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(54) **YACHT**

JACHT

YACHT

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(56) References cited:
EP-A1- 2 826 702
WO-A1-2013/094534
FR-A1- 2 726 804
GB-A- 1 215 530
US-A1- 2003 089 290

- **Anonymous: "Delivery of M/Y SIBELLE - Heesen Yachts", , 26 March 2015 (2015-03-26), XP055335134, Retrieved from the Internet: URL:https://www.heesenyachts.com/news-events/super-yacht-sibelle-is-delivered/ [retrieved on 2017-01-13]**

EP 3 436 334 B1

Description

[0001] The present application relates to a yacht, comprising a hull and a superstructure, with the hull defining a stern and a bow.

[0002] Such yachts are commonly known, wherein the bow may have, in side view, an upwardly reclining shape, as shown in figure 1, relative to a section of the bow with water at the waterline. This known embodiment of a yacht 1 comprises a hull 2, a superstructure 3 and a bow 4. As shown, the bow 4 is upwardly reclining from the waterline. As a consequence such yachts have a relatively long waterline LI, which is beneficial for a low sailing resistance, higher speeds, and lower fuel consumption. On the other hand, waves are known to easily roll onto the main deck on the hull or elsewhere. Interior space is decreased at the bow just under the deck.

[0003] Alternatively, yachts 5 as shown in figure 2 are commonly known, to have a hull 2 and a superstructure 3, where the hull defines a bow 6 in an upwardly protruding orientation, in side view. Then the waterline L2 is relatively shorter, but this inherent shape prevents waves from rolling onto the main deck too easily. Interior space is reduced at the waterline L2.

[0004] As a third prior art embodiment in figure 3, yachts 7 are can have a vertically oriented bow 8. All such prior art yachts exhibit in front view a V-shape, as indicated in figure 4.

[0005] Consumers in this market of normally high end yachts are always yearning for innovations. Their prize possession of a yacht should distinguish the owners over other yacht owners.

[0006] A yacht is acknowledged to be known from for example FR-2726804, of which the bow is recessed in side view. This is to say that the bow has - in side view - a shape, starting at the waterline, reclining upwardly backward into the hull of the ship, and then, progressing further upward, turning into a forward protruding orientation.

[0007] The yacht of the present disclosure further exhibits the feature that the hull comprises a stepped shoulder. Such a stepped shoulder contributes to synergetic limiting of amounts of spray coming off the lower part of the bow and waves rolling there over, which lower part of the bow is backward reclining, where such spray and waves would otherwise reach the deck. Moreover, the stepped shoulder contributes to an air and/or water flow away from the hull, and as a side consideration a more appealing, innovative and distinguishing appearance is provided. Additionally, relatively more interior space in the width of the hull is provided above the stepped shoulder, and below the main deck level, while the hull portion under the water line can have a slim width, reducing drag and water resistance when sailing.

[0008] In combination with the stepped shoulder in the hull the yacht of the present disclosure exhibits the further feature that the stepped shoulder defines an elongate overhang of a higher portion of the hull relative to a lower portion of the hull. This is a relatively simple and elegant embodiment of the stepped shoulder, and highly effective to limit in particular additional spray and waves that can be attributed to the presence of the lower lying and reclining portion of recess of the bow.

[0009] Yachts according to the present disclosure may have many embodiments shapes and forms, some of which will be highlighted in the below description of preferred embodiments and in appended dependent claims. However, no features of any of the preferred embodiments are to be interpreted as limiting the scope of protection according to the appended independent claim, which scope should instead also include functional alternatives of defined features in the appended independent claim.

[0010] In a specific, non-limiting embodiment, the stepped shoulder in the hull the yacht of the present disclosure may exhibit the further feature that the stepped shoulder extends from the bow, essentially in the direction of the stern of the hull. The stepped shoulder does not need to extend all the way back to the stern, but the appearance resulting from this technical feature, if the stepped shoulder does extend all the way back to the stern, may be considered quite distinguishable for the yacht.

[0011] In such an embodiment with the stepped shoulder in the hull the yacht of the present disclosure may exhibit the alternative or further feature that the stepped shoulder extends across the bow and away from the bow on both sides of the hull. Then the portion of the stepped shoulder extending across the bow also contributes to limiting spray onto the deck, by down force as well as air and/or water turbulence in a downward orientation or at least away from the hull.

[0012] In a specific, non-limiting embodiment the yacht of the present disclosure may exhibit the feature of elongate protrusions on opposing outsides of the hull relative to the bow. These protrusions may contribute to down force on water that would otherwise splash up onto the deck. Additionally, such protrusions may contribute to an air and/or water turbulence turning water down or at least away from the hull.

[0013] In such an embodiment with protrusions the yacht of the present disclosure may exhibit the further feature that the elongate protrusions extend in an essentially horizontal orientation. Thereby a maximisation of the effect turning water down or away from the hull.

