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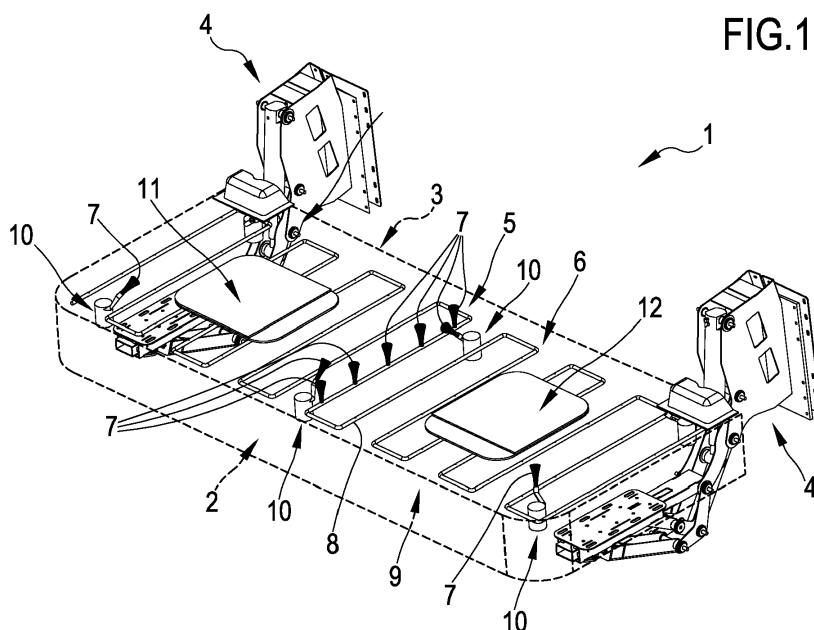
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(54) **MOVABLE AND FOLDING DECK FOR BOATS**

(57) A movable and folding deck (1) for boats, preferably hydraulic and mounted at the stern, comprising a support platform (2) provided with an upper flooring surface (3) accessible to one or more persons, and moving means (4), suitable to be fixed to a prefixed part (P) of a boat, operatively connected with the support platform (2) in such a way as to alternately support platform (2) between a rest position, in which the flooring surface (3) of the support platform (2) is substantially placed in a vertical plane and facing and adjacent to the prefixed part (P) of the boat, and an use position, in which the support platform (2) actually protrudes from the prefixed part (P) of the boat and the flooring surface (3) of the support

platform (2) is substantially placed along a horizontal plane and at least partly below the free surface (L) of the water surface which the boat is located. In particular, the movable and folding deck (1) comprises spraying and/or agitation means (5) coupled with the support platform (2) in such a way as to be predominantly underlying the flooring surface (3) and operatively connected with actuating means (6) suitable to be fed when the support platform (2) takes the use position in order to induce a turbulent flow or an air bubbles set to the water surface above the flooring surface (3) of the support platform (2), determining an hydromassage effect available to the persons.



## Description

**[0001]** The present invention relates to the nautical field and concerns a movable and folding deck for boats, preferably of the hydraulic type and, particularly although not exclusively, suitable to be installed at stern of the boats themselves.

**[0002]** Notoriously, in the field of boating a deck is an accessory component become essential for pleasure boats and/or for cruise ships (in the extended and technical sense of the term, therefore not limited to ships which are traditionally identified as "cruise" ones and which consist of a motorboat of significant dimensions, used for tourist and recreational purposes trips with a duration of at least one week, during which customers are entertained on board with the various structures present, mainly of recreational and sport type), which is externally associated with.

**[0003]** Indeed, the decks for boats of movable and folding type, being applied to boats through the interposition of moving means that allow to define for the decks themselves:

- a rest (or closure or non-use) condition, in which they are arranged facing and juxtaposed at a prefixed part of the boat hull (typically at aft) substantially integrating with the latter without greatly expanding their overall dimensions and becoming a sort of delimiting bulkhead thereof;
- an use (or opening or working) condition, fully operative, in which they are folded by 90° with respect to the rest position mentioned above and actually arranged protruding from the boat hull, in such a way that the flooring surface of the support platform is just below the free surface of the water surface (typically of a sea or at the most of any navigable lake basin) in order to be accessible to people even just for a stop pleasantly remaining in contact with the water or to dive into water from a more comfortable position, or even more while they get off in the water or get on from the water by a more smooth and rapid position after a bath.

**[0004]** In order to be effectively livable and usable, a deck for boats must have suitably relevant dimensions: not by chance, in the new projects, the decks are more spacious and, in particular, increasingly integrated with the cockpit (which, as known, defines the open part of a boat, typically at stern, where usually the manoeuvring groups are with the related winches, the rudder, some benches for sitting and often also a central table, and where people rest during normal navigation).

**[0005]** In the nautical sector, the current trend is, therefore, to manufacture decks that are increasingly large and increasingly integrated with the cockpit of which aspire to become, when they assume the use position, a kind of constructive continuation.

**[0006]** Technically, it is necessary to carefully design

and control the closing and opening mechanism (moving means) of the decks that must be easy and little tiring to be uses, while, in order to ensure better safety conditions for people, it is preferable that the support platform of the decks is provided with appropriate perimetrical support structures commonly known as handrails in the nautical jargon.

**[0007]** In addition, in presence of a folding deck, the (removable or not) ladder of getting off on board traditionally provided in boats must be positioned laterally to the deck itself, especially in view of the fact that the trend of the present times by the users is to maintain the deck lowered (or open) on the free surface of water surface even in mooring conditions. It appears, therefore, clear that the decks of the type briefly described above are designed to offer more comfort and further enjoyable fun or relaxing situations to persons on board of the boats on which they are installed, also respecting adequate safety conditions for the persons themselves who rest even temporarily on the decks.

**[0008]** However, also the movable and folding decks for boats of the known art just briefly described suffer from some recognized limitations or at least from a constructive concept which, beyond to the design differences from manufacturer to manufacturer that allow to effectively reach in almost equivalent way the expected technical performance, has been fixing for years to the traditional canons described above (deck comprising a support platform accessible to the user and moving means which allow, if necessary, when operated by the operator by means of a central processing and control unit, of overturning by 90° the support platform up to place it just below the free surface of the water surface starting from a position in which it is adjacent to a prefixed part of the boat hull - mainly at stern, but sometimes also at aft - and substantially integrated to this, in the rest or non-use or closing condition, and vice versa.

**[0009]** The state of the art of the herewith examined specific applications of the nautical field is then missing a movable and folding deck for boats which is advantageously provided with accessory components able to change, expanding them, its use modes and to turn it into an accessory able to provide additional services appreciated to the ship-owner and his guests on board of the boats, favouring the development of recreation and amusement moments more pleasant and relaxing than those ones currently enjoyable.

**[0010]** The present invention aims, therefore, to overcome the limitations of the prior art just mentioned in terms of movable and folding (or which can be tilted) decks.

**[0011]** In particular, primary purpose of the invention is to provide a movable and folding deck for boats which, when the support platform that marks it takes the use position (corresponding to the opening condition of the deck itself), is usable not only to ease the access at the adjacent water surface, the getting on from this on board of the boat or the simple support of persons, as it typically

happens today, but also to increase the level of comfort and relax of the persons themselves while they remain pleasantly in contact with the water, becoming a kind of open-sky hydromassage on sea, lake water or other navigable water surface.

