(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) **EP 2 886 440 A1**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
24.06.2015 Bulletin 2015/26

(51) Int Cl.:
B63B 19/00 *(2006.01)* ***B63B 17/02*** *(2006.01)*

(21) Application number: **14199827.8**

(22) Date of filing: **22.12.2014**

(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

(30) Priority: **20.12.2013 NL 2012012**

(71) Applicant: **Cor D Rover II B.V.**
2965 AD Nieuwpoort (NL)

(72) Inventors:
- **de Rover, Cornelis Daniel**
  2965 AM Nieuwpoort (NL)
- **van der Pas, Jan**
  4617 MN Bergen op Zoom (NL)

(74) Representative: **Grootscholten, Johannes A.M. et al**
Arnold & Siedsma
Bezuidenhoutseweg 57
2594 AC The Hague (NL)

(54) **Yacht or vessel with a movable deck closure**

(57) The present invention relates to a yacht, comprising at least a hull and a superstructure, or other movable object with a movable or at least displaceable frame. Such yachts usually also have a swimming pool or in general large surface areas on their decks which are in fact used little and sometimes hardly or even not at all.

Provided according to the present invention is a yacht with a selectively removable, at least partial closure which is arrangeable in use close to, on or at a deck. The closure comprises a pivotable closing wall which can be arranged on other parts of the closure and can be folded back thereon by means of at least one pivot construction with a substantially horizontally oriented pivot axis. A yacht can further comprise a lifting and tilting mechanism for stowing and/or erecting the closing wall.

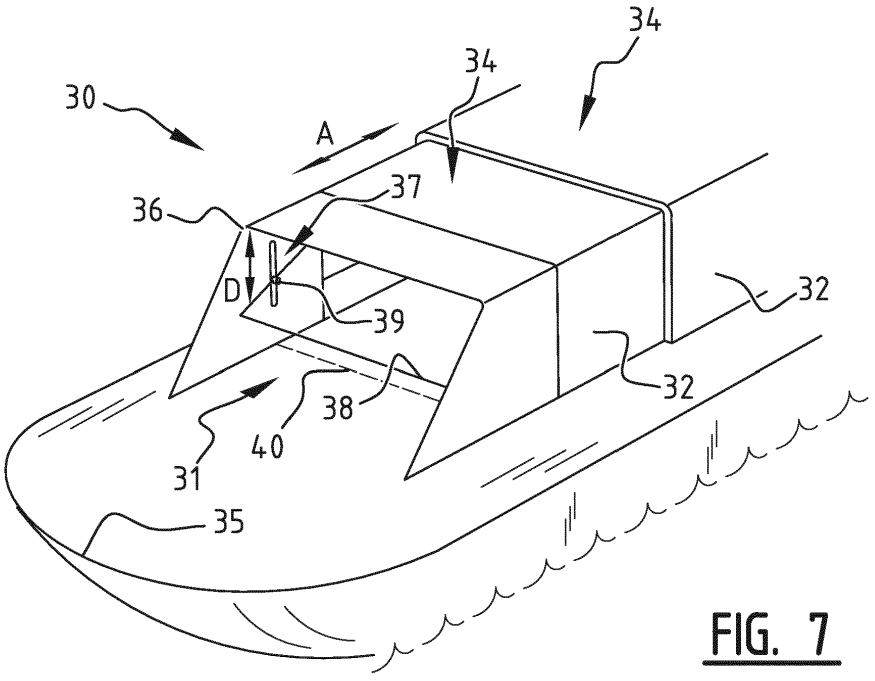

FIG. 7

EP 2 886 440 A1

Description

[0001] The present invention relates to a yacht comprising at least a hull and a superstructure. Such yachts are generally known and, from a determined length, usually also have a swimming pool. Quite apart from whether a specific yacht has a swimming pool in or on a deck, larger yachts usually have large surface areas on their decks, which areas are not really used, or at least not used effectively or efficiently, by owners or users of such large yachts. It is also the case in this respect that interior spaces of such a yacht are perceived by users and owners as being small and restrictive even though they are actually usually very spacious. Particularly for the purpose of receiving larger groups of people very special provisions must be made, usually on shore, wherein no real advantage is taken of the convenience of use of a yacht of larger dimensions. It is in addition the case that the superstructure could be extended to provide the desired extra space. Such a measure would however detract from the aesthetic characteristics of the original design of the yacht, as would enlarging the hull. Suchlike or similar considerations can also apply for other vessels or movable objects in general. It is noted by way of comparison that convertible cars are always photographed in brochures of manufacturers with the top and windows down, and without draught deflector. The style or design of the convertible is thus emphasized in its most attractive form. A fixed part of the superstructure of a yacht or the roof of a car merely results - at least in the perception of the purchasers - in a more unwieldy yacht or an ordinary saloon car.

[0002] Reference is further made here to the closest prior art as according to FR 2953546, from which a closure resembling a glasshouse is known. The closure has a closing wall on an open side thereof, i.e. at the rear relative to the superstructure of the yacht. The known glasshouse has side wall parts and roof parts. In this known configuration it is not possible for the closure, when not in use, to be stowed away in a recess of the superstructure of the yacht. The closing wall comprises a plurality of elements, this presenting challenges in respect of watertight connection of the elements. The elements of the closing wall are curved, and are rotatable laterally away in pivotable manner, which contributes in adverse manner to a package thickness of side wall parts of the closure, this being particularly unfavourable in respect of dimensions of a substantially vertically oriented recess when it is desired that a package of such elements of the closing wall of the known closure must be stowed away therein when not in use. The elements are further curved, whereby the vertically oriented recess must be made still larger, or rather broader or thicker.

