

Aug. 9, 1966

A. D. JACOBS

3,265,156

PLATFORM MEANS WITH ADJUSTABLE COMPANION UNITS

Filed June 29, 1965

3 Sheets-Sheet 1

Fig. 1

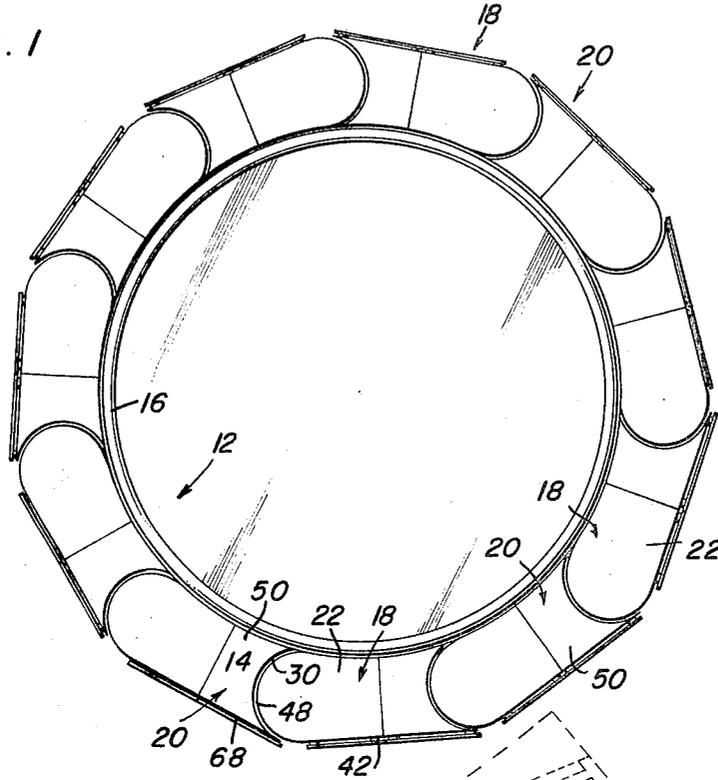
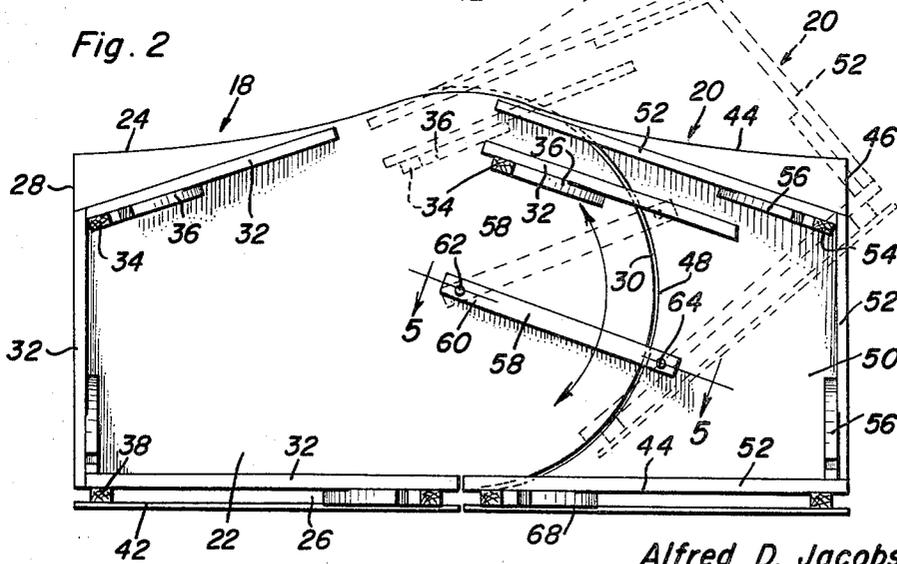


Fig. 2



Alfred D. Jacobs
INVENTOR.

