



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:  
**12.01.2022 Bulletin 2022/02**

(51) Int Cl.:  
**E04H 4/06 (2006.01)**

(21) Application number: **21180550.2**

(22) Date of filing: **21.06.2021**

(84) Designated Contracting States:  
**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB  
GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO  
PL PT RO RS SE SI SK SM TR**  
Designated Extension States:  
**BA ME**  
Designated Validation States:  
**KH MA MD TN**

(71) Applicant: **Exonsteel S.r.l.**  
**37036 San Martino Buon Albergo (VR) (IT)**

(72) Inventor: **Albrigi, Massimo**  
**San Martino Buon Albergo (VR) (IT)**

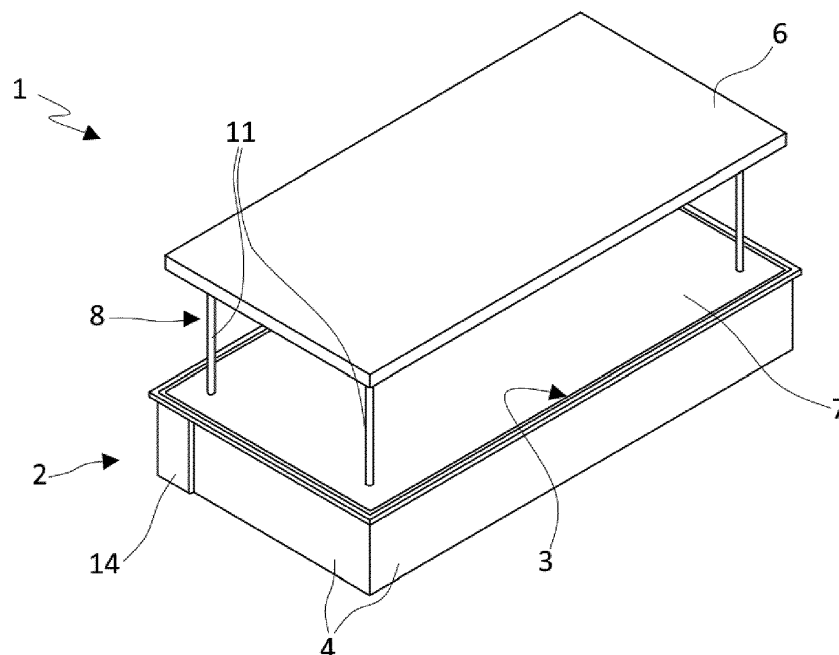
(74) Representative: **IP Sextant s.r.l.**  
**Via A. Salandra, n.18**  
**00187 Rome (IT)**

(30) Priority: **07.07.2020 IT 202000016459**

(54) **POOL WITH MOVABLE PLATFORM**

(57) A Pool (1) comprising a body (2) provided with side walls (4) and a bottom wall (5) connected to each other, wherein the side walls (4) delimit an upper opening (3) of said pool (1), a mobile top platform (6), a mobile bottom platform (7) which is interposed between the mobile top platform (6) and the bottom wall (5), lifting members (8) configured to move the mobile top platform (6)

between at least one completely lowered position, wherein the mobile top platform (6) is abutted against the mobile bottom platform (7) and both are arranged in proximity to the bottom wall (5) of said body, and at least one completely raised position wherein the mobile top platform (6) is arranged outside the body (2) and spaced from the mobile bottom platform (7).



**FIG.3**

## Description

**[0001]** The present invention relates to a pool provided with at least one movable platform, configured to be selectively moved in several operating positions with respect to the pool itself.

**[0002]** The use of a mobile platform or floor to selectively close a swimming pool is known. The mobility of the platform is guaranteed by motor members and guide members that allow the movement of the same platform inside the pool to be operated and controlled. In practice, the platform can be moved between a lowered limit position, wherein it defines the bottom of the pool itself, and a raised position, wherein it provides a closure that can be walked on. The mobility of the platform also allows to vary the depth of the pool, being able to adjust the distance between the platform itself and the free surface of the water.

**[0003]** Documents US 4106134, US 8104109 B2, DE 2229901A1 and US 2017/0356207A1 describe some examples of swimming pools provided with a lifting platform.

**[0004]** A limitation of the solutions of the prior art concerns the use of the mobile platform exclusively to block or selectively free access to the tub.

**[0005]** The tub according to the invention is a tub that can be configured as a swimming pool that can be installed preferably, but not exclusively, on board a boat such as a ship, a boat, a yacht or similar.

**[0006]** In the field of naval application, there is a need to optimize the exploitation of the space available on board.

**[0007]** The possibility of closing the pool and providing a walkable surface partly responds to this need by allowing the space normally occupied by the pool to be used for other purposes.

**[0008]** In the context of the exploitation of the space occupied by a pool on board a boat, the compartment of the same is sometimes improperly used as a storage wherein to stow, for example, a small boat, a dinghy, a jet ski, tools or objects in general.

**[0009]** In practice, one or more of the aforementioned means of navigation can be stowed inside the volume of the pool, which has been emptied.

**[0010]** This solution, however, does not appear safe, as there is the danger of accidentally falling into the compartment delimited by the pool with the risk of injury.

**[0011]** The use of a cover sheet to be spread on the deck at the pool, to occlude the same, although allows to protect the objects stored inside the pool, does not allow to avoid the danger described above.

**[0012]** There is therefore a need to optimally exploit the volume occupied by an on-board swimming pool, in order to overcome the drawbacks of conventional solutions of the known type.

**[0013]** The object of the present invention is to provide in a simple, efficient and economical way a pool that can be configured as a swimming pool which allows the space occupied by it to be exploited in an optimal way.

**[0014]** A further object of the present invention is to provide a pool configured to assume different configurations so as to alternatively provide a swimming pool, a walkable surface or a hold for the storage of objects.

