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(54) **PLEASURE CRAFT**

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Description

Technical Field

[0001] The present invention relates to a pleasure craft.

[0002] More particularly, the present invention relates to a luxury pleasure craft, such as a yacht.

Prior Art

[0003] Pleasure crafts are known which comprise a hull and a deck, on which a superstructure is provided, which can accommodate, for instance, the passenger cabin and/or the pilot house for the shipowner.

[0004] In some known types of crafts, the aforementioned superstructure extends over the whole transverse width of the deck, so that the side walls of said superstructure are substantially aligned with the hull on both sides of the craft.

[0005] This configuration (also known as "Full Beam") has the advantage that it allows to maximize the space inside the superstructure, thus allowing to obtain larger and more comfortable environments.

[0006] However, as the superstructure extends over the whole width of the deck, this involves the need of passing through it or above it for moving from the deck stern to the deck bow, or vice versa. This is a major drawback, both from the point of view of practicality and from the point of view of users' privacy, particularly when the superstructure accommodates a passenger cabin.

[0007] In other known types of crafts, the superstructure has a width smaller than that of the deck, so that lateral passageways or corridors are obtained on both sides of said superstructure, between its side walls and the side walls of the craft.

[0008] This second configuration (also known as "Walk Around") has the advantage that it allows to easily move from the stern to the bow of the deck, without the need of passing through the superstructure.

[0009] On the other hand, it involves a significant reduction in terms of space that can be utilized inside the superstructure with respect to a "Full Beam" configuration.

[0010] In order to find a compromise between the two above-disclosed configurations, it is possible to provide one lateral passageway only for moving from the deck stern to the deck bow while remaining outside the superstructure: at one of the flanks of the craft, the lateral wall of the superstructure will be substantially flush with the hull; on the contrary, at the opposite flank of the craft, the superstructure will end before reaching the hull, leaving a free corridor on the deck between the opposite lateral wall of the superstructure and the side wall of the craft.

[0011] This compromise solution on one hand allows greater practicality when moving from one area to the other area of the deck and on the other hand it provides - for a given size of the deck - a space inside the super-

structure larger than in the case of a "Walk Around" configuration. Pleasure crafts comprising a superstructure designed in this way are disclosed, for instance, in documents WO 2013/034935 and US 4 064 584.

[0012] However, even this solution is not free from drawbacks.

[0013] In particular, the asymmetrical arrangement of the superstructure with respect to the hull involves an aerodynamic imbalance, since the craft has a frontal surface exposed to the air in the direction of navigation that is not symmetrical with respect to the hull, with the consequent formation of different turbulences on the two opposite sides of the hull. Consequently, rather than advancing straight forward, the craft has the tendency to turn towards the side on which the superstructure is arranged, i.e. towards the side on which it offers a greater resistance to the air. Consequently, in order to keep the ship advancing straight ahead, continuous corrections on the craft wheel are required.

[0014] The higher the navigation speed is, the more evident is this disadvantage. Moreover, the larger the craft size is, the more evident is this disadvantage.

[0015] Such disadvantage is to be avoided especially in luxury pleasure crafts (such as yachts), in which the high selling price should guarantee optimal performances.

[0016] Moreover, if the craft is provided with a flying bridge over the superstructure, the asymmetrical arrangement causes said flying bridge to be cantilevered on the side of the lateral passageway, which can lead to possible phenomena of pressure fluctuations which have to be suppressed either by increasing the bearing structures, which would be penalizing in terms of weight, or by adding separate uprights (stanchions) which would be unaesthetic.

[0017] Still, the asymmetrical arrangement of the superstructure with respect to the hull gives the craft a rough, awkward overall structure, which means an unpleasant appearance.

[0018] The asymmetrical arrangement cannot be evidently perceived when the craft is viewed from the side. On the other hand, it is evident when the craft is viewed frontally or from behind, for instance when the craft is berthed, with its bow or stern towards the pier.

[0019] Also in this case, this disadvantage has a remarkable importance in the case of yachts and similar luxury pleasure crafts, in which appearance is one of the parameters determining the success (or failure) of a model on the market.

[0020] As a result, despite the practical advantages that can be obtained, a solution providing for an asymmetrical arrangement of the superstructure with respect to the deck is impracticable, at least as far as the application to luxury crafts such as yachts is concerned, in which high standards are required both from the technical point of view and from the aesthetic point of view.

[0021] Document "X-Sym 125 Yacht with asymmetrical design and exclusive curves by S-move design | Tu-

vie" (www.tuvie.com/x-sym-125-yacht-with-asymmetrical-design-and-exclusive-curves-by-s-move-design"), as well as document "Beneteau Swift Trawler 30 - Reviews, performances, compare, price, warranty, specs, Reports Specifications Layout, video | BoatTEST.com" (www.boattest.com/review/beneteau/3493_swift-trawler-30") both disclose pleasure crafts incorporating both symmetrical and asymmetrical components.

[0022] However, in the pleasure crafts shown in these documents the simultaneous provision of symmetrical and asymmetrical elements has a merely aesthetic purpose.

[0023] None of these documents deals with the technical problem of eliminating the aerodynamic imbalance due to the fact that the craft has a frontal surface exposed to the air in the direction of navigation that is not symmetrical with respect to the hull.

[0024] Accordingly, none these documents proposes a pleasure craft structure capable of effectively suppressing such aerodynamic imbalance.

[0025] The main object of the present invention is to overcome the drawbacks of the prior art by providing a pleasure craft that allows to combine advantageous practical solutions with directional stability during navigation and a pleasing and attractive appearance. This and other objects are achieved by the pleasure craft as claimed in the appended claims.

Summary of the Invention

[0026] The pleasure craft according to the invention comprises a hull and a deck on which a superstructure is provided, which superstructure is arranged asymmetrically with respect to the symmetry plane - i.e. the plane arranged in the bow - stern direction - of said craft, so that at a first flank of the craft the lateral wall of the superstructure is substantially flush with the hull, while at the second, opposite flank a free passageway or corridor is left on the deck between the lateral wall of the superstructure and the side wall of the craft.

[0027] Thanks to the fact that the invention provides for at least one bulkhead extending from said second flank of the hull in a direction substantially transverse to the symmetry plane of the craft and having a suitably chosen width, the front surface offered to the air in the direction of navigation does not substantially comprise any gap between said bulkhead and said superstructure.

[0028] By virtue of such solution, any imbalance (even minimal) in the aerodynamic profile of the craft is compensated, and the craft shows no tendency to deviate from the predetermined route during navigation.

[0029] Furthermore, always thanks to the bulkhead according to the invention, when an observer looks at the craft in a direction parallel to the symmetry plane of the craft itself, due to such solution, the optical effect on the observer is that of a substantially symmetrical overall structure.

[0030] Therefore, thanks to the invention, the asym-

metrical arrangement of the superstructure does not adversely affect either the aerodynamic profile or the aesthetic appearance of the craft and all the practical advantages resulting from this arrangement can be fully exploited while maintaining a directional stability during navigation (without the need for continuous corrections) and a prestige appearance.

[0031] Said at least one bulkhead is substantially coplanar to one of the transverse walls of the superstructure, in particular the transverse wall on the bow side.

[0032] In this way, the bulkhead acts as a deflector and gives, at its side of the hull, an aerodynamic behavior completely similar to that provided by the superstructure at the opposite side of said hull, thus eliminating (or at least drastically reducing) the imbalance in the aerodynamic profile.

[0033] In a preferred embodiment of the invention, said at least one bulkhead is substantially "L"-shaped and comprises a first wall arranged substantially coplanar to one of the transverse walls of the superstructure, namely the transverse wall on the bow side, and a second wall arranged substantially orthogonal to the first wall and extending along the flank of the hull, towards the center of the superstructure.

[0034] Indeed, experimental tests have shown that a bulkhead provided only with the first wall substantially coplanar to one of the transverse walls of the superstructure may not be sufficient for suppressing the tendency of the craft to deviate from the predetermined route, whereas in the case of a "L"-shaped bulkhead, the second wall extending along the flank of the hull effectively contributes to guarantee a satisfactory aerodynamic profile.

[0035] In a preferred embodiment of the invention, two bulkheads are provided, one of which is substantially coplanar to the transverse wall of the superstructure on the bow side and the other one of which is substantially coplanar to the transverse wall of the superstructure on the stern side.

[0036] In a particularly preferred variant of said embodiment, both said bulkheads are substantially "L"-shaped and comprise a first wall substantially coplanar to the corresponding transverse wall of the superstructure and a second wall substantially orthogonal to the first wall and extending along the flank of the hull, towards the center of the superstructure.

