

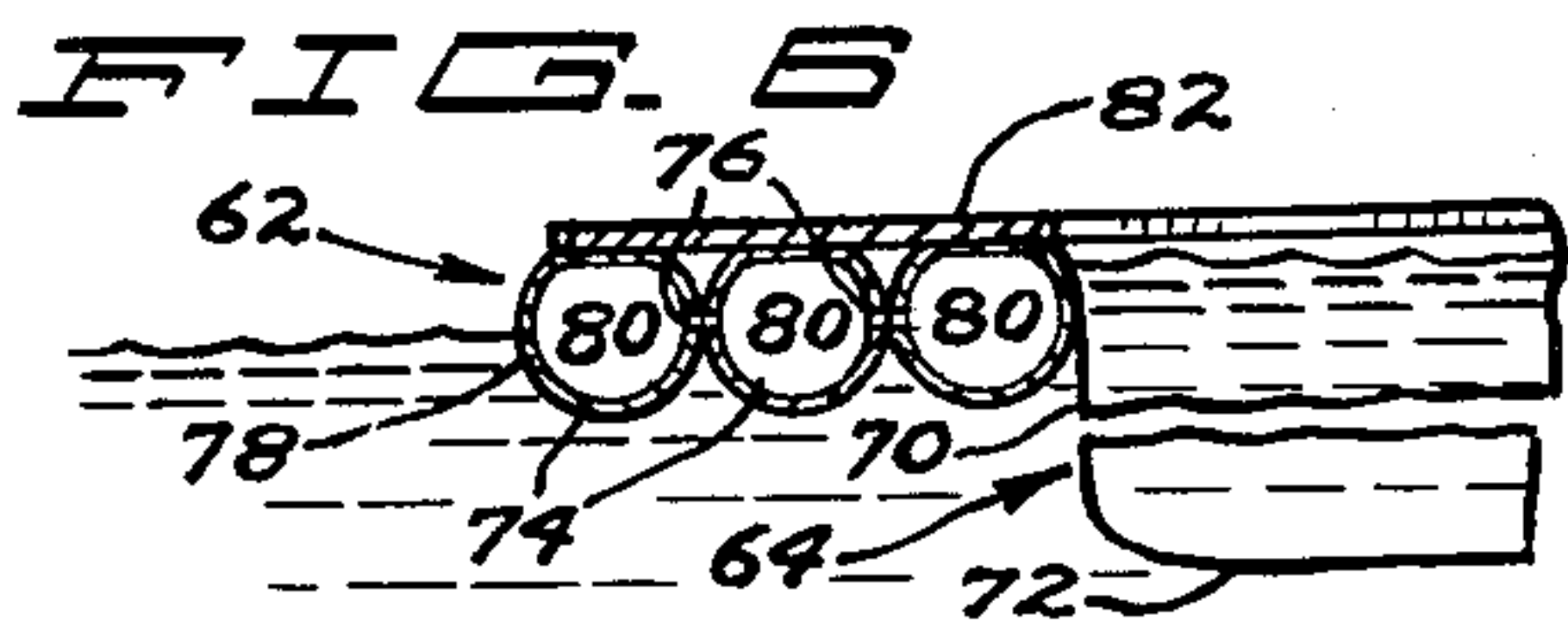