[0014] In such an embodiment with protrusions the yacht of the present disclosure may exhibit the further feature that the elongate protrusions extend from a distance behind the bow, at least towards the bow. Preferably, then, a pair of protrusions on opposing sides of the hull are joint at the bow to define a single protrusion across the bow.

[0015] In such an embodiment with protrusions the yacht of the present disclosure may exhibit the further feature that two or more strip shaped protrusions are arranged on one side of the hull. Preferably, then, the two

or more strip shaped protrusions are arranged on the side of the hull at distinct level above a waterline extending along the hull.

[0016] In such an embodiment with protrusions the yacht of the present disclosure may exhibit the further feature that the elongate protrusions are essentially half-tubular in cross section.

[0017] Below, aspects of embodiments of the present disclosure are described in relation to the appended non-limiting drawing. It is again emphasized that the embodiment drawing and description are by no means limiting on the scope of protection of the present disclosure. The drawing comprises a plurality of figures, in which elements, components and/or functional aspects of distinct embodiments may be indicated using the same reference numbers, regardless of other differences amongst the distinct embodiments. In the drawing:

Figures 1 - 4 exhibit schematic representations of prior art yachts;
Figure 5 shows a schematic side view of a yacht and in particular a bow thereof, according to the present disclosure;
Figure 6 shows a schematic perspective view of a yacht and in particular a bow thereof, according to the present disclosure;
Figure 7 shows a frontal view of a yacht according to the present disclosure along arrow VII in figure 6;
Figure 8 shows a more detailed side view of a part of the bow in figure 7 along arrow VIII;
Figure 9 shows a cross sectional view of a protrusion in figure 8 along arrows IX-IX; and
Figure 10 shows a worked open view along arrow X in figure 8.

[0018] Figure 5 shows in side view a part of a yacht 10, comprising a hull 2 and a superstructure 3. The hull 2 has a bow 11. The hull 2 defines a bow 11 and a stern 12. The bow 11 exhibits a recess 13 in side view relative to the yacht 10. This is to say that the bow 11 has a shape, starting at the waterline 15, reclining upwardly backward into the hull of the ship at bow portion 14, and then, progressing further upward, turning into a forward protruding orientation at bow portion 16.

[0019] The hull 2 comprises, in the shown embodiment of figures 5, 6, and 7 a stepped shoulder 17. The stepped shoulder 17 defines an elongate overhang.

[0020] The stepped shoulder 17 extends from the bow 11, essentially in the direction of the stern 12 of the hull 2.

[0021] The stepped shoulder 17 extends across the bow at stepped shoulder portion 18 and on both sides 19, 20 of the hull 2.

[0022] In addition to and/or as an alternative for the stepped shoulder 17, the yacht 10 according to the present disclosure may further comprise elongate protrusions 21, 22, 23, 24 on opposing outsides of the hull 2 relative to the bow. The elongate protrusions 21 - 24 extend in an essentially horizontal orientation. The elongate protrusions 21 - 24 extend from a distance behind the bow, at least towards the bow. All protrusions may extend across the bow 11. In the shown embodiment of figure 6, 7, only an uppermost protrusion 21 extends across the bow 11. Other protrusions 22 - 24 do not extend across the bow 11, but extend only from a distance behind the bow 11 towards the bow 11 to terminate at a distance from the actual bow 11.

[0023] To form the uppermost protrusion 21, protrusions on opposing sides of the hull 2 are joint at the bow 11 to define a single protrusion across the bow 11.

[0024] As evident from figures 6, 7 and 8, two or more strip shaped protrusions 21 - 24 are arranged on one side of the hull 2. The two or more strip shaped protrusions 21 - 24 are arranged on at least one side of the hull at distinct levels above a waterline 15 extending along the hull 2.

[0025] Figure 9 shows that elongate protrusions 21 - 24 may be arranged on the hull 2 and could be essentially half-tubular in cross section.

[0026] Figure 10 shows a worked open view along arrow X in figure 8. Therein the protrusion is shown to be formed by a solid piece 25, which may be welded, glued or otherwise adhered to the hull 2. The hull 2 is also shown to comprise a finish layer 26. The solid piece 25 defines an attachment for the half-tubular protrusion 21-24. The half-tubular protrusions 21-24 may be adapted to the slope of the hull 2, and consequently deviate from being precisely half-tubular. The half-tubular protrusions 21 - 24 may be welded, glued or otherwise adhered to the hull 2 and/or to the solid connecting piece 25.

[0027] It is noted that many additional and/or alternative embodiments than the ones described above and shown in the appended drawing are within the scope of protection of the appended independent claim, including alternatives for specifically defined features in the appended independent claim. Such additional and/or alternative embodiments are all considered to be comprised in the scope of the appended independent claim.

