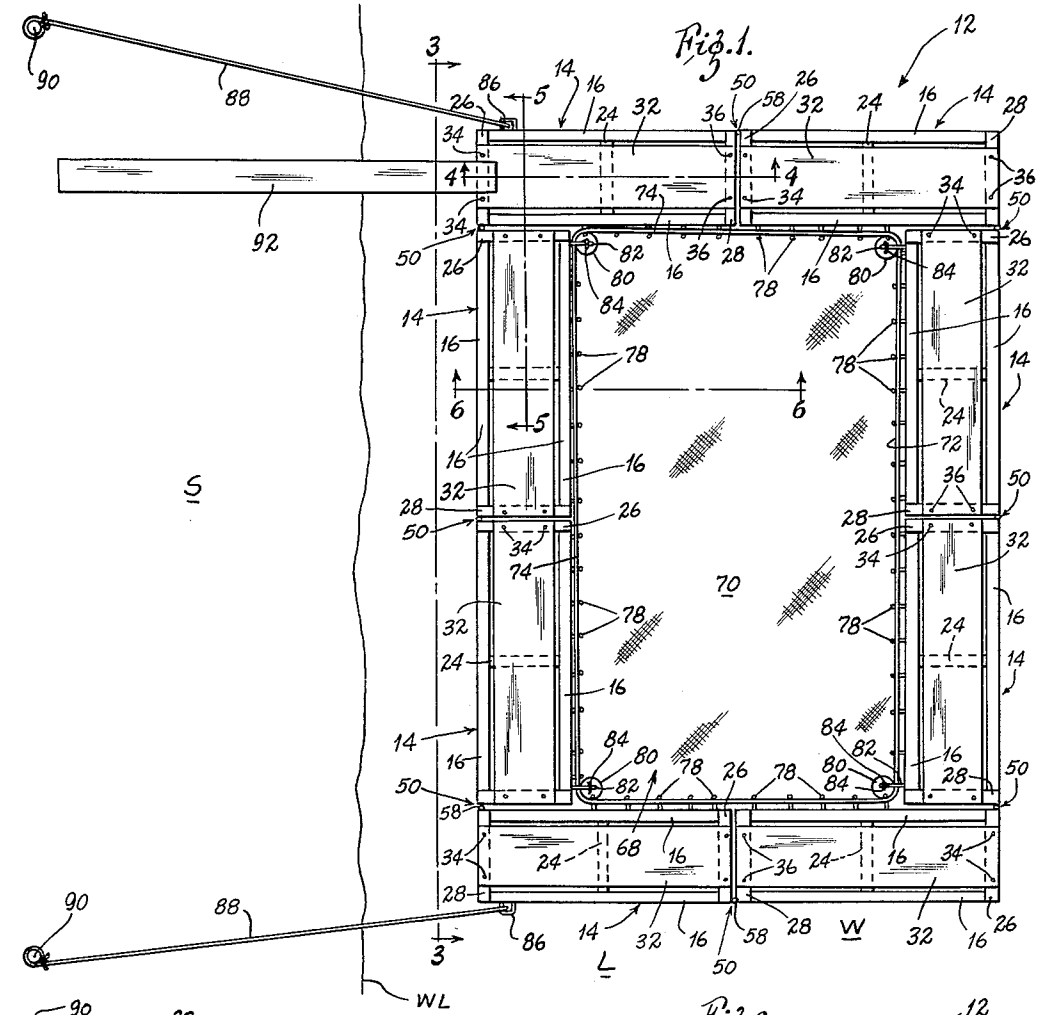


Fig. 2.

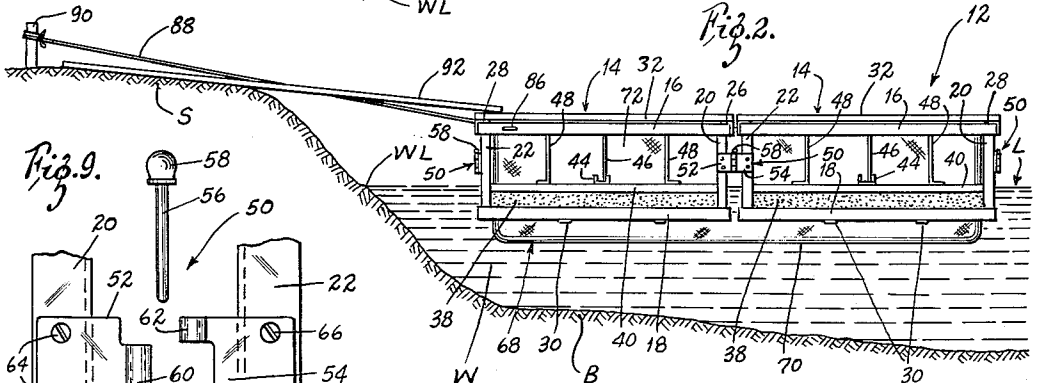


Fig. 3.

