United States Patent

[11] **3,600,722**

[72] Inventors **Joseph Diemond Simsbury;**
Melvin Y. Gershman, West Hartford, Conn.; Henry L. Sundberg, Jr.; Norbert A. Vangsness, Longmeadow, Mass.

[21] Appl. No. **12,090**
[22] Filed **Feb. 17, 1970**
[45] Patented **Aug. 24, 1971**
[73] Assignee **Coleco Industries, Inc. Hartford, Conn.**

[54] **POOL AND ENCLOSURE THEREFOR**
15 Claims, 13 Drawing Figs.

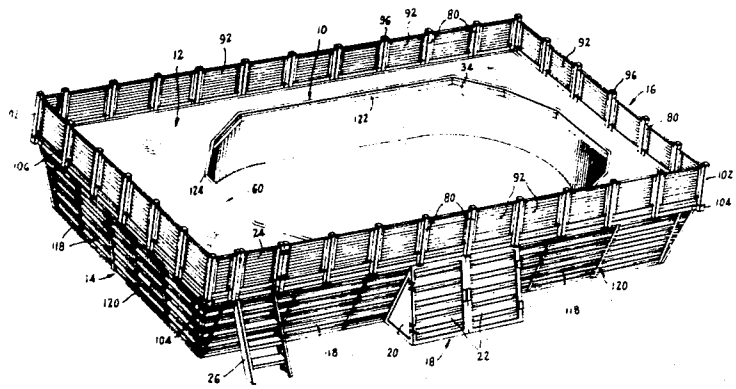
[52] **U.S. Cl.** **4/172.19**
[51] **Int. Cl.** **E04h 3/18**
[50] **Field of Search** 4/172.19, 172, 172.21

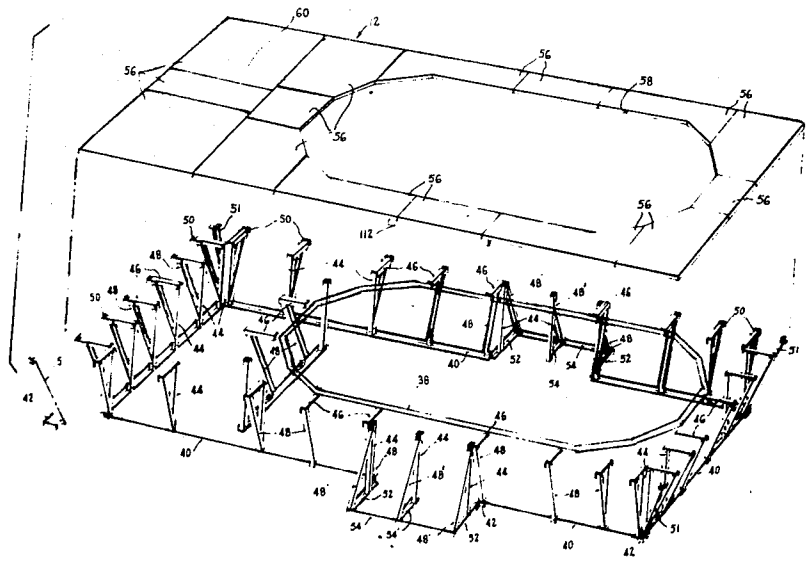
[56] **References Cited**
UNITED STATES PATENTS

2,490,272	12/1949	Kascle	4/172.19
Des.185,570	6/1959	Pruess	4/172.19 X
3,409,916	11/1968	Billig et al.	4/172.19
3,447,168	6/1969	Gabrielli et al.	4/172
3,458,875	8/1969	Michalke et al.	4/172
3,479,780	11/1969	Schwarz et al.	4/172 X
3,534,414	10/1970	Hall	4/172.19

Primary Examiner—Henry K. Artis
Attorney—Peter L. Costas

ABSTRACT: A swimming pool assembly for aboveground installation has a self-supporting swimming pool and a self-supporting deck enclosure extending about the periphery of the swimming pool with a multiplicity of wall panels providing a sidewall about at least a portion of the swimming pool assembly. Means on the deck enclosure are engaged with the swimming pool to hold the deck closely adjacent the upper end of the swimming pool for limited relative movement in a vertical direction but permit relative horizontal movement of the deck enclosure and swimming pool during use thereof.