Claims

1. A yacht (10), comprising a hull (2) and a superstructure (3), with the hull (2) defining a stern (12) and a bow (11), where the bow (11) comprises a recess (13) in side view, defined by a shape, starting at the waterline (15), reclining upwardly backward into the hull of the ship, and then, progressing further upward, turning into a forward protruding orientation (16),
wherein the hull comprises a stepped shoulder (17), defining an elongate overhang of a higher portion of the hull relative to a lower portion of the hull, extending from the bow (11) essentially in the direction of the stern (12) of the hull,
CHARACTERISED IN THAT
the stepped shoulder (17) extends from a most re-

cessed part (13) of the bow (11), where the upwardly backward into the hull of the ship reclining shape (14) turns into a forward protruding orientation (16).

2. The yacht according to claim 1, wherein the stepped shoulder extends across the bow at the most recessed part of the bow in side view and away from the bow on both sides of the hull.

3. The yacht according to claim 1 or 2, further comprising elongate protrusions on opposing outsides of the hull relative to the bow.

4. The yacht according to claim 3, wherein the elongate protrusions extend in an essentially horizontal orientation.

5. The yacht according to claim 3 or 4, wherein the elongate protrusions extend from a distance behind the bow, at least towards the bow.

6. The yacht according to claim 5, wherein a pair of protrusions on opposing sides of the hull are joint at the bow to define a single protrusion across the bow.

7. The yacht according to any one or more than one of the preceding claims 3 - 6, wherein two or more strip shaped protrusions are arranged on one side of the hull.

8. The yacht according to claim 7, wherein the two or more strip shaped protrusions are arranged on the side of the hull at distinct level above a waterline extending along the hull.

9. The yacht according to any one or more than one of the preceding claims 3 - 8, wherein the elongate protrusions are essentially half-tubular in cross section.

Patentansprüche

1. Yacht (10), die einen Rumpf (2) und eine obere Struktur (3) aufweist, wobei der Rumpf (2) einen Steven (12) und einen Bug (11) definiert, wobei der Bug (11) in der Seitenansicht eine Vertiefung (13) aufweist, die durch eine Form definiert ist, die an der Wasserlinie (15) beginnt, nach oben hinten in den Bug des Schiffes geneigt verläuft und sich dann im weiteren Verlauf nach oben in eine nach vorne hervorstehende Richtung (16) dreht, wobei der Rumpf einen abgestuften Ansatz (17) aufweist, der einen länglichen Überhang eines höheren Bereichs des Bugs bezüglich eines unteren Bereichs des Bugs definiert, der vom Bug (11) im Wesentlichen in der Richtung des Stevens (12) des Rumpfes verläuft,
dadurch gekennzeichnet, dass
der abgestufte Ansatz (17) von einem am weitesten eingebuchteten Teil (13) des Bugs (11) aus verläuft, wobei die nach oben hinten in den Rumpf geneigt verlaufende Form (14) des Schiffs in eine nach vorne hervorstehende Richtung (16) dreht.

2. Yacht nach Anspruch 1, wobei in der Seitenansicht der abgestufte Ansatz über den Bug an dem am weitesten vertieften Teil des Bugs und an beiden Seiten des Rumpfes weg vom Bug verläuft.

3. Yacht nach Anspruch 1 oder 2, die weiterhin längliche Vorsprünge an gegenüberliegenden Außenseiten des Rumpfes bezüglich des Bugs aufweist.

4. Yacht nach Anspruch 3, wobei die länglichen Vorsprünge im Wesentlichen in einer horizontalen Richtung verlaufen.

5. Yacht nach Anspruch 3 oder 4, wobei die länglichen Vorsprünge von einem Abstand hinter dem Bug wenigstens in Richtung des Bugs verlaufen.

6. Yacht nach Anspruch 5, wobei ein Paar von Vorsprüngen an gegenüberliegenden Seiten des Rumpfes mit dem Bug verbunden sind, um einen einzelnen Vorsprung über den Bug zu definieren.

7. Yacht nach einem oder mehreren der vorhergehenden Ansprüche 3 bis 6, wobei zwei oder mehrere streifenförmige Vorsprünge an einer Seite des Bugs angeordnet sind.

8. Yacht nach Anspruch 7, wobei die zwei oder mehreren streifenförmige Vorsprünge an der Seite des Bugs an einem deutlich erkennbaren Niveau über einer Wasserlinie, die entlang des Bugs verläuft, angeordnet sind.

9. Yacht nach einem oder mehreren der vorhergehenden Ansprüche 3 bis 8, wobei die länglichen Vorsprünge im Wesentlichen im Querschnitt halbröhrenförmig sind.

