Feb. 13, 1962 R. BEDICK 3,020,560

SWIMMING POOL CONSTRUCTION AND RELATED METHOD

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FIG. 1

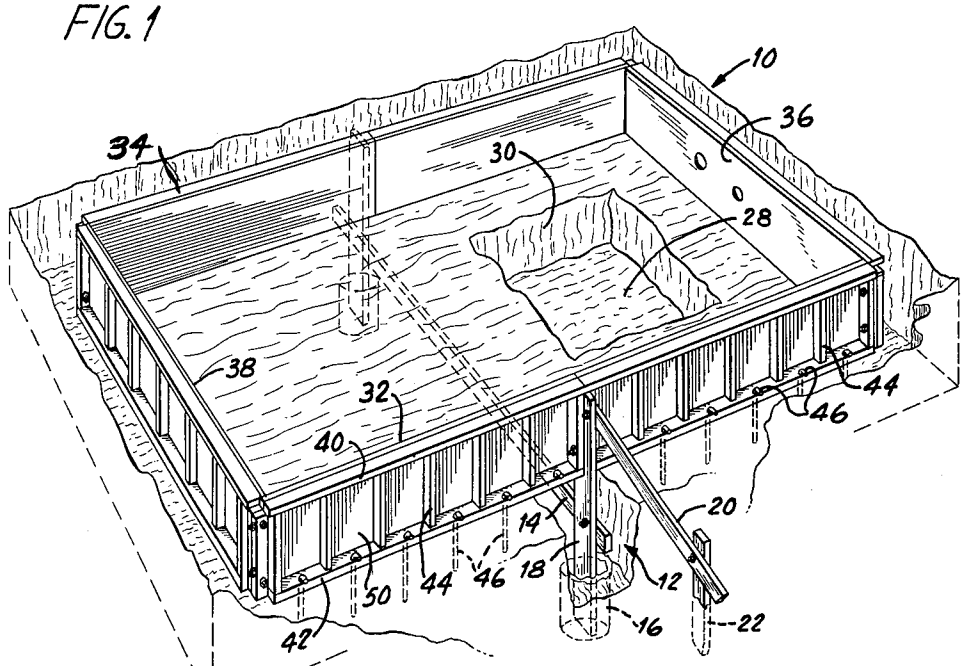
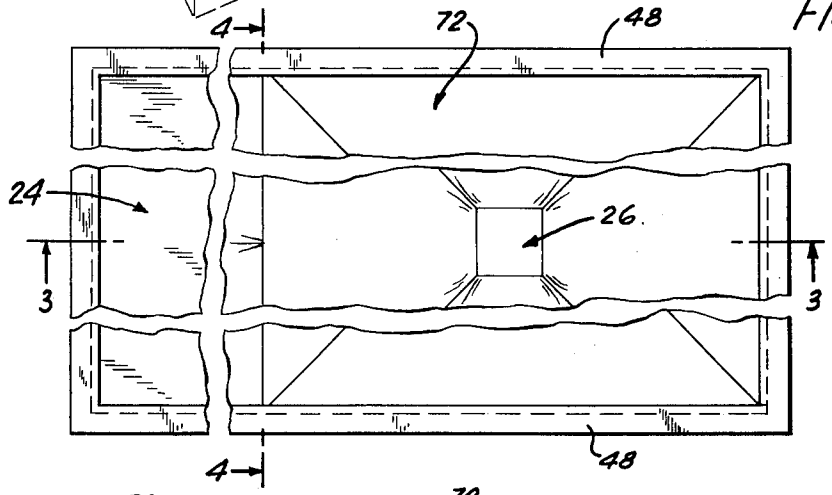