[0003] The present invention has for its object to provide a solution for the above stated drawbacks or problems of yachts according to the known art or to at least reduce such drawbacks or problems. Provided for this purpose according to the present invention is a yacht with a selectively removable, at least partial closure which is arrangeable in use close to, on or at a deck, wherein the closure comprises side wall parts, roof parts and a pivotable closing wall which can be arranged on other parts of the closure and can be folded back thereon by means of at least one pivot construction with a substantially horizontally oriented pivot axis. When not in use such a closure can be stowed away in a part or component of particularly the superstructure of the yacht. The closure can thus be taken along on a trip and be disposed or erected at a destination and as required. Such a closure, which is preferably sized to fit close to, on or at an associated yacht, could alternatively be placed and left behind on shore. Particularly in association with a deck having for instance a swimming pool which is preferably closable, an enormous space can be made available with such a closure so that use can be made of the swimming pool in sheltered surroundings or larger groups of people can be received on board the yacht. In the situation where the closure is stowed away in the superstructure or elsewhere or has been removed the yacht retains the lines of the style of the original design, this being more attractive than the contours of the yacht with a closure as fixed or integral part of the superstructure. Similar considerations also apply for other movable objects or vehicles such as cars and the like. The closure according to the invention further comprises a pivotable closing wall which can be arranged on other parts of the closure and can be folded back thereon by means of at least one pivot construction (13) with a substantially horizontally oriented pivot axis. The number of elements of the closure can thus be minimized and highly elegant options are provided for stowing or storing the closing wall during a trip, or simply when a closing wall of the glasshouse is temporarily not necessary or desired, while the other parts of the glasshouse must however remain in place.

[0004] Diverse preferred embodiments are possible according to the present invention and in the scope thereof as defined in the appended claims. The invention is limited only to the features according to the appended independent claim; the preferred features according to the appended dependent claims must in no way be interpreted as limitation to the scope of protection according to the independent claim.

[0005] The closing wall preferably comprises at least one entrance or exit.

[0006] The closing wall can preferably be folded back onto or against a roof section of the closure and, in the situation where it is folded back onto or against the roof section of the closure, can be received in a recess when not in use.

[0007] The closing wall preferably comprises a single panel.

[0008] In a preferred embodiment the yacht according to the present invention can have the feature that the superstructure comprises at least one recess for receiving therein at least a part of the closure when it is not in use. In such an embodiment at least a part of the closure

can be stowed away in the superstructure, and can thus be taken along on a trip. Such a closure is preferably stowed away during a trip, although depending on the robustness thereof a closure could even be kept in state of use during a sailing trip. In such an embodiment it can be favourable for the recess and the closure to have a substantially reverse U-shape. In such an embodiment the stowing of the closure, or at least a part thereof, is particularly easy to realize.

[0009] In an additional or alternative preferred embodiment the yacht according to the present invention can have the feature that the closure is modular. Individual modules of the closure can then be stowed away separately or together, for instance in a recess, or take up less storage space when the closure is removed and left behind on shore.

[0010] In an additional or alternative preferred embodiment the yacht according to the present invention can have the feature that the closure is telescopically compressible to an out-of-use state and is expandable for the purpose of use. In such an embodiment the closure takes up a minimal amount of space in a stored state on the yacht or in the situation where it is left behind on shore.

[0011] In an additional or alternative preferred embodiment the yacht according to the present invention can have the feature that the closure comprises at least two segments. Individual segments together forming a closure can be individually stowed away or left behind, this resulting in space-saving in a situation where the closure is not in use. Furthermore, conversion of the closure from the state of use to an out-of-use state, and vice versa, can hereby be easily realized.

[0012] In an additional or alternative preferred embodiment the yacht according to the present invention can have the feature that the segments are nestable when the closure comprises two or more segments. This also results in space-saving when the closure is not in use. Such a measure moreover provides an aesthetic advantage on the basis of technical measures, that in a situation of use the closure can follow or accentuate a line of the yacht.

[0013] In an embodiment with a closure of at least two segments, wherein the segments are nestable, a yacht according to the present invention can further have the feature that seals are arranged between mutually connecting segments. An interior can thus be realized which is defined by the closure, wherein this interior can be effectively screened from conditions, such as the weather, outside the closure.

[0014] In an additional or alternative preferred embodiment the yacht according to the present invention can have the feature of a heating and/or cooling for a space defined by the closure. A comfortable temperature can thus be provided or realized in an interior defined by the closure, even if under determined weather conditions (too warm or too cold) the temperature outside the closure is (much) less than pleasant. It can for instance be anticipated that such an embodiment of a yacht according to the present invention allows owners or users of such a yacht to be able to swim in the swimming pool in or on a deck while the yacht is sailing in icy seas or in the vicinity of either of the poles. It can be favourable, effective or efficient here for the heating to comprise a floor heating of the deck at the closure. Such a heating can thus be integrated into the structure of the yacht at a location where there would normally otherwise be no motivation whatever to arrange any heating. A cooling can take the form of a random air-conditioning.

