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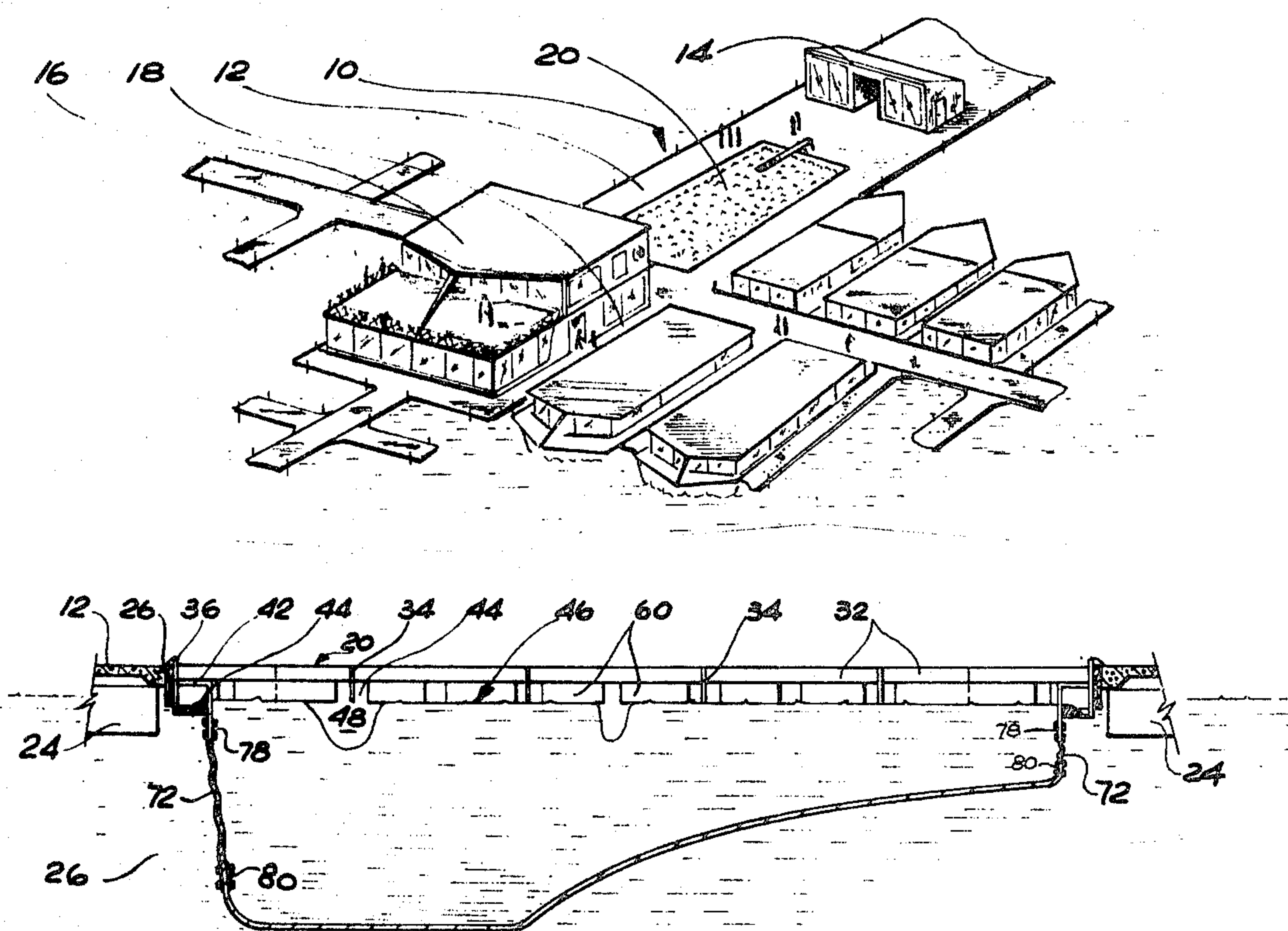