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Fig. 3.

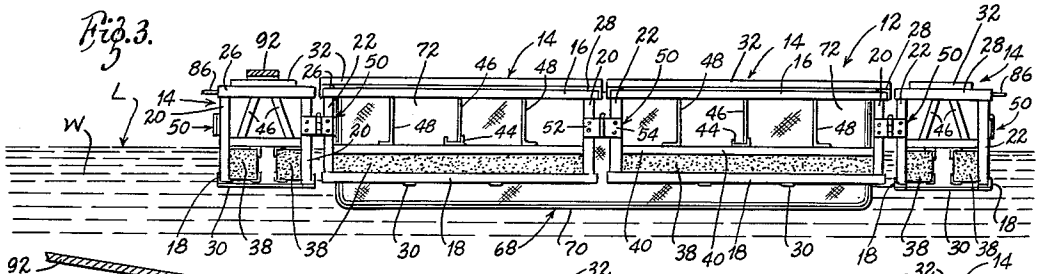


Fig. 4.

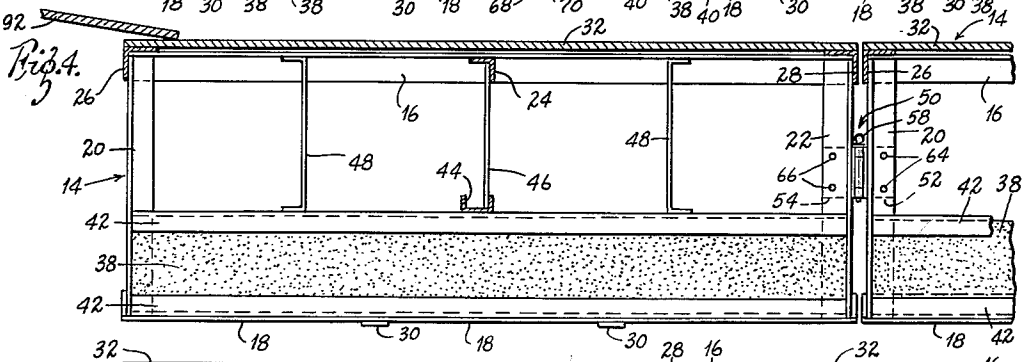


Fig. 5.

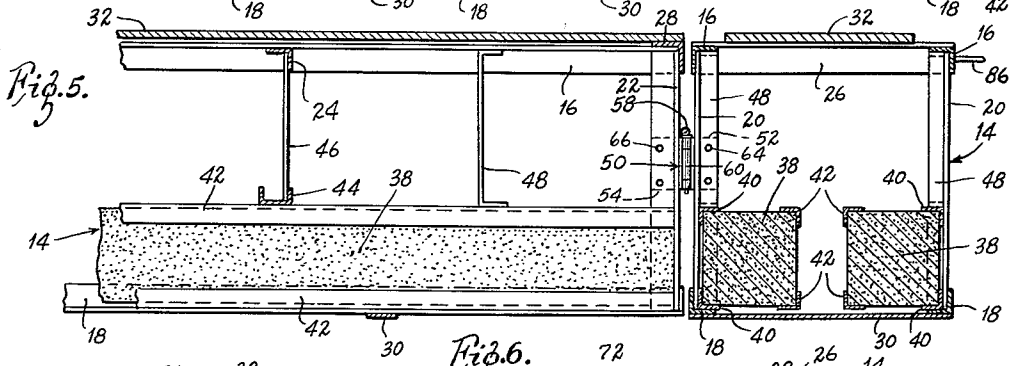


Fig. 6.