PATENTED AUG 24 1971

3,600,722

SHEET 1 OF 6

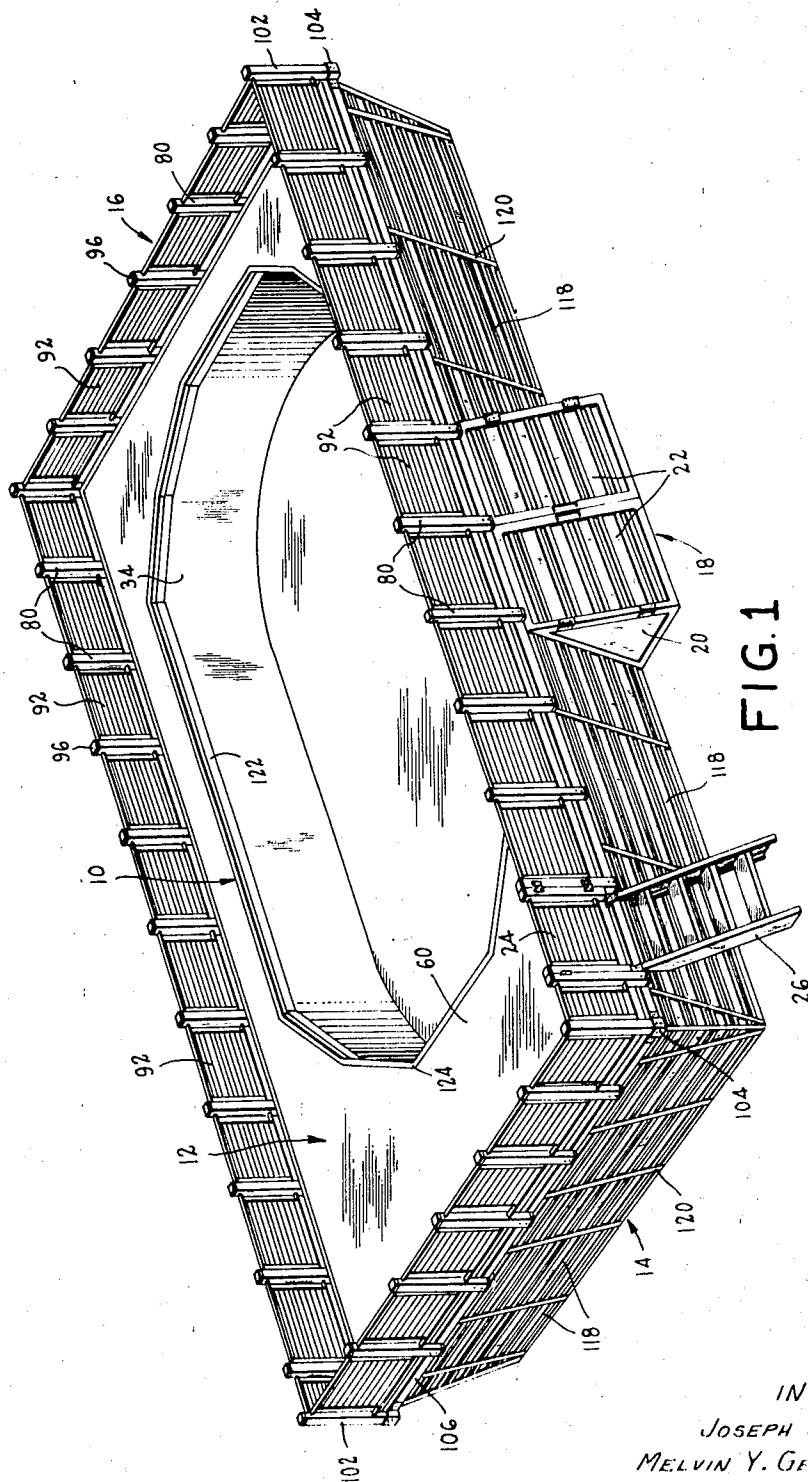


FIG. 1

INVENTORS
JOSEPH DIEMOND,
MELVIN Y. GERSHMAN,
HENRY L. SUNDBERG, JR.,
NORBERT A. VANGSNESS

BY Peter L. Costas
ATTORNEY

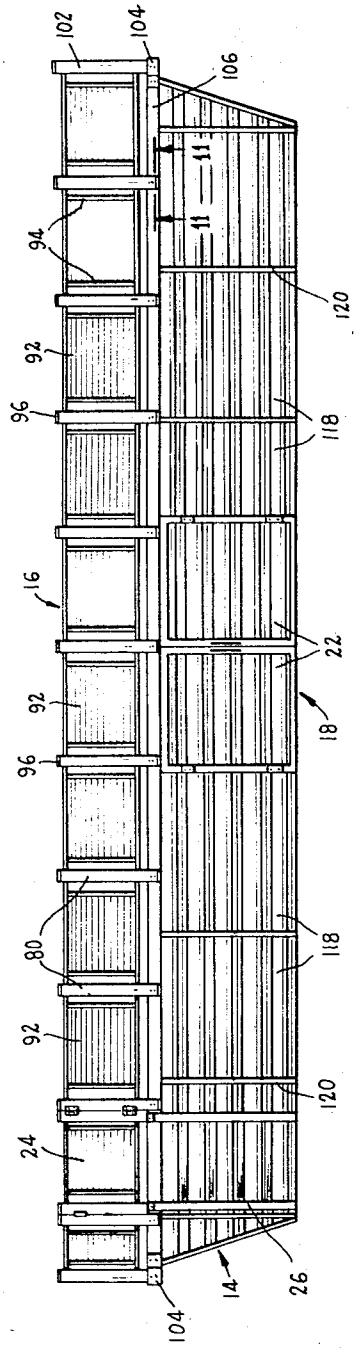


FIG. 2

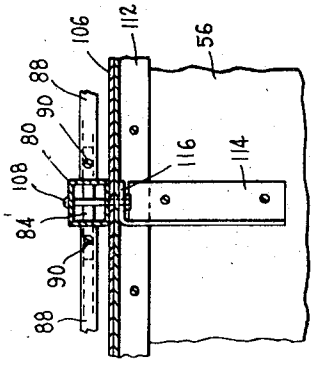


FIG. 11