**[0015]** Specific form object of the invention a pool comprising:

a body equipped with side walls and a bottom wall connected to each other, wherein the side walls delimit an upper opening of the pool,  
a mobile top platform housed within the plan footprint of a compartment delimited by the body,  
a mobile bottom platform housed within the overall dimensions of the body,  
wherein the bottom platform is interposed between the mobile top platform and the bottom wall,  
the pool comprising lifting members configured to move the mobile top platform between at least one completely lowered position, wherein the mobile top platform is leaning against the mobile bottom platform and both are placed in proximity to the bottom wall of the body, and at least a fully raised position wherein at least the mobile top platform is located outside the body and spaced from the bottom movable platform.

**[0016]** According to another aspect of the invention, the bottom wall and the mobile bottom platform can have through openings configured for the passage of the lifting members.

**[0017]** According to a further aspect of the invention, the pool can comprise movement members operatively connected to the mobile bottom platform and configured to move the mobile bottom platform between a completely lowered position, wherein the mobile bottom platform is in proximity to the bottom wall bottom of the body and a raised position wherein the mobile bottom platform is arranged at the top of the body occluding the upper opening, depending on the position of the top mobile platform with respect to said body.

**[0018]** According to an additional aspect of the invention, the pool can comprise a sealing system that develops perimeter around the mobile top platform and is configured to selectively provide a hermetic seal between the mobile top platform and the side walls of the body.

**[0019]** According to another aspect of the invention, the sealing system can comprise at least one expandable gasket configured to be selectively inflated or deflated.

**[0020]** According to a further aspect of the invention, the lifting members can comprise a plurality of telescopic pistons operatively connected to the mobile top platform and to the body of the pool.

**[0021]** According to an additional aspect of the invention, the telescopic pistons can comprise a plurality of tubular elements slidingly connected to each other and housed, in a retracted configuration, inside a containment body, wherein the containment body is connected to the bottom and extends outside the body.

**[0022]** According to another aspect of the invention, the pool can comprise at least one logic control unit operatively connected to the lifting members and configured to control the position of the top mobile platform relative to the body and to the bottom mobile platform.

**[0023]** According to a further aspect of the invention, the at least one logic control unit can be operatively connected to the movement members and is configured to control the position of the mobile bottom platform relative to the body and the mobile top platform.

**[0024]** According to an additional aspect of the invention, the pool can comprise at least one compartment delimited along at least one of the side walls and configured to house at least one ladder for accessing inside the pool, wherein the ladder is located outside the plan dimensions of the mobile top platform and of the mobile bottom platform so as not to interfere with their movement relative to the body.

**[0025]** The advantages offered by the pool according to the invention are evident.

**[0026]** In particular, the pool according to the invention comprises a system of mobile platforms configured to provide an extremely flexible solution that can be configured, according to specific needs of use, such as a hold with relative cover, a swimming pool or as a support surface, not only walkable but able to support a high load.

**[0027]** Furthermore, the pool according to the invention has overall reduced and optimized dimensions wherein the moving parts of the platforms of the pool are included or substantially included in the plan dimensions of the pool itself, promoting its installation, for example on board a boat.

**[0028]** The present invention will now be described, for illustrative but not limitative purposes, according to its preferred embodiments, with particular reference to the Figures of the attached drawings, wherein:

Figure 1 shows an overall perspective view of the pool according to the invention in an operating position;

Figures 2 and 3 show perspective views of the pool according to the invention in some possible configurations of use;

Figures 4 to 6 show lateral sectional views of the pool according to the invention in some possible configurations of use.

**[0029]** With reference to the accompanying Figures, it should be noted that a pool according to the present invention is indicated as a whole with the reference number 1.

**[0030]** In the following description, reference will be made to a pool configured to be installed on board a boat, although it is intended that according to alternative embodiments, the pool according to the invention can also be used for installation on land, without any limit.

**[0031]** The pool 1 comprises a body 2 which defines a compartment delimiting an upper opening 3, through

which to access the inside of the pool 1 itself.

**[0032]** In particular, the body 2 has side walls 4, mutually connected to each other to delimit the upper opening 3 and a bottom wall 5 (see, in particular Figures 4 to 6).

**[0033]** The side walls 4 protrude orthogonally from the bottom wall 5 defining with it a box-like body open at its top, that is, at the upper opening 3.

**[0034]** In the preferred embodiment, the pool 1 is configured for installation flush with respect to the deck of a boat, that is to say that the top portion of the pool 1 is flush with the deck and does not extend above it.

**[0035]** As mentioned, the pool 1 according to an alternative embodiment can be installed on the ground and, in this case, the top of the pool 1 is flush with the ground or a covering that delimits the walkable surface around the pool 1 itself.

**[0036]** The pool 1 includes a mobile top platform 6, housed within the plan footprint of the body 2 and a mobile bottom platform 7, also housed within the plan area of the body 2.

**[0037]** The mobile bottom platform 7 is interposed between the bottom wall 5 and the mobile top platform 6.

**[0038]** The mobile top platform 6 and the mobile bottom platform 7 are both mobile, depending on the mutual positioning and the position assumed by each of them relative to the body 2, as better described below.

**[0039]** The pool 1 comprises lifting members 8 configured to move the mobile top platform 6 relative to the body 2 as well as to the mobile bottom platform 7.

**[0040]** In particular, the lifting members 8 are configured to move the mobile top platform 6 between a completely lowered position, wherein the mobile top platform 6 is positioned at the bottom wall 5 of the body 2 of the pool 1, leaning against the mobile bottom platform 7 (see Figure 5), when the mobile bottom platform 7 is placed in a completely lowered position, wherein it is arranged at the bottom wall 5, a completely raised position, wherein the mobile top platform 6 is positioned outside the body 2, above the top portion of the body 2 itself, spaced from the bottom platform 7 (see Figure 6) and at least an intermediate position, wherein the mobile top platform 6 is arranged at the top portion of the body 2 (see Figure 4), occluding the upper opening 3, possibly in a spaced position from the bottom platform 7.