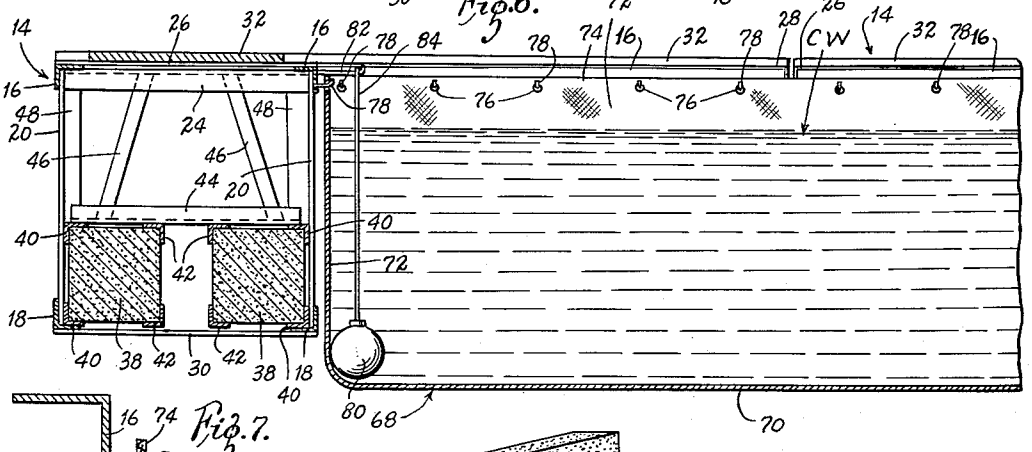


Fig. 7.

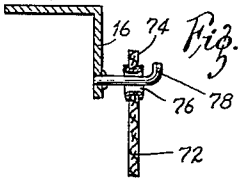
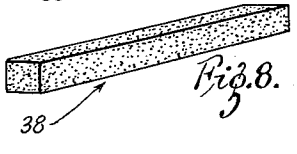


Fig. 8.



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3,099,018

FLOATING SWIMMING POOL

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Filed Sept. 4, 1962, Ser. No. 221,121
3 Claims. (Cl. 4—171)

In general, the present invention relates to swimming pools, and more particularly to swimming pools of the outdoor type that may be enjoyed during the late spring, summer, and early autumn months rather than the indoor type that may be enjoyed throughout the year.

More specifically, the present invention contemplates a novel swimming pool structure that when assembled for use, is itself supported by a body of water, as will appear.

It is common knowledge that the lakes and streams of our nation, for reasons that do not require elaboration, are becoming increasingly hazardous from a sanitary and safety standpoint. This is particularly true with respect to children who enjoy swimming, but unfortunately are prone to swallow some of the polluted water in the process, thus endangering their health.

Furthermore the beds of rivers, lakes and so on, are becoming increasingly hazardous because of the presence of tin cans, broken bottles and other debris. Even when such hazards are not present, these beds are generally of an inherently muddy and slimy nature.

The primary objective of the present invention accordingly, is to provide a sanitary outdoor swimming pool particularly though not exclusively designed for use by young children who are able to swim.

It is another object to provide a sanitary outdoor swimming pool that may be quickly installed off the shore of a body of water, and may be dismantled with ease for storage during the colder and winter months.

It is a further object to provide a sanitary swimming pool without in any way changing the scenic surroundings in that it would be installed in and supported by the same body of water wherein the swimming would take place were the pool of the invention not available.

Broadly, the swimming pool contemplated by the present invention is comprised of a plurality of rectangular float units each of which is supported by a pair of spaced pontoons, the pontoons in turn being floatingly supported by a body of water. Means are provided for hingedly and easily connecting a plurality of the float units so as to form a rectangular structure adapted to support within the confines thereof, a basin whereinto clean water may be introduced. At the corners of the basin, spherical weights are dependingly suspended from certain of the float units, said weights serving to obviate the normal tendency of the bottom wall of the basin to rise.

The basin is composed of canvas material that is flexible, and that has been specially treated to render it sturdy and impervious. It is noted at this point however, that the present invention makes no claim to the process or treatment of the canvas. The upper peripheral edge portion of the canvas basin incorporates therein at somewhat closely spaced intervals, eyelets or grommets that cooperate with similarly spaced hanger hooks projecting from the float units, whereby said basin is removably hung from said hooks, as will appear.

The pontoon-supported float units include a skeleton framework of comparatively lightweight metallic material, the various elements incorporated in said framework being appropriately integrated.