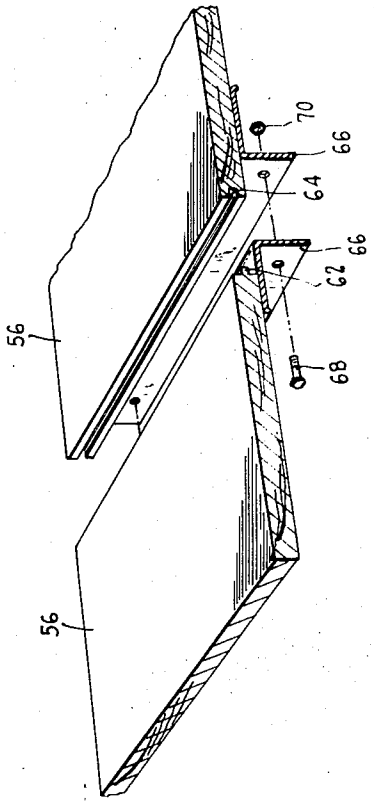


FIG. 7

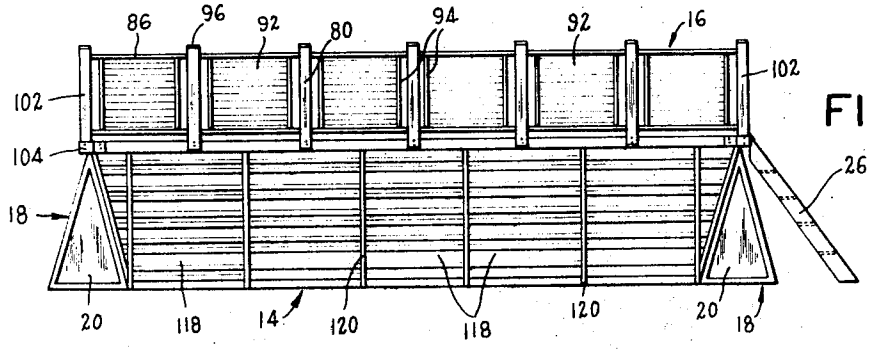


FIG. 3

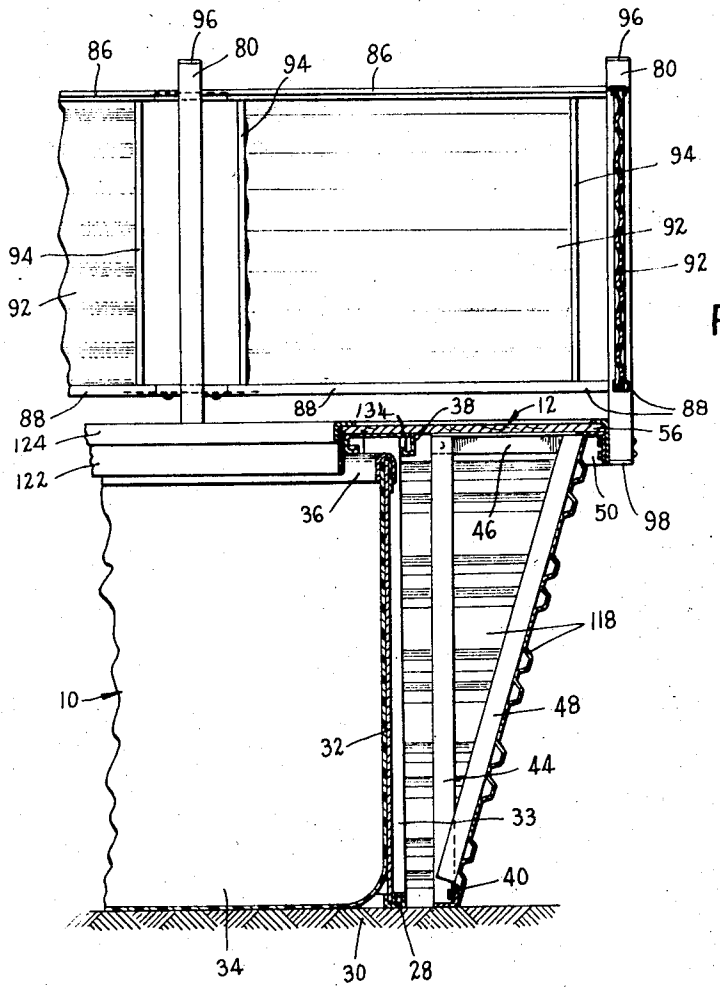


FIG. 5

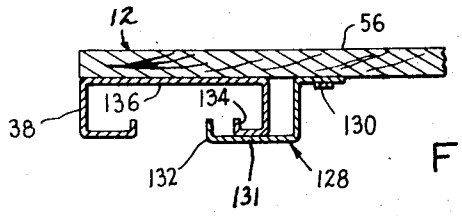


FIG. 13

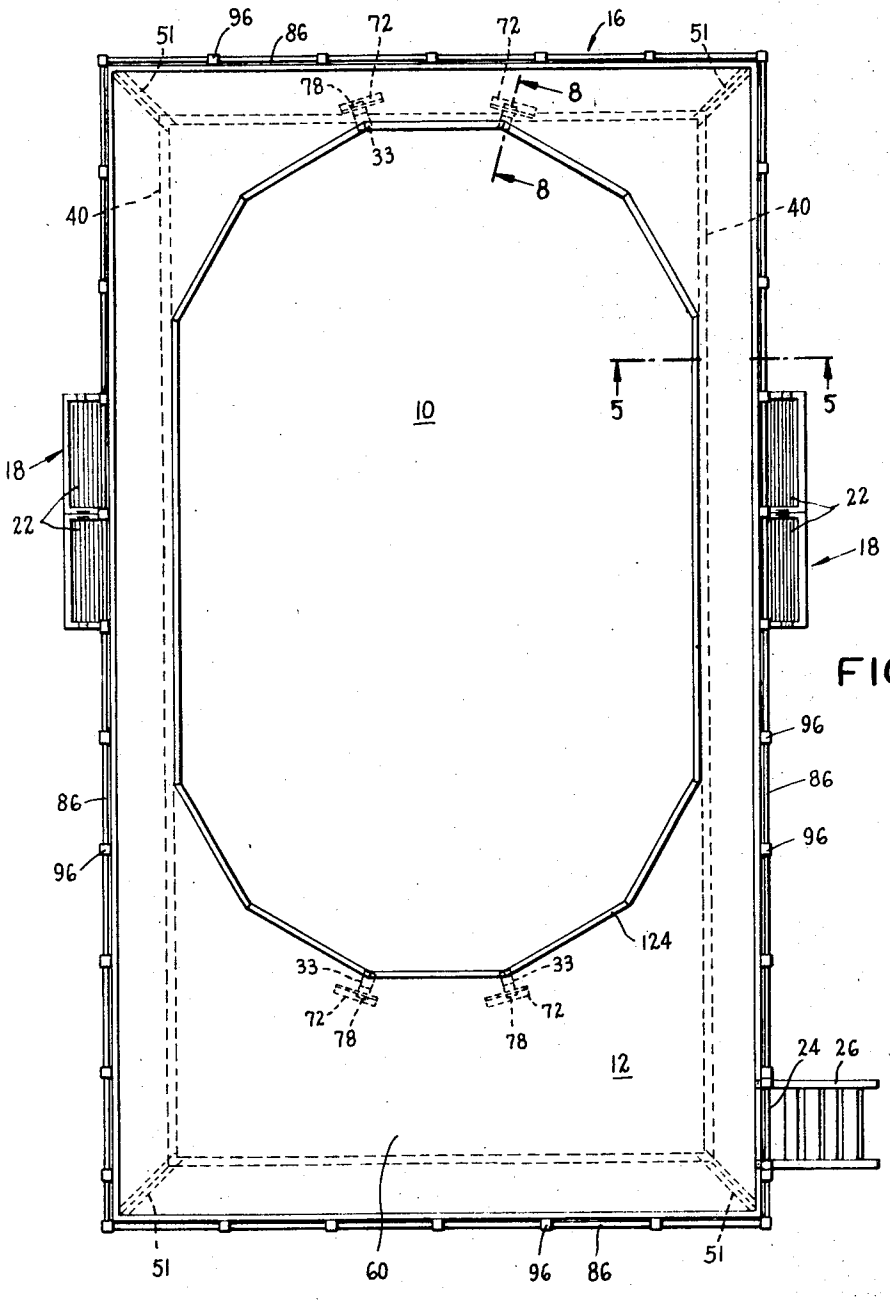

51
96
86
72
72
16
51
78
8
33
8
40
40
10
5
5
18
22
22
18
96
86
96
86
96
124
33
33
72
72
78
78
12
24
26
51
60
96
86
51