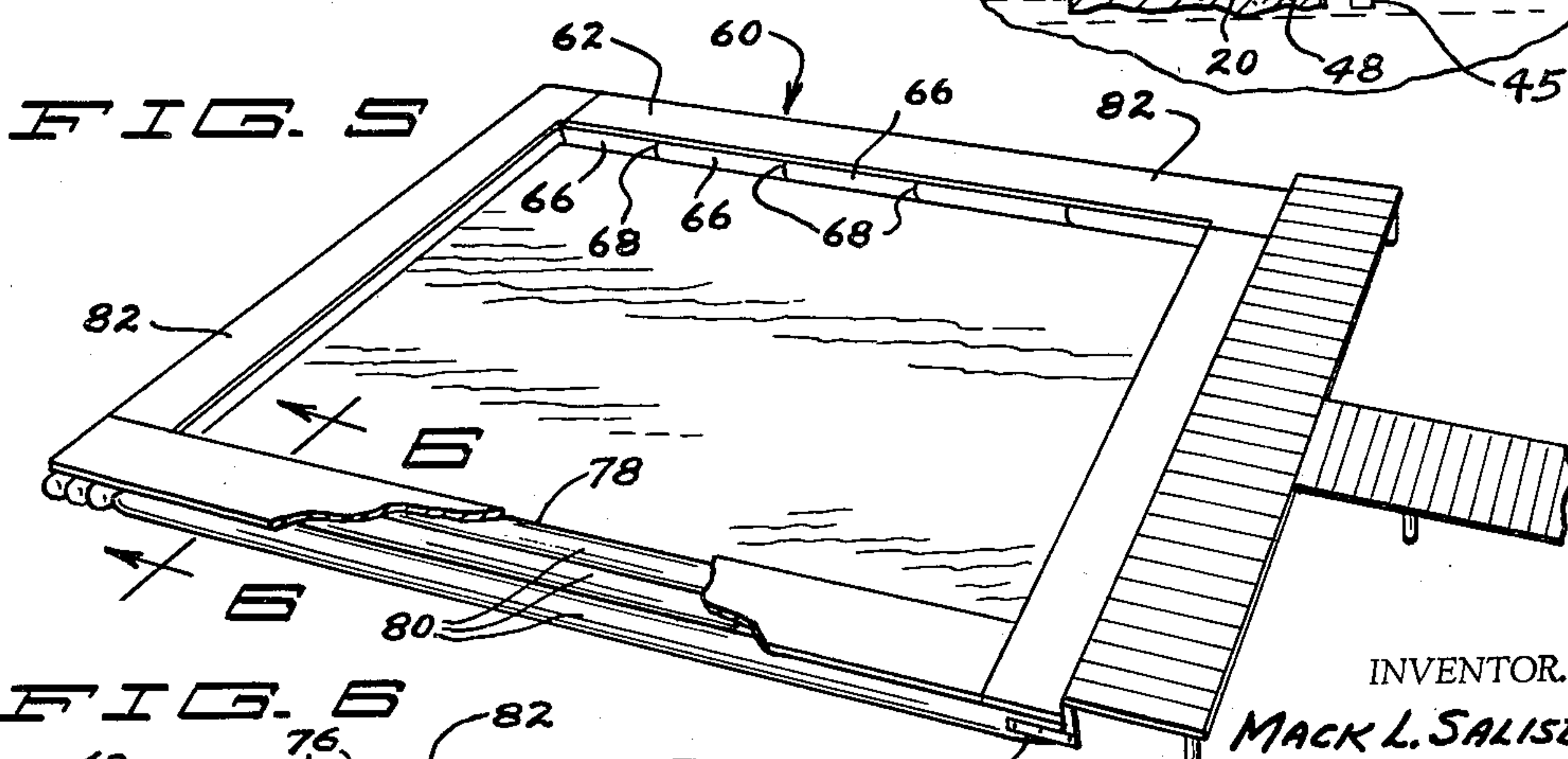
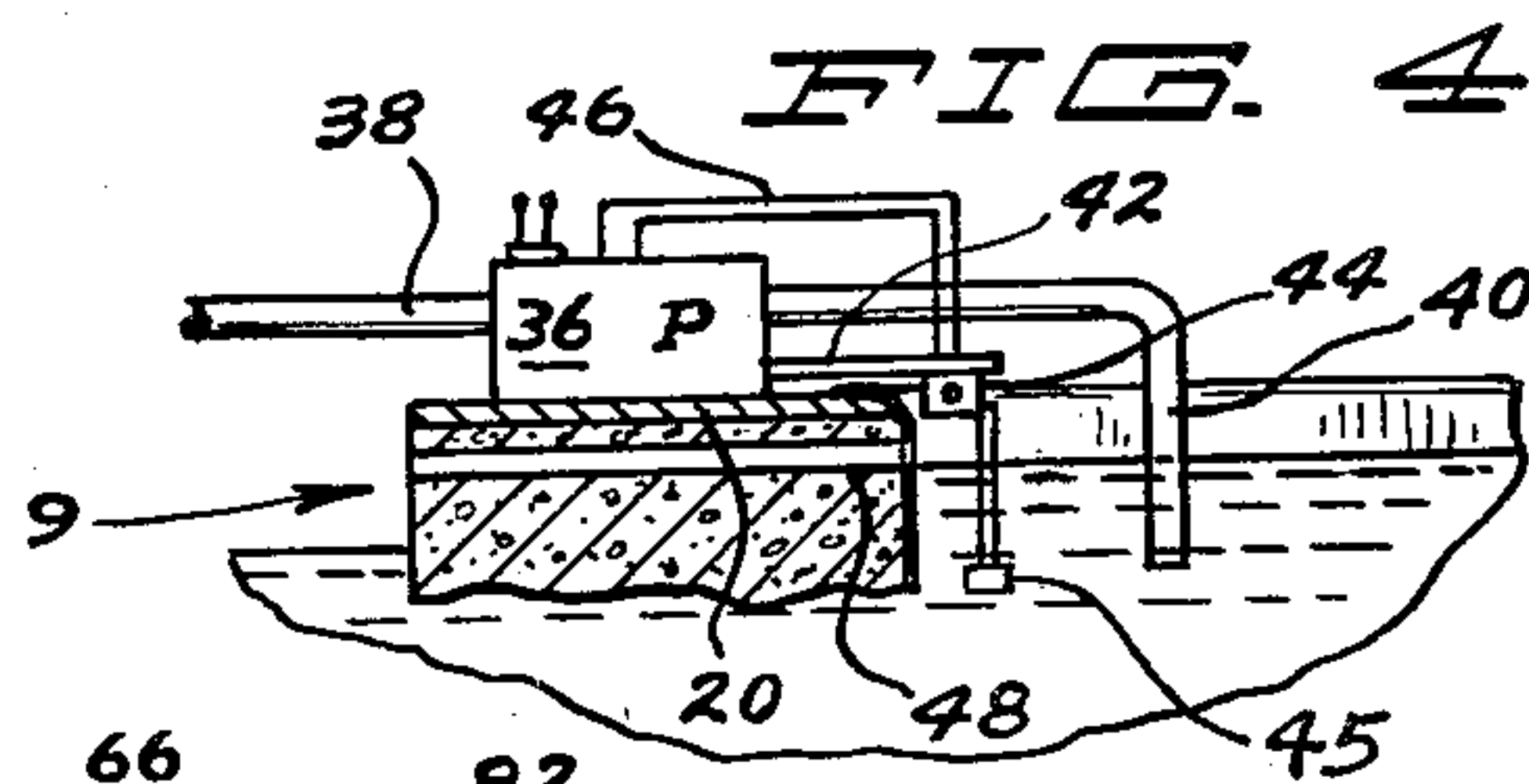