**[0012]** In the cognitive sphere of this purpose, it is a first task of the present invention to provide, therefore, a movable and folding deck for boats which, when it takes the opening condition, can be equipped with an additional functionality compared to the traditional ones provided in the known art and which is widely beyond from them.

**[0013]** It is another task of the present invention to make available a movable and folding deck for boats which makes exclusive, exciting, unique and unforgettable some given leisure moments enjoyable by people on a boat, as not noticeable in any way with equivalent decks of known type.

**[0014]** It is a further purpose of the invention to give substance to a movable and folding deck for boats which explodes an established constructive custom followed for years by all the manufacturers in the nautical sector and thus carries an innovative and significant technological progress able to represent a positive breaking or turning point with respect to the past for this kind of technical applications.

**[0015]** It is a last but not least purpose of the present invention to create a movable and folding deck for boats which, despite the additional components of which is provided with respect to the known art decks, can be manufactured at competitive costs or which can be however, as higher, justified and adsorbed by the market, just according to the further considerable functionalities it offers.

**[0016]** The foregoing purposes are achieved by means of a movable and folding deck for boats according to claim 1 attached hereto, as hereinafter referred for the sake of brevity of exposure.

**[0017]** Further technical features of detail of the movable and folding deck for boats of the present invention are contained in the corresponding dependent claims.

**[0018]** The above-mentioned claims, in the following specifically and concretely defined, shall mean an integral part of the present description.

**[0019]** Advantageously, the movable and folding (or which can be tilted) deck for boats, object of the present invention, can be exploited in full pleasantness also as hydromassage station by people, when the support platform is placed by the moving means in the use position, directly facing the water.

**[0020]** This derives basically from the fact that, in an innovative and quite revolutionary way compared to the current state of art, the movable and folding deck of the invention also comprises spraying and/or agitation means coupled with the support platform in such a way as to be predominantly underlying the upper flooring surface of the latter and operatively connected with actuating means which are fed when the support platform takes the use position in order to induce a turbulent flow or an air bubbles set to the water surface (or column) above

the flooring surface of the support platform, determining a hydromassage effect at disposal of the persons.

**[0021]** Still advantageously, the movable and folding deck of the invention allows thus to get an additional functionality different from that traditional one which can be found in equivalent decks of known type, to all advantage of the constructive exclusivity of the nautical article concerned and of the possibility for the buyer (as well as for the people who hosts aboard his boat) to enjoy new exciting moments of open-sky leisure, comfortably in contact with the water, unthinkable until now and with known similar decks.

**[0022]** Equally advantageously, the new constructive equipment highlighted above the movable and folding deck of the invention enjoys of doesn't affect its traditional function of aid of the boaters movements and postural behaviors (getting off and getting on from water, simple support remaining in contact with the water) when the support platform takes the use position, since the innovative technical features of the invention remain below the flooring surface and however contained in an inner space made in the support platform, thus being almost entirely and properly hidden from view and implying almost nil risks of suffering dangerous and/or harmful accidental impacts by persons or objects handled by these.

**[0023]** In advantageous manner, moreover, the movable and folding deck of the invention therefore exploits the overall dimensions and spaces already existing in the prior art similar decks while providing the innovative additional functionality highlighted above, with the clear advantages which this entails not only from a productive point of view but also from that one of communication to the public which could appropriately perceive the reach for many ways revolutionary of the movable and folding deck of the invention without distorting the typical design it has of this nautical article.

**[0024]** Said purposes and advantages, as well as other ones which will emerge in the course of this patent text, will appear to a greater extent from the description that follows, relating to a preferred embodiment of the movable and folding deck for boats of the invention, given by indicative and illustrative, but not limitative, way with reference to the accompanying drawings, in which:

- figure 1 is a simplified assonometric view of the movable and folding deck of the invention in open and partially operative conditions (i.e., with the support platform almost in use position);
- figure 2 is an applicative assonometric view of the deck of figure 1 immediately before reaching the final operative condition (i.e., with the support platform just above the free surface (or column) of the water surface and not yet in use position);
- figure 3 is a simplified assonometric view of the platform of figure 1 in open conditions and fully operational (i.e., with the support platform in a first use position);
- figure 4 is the applicative assonometric view of the

- deck of figure 3;
- figure 5 is a simplified assonometric view of the deck of figure 1 in open and fully operative conditions (i.e., with the support platform in a second use position);
- figure 6 is a simplified assonometric view of the deck of figure 1 in open and fully operative conditions (i.e., with the support platform in a third use position);
- figure 7 the applicative assonometric view of the deck of figure 1 in the open and fully operative conditions (i.e., with the support platform in a fourth use position);
- figure 8 is a truncated enlargement of a detail of figure 1.

**[0025]** The movable and folding deck for boats is illustrated even in various possible operative configurations or conditions in the figures that follow, where it is globally numbered with 1. In particular, although not limitedly, the movable and folding deck 1 of the invention is suitable to be installed at the stern P of a boat, so as to be, when it takes the opening or use condition, substantially alongside the cockpit, although at a lower planar level.

**[0026]** As it can be seen for example in figure 1, the movable and folding deck 1 comprises:

- a support platform 2 provided with an upper flooring surface 3 accessible to one or more persons;
- moving means, indicated as a whole with 4, suitable to be fixed to a prefixed part in general defined, as just said, at aft P, of a boat, operatively connected with the support platform 2 in such a way as to alternately position the support platform 2 between a rest position, in which the flooring surface 3 of the support platform 2 itself is substantially placed along a vertical plane and facing and adjacent to the boat prefixed part P, and an use position, in which the support platform 2 effectively protrudes, for the entire width, from the prefixed part of the P boat and the flooring surface 3 of the support platform 2 is substantially placed along a horizontal plane and is at least partly below the free surface L of the water surface which the boat is located in.

**[0027]** In accordance with the invention, the movable and folding deck 1 comprises spraying and/or agitation means, as a whole numbered with 5, coupled with the support platform 2 in such a way as to be predominantly underlying the flooring surface 3 and operatively connected with actuating means, generally indicated with 6 and suitable to be fed when the support platform 2 takes the use position in order to induce a turbulent flow or an air bubbles set to the water surface (or column) above the flooring surface 3 of the support platform 2, determining a hydromassage effect pleasantly at disposal of the persons who can benefit it while keeping contact with an aqueous surface of a natural type.

**[0028]** In essence, therefore, in the use position (corresponding to the open condition of the movable deck 1

of the invention), the support platform 2 is folded forwards substantially of 90° with respect to the rest position (corresponding to the closed condition of the movable deck 1 of the invention).

**[0029]** Conveniently, according to established constructive customary for this type of nautical accessories, the flooring surface 3 presents a plurality of discontinuity area (not shown for the sake of illustrative simplicity in the accompanying figures) which interrupt its structural uniformity in such a manner that, when the support platform 2 takes the use position, the spraying and/or agitation means 5 induce, in the water surface above the upper flooring surface 3 itself, the aforesaid turbulent flow or the aforesaid air bubbles set as a result of the power of the actuating means 6.