[0037] In a preferred embodiment of the invention, a flying bridge is provided over the superstructure, said flying bridge extending transversely across the whole width of the bridge, from flank to flank of the craft: thanks to the presence of such flying bridge the asymmetrical arrangement of the superstructure is not visible when the craft is seen from above.

[0038] Advantageously, when a flying bridge is provided, the at least one bulkhead of the craft according to the invention plays an important structural role, since it supports the side of the flying bridge opposite to that on which the superstructure is arranged: in the absence of such a

bulkhead, the flying bridge would be cantilevered on the underlying (narrower) superstructure, which would result in considerable bending stresses or in the need of increasing the bearing structures, which would be penalizing in terms of weight, or of adding unaesthetic, separate uprights.

Brief Description of the Drawings

[0039] Further features and advantages will be more evident from a detailed description of some preferred embodiments of the invention, given by way of non-limiting example with reference to the attached drawings, in which:

Figure 1 is a schematic perspective view of a pleasure craft according to a first embodiment of the invention;

Figure 2 is a further schematic perspective view of the craft of Figure 1, seen from a different direction; Figure 3 is a plan view of the craft of Figures 1 and 2; Figure 4 is a front view of the craft of Figures 1 and 2; Figure 5 is a schematic perspective view of a pleasure craft according to a second embodiment of the invention;

Figure 6 is a plan view of the craft of Figure 5, in which the flying bridge has been removed for sake of clarity.

Detailed Description of Some Preferred Embodiments

[0040] Referring to Figures 1 to 4, a pleasure craft according to a first embodiment of the invention is shown, which craft is indicated as a whole by reference 1.

[0041] The craft 1 comprises a hull 3 in which a bow 3a, a stern 3b, and two flanks 3c, 3d connecting the bow 3a and the stern 3b on opposite sides of the hull 3 are defined.

[0042] The craft 1 also comprises a deck 5 on which a superstructure 7 is provided, which is intended to accommodate one or more passenger cabins and/or a pilot house for the shipowner.

[0043] According to the invention, the superstructure 7 is arranged on the deck 5 in an asymmetrical position with respect to the symmetry plane L of the craft 1, i.e. the plane which is perpendicular to the deck 5 and passes through the bow 3a and the middle point of the stern 3b. In particular, the outer perimeter of said superstructure 7 comprises: a first lateral wall 7c extending over a certain length along a first flank 3c of the hull between the bow and the stern, substantially aligned with said first flank of the hull; a first transverse wall 7a extending from the bow-facing end of said first lateral wall 7c in a direction substantially transverse to the symmetry plane L of the craft; a second transverse wall 7b extending from the stern-facing end of said first lateral wall 7c in a direction substantially transverse to the symmetry plane L of the craft; a second lateral wall 7d joining the ends of the transverse

walls 7a, 7b opposite to those connected to the first lateral wall 7c.

[0044] The distance between the lateral walls 7c, 7d of the superstructure 7 - or, in other words, the width W' of the superstructure 7 - along an axis transverse to the symmetry plane L of the craft is, at each point of the superstructure, smaller than the distance between the flanks 3c, 3d of the hull 3 - or, in other words, than the width W of the deck 5 - along an axis transverse to the symmetry plane L of the craft, so that a free lateral passageway 9 is left on the deck 5 between the second lateral wall 7d of the superstructure 7 and the second flank 3d of the hull 3. Said lateral passageway will have a width sufficient for allowing at least the passageway of an individual.

[0045] In any case, in order to obtain enough space within the superstructure 7, said superstructure will extend - in a direction perpendicular to the symmetry plane L - from the first flank 3c of the hull to the second flank 3d of the hull beyond said symmetry plane, at least along a substantial portion of its length.

[0046] Moreover, for the reasons that will become apparent later, preferably the superstructure 7 has not a uniform width in the direction perpendicular to the symmetry plane L of the craft, but has a reduced width, i.e. it is tapered, at least at one of its ends in the longitudinal direction.

[0047] More particularly, in the preferred embodiment shown in Figures 1 to 4, the superstructure 7 comprises a portion with a reduced width at its end facing the bow of the craft. Correspondingly, the width of the first transverse wall 7a is smaller than the width of the second transverse wall 7b in a direction transverse to the symmetry plane L of the craft and the second lateral wall 7d comprises a first portion 7d' extending from the end of the second transverse wall 7b in a direction substantially parallel to the symmetry plane L of the craft and a second portion 7d'' extending in an oblique direction and joining the first portion 7d' of the second lateral wall 7d to the first transverse wall 7a. In other words, the plan of the superstructure 7 has the shape of a rectangle with a superimposed scalene trapezoid having its smaller base facing the bow (see Figure 3).

[0048] This configuration is not to be intended as limiting and several different variants are possible. For instance, instead of being formed by two differently oriented portions, the second lateral wall 7d of the superstructure 7 could have a profile curved towards the bow.

[0049] In general, the first transverse wall 7a will have a width along an axis perpendicular to the symmetry plane L smaller than the maximum width W'' of the superstructure 7, i.e. to the maximum distance between said first and second lateral walls of said superstructure along an axis perpendicular to the symmetry plane L.

[0050] From the above, it is evident that the pleasure craft 1 according to the invention has an overall structure which is strongly asymmetrical.

[0051] Such asymmetry is relevant when the craft is

viewed frontally (or from behind), i.e. in a direction parallel to the symmetry plane L (direction bow - stern).

[0052] As mentioned above, the asymmetrical arrangement of the superstructure 7 involves relevant practical advantages and, in particular, allows to increase the space available inside said structure if compared with a symmetrical arrangement with lateral passageways on both sides ("Walk Around" configuration). Specifically, for the same size of the deck, in the craft according to the invention the space inside the superstructure 7 can be 12 - 15% larger than in a "Walk Around" configuration.

[0053] However, the asymmetrical arrangement of the superstructure 7 causes an imbalance from the aerodynamic point of view, since the portion of the craft between the symmetry plane L and the side 3c of the hull 3 (i.e. the portion completely occupied by the superstructure 7) offers a significantly higher resistance to air than the portion of the craft between the symmetry plane L and the opposite side 3d of the hull 3 (i.e. the portion only partially occupied by the superstructure 7) and different turbulences are created at the two opposite sides of the hull; the higher the craft speed is and the larger the craft size is, the more relevant are the effects of such imbalance.

[0054] Moreover, the asymmetrical arrangement of the superstructure 7 gives the craft 1 an awkward profile and generates in the observer an unpleasant impression from the aesthetical point of view.

[0055] In order to eliminate this imbalance in the aerodynamic profile and to hide the asymmetrical arrangement of the superstructure 7, the pleasure craft 1 according to the invention provides for the presence on the deck 5 of a bulkhead 11 which comprises at least a first wall 11a extending from the second flank 3d of the hull 3 in a direction substantially transverse to the symmetry plane L of the craft 1 and substantially coplanar to the first transverse wall 7a of the superstructure 7 and having such a width that the distance d of the end of said first wall 11a of said bulkhead 11 adjacent to the first transverse wall 7a of the superstructure 7 from the symmetry plane L of the craft is equal to or smaller than the maximum distance d' of the second lateral side 7d of the superstructure 7 from said symmetry plane L.

[0056] The height of the first wall 11a of the bulkhead 11 is preferably substantially equal to the height of the walls 7a - 7d of the superstructure 7.

[0057] Thanks to this solution, when the craft 1 is viewed frontally, there is no gap between the wall 11a of the bulkhead 11 and the superstructure 7, said bulkhead acts as a deflector and the craft offers to the air a symmetrical, substantially continuous impact surface, thus eliminating any imbalance in the aerodynamic profile and giving, as a result, directional stability to the craft.

[0058] Moreover, the presence of the bulkhead 11 reduces the impression of strong asymmetry in the observer and generates a more pleasant impression in such observer.

[0059] Considering the presence of the bulkhead 11, it will be evident to the person skilled in the art why the

superstructure 7 has a portion with a reduced width at its bow-facing end, i.e. near said first transverse wall 7a: thanks to this configuration, the lateral passageway 9 continuously extends from the stern to the bow, without the need of providing doors or passages in the first wall 11a of the bulkhead 11. More particularly, said lateral passageway 9 comprises a first portion 9' extending along the first portion 7d' of the second lateral wall 7d, in a direction substantially parallel to the symmetry plane L of the craft, and a second portion 9" extending along the second portion 7d" of the second lateral wall 7d, in an oblique direction; the opening 9a of the lateral passageway 9 towards the bow, which extends between the first transverse wall of 7a of the superstructure 7 and the first wall 11a of the bulkhead 11, will be at a distance from the symmetry plane L of the craft smaller than the maximum distance between said symmetry plane L and the second lateral wall 7d of the superstructure 7.