FIG. 4

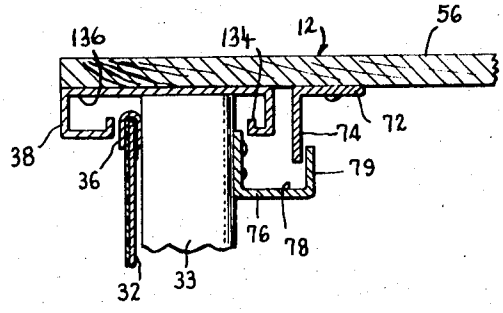

136
134
12
56
74
72
38
79
36
76
78
32
33

FIG. 8

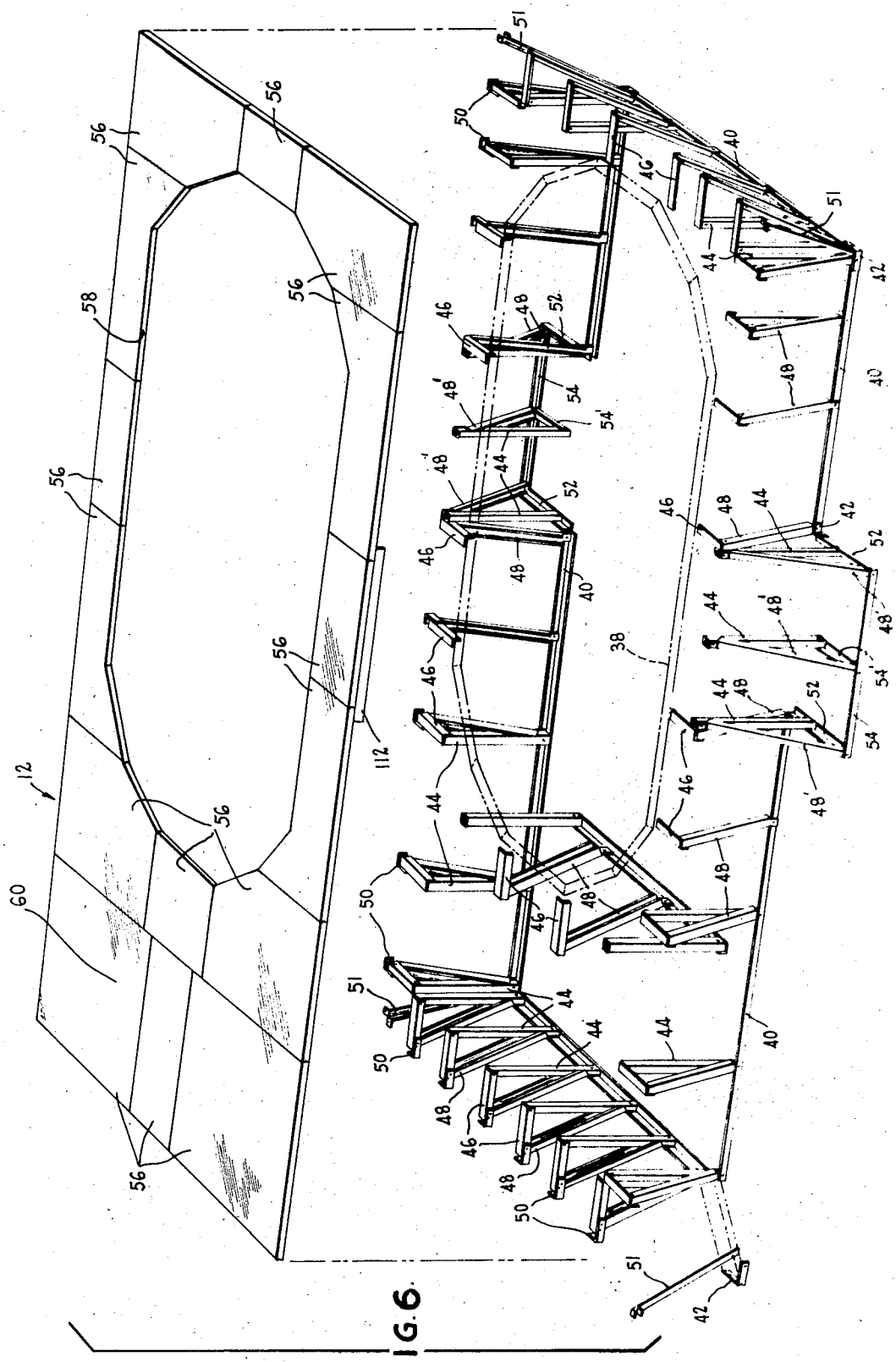


FIG.6

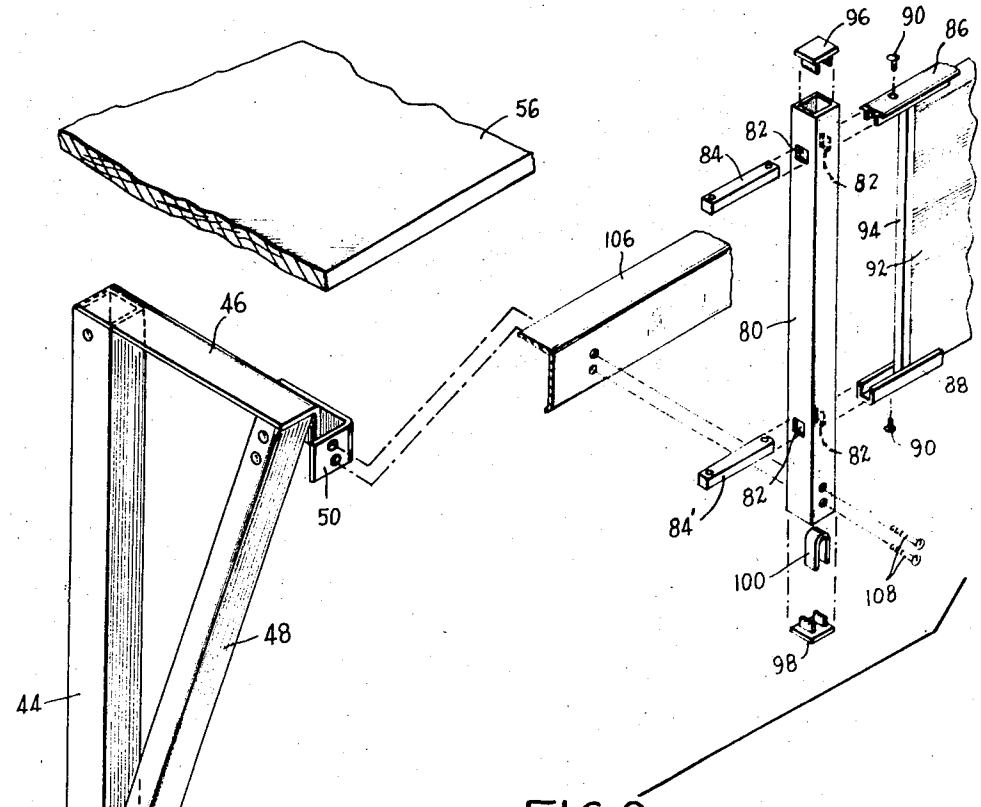


FIG. 9

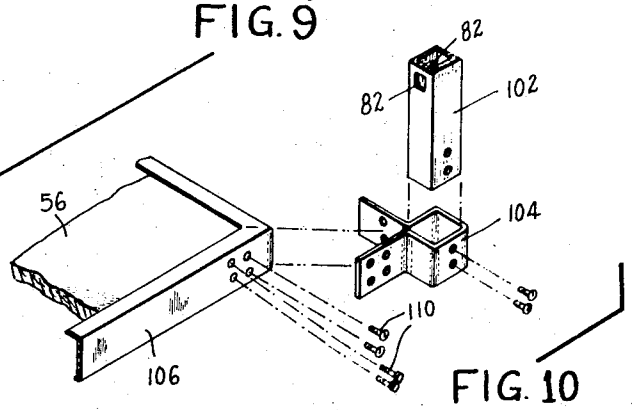


FIG. 10

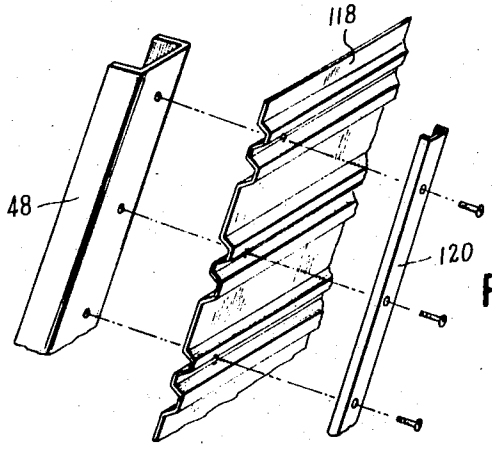


FIG. 12

POOL AND ENCLOSURE THEREFOR

BACKGROUND OF THE INVENTION

Above-ground and on-ground swimming pools have attained increasingly widespread acceptance because of the convenience and economy of installation as contrasted with below ground swimming pools and because of the desirability of an installation which may be disassembled and transported elsewhere should the owner move. A further favorable factor has been one of safety since it is relatively simple to provide safeguards for pools extending above ground level to prevent unauthorized access by children.