[0015] In an additional or alternative preferred embodiment the yacht according to the present invention can have the feature that the closure comprises at least one panel of glass, plastic or other material, which at least one panel is transparent substantially in at least one direction. This enhances the concept that lines of the design of the yacht remain preserved as far as possible, even when the closure is in use. The light transmission or transparency is preferably adjustable here. Such an adjustability can be reactive depending on incidence of sunlight, or be controlled actively, for instance with an electrical control for adjusting the transparency of such panels, wherein the transparency or light transmission can be independent of the light intensity of for instance sunlight in the surrounding area. In a possible embodiment with panels an additional feature can be realized in that the panels are transparent in a single direction. This reinforces the idea that users are in an environment of their own without the danger of being observed by third parties with possible malicious intentions.

[0016] In an additional or alternative preferred embodiment the yacht according to the present invention can have the feature that the closure is manufactured at least partially from bullet-proof or explosion-proof material. This increases the safety of the users of the yacht.

[0017] In an additional or alternative preferred embodiment the yacht according to the present invention can have the feature that the closure leaves clear a gangway on the deck round at least a part of the closure. This can achieve that the regular routines on board the yacht, for instance during mooring or casting off thereof, are not disrupted by the closure in its position of use.

[0018] In an additional or alternative preferred embodiment the yacht according to the present invention can have the feature that the closure, and in particular one of the side walls or the closing wall, comprises at least one entrance and/or exit. This can serve as escape route or provide users with a regular exit or entrance for the purpose of spending time as desired in the space defined by the closure. Such an embodiment is preferably such that the entrance and/or exit comprises a door. This is a particularly user-friendly embodiment and can comprise a hinged door or a sliding door, and so on.

[0019] In an additional or alternative preferred embodiment the yacht according to the present invention can have the feature that the closure comprises a pivotable closing wall which can be arranged on other parts of the closure and can be folded back thereon. Closing of the

closure can thus be realized in for instance a U-shaped embodiment which can for instance be stowed away and erected in telescopic or nestable manner. Because the closing wall, which need not per se be hinged, can be folded back onto, on or against other parts of the closure, a highly compact option for stowing the closure can be provided while a more than sufficient embodiment is provided which enables complete closing of the closure.

[0020] In an additional or alternative embodiment a yacht according to the present invention can be such that the pivot construction comprises a lifting and tilting mechanism. A highly elegant manner can thus be provided of stowing the closing wall during a trip or when the other parts of the glasshouse are in use. In such an embodiment the yacht can have the further feature that the lifting and tilting mechanism is arranged in or at a framework of a rearmost segment of at least one segment relative to a longitudinal and navigation direction of the yacht.

[0021] As already noted above, the present invention further relates to a vessel or other movable object comprising a movable or at least displaceable frame and a closure as described above with reference to features according to arbitrary of the appended independent and dependent claims in respect of a yacht and hereinbelow with reference to specific embodiments thereof. Such objects can be: launches (without the superstructure of a yacht, wherein the closure can be incorporated into a frame of the launch), round-trip boats and so on.

[0022] After the foregoing description in more general generic terms and expressions with reference to the appended claims, there follows below by way of example of the invention a description of a specific embodiment to which the present invention is not limited other than by the features defined particularly in the main claim, with reference to the accompanying drawing. In the different figures the same reference numerals can be used for the same or similar elements, components and aspects. In the drawing:

Figure 1 is a side view of a yacht according to the present invention;
Figure 2 is a perspective view in the direction of arrow II in figure 1 with a closure in an out-of-use state;
Figure 3 is a perspective view in the direction of arrow III in figure 1 with a closure in a situation of use;
Figure 4 is a rear view in the direction of arrow IV-IV in figure 3;
Figure 5 is a cut-away top view in the direction of arrow V in figure 4;
Figure 6 is a perspective view of a yacht in an embodiment with a plate-like closing wall according to the present invention; and
Figure 7 is a perspective view of a yacht in an alternative or additional embodiment relating particularly to suspension of a closing wall.

[0023] Figure 1 shows a yacht 1 according to the present invention. Yacht 1 comprises a hull 2 and a superstructure 3. Superstructure 3 comprises diverse layers, with a wheelhouse 4 in an upper layer with a radar and antenna system 5 thereabove. Located directly thereunder is a so-called flybridge.

[0024] Arranged on hull 2 on the side of stern 6 is a closure in the form of a glasshouse 7. A similar glasshouse can also be provided on an intermediate deck or the flybridge. This glasshouse 7 on stern 6 of hull 2 can be taken selectively into use. Glasshouse 7 comprises segments 8, 9, 10 and 11, which fit into each other and are thus nestable. More or fewer segments are also possible, although at least one segment has to be provided in order to embody the glasshouse forming a closure. The mutually fitting segments 8, 9, 10 and 11 can be taken out of use in one of the two directions indicated with double arrow A. When the glasshouse 7 has to be taken into use, segments 8-11 can be rolled or slid outward in a manner to be described hereinbelow so as to together form the glasshouse 7.

[0025] Figure 2 shows a perspective view in the direction of arrow II in figure 1. It will be apparent that glasshouse 7 has been taken out of use here. In figure 3 the glasshouse 7 is in use and the segments are rolled or slid outward in abutting manner so that in combination they form the glasshouse 7.

[0026] The rearmost segment 11 of closure or glasshouse 7 comprises a rearward oriented closing wall 12 which is suspended from a pivot construction 13 with a substantially horizontally oriented pivot axis. This rear wall 12 can hereby be folded up or downward in the direction of arrow B.

