

STERN PLATFORM EQUIPPED WITH RECREATION OPENINGS

Field of application

[001] The present invention belongs to the field of mechanical and nautical engineering, as well as architecture, more specifically of reservoirs, tanks, swimming pools, bathtubs, and the like intended for use on vessels.

Introduction

[002] The present invention relates to a stern platform equipped with recreation openings, comprising at least one gate provided with at least one removable and/or foldable element, wherein the removable and/or foldable elements form backrests and/or headrests and/or support means and/or containment barriers in the form of an open, partially open or closed reservoir, the recreation opening being further equipped with bottom support and/or footrests to support the feet.

Background

[003] Stern platforms, whether submersible or not, are widely used on vessels for various purposes, including assisting in the entry to and exit from water, forming small platforms for bathing, using cooking appliances, assisting in launching, collecting or lifting accessories, diving tanks and even other smaller vessels, among other applications.

[004] As swimming pools and other recreational and leisure elements are also highly appreciated on vessels, especially speedboats, yachts, and the like, there are several devices and systems that form reservoirs to be filled with water.

[005] These devices can be inflatable or fixed, but they are always part of an additional device that either requires a relatively high effort to assemble and/or requires complex moving and concealing systems.

[006] In addition, the devices described above are almost always

complemented with backrests or supports and even furniture to provide a little more comfort to users during recreation.

Prior Art

[007] Examples of solutions of this nature are described, for example, by the patent document BR112017027857 of title "*boat with a movable stern hatch, having a submersible stern platform*", which discloses, according to the abstract, a boat comprising a hull provided with a rear stern hatch, located in correspondence with a stern internal compartment of the said hull, suitable for opening and closing a respective opening of said compartment, said hatch having a body with opposite sides, located in correspondence with side walls of said compartment, and an upper edge and a lower edge, and said hull having a stern platform which is movable and submersible. Instead of being provided with direct connections to the hull, the hatch is connected to the stern platform in order to reach, after the opening, a submerged position in the water where the boat is located, at the time when said platform submerges in said water.

[008] The solution proposed by BR112017027857 is ingenious and interesting, as it provides a submersible bow platform with direct access to the interior of the boat; however, it does not provide a platform with additional recreation options such as an opening with a gate and neither backrests nor bottom support to support the feet.

[009] Another relevant prior art document is patent document US7162969 which reveals a platform seated on the stern of a boat hull and which can be lowered by motor drive means using guides on an incline to descend into the water, which exposes steps to allow a swimmer to climb up out of the water onto the main boat deck. This solution, although ingenious, also does not provide an opening with a gate that allows leisure and recreation activities on the platform.

[010] US 2018/0354589 discloses a swim platform for attachment to a boat that includes a rearwardly tapered inflatable body including a top surface capable of supporting a standing person, an outer perimeter including a forward wall, an aft wall, and a port sidewall extending between the forward wall and the aft wall. This swim platform can be left in the water while the boat is in motion. This proposal offers a recreation option; however, it is external to the boat, demands a certain effort to be used, and even when deflated it takes up considerable space on the vessel.

[011] Patent document EP0253745 refers to an attached service system connected to a ship, which has a floating part that comprises a platform element intended to be horizontal in the active position, mounted on a float articulated to the platform element so as to be relatively movable with respect to the platform element under the effect of the sea's movement, the platform element being connected to the ship by a connecting-link device forming at least one articulated parallelogram in a vertical plane. This solution applies, in particular, to a swimming pool or transshipment platform, but it has the same disadvantages as the solution described above, in particular the fact that it occupies precious space on the vessel and involves a complex and expensive system of articulations and drives.

[012] As can be inferred from the previous descriptions, there is room for a stern platform equipped with recreation openings capable of overcoming the deficiencies of the prior art described above, in particular that provides an recreation opening with at least one hatch provided with at least one removable and/or foldable element, in which the removable and/or foldable elements form backrests and/or headrests and/or support means and/or containment barriers in the form of an open, partially open or closed reservoir, the recreation opening being further equipped with bottom support and/or footrests to support the

feet.

Objects of the Invention

[013] The object of the present invention is, therefore, to provide a stern platform, in accordance with the features of independent claim 1 of the accompanying set of claims.

[014] Additional features and details of these features are defined by claims 2 to 7 of the accompanying set of claims.

Brief description of the drawings

[015] For better understanding and visualization of the object of the present invention, it will now be described with reference to the accompanying drawings, representing the technical effect obtained by exemplary embodiments without limiting the scope of the present invention, in which:

Figure 1 shows a partial perspective view of a vessel provided with a platform according to the invention, showing a recreation opening closed by a removable element and single-jointed foldable elements (left opening) and an open recreation opening without the removable element and with the foldable elements folded (right opening);

Figure 2 shows a partial perspective view of a vessel provided with a platform according to the invention, showing a recreation opening closed by double-jointed foldable elements (left opening) and an open recreation opening with the double-jointed foldable elements doubly folded (right opening);

Figure 3 shows a partial perspective view of a vessel provided with a platform according to the invention, showing a recreation opening closed by a removable element and single-jointed foldable elements (left opening) and an open recreation opening without the removable element and with the foldable elements folded (right opening);

Figure 4 shows a partial perspective view of a vessel provided with a

platform according to the invention, showing a recreation opening closed by double-jointed foldable elements (left opening), an open recreation opening with the double-jointed foldable elements singly folded (center opening) and an open recreation opening with the double-jointed foldable elements doubly folded (right opening);

Figure 5 shows a partial perspective view of a vessel provided with a platform according to the invention, showing a recreation opening closed by double-jointed recreation elements (left opening), an open opening with the double-jointed recreation elements singly folded (center opening) and an open recreation opening with the double-jointed foldable elements doubly folded (right opening);

Figure 6 shows a partial perspective view of a vessel provided with a platform according to the invention, showing a recreation opening closed by single- and double-jointed foldable elements (left opening), an open recreation opening with the single-jointed foldable elements folded and the double-jointed foldable elements singly folded (center opening) and an open recreation opening with the single-jointed foldable elements singly folded and the double-jointed foldable elements doubly folded (right opening);

Figure 7 shows a partial perspective view of a vessel provided with a platform according to the invention, showing a recreation opening closed by single- and double-jointed foldable elements (left opening), an open recreation opening with the single-jointed foldable elements folded and the double-jointed foldable elements singly folded (center opening) and an open recreation opening with the single-jointed foldable elements singly folded and the double-jointed foldable elements doubly folded (right opening), forming an open reservoir.