BY *Clarence A. O'Brien*
and Harvey B. Jacobson
Attorneys

Aug. 9, 1966

A. D. JACOBS

3,265,156

PLATFORM MEANS WITH ADJUSTABLE COMPANION UNITS

Filed June 29, 1965

3 Sheets-Sheet 2

Fig. 3

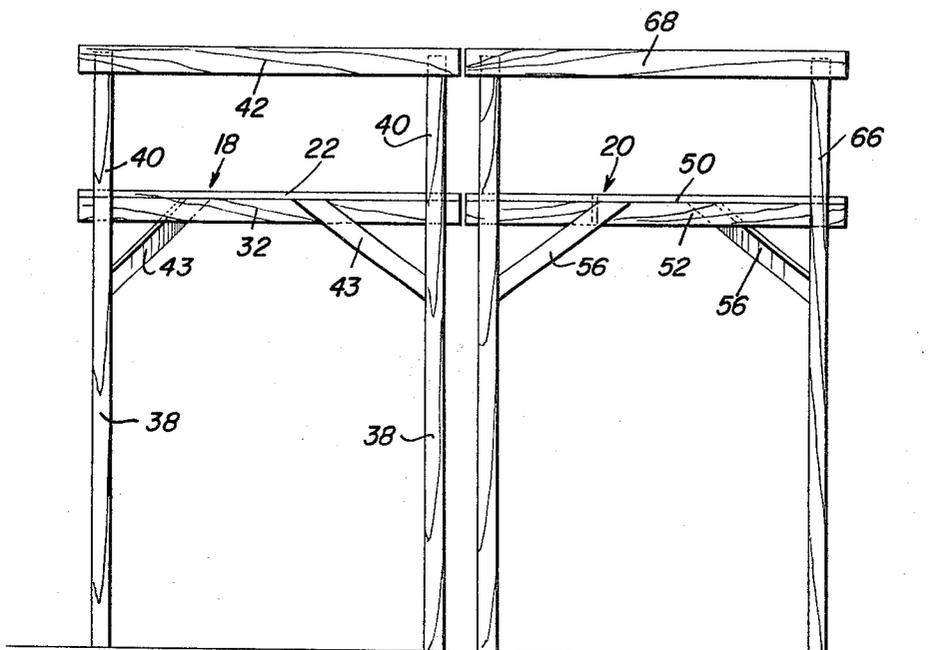


Fig. 4

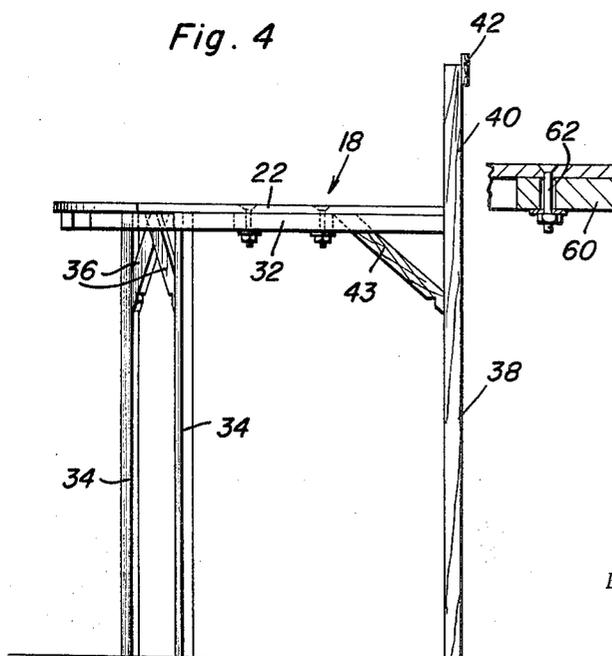
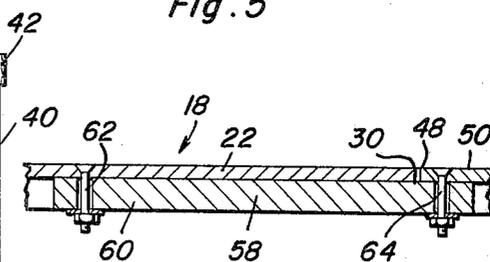


Fig. 5



Alfred D. Jacobs

INVENTOR.