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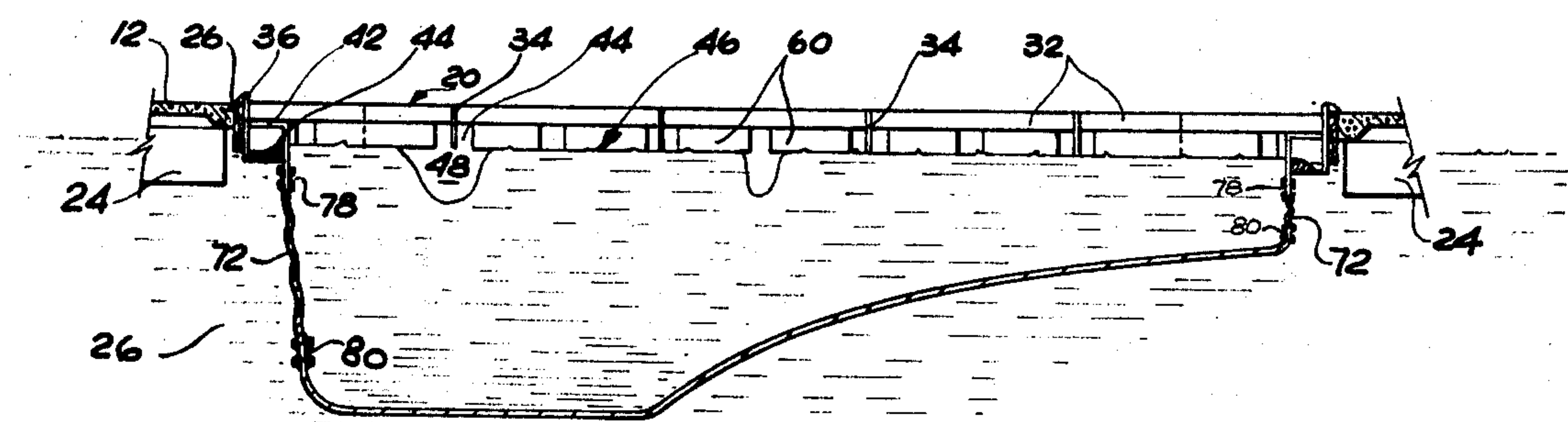
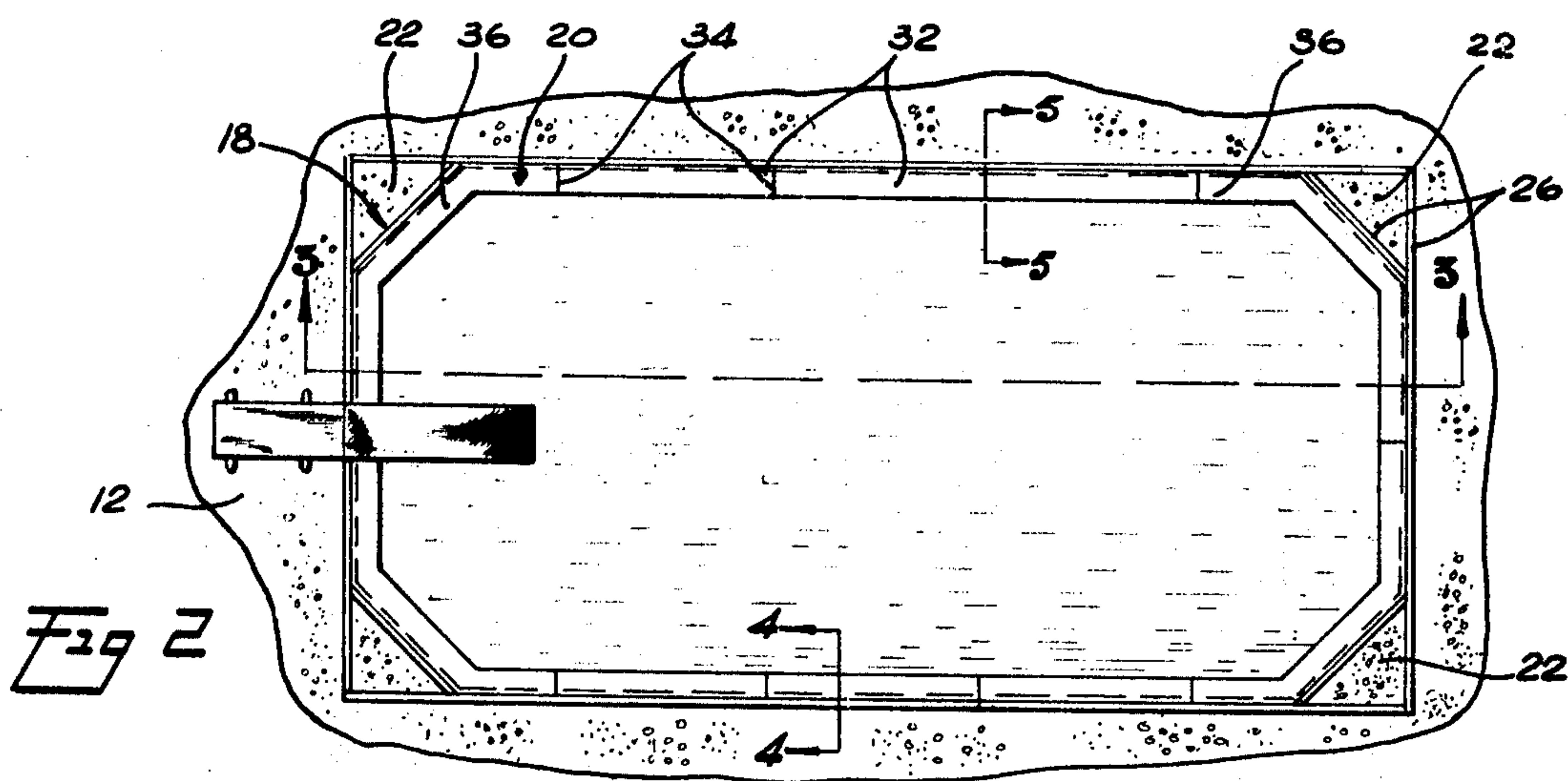