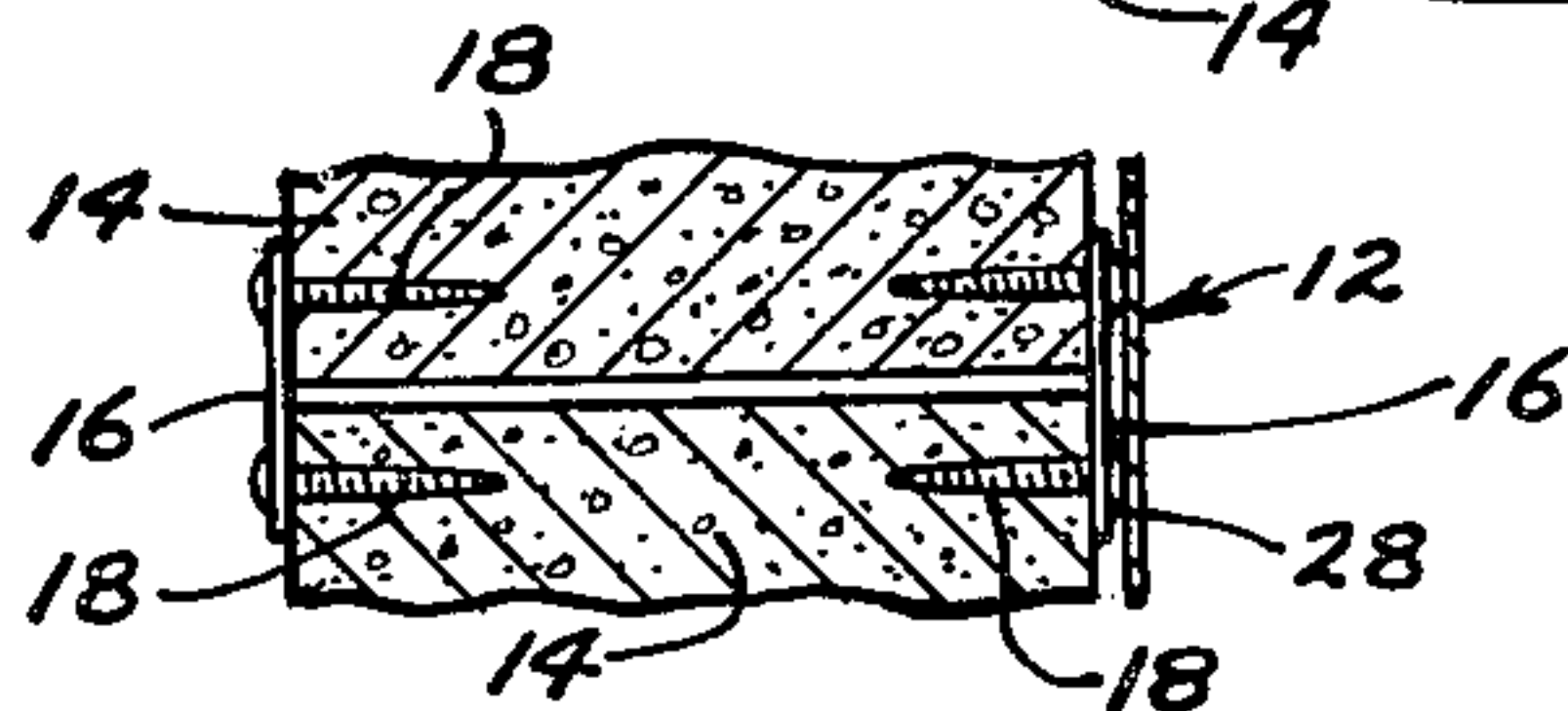
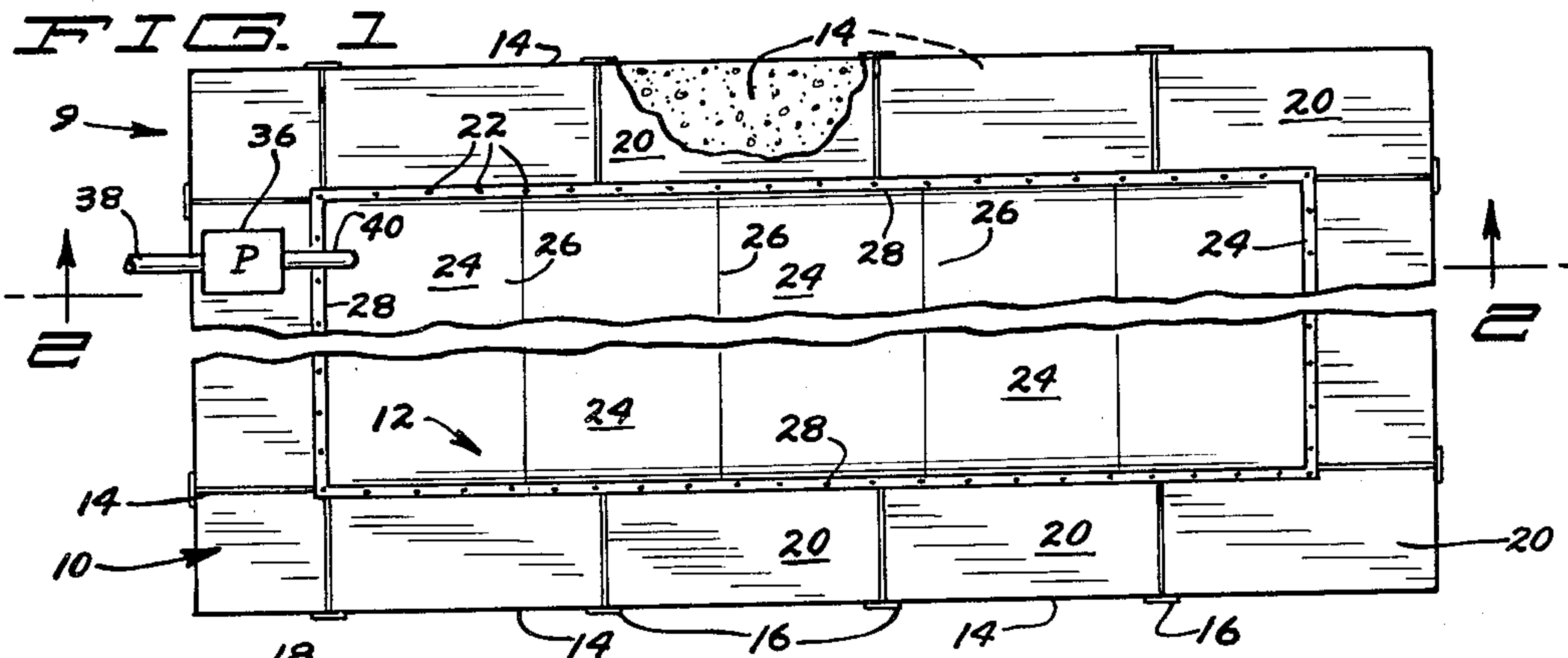