**[0041]** The mobile top platform 6 when arranged in the intermediate position described above blocks access to the pool 1 and provides a support surface configured to support a predetermined weight resting on it.

**[0042]** The pool 1 comprises movement members 9 operatively connected to the mobile bottom platform 7 and configured to move it relative to the body 2 as well as to the mobile top platform 6.

**[0043]** The movement members 9 are configured to move the mobile bottom platform 7 between the completely lowered position and a completely raised position.

**[0044]** The mobile top platform 6 and the mobile bottom platform 7 are movable with each other, so as to be able to be approached each other, possibly until they are

placed in mutual abutment, or moved away from each other according to specific requirements of use.

**[0045]** Depending on the position assumed by the mobile top platform 6 and by the mobile bottom platform 7, the pool 1 can be selectively configured as a swimming pool, a support surface or as a housing hold.

**[0046]** The pool 1, in fact, is configured to be able to assume different operating modes, depending on the presence or absence of water or objects inside it.

**[0047]** In this regard, it should be noted that with the mobile bottom platform 7 arranged in the lowered position and the mobile top platform 6 arranged in an intermediate position between the lowered position and a position corresponding to the top portion of the body 2, the pool 1 it is configured to be filled with water and serve as a swimming pool.

**[0048]** With the mobile top platform 6 in a position aligned, flush or substantially flush with the top portion of the body 2, the pool 1 is closed, sealing if desired, and the compartment below the mobile top platform 6, i.e. the volume of the pool 1 delimited between the mobile bottom platform 7, the side walls 4 and the mobile top platform 6, is configured to be used as a technical compartment wherein to house objects.

**[0049]** Again, with the mobile top platform 6 in the raised position, spaced from the top portion of the body 2, the pool 1 has the upper opening 3 free, thus allowing access to the compartment delimited between the body 2 and the mobile bottom platform 7.

**[0050]** The pool 1 can assume further configurations, for example to allow its inspection and/or maintenance and, therefore, the access of assigned personnel inside the body 2. For example, the mobile bottom platform 7 is optionally configured to be moved beyond the top portion of the body 2.

**[0051]** The mobile top platform 6 is configured to support a distributed or concentrated load that insists on it, for example due to foot traffic or the positioning of furniture.

**[0052]** By way of non-limiting example, the mobile top platform 6 can comprise longitudinal members and cross-pieces connected to each other and lying along the same plane, to define a reticular structure configured to support an upper cover which defines the walkable surface for the mobile top platform 6.

**[0053]** Furthermore, the mobile top platform 6 can be configured as a landing pad for a helicopter, thus acting as a heliport.

**[0054]** The pool 1 comprises a sealing system, which develops around the perimeter in correspondence with the top portion of the body 2 and is configured to selectively obtain a hermetic seal between the mobile top platform 6 itself and the side walls 4 of the body 2 or between the mobile bottom platform 7 and side walls 4.

**[0055]** The sealing system comprises an expandable gasket 10, shaped like a frame and configured to selectively abut against the perimeter side walls of the mobile top platform 6 or the perimeter side walls of the mobile

bottom platform 7.

**[0056]** The expandable gasket 10 is configured to be selectively inflated or deflated respectively to abut or distance itself from the side walls of the mobile top platform 6 or of the mobile bottom platform 7 and ensure or not the hermetic seal with them.

**[0057]** More in detail, the expandable gasket 10 is deformable between a rest configuration, wherein it is deflated and away from the perimeter side walls of the mobile top platform 6 or from the perimeter side walls of the mobile bottom platform 7 and a working configuration in the which is expanded so as to extend inside the body 2 and abut against the perimeter side walls of the mobile top platform 6 or the perimeter side walls of the mobile bottom platform 7 to define a hermetic seal.

**[0058]** It should be noted that the expandable gasket 10 is placed in a rest configuration during the relative movement of the mobile top platform 6 and/or of the mobile bottom platform 7 so as not to be an obstacle to them.

**[0059]** As said, the pool 1 comprises lifting members 8 operatively connected to the mobile top platform 6.

**[0060]** According to a preferred embodiment illustrated in the attached Figures, the lifting members 8 comprise a plurality of telescopic pistons 11 operatively connected to the mobile top platform 6 and configured to determine the selective movement thereof between a fully lowered position (see Figure 5), fully raised (see Figure 6) and intermediate positions (see for example Figure 4).

**[0061]** The telescopic pistons 11 are hydraulically or electro-mechanically operated and are operatively connected to at least one drive unit, not shown in the attached Figures, which will not be described in detail, since this teaching is within the reach of the person skilled in the art.

**[0062]** The telescopic pistons 11 are constrained to the body 2 of the pool 1 and protrude outside the same starting from the bottom wall 5.

**[0063]** More in detail, each of the telescopic pistons 11 comprises a plurality of tubular elements slidably connected to each other and housed, in a retracted position, inside a containment body 12 which extends outside the pool 1, starting from the bottom wall 5.

**[0064]** The length according to which the containment body 12 of each of the telescopic pistons 11 extends outside the bottom wall 5 is a function of the predetermined stroke for the movement of the mobile top platform 6 between the completely lowered position and the completely raised position.

**[0065]** The telescopic pistons 11 are constrained at a respective top end to the mobile top platform 6.

**[0066]** As known, the telescopic pistons 11 have a plurality of movable tubular elements slidably engaged with each other and mutually removable for a predetermined length.