BY *Alma A. O'Brien*
and Harvey B. Jacobs
Attorneys

Aug. 9, 1966

A. D. JACOBS

3,265,156

PLATFORM MEANS WITH ADJUSTABLE COMPANION UNITS

Filed June 29, 1965

3 Sheets-Sheet 3

Fig. 6

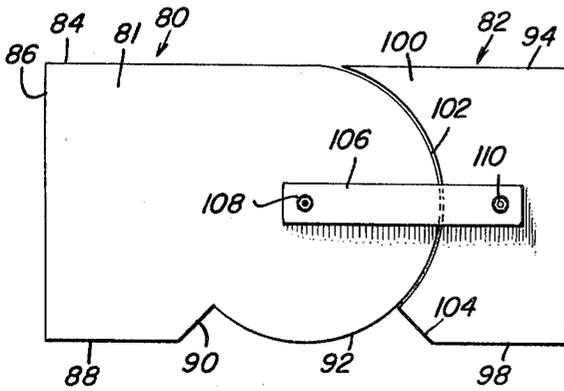


Fig. 7

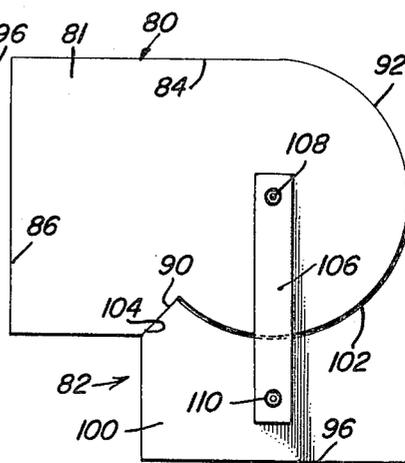


Fig. 8

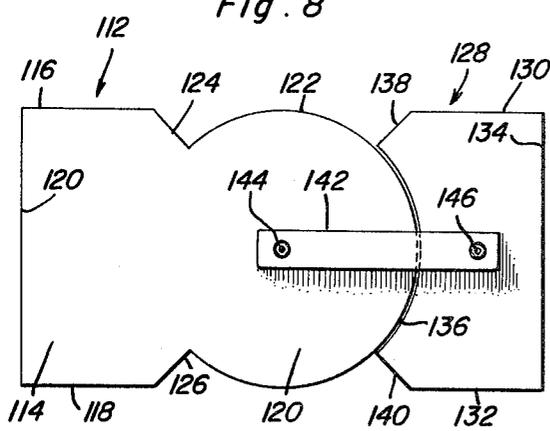


Fig. 9

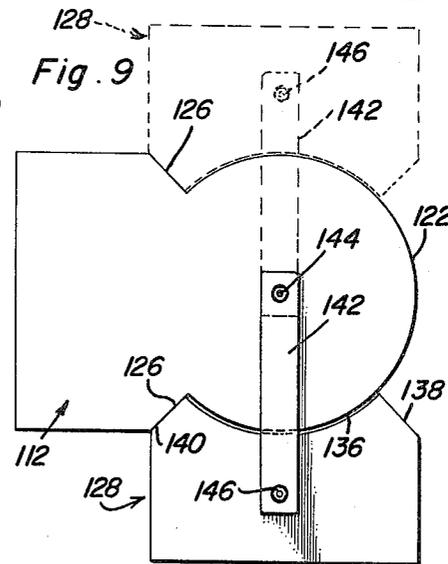
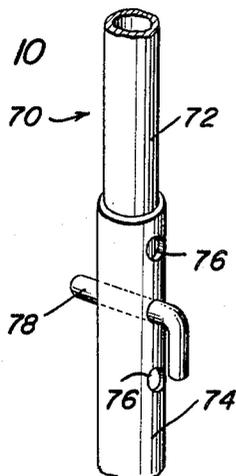


Fig. 10



Alfred D. Jacobs

INVENTOR.

BY *Clarence A. O'Brien*
and Harvey B. Jacobs
Attorneys

1

3,265,156

**PLATFORM MEANS WITH ADJUSTABLE
COMPANION UNITS**

Alfred D. Jacobs, 604 7th Ave., Huntington, N.Y.
Filed June 29, 1965, Ser. No. 467,914
15 Claims. (Cl. 182-113)

This invention relates to certain new and useful improvements in a unique platform structure which is to be construed as either stationary or portable when erected for use, which can be used alone or in combination with correspondingly constructed platform structures, and is functionally designed and structurally adapted for practical and satisfactory use in connection with diversified lines of endeavor.