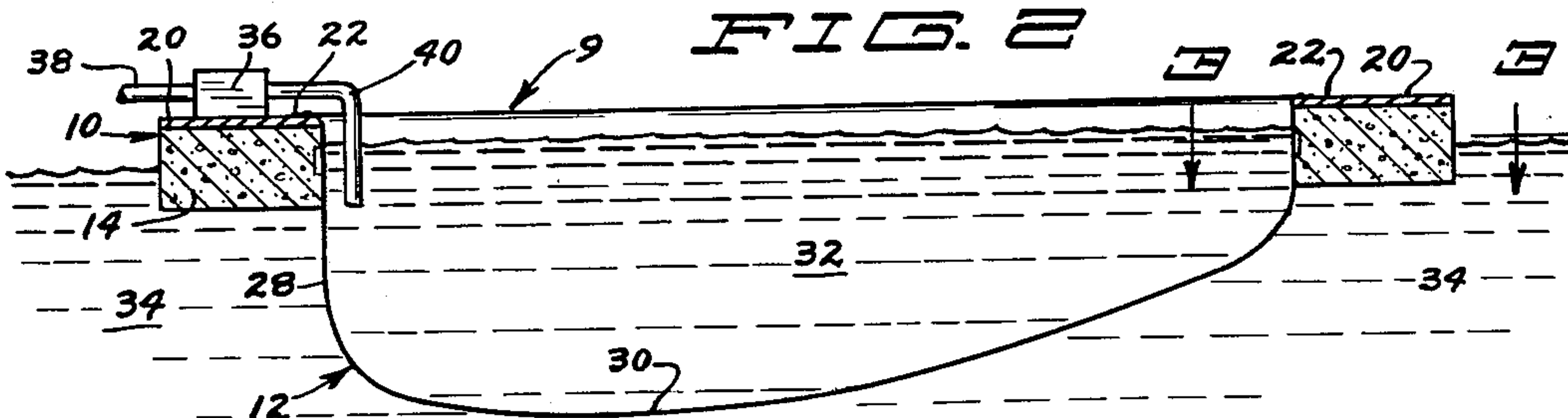
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SWIMMING POOL