**[0067]** In the attached Figures the telescopic pistons 11 are illustrated in a simplified way, as tubular elements with a constant diameter, although it is understood that they have a plurality of tubular elements fitted one on top of the other and, consequently, of gradually decreasing

dimensions starting from the outermost tubular element towards the innermost tubular element, in a manner within the reach of the person skilled in the art.

**[0068]** According to an alternative embodiment, the lifting members 8 comprise linear actuators different from the telescopic pistons 11 such as, by way of example, catenary actuators.

**[0069]** The bottom wall 5 and the mobile bottom platform 7 have respective through openings mutually aligned and configured for the passage of the lifting members 8.

**[0070]** In particular, the through openings made along the bottom wall 5 and the mobile bottom platform 7 act as guiding elements for moving the lifting members 8 and, consequently, the mobile top platform 6.

**[0071]** The pool 1 comprises at least one logic control unit 13 operatively connected to the lifting members 8 and configured to control their actuation so as to determine the position of the mobile top platform 6. In this regard, the pool 1 comprises at least one sensor, not illustrated in detail in the attached Figures, configured to detect the position of the mobile top platform 6 relative to the body 2.

**[0072]** According to a preferred embodiment, the pool 1 comprises encoders not shown in detail, operatively connected to the lifting members 8 and configured to detect the position assumed by the individual telescopic pistons 11.

**[0073]** The movement of the mobile bottom platform 7, on the other hand, is determined by the movement members 9.

**[0074]** According to a preferred embodiment, the movement members 9 are configured as a cable or chain drive, not shown in detail in the attached Figures but outlined as a rectangular element leaned against the outside of the bottom wall 5 (see Figures 4- 6).

**[0075]** It should be noted that the positioning of the movement members 9 in a position leaning against the outside of the bottom wall 5 is shown purely by way of example and does not imply that the movement members 9 are provided exclusively in this position. By way of example, the movement members 9 could comprise a cable system operatively connected to an electro-mechanical actuator, wherein the electro-mechanical actuator is placed inside the thickness of the mobile bottom platform 7 and is configured to actuate the cable system so as to selectively control the lifting or lowering of the mobile bottom platform 7 or its maintenance in position.

**[0076]** A cable drive of the type indicated above comprises, as mentioned, at least one drive unit configured to recall or release in a controlled manner at least one cable which, in turn, is operationally connected to the mobile bottom platform 7 by means of a series of pulleys and return ropes. Following the winding or unwinding of at least one rope connected to the drive unit, the controlled lifting, lowering or maintenance in position of the mobile bottom platform 7 is determined relative to the body 2.

**[0077]** The pool 1 comprises at least one sensor con-

figured to detect the position of the mobile bottom platform 7 relative to the body 2 and, consequently, relative to the mobile top platform 6.

**[0078]** Preferably, the mobile bottom platform 7 is configured to be moved between a completely lowered position, wherein it abuts against the bottom wall 5 of the body 2 of the pool 1 (see Figures 4 and 5) and a raised position, closing the upper opening 3 of the body 2 of the pool 1, wherein it is flush with the top portion of the body 2 (see Figure 6).

**[0079]** As mentioned, according to an embodiment, the mobile bottom platform 7 can be moved in a raised position, wherein it is positioned beyond the top portion of the body 2, in order to be able to access the bottom wall 5 of the body 2 or the bottom of the bottom mobile platform 7, for inspection or maintenance.

**[0080]** The movement of the mobile top platform 6 and of the mobile bottom platform 7 can be synchronized with each other and controlled by means of the at least one logic control unit 13 to avoid accidental collisions or crushing of any objects in a position interposed between the mobile bottom platform 7 and the top mobile platform 6, i.e. supported by the bottom mobile platform 7.

**[0081]** According to an alternative embodiment, not shown in the attached Figures, the lifting members 8 comprise poles, as a replacement of the single telescopic pistons 11, each bearing a toothing engaged by a respective mechanical drive such as a motorized pinion or worm screw.

**[0082]** The direction of rotation of the individual pinions selectively determines the lifting or lowering of the respective poles and, therefore, the lifting or lowering of the mobile top platform 6.

**[0083]** Each of the poles extends outside the body 2 through respective openings made passing through the bottom wall 5 and the mobile bottom platform 7 according to similar methods to those described in relation to the previous embodiment.

**[0084]** Each of the mechanical drives is configured to engage a respective one between the poles and is provided externally to the body 2 constrained to the bottom wall 5.

**[0085]** The pool 1 has locking members configured to selectively lock the mobile top platform 6 in position.

**[0086]** According to an embodiment of the invention, the locking members are housed in the thickness of the mobile top platform 6 and comprise movable elements and relative actuation members for selectively controlling their exit from the edge of the mobile top platform 6 so as to engage respective seats made along the side walls 4, at the top of the body 2 of the pool 1.

**[0087]** Each of the movable elements can be configured as the rod of a piston or a pin, electro-actuated or hydraulically operated, operatively connected to the at least one logic control unit 13, so that the movable element is selectively operable between a extracted position, wherein it engages a corresponding seat, preventing the movement of the mobile top platform 6 relative to the

body 2, and a retracted position, wherein it allows the movement of the mobile top platform 6 relative to the body 2 of the pool 1.

**[0088]** When the movable elements are engaged in the respective seats made along the side walls 4, the mobile top platform 6 is constrained to the body 2.

**[0089]** The mobile top platform 6 thus locked acts as a support surface for any loads that insist on it.

**[0090]** The pool 1 comprises further locking members, not shown in the attached Figures, operatively connected to the mobile bottom platform 7 in a similar way to the connection between the locking members and the mobile top platform 6.

**[0091]** The further locking members are configured to selectively constrain the mobile bottom platform 7 to the top portion of the body 2 of the pool 1 according to similar methods to those described in relation to the locking members of the mobile top platform 6.