Revendications

1. Yacht (10), comprenant une coque (2) et une superstructure (3), la coque (2) définissant une poupe (12) et une proue (11), dans lequel la proue (11) comprend une cavité (13) en vue de côté, définie par une forme, commençant au niveau de la ligne de flottaison (15), s'inclinant vers le haut, vers l'arrière dans la coque du bateau, et ensuite, progressant davantage vers le haut, se transformant suivant une orientation s'étendant vers l'avant (16),
dans lequel la coque comprend un épaulement étagé (17), définissant un surplomb allongé d'une partie supérieure de la coque par rapport à une partie in-

férieure de la coque, s'étendant à partir de la proue (11) sensiblement dans la direction de la poupe (12) de la coque,
caractérisé en ce que
l'épaulement étagé (17) s'étend à partir d'une partie plus en retrait (13) de la proue (11), sur laquelle la forme s'inclinant vers le haut, vers l'arrière dans la coque de bateau (14) se transforme avec une orientation s'étendant vers l'avant (16).

2. Yacht selon la revendication 1, dans lequel l'épaulement étagé s'étend à travers la proue au niveau de la partie la plus en retrait de la proue en vue de côté et à l'écart de la proue sur les deux côtés de la coque.

3. Yacht selon la revendication 1 ou 2, comprenant, en outre, des saillies allongées sur les faces externes opposées de la coque par rapport à la proue.

4. Yacht selon la revendication 3, dans lequel les saillies allongées s'étendent suivant une orientation sensiblement horizontale.

5. Yacht selon la revendication 3 ou 4, dans lequel les saillies allongées s'étendent à partir d'une certaine distance derrière la proue, au moins vers la proue.

6. Yacht selon la revendication 5, dans lequel une paire de saillies sur des côtés opposés de la coque sont reliées au niveau de la proue afin de définir une simple saillie à travers la proue.

7. Yacht selon l'une quelconque ou plusieurs des revendications précédentes 3 à 6, dans lequel deux ou plusieurs saillies en forme de bande sont agencées sur un premier côté de la coque.

8. Yacht selon la revendication 7, dans lequel deux ou plusieurs saillies en forme de bande sont agencées sur le côté de la coque à un niveau distinct au-dessus d'une ligne de flottaison s'étendant le long de la coque.

9. Yacht selon l'une quelconque ou plusieurs des revendications précédentes 3 à 8, dans lequel les saillies allongées sont, en section transversale, sensiblement semi-tubulaires.