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SWIMMING POOL

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This invention relates to swimming pools and more particularly to floating swimming pools of the type adapted to be moored in a body of water.

Swimming pools have been previously provided for use in bodies of water to protect swimmers from water hazards such as fish or swift currents and for the safety of children and others who are unable to swim. Such prior swimming pools are for the most part relatively expensive due to the complexity of their construction and in general are not suitable for use in silt laden, muddy or brackish water which is undesirable for swimming purposes.

It is thus an important object of the present invention to provide an improved, relatively inexpensive and simply constructed swimming pool adapted to make available clean fresh water for swimming in a lake, stream or other bodies of water which is laden with mud or is otherwise unsuitable for swimming.

It is another object of this invention to provide an improved floatable swimming pool which is more simply constructed than prior pools and has been reduced in cost through the elimination of a number of parts.

It is a still further object of this invention to provide an improved floatable swimming pool wherein the walls and bottom are held in place without the aid of rigid structural supporting members.

It is a still further object of this invention to provide an improved floatable swimming pool formed from a fluid impervious flexible sheet material and including means for automatically retaining the sheet material in a stretched or distended condition without the use of rigid structural members.

It is still another object of the present invention to provide an improved swimming pool adapted to be moored in a body of water wherein the materials of the pool will not be harmed by normal wave action.

These and other more detailed and specific objects will be disclosed in the course of the following specification, reference being had to the accompanying drawings, in which—

FIG. 1 is a plan view of the swimming pool according to the present invention.

FIG. 2 is a vertical sectional view taken along line 2—2 of FIG. 1.

FIG. 3 is a partial horizontal sectional view taken along line 3—3 of FIG. 2.

FIG. 4 is a partial vertical sectional view of another form of the invention.

FIG. 5 is a perspective view showing a swimming pool according to another form of the present invention as it appears when it is in use.

FIG. 6 is a partial vertical sectional view taken on line 6—6 of FIG. 5.

Referring now to the figures, and particularly to FIGS. 1, 2 and 3, there is shown a swimming pool 9, according to the present invention, including a peripheral float means or supporting member 10 which is preferably rectangular in shape and extends around the entire periphery of the pool 9. Secured thereto is an enclosure 12 formed from a fluid impervious flexible sheet material such as plastic sheeting. Member 10 maintains the edges of the enclosure 12 above the surface of the water upon which the pool 9 is afloat thereby preventing

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mixing of the water in the pool with the surrounding water.

The supporting member 10 is formed from a plurality of floats 14 connected together at their ends by fastening members 16, as best seen in FIG. 3. Fastening members 16 can comprise flat sheet metal strips secured at each end to the side one of the floats 14 by screws 18 as best seen in FIG. 3. The fastening members 16 are secured to both inside and outside walls of the floats 14 and thus prevent lateral bending of the peripheral supporting member 10. A limited amount of vertical pivotal movement between each of the floats 14 will be permitted by the fasteners 16 of FIG. 3. Such vertical pivotal movement is ordinarily desired since it will reduce stresses on the enclosure 12 resulting from wave action. If greater rigidity is desired, the several floats 14 can be rigidly connected to each other or, if desired, a single large float can be used to define the periphery of the swimming pool.

While the float 14 can be formed from hollow bodies or other float materials, a preferred material is a foamed plastic material such as foamed polyethylene or foamed polystyrene.

Secured to the upper surface of each of the floats 14 by means of adhesive or other suitable fastening means (not shown) are a number of rigid horizontally disposed deck members such as boards 20. The boards 20 provide further rigidity for the peripheral support 10 and also distribute a person's weight to provide a smooth surface for walking in the event that the foam plastic floats 14 are of a spongy nature. The boards 20 thus serve as a walkway around the edge of the pool.

The floats 14 are preferably rectangular in cross-section but, depending on the particular requirements of the pool to be constructed, the cross-sectional shape of the floats may be changed as desired. When the edge of the pool is to be used for a walkway, it is preferred that at least tops of the floats 14 be flat to provide adequate support for the boards 20.

Secured to the inner edges of the peripheral support 10 and more specifically according to a preferred form of the invention to boards 20 by a suitable fastening means, such as by screw fasteners 22 are the side walls 28 of enclosure 21. The enclosure 21 is formed from a flexible fluid impervious sheet material of relatively thin gage such as plastic film, water proof canvas or the like composed of a plurality of sheets 24, which are secured together in fluid tight relationship as by heat sealing or sewing along the seams 26, best seen in FIG. 1. The bottom wall 30 is preferably inclined to provide a deep and shallow water at opposite ends of the pool.

When the pool is to be used, it is filled with water 32 to a level above the body of water 34 in which the pool 9 is moored. The head of water represented by the difference between the levels of the water 32 within the pool and the level of the water outside the pool maintains a pressure differential across the enclosure 12 thereby maintaining the walls 28 and bottom 30 in a distended condition without the requirement for supporting braces or the like. The bottom of the pool can therefore be readily cleaned with conventional equipment and will support the weight of persons who are unable to swim.