**[0030]** In particular, the discontinuity areas are determined by any of the passage systems suitable to put in mutual communication different environments (such as in this case the internal of the movable and folding deck 1 of the invention and the external environment constituted by the mass of natural water), selected from the group consisting of through holes belonging to a grilling, through openings parallel each other belonging to a structure made of parallel slats (made for example of iroko wood) spaced apart by the through openings themselves and/or the like.

**[0031]** As regards the moving means 4, they are of the kind per se known to the person skilled in the art, comprising in the specific case, by way of purely indicative example, linear actuators of the hydraulic type adequately clamped to the boat hull at the prefixed part P (as said, in this case represented by the stern area of the boat).

**[0032]** With specific reference to the spraying and/or agitation means 5, they comprise a plurality of immersion nozzles or jets 7 (resistant to aggressive environments such the marine environment notoriously is) distributed at and predominantly below the upper flooring surface 3.

**[0033]** Preferably but not necessarily, the immersion nozzles or jets 7 are uniformly distributed along the surface extension of the flooring surface 3.

**[0034]** In addition, still by preferred but not binding way, the immersion nozzles or jets 7 are designed in a manner such as to close independently, while remaining stationary in position, when the support platform takes the rest position and/or when the power supply of the actuating means 6 is interrupted: this allows to limit the dimensions of the immersion nozzle 7 when the support platform 2 is not used as hydromassage station (condition which does not necessarily coincide with the rest position of the support platform 2 itself), avoiding or minimizing the risks that these immersion nozzles 7 undergo damaging accidental impacts which could also compromise only in part the structural and/or functional integrity thereof. In preferred but not exclusive and non-limiting manner, the immersion nozzles or jets 7 are adjustable in position, even by not necessarily expert personnel (for example, the on board boat service personnel or by the same persons hosted on board) in such a manner as to vary depending

on the needs, also changing in time, the direction of the turbulent flow or air bubbles set which affects the water surface (or column) above the upper flooring surface 3 when the support platform 2 takes the aforesaid use position.

**[0035]** According to the preferred embodiment described herein of the invention, the actuating means 6 comprise a flexible coil pipe 8 which stably supports the spraying and/or agitation means 5 (for example of the type described above) and is housed in an inner compartment 9 defined in the support platform 2 in such a way as to be below the flooring surface 3, as shown by the attached figures and in particular by the detail of figure 8.

**[0036]** Furthermore, the flexible coil pipe 8 is pneumatically connected with a compressor, not visible in the accompanying figures, suitable to be housed in an engine room commonly made in the boat hull.

**[0037]** In particular, the flexible coil pipe 8 inferiorly supports the immersion nozzles or jets 7 and is stably coupled, for example by resin, with the inner wall belonging to the support platform 2 and delimiting the inner compartment in which it is housed.

**[0038]** By preferred but non-limiting way, the actuating means 6 in this case also include a plurality of immersion pumps 10 of the type per se known to the person skilled in the field concerned, are electrically and firmly housed in the inner compartment 9 defined in the support platform 2.

**[0039]** Advantageously, although not necessarily, the immersion pumps 10 are powered independently in order to determine a turbulent flow at specific positions of the upper flooring surface 3, different from each other depending on the variable needs of the users, for example of the ship-owner.

**[0040]** It is understood that in further embodiments of the movable and folding deck of the invention, not shown in the following, the actuating means could comprise only one or more flexible coil pipes or one or more immersion pumps.

**[0041]** In addition, other embodiments of the movable and folding deck of the invention, not shown in the following figures, could provide that the actuating means include a motor pump of propulsion of the water surface, designed to be housed on board of the boat and operatively connected with the spraying and/or agitation means through flexible diffusion pipes dragged by the support platform in its movement between the rest position and use position. The attached figures 1-7 show, also, that in an advantageous but not binding way, the upper flooring surface 3 of the movable and folding deck 1 of the invention is provided with a pair of sitting elements 11, 12 stably coupled with the flooring surface 3 itself and available to people in order to enjoy in a more comfortable position a moment of total relax offered by the hydromassage system which the support platform 2 of the movable and folding deck 1 of the invention is provided of.

**[0042]** More in detail, each of the sitting elements 11,

12 is, preferably, rotatably coupled with the flooring surface 3 in order to allow the person who uses it and accesses to the support platform 2 when it takes the use position of spatially orient it at will, for example as a function of the boat position relative to the sun.

**[0043]** It is understood that in other embodiments of the movable and folding deck of the invention, here not accompanied by reference drawings, the flooring surface of the support platform could include sitting elements in a number different from that one described above, this number varying depending on the design choices, starting from one.

**[0044]** Furthermore, in other embodiments of the movable and folding deck of the invention, still not represented, only one or in any case not all the sitting elements could be rotatably coupled with the flooring surface of the support platform.

**[0045]** Preferably but not necessarily, each of the sitting elements 11, 12 comprises:

- a fixed sitting plane 13, linked to the upper flooring surface 3 of the support platform 2;
- a movable aid backrest 14, coupled with the sitting plane 13 through rotation means, indicated overall with 15 and of the type per se known to the man skilled in the art (typically, one or more hinges aligned each other), suitable to allow people to position each of the sitting elements 11, 12 alternately between a work position (or active position), definable when the support platform 2 takes the use position, in which the aid backrest 14 is placed according to a plane substantially perpendicular to the plane defined by the sitting plane 13 (which in these conditions is generally horizontal), and a rest position (or passive position), in which the aid backrest 14 directly faces and is placed close to the sitting plane 13 in order to be placed according to a plane substantially parallel to the plane defined by the sitting plane 13.

**[0046]** From an operational point of view, the operation of the movable and folding deck of the invention appears immediately comprehensible at the light of the technical explanations just given during the current description.

**[0047]** In summary, the ship-owner or the service personnel present on board of a boat, by acting on the control panel of a central control and processing unit at his disposal in the cockpit, operates the moving means 4 which position by progressive forward rotation (counterclockwise) the support platform 2 from the rest position to the use position, visible for example in figure 4, in which the flooring surface 3 is located just below the water surface (in particular, the free surface L) of the sea, lake or similar mass of navigable water.

**[0048]** Once the use position of the support platform 2 (or point of angular end-of-stroke downwardly of the moving means 4) has been reached, if desired, still the ship-owner or the service personnel on board of the boat feeds the actuating means 6 which, in return, through the spray-

ing and/or agitation means 5, create in this case both the turbulent flow (in the case of the immersion pumps 10) and the air bubbles set (in the case of the compressor, as said not visible in the accompanying figures) in the water surface (or water column) above the upper flooring surface 3, thereby generating a relaxing, toning and full of regenerating sensations also in the people's spirit time which result quite welcome to them and which, in particular, is not in any way obtainable with equivalent decks of the prior art.

**[0049]** Before supply of the actuating means or during their operation, the same end-user - the ship-owner or his guests on board of the boat - are able to quickly move with simple manoeuvres the sitting elements 11, 12 from the rest (passive and folded) position of figure 2 to any of the possible working (active) positions, examples of which are shown in the attached figures 3-7, in such a manner as to further increase the feeling of pleasant well-being and relax on the support platform 2.

**[0050]** The innovative technical effect that the movable and folding deck 1 of the invention elicits in the field market appears undoubtedly surprising since it significantly affects a well-established constructive design of this type of accessories for the nautical field that hasn't been changing for several years.