On-ground pools generally comprise an integrated wall for the pool and deck assembly with the structural strength being developed by the integrated parts. Thus, the sidewall of the pool may, in fact, carry the deck assembly and the deck assembly may tension the sidewall of the pool so as to enable it to resist the pressures acting thereon. As a result, such on-ground pools generally have a deck assembly extending completely thereabout and the assembly thereof is both costly and relatively difficult. Deterioration of any of the parts can materially reduce the overall structural strength of the pool.

In aboveground pools, the pool structure is self-supporting but there has been a recent tendency to provide deck areas about all or a portion thereof to facilitate comfortable utilization of the pool area. Generally, the deck assembly has been supported at least partially upon the supporting structure for the swimming pool itself, introducing some of the same problems as may be found with on-ground pools, although the deck structure does not comprise an essential element of the structural integrity of the swimming pool itself. However, installation tends to be difficult and relatively time consuming and deterioration of the parts can produce very substantial problems from the standpoint of repair or replacement.

In any combination of deck and swimming pool, it must be recognized that there is a tendency for the sidewall of the swimming pool to move inwardly and outwardly, particularly towards the upper end of the sidewall, as a result of the pressures occurring during use of the pool. Moreover, construction of the pool from metal and deck elements from wood would tend to introduce problems of relative expansion and contraction as the result of different coefficients of expansion for the component materials. Thus, fittings must provide for relative movement therebetween, usually at some expense of structural integrity or at greater cost.

It is an object of the present invention to provide an enclosed swimming pool assembly for substantially above ground installation wherein the swimming pool and deck structure are each self-supporting but are interengaged in a manner to permit limited relative movement therebetween.

It is also an object to provide such a swimming pool assembly wherein a peripheral wall is provided about the deck structure so as to create a highly attractive appearance and to provide a storage area for materials and equipment inwardly thereof.

Another object is to provide such a swimming pool assembly in which the components may be readily and independently erected and in which repair may be made with relative ease.

A further object is to provide such a swimming pool assembly in which the interengaging elements between the deck structure and swimming pool are attached after erection of the two components so as to insure optimum alignment and so as to provide a desired degree of limited horizontal movement therebetween.

SUMMARY OF THE INVENTION

There has now been found that the foregoing and related objects can be readily attained in an enclosed swimming pool assembly for substantially above ground installation utilizing a self-supporting swimming pool including a bottom wall, a sidewall extending upwardly therefrom about the periphery of the bottom wall and a support assembly including a multiplicity of vertically disposed support members outwardly of the sidewall and providing lateral support therefor. A self-supporting deck enclosure includes a deck extending about the periphery of the swimming pool in a substantially horizontal plane closely adjacent the upper end of the sidewall and support assembly therefor and providing a central opening generally corresponding with the interior of the swimming pool. A support assembly for the deck includes upwardly extending posts spaced outwardly from the swimming pool and horizontally extending support members to which the deck is secured.

Means on the deck enclosure are engaged with the swimming pool support assembly to hold the deck in a horizontal position closely adjacent the upper end of the pool sidewall and support assembly for limited relative movement therebetween in a vertical direction. However, the engagement means also permits limited relative horizontal movement between the deck enclosure and swimming pool support assembly during use so as to accommodate pressures acting upon the sidewall of the pool to produce deflection thereof and differential expansion and contraction.

The deck enclosure most desirably includes a multiplicity of wall panels extending from adjacent the deck to substantially the bottom of the support assembly therefor and to which the panels are secured to provide a sidewall about at least a portion of the periphery of the swimming pool assembly.

In the preferred embodiment, the swimming pool support assembly includes a multiplicity of horizontally disposed rail members firmly engaged with the vertically disposed support members and extending therebetween about the upper edge of the sidewall. The horizontally extending rails have a downwardly opening channel therein receiving the upper edge of the sidewall and extending outwardly of the sidewall. The movement limiting means on the deck enclosure comprises depending members on the deck spaced about the periphery of the swimming pool with horizontally extending portions at the ends thereof which extend below corresponding portions of the swimming pool support assembly to limit lifting of the deck relative to the swimming pool. In the preferred embodiment, these depending members have a hook shaped portion receiving an edge portion of the horizontal rail, and the width of the hook shaped portion is greater than the width of the rail portion received therein to permit limited relative movement in a horizontal direction between the depending members of the pool support assembly.

To facilitate construction and to assist in insuring limited horizontal movement of the deck enclosure relative to the pool, desirably the assembly includes locating means on the deck enclosure which are engageable with the swimming pool support assembly to facilitate location of the two components in proper relationship. The locating means include depending elements on the deck enclosure and cooperating elements on the swimming pool support assembly providing abutment shoulders for the depending elements to limit movement thereof in a direction towards and from the swimming pool sidewall. In its usual aspect, the depending elements are secured to the deck outwardly of the swimming pool sidewall and the cooperating elements are secured to the vertically disposed support members of the swimming pool to provide a channel receiving the depending elements.

In the most desirable embodiment, the deck extends inwardly of the swimming pool and the swimming pool assembly also includes depending means on the deck enclosure extending inwardly of the swimming pool sidewall to conceal the upper edge thereof. Normally, the depending means is a molding strip of sufficient vertical dimension to extend below the surface of the water.

The wall panels of the deck enclosure extend substantially completely about the deck enclosure to provide an enclosing sidewall for the swimming pool assembly. The support assembly for the deck enclosure includes diagonal support members extending upwardly and outwardly about the periphery

thereof and to which the wall panels are secured to provide a diagonally extending sidewall about the principal portion of the periphery. At at least one point about the periphery, second diagonal support members extend upwardly and inwardly to the deck so that the lower ends thereof are spaced outwardly from the lower ends of the first mentioned diagonal support members. The wall panels include at least one wall panel movably mounted on the second diagonal support members to provide a door opening and a pair of outwardly extending wall panels extending between the movably mounted wall panel and the wall panels secured to the first mentioned diagonal support members. The movably mounted wall panel is preferably hingedly secured to one of the second diagonal support members.

The deck enclosure most desirably includes a rail assembly extending about the periphery of the deck and comprising support members secured to the periphery of the deck and vertically extending posts secured to the support members. Fence panels extend between the vertical posts and means is provided for securing the fence panels to the vertical posts.