Surmounting each float unit is a co-extensive deck panel, so that when said units are in assembled status, the pool basin will be surrounded by decking.

Mooring or anchoring means for the floating swimming pool are contemplated as being included in the concepts of the present invention, although it should be understood that these means will vary, wherefore no claim is made herein to any specific means for the purpose indicated.

Similarly, the present invention contemplates access means from the shore to the swimming pool decking when necessary or desirable, but makes no claim to any specific access means for this purpose.

The invention has been illustrated on two sheets of drawings that accompany this specification, and a comprehensive understanding of the features and the advantages provided by said invention, will be apparent from the detailed description that follows with reference to said drawings, wherein:

FIGURE 1 is a top plan view of an exemplary swimming pool installation in accordance with the concepts of the present invention;

FIGURE 2 is an end elevational view of the FIGURE 1 installation;

FIGURE 3 is a side elevational view of the swimming pool when viewed from the shore, the view being taken approximately as indicated by the line 3—3 in FIGURE 1;

FIGURE 4 is a vertical sectional view on an enlarged scale, taken along the line 4—4 of FIGURE 1;

FIGURE 5 is a similar view taken along the line 5—5 of FIGURE 1;

FIGURE 6 is a vertical sectional view on an enlarged scale taken on the line 6—6 of FIGURE 1;

FIGURE 7 is an enlarged detail view illustrating an exemplary means for suspending the canvas basin body at spaced intervals from the float units;

FIGURE 8 is an isometric view of one of the pontoons, this view being drawn to a scale in correspondence with that of FIGURES 1 through 3; and

FIGURE 9 is a fragmentary exploded view of the hinge means for connecting the float units of the invention.

Prior to entering into a detailed description of the views presented in the drawings, a few general observations will be given.

As hereinbefore noted, the present invention may be installed along the bank of a river, near the shore of a lake or pond, and so on. Wherefore, although the swimming pool structure itself will generally conform to the description thereof to follow, the means for mooring or anchoring said structure may obviously vary. In other words, assuming that the swimming pool of the invention were installed near the bank of a large river, the anchoring means would necessarily be more sturdy, and would probably be at variance with the anchoring means employed with respect to a lake-shore installation, or an installation in a pond.

Furthermore, the access means to the pool from the bank or shore may vary. In other words, in case the water of the river or lake is of considerable depth abruptly off shore, the pool structure may be anchored so closely to the shore that access means would not be requisite. On the other hand, when the depth of the water increases gradually from the shore water line, an appropriate gangplank that could either be rigid or flexible as is understood, would be employed.

An exemplary installation of the invention is illustrated in FIGURES 1 through 3. In these views, the swimming pool of the present invention is designated as a whole by the numeral 12, and is shown floatingly supported by the water W of a lake generally designated L. The bed or bottom of the lake is designated B, and gradually slopes outwardly to greater depth relatively to the shore S, the normal waterline being designated WL.

In the illustrated installation of the invention, the pool structure 12 includes a plurality of float units each designated as a whole by the numeral 14. Four pairs of the units 14 are shown, but it will be manifest that additional

pairs of units may be employed should it be desired to increase the size of the pool.

Structurally, all of the float units **14** are similar except as to length, so that a detailed description of one of them will be given with attention directed particularly to FIGURES 4 through 6. As there seen, each float unit **14** is comprised of a rectangular open framework that includes: a pair of spaced parallel horizontal top angle rails **16**; a pair of similar bottom rails **18**; a first pair of spaced parallel end uprights **20**; a second pair of similar end uprights **22**; a transverse angle bar **24** connecting the top rails centrally of the unit; a first angle bar **26** overlying the extremities of the top rails **16** at one end; a second angle bar **28** overlying the extremities of the top rails **16** at the opposite end; and a pair of longitudinally spaced, transverse plates **30** connecting the bottom rails **18**.

All of these structural members, as well as those yet to be described, are rigidly connected at appropriate points so as to form a sturdy though lightweight skeleton framework. In other words, these various members may optionally be secured together by screws, by nut and bolt assemblies, by welding, and so on as is understood, although not illustrated in the drawings.

Extending from end to end of each float unit **14** atop the framework, is a wooden deck panel **32**. One end of the deck panel rests on the angle bar **26** and is removably secured thereto by means of countersunk screws **34** or otherwise. The opposite end of the deck panel rests on the angle bar **28**, and is removably secured thereto by means of countersunk screws **36** or otherwise.