For most purposes, it was found that a head of water of about 1/2 to 1 inch was satisfactory to keep the side and bottom walls of the pool in a distended condition. If relatively swift currents are encountered, a greater head of water may be required.

While the head of water within the pool 9 can be produced in any convenient manner, for most purposes it is preferred that the pool be provided with a means for maintaining a head of water such as reversible pump 36.

Pump 36 is provided with an inlet pipe 38 connected to a source of water suitable for swimming (not shown) and outlet pipe 40 adapted to introduce and withdraw water from the pool 9. Thus when the level of water in the pool is too low, as a result of evaporation or from other causes, additional water can be added easily by pumping water into the pool. If the level of water in the pool becomes too high, the pump 36 is operated in reverse to remove water from the pool. Removal of water can in the alternative be accomplished by means of an overflow pipe (not shown) in which case the pump need not be reversible.

Refer now to FIG. 4 which shows a modified form of pool filling and emptying means. In this form of the invention, the pump 36 can be operated manually or, if desired, can be operated automatically. The pump 36 of FIG. 4 is provided with an inlet pipe 38 communicating with a source of water suitable for swimming (not shown) and an outlet pipe 40 communicating with the interior of the pool 9. The pump 36 is secured rigidly to the upper surface of one of the boards 20. Connected to the side of the pump 36 is a support arm 42. Attached to the end of support arm 42 is a pressure operated switch 44 adapted to sense the level of the water within the pool 9. A pressure sensing element 45 connected to the switch 44 is positioned within the pool below the surface of the water. The switch 44 is connected to the motor of pump 36 by means of suitable conductors 46. Extending transversely through the peripheral support 10 is an overflow pipe 48.

During operation, when the pressure sensing element 45 senses a pressure determined by the desired height of the water within the pool 9, the pump 36 will be inoperative. When the pressure sensed by the element 45 falls below the desired value, contacts of switch 44 will close establishing a current through conductors 46 to the pump 36. The resulting operation of pump 36 will force water from the supply source through pipe 40 into the pool 9 until the desired height of water is established, at which time switch 44 will cut off current to the pump.

The operation of the pump 36, of FIG. 4, is thus entirely automatic. Loss of water from the other causes will be quickly replaced when necessary thereby maintaining the pool side walls and bottom wall in the distended condition at all times. If the pool is overfilled, for example, the result of a heavy rain, the overflow pipe 48 will exhaust the excess water from the pool until the proper head of water is again established.

Referring now particularly to FIGS. 5 and 6, there is shown a pool 60, according to another form of the invention. In FIGS. 5 and 6, the pool 60 includes peripheral support member 62 extending completely around the pool and a flexible fluid impervious enclosure 64 secured at its edges to support 62. As in the previous embodiments, the enclosure is formed from a plurality of sheets 66 secured together along seams designated 68 and includes side walls 70 and a bottom wall 72. The peripheral support 62 includes floats 73 which, in this instance, are formed from hollow inflatable gas impervious sheet material 74. The sheet material 73 is preferably joined together along a plurality of longitudinally extending seal lines 76, two such lines being shown. Seal lines 76 divide each inflatable float 73 into a plurality of inflatable chambers 80.

Secured to the upper surface of the chamber 80 by any suitable means as by adhesive or by means of suitable fasteners, are horizontally disposed deck members, such as boards 82, which form a walkway permitting swimmers to walk around the periphery of the pool 60 as well as providing additional rigidity and support for the edge of the enclosure 64. The upper edges of the side walls 70 are secured by suitable fastening means such as by heat sealing to the inner edges of the inner chamber 80 to maintain the walls above the surface of the body of water in which the pool floats. If desired, the pool 60 may be

secured to a pier or dock by means of fasteners such as fastener 84 of FIG. 5.

A pool embodying the present invention was constructed and moored in a rather muddy river. It was then filled with clean fresh water. It proved to be low in cost, reliable in operation and provided excellent swimming facilities for an area which is otherwise undesirable for swimming. The pool withstood substantial currents without showing any damage. A head of water of about 1 inch which was maintained within the pool kept the sides and bottom of the pool distended without the requirement for any structural members for this purpose.