In its preferred aspect, the deck enclosure support assembly includes the diagonal support members extending upwardly and outwardly about the periphery of the deck enclosure and bottom horizontal support members generally circumscribing the lower periphery of the deck enclosure and engaged with said diagonal support members, at least some horizontally extending support members to which the deck is secured extending between and being secured to at least some of the diagonal support members and some of the upwardly extending posts. The deck is comprised of a multiplicity of panels with adjacent ends of the panels having depending flanges thereon and with means securing the depending flanges to prevent relative movement therebetween.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a perspective view of an enclosed swimming pool assembly embodying the present invention;

FIG. **2** is a side elevational view thereof;

FIG. **3** is an end elevational view thereof;

FIG. **4** is a plan view thereof;

FIG. **5** is a fragmentary sectional view, to a greatly enlarged scale, along the line **5—5** of FIG. **4**;

FIG. **6** is a partially exploded perspective view illustrating the construction of the deck enclosure and of the infrastructure of the pool structure; FIG. **7** is a fragmentary perspective view, to a greatly enlarged scale, of a pair of deck sections;

FIG. **8** is a fragmentary sectional view, to an enlarged scale, along the line **8—8** of FIG. **4**;

FIG. **9** is a fragmentary, exploded perspective view to a greatly enlarged scale of a portion of the deck enclosure showing the manner in which an interior fence section is joined to the infrastructure and deck;

FIG. **10** is a similar view with respect to a corner fence section;

FIG. **11** is a bottom view, to an enlarged scale, along the line **11—11** of FIG. **2**;

FIG. **12** is a fragmentary, exploded perspective view illustrating the manner of mounting the peripheral sidewall panels; and

FIG. **13** is a sectional view showing the hook-shaped clamp, to an enlarged scale, interengaging the deck and the pool top rail.

DETAILED DESCRIPTION OF THE ILLUSTRATED EMBODIMENT

Turning now in detail to FIGS. **1–4** of the drawings, therein illustrated is an enclosed swimming pool assembly embodying the present invention and consisting of a self-supporting swimming pool, generally designated by the numeral **10**, a deck, generally designated by the numeral **12**, a peripheral wall portion, generally designated by the numeral **14** and extending downwardly from the deck **12**, and a fence or rail assembly, generally designated by the numeral **16**, extending upwardly from the periphery of the deck **12**. Door assemblies, generally designated by the numeral **18**, project outwardly from both sides of the wall portion **14** at locations approximately midway along the length thereof, and the door assemblies **18** have triangular end panels **20** and hingedly mounted doors **22** providing access to the enclosed area beneath the deck **12**. A hinged gate **24** is provided in the fence **16** to permit access to the surface of the deck **12** and to the pool **10**, and a removable ladder **26** leading to the gate **24** is mounted against the peripheral wall portion **14**.

As is best seen in FIG. **5**, the pool **10** comprises a bottom rail or member **28** resting upon the ground **30**, in which is seated a continuous metal sidewall **32** (normally vertically corrugated for rigidity in that direction) defining the configuration of the pool **10**. The peripheral edge portion of a flexible plastic liner **34** is fitted over the upper edge of the sidewall **32**, and is clamped in that position by the U-shaped coping strip **36**, so that vertical support is provided for the sidewall of the liner **34** by the sidewall **32**. The sidewall **32** is, in turn, supported by a multiplicity of vertical posts or vertical support members **33** spaced thereabout (only one of which is shown), and other mechanical members may also be present to provide positive locating action for the sidewall **32** and added support therefor, and to minimize undue deflection so that the pool **10** is supported entirely independently of the remaining portions of the overall structure. An upper rail **38** extends about the periphery of the pool **10** and receives the upper edge of the sidewall **32**, and comprises a multiplicity of individual rail members that are supported and securely fastened upon the upper ends of the posts **33**. Any suitable means may be utilized to secure the top and bottom rail members to the vertical posts to provide a unified structure, the constructions described in Diemond et al. U.S. Pat. No. 3,268,917 and Gershman et al. U.S. Pat. No. 3,280,408 being particularly effective. As will be noted, the rail members are configured to provide the upper rail **38** with a downwardly opening channel **136** bounded by inward reverse bend portions **134**.

Turning now in detail to FIG. **6**, the deck **12**, fence **16** and peripheral sidewall **14** support assembly are illustrated therein. A multiplicity of braces is spaced about a central space for the pool **10**, the presence of which is suggested by the phantom line representation of the upper rail **38** thereof. The support assembly includes a footing or bottom horizontal support member **40** made up of a multiplicity of assembled separate elements joined together and at the corners by appropriate brackets **42**. The majority of the braces consist of vertical and horizontal support members **44** and **46** respectively, joined at their ends to form a right angle configuration, with the free ends thereof connected by a diagonal brace or support member **48**; certain of the braces omit the vertical support member **44** where they would interfere with posts **33** for the pool **10**, and, similarly, certain braces omit the elongated horizontal members **46** where their presence is not necessary. The lower ends of the braces are affixed to the footing **40**, and angle plates **50** project outwardly from the upper ends thereof, for a purpose to be more fully explained hereafter. Four corner braces **51** are provided to give added support to the structure in those areas.

The infrastructure for the door assemblies **18** is somewhat different from that previously described. Outwardly extending footing elements or bottom support members **52** are joined at one end by brackets **42** to the footing **40** of the main portion of the deck enclosure and to one another at the opposite ends by spacer bars **54**. As will be apparent from the drawing, diagonal brace members **48'** in the door infrastructures extend upwardly and inwardly toward the deck **12** to provide added strength, and additional spacer bars **54'** are used to tie together the ends of the diagonal brace members **48'** and the vertical support member **44** of the intermediate brace thereof.

The horizontal support members **44** serve primarily to support the deck **12**, which is constructed of a multiplicity of wooden sections **56** which are assembled to form the rectan-

gular deck 12 with a generally oval opening 58. The opening 58 is noncentrally or asymmetrically located in the deck 12 to provide an enlarged deck area 60 at one end, and it is dimensional and configured to approximate the configuration of the pool 10 and to provide an inwardly extending area thereabout, as is best seen in FIG. 5.

In FIG. 7 it is seen that one of each pair of adjacent sections 56 has a tongue 62 and the other has a corresponding groove 64 for interengagement thereof in a conventional manner. Elongated angle irons or depending flanges 66 are secured to the underside of each of the sections 56, and these are joined together by nuts 68 and bolts 70 to integrate the sections 56 into the unified deck structure 12.

With specific reference now to FIGS. 4 and 8, right angle locating members 72 are secured to the underside of the deck sections 56 adjacent the ends of the pool 10 to provide flange elements 74 depending vertically therefrom. Upwardly opening channel members 76 are affixed adjacent the upper ends of the posts 33 in positions corresponding to the locating members 72, and the deck 12 and post 33 are situated so that the flange elements 74 extend downwardly into the channels 78 of the channel members 76 behind the forward, upwardly projecting flanges 79 thereof. This arrangement of the locating members 72 and channel members 76 facilitates initial erection of the pool assembly in proper relationship and movement between the pool support assembly and the deck 12 such as to accommodate deflection of the sidewall 32 of the pool 10 during use and differential expansion and contraction. As a result, the natural movement of the pool 10 will not weaken or otherwise harm the enclosure structure, since each is supported independently of the other and they are not rigidly interlocked.