Each float unit **14** also includes: a pair of pontoons **38**; two pairs of parallel outer angle bars **40**; two pairs of parallel inner angle bars **42**; a transverse channel member **44**; a pair of obliquely disposed struts **46**; and a plurality of vertically disposed brace members **48**.

The pontoons **38** extend from end to end of the float units, and with particular reference to FIGURE 8, are comprised of elongated rectangular blocks of foamed polystyrene, a material that is not only light in weight, but also extremely buoyant. The angle bars **40** and **42** are coextensive with the pontoons, and as shown particularly in FIGURES 5 and 6, serve to reinforce and protect the corner portions thereof.

The manner wherein the pontoons **38** are incorporated in a unit **14** should be manifest from an inspection of the drawings. Each pontoon is confined at one end thereof by one of the uprights **20**. At the opposite end thereof, each pontoon is confined by one of the uprights **22**. The channel member **44** is rigidly secured to the top flanges of the angle bars **40** and **42**, and is transversely disposed approximately centrally of the float unit, and directly below the angle bar **24**. The obliquely disposed strut members **46** are rigidly connected at their upper ends to the angle bar **24**, and at their lower ends, to the channel member **44**. The vertical brace members **48** are illustrated as being of channel configuration, but may be of any other appropriate contour. These brace members are rigidly secured at their upper ends to the rails **16**, and at their lower ends to the uppermost ones of the pairs of outer angle bars **40**.

From the foregoing, it should be apparent that the framework of the float units **14** provides an amply sturdy support for the therewith associated deck panels **32**. It is to be noted however, that the cross-sectional configurations of some of the structural members and the precise disposition thereof relatively to one another as illustrated in the drawings, is exemplary only, and therefore subject to modification.

A most important feature of the present invention resides in the means provided for connecting and disconnecting adjacent float units **14** in simple fashion by means of hinge assemblies generally designated **50**. An exploded presentation of a hinge assembly **50** appears in FIGURE **9**, and includes a male hinge member **52**, a female hinge member **54**, and a hinge pin **56** surmounted by a knob segment **58**. As clearly depicted, the diameter of the hinge pin **56** is smaller than the internal diameters of the eye segment **60** integral with the hinge member **52**, and the internal diameters of the eye segments **62** integral with the hinge member **54**.

In accordance with the concepts of this invention, a hinge member **52** is permanently secured to one of the uprights **20** of each float unit **14**, by means of screws **64** as shown, or otherwise. Similarly, a hinge member **54** is permanently secured to one of the uprights **22** of each float unit, by means of screws **66** as shown, or otherwise.

Numeral **68** designates generally, a basin of specially treated canvas material that is impervious, and is adapted to be hung from the units **14** in a manner to be explained. Viewed in top plan as in FIGURE 1, the basin **68** has a rectangular contour in general correspondence with the rectangular inner outline of the hingedly connected float units **14**. As seen to best advantage in FIGURE 6, the basin **68** includes a bottom wall section **70** integral with a side and end wall section designated **72**. Provided in the upper marginal portion **74** of the wall section **72**, is a plurality of horizontally spaced grommets **76**, one of said grommets being particularly illustrated in FIGURE 7. Correspondingly spaced hanger hooks **78** are provided on the pool-side angle rails **16** of the float units **14**, so that as should be apparent, the canvas basin **68** would be dependingly suspended via the grommets **76** and the hooks **78** following the introduction thereinto of a determined volume of clean water, illustrated and designated CW in FIGURE 6.

Means are provided for maintaining the basin **68** in a substantially constant disposition irrespective of the behavior of the water that surrounds and supports the pool **12**. To this end, a weight **80** is dependingly suspended in each corner section of the basin. Preferably, the weights **80** would be spherical, and would be suspended from hooks or the like **82** by means of chains or wires **84**. The lengths of the wires **84** will be determined by the depth of the basin, so as to provide a slight clearance between the weights **80** and the bottom wall **70** of said basin, as shown in FIGURE 6.

As hereinbefore noted, the mooring or anchoring means for an installation such as **12** would vary. Exemplary mooring means for the installation **12** illustrated are more or less schematically shown in FIGURES 1 and 2, and include a pair of eye elements **86**, a pair of guy rods or ropes **88**, and a pair of posts or stakes **90** that are driven into the ground or shore S at appropriate points inland from the water line WL. The eye elements **86** would be welded or otherwise rigidly secured to one angle rail **16** of each corner unit **14** closest to shore as shown.