[0060] Advantageously, as can be seen in Figure 3, the opening 9a of the lateral passageway 9 is in a central position with respect to the direction transverse to the symmetry plane L (i.e. astride said symmetry plane), which further contributes to suppress asymmetries in the aerodynamic profile of the pleasure craft 1.

[0061] As can be seen in Figure 4, notwithstanding the asymmetrical arrangement of the superstructure 7, when considering the pleasure craft 1 according to the invention frontally, it will be appreciated that it offers the best possible approximation of a continuous front surface, formed by - in sequence - the first transverse wall 7a of the superstructure 7, the second portion 7d" of the second lateral wall 7d of said superstructure (visible behind the opening 9a of the lateral passageway 9) and the first wall 11a of the bulkhead 11.

[0062] The opening 9a of the lateral passageway 9 could be provided with a door (e.g. a sliding door or a swinging door) for increasing the symmetry of the structure.

[0063] In the preferred embodiment shown in Figures 1 to 4, the bulkhead 11 has a substantially "L"-shaped profile and comprises - besides the first wall 11a - a second wall 11b extending along the second flank 3d of the hull 3, in a direction substantially orthogonal to said first wall 11a and towards the stern 3b.

[0064] The presence of said second wall 11b contributes to "accompany" the air flow along the flank 3d of the hull, symmetrically to what occurs along the opposite flank 3c of the hull by virtue of the presence of the lateral wall 7c of the superstructure 7.

[0065] Moreover, said second wall 11b can advantageously hide the presence of an access door (not shown in the Figures) to the superstructure 7 in the second portion 7d" of the second lateral wall 7d to an external observer viewing the craft from the side.

[0066] Preferably, the bulkhead 11 will further comprise a third wall 11c extending parallel to the second portion 7d" of the second lateral wall 7d of the superstructure 7 and joining the free ends of said first and sec-

ond walls 11a, 11b of said bulkhead.

[0067] Thanks to this arrangement, the free lateral passageway 9 will have a substantially uniform width over its entire length.

[0068] Moreover, the volume enclosed by walls 11a - 11c of the bulkhead 11 can advantageously be used as storage space, for instance for berthing equipment and/or safety equipment.

[0069] In the embodiment shown in Figures 1 to 4, the craft 1 further comprises a overhead bridge or flying bridge 13 covering the superstructure 7 and extending in a direction transverse to the symmetry plane L of the craft, across the whole width of the deck 5.

[0070] Thanks to the presence of this flying bridge 13, the asymmetrical arrangement of the superstructure 7 is not visible when the craft 1 according to the invention is seen from above.

[0071] Advantageously, in this embodiment the bulkhead 11 acts as a support for the flying bridge 13, close to its bow-facing end, on the side of the deck opposite to that along which the superstructure 7 is arranged. An upright 15 can be provided for supporting the flying bridge 13 close to its stern-facing end.

[0072] In this embodiment, the bulkhead 11 plays an important structural role, since in its absence the flying bridge 13 would be cantilevered on the underlying superstructure 7, which would involve relevant bending stresses or the need of increasing the bearing structures, with a consequent increase in weight, or of adding unaesthetic, separate uprights.

[0073] In a preferred embodiment of the invention, the bulkhead 11 is permanently, fixedly mounted on the deck 5.

[0074] However, in an alternative embodiment of the invention, said bulkhead could be movably, or even removably, mounted on the deck 5.

[0075] With reference now to Figures 5 and 6, a second embodiment of the pleasure craft 1 according to the invention is schematically shown.

[0076] Said second embodiment differs from the previously described embodiment in that it provides for two bulkheads 11, 21, one at the bow-facing end of the superstructure 7 and the other one at the stern-facing end of the superstructure 7.

[0077] Thanks to the presence of said two bulkheads, the craft will offer a substantially continuous surface both at its bow and at its stern and the optical impression of a symmetrical surface will be very strong, both when viewing the craft frontally and when viewing it from behind.

[0078] In this second embodiment, too, the superstructure 7 is arranged on the deck 5 in an asymmetrical position and the width of the superstructure 7 in a direction transverse to the symmetry plane L of the craft - i.e. the maximum distance between the lateral walls 7c, 7d of said superstructure - is, at each point of the superstructure 7, smaller than the width of the deck 5 in a direction transverse to the symmetry plane L of the craft, whereby

a free lateral passageway 9 is left between the second lateral wall 7d of the superstructure 7 and the second flank 3d of the hull 3.

[0079] In this embodiment, the superstructure 7 comprises a first portion with reduced width at its bow-facing end and a second portion with reduced width at its stern-facing end. Correspondingly, the second lateral wall 7d of said superstructure comprises a first, middle portion 7d' extending in a direction substantially parallel to the symmetry plane L of the craft, a second portion 7d'' extending in an oblique direction and joining the first portion 7d' of the second lateral wall 7d to the first transverse wall 7a and a third portion 7d''' extending in an oblique direction and joining the first portion 7d' of the second lateral wall 7d to the second transverse wall 7b. In this embodiment, on the deck 5 a first bulkhead 11 is provided, which comprises at least a first wall 11a, substantially coplanar to the first transverse wall 7a of the superstructure 7 and extending from the second flank 3d of the hull 3 in a direction substantially transverse to the symmetry plane L of the craft 1 and having such a width that the distance of the end of said first wall 11a of said bulkhead 11 adjacent to the first transverse wall 7a of the superstructure 7 from the symmetry plane L of the craft is equal to or smaller than the maximum distance of the second lateral wall 7d of the superstructure 7 from said symmetry plane L; on the deck 5 a second bulkhead 21 is further provided, which comprises at least a first wall 21a, substantially coplanar to the second transverse wall 7b of the superstructure 7 and extending from the second flank 3d of the hull 3 in a direction substantially transverse to the symmetry plane L of the craft 1 and having such a width that the distance of the end of said first wall 21a of said bulkhead 21 adjacent to the second transverse wall 7b of the superstructure 7 from the symmetry plane L of the craft is equal to or smaller than the maximum distance of the second lateral wall 7d of the superstructure 7 from said symmetry plane L.

[0080] The height of the first walls 11a, 21a of said bulkheads 11, 21 is preferably equal to the height of the walls 7a - 7d of the superstructure 7. Therefore, the lateral passageway 9 will continuously extend from the stern to the bow and comprise a middle portion 9' extending in a direction substantially parallel to the symmetry plane L of the craft, and oblique portions 9'', 9''' extending along the second and third portions 7d'', 7d''', respectively, of the second lateral wall 7d. The openings 9a, 9b of the lateral passageway 9 towards the bow and the stern will be at a distance from the symmetry plane L of the craft smaller than the maximum distance between said second lateral wall 7d of the superstructure 7 and said symmetry plane L.

[0081] As a result, notwithstanding the asymmetrical arrangement of the superstructure 7, the observer viewing the pleasure craft 1 according to the invention frontally or from behind will get the impression of a continuous surface.

[0082] In this embodiment, too, each bulkhead 11, 21

has a substantially "L"-shaped profile and comprises - besides the first wall 11a, 21 - a second wall 11b, 21b, extending along the second flank 3d of the hull 3, in a direction substantially orthogonal to said first wall 11a, 11b and towards the center of the superstructure 7, i.e. towards the stern and towards the bow, respectively. Preferably, each bulkhead 11, 21 will further comprise a third wall 11c, 21c joining the free ends of the walls of each corresponding bulkhead and defining a corresponding enclosed volume which can be advantageously used as storage space.

[0083] In this embodiment, too, the bulkheads 11, 21 are permanently, fixedly mounted on the deck 5, but in an alternative embodiment they could be movably, or even removably, mounted on the deck 5.

[0084] If the craft 1 comprises a flying bridge 13 covering the superstructure 7 and extending in a direction transverse to the symmetry plane L of the craft across the whole width of the deck 5, the bulkheads 11, 21 act as supports for the flying bridge 13, both at the stern and at the bow, so that the flying bridge is not cantilevered on the underlying superstructure and there is no need for the presence of separate uprights or for an increase in the bearing structures, with a consequent increase of weight.