[0027] Further shown in figure 3 is that rear wall 12 can be pivoted far in the direction of arrow B' onto the top of the rearmost of segments 8-11. This can be a preparation for bringing together and rolling the segments inward in the direction of superstructure 3. The embodiment of figure 6 in contrast comprises the feature that closing wall 12 can be folded up or downward in the direction of double arrow C. Rear wall 12 then comes to lie or hang parallel under a roof section 25 of rearmost segment 11 in a situation where glasshouse 7 is to be rolled or slid inward or is even already stowed away. The closing wall can comprise at least one escape door 26. This can also serve as normal entrance and exit to give users of yacht 1 the opportunity to go outside and/or into glasshouse 7. Such doors 27 can also or alternatively be arranged in side walls of random segments. The doors can be hinged or sliding doors or of any other random type.

[0028] Remaining adjacently of glasshouse 7 on deck 21 is a gangway 28 so that users or crew can walk outside and alongside glasshouse 7, and glasshouse 7 causes no obstruction to for instance normal operations on board the yacht during mooring or casting off thereof.

[0029] Superstructure 3 comprises a protective cover 14 which has substantially the same form as that of segments 8-11. It is more particularly the case that segments 8-11 take substantially the same form as that of protective cover 14. Nestable segments 8-11 which have been

brought together can as a result be received in a recess in the form of a hollow wall 15 in or of protective cover 14 as shown schematically in the cross-sectional top view along arrow V in figure 4 and in figure 5. Segments of glasshouse 7 can also fit round protective cover 14 in an embodiment other than that shown here.

[0030] The segment 8 of glasshouse 7 which in a situation of use lies closest to protective cover 14 is the last to be rolled out in the direction of arrow A when glasshouse 7 is taken into use. When glasshouse 7 is not in use all segments 8-11 are situated in hollow wall 15 of protective cover 14. Since the protective cover is a normal component in a form associated with the remaining design of the yacht, the lines of the yacht are in no way disrupted or adversely affected in the situation where glasshouse 7 has been slid or rolled inward and glasshouse 7 is received in hollow wall 15 of protective cover 14.

[0031] In an embodiment with the upward foldable rear wall 12 as according to figure 6 the hollow space 15 has to have a depth which must correspond to the height of rear wall 12, or the rear wall itself must in turn also be divided into segments (not shown here) in order to limit the depth of the hollow space, which will however then affect the width of hollow space 15 although the lines, or at least the side view, of yacht 1 will in no event be affected.

[0032] Segment 8 comprises on a peripheral edge thereof a flange 16 which in an outward rolled position comes to lie against a flange 17 on hollow wall 15. A seal of glasshouse 7 on protective cover 14 is thus realized. In the same way a segment 9 lying adjacency of segment 8 in the situation where the glasshouse is in use comprises a flange 18 which must come to lie sealingly against a flange 19 on segment 8 on a side thereof opposite flange 16. All segments 8-11 can be connected sealingly to each other in the same way.

[0033] Figures 2, 3 and 4 show that glasshouse 7 can form a closure over a swimming pool 20 in afterdeck 21. Stairs 22, 23 are arranged in the interior of protective cover 14, although these could also be positioned outside the interior of protective cover 14.

[0034] Segments 8-11 can be manufactured with or from glass panels or transparent plastic panels. Thus made possible is that people can make use of swimming pool 20 even when this would not be possible in view of prevailing weather conditions (too cold or too hot). Segments 8-11 can further comprise, as addition or as alternative, glass panels or plastic panels which change colour with light intensity so as to prevent for instance too extreme a heat developing in the interior of glasshouse 7. As addition or as alternative glass panels or plastic panels can further be applied having a for instance electrical control for adjusting the transparency thereof independently of the light intensity of for instance sunlight in the surrounding area. The panels are preferably transparent in only one direction so that users can devote themselves to the use and enjoyment of the covered space in or below glasshouse 7 in a wholly private environment without the danger of the users being observed by malicious outsiders. Glasshouse 7 can also make it possible for users, who from religious conviction otherwise cannot or may not bathe in the open outside air, to make use of the swimming pool or other facility in or under glasshouse 7. Following on from or as alternative to this, the material of the segments can be bullet-proof or even able to withstand diverse other impacts from outside, or even explosions. Additionally or alternatively cloth-like elements can have been or are suspended under a ceiling of glasshouse 7. In cold weather conditions it may be worthwhile or useful for the deck 21 with swimming pool 20 to comprise a floor heating 24 in figure 4. A heating can also be realized in a manner other than as floor heating of deck 21. It is possible on the basis hereof to heat a space in glasshouse 7 defined by glasshouse 7 when it is cold outside glasshouse 7. In similar manner a cooling or air-conditioning can be provided for the purpose of cooling the space in or under glasshouse 7. Particularly in very hot areas cooling or air-conditioning can be (more than) desirable, for instance in or on seas in desert regions.

[0035] Segments 8-11 have a width, in the side view of for instance figure 1, which is substantially the same for each of the segments 8-11. An efficient use of space can thus be realized in the recess in protective cover 14 or round the outer periphery of protective cover 14.