It is understood that suitable modifications may be made in the structure as disclosed, provided such modifications come within the spirit and scope of the appended claims. Having now therefore fully illustrated and described my invention, what I claim to be new and desire to protect by Letters Patent is:

1. A floatable swimming pool adapted to be moored in a body of water comprising, a flexible fluid impervious sheet enclosure to provide a swimming compartment, float means secured to the edges of said enclosure to maintain the edges thereof above the surface of said body of water and means to maintain the level of water in said pool above the level of water in said body of water to keep said enclosure in a distended condition.

2. A floatable swimming pool comprising in combination, a fluid impervious enclosure, said enclosure including side walls extending entirely around said pool, a bottom wall and float means secured to the upper edge of said enclosure to support the entire upper edge of said enclosure above the surface of a body of water in which said pool is floated whereby said pool is adapted to be filled to a level above said surface thereby maintaining said enclosure in a tightly stretched condition.

3. A floatable swimming pool adapted to be moored in a body of water comprising in combination an enclosure formed from fluid impervious flexible sheet material, said enclosure including side walls and a bottom wall, said walls being connected together in fluid tight relationship, a peripheral float member secured to the edges of said enclosure to maintain every portion of the edge of said enclosure above the surface of said body of water, said pool being adapted to be filled with water to a level above the surface of said body of water to maintain the flexible sheet material in a distended condition.

4. A floatable swimming pool adapted to be floated in a body of water comprising in combination an enclosure formed from flexible fluid impervious sheet material including side walls and a bottom wall, a plurality of connected floats secured to the peripheral edges of said side walls to maintain the edges of said enclosure at every point around the periphery of said pool above the surface of said body of water upon which said pool is afloat, fastening means securing said edges of said enclosure to said float means and said pool being adapted to be filled to a level above the level of water in said body of water without the water in said pool overflowing into said body of water.

5. A floatable swimming pool adapted to be moored in a body of water comprising in combination an enclosure formed from flexible fluid impervious sheet material, float means secured to the edges of said sheet material to support every portion of the edge thereof above the surface of said body of water, horizontally disposed deck members secured to the upward surface of said float means to provide a walkway around the edge of said pool and said pool being adapted to be filled with water above the level of the surface of water upon which said pool is afloat to maintain the enclosure in a distended position.

6. A floatable swimming pool adapted to be placed in a body of water comprising in combination an enclosure formed from fluid impervious sheet material including

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side walls and a bottom wall secured together in fluid tight relationship, float means secured around the entire periphery of said pool for raising the entire peripheral edge of said enclosure above the surface of said body of water and pump means for maintaining the level of water within said pool above the surface of said body of water to distend the side walls and bottom walls of said enclosure.

7. A floatable swimming pool for use in a body of water which is undesirable for swimming purposes comprising in combination a flexible fluid impervious enclosure including side walls and a bottom wall secured together in a fluid tight relationship, float means secured to the peripheral edges of the said side walls to maintain the entire upper edges of each of said side walls above the surface of said body of water to thereby prevent the flow of water over said edges and said float means comprising blocks of foamed plastic material, said pool being fillable to a level above the surface of said body of water to maintain said enclosure in a distended condition.

8. A floatable swimming pool adapted to be placed in a body of water comprising in combination a generally rectangular enclosure formed from flexible fluid impervious sheet material including bottom and side walls secured together in fluid tight relationship, float means secured to the upper edges of said side walls and extending around the entire periphery of said pool to maintain said side walls above the surface of said body of water,

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said float means comprising a plurality of blocks of floatable plastic foam material, said blocks being generally rectangular in cross section and a plurality of flat horizontally disposed deck members secured to the upper surface of said float means around substantially the entire periphery of said pool to provide a walkway for swimmers.

9. A swimming pool for use in a body of water which is undesirable for swimming comprising in combination, an enclosure formed from flexible fluid impervious sheet material, float means extending around the entire periphery of said pool and secured to the edges of said sheet material to maintain said edges above the level of the surface of the water upon which said pool is afloat, said float means comprising at least one air inflatable fluid impervious cell and horizontally disposed rigid deck members secured to the upper surface of the said float means to provide a walkway around the periphery of said pool.

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