FIG. 2



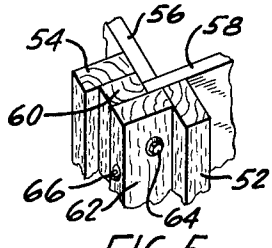


FIG. 5

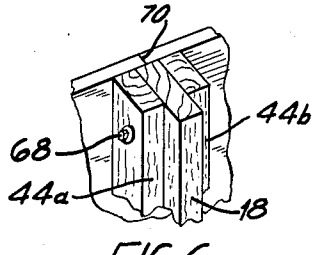


FIG. 6

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SWIMMING POOL CONSTRUCTION AND RELATED METHOD

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FIG. 3

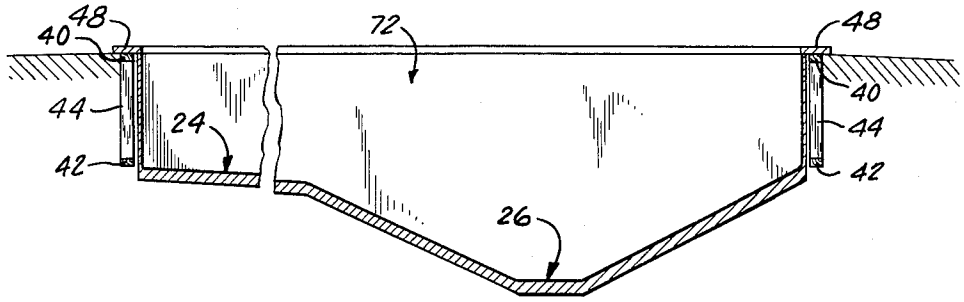
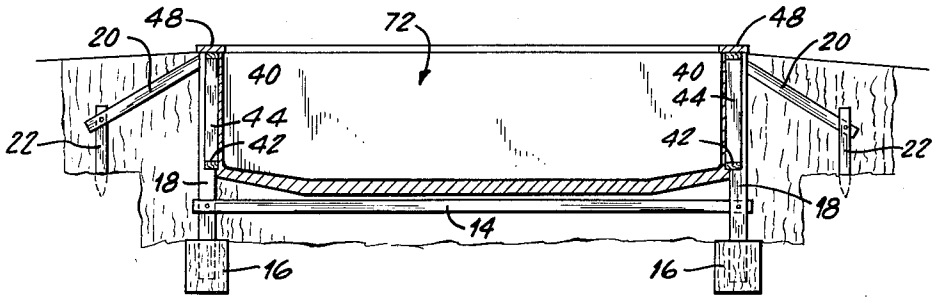


FIG. 4



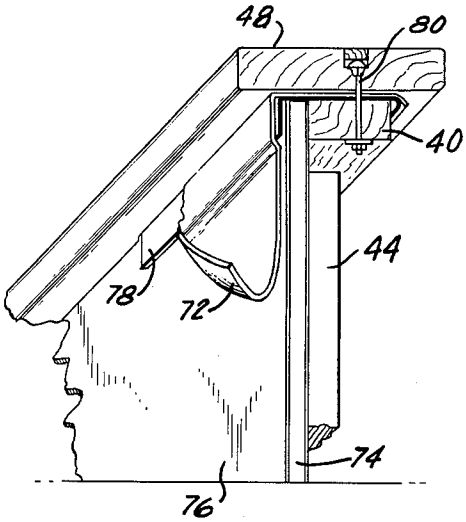


FIG. 7

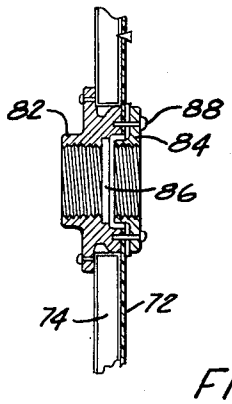


FIG. 8

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3,020,560

SWIMMING POOL CONSTRUCTION AND RELATED METHOD

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2 Claims. (Cl. 4—172)

This invention relates to swimming pool constructions and methods for providing the same.

It is an object of the invention to provide improved swimming pool constructions and improved methods for fabricating these constructions.

It is a further object of the invention to provide an improved swimming pool construction adapted for mass production and susceptible of prefabrication techniques.

Still another object of the invention relates to the provision of improved swimming pool constructions which are more practical and economical than those heretofore available.

Another object of the invention is to provide a swimming pool construction which requires a minimum of repairs and in connection with which repairs, when necessary, are very readily effected.

Still another object of the invention is the provision of an improved structure which is algae and bacteria resistant.