[0036] Shown in figure 7 is an afterdeck of a yacht 30 with a glasshouse 31 in an embodiment other than in the foregoing figures. The glasshouse comprises side wall parts 32 and roof parts 33 of telescopically extendable segments 34. The rearmost of the segments 34, i.e. that closest to stern 35 of yacht 30, comprises a framework 36 in which is arranged a lifting and tilting mechanism 37 as embodiment of a pivot construction with substantially horizontal hinges from which a closing wall 38 is suspended. Closing wall 38 is tiltable about substantially horizontal hinges 39 in the direction of double arrow E. The lifting and tilting mechanism 37 further comprises carriages incorporated in framework 36 which are movable up and downward in the direction of arrow D in framework 36. Starting from the situation shown in figure 7, in which the carriages and hinges 38 have been lowered, closing wall 38 can thus be folded downward to line 40 in order to close the rear side of glasshouse 31. Closing wall 38 can in contrast be folded up about hinges 39 to a horizontal, lying orientation, and the carriages can then be displaced upward in order to stow the closing wall 38 against an underside of roof element 34 of framework 36 of rearmost segment 34. In a thus stowed situation the glasshouse 31 can be stored away in a similar or the same recess as that described above with reference to other embodiments by sliding or rolling segments 34 (when the segments are on wheels) telescopically into each other in the direction of double arrow A.

[0037] After examination of the foregoing disclosure of the general concept of a yacht according to the present

invention it will be apparent that diverse additional and alternative embodiments will occur to the skilled person which must all be deemed to lie within the scope of protection of the present invention as defined in the appended claims. It is thus possible that a yacht does not have a swimming pool but can nevertheless be equipped with a glasshouse. The swimming pool can be closed off, for instance with a cover plate, in order to provide an enlarged floor area in the interior of the glasshouse. A closure in general can also be provided on the forward deck or in, on or at a random other deck which without barriers would otherwise be exposed to weather conditions in the vicinity of the yacht.

Claims

1. A yacht, comprising at least a hull and a superstructure and a selectively removable, at least partial closure which is arrangeable in use close to, on or at a deck, wherein the closure comprises side wall parts, roof parts and a pivotable closing wall which can be arranged on other parts of the closure and can be folded back thereon by means of at least one pivot construction with a substantially horizontally oriented pivot axis.

2. The yacht as claimed in claim 1, wherein the superstructure comprises at least one recess for receiving therein at least a part of the closure when it is not in use, wherein the recess and the closure preferably have a substantially reverse U-shape.

3. The yacht as claimed in claim 1 or 2, wherein the closure is modular.

4. The yacht as claimed in at least one of the foregoing claims, wherein the closure is telescopically compressible to an out-of-use state and is expandable for the purpose of use.

5. The yacht as claimed in at least one of the foregoing claims, wherein the closure comprises at least one segment and preferably at least two segments, wherein the segments are preferably nestable when the closure comprises two or more segments, wherein seals are preferably arranged between mutually connecting segments.

6. The yacht as claimed in at least one of the foregoing claims, further comprising a heating and/or a cooling for a space defined by the closure, wherein the heating preferably comprises a floor heating of the deck at the closure.

7. The yacht as claimed in at least one of the foregoing claims, wherein the closure comprises at least one panel of glass, plastic or other material, which at least one panel is transparent substantially in at least one direction.

8. The yacht as claimed in claim 7, wherein the light transmission or transparency of the at least one panel is adjustable, wherein the panels are preferably connected to an electrical control for adjusting the transparency thereof independently of the light intensity of for instance sunlight in the surrounding area.

9. The yacht as claimed in at least one of the foregoing claims, wherein the closure is manufactured at least partially from bullet-proof or explosion-proof material.

10. The yacht as claimed in at least one of the foregoing claims, wherein the closure leaves clear a gangway on the deck round at least a part of the closure.

11. The yacht as claimed in at least one of the foregoing claims, wherein the closure, and in particular one of the side walls or the closing wall, comprises at least one entrance and/or exit, wherein the entrance and/or exit preferably comprises a door.

12. The yacht as claimed in at least one of the foregoing claims, wherein the closing wall comprises a single panel.

13. The yacht as claimed in at least one of the foregoing claims, wherein the pivot construction comprises a lifting and tilting mechanism.

14. The yacht as claimed in claim 13, wherein the lifting and tilting mechanism is arranged in or at a framework of a rearmost segment of at least one segment relative to a longitudinal and navigation direction of the yacht.