[0085] With particular reference to Figure 6, some preferred proportions between the different elements of the craft according to the invention (more particularly between the superstructure 7 and the bulkheads 11, 21) are provided, which proportions should in no way be intended as limiting:

- the ratio between the distance of the end of the first transverse wall 7a of the superstructure 7 from the symmetry plane L (segment ED in Figure 6) and the corresponding distance of the second flank 3d of the hull 3 from said symmetry plane L (segment EB in Figure 6) is comprised between 0,3 and 0,6; said ratio can be considered as an "asymmetry index" of the configuration of the craft according to the invention;
- the minimum width of the first wall 11a of the bulkhead 11 is equal to the distance between the second flank 3d of the hull 3 and the projection of the point farthest from the symmetry plane L of the second lateral wall 7d of the superstructure 7 (A) on said first wall 11a of the bulkhead 11 and therefore corresponds to segment A'B in Figure 6; the width of the first wall 11a of the bulkhead 11 (segment CB' in Figure 6) is preferably equal to said minimum width plus a so-called "covering factor" (segment CA' in Figure 6);
- said "covering factor" (segment CA' in Figure 6) is preferably equal to 15 - 40% of the distance between the end of the first transverse wall 7a of the superstructure 7 and the projection of the point farthest from the symmetry plane L of the second lateral wall 7d of the superstructure 7 (A) on the first wall 11a of

the bulkhead 11 (segment DA' in Figure 6);

- the angle α formed between the second oblique portion 9" of the lateral passageway 9 and the first portion 9' of said lateral passageway - i.e. and the symmetry plane L of the craft 1 - is preferably equal to 20 - 45°;
- the ratio between the width b1 of the second oblique portion 9" of the lateral passageway 9 and the width b of the first portion 9' of said lateral passageway is preferably comprised between 0,9 and 1,1.

[0086] Similar proportions can also be provided for the second bulkhead 21.

[0087] It will be evident from the above that the pleasure craft according to the invention allows to achieve the objects set forth above and combine the practical advantages deriving from an asymmetrical arrangement of the superstructure with a substantially symmetrical aerodynamic profile and a good directional stability and a pleasant appearance.

[0088] It will also be evident to the person skilled in the art that the detailed description provided above has been given by way of non-limiting example and several modifications and variants are possible without departing from the scope of protection as defined by the appended claims.

Claims

1. Pleasure craft (1), comprising:

- a hull (3), including a bow (3a), a stern (3b), a symmetry plane (L) and two flanks (3c, 3d) connecting said bow (3a) to said stern (3b) on opposite sides of said hull relative to the symmetry plane (L);
- a deck (5) substantially perpendicular to the symmetry plane;
- a superstructure (7) arranged on said deck (5), the outer perimeter of said superstructure comprising a first lateral wall (7c) extending over a first flank (3c) of said hull in a direction substantially parallel to the symmetry plane (L) of said craft and is substantially aligned with said first flank of said hull, a first transverse wall (7a) extending from the end of said first lateral wall (7c) facing towards the bow (3a) in a plane substantially transverse to the symmetry plane (L) of said craft, a second transverse wall (7b) extending from the end of said first lateral wall (7c) facing towards the stern (3b) in a plane substantially transverse to the symmetry plane (L) of said craft, and a second lateral wall (7d) connecting the ends of said first and second transverse walls (7a, 7b) opposite to the ends thereof connected to said first lateral wall (7c), wherein the width (W') between said first and

- said second lateral walls (7c, 7d) of said superstructure along an axis perpendicular to the symmetry plane is smaller than the width (W) between said first and said second flanks (3c, 3d) of said hull along the same axis, a lateral passageway (9) being thus defined between said second lateral wall (7d) of said superstructure (7) and said second flank (3d) of said hull (3), wherein the width along an axis perpendicular to the symmetry plane of at least said first transverse wall (7a) of the superstructure is smaller than the maximum width (W'') between said first and said second lateral walls (7c, 7d) of said superstructure,
- characterized in that** at least one bulkhead (11) is arranged on said deck (5), said bulkhead comprising at least a first wall (11a) extending from said second flank (3d) of said hull (3) and being substantially coplanar with said first transverse wall (7a) of said superstructure, wherein said first wall (11a) of said bulkhead (11) has such a width along an axis perpendicular to said symmetry plane (L) that the distance (d) of the end of said first wall (11a) of said bulkhead (11) adjacent to said first transverse wall from said symmetry plane (L) is equal to or smaller than the maximum distance (d') of said second lateral wall (7d) of said superstructure (7) from said symmetry plane (L), and **in that** said transverse walls (7a, 7b) and said lateral walls (7c, 7d) of said superstructure (7) all have the same height and wherein the height of said first wall (11a) of said bulkhead (11) is substantially the same as the height of said walls (7a - 7d) of said superstructure.
2. Pleasure craft (1) according to claim 1, wherein said superstructure (7) has a portion having a smaller width near said first transverse wall (7a).
 3. Pleasure craft (1) according to claim 1, wherein said bulkhead (11) further comprises a second wall (11b) which extends towards said stern (3b) in a direction substantially orthogonal to said first wall (11a) of said bulkhead and is substantially aligned with said second flank (3d) of said hull.
 4. Pleasure craft (1) according to claim 1, wherein a second bulkhead (21) is further provided on said deck (5), which second bulkhead comprises at least a first wall (21a) extending from said second flank (3d) of said hull (3) and being substantially coplanar with said second transverse wall (7b) of said superstructure (7), wherein said first wall (21a) of said second bulkhead (21) has such a width along an axis perpendicular to said symmetry plane (L) that the distance (d) of the end of said first wall (21a) of said second bulkhead (21) adjacent to said second transverse wall from said symmetry plane (L) is equal to or smaller than the maximum distance (d') of said second lateral wall (7d) of said superstructure (7) from said symmetry plane (L).
 5. Pleasure craft (1) according to claim 4, wherein said transverse walls (7a, 7b) and said lateral walls (7c, 7d) of said superstructure (7) all have the same height and wherein the height of said first wall (21a) of said second bulkhead (21) is substantially the same as the height of said walls (7a - 7d) of said superstructure.
 6. Pleasure craft (1) according to claim 4, wherein said superstructure (7) has a second portion having a smaller width near said second transverse wall (7b).
 7. Pleasure craft (1) according to claim 4, wherein said second bulkhead (21) further comprises a second wall (21b) which extends towards said bow (3a) in a direction substantially orthogonal to said first wall (21a) of said bulkhead and is substantially aligned with said second flank (3d) of said hull.
 8. Pleasure craft (1) according to claim 3, wherein said bulkhead (11) further comprises a third wall (11c) joining the free ends of said first and said second walls (11a, 11b) of said bulkhead.
 9. Pleasure craft (1) according to claim 7, wherein said second bulkhead (21) further comprises a third wall (21c) joining the free ends of said first and said second walls (21a, 21b) of said bulkhead.
 10. Pleasure craft (1) according to any of the claims 1 - 9, wherein said bulkhead (11) and, if provided, said second bulkhead (21) is/are fixedly and permanently mounted on said deck (5).
 11. Pleasure craft (1) according to any of the claims 1 - 9, wherein said bulkhead (11) and, if provided, said second bulkhead (21) is/are movably and/or removably mounted on said deck (5).
 12. Pleasure craft (1) according to any of the preceding claims, wherein said craft (1) comprises a flying bridge (13) covering said superstructure (7) and extending in a direction transverse to the symmetry plane (L) of the craft across the entire width of said deck (5) and wherein said bulkhead (11) and, if provided, said second bulkhead (21) act(s) as a support for said flying bridge (13).
- Patentansprüche**
1. Vergnügungsboot (1) mit:

- einem Rumpf (3), der einen Bug (3a), ein Heck (3b), eine Symmetrieebene (L) und zwei Seiten (3c, 3d), die den Bug (3a) mit dem Heck (3b) auf gegenüberliegenden Seiten des Rumpfs relativ zur Symmetrieebene (L) verbinden, aufweist, 5