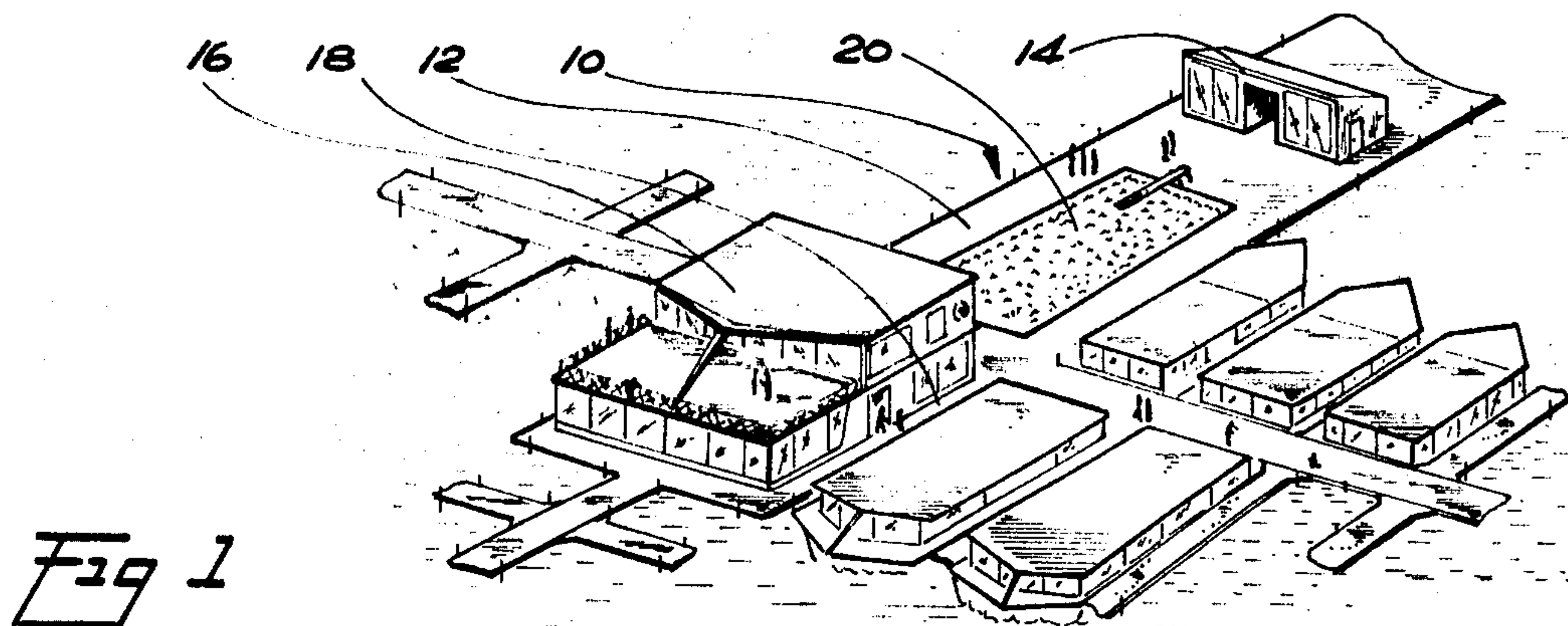
[54] **FLOATING SWIMMING POOL**  
**11 Claims, 5 Drawing Figs.**