There has long existed a need for a deck-type platform which has the capability of wholly or partially encompassing a swimming pool, for example, an above-ground (or partly above-ground) tank-type or equivalent pool. It follows that one objective in the instant matter is to provide one or more platforms capable of cooperable level right angular orientation with the brim or upper edge of the vertical marginal wall of a circular (or similarly shaped) swimming pool and wide enough that parents and users of the pool are offered a deck or platform which is safe and feasible for use while sitting, standing, walking or diving, as the case may be. Access to the available deck surface can be had by ladders or steps provided on the outboard side and also from the pool to the inboard side. The materials capable of use can be, as experience has shown, wood, metal, plastics or a practical combination and association thereof.

As above stated, it is within the purview of the present invention to erect a deck or platform completely around the perimeter of the wall of the pool. Under such circumstances and because such pools vary in size and top plan configuration it is deemed significant that the overall platform can best be devised and perfected through the appropriation and utilization of individual component parts or sections and while the all inclusive concept pertains to an elevated endless walkway-type deck to fully encompass the wall of a pool, the underlying and principal objective has to do, primarily speaking, with the construction of the individual component parts which can be and are coordinated in end-to-end flush relationship and accordingly enclose the pool's wall.

With the above in view, but keeping in mind that such component parts aptly lend themselves to adoption and use in other fields of usage (as will be hereinafter revealed) it will soon become evident that the invention at bar is chiefly directed and pertains to the novel construction of each of the stated parts or sections of the overall deck.

Briefly then, each component part comprises what is herein set forth as a "platform structure" characterized broadly as comprising first and second companion units which are preferably elevated above ground level by support means, such as, for example, simple uprights or legs. Each unit embodies a horizontally flat platform portion and these platform portions are structurally linked or otherwise connected together in oriented end-to-end relationship. A built-in articulatable joint exists between the respectively abutting end of the units and makes it possible and practical to link said units in straight-away longitudinal alignment or, alternatively, to bodily shift or

2

swing one unit in a horizontal arcuate path (90° to 180°) to thus arrange one unit at a predetermined angle to the other units, whereby when a plurality of these platform structures or "stands" are grouped, a deck corresponding to the circular or other shape of the pool is had.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a view in top plan showing a circular above-ground type swimming pool encompassed by a sectional or composite platform or deck constructed in accordance with the principles of the present invention;

FIGURE 2 is a bottom plan view of one of the aforementioned platform structures capable of being embodied in the overall deck or platform shown in FIGURE 1 and which also shows the companion units in alignment in full lines and with one of the units laterally adjusted to a given position in phantom lines;

FIGURE 3 is a view in side elevation of the platform structure of FIGURE 2 but in its vertically erected or in-use position;

FIGURE 4 is an end view of FIGURE 3;

FIGURE 5 is an enlarged sectional and elevational detail view taken approximately on the plane of the section line 5-5 of FIGURE 2;

FIGURE 6 is a bottom plan view of a modification and which is shown diagrammatically, that is, with the support legs omitted and which illustrates an embodiment wherein a relatively movable unit is in line with the companion unit but is capable of being adjusted by moving the same through an arcuate path approximating ninety degrees (90°);

FIGURE 7 is also a bottom plan view of the form or embodiment shown at the left in FIG. 6 and showing the movable component or unit adjusted ninety degrees (90°) and assuming a position at approximate right angles to the lengthwise dimension of the companion unit;

FIGURE 8, like FIGURE 6, is a bottom diagrammatic view showing a third form or modification of the invention wherein the units are mated and constructed to permit the movable unit to be swung through an arcuate path of approximately one hundred eighty degrees (180°);

FIGURE 9 is a bottom diagrammatic view based on FIGURE 8 and which shows in full and dotted lines the range (180°) of adjustment; and

FIGURE 10 is a perspective view showing an optionally usable vertically adjustable support leg.

Inasmuch as several embodiments of the generic concept are herein disclosed, as evident from the description of the figures, it is deemed desirable to make reference first to FIGURES 1 to 4, inclusive. With reference to FIGURE 1 it will be noted that the numeral 12 designates a circular above-ground tank-type swimming pool whose flat bottom is denoted at 14 and whose vertical encompassing rim or wall is denoted at 16. While the pool shown is "circular" in plan it is obvious pools in this line of endeavor vary in shape, size and form. As is further shown in FIGURE 1 the encircling or encom-

passing platform or deck surrounds the rim wall 16. However and as before stated, it is within the purview of the concept to use one or more of the novel platform structures. It will be evident that each platform structure is such in purpose and construction that it may be used alone or in combination with equivalent platform structures.