The construction of the fence 16 and the deck attachments are more clearly illustrated in FIGS. 1–11, FIG. 9 showing a square, hollow interior fence post 80 having upper and lower apertures 82 for receiving square connecting rods 84 inserted horizontally therethrough. The end of an elongated channeled cap 86 is fastened to each side of the upper connecting rod 84, and the end of an elongated, U-shaped channeled support member 88 is similarly fastened to each side of the lower connecting rod 84', screws 90 being employed for that purpose. The cap 86 and support member 88 seat a multiplicity of horizontally corrugated fence panels 92 in the channels thereof, and each of the fence panels 92 has a vertical guard member 94 on each end thereof to enhance the appearance and durability thereof. Top and bottom caps 96, 98 are frictionally engaged in the upper and lower ends of the fence post 80, respectively, a U-spacer 100 having been inserted into the lower end before placement of the cap 98 to avoid crushing of the post 80 when it is tightened against the remaining structure to join it thereto.

The details of the corner fence posts 102 are most clearly shown in FIG. 10, the primary difference being the location of the apertures 82 in adjacent rather than opposite sides of the post 102 to permit the corner construction to be made. In addition, a corner bracket 104 is employed for mounting of the posts 102, and this is also best shown in FIG. 10. To finish off the outer peripheral areas of the deck 12, an angled outer coping strip 106 is applied thereabout and is held in place by the bolts 108 securing the posts 80 and by the bolts 110 securing the corner brackets 104. As is seen in FIG. 6, an elongated angle iron 112 is secured adjacent the outer edge of the deck 12 above the door assemblies 18 to unify further and strengthen the structure thereat.

FIG. 11 shows the arrangement used to secure interior posts 80 that do not align with an infrastructure brace and hence do not have available to them an angle plate 50 for attachment. In that case, a short length of angle iron 114 having an inwardly bent tab 116 is secured to the underside of a deck section 56, the tab 116 having apertures through which the bolts 108 may pass and be secured. FIG. 12 illustrates the manner in which ribbed wall panels 118 are affixed to extend from adjacent the deck 12 to the bottom of the support assembly to provide the peripheral wall portion 14. Thus, the panels 118 are secured against the diagonal brace members 48 by vertical cleat members 120 which are bolted through the panels 118 to the brace members 48. Inner coping strips 122 and 124 of synthetic plastic material and of metal, respectively, are applied about the oval opening 48 of the deck 12 (as is best seen in FIG. 5), to mask the upper edge of the pool sidewall 32 and to finish off the entire structure with a unified appearance, although the pool 10 and the enclosure structures are essentially mechanically independent of one another.

Turning finally to FIG. 13, a generally "J" or hook-shaped bracket, generally designated by the numeral 128, is secured by suitable fastener 130 against the underside of the section 56 of the deck 12. The bracket 128 has a horizontally extending portion 131 with an upwardly turned portion 132 at its free end, thereby providing the bracket 128 with the generally hook-shaped configuration. The top rail 38, secured in a manner previously described to the vertical posts 33, has a downwardly opening channel 136 therein bounded by longitudinally extending reversely bent portions 134. As can be seen, the horizontal portion 131 of the bracket 128 seats under the outer reversely bent portion 134 of the rail 38 with the upwardly turned portion 132 thereof extending into the channel 136 behind the reversely bent portion 134. Since the corresponding horizontal portions of the rail 38 and bracket 128 fit closely together, relative vertical movement between the deck section 56 and the rail 38 is kept to a minimum. However, the reversely bent portion 134 is considerably narrower than the corresponding horizontal portion 131 of the bracket 128, thus permitting limited free movement therebetween. In this manner, the deck 12 is substantially fixed on the rail 38 against dangerous, unsightly and bothersome vertical movement, but the pool 10 is free to move to a limited extent relative to the deck 12, such as to accommodate the forces that naturally bear thereupon during use or to accommodate differential expansion and contraction, without damage to the deck 12 and its associated parts.

As has been pointed out previously, the concept of the present invention is applicable not only to a swimming pool wherein the bottom wall rests directly upon the surface of the ground, but also to the type of swimming pool wherein part of the bottom wall may extend below ground level; however, it is particularly advantageously employed with the former type of pool. Moreover, the assemblies embodying the invention may employ pools that have fully rigid sidewalls and pools with circular, rectangular and FIG. 8 configurations.

The relative movement that is to be permitted in accordance with the present invention may originate in a number of ways, but most commonly movement in the horizontal direction will be caused by the pressure of water acting against the sidewall during use and during filling which tends to produce a force acting upon the lower portion of the sidewall in a manner to move it outwardly and upwardly; obviously, this in turn tends to change the configuration of the upper periphery of the sidewall. Among the outer sources of movement are the effects of ground swells, frost heaves, and the like due to changing thermal conditions. Any of these effects which cause relative movement may easily result in damage or destruction of, a portion of an enclosed swimming pool assembly that is too rigidly fixed against lateral movement; they may also cause dangerous and unsightly gapping if movement were not controlled in the manner of the present structure.

It will be appreciated that the bottom wall of the pool will normally be provided simply by that portion of a plastic liner that extends across the ground area enclosed by the sidewall. Although the sidewall may comprise a series of unified rigid panels, normally it will be provided by a continuous relatively light gauge sheet of corrugated steel or aluminum that is flexible in the horizontal direction to facilitate assembly and shipment thereof. The deck will usually be of wooden construction (e.g. of plywood, redwood planks, etc.), and it will desirably be prefabricated as modules or sections, because such con-

struction enhances the efficiency and economy of manufacture and facilitates assembly at the pool site. The aperture or opening in the deck should be configured to correspond to the adjacent portion of the sidewall (in cross section), but it will desirably be somewhat smaller to result in an inwardly projecting lip or overhanging portion. The lip is important to provide a substantially unified structure free of dangerous gaps, and it also affords a convenient surface for the attachment of coping strips or the like, which may extend downwardly therefrom in front of the peripheral edge of the tank primarily to mask it and improve the appearance of the structure.

The support assemblies for both the swimming pool and the deck structure may be quite conventional and, as is shown in the drawings, may include horizontal, vertical, diagonal and other types of members. The most significant aspect of the support assemblies is that each provides independent support for either the deck or the pool so that neither relies upon the other for any significant amount of support. As has been pointed out previously, this permits relative movement between the adjacent portions of the tank and the deck without damage or distortion of one by the other. It is particularly desirable that door assemblies be provided in the underlying support assembly for the deck to provide storage areas for equipment, chemicals, etc., in a very convenient manner.