[52] U.S. Cl. .... 4/171  
[51] Int. Cl. .... A47k 3/00,  
E04h 3/16, E04h 3/18  
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172.19, 172

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**ABSTRACT:** A floating swimming pool for use in a wharf structure. An expanse of decking is supported over a body of water and defines an enclosed opening through which the swimming pool depends into the body of water. The swimming pool includes a basin having a rigid bottom portion and a flexible wall portion between the bottom portion and the decking. A water channel extends along the perimeter of the swimming pool and opens into the pool to define the waterline thereof.





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## FLOATING SWIMMING POOL

## FIELD OF THE INVENTION

The field of art to which the invention pertains includes the field of sea baths.

## BACKGROUND AND SUMMARY OF THE INVENTION

The expansion of the small boat industry and increased enthusiasm for boating as a sport and as a recreation has increased the need for marina accommodations. Particularly with the rise in popularity of houseboating, docking facilities are required that provide not only a berth for the boat but recreation for the boater. To this end, the present invention provides swimming facilities and a mode of construction which enables the installation of a swimming pool as part of a dock or wharf structure.

Specifically, an enclosed opening is defined through an expanse of wharf decking which is supported over a body of water, and a swimming pool is provided in the opening depending from the decking into the body of water. The swimming pool completely fills the opening and includes a rigid wall portion depending from the decking, a flexible wall portion depending from the rigid wall portion and a rigid bottom portion depending from the flexible wall portion into the body of water. Means are provided for floating the decking on the body of water and flotation material is disposed along the outer perimeter of the swimming pool to aid in supporting the swimming pool. A water channel is provided extending along the perimeter of the swimming pool and which opens into the pool to define its waterline. The swimming pool includes a plurality of modular structural units, each unit comprising a rigid wall portion and a water channel section. Stringers are secured to the decking along the perimeter of the opening, the modular units being secured to the stringers to depend therefrom and are finished with fiberglass. Connecting plates are provided between adjacent modular units and are connected to respective ones thereof and to each other to secure the units together. By the foregoing construction, a swimming pool is provided surrounded by an expanse of decking which can support walled structures thereon and walkways for pedestrian use of the structures so that the swimming pool is a part of an integrated complex of recreational and convenience facilities such as found at large hotels.

## BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view in schematic format of a floating facility for houseboats and which incorporates a swimming pool of this invention as a part thereof;

FIG. 2 is a plan view of the swimming pool herein and a portion of the surrounding decking;

FIG. 3 is a vertical section view taken on the line 3—3 of FIG. 2, in the direction of the arrows;

FIG. 4 is a partial vertical section view taken on the line 4—4 of FIG. 2, in the direction of the arrows; and

FIG. 5 is a partial vertical section view taken on the line 5—5 of FIG. 2, in the direction of the arrows.