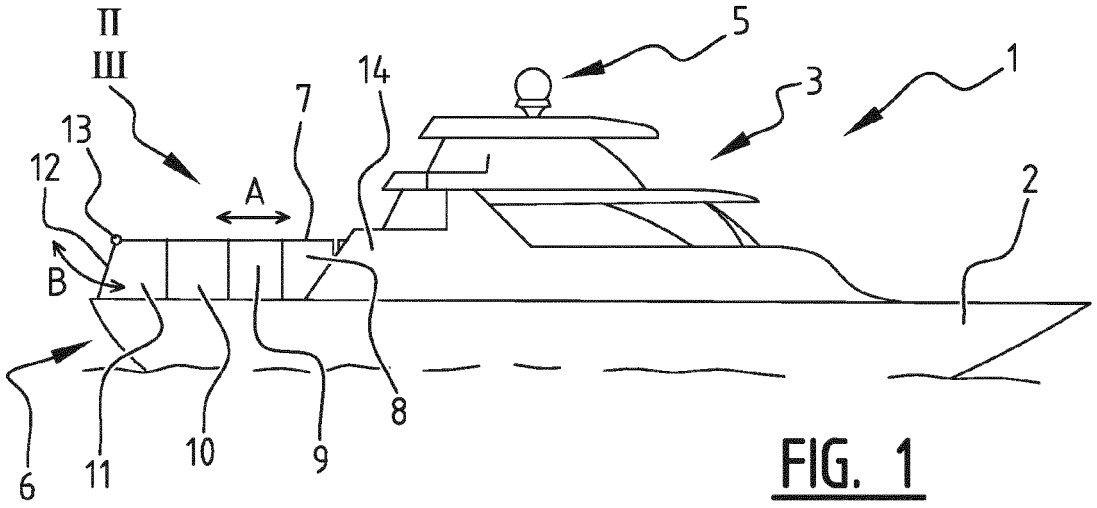

FIG. 1

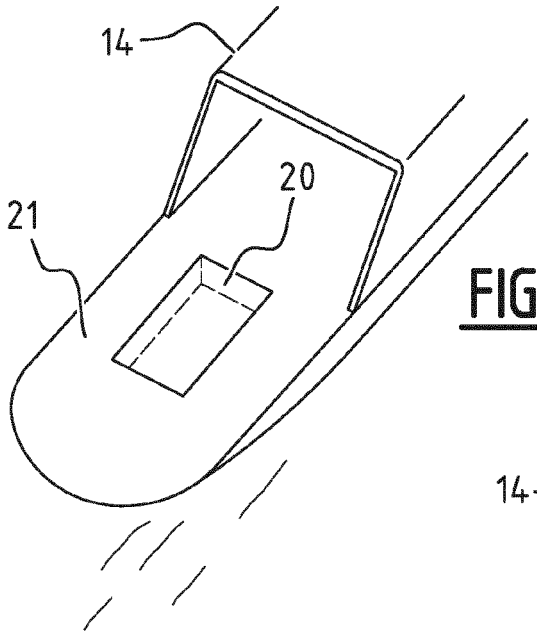

FIG. 2

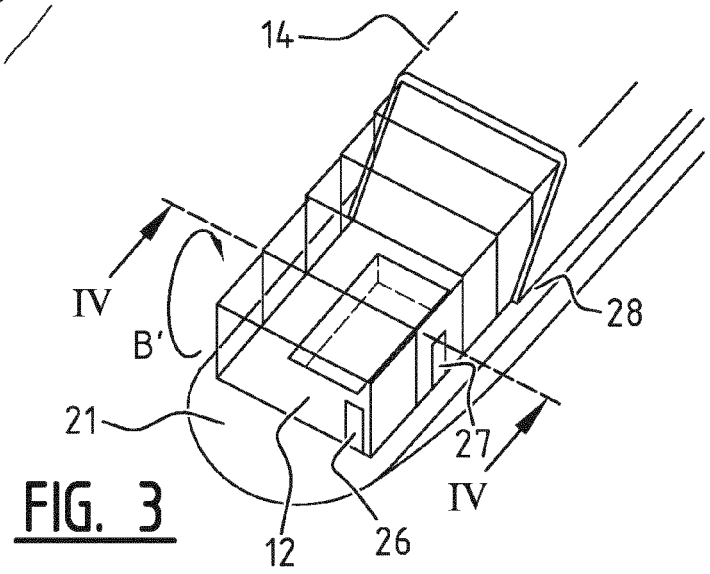

FIG. 3

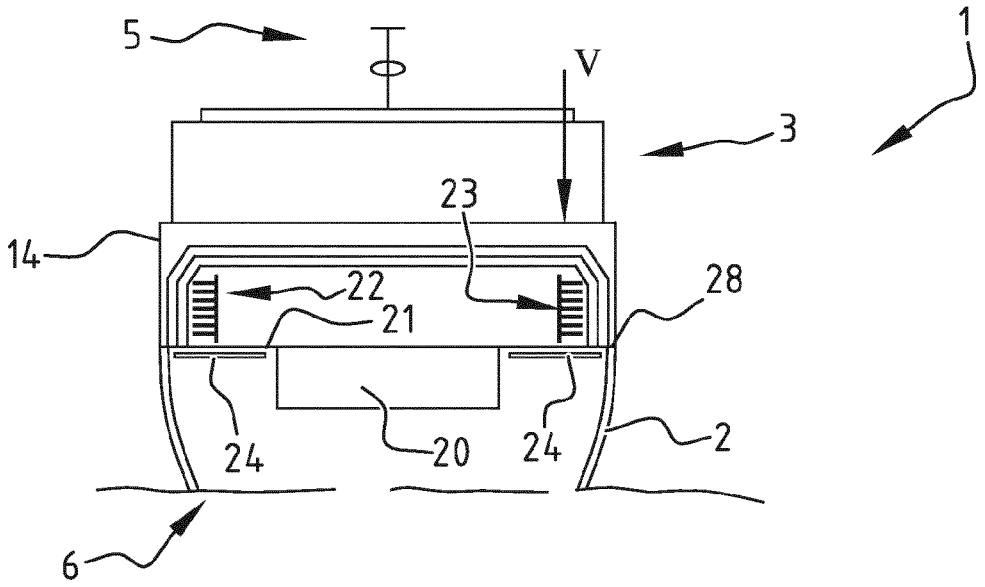

FIG. 4

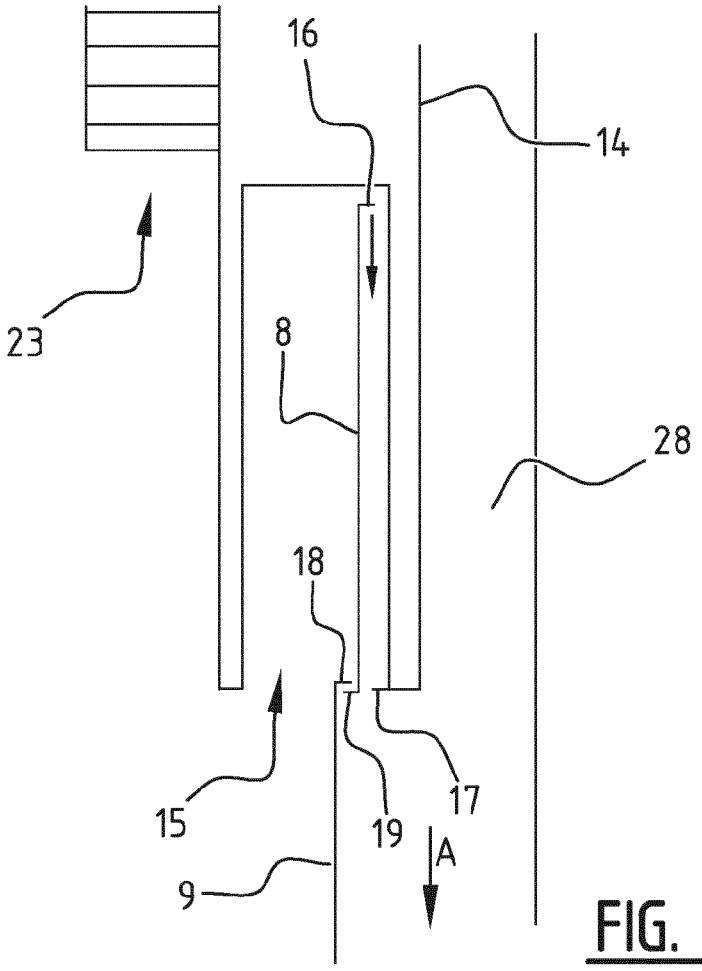

FIG. 5

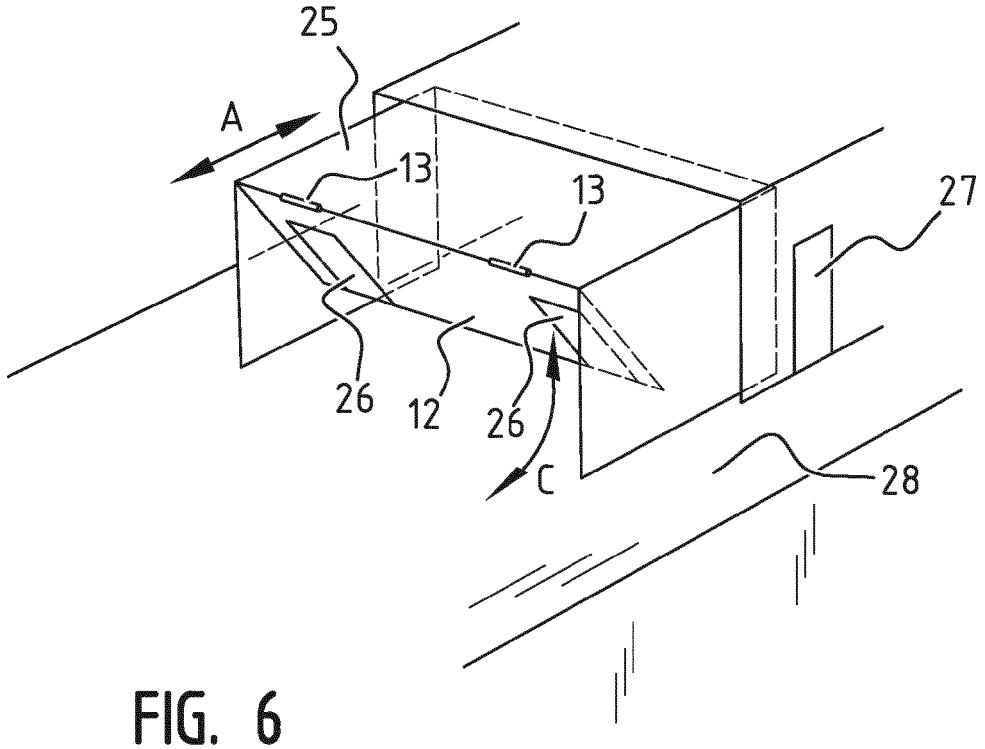

FIG. 6

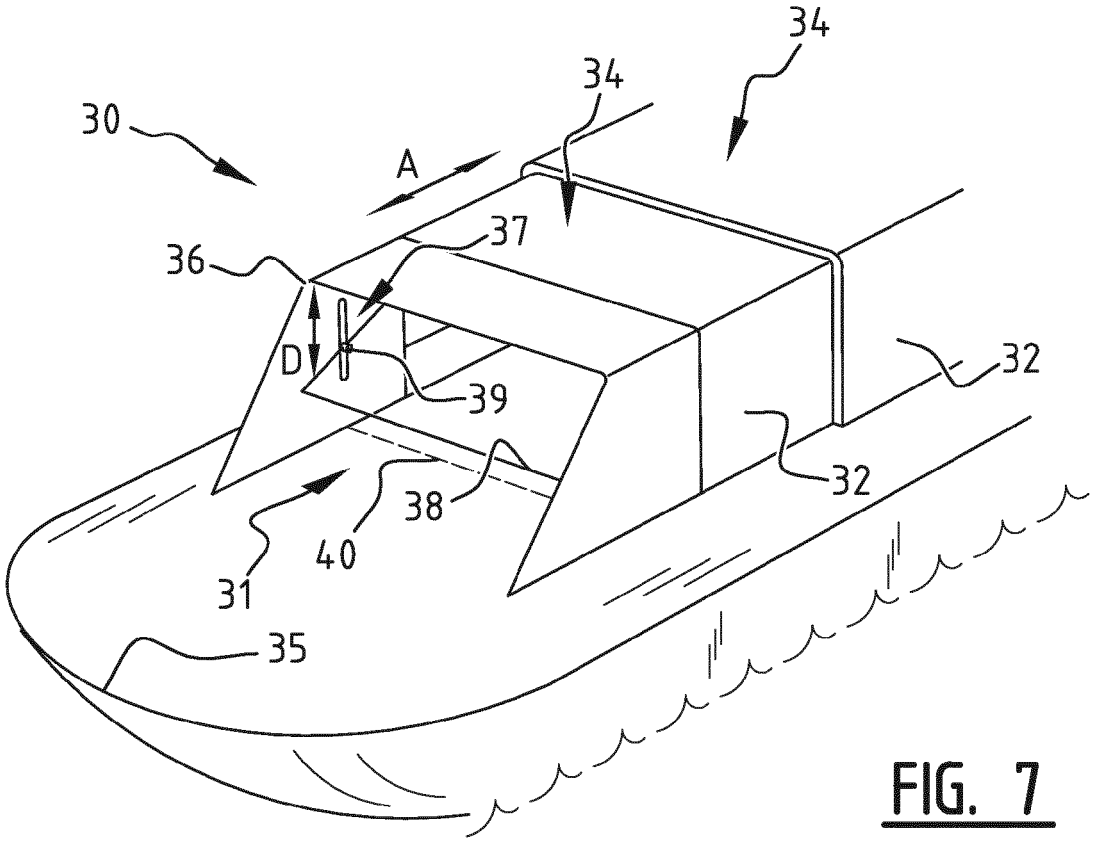

FIG. 7

Europäisches Patentamt
European Patent Office
Office européen des brevets

EUROPEAN SEARCH REPORT

Application Number
EP 14 19 9827

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	WO 85/04140 A1 (TOPSHORE LTD [GB]) 26 September 1985 (1985-09-26) * page 6, line 16 - page 24 * * page 11, line 14 - line 17; figures 2-7 *	1,2	INV. B63B19/00 B63B17/02
X	FR 2 892 376 A1 (TINCELIN THIBAUT JEAN EDOUARD [FR]) 27 April 2007 (2007-04-27) * abstract; figures *	1-14	
X	US 6 357 379 B1 (MURPHY JR CHARLES [US]) 19 March 2002 (2002-03-19) * figures *	1-14	