**[0092]** According to an alternative embodiment, not shown, the locking members comprise movable pins configured to be selectively moved so as to protrude from the side walls 4 and engage respective openings made along the perimeter side walls of the mobile top platform 6 to constrain it in position.

**[0093]** Similarly, according to this embodiment, the mobile bottom platform 7 can comprise openings along the perimeter side walls, configured to be selectively engaged with the pins of the locking members, to selectively constrain the mobile bottom platform 7 in position, relative to the body 2.

**[0094]** In practice, this embodiment of the locking members substantially represents an inversion with respect to the previously described embodiment, wherein the mobile top platform 6 and the mobile bottom platform 7 each have locking pins configured to selectively extend therefrom and engaging respective openings delimited along the perimeter walls 4 of the body 2 of the pool 1.

**[0095]** The pool 1 comprises sensors, not shown in detail, operatively connected to the movable elements or to the movable pins and to the at least one logic control unit 13 and configured to detect the stopping position of the movable elements or of the movable pins engaged in the respective locations.

**[0096]** The presence of several sensor members to detect the position of the mobile top platform 6 and/or of the mobile bottom platform 7 and the possible connection in position with the body 2 of the pool 1 allows to increase the control and safety of the pool 1 and detecting any anomalies that can be signaled by the at least one logic control unit 13, for example by means of a display or a control panel or by means of devices operatively connected to the at least one logic control unit 13 remotely.

**[0097]** The pool 1 comprises at least a compartment 14 delimited along at least one of the side walls 4 and configured to house at least a ladder 15 to allow access or exit relative to the pool 1 (see Figure 2).

**[0098]** In particular, the at least one compartment 14 defines at least one niche wherein the at least one ladder

15 is housed which, in practice, remains outside the plan dimensions of the mobile top platform 6 and of the mobile bottom platform 7, so as not to interfere with their movement.

**[0099]** The at least one compartment 14 extends in an interposed position between the bottom wall 5 and the top portion of the body 2. In particular, the at least one compartment 14 is delimited below the sealing system in order not to interfere with the latter.

**[0100]** In practice, the at least one compartment 14 does not intersect the top portion of the body 2 of the pool and does not create any discontinuity at the expandable gasket 10.

**[0101]** It is evident that the pool 1 according to the invention is able to achieve the intended purposes with particular reference to the possibility of optimally exploiting the space occupied by a pool 1 for multiple purposes.

**[0102]** The pool 1, in fact, comprises at least a mobile top platform 6 and a mobile bottom platform 7 which are movable reciprocally and relative to the body 2 of the pool 1 itself to delimit the bottom of the pool, to occlude the upper opening 3 of the same, and to define a storage area wherein to place tools or nautical items such as an inflatable boat, a jet ski or similar.

**[0103]** In particular, by positioning the mobile top platform 6 in a completely raised position and the mobile bottom platform 7 flush with the top of the body 2 of the pool 1, a loading area is arranged along which to arrange the items to be stored inside the body 2, placing them on the mobile bottom platform 7.

**[0104]** Then, by lowering the mobile bottom platform 7 along the body 2, the articles to be stored inside the pool 1 are brought. With the mobile bottom platform 7 in the completely lowered position, in correspondence with the bottom wall 5 of the body 2, lowers the mobile top platform 6 until it reaches the top of the body 2, occluding the upper opening 3.

**[0105]** Then, the mobile top platform 6 is constrained to the body 2 by means of the locking members.

**[0106]** The mobile top platform 6 acts as a closing element for the pool 1 to protect the items stored inside the pool 1 itself and, at the same time, as a support surface at the installation area of the pool 1, for example along the deck of the boat.

**[0107]** If it is necessary to access the inside of the pool 1, it is possible to proceed in the reverse way with respect to what has been described above, lifting the mobile top platform 6 until it is completely extracted from the body 2 and, subsequently, moving the mobile bottom platform 7.

**[0108]** The control of the movement of the mobile top platform 6 and of the mobile bottom platform 7 can take place via a control panel, not shown in the attached Figures, connected in data exchange mode with at least one logic control unit 13.

**[0109]** The connection in data exchange regime between the control panel and the at least one logic control unit 13 can occur through wiring or wirelessly according

to methods within the reach of the person skilled in the art that do not form the specific object of the present invention.

**[0110]** The mobile top platform 6 can carry at least one layer of external coating configured to camouflage the mobile top platform 6 itself along the installation deck or, alternatively, to distinguish it from the material with which the boat deck is made.

**[0111]** It is understood that the pool 1 can be made in different shapes and sizes than those illustrated in the attached Figures, without any limitation, even within the scope of a technical solution falling within the same inventive concept of the invention.

**[0112]** In the foregoing, the preferred embodiments have been described and variants of the invention have been suggested, but it is to be understood that those skilled in the art will be able to make modifications and changes without thereby departing from the relative scope of protection, as defined by the claims attached.

## Claims

### 1. Pool (1) comprising:

a body (2) provided with side walls (4) and a bottom wall (5) connected to each other, wherein said side walls (4) delimit an upper opening (3) of said pool (1),

a mobile top platform (6) housed within the plan dimensions of a compartment delimited by said body (2),

**characterized in that** is comprises a mobile bottom platform (7) housed within the plan dimensions of said body (2),

wherein said mobile bottom platform (7) is interposed between said mobile top platform (6) and said bottom wall (5),

said pool (1) comprising lifting members (8) configured to move said mobile top platform (6) between at least one completely lowered position, wherein said mobile top platform (6) is abutted against said mobile bottom platform (7) and both are arranged in proximity to said bottom wall (5) of said body, and at least one completely raised position wherein at least said mobile top platform (6) is arranged outside said body (2) and spaced from said mobile bottom platform (7).