- einem Deck (5), das im Wesentlichen senkrecht zu der Symmetrieebene ist,

- Aufbauten (7), die auf dem Deck (5) angeordnet sind, wobei der äußere Umfang der Aufbauten eine erste Seitenwand (7c), die sich über 10 eine erste Seite (3c) des Rumpfs in eine Richtung im Wesentlichen parallel zur Symmetrieebene (L) des Boots erstreckt und im Wesentlichen mit der ersten Seite des Rumpfs fluchtet, eine erste quer verlaufende Wand (7a), die von dem Ende der ersten Seitenwand (7c), die dem Bug (3a) zugewandt ist, in einer Ebene, die im Wesentlichen quer zur Symmetrieebene (L) des Boots ist, verläuft, eine zweite quer verlaufende Wand (7b), die von dem Ende der ersten Seitenwand (7c), die dem Heck (3b) zugewandt ist, in einer Ebene, die im Wesentlichen quer zu der Symmetrieebene (L) des Boots ist, verläuft, und eine zweite Seitenwand (7d), welche die Enden der ersten und zweiten quer verlaufenden Wände (7a, 7b) an den Enden verbindet, die den durch die erste Seitenwand (7c) verbundenen Enden gegenüberliegen, aufweist, 20

wobei die Breite (W') zwischen der ersten und der zweiten Seitenwand (7c, 7d) der Aufbauten entlang einer Achse, die senkrecht zur Symmetrieebene ist, kleiner als die Breite (W) zwischen der ersten und der zweiten Seite (3c, 3d) des Rumpfs entlang derselben Achse ist, wodurch ein seitlicher Durchgang (9) zwischen der zweiten Seitenwand (7d) der Aufbauten (7) und der zweiten Seite (3d) des Rumpfs (3) gebildet ist, wobei die Breite entlang einer Achse, die senkrecht zu der Symmetrieebene von zumindest der ersten quer verlaufenden Wand (7a) der Aufbauten ist, kleiner als die maximale Breite (W'') zwischen der ersten und der zweiten Seitenwand (7c, 7d) der Aufbauten ist, 30

dadurch gekennzeichnet, dass wenigstens eine Querwand (11) auf dem Deck (5) angeordnet ist, wobei die Querwand wenigstens eine erste Wand (11a) aufweist, die von der zweiten Seite (3d) des Rumpfs (3) ausgeht und im Wesentlichen koplanar mit der ersten quer verlaufenden Wand (7a) der Aufbauten ist, wobei die erste Wand (11a) der Querwand (11) entlang einer Achse, die senkrecht zur Symmetrieebene (L) ist, eine solche Breite hat, dass der Abstand (d) des Endes der ersten Wand (11a) der Querwand (11), das an die erste quer verlaufende Wand angrenzt, von der Symmetrieebene (11) gleich wie oder kleiner als der maximale Abstand (d') der zweiten Seitenwand (7d) der Aufbauten (7) von der Symmetrieebene (L) ist, 45

bauten (7) von der Symmetrieebene (L) ist, und dass die quer verlaufenden Wände (7a, 7b) und die Seitenwände (7c, 7d) der Aufbauten (7) alle dieselbe Höhe haben, und wobei die Höhe der ersten Wand (11a) der Querwand (11) im Wesentlichen genauso groß ist wie die Höhe der Wände (7a - 7d) der Aufbauten.

2. Vergnügungsboot (1) nach Anspruch 1, wobei die Aufbauten (7) einen Abschnitt haben, der in der Nähe der ersten quer verlaufenden Wand (7a) eine kleinere Breite hat.
3. Vergnügungsboot (1) nach Anspruch 1, wobei die Querwand (11) zudem eine zweite Wand (11b) aufweist, die sich zu dem Heck (3b) hin in einer Richtung erstreckt, die im Wesentlichen senkrecht zu der ersten Wand (11a) der Querwand ist und im Wesentlichen mit der zweiten Seite (3d) des Rumpfs fluchtet. 15
4. Vergnügungsboot (1) nach Anspruch 1, wobei eine zweite Querwand (21) auf dem Deck (5) angeordnet ist, wobei die zweite Querwand zumindest eine erste Wand (21a) aufweist, die von der zweiten Seite (3d) des Rumpfs (3) ausgeht und im Wesentlichen koplanar mit der zweiten quer verlaufenden Wand (7b) der Aufbauten (7) ist, wobei die erste Wand (21a) der zweiten Querwand (21) eine solche Breite entlang einer Achse hat, die senkrecht zur Symmetrieebene (L) ist, dass der Abstand (d) des Endes der ersten Wand (21a) der zweiten Querwand (21), das an die zweite quer verlaufende Wand angrenzt, von der Symmetrieebene (L) gleich wie oder kleiner als der maximale Abstand (d') der zweiten Seitenwand (7d) der Aufbauten (7) von der Symmetrieebene (L) ist. 25
5. Vergnügungsboot (1) nach Anspruch 4, wobei die quer verlaufenden Wände (7a, 7b) und die Seitenwände (7c, 7d) der Aufbauten (7) alle dieselbe Höhe haben und wobei die Höhe der ersten Wand (21a) der zweiten Querwand (21) im Wesentlichen genauso groß wie die Höhe der Wände (7a - 7d) der Aufbauten ist. 30
6. Vergnügungsboot (1) nach Anspruch 4, wobei die Aufbauten (7) einen zweiten Abschnitt aufweisen, der in der Nähe der zweiten quer verlaufenden Wand (7b) eine kleinere Breite hat. 35
7. Vergnügungsboot (1) nach Anspruch 4, wobei die zweite Querwand (21) zudem eine zweite Wand (21b) aufweist, die sich zu dem Bug (3a) in einer Richtung erstreckt, die im Wesentlichen senkrecht zu der ersten Wand (21a) der Querwand ist, und im Wesentlichen mit der zweiten Seite (3d) des Rumpfs fluchtet. 40

8. Vergnügungsboot (1) nach Anspruch 3, wobei die Querwand (11) zudem eine dritte Wand (11c) aufweist, welche die freien Enden der ersten und der zweiten Wand (11a, 11b) der Querwand verbindet.
9. Vergnügungsboot (1) nach Anspruch 7, wobei die zweite Querwand (21) zudem eine dritte Wand (21c) aufweist, welche die freien Enden der ersten und der zweiten Wand (21a, 21b) der Querwand verbindet.
10. Vergnügungsboot (1) nach einem der Ansprüche 1 bis 9, wobei die Querwand (11) und, falls vorhanden, die zweite Querwand (21) fest und dauerhaft auf dem Deck (5) montiert sind.
11. Vergnügungsboot (1) nach einem der Ansprüche 1 bis 9, wobei die Querwand (11) und, falls vorhanden, die zweite Querwand (21) beweglich und/oder abnehmbar an dem Deck (5) montiert sind.
12. Vergnügungsboot (1) nach einem der vorstehenden Ansprüche, wobei das Boot (1) eine Laufbrücke (13) aufweist, welche die Aufbauten (7) bedeckt und sich in einer Richtung, die quer zu der Symmetrieebene (L) des Boots ist, über die gesamte Breite des Decks (5) erstreckt, und wobei die Querwand (11) und, falls vorhanden, die zweite Querwand (21) als Stützen für die Laufbrücke (13) dienen.

Revendications

1. Bateau de plaisance (1), comprenant :

- une coque (3), comportant une proue (3a), une poupe (3b), un plan de symétrie (L) et deux flancs (3c, 3d) reliant ladite proue (3a) à ladite poupe (3b) sur des côtés opposés de ladite coque par rapport au plan de symétrie (L) ;
- un pont (5) sensiblement perpendiculaire au plan de symétrie ;
- une superstructure (7) agencée sur ledit pont (5), le périmètre externe de ladite superstructure comprenant une première paroi latérale (7c) s'étendant sur un premier flanc (3c) de ladite coque dans une direction sensiblement parallèle au plan de symétrie (L) dudit bateau et sensiblement aligné avec ledit premier flanc de ladite coque, une première paroi transversale (7a) s'étendant à partir de l'extrémité de ladite première paroi latérale (7c) en regard de ladite proue (3a) dans un plan sensiblement transversal au plan de symétrie (L) dudit bateau, une deuxième paroi transversale (7b) s'étendant à partir de l'extrémité de ladite première paroi latérale (7c), en regard de ladite poupe (3b) dans un plan sensiblement transversal au plan de symétrie (L) dudit bateau, et une deuxième paroi

latérale (7d) reliant les extrémités desdites première et deuxième parois transversales (7a, 7b) opposées aux extrémités de celles-ci reliées à ladite première paroi latérale (7c), dans lequel la largeur (W') entre lesdites première et deuxième parois latérales (7c, 7d) de ladite superstructure le long d'un axe perpendiculaire au plan de symétrie est plus petite que la largeur (W) entre lesdits premier et second flancs (3c, 3d) de ladite coque le long du même axe, un passage latéral (9) étant ainsi défini entre ladite deuxième paroi latérale (7d) de ladite superstructure (7) et ledit second flanc (3d) de ladite coque (3), dans lequel la largeur le long d'un axe perpendiculaire au plan de symétrie d'au moins ladite première paroi transversale (7a) de la superstructure est plus petite que la largeur maximale (W'') entre lesdites première et deuxième parois latérales (7c, 7d) de ladite superstructure, **caractérisé en ce qu'**au moins une cloison (11) est agencée sur ledit pont (5), ladite cloison comprenant au moins une première paroi (11a) s'étendant à partir dudit second flanc (3d) de ladite coque (3) et étant sensiblement coplanaire avec ladite première paroi transversale (7a) de ladite superstructure, dans lequel ladite première paroi (11a) de ladite cloison (11) a une largeur le long d'un axe perpendiculaire audit plan de symétrie (L) telle que la distance (d) de l'extrémité de ladite première paroi (11a) de ladite cloison (11) adjacente à ladite première paroi transversale à partir dudit plan de symétrie (L) est inférieure ou égale à la distance maximale (d') de ladite deuxième paroi latérale (7d) de ladite superstructure (7) à partir dudit plan de symétrie (L), et **en ce que** lesdites parois transversales (7a, 7b) et lesdites parois latérales (7c, 7d) de ladite superstructure (7) ont toutes la même hauteur et la hauteur de ladite première paroi (11a) de ladite cloison (11) est sensiblement la même que la hauteur desdites parois (7a à 7d) de ladite superstructure.