With reference now to the platform structure or means itself it will be evident from FIGURES 2 to 4 in particular that there are two oriented or companion units. A first unit is denoted by the numeral 18 and a second complementary or companion unit is denoted by the numeral 20. These units are basically the same in construction. Nevertheless, it seems advisable to explain that the larger unit 18 comprises a generally rectangular panel or floor 22 of suitable material and which when in use occupies an elevated horizontally flat position. One longitudinal or marginal edge is denoted at 24 and may be designated as the inboard edge while the opposed longitudinal edge 26 constitutes the outboard edge. The outer transverse end is denoted at 28 and these ends or edges are generally straight. On the other hand the inner transverse end-edge 30 is of unique construction. That is, this edge is substantially semicircular in plan and is referred to here as arcuately convex. The numeral 32, in each instance, designates a frame member and these members are fastened to the underneath side of the platform or panel for rigidity. The inboard edge portion is supported by a pair of duplicate vertical uprights or legs 34 joined at their upper ends to the frame members and provided with appropriate diagonal or equivalent braces 36. The outboard legs are denoted at 38 (see FIG. 4) and these have their upper ends 40 extending above the level of the deck or platform and provided with a horizontal handrail 42 of suitable construction. Thus these end portions 40 and handrail provide a safeguarding feature for both adults and children. Suitable and properly anchored braces 43 are also provided for the legs 38. The smaller bodily adjustable unit 20 is also provided with inboard and outboard lengthwise or marginal edges 44 (FIG. 2) and a transverse outer marginal edge 46 therebetween. In this situation the inner transverse end or edge is also arcuately shaped. More specifically, this edge is characterized as a semicircular notch or cutout 48 and it is conformable in arcuation with the mating convex edge 30. Accordingly, the edge 30 is nested or seated within the confines of and is capable of abutting the recessed edge 48. This unit comprises the thus constructed panel or platform 50 reinforced on the underneath side by interconnected suitably mounted frame members 52. Appropriate supporting legs 54 are also provided here and these legs are rigidified by coacting braces 56. The means for assembling and connecting the units 18 and 20 comprises a simple linearly straight link or equivalent connector 58 which is arranged to bridge the articulating joint (features 30 and 48) and this link is sufficiently long that one end portion 60 is hinged or pivoted on center, as at 62, to the selected underneath side of the panel or platform 22. The other end portion is also pivoted, that is, arbitrarily anchored at 64 on the underneath side of the panel or platform 50 of unit 20. It will be further noted that the legs on this unit are such in construction that the upper extended end portions 66 are provided with an appropriate railing 68 providing a guard or handrail (FIG. 3).

With the construction described it will be evident that the companion platform portions of the two units are such that they provide the desired flush surface, that is, common planes between the coacting surfaces. The surface is smooth and without ridge or lip to interfere with walking or other occupant usage. The construction and arrangement is such that it requires one pivot point on the part of one platform and an arbitrary anchor point on the other. In this fashion and by

utilizing the convex edge on one side of the platform and the concave edge on the other, either side can be moved to any position within ninety degrees from either side of the straight or parallel position and relationship to form a complete platform. Accordingly, it is believed that the views illustrating this form of the invention and the detailed explanation will be sufficient to enable the reader to obtain a clear and comprehensive understanding of the same.

With respect now to the modifications it may be pointed out that it is within the purview of the invention to use one-piece legs as shown and described and also it would be within the purview of the invention to employ legs which can be vertically adjusted as, for example, the leg 70 shown in FIG. 10 and which comprises an upper tubular section 72, a lower section 74, these sections having registrable holes 76 to accommodate an insertable and removable L-shaped assembling and retaining pin 78.