**[0051]** When the use of the support platform 2 is no longer necessary even as a station with hydromassage effect, the ship-owner or the service personnel on the boat interrupts the power supply of the actuating means 6 and, accordingly, the supply of the spraying and/or agitation means 5, and folds the sitting elements 11, 12 back up to define their position with minimum overall dimensions (passive position, illustrated in figure 2): in this way, the support platform 2 takes the configuration which can be found in the traditional prior art (net of the sitting elements 11, 12), useful as a support or aid plane in the ascent or descent into water of the people present on board of the boat.

**[0052]** With the hydromassage system stopped, the support platform 2 will be bring back in the rest position by the moving means 4, arranged according to a vertical plane and facing and adjacent to the prefixed part of the boat, according to which it also serves as delimiting bulk-head, or reentrant in a room specifically dedicated to it in the hull of the boat itself.

**[0053]** By virtue of the description just given and of the technical explanations set out above, it is understood, therefore, that the movable and folding deck for boats of the present invention achieves the purposes and reaches the advantages previously mentioned.

**[0054]** The movable and folding platform for boats of the invention advantageously becomes, if necessary, a kind of hydromassage tub but at open-sky and exploiting the sea, lake water or other navigable water mass in the free surface of which it is immersed, without requiring installation of a specific and dedicated nautical accessory but relying on an existing accessory, that is precisely a common deck usually mounted at stern, but sometimes

also at aft.

**[0055]** Upon execution or implementation phase, changes could be made to the movable and folding deck for boats of the present invention consisting, for example, in moving means of constructive conception different from that one obtainable and visible in the accompanying drawings and comprising linear actuation means, distinct from those ones hydraulic, selected from the group consisting of pneumatic linear actuators, electric motors or other appropriate systems for applications and uses in the marine environment.

**[0056]** In addition to this, other embodiments of the movable and folding deck exclusively claimed herein could exist, not depicted in the following, in which the spraying and/or agitation means could be of different type from that one described above, which does not affect the advantage brought by the present invention.

**[0057]** In this regard, for example, in further embodiments of the movable and folding deck of the invention, not shown in the appended drawings, the spraying and/or agitation means could include one or more propellers for moving the water surface, arranged predominantly below the flooring surface of the support platform and suitably protected by the latter in such a way as to avoid the accidental contact also with the propellers themselves by the people while for example they are bathing, thus also fulfilling to rules of safety of the persons.

**[0058]** It is, finally, clear that several other changes could be made to the movable and folding deck for boats concerned, without departing from the principle of novelty intrinsic in the inventive idea expressed herein, as it is clear that, in the practical implementation of the invention, materials, shapes and sizes of the illustrated details could be changed, as needed, and replaced with others technically equivalent.

**[0059]** Where the constructive features and techniques mentioned in the following claims are followed by reference numbers or signs, those reference signs have been introduced with the sole objective of increasing the intelligibility of the claims themselves and therefore they have no limiting effect on the interpretation of each element identified, by way of example only, by these reference signs.

## Claims

1. Movable and folding deck (1) for boats comprising:

- a support platform (2) provided with an upper flooring surface (3) accessible to one or more persons;
- moving means (4), suitable to be fixed to a prefixed part (P) of a boat, operatively connected with said support platform (2) in such a way as to alternately position said support platform (2) between a rest position, in which said flooring surface (3) of said support platform (2) is sub-

stantially placed along a vertical plane and facing and adjacent to said prefixed part (P) of said boat, and an use position, in which said support platform (2) protrudes from said prefixed part (P) of said boat and said flooring surface (3) of said support platform (2) is substantially placed along a horizontal plane and at least partly below the free surface (L) of the water surface which said boat is located in,

**characterized in that** it comprises spraying and/or agitation means (5) coupled with said support platform (2) in such a way as to be predominantly underlying said flooring surface (3) and operatively connected with actuating means (6) suitable to be fed when said support platform (2) takes said use position in order to induce a turbulent flow or an air bubbles set to said water surface above said flooring surface (3) of said support platform (2), determining an hydromassage effect available to said persons.

2. Deck (1) according to claim 1), **characterized in that** said flooring surface (3) presents a plurality of discontinuity areas which interrupt its structural uniformity in such a manner that, when said support platform (2) takes said use position, said spraying and/or agitation means (5) induce, in said water surface above said flooring surface (3), said turbulent flow or said air bubbles set due to power of said actuating means (6).
3. Deck (1) according to claim 2), **characterized in that** said discontinuity areas are determined by any of the passage systems suitable to put in mutual communication different environments, selected from the group consisting of through holes belonging to a grilling, through openings parallel each other belonging to a structure made of parallel slats spaced apart by said through openings and/or the like.
4. Deck (1) according to any of the preceding claims, **characterized in that** said spraying and/or agitation means (5) comprise a plurality of immersion nozzles or jets (7) distributed at and predominantly below of said flooring surface (3).
5. Deck (1) according to claim 4) **characterized in that** said immersion nozzles or jets (7) are uniformly distributed along the surface extension of said flooring surface (3).
6. Deck (1) according to claim 4) or 5), **characterized in that** said immersion nozzles or jets (7) close independently, while remaining stationary in position, when said support platform (2) takes said rest position and/or when the power of said actuating means (6) is interrupted.

7. Deck (1) according to claim 4), 5) or 6), **characterized in that** said immersion nozzles or jets (7) are adjustable in position in such a manner as to vary depending on the needs, also changing in time, the direction of said turbulent flow or of said air bubbles set that affects said water surface above said upper flooring surface (3) when said support platform (2) takes said use position.
8. Deck according to any of the claims 1) to 3), **characterized in that** said spraying and/or agitation means include one or more propellers for moving said water surface, arranged predominantly below said flooring plane and protected by said support platform in order to avert the even accidental contact with said propellers by said persons.
9. Deck (1) according to any of the preceding claims, **characterized in that** said actuating means (6) comprise at least one flexible coil pipe (8) which stably supports said spraying and/or agitation means (5), is housed in an inner compartment (9) defined in said support platform (2) in such a way as to be below said flooring surface (3) and is pneumatically connected with a compressor suitable to be received in an engine compartment of said boat.
10. Deck (1) according to any of the preceding claims, **characterized in that** said actuating means (6) include a plurality of immersion pumps (10), electrically and firmly housed in an inner compartment (9) defined in said support platform (2).
11. Deck (1) according to claim 10), **characterized in that** said immersion pumps (10) are powered independently in order to determine said turbulent flow at specific positions of said flooring surface (3), different from each other depending on the needs.
12. Deck according to any of the preceding claims, **characterized in that** said actuating means includes a motor pump of propulsion of said surface water, suitable to be housed on board of said boat and operatively connected with said spraying and/or agitation means through flexible diffusion pipes dragged by said support platform.
13. Deck (1) according to any of the preceding claims, **characterized in that** said flooring surface (3) is provided with one or more sitting elements (11, 12) stably coupled with said flooring surface (3).
14. Deck (1) according to claim 12), **characterized in that** at least one of said sitting elements (11, 12) is rotatably coupled with said flooring surface (3) in order to allow one of said persons accessing to said support platform (2) when it takes said use position to spatially orient at will said at least one of said sitting

elements (11, 12).