## DETAILED DESCRIPTION

Referring to FIG. 1, there is schematically illustrated a marina facility for the accommodation of a plurality of boats, including houseboats, which is constructed to extend into the harbor water by floating thereon, or otherwise, and which is provided generally centrally with a recreational facility 10 for use by the boaters. The recreational facility 10 includes an expanse of decking 12 which can support a variety of walled structures, such as, a lounge room, a restaurant, offices, shops of various sorts, etc., as indicated at 14 and 16, and walkways for pedestrian use of the structure. In accordance with the present invention, the decking 12 defines an enclosed opening 18 in which a swimming pool is constructed which depends from the decking into the body of water.

Referring to FIGS. 2, 3 and 4, the decking 12 can be formed of any material used for decking purposes and in this particular illustration is formed of reinforced concrete suitably surfaced for walkways and is supported on a plurality of pontoons 24 so as to float over the harbor water 26. The decking 12 is formed with an enclosed opening 18 therethrough generally rectangular in shape, the corners of which are beveled by corner sections or knees 22. Wooden stringers 26 are secured to the edge of the decking 12 along the perimeter of the opening 18 so as to afford means for securing the swimming pool 20 depending from the decking 12 as will hereinafter be described. Referring specifically to FIG. 4, the stringers 26 are connected to the decking 12 by means of galvanized bolts 28 that are threaded into inserts 30 encased in the concrete of the decking. Further details of construction of such decking and supporting pontoons can be found in my earlier U.S. application Ser. No. 806,249, filed Mar. 11, 1969, entitled "Floating Wharf Structure."

The sides of the pool 20 are constructed of a plurality of modular units 32 secured together by connection plates 34, as hereinafter described. Corner members 36 having 45° angles 38 are preformed and assembled with the side members 32 but have the same manner of construction and attachment to the stringers 26. Each constructional unit 32 includes a vertical member 36 of plywood which is bolted and screwed by respective fasteners 38 and 40 to the stringer 26 thereat. A horizontal plywood member 42 extends outwardly from the vertical member 36 and is connected to a depending plywood member 44 (FIG. 5) which extends beneath the waterline 46 of the pool. The wooden members 36, 42 and 44 are lined on both sides with fiberglass, as shown at 48, to protect the plywood, and the fiberglass is built up adjacent the interconnection between the vertical and horizontal members 36 and 42 to form a support member 50 thereat. The plywood members 36, 42 and 44 are connected together by small nails and adhesives, or by any other appropriate means. The fiberglass coating 48 is formed over the top edge of the vertical member 36 and adjacent top edge of the wooden stringer 26 to form a smoothly rounded fiberglass edge 52, but that portion of the coating may be preformed.

The horizontal member 42 functions as a stepdown from the top of the deck 12. The vertical member 36 extends downwardly past the horizontal member 42 and its outer fiberglass lining 48 turns inwardly toward the bottom thereof parallel to the horizontal member 42 to continue as the outer fiberglass lining of the vertical depending member 44. The horizontal portion 54 of the fiberglass lining 48 thus forms a chamber 56 with the plywood members 36, 42 and 44. Foamed polystyrene 58 is disposed as flotation material within the chamber 56 and is covered with a fiberglass gutter member 49 so that its fiberglass surface continues as the outer lining 48 of the vertically depending member 44. The gutter member 49 may be preformed along or integral with the upwardly extending fiberglass and rounded edge member 52, or it may be formed at the site as a continuation of the lining 48. The vertically depending member 44 is approximately 90 percent open space 60, as shown more clearly in FIG. 3. Referring also to FIG. 5, those portions of the vertical member 44 which are not open space and which are therefor connected to the horizontal member 42, are shown in cross section where it is seen that the gutter member 49 abuts the outer fiberglass surface of the vertical member 44. The foamed member 58 aids in keeping the swimming pool afloat. The topmost point 64 of the gutter member 49 defines the waterline 46 of the swimming pool and slopes downwardly into a water channel 62. Water flows into the pool by means of a water conduit 66 connected beneath the chamber 56 and into the pool at some point, from the pool over the sloping gutter member 49 into the channel 62 so that the water may be circulated for filtering or other treatment, or for replacement.