Referring now to FIGS. 6 and 7 it will be evident that these are purely diagrammatic views but are sufficient to illustrate the principle of the concept involved. Here one platform unit is denoted at 80 and the companion or complementary unit at 82. Part 81 has straight marginal edges 84, 86 and 88. The marginal edge 88 is provided with a diagonal abutment 90 which constitutes a limit stop or shoulder and is located at one end of the rounded substantially circular convex inner transverse edge or end 92. The unit 82 has marginal edges 94, 96 and 98 and the inner transverse edge of the platform portion 100 is provided with a substantially semicircular recess or notch 102 which accommodately seats or nests the portion of the edge 92 with which it cooperates. One end of this edge portion is provided with a diagonal abutment 104 which as is obvious is intended to strike the limit shoulder or abutment 90 when the unit 82 is adjusted through an arc of ninety degrees as shown in FIG. 7. The connecting link is denoted at 106 and has one end portion pivoted as at 108 on the platform portion 81 of the unit 80. The link bridges the articulating joint and the other end is pivotally anchored as at 110.

In carrying this phase of the concept further and to permit an adjustment of 180 degrees the form of the invention shown in FIGS. 8 and 9 serves the intended purposes. Here the first unit is denoted at 112 and comprises a flat platform or panel 114 having opposed marginal edges 116 and 118 and an intervening outer transverse edge or end 120. In this form the complete inner end portion of the platform is fashioned into a substantially circular head denoted at 120 and whose edge portion 122 is approximately three-quarters of a circle and terminates at its respective ends in oblique angled abutments or limit stops 124 and 126, respectively. The companion unit 128 is provided with straight marginal edges 130, 132 and a transverse outer edge 134 and here again the inner transverse end portion is recessed to define a part circular or arcuate notch 136 which is conformable to the coacting convex edge 22 and which is provided at its ends with suitably positioned or mitered corners constituting limit stops 138 and 140 which coact with the limit stop shoulders 124 and 126 in the manner shown in FIG. 9. The connecting link 142 is the same as previously described and bridges the articulating joint and is pivoted on center at one end as at 144 and arbitrarily anchored and pivoted at the other end as at 146.

It will be obvious that while the description has centered itself on the construction and arrangement of parts of the aforementioned "platform structures" as such, it will be evident that these structures can be incorporated in group arrangements in varying and random patterns to provide a continuous common plane surface. In this fashion they may form almost any conceivable shape

whether it be circular, square, rectangular, angular, oblong or any combination thereof.

It will be further evident that the invention lends itself to use in other fields of endeavor as, for example, a scaffold, for material handling, for furniture, for loading platforms, for conveyors, trestles and, if desired, in hobby equipment.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A platform structure either portable or fixed, characterized by at least two companion units, each unit embodying a flat horizontal surface of an area suitable to support a user while sitting, standing or walking, as the case may be, said units having adjacent marginal end edges conformingly delineated, matched and mated in configuration and abutting each other and adapted to permit one unit to be angularly adjusted and laterally offset relative to the other unit, the coordinating flat surfaces of said units being disposed in an uninterrupted common horizontal plane when in use, and means carried by and pivotally linking and joining said units to each other, whereby they can be oriented and maintained in lengthwise straight-away alignment or, alternatively, one unit bodily swung in an arcuate path relative to the other unit when either unit is intentionally offset from the other in flush coacting relationship.

2. The structure defined in claim 1, and wherein each surface is characterized by a panel defining and providing a flatwise horizontal floor capable of providing a stage, walkway, work area or the like depending on the purpose to be served.

3. The platform structure according to claim 1 and, in combination, supporting and elevating means for said platform structure mounted on and located beneath said units.

4. The platform structure according to claim 1 and, in combination, supporting and elevating means for said platform structure mounted on and located beneath said units, said supporting and elevating means embodying a plurality of marginally mounted depending legs capable of upstanding support from the ground or an equivalent stationary foundation.

5. The structure according to claim 1, and wherein said coacting end-edges are arcuate in plan and are nested together but are shiftably movable relative to each other for unit adjustment needs.

6. The structure according to claim 1, and wherein said coacting end-edges are arcuate in plan and are nested together but are shiftably movable relative to each other for unit adjustment needs, one end-edge being convex and the other mating companion edge being conformingly and cooperatively concave.

7. The structure according to claim 6, and each unit also having substantially straight longitudinal side edges and transverse outer end-edges straight-across and disposed at right angles to the side edges.

8. The structure according to claim 6, and wherein the arcuation of said convex edge range is useably adjustable extent from three-quarters of a circle to one-half of a circle and said concave edge ranges from a quarter-circle to a half-circle, as may be required.