The means that is used to limit relative displacement between the pool support assembly and the deck may be very simple and may be provided by a variety of configurations and materials; normally, the limiting means will be comprised of a multiplicity of individual elements secured to the deck at locations spaced about the pool. The hook-shaped elements illustrated are particularly preferred as the limiting means because they are relatively inexpensive to produce, simple to install in cooperation with rails of existing design, and they effectively provide the sort of limited movement that is desired. Nevertheless, different configurations may be employed, and the element secured to the deck may engage other portions of the pool support assembly such as the posts or elements affixed thereto for that purpose.

Although not essential, the locating means is desirably included as an element of the present pool assembly to ensure proper alignment of the parts upon initial or subsequent erection. As will be noted from the drawings, the locating means illustrated also has cooperative vertically extending elements whichservetoassistthe limiting means in restricting the degree of horizontal movement between the pool and the deck.

Many variations and different types of fencing and side panels are feasible and will occur to those skilled in the art. Although the construction illustrated is preferred, the fence and side panel portions are exemplary and may be modified without departure from the broad concept of the invention; in fact, the fence or rail assembly need not be included, although its use is desirable to discourage unauthorized entry.

Thus, it can be seen that the present invention provides an enclosed swimming pool assembly for substantially above ground installation, wherein the swimming pool and deck structure are each self-supporting but are interengaged in a manner to permit limited relative movement therebetween. A peripheral wall is provided about the deck structure so as to create a highly attractive appearance and to provide a storage area for materials and equipment inwardly thereof. The components of the swimming pool assembly may be readily and independently erected, and repair may be made thereto with relative ease. The interengaging means between the deck structure and the swimming pool are attached after erection of the two components, so as to ensure optimum alignment and to provide a desired degree of limited horizontal movement therebetween.

Having thus described the invention, we claim:

1. An enclosed swimming pool assembly for substantially above ground installation and permitting limited relative movement of the components thereof comprising:

A. a self-supporting swimming pool including: (1) a bottom wall, (2) a sidewall extending upwardly therefrom about the periphery of said bottom wall, and (3) a support assembly including (*a*) a multiplicity of vertically disposed support members outwardly of said sidewall and providing lateral support therefor;

B. a self-supporting deck enclosure for said swimming pool including: (1) a deck extending about the periphery of said swimming pool in a substantially horizontal plane closely adjacent the upper end of said sidewall and support assembly therefor and providing a central opening generally corresponding with the interior of said swimming pool; and (2) a support assembly for said deck including (*a*) upwardly extending posts spaced outwardly from said swimming pool and (*b*) horizontally extending support members to which said deck is secured;

C. Means on said deck enclosure engaged with said swimming pool support assembly to hold said deck closely adjacent the upper end of said sidewall and support assembly for limited relative movement therebetween in a vertical direction, said engagement of said means also permitting limited relative horizontal movement between said deck enclosure and swimming pool support assembly during use of the enclosed swimming pool assembly.

2. The swimming pool assembly of claim 1 wherein said swimming pool support assembly includes (*b*) a multiplicity of horizontally disposed rail members firmly engaged with said vertically disposed support members and extending therebetween about the upper edge of said sidewall.

3. The swimming pool assembly of claim 1 wherein said movement limiting means comprises depending members of said deck spaced about the periphery of said swimming pool and having horizontally extending portions at the lower ends thereof engaged under corresponding portions of said swimming pool support assembly to limit lifting of said deck relative to said swimming pool.

4. The swimming pool assembly of claim 2 wherein said horizontal extending rails have a downwardly opening channel therein extending outwardly of said sidewall and wherein said movement limiting means comprises depending members on said deck spaced about the periphery of said swimming pool and having horizontally extending portions at the lower ends thereof engaged in said channel of said horizontal rail members.

5. The swimming pool assembly of claim 4 wherein said horizontally extending portions of said depending members have an upwardly turned free end portion fitting within said channel to provide a generally hook-shaped portion, the width of said hook-shaped portion being greater than the width of the rail portion received therein to permit limited relative movement in a horizontal direction between said depending members and said pool support assembly.

6. The swimming pool assembly of claim 1 wherein said swimming pool assembly includes:

D. locating means on said deck enclosure engageable with said swimming pool support assembly to facilitate location of these components in proper relationship during erection of the pool assembly and to permit limited relative movement therebetween during use of the enclosed swimming pool assembly, said locating means including: (1) depending elements on said deck enclosure and (2) cooperating elements on said swimming pool support assembly providing abutment shoulders for said depending elements to limit movement thereof in a direction towards and from said swimming pool sidewall.

7. The swimming pool assembly of claim 6 wherein said depending elements of said locating means are secured to said deck outwardly of said swimming pool sidewall and wherein said cooperating elements are secured to said vertically disposed support members of said swimming pool and provide a channel receiving said depending elements.

8. The swimming pool assembly of claim 1 wherein said deck extends inwardly of the sidewall of said swimming pool and wherein there are included:

E. depending means on said deck enclosure extending inwardly of said swimming pool sidewall to conceal the upper edge of said swimming pool.

9. The swimming pool assembly of claim 1 wherein said deck enclosure includes (3) a multiplicity of wall panels extending from adjacent said deck to substantially to bottom of said support assembly to provide and enclosing sidewall about at least a portion of said swimming pool assembly.

10. The swimming pool assembly of claim 9 wherein said deck enclosure support assembly includes (*c*) diagonal support members extending upwardly and outwardly about the periphery thereof and wherein said wall panels are secured thereto to provide a diagonally extending sidewall about the principal portion of the periphery of said pool assembly.

11. The swimming pool assembly of claim 10 wherein said deck enclosure support assembly included (*d*) second diagonal support members extending upwardly and inwardly to said deck so that the lower ends thereof are spaced outwardly from the lower ends of said first mentioned diagonal support members; wherein said wall panels include at least one wall panel movably mounted on said second diagonal support members to provide a door opening and outwardly extending wall panels extending between said movably mounted wall panels and said wall panels secured to said first mentioned diagonal support members.

12. The swimming pool assembly of claim 11 wherein said movably mounted wall panel is hingedly secured to one of the said second diagonal support members.

13. The swimming pool assembly of claim 1 wherein said deck enclosure includes: (4) a rail assembly extending about the periphery of said deck, said rail assembly comprising (*a*) support members secured to the periphery of said deck, (*b*) vertically extending posts secured to said support members, (*c*) fence panels extending between said vertical posts and (*d*) means securing said fence panels to said vertical posts.

14. The swimming pool assembly of claim 1 wherein said deck enclosure support assembly includes: (*c*) diagonal support members extending upwardly and outwardly about the periphery of said deck enclosure, (*e*) bottom horizontal support members generally circumscribing the lower periphery of said deck enclosure and engaged with said diagonal support members, at least some of said first mentioned horizontally extending support members being secured to and extending between at least some of said diagonal support members and some of said upwardly extending posts.

15. The swimming pool assembly of claim 1 wherein said deck is comprised of a multiplicity of panels, adjacent edges of said panels having depending flanges thereon, and means securing said depending flanges to prevent relative movement therebetween.