Referring to FIG. 5, a fiberglass connecting plate 34 is secured on each side of each structural unit 32, either with fasteners such as bolts (not shown) or by being formed in-



tegral with the fiberglass surfacing 48. The plates 34 are shaped so as to allow intimate contact between adjacent foam members 58, and cut away at 68 to allow passage of water through the water channel 62. The plates 34 are foraminated and adjacent plates are tightly connected together by means of bronze bolts 70 therethrough.

As previously noted, the vertical member 44 extends downwardly below the pool waterline 46. Referring again to FIG. 4, a flexible wall member or liner 72 is connected along the bottom edge of the vertical member 44. The flexible member 72 defines a midportion of the pool structure, as shown in FIG. 3, and is of neoprene or other waterproof material formed with enveloping lips 74 and 76 along its top and bottom edges respectively. The flexible member 72 is secured to the vertical member 44 by bonding or welding (depending upon the materials utilized) of the lips to the fiberglass lining 48 of the vertical member 44, aided by a plurality of closely spaced sealing clamps 78. The enveloping lips 76 along the bottom of the flexible member 72 is similarly connected by bonding a sealing clamps 80 to the upper edge of a molded fiberglass pool bottom 82.

The flexible liner 72 serves several purposes. In high hurricane areas, water adjacent the shore can be swept outwardly into the sea as a result of violent wave or wind action. If a completely rigid pool were to be floated in water and the water beneath the pool were to be suddenly swept away, the bottom of the pool could impact against the ocean floor with sufficient force to damage not only the pool but adjacent decking surfaces. With a pool of the type illustrated and described herein, the flexible member 72 would give to eliminate or minimize damage to the pool and adjacent areas. Alternatively, the pool could be pumped free of water in the event of a warning of hurricane, or the like, permitting the bottom of the pool 82 to rise to thereby minimize damage that might occur and also to remove extreme loads from the dock to which the pool is attached. Furthermore, wave or current action which may be inherent in the body of water in which the swimming pool is floating would be absorbed by the flexible wall member 72 thus minimizing stresses on the decking and on the securing members which hold the pool affixed to the decking.

While the swimming pool as above described can be utilized with any form of wharf or dock structure, it is particularly suitable for utilization with a floating dock structure in which the decking thereof is supported on a body of water by means of pontoons, as described above. With such construction, particularly where buildings or other walled structures are further supported on the decking, a pool of the present invention is particularly advantageous in providing a minimum of reaction

to local current conditions with a minimum of detracting from stability of the buildings and contents thereof supported by the decking.

What is claimed is:

1. A wharf structure, comprising:  
an expanse of decking defining an enclosed opening therethrough;  
means for supporting said decking over a body of water; and  
a swimming pool in said opening depending from said decking into said body of water;  
said swimming pool comprising a basin having a rigid bottom portion in said body of water and having a flexible wall bottom portion in said body of water and having a flexible wall completely and continuously around the perimeter of said pool and connected between said rigid bottom portion and said decking whereby to impart vertical collapsibility to said pool.
2. The invention according to claim 1 in which said decking supports at least one walled structure thereon and defines at least one walkway for pedestrian use of said structure.
3. The invention according to claim 1 in which said swimming pool entirely fills said opening.
4. The invention according to claim 1 in which said supporting means comprises means for floating said decking on said body of water.
5. The invention according to claim 1 including a rigid wall portion depending from said decking and connected to said flexible wall portion.
6. The invention according to claim 1 in which said rigid bottom portion depends from said flexible wall portion.
7. The invention according to claim 1 including a water channel extending along the perimeter of said swimming pool and opening into said pool to define the waterline thereof.
8. The invention according to claim 1 in which said swimming pool comprises a plurality of modular structural units, each unit comprising a rigid wall portion and a water channel section, and including means for securing said unit to said decking to depend therefrom.
9. The invention according to claim 8 including a pair of connecting plates between adjacent modular units connected to respective ones thereof, and means for securing said connecting plates together.
10. The invention according to claim 1 including a stringer secured to said decking along the perimeter of said opening and a member secured to said stringer and depending therefrom to define the upper extent of said swimming pool.
11. The invention according to claim 1 including flotation means along the outer perimeter of said swimming pool to aid in supporting said swimming pool in said body of water.

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