In achieving the above and other of its objectives, the invention contemplates the use of a framework supporting, for example, cement asbestos panels, constituting the sides of the pool structure and constituting lateral supports for a vinyl sheet or the like which constitutes a receptacle for the pool water. The cement asbestos panels are amazingly resistant to deterioration, while performing the function of laterally supporting said vinyl sheet and the use of a vinyl sheet provides innumerable advantages regards installation and maintenance.

According to a feature of the invention, the vinyl sheet is supported from below by means of a sand bedding which is employed to cover the floor of the excavation provided for accommodating the pool structure.

Other objects, advantages and features of the invention will be found in the following detailed description of a preferred embodiment as illustrated in the accompanying drawing, in which:

FIG. 1 is a perspective view illustrating a partially completed installation of a swimming pool structure provided according to the invention;

FIG. 2 is a top plan view of the completed swimming pool structure;

FIG. 3 is a sectional view taken along line III—III of FIG. 2;

FIG. 4 is a sectional view taken along line IV—IV of FIG. 2;

FIG. 5 is a perspective view illustrating a preferred arrangement for the corners of the pool structure, the corner arrangement being partially broken away and shown in enlarged scale;

FIG. 6 is a view similar to that of FIG. 5 illustrating a central support for the longitudinal sides of the pool structure;

FIG. 7 is a perspective view illustrating the connection of the vinyl liner to the sides of the pool; and

FIG. 8 illustrates a fitting providing access to the pool for pumping operations and the like.

According to the invention, an appropriate site is selected for the swimming pool structure which is desired and an excavation is made in the ground at said site, such as generally indicated at **10**. This excavation is generally of a right quadrilateral cross section to accommodate therein a swimming pool of like configuration.

Transversely of the longitudinal extent of the excavation is provided a slot or ditch **12** wherein is located a transverse beam **14**. At opposite extremities of the beam **14** are located cementitious blocks **16** which serve as anchors for vertical posts **18**. Vertical posts **18** are, in turn, braced by diagonal beams **20** connected with dead men **22**.

As appears from FIGS. 2 and 3, the swimming pool is provided with a shallow end generally indicated at **24** and a deeper end generally indicated at **26**. The shape of the deeper end is of the nature of an inverted truncated pyramid. Referring again to FIG. 1, it is noted that to provide a basis for this form of deeper end there is provided a supplemental hole **28** which at the outset has the shape of a right quadrilateral, the sides **30** of this hole being subsequently broken down and graded to yield the form illustrated in FIGS. 2 and 3.

The structure is provided with lateral sides **32** and **34** and with sides or ends **36** and **38**.

Each of these sides includes a wooden framework constituted, for example, by a top rail **40** and a bottom rail **42** connected by vertical studs or posts **44**. The bottom rails **42** are provided with a rectilinear series of openings through which are inserted bent anchor rods **46**, the purpose of which is to hold the bottom rails **42** securely against the ground.

On top of the top rails **40** is provided an upper peripheral member or coping board **48**, the purpose of which, aside from esthetics, is to hold the vinyl liner in position, as will be shown in greater detail hereinafter.

Attached to the above noted framework are cement asbestos panels **50**. For a given side a single panel may be employed but, preferably, for convenience in handling, a series of panels will be employed which are placed in end to end abutting relationship. These panels constitute one of the features of the invention since an examination of the properties of these panels indicates that they are unusually well adapted for their intended use.

For example, since the panels are composed of only inert materials, they cannot rot or decay and will not be effected by sun, ground moisture, freezing, thawing and the like. Morever, these panels are extremely resistant to chemicals in the soil and, furthermore, possess an unusually high compressive strength of, for example, 14,000 p.s.i.

FIG. 5 illustrates how the cement asbestos panels are maintained in position at the corners of the pool structure. Thus, for example, end posts **52** and **54** are in abutting relationship with adjacent panels **56** and **58**, said posts abutting the panels along their respective narrow faces. Additionally, two further beams **60** and **62** are employed which are generally parallel to post **54**, but perpendicular to post **52**. Beam **60** is a spacer beam enabling beam **62** to overlap the corner formed by panels **56** and **58**. Beams **60** and **62** are locked to post **54** by means of bolt **64**, there being provided a transverse bolt **66** which pierces beam **62** through the larger cross sectional dimension thereof and fastens this beam to the post **52**.