2. Bateau de plaisance (1) selon la revendication 1, dans lequel ladite superstructure (7) a une portion ayant une largeur plus petite à proximité de ladite première paroi transversale (7a).

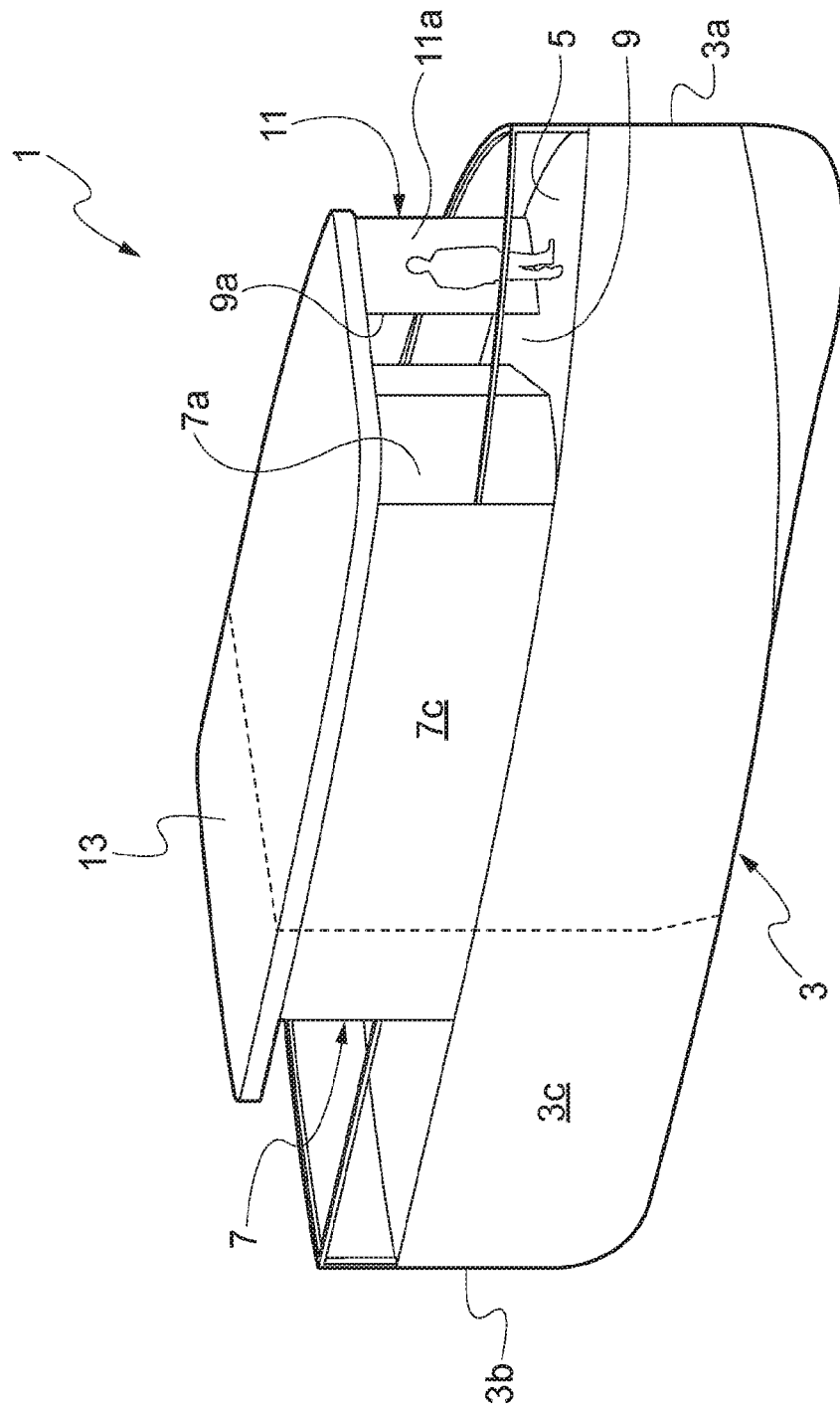
3. Bateau de plaisance (1) selon la revendication 1, dans lequel ladite cloison (11) comprend en outre une deuxième paroi (11b) qui s'étend vers ladite poupe (3b) dans une direction sensiblement orthogonale à ladite première paroi (11a) de ladite cloison et est sensiblement alignée avec ledit second flanc (3d) de ladite coque.

4. Bateau de plaisance (1) selon la revendication 1,

- dans lequel une seconde cloison (21) est en outre prévue sur ledit pont (5), laquelle seconde cloison comprend au moins une première paroi (21a) s'étendant à partir dudit second flanc (3d) de ladite coque (3) et étant sensiblement coplanaire avec ladite deuxième paroi transversale (7b) de ladite superstructure (7), dans lequel ladite première paroi (21a) de ladite seconde cloison (21) a une largeur le long d'un axe perpendiculaire audit plan de symétrie (L) telle que la distance (d) de l'extrémité de ladite première paroi (21a) de ladite seconde cloison (21) adjacente à ladite deuxième paroi transversale à partir dudit plan de symétrie (L) est inférieure ou égale à la distance maximale (d') de ladite deuxième paroi latérale (7d) de ladite superstructure (7) à partir dudit plan de symétrie (L).
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5. Bateau de plaisance (1) selon la revendication 4, dans lequel lesdites parois transversales (7a, 7b) et lesdites parois latérales (7c, 7d) de ladite superstructure (7) ont toutes la même hauteur et dans lequel la hauteur de ladite première paroi (21a) de ladite seconde cloison (21) est sensiblement la même que la hauteur desdites parois (7a à 7d) de ladite superstructure.
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6. Bateau de plaisance (1) selon la revendication 4, dans lequel ladite superstructure (7) a une seconde portion ayant une largeur plus petite à proximité de ladite deuxième paroi transversale (7b).
- 30
7. Bateau de plaisance (1) selon la revendication 4, dans lequel ladite seconde cloison (21) comprend en outre une deuxième paroi (21b) qui s'étend vers ladite proue (3a) dans une direction sensiblement orthogonale à ladite première paroi (21a) de ladite cloison et est sensiblement alignée avec ledit second flanc (3d) de ladite coque.
- 35
8. Bateau de plaisance (1) selon la revendication 3, dans lequel ladite cloison (11) comprend en outre une troisième paroi (11c) joignant les extrémités libres desdites première et deuxième parois (11a, 11b) de ladite cloison.
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9. Bateau de plaisance (1) selon la revendication 8, dans lequel ladite seconde cloison (21) comprend en outre une troisième paroi (21c) joignant les extrémités libres desdites première et deuxième parois (21a, 21b) de ladite cloison.
- 50
10. Bateau de plaisance (1) selon l'une quelconque des revendications 1 à 9, dans lequel ladite cloison (11) et, si elle est prévue, ladite seconde cloison (21) est(sont) montée(s) à demeure et en permanence sur ledit pont (5).
- 55
11. Bateau de plaisance (1) selon l'une quelconque des

revendications 1 à 9, dans lequel ladite cloison (11) et, si elle est prévue, ladite seconde cloison (21) est (sont) montée(s) de façon mobile et/ou amovible sur ledit pont (5).

12. Bateau de plaisance (1) selon l'une quelconque des revendications précédentes, dans lequel ledit bateau (1) comprend un pont volant (13) recouvrant ladite superstructure (7) et s'étendant dans une direction transversale au plan de symétrie (L) du bateau le long de la largeur entière dudit pont (5) et dans lequel ladite cloison (11) et, si elle est prévue, ladite seconde cloison (21) agit(agissent) comme un support pour ledit pont volant (13).