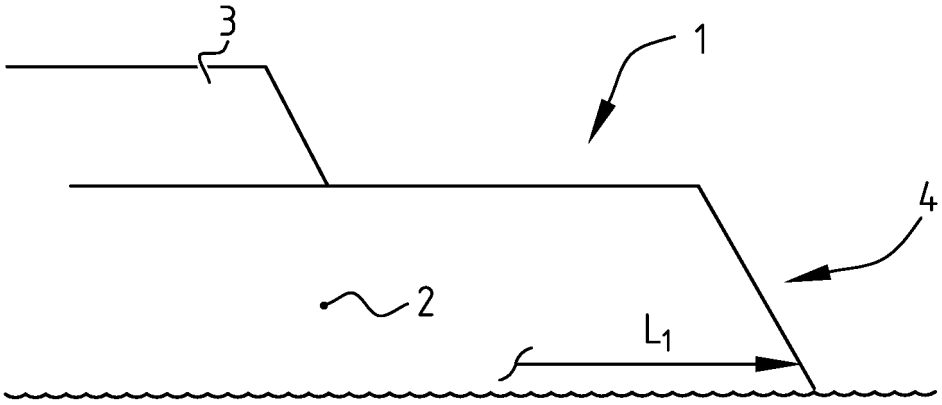

FIG. 1

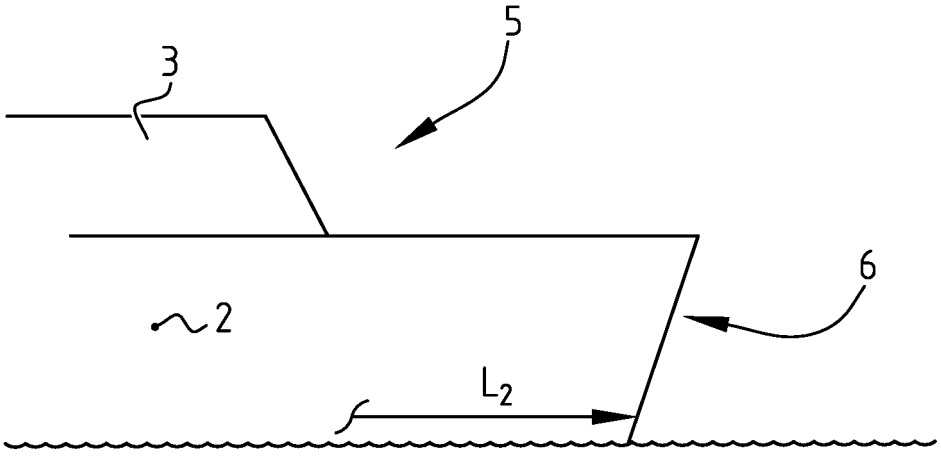

FIG. 2

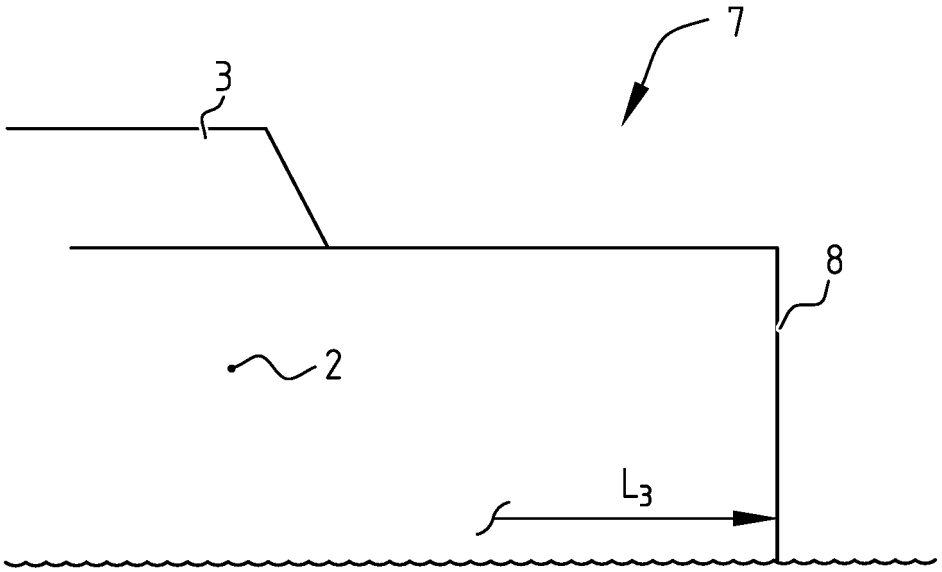