When necessary, access means to the pool are contemplated. In the exemplary installation **12** under consideration, a gangplank **92** is shown leading from the shore to the deck panel **32** of one of the units **14**.

In view of the foregoing description and the drawings, it is believed that a comprehensive disclosure of the invention has been presented. The canvas whereof the pool basin is formed consists of strong flexible material that has been specially treated to render it positively impervious. It should be understood that the depth of the basin **68** may vary in accordance with the stature of the child or children for whom the pool is constructed. The hinge connections **50** facilitate the assembling and dismantling operations as should be apparent. The units **14** are light, and a father and his young son for example, would have no difficulty in transporting them to and from the body of water.

The invention obviously admits of modifications and is therefore not to be limited to the precise structural details illustrated and described, the purview thereof being limited only by the scope of the claims hereunto appended.

What I claim is:

1. A swimming pool of the character described, including in combination:

a plurality of pairs of float units, each float unit being

comprised of a rectangular skeleton framework of light weight material;

a pair of horizontally spaced pontoons supporting each unit from a body of water;

means hingedly connecting adjacent units to form a rectangular structure;

a deck panel atop each unit and coextensive therewith;

a basin of specially treated canvas material for containing a determined quantity of clear water dependingly supported from the float units within the inner area defined by the frameworks thereof;

a weight dependingly supported at each corner of the basin;

means for anchoring or mooring the connected float units and the basin supported thereby, said means comprising a pair of eye elements each rigid with one of the corner float units closest to shore, a pair of stakes driven into the ground inland of said body of water, and a pair of guy rods each having one end secured to one of said eye elements and its opposite end secured to one of the stakes;

and means providing access from the shore to at least one deck panel and vice versa, said means comprising a gangplank having its inland end portion resting on the shore aforesaid and its opposite end portion resting on a deck panel.

2. A swimming pool of the character described, including in combination:

a plurality of pairs of float units, each float unit being comprised of a rectangular skeleton framework of light weight material, the members of said framework being secured together at appropriate points to form a rigid construction;

a pair of horizontally spaced elongated rectangular pontoons supporting each unit from a body of water;

hinge means releasably connecting adjacent float units whereby to form a rectangular structure, said means comprising a male hinge member permanently secured to an end upright of one float unit, a female hinge member permanently secured to the contiguous end upright of the adjacent float unit, an eye segment integral with the male hinge member, a pair of eye segments integral with the female hinge member, a hinge pin adapted to pass freely through all of said eye segments when they are brought into alignment, the diameter of the hinge pin being slightly smaller than the integral diameters of said eye segments, and an integral knob segment surmounting the hinge pin to facilitate manipulations thereof;

a deck panel coextensive therewith surmounting each float unit;

a basin of specially treated canvas material for containing a determined quantity of clear water;

means dependingly supporting said basin from the float units within the inner area defined by the frameworks thereof;

a spherical weight in each corner of the basin, and means for removably suspending each weight from the framework of one of the float units to a plane slightly above the bottom wall of said basin, said means comprising a hook element rigid with a corner float unit, and a wire having its upper end secured to said hook element and its lower end secured to said weight;

means for mooring or anchoring the connected float units and the basin supported thereby, said means comprising a pair of eye elements each rigid with one of the corner float units closest to shore, a pair of stakes driven into the ground inland of said body of water, and a pair of guy rods each having one end secured to one of said eye elements and its opposite end secured to one of the stakes;

and means providing access from the shore to at least one deck panel and vice versa, said means comprising a gangplank having its inland end portion resting on the shore aforesaid and its opposite end portion resting on a deck panel.

3. A swimming pool of the character described, including in combination:

the structure recited in claim 2 wherein the skeleton framework of each float unit includes a pair of spaced horizontal top angle rails, a pair of similar bottom rails, a first pair of spaced parallel end uprights, a second pair of similar end uprights; a transverse angle bar connecting the top rails centrally of the unit, a first angle bar overlying the extremities of said top rails at one end, a second angle bar overlying the extremities of said top rails at the opposite end, transverse plates connecting said bottom rails; and structural members for maintaining the pontoons aforesaid in position at the bottom of the framework.

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