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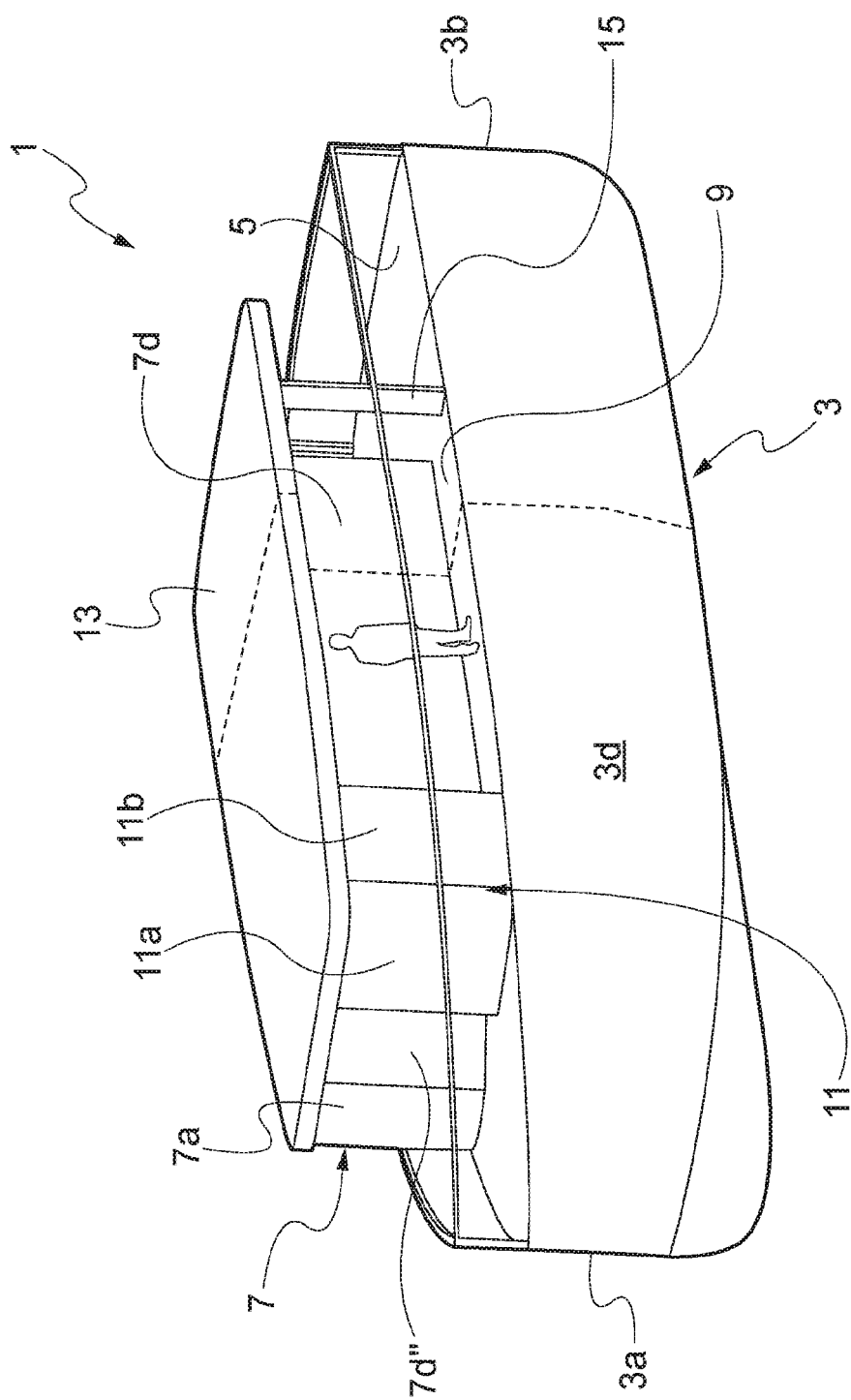
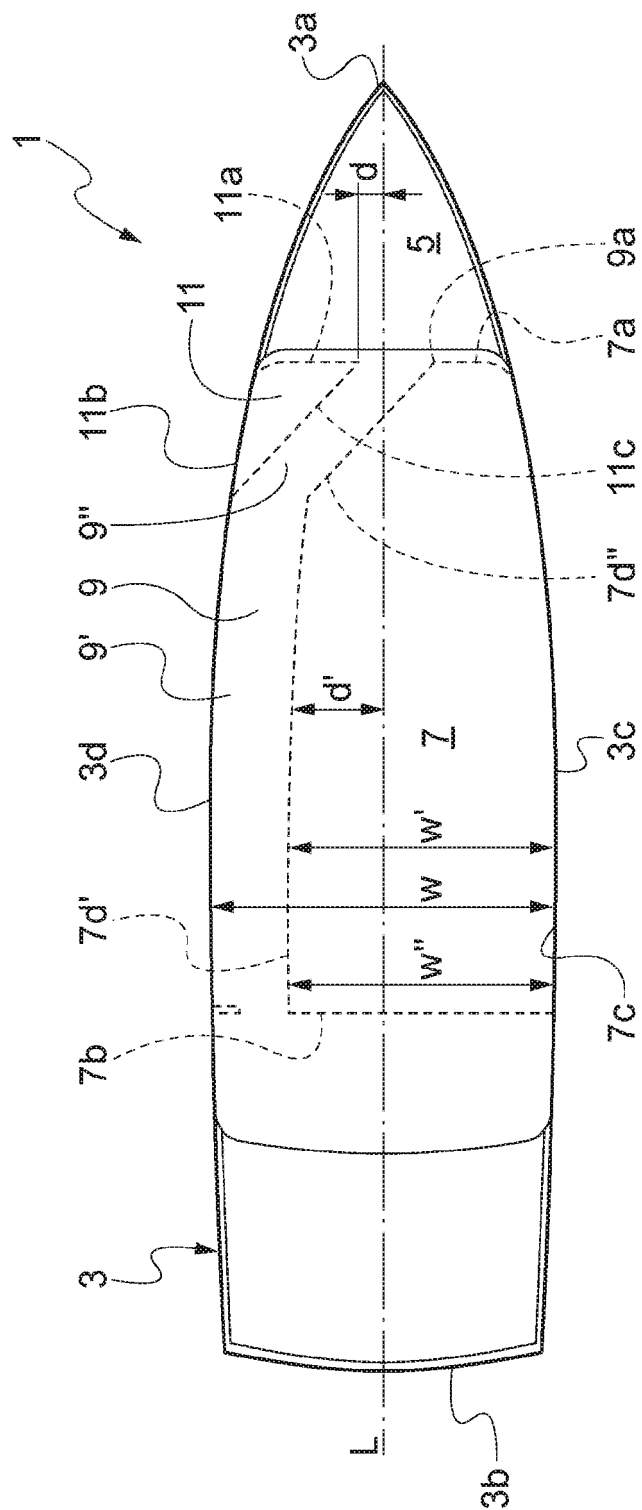