FIG. 3

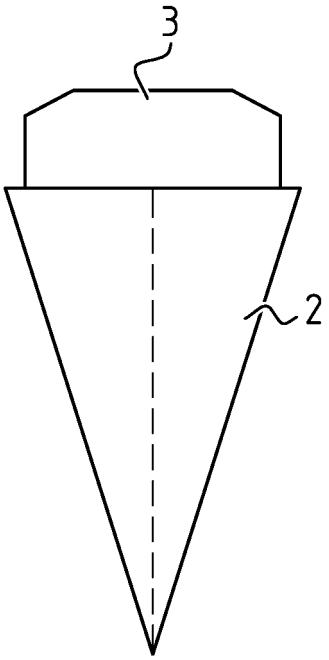

FIG. 4

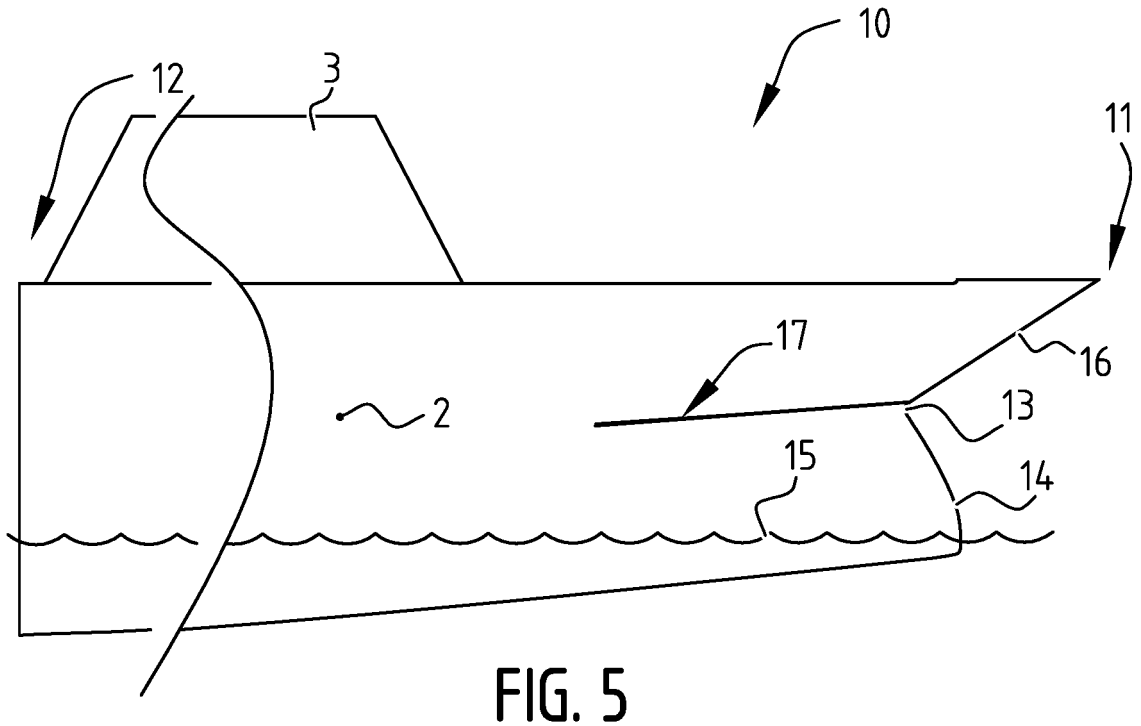

FIG. 5

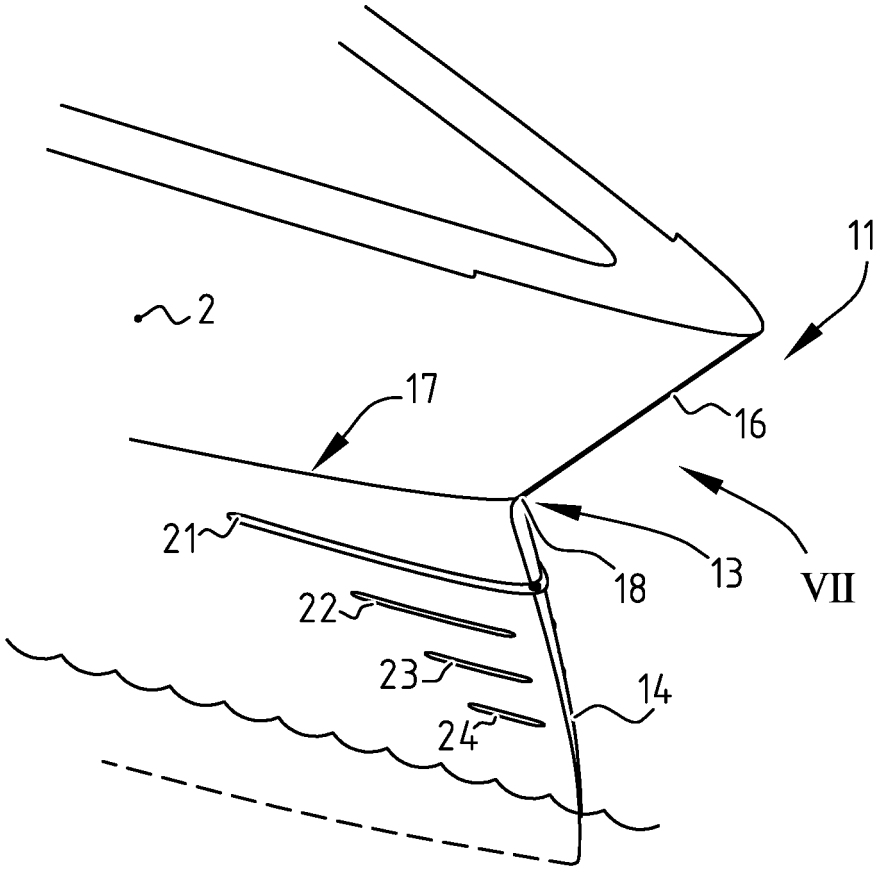