9. The structure according to claim 8, and wherein one longitudinal edge of each unit is provided with a lengthwise guard rail extending horizontally in a plane elevated above the plane of the platform surface.

10. For use when erecting an elevated deck-type walkway outwardly of but proximal to and bordering the vertical rim wall of an above-the-ground tank-type swim-

ming pool, a portable stand-type platform structure embodying a first leg-supported platform unit having a pair of longitudinal side marginal edges joined by transverse inner and outer end-edges, the inner end-edge being arcuately curved and accordingly convex in plan, a second leg-supported unit complementary to and cooperable with said first unit and likewise having a pair of longitudinal side marginal edges joined by inner and outer transverse end-edges, the inner end-edge being arcuately notched, curved and concave in plan and conformingly mated and matched with and receiving and nesting said convex end-edge therein and providing an articulating joint which permits the platform portions of the two units to remain coplanar and flush while one unit is shifted bodily relative to the other unit from an in-line to an out-of-line position, and a rigid connecting link underlying adjacent portions of the respective end-edges and being pivotally joined at an on-center point of the platform of the first platform unit, bridging the joint between the units and having its other end pivotally joined at an arbitrary anchor point to the platform of the second platform unit.

11. The structure according to claim 10, and wherein the outwardly disposed longitudinal side marginal edges of both units are provided with suitably constructed and appropriately elevated guard rails to assist in safeguarding users of said platform.

12. The structure of the class described, a first leg supported unit generally rectangular in plan embodying a flat horizontal platform having an inner transverse end generally semi-circular in plan, a second leg supported unit complementary to said first unit and embodying a flat horizontal platform disposed in a common plane with the plane of the platform of said first unit and having an inner transverse end provided with a semi-circular notch conforming in curvature to said semi-circular end, the latter snugly nested in said semi-circular notch and providing an articulating joint between said inner transverse ends, and a straight rigid link underlying the respective platforms, bridging said joint and having its ends pivotally connected to the respective platforms, whereby to join and permit said platforms to be arranged in longitudinal alignment or swung to angular out-of-line but oriented relationship at will.

13. The structure according to claim 12, and wherein said inner convex end is three-quarters circular in plan and is provided at the other end with a similar shoulder-like abutment providing a second limit stop, and also wherein the other terminal end of said recess likewise has a limit stop shoulder in a position oriented to abut said second limit stop, whereby one of said platforms has the capability of swinging through an arcuate path covering one-hundred eighty degrees (180°).

14. In a structure of the class described, a first horizontally flat platform having an inner convex end substantially circular in plan with a shoulder-like abutment at one end defining and providing a limit stop, a second horizontally flat platform coplanar with and constituting and providing a complementary extension of said first platform and having an inner end provided with an arcuate recess in which said convex end is conformingly and cooperatively seated and providing an oriented articulating joint between said platforms, and a rigid connecting link underlying the respective platforms, bridging said joint and having its end pivotally connected to the respective platforms in a manner to allow the same to be positioned in end-to-end alignment or angled ninety-degrees (90°) to out-of-line but oriented flush relationship at will, said second platform being provided at one terminal end portion of said recess with a limit stop shoulder designed and adapted to abut said first-named limit stop.

15. In combination, a tank-like or an equivalent swimming pool of an above-the-ground or partly sunken semi-above-the-ground type having a vertical rimming wall and circular or substantially so in plan, and a platform structure for users of the pool located outwardly of and mar-

7

ginally encompassing said wall, said structure characterized by a plurality of like leg-supported deck units arranged in end-to-end relationship, each unit having a flat horizontal platform having suitable hand rails serving as upstanding guards for persons using the overall deck in the manner of a boardwalk, each unit having oriented contacting ends pivotally linked together, one end being convexly rounded, and the coordinating end being arcuately recessed, the rounded end fitting conformingly in said recess and providing an articulating joint between said units and permitting the same to be angularly adjusted with

8

their respective platform portions in a common uninterrupted multipurpose surface.

References Cited by the Examiner

UNITED STATES PATENTS

923,721	6/1909	Smith	-----	182—131
1,825,590	9/1931	Hollister	-----	182—223
1,921,631	8/1933	Miller	-----	182—130
2,066,984	1/1937	Lamb	-----	182—187

REINALDO P. MACHADO, *Primary Examiner.*