Detailed Description of the Invention

[016] A stern platform (100), or simply platform (100), according to the

invention comprises an opening (150) arranged in any position on the platform (100), comprising at least one gate (200) provided with at least one removable element (210) and/or at least one foldable element (220).

[017] The openings (150) and gates (200), as well as their removable (210) and foldable (220) elements can have any shape, including, but not by way of limitation, polygonal, round, oval, oblong, and the like.

[018] The removable elements (210) are covers that can be provided separately, forming by themselves a gate (200), or be provided as part of a group of combined removable elements (210) or, further, forming a set of elements together with one or more foldable elements (220).

[019] The foldable elements (220), in turn, can have only one joint or have more than one joint forming two or more sheets (221) that can be folded depending on the degree of freedom of their pivoting structure.

[020] Both the removable elements (210) and the foldable elements (220) may contain upholstery or other special surfaces (222), forming backrests and/or headrests and/or support means.

[021] In particular, the foldable elements (220) can also form containment barriers in the form of an open, partially open or closed reservoir, and the recreation opening (150) can further have bottom support (not shown) and/or footrests (not shown) to support the feet.

[022] The removable element (210) of the invention is a suitable closing element that acts as a gate, which can be fitted and hoisted manually (Figures 6 and 7) and/or slid and concealed into niches, that is divided into one or more parts and/or as a single piece and/or a combination of these alternatives, in any configuration and construction suitable for opening and closing or concealing the opening (150).

[023] Once the removable element (210) is removed, a huge range of

possibilities for use and activities opens up, also for accessories, significantly expanding the possibilities of using a platform (100) of the type discussed herein, since the foldable elements (220), which reversibly cover the openings (150), can be singly or doubly folded, together or separately.

[024] In a preferred embodiment of the invention, the gate (200) does not have a removable element (210), but only one or more foldable elements (220), with one or more joints.

[025] It should be noted that all elements of the platform (100) according to the invention can be located in any position, order, or alignment.

[026] It should be noted that the platform (100) can also comprise complementary elements such as covers, drains, grids, screens or a combination of these options, according to the desired application.

[027] The movement and/or handling of the removable (210) and foldable (220) elements is possible by means of any suitable traction device. Suitable traction devices include, but are not limited to, manual traction, gears, spindles, levers, ratchets, and the like, electric, hydraulic or pneumatic motors, gravitational systems, capillary and/or communicating vessel systems and any other suitable for the vessel and the conditions of use and application, alone or possibly in combination.

[028] Whether hollow, solid or combined, the elements (210, 220) of the gate (200) can have built-in piping and wiring, enabling the direct internal or indirect external installation of pumps and nozzles for hydromassage, lighting, massagers, heating, cooling, etc.

[029] It should be noted that, depending on the intended application, the platform elements may need seals between their contact and/or sliding walls and surfaces.

Further benefits and descriptions

[030] The person skilled in the art will understand that the platform (100) according to the invention solves several problems of the prior art, providing a stern platform provided with recreation openings capable of overcoming the above-described deficiencies of the prior art.

Conclusion

[031] The present invention, therefore, provides a platform (100) which, together with the aforementioned dimensions and features, provides new and inventive solutions to the prior art problems of stern platforms (100) and the like.

Final remarks

[032] It will be easily understood by those skilled in the art that modifications can be made to the present invention without departing from the concepts set out in the description above. Such modifications should be considered as comprised by the scope of the present invention. Consequently, the particular embodiments previously described in detail are merely illustrative and exemplary, and not limitative in terms of the scope of the present invention, to which the full extent of the accompanying claims should be given, in addition to all and any equivalents thereof.

CLAIMS

1. Stern platform (100) equipped with recreation openings, **characterized** in that it comprises an opening (150) arranged in any position on the platform, comprising at least one gate (200) provided with at least one removable element (210) and/or at least one foldable element (220).

2. Platform (100), according to claim 1, **characterized** in that the openings (150) and gates (200), as well as their removable (210) and foldable (220) elements, are polygonal, round, oval, oblong-shaped, and the like.

3. Platform (100), according to claim 1, **characterized** in that the removable elements (210) are covers that can be provided separately, forming by themselves a gate (200), or be provided as a part of a group of combined removable elements (210) or, further, forming a set of elements together with one or more foldable elements (220).

4. Platform (100), according to claim 1, **characterized** in that the foldable elements (220) have only one joint or have more than one joint forming two or more sheets (221) that can be folded depending on the degree of freedom of their pivoting structure.

5. Platform (100), according to claim 1, **characterized** in that the removable elements (210) and foldable elements (220) may contain upholstery or other special surfaces (222), forming backrests and/or headrests and/or support means.

6. Platform (100), according to claim 1, **characterized** in that the foldable elements (220) can form containment barriers in the form of an open, partially open or closed reservoir.

7. Platform (100), according to claim 1, **characterized** in that the recreation opening (150) can be provided with bottom support and/or footrests to support the feet.