FIG. 6

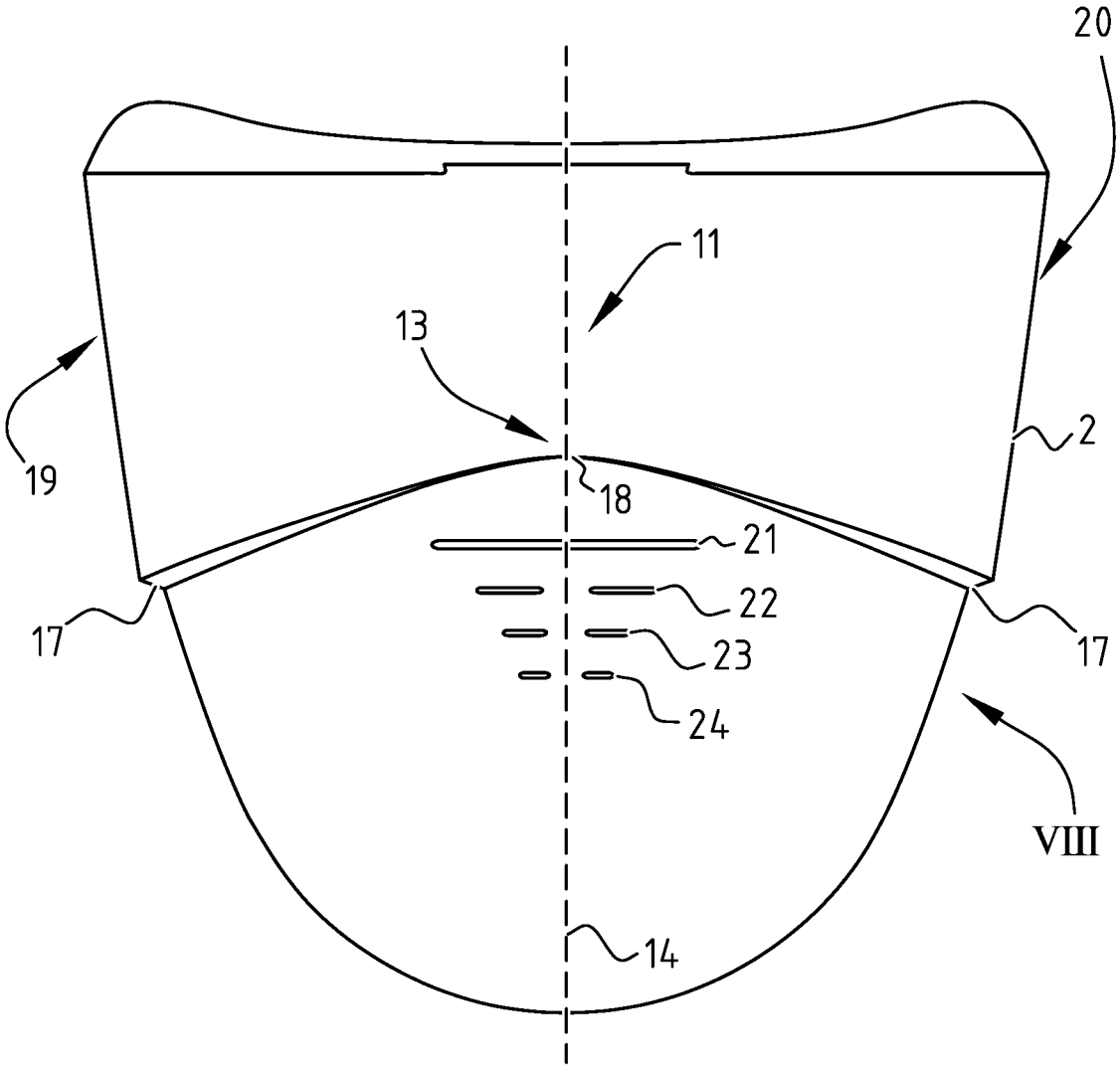

FIG. 7

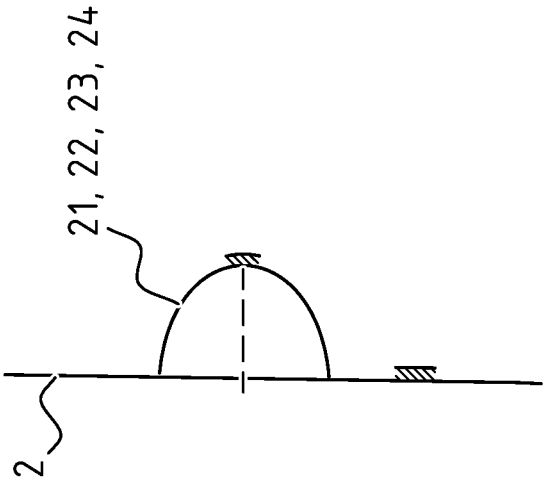

FIG. 9

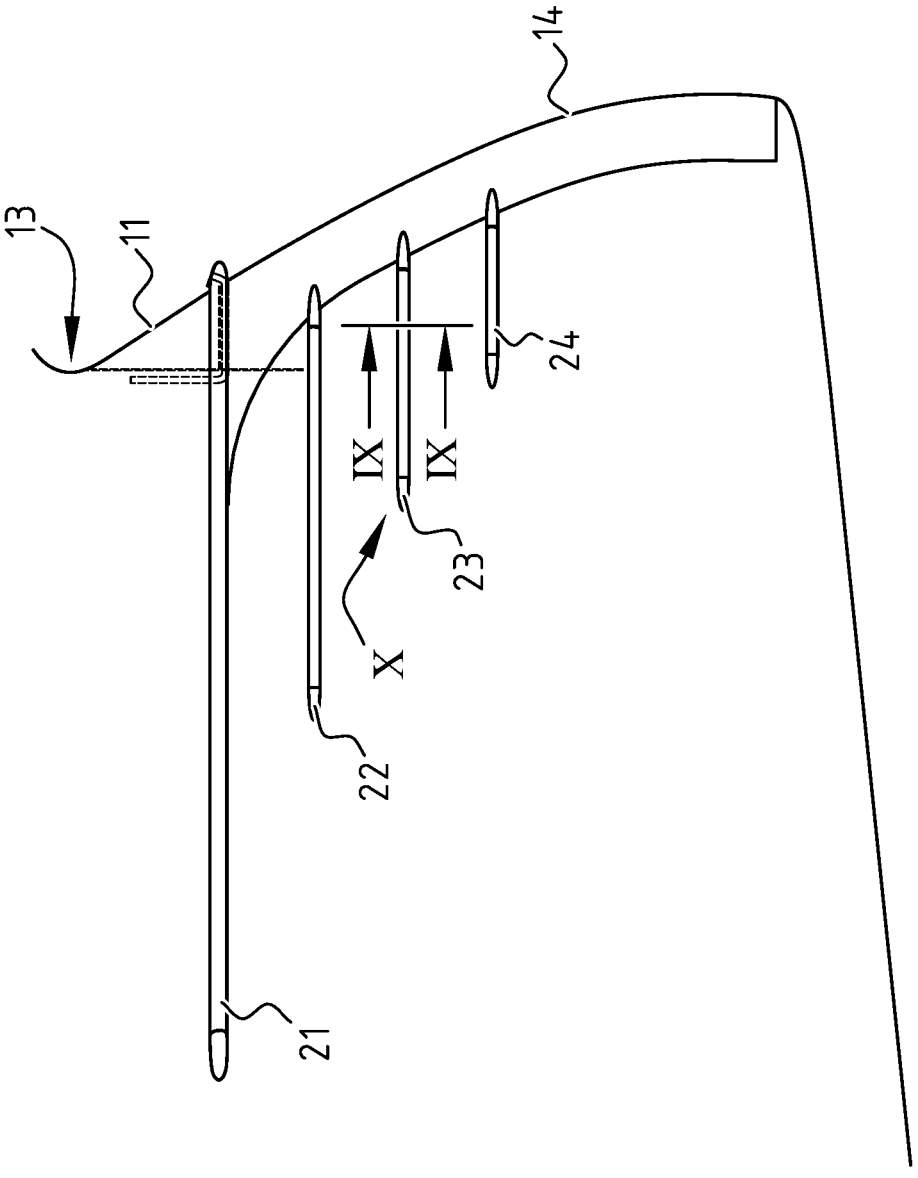