X	FR 1 344 413 A (MAC GREGOR COMARAIN SA) 29 November 1963 (1963-11-29) * figures *	1-14	
X,D	FR 2 953 546 A1 (ABRISUD [FR]) 10 June 2011 (2011-06-10) * figures *	1-14	
			TECHNICAL FIELDS SEARCHED (IPC)
X	FR 2 861 112 A1 (FUSILIER LAURENT [FR]) 22 April 2005 (2005-04-22) * figures *	1-14	B63B
X	FR 2 555 219 A1 (LETULLE BERNARD [FR]) 24 May 1985 (1985-05-24) * figures *	1-14	
A	WO 2013/088458 A1 (FINCANTIERI CANTIERI NAVALI IT [IT]; FRANCOVIGH MICHELE [IT]) 20 June 2013 (2013-06-20) * figures *	1-14	
X	EP 1 270 299 A1 (SANNA IGNAZIO [IT]) 2 January 2003 (2003-01-02) * figures 13-15 *	1-14	

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	8 May 2015	Schmitter, Thierry

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

EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 14 19 9827

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.

08-05-2015

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 8504140 A1	26-09-1985	AU 4117285 A	11-10-1985
		DE 3560437 D1	17-09-1987
		DK 530885 A	15-11-1985
		EP 0175733 A1	02-04-1986
		FI 854479 A	14-11-1985
		US 4685411 A	11-08-1987
		WO 8504140 A1	26-09-1985
FR 2892376 A1	27-04-2007	NONE	
US 6357379 B1	19-03-2002	NONE	
FR 1344413 A	29-11-1963	NONE	
FR 2953546 A1	10-06-2011	NONE	
FR 2861112 A1	22-04-2005	NONE	
FR 2555219 A1	24-05-1985	NONE	
WO 2013088458 A1	20-06-2013	EP 2790999 A1	22-10-2014
		JP 2015501760 A	19-01-2015
		WO 2013088458 A1	20-06-2013
EP 1270299 A1	02-01-2003	AT 266538 T	15-05-2004
		DE 60200468 D1	17-06-2004
		DE 60200468 T2	12-05-2005
		DK 1270299 T3	06-09-2004
		EP 1270299 A1	02-01-2003
		ES 2220858 T3	16-12-2004
		IT MI20011360 A1	30-12-2002
		PT 1270299 E	30-09-2004
		US 2003000154 A1	02-01-2003

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

- FR 2953546 **[0002]**