2. Pool (1) according to claim 1, wherein said bottom wall (5) and said mobile bottom platform (7) have through openings configured for the passage of said lifting members (8).

3. Pool (1) according to claim 1 or 2, comprising movement members (9) operatively connected to said mobile bottom platform (7) and configured to move said mobile bottom platform (7) between a completely

lowered position, wherein said mobile bottom platform (7) is in proximity to said bottom wall (5) of said body (2) and a raised position wherein said mobile bottom platform (7) is arranged at said top of said body (2) occluding said upper opening (3), depending on the position of said mobile top platform (6) with respect to said body (2).

4. Pool (1) according to any one of the preceding claims, comprising a sealing system which develops perimeter around said mobile top platform (6) and is configured to selectively provide a hermetic seal between said mobile top platform (6) and said side walls (4) of said body (2).

5. Pool (1) according to claim 4, wherein said sealing system comprises at least one expandable gasket (10) configured to be selectively inflated or deflated.

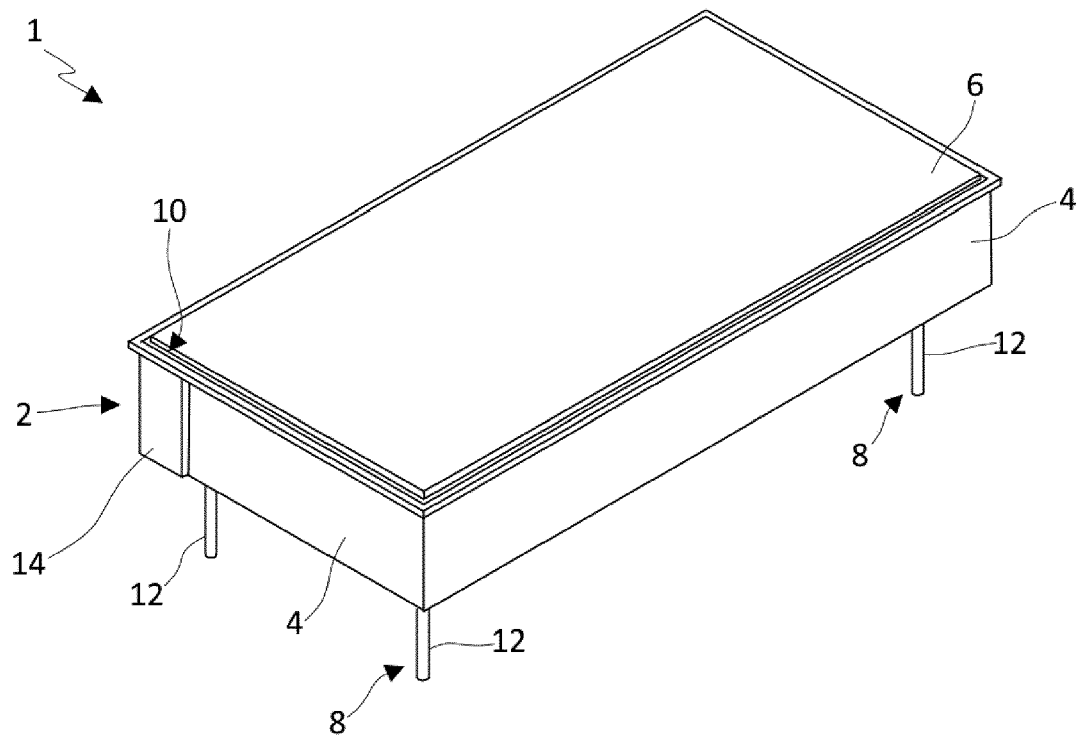
6. Pool (1) according to any one of the preceding claims, wherein said lifting members (8) comprise a plurality of telescopic pistons (11) operatively connected to said mobile top platform (6) and to said body (2) of said pool (1).

7. Pool (1) according to claim 6, wherein said telescopic pistons (11) comprise a plurality of tubular elements slidably connected to each other and housed, in a retracted configuration, inside a containment body (12), wherein said containment body (12) is connected to said bottom wall (5) and extends outside said body (2).

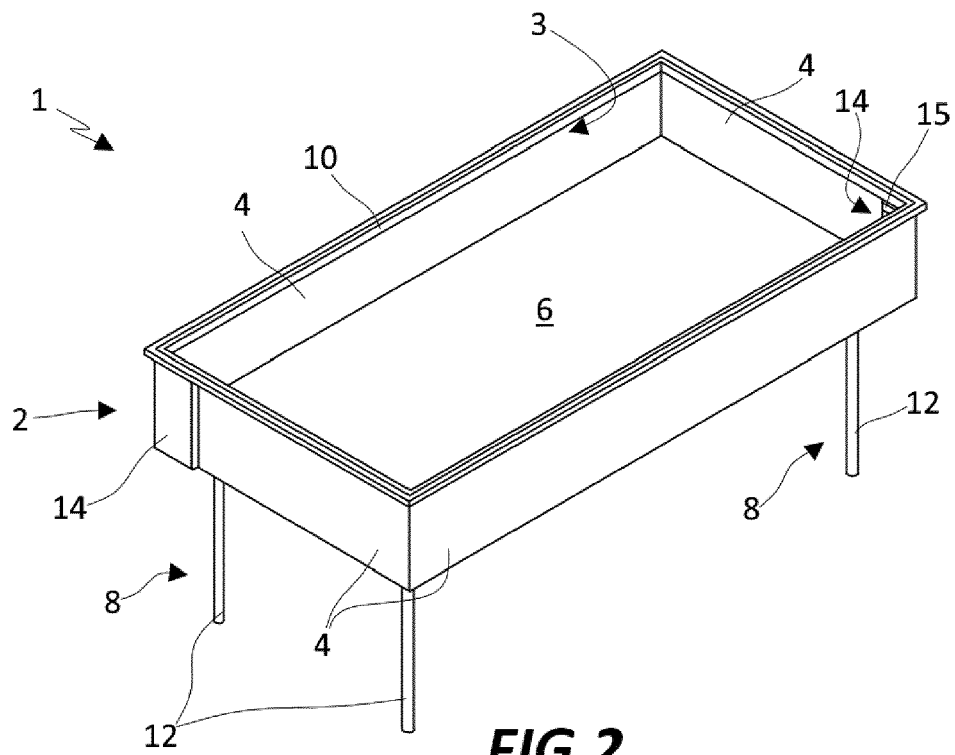
8. Pool (1) according to any one of the preceding claims, comprising at least one logic control unit (13) operatively connected to said lifting members (8) and configured to control the position of said mobile top platform (6) relative to said body (2) and to said mobile bottom platform (7).