FIG. 8

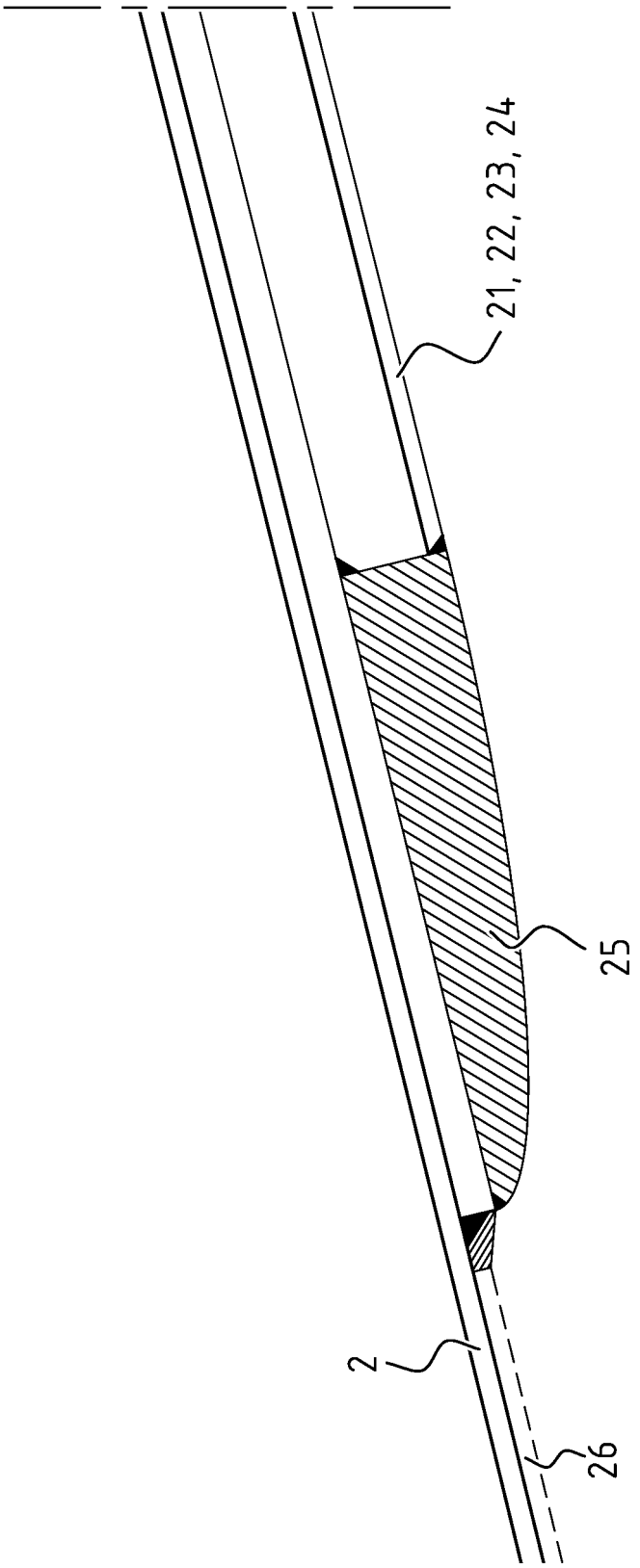

FIG. 10

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- FR 2726804 **[0006]**