15. Deck (1) according to claim 12) or 14), **characterized in that** at least one of said sitting elements (11, 12) comprises:

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- a fixed sitting plane (13), constrained to said flooring surface (3) of said support platform (2);  
- a movable aid backrest (14), coupled with said sitting plane (13) through rotation means (15) suitable to allow said people to position at least one of said sitting elements (11, 12) alternately between a work position, defined when said support platform (2) is in said use position, in which said aid backrest (14) is placed according to a plane substantially perpendicular to the plane defined by said sitting plane (13), and a rest position, in which said aid backrest (14) faces said sitting plane (13) in order to be placed according to a plane substantially parallel to said plane of said sitting surface (13).

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**FIG.1**

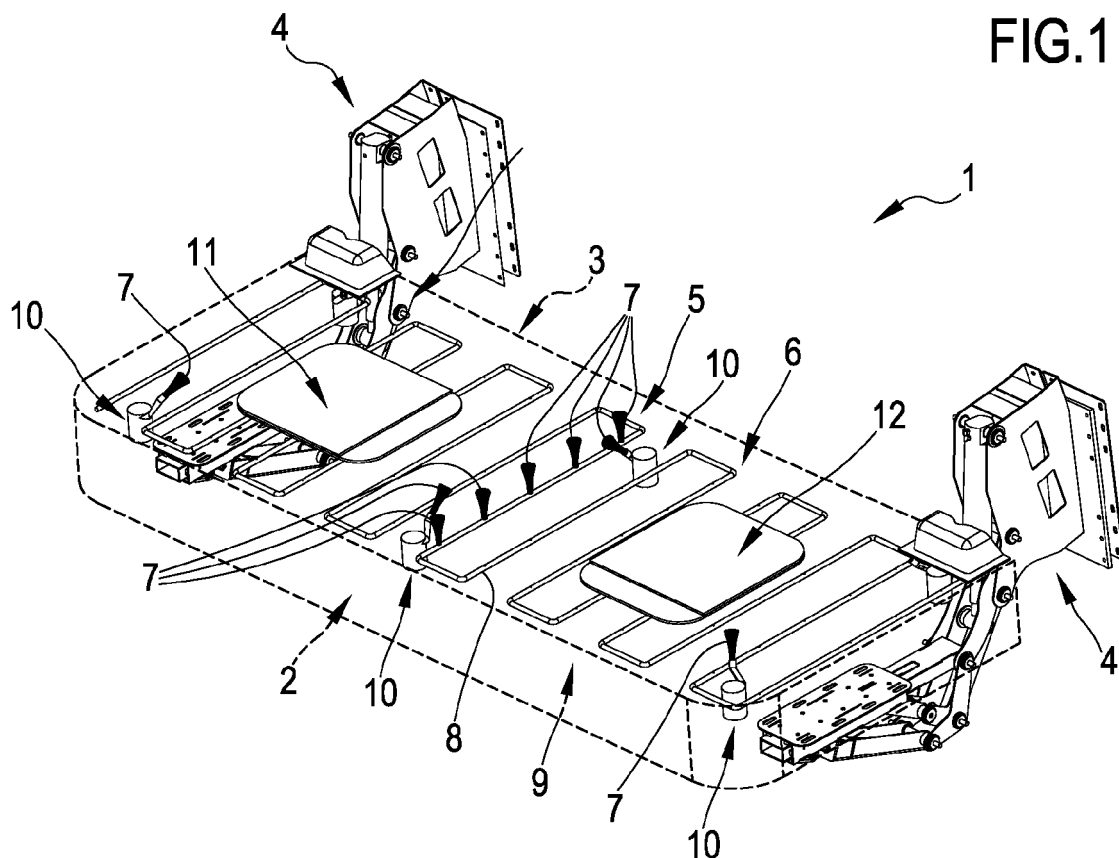


FIG.2

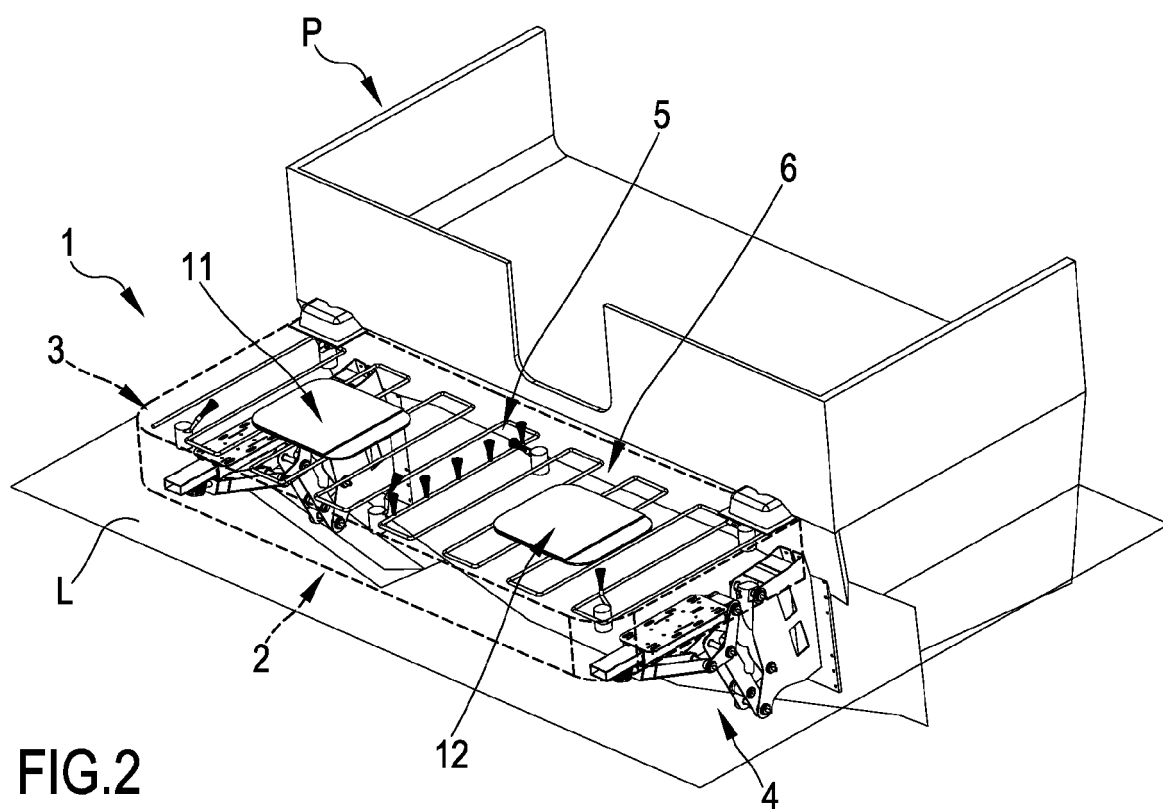


FIG.3

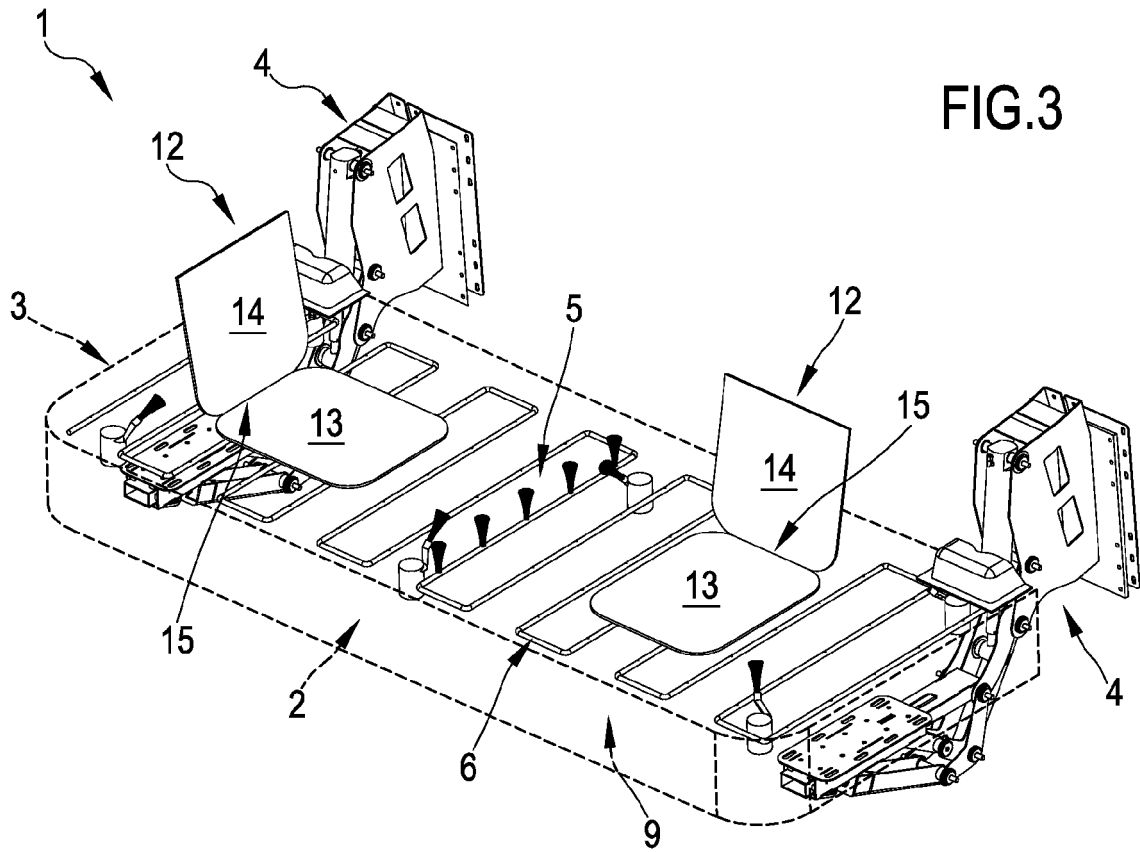
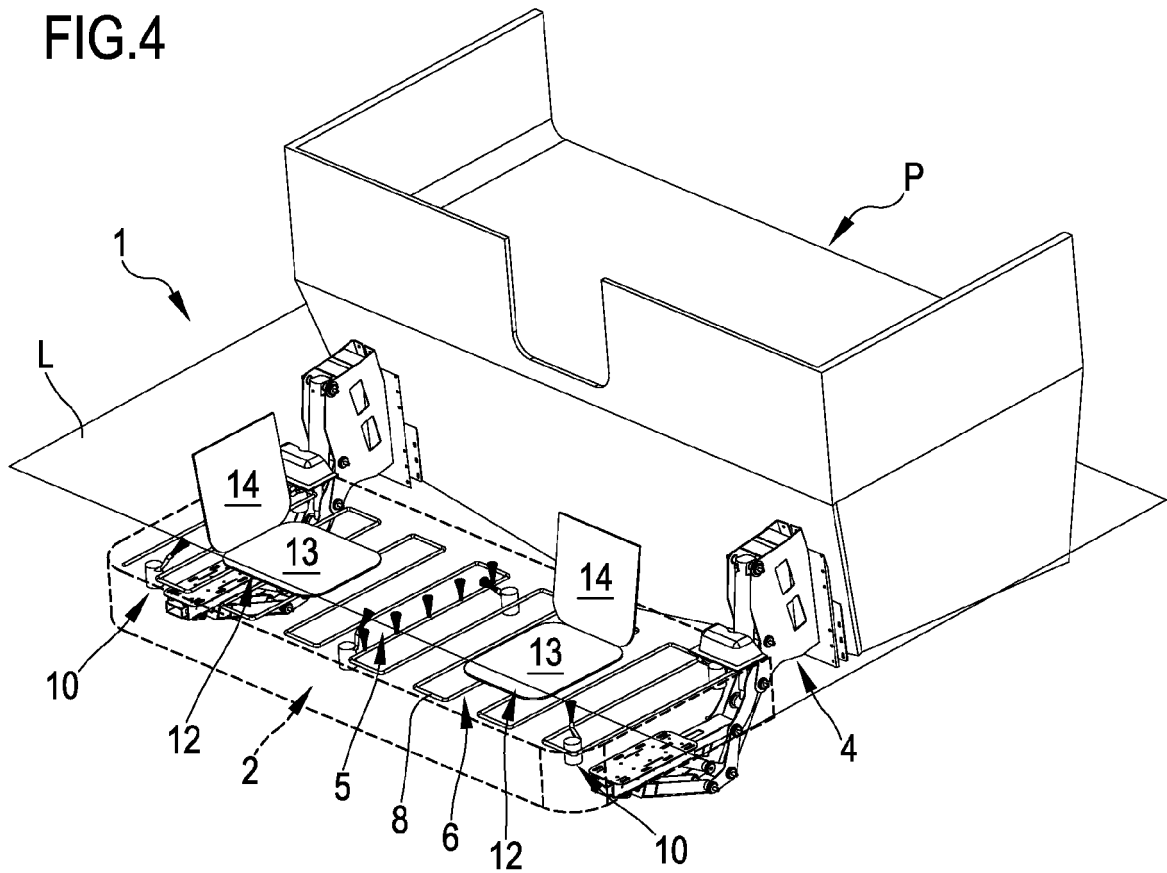
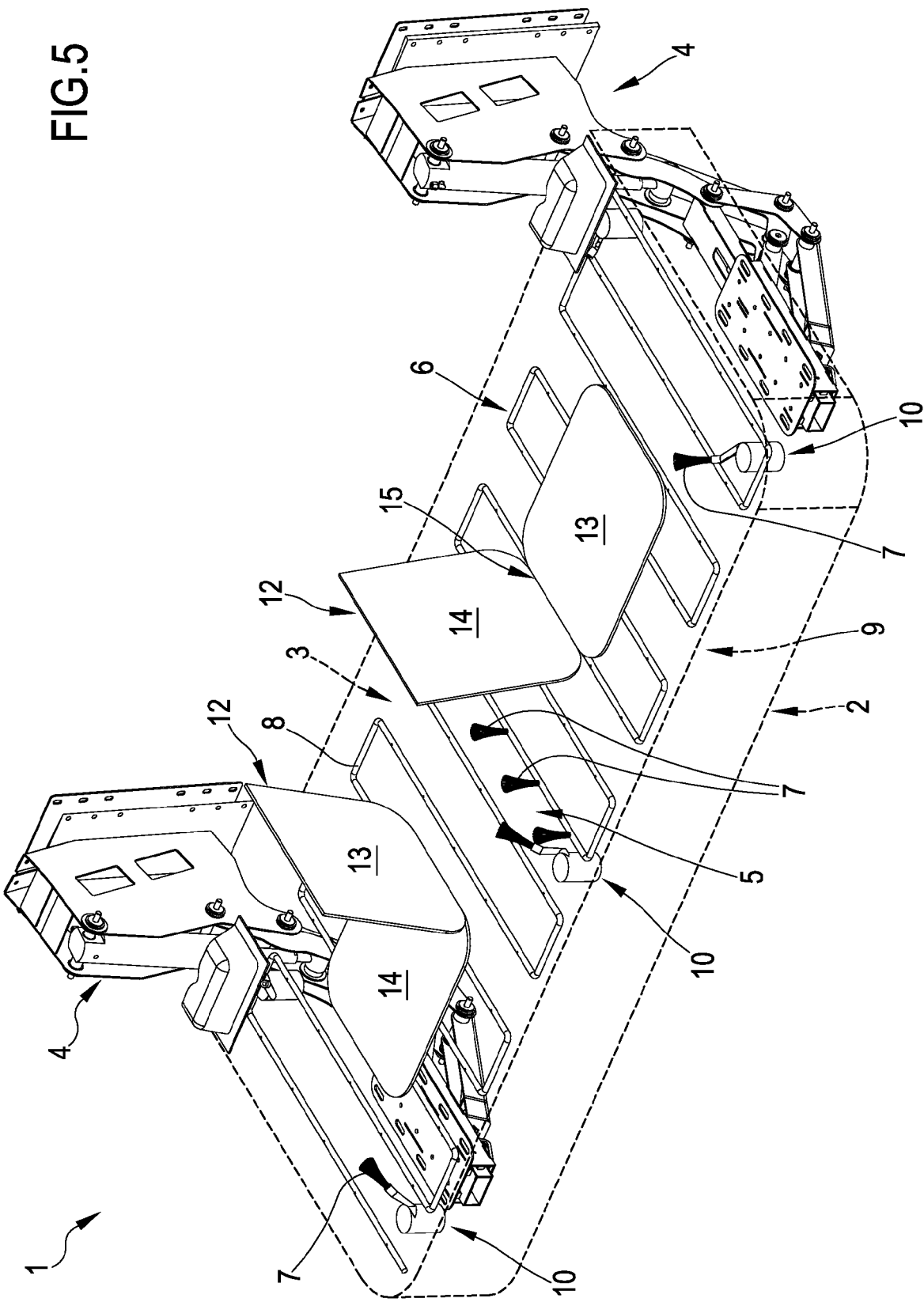
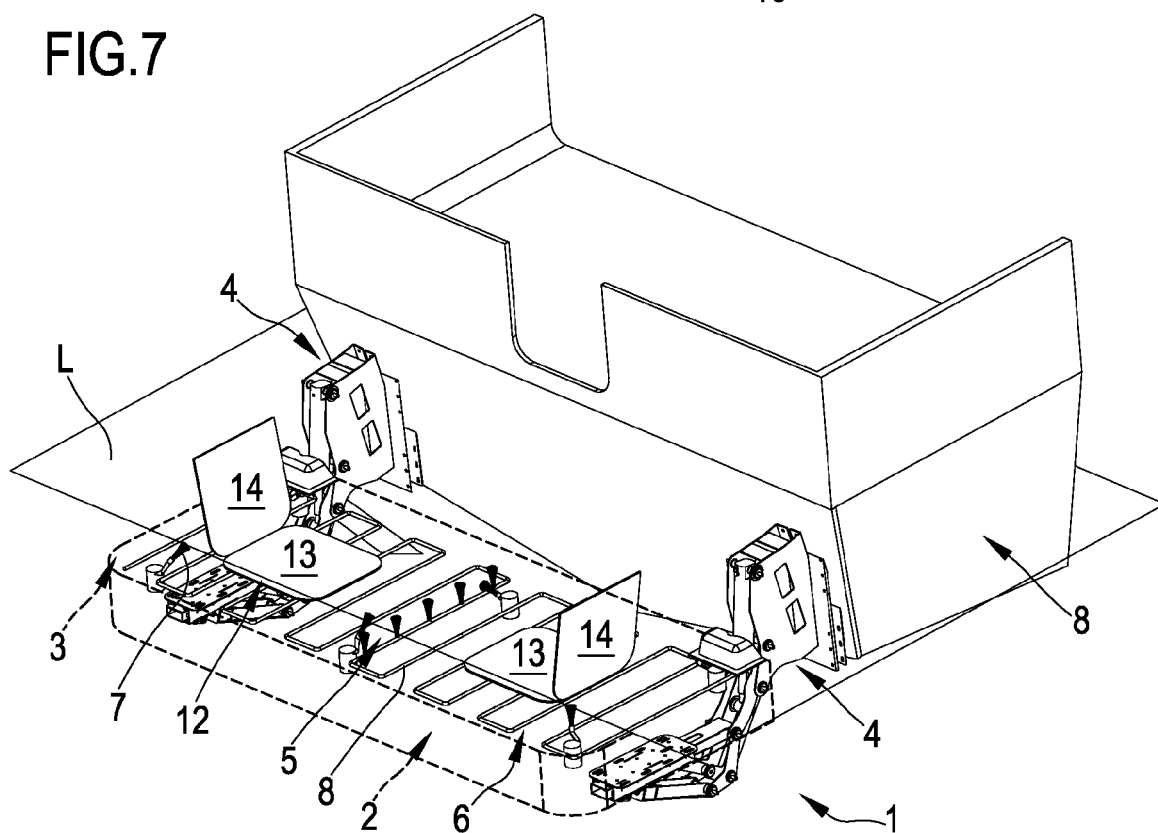
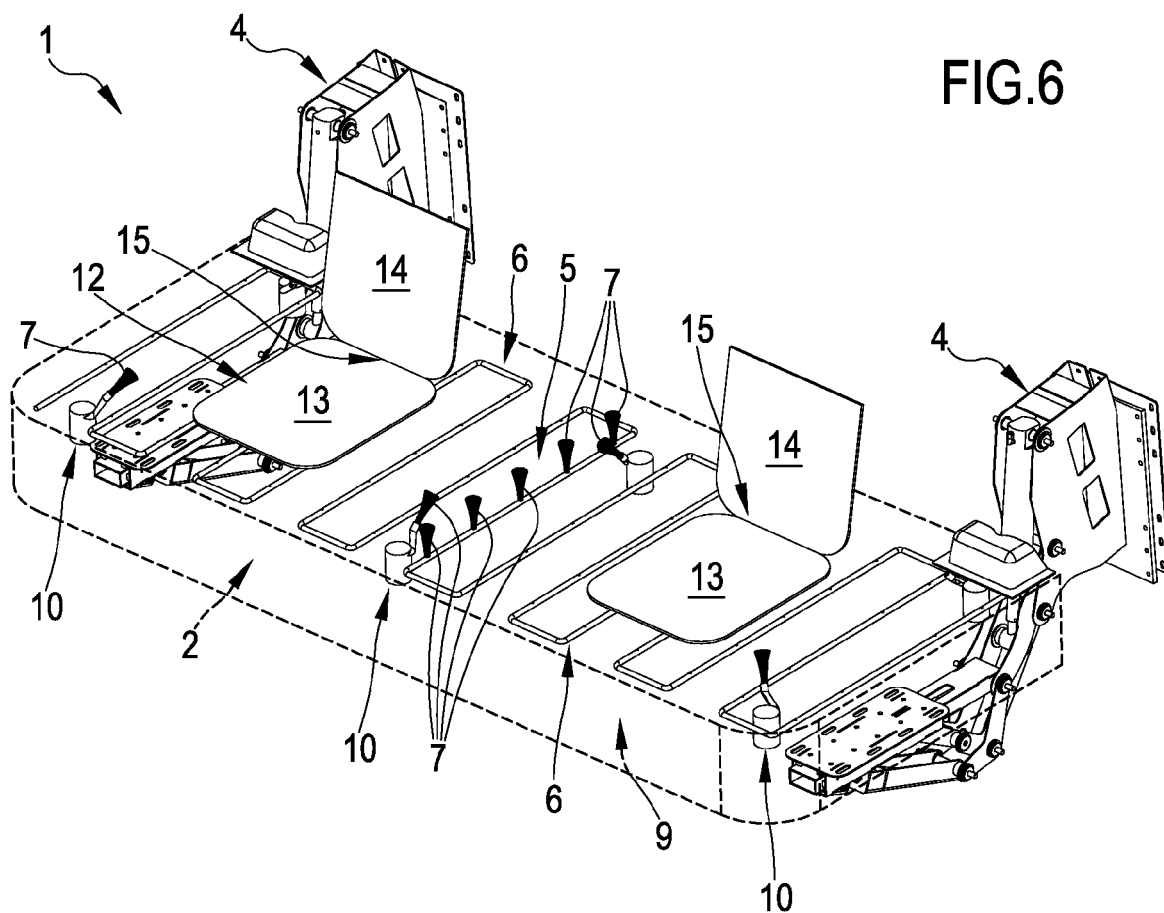