9. Pool (1) according to claim 8, when dependent on claim 3, wherein said at least one logic control unit (13) is operatively connected to said movement members (9) and is configured to control the position of said mobile bottom platform (7) relative to said body (2) and to said mobile top platform (6).

10. Pool (1) according to any one of the preceding claims, comprising at least one compartment (14) delimited along at least one of said side walls (4) and configured to house at least one ladder (15) for accessing inside said pool (1), wherein said ladder (15) is arranged outside the plan dimensions of said mobile top platform (6) and of said mobile bottom platform (7) so as not to interfere with their movement relative to said body (2).

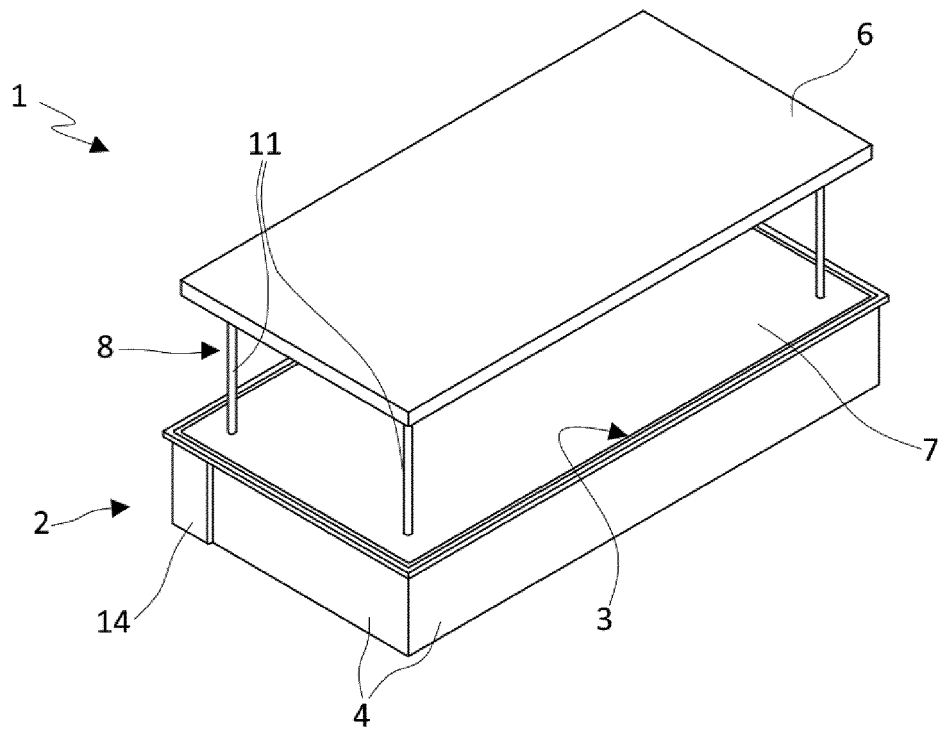


**FIG.1**

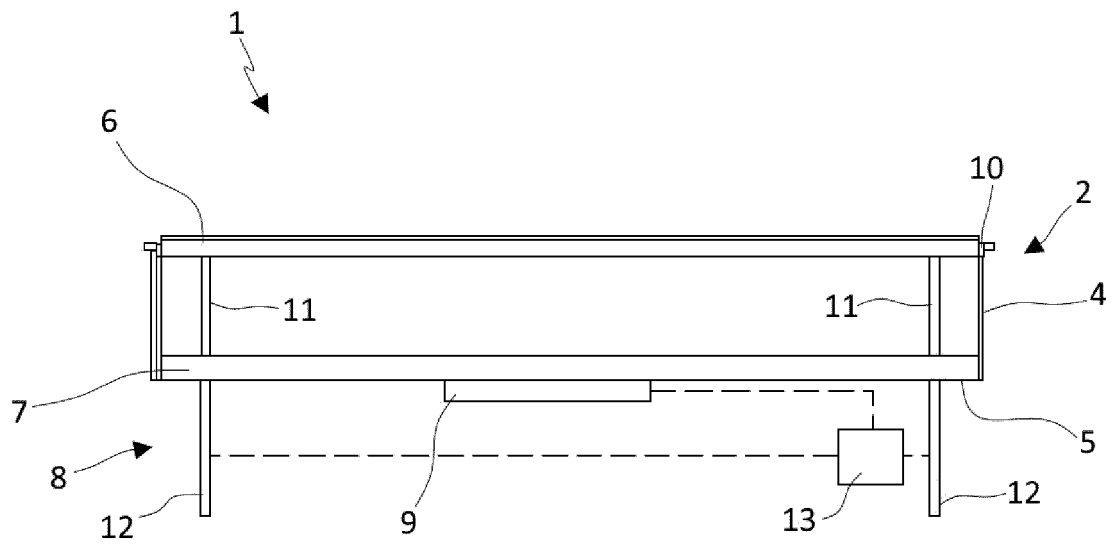


**FIG.2**

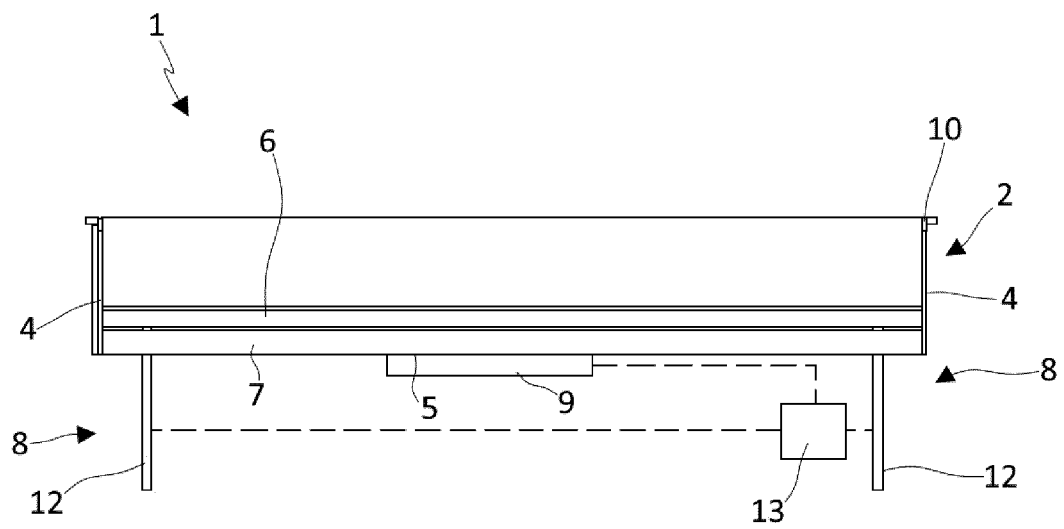




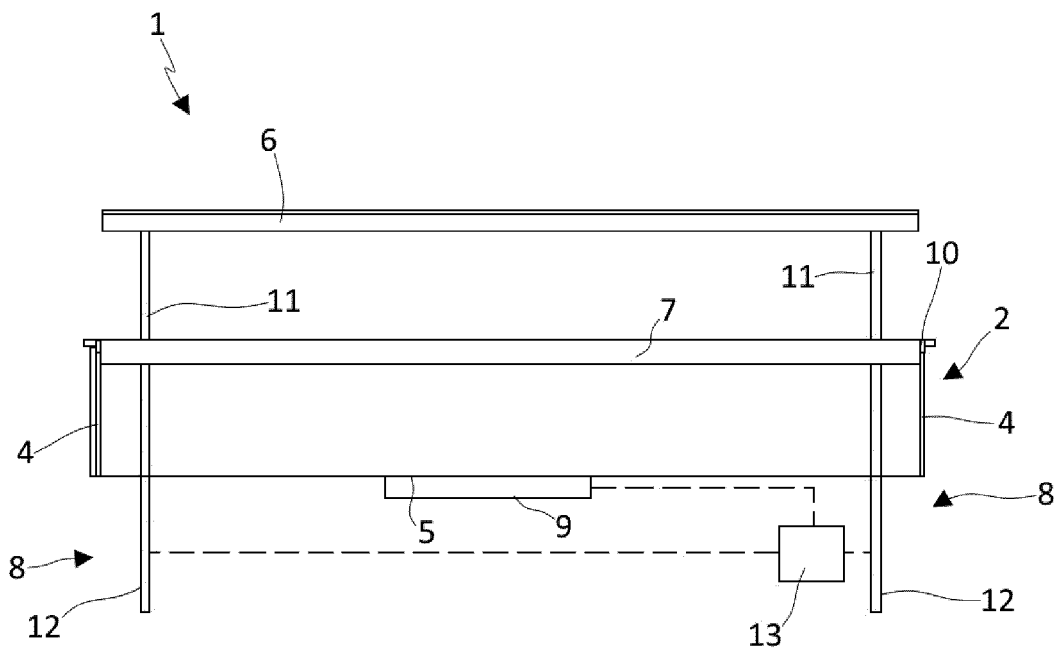
**FIG. 3**



**FIG. 4**



**FIG. 5**



**FIG. 6**



## EUROPEAN SEARCH REPORT

 Application Number  
EP 21 18 0550

5

10

15

20

25

30

35

40

45

50

55

2

EPO FORM 1503 03.82 (P04C01)

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	DE 22 29 901 A1 (HOERNSTEIN HEBEBUEHNEN) 10 January 1974 (1974-01-10) * claims 1,2; figures 1,2 *	1-10	INV. E04H4/06
A	US 2017/356207 A1 (HENRY D SEAN [US]) 14 December 2017 (2017-12-14) * paragraph [0096]; figures 15,16 *	1-10	
A	DE 25 23 409 A1 (MEYER HANNS CHRISTIAN) 2 December 1976 (1976-12-02) * page 8, paragraph 2; figure 5 *	1-10	
			TECHNICAL FIELDS SEARCHED (IPC)
			E04H
The present search report has been drawn up for all claims			
Place of search <b>Munich</b>		Date of completion of the search <b>17 November 2021</b>	Examiner <b>Rosborough, John</b>
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 21 18 0550

5

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
The members are as contained in the European Patent Office EDP file on  
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

17-11-2021

10

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 2229901	A1	10-01-1974	NONE
US 2017356207	A1	14-12-2017	NONE
DE 2523409	A1	02-12-1976	NONE

15

20

25

30

35

40

45

50

55

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

**REFERENCES CITED IN THE DESCRIPTION**

*This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.*

**Patent documents cited in the description**

- US 4106134 A [0003]
- US 8104109 B2 [0003]
- DE 2229901 A1 [0003]
- US 20170356207 A1 [0003]