Fig. 2



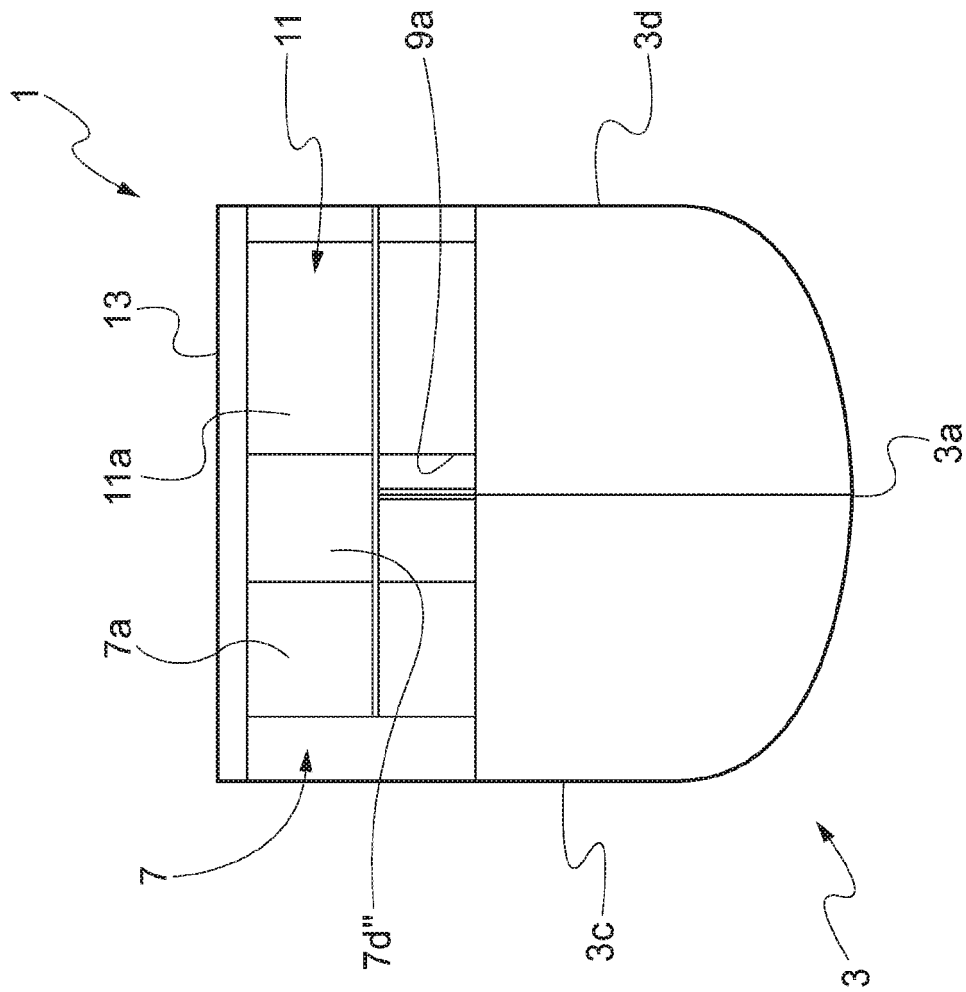


Fig. 4

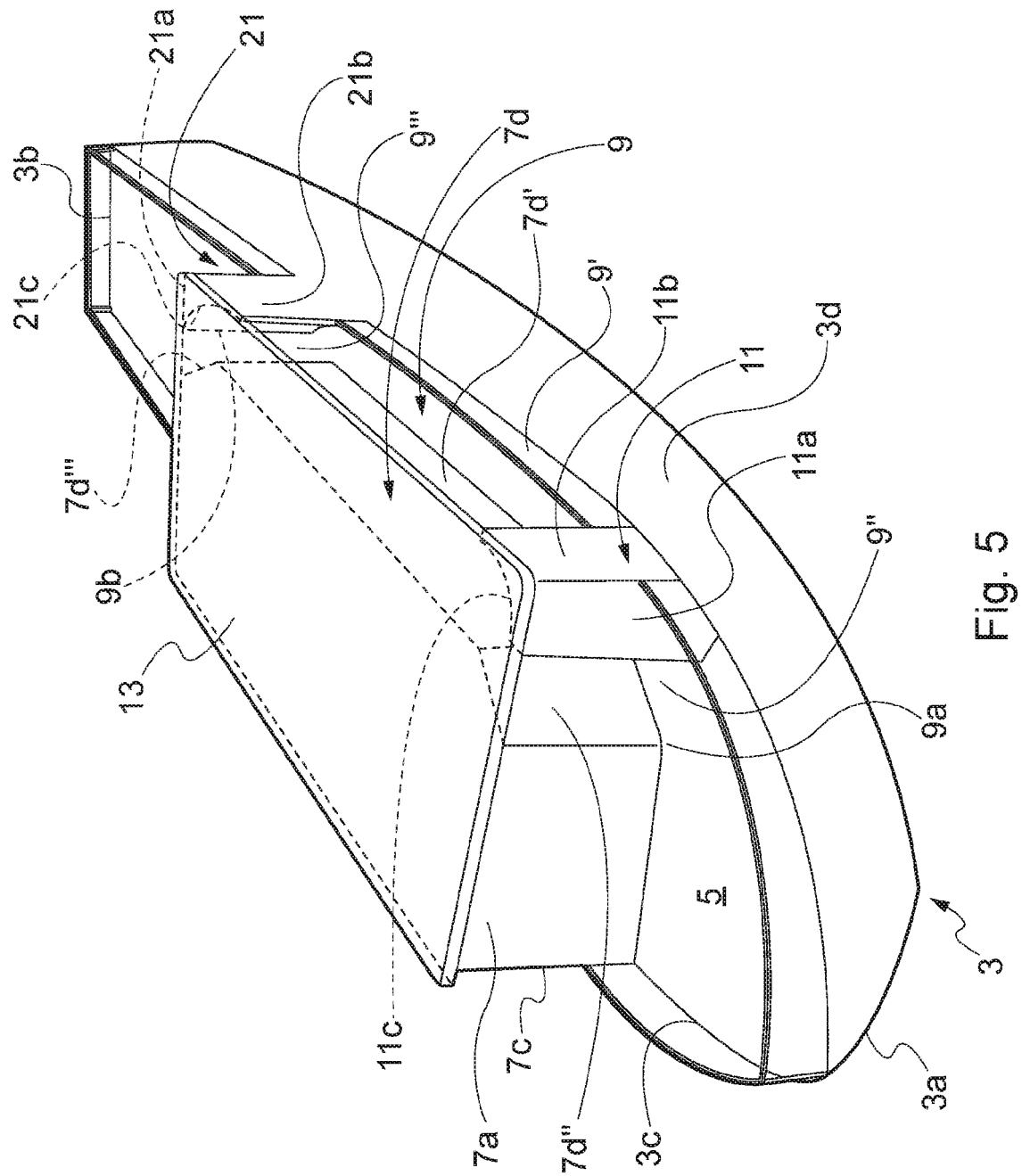
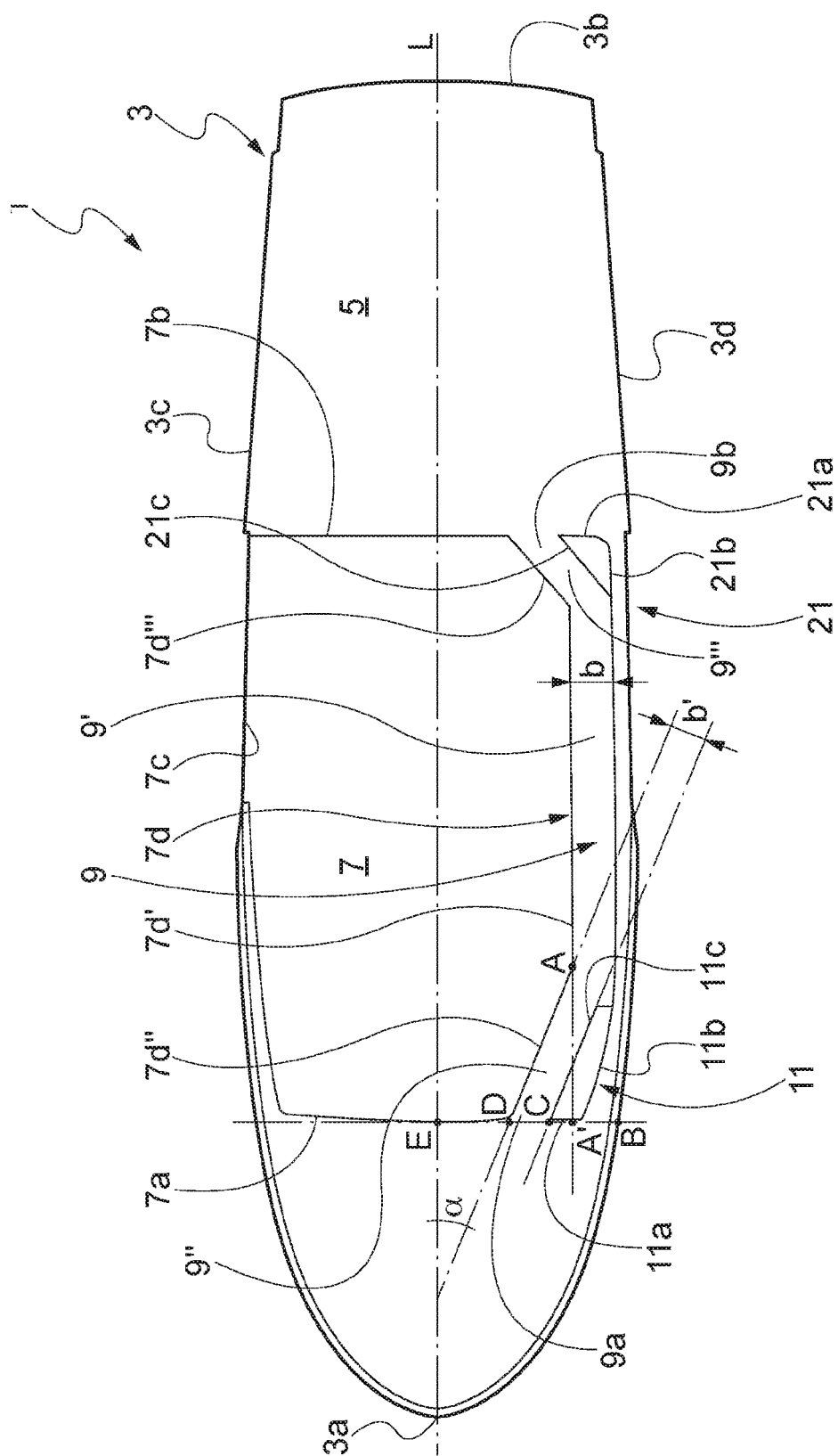


Fig. 5



REFERENCES CITED IN THE DESCRIPTION

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