FIG. 6 illustrates that vertical post **18** (as first seen in FIG. 1) is sandwiched between two adjacent vertical studs **44***a* and **44***b*, the assembly being held together by means of bolts **68**. FIG. 6 further illustrates how adjacent panels abut along a seam **70**.

In the preparation of the pool structure, insofar as it has been noted above, it is intended that the bottom support be constituted by the ground in which the excavation is made. However, in view of the intended use of a vinyl or similar sheet to constitute the actual fluid container, provision is made for avoiding possible damage to this sheet by the ground and objects therein by the use of a sand surface provided on the floor or ground. Thus, after the arrangement illustrated in FIG. 1 is completed

by reshaping hole **28** into the inverted pyramidal form mentioned above, sand is dumped into the shallow end of the pool and raked down by the use of a common rake so as to provide a covering of about 2 to 4 inches, a minimum of 2 inches being preferred.

With the pool structure ready for completion, there is introduced the vinyl liner **72** generally indicated in FIGS. 3 and 4 and illustrated in substantial detail in FIG. 7.

In FIG. 7 between cement asbestos panel **74** and the liner **72** are sandwiched an interliner **76** of tar paper and gasketing **78**, these members preventing contact between the liner and nails or the like maintaining the cement asbestos panels on the associated framework.

Also illustrated in FIG. 7 is the coping board **48** which constitutes the peripheral member of the swimming pool structure and which sandwiches the liner **72** against upper rail **40**, these two members being locked together by bolts **80** so that the liner is appropriately held in position.

Although a vinyl liner has been found to be the most satisfactory in service from the point of view of performing its function and requiring a minimum of maintenance, it is appreciated that materials will become available from time to time which are also capable of performing the functions demanded of the liner. Thus, the liner may be other than vinyl provided that it is tough, flexible, and impermeable to water and, further provided that it inhibits or does not form a basis for the growth of bacteria and algae.

It will be appreciated that the liner must be of sufficient dimension to adequately cover the bottom of the pool as indicated in FIGS. 2–4 without being unduly stretched, but while conforming, nevertheless, rather precisely to the configuration of the pool.

Following the positioning of the liner **72**, it is then possible to provide the pool structure with inlets and outlets such as illustrated in FIG. 8, wherein the circular fittings **82** and **84** are engaged in a hole **86** and clamped together by bolts **88** so as to sandwich the panel **74** and liner **72** therebetween. The circular fittings **82** and **84** are appropriately threaded so as to provide for connections to pumps and auxiliary apparatus as desired.

The structure is completed by appropriate connection of a pump and filter arrangement (not shown) by means of the last mentioned circular fittings and the ditch enclosing the pool structure is then filled in, whereupon the pool is ready for use.

It will be appreciated from what has been stated above, that the liner itself constitutes a water storage means

which is laterally supported by the cement asbestos panels on the associated frameworks, the bottom of the excavation itself surfaced with a sand bed supporting the liner from below. It is to be noted that the wooden frameworks and other wooden supporting members employed are, in accordance with the invention, appropriately treated with preservatives.

There will now be obvious to those skilled in the art many modifications and variations of the structure and methods set forth above. These modifications and variations will not, however, depart from the scope of the invention if defined by the following claims.

What is claimed is:

1. A swimming pool structure comprising a plurality of sides defining an enclosure and a flexible waterproof member engaging said sides and extending between the lower extremities thereof to constitute a water storage means, said sides each comprising a wood framework and cement asbestos panels covering the framework on the inside and constituting lateral supports for said flexible member, said structure further comprising gasket and interliner members between said flexible member and said cement asbestos panels, at least one of the sides being provided with a hole, a first circular fitting engaging in said hole against the corresponding panel of the said one side, a second circular fitting engaging in said hole and pressing against the vinyl adjacent the hole, and means to lock the fittings together.

2. A swimming pool structure comprising a plurality of sides defining an enclosure and a flexible waterproof member engaging said sides and extending between the lower extremities thereof to constitute a water storage means, said sides each comprising a wood framework and cement asbestos panels covering the framework on the inside and constituting lateral supports for said flexible member, said structure further comprising gasket and interliner members between said flexible member and said cement asbestos panels.

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