FIG.4







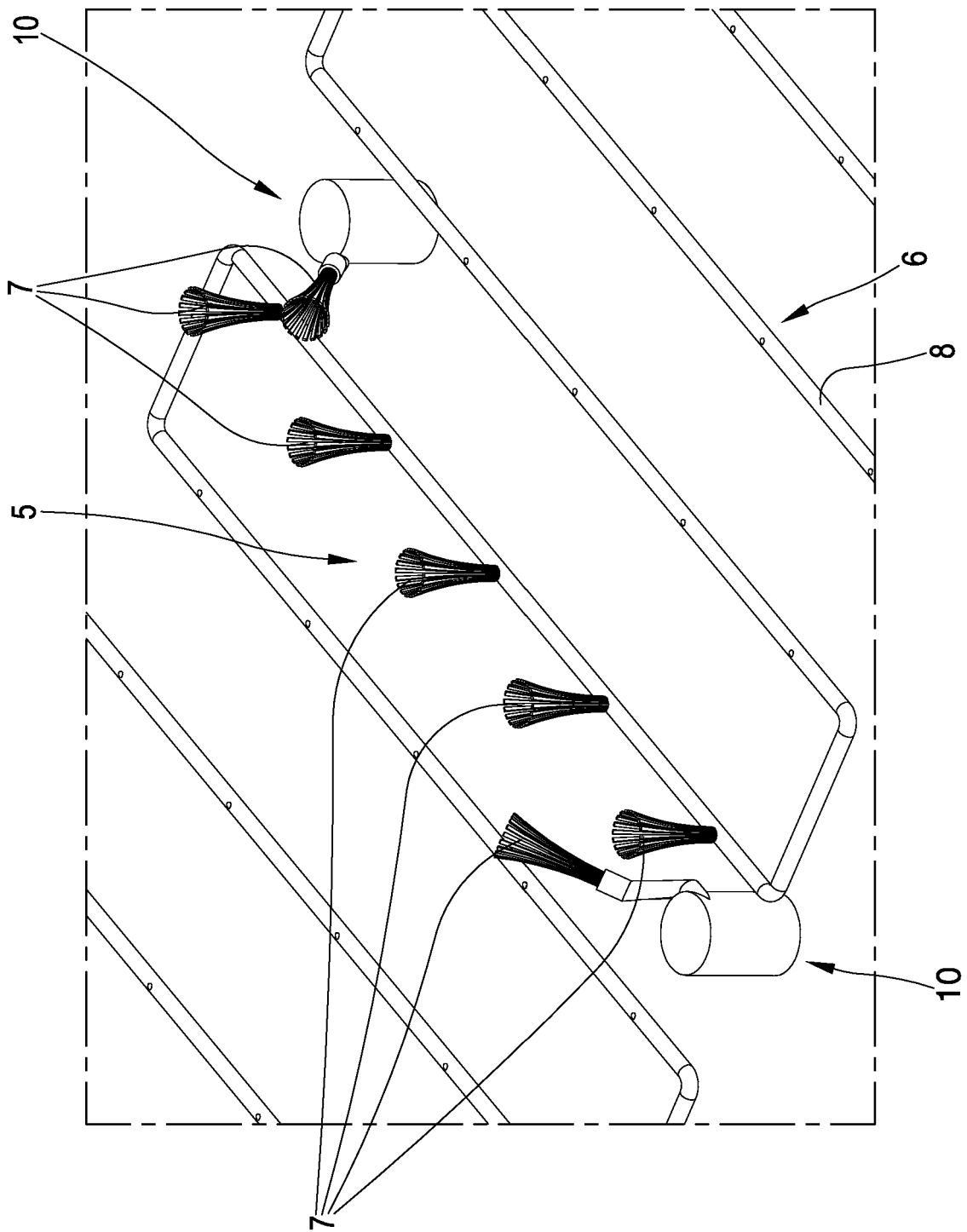


FIG.8



## EUROPEAN SEARCH REPORT

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	DE 20 2009 007141 U1 (H & B TECHNICS GMBH & CO KG [DE]) 20 August 2009 (2009-08-20) * figures *	1-14	INV. B63B27/14 A61H33/00 B63B35/73 B63B29/04 B63B29/02
A	FR 2 970 939 A1 (BEYNET JEAN MARC [FR]) 3 August 2012 (2012-08-03) * the whole document *	1-14	
A	US 6 672 240 B1 (AUBE MARTIN [CA] ET AL) 6 January 2004 (2004-01-06) * column 7, line 66 - column 8, line 6; figure 7 *	1-14	
A	US 8 899 169 B1 (JAZIRI CHADLEY [US]) 2 December 2014 (2014-12-02) * figures *	1-14	
A	US 2014/060414 A1 (BUCK LARRY RAY [US]) 6 March 2014 (2014-03-06) * figures *	1-14	
			TECHNICAL FIELDS SEARCHED (IPC)
			B63B A61H
The present search report has been drawn up for all claims			
Place of search <b>The Hague</b>		Date of completion of the search <b>31 January 2017</b>	Examiner <b>Schmitter, Thierry</b>
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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ON EUROPEAN PATENT APPLICATION NO.**

EP 16 17 5771

5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
The members are as contained in the European Patent Office EDP file on  
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31-01-2017

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 202009007141 U1	20-08-2009	NONE	
FR 2970939 A1	03-08-2012	NONE	
US 6672240 B1	06-01-2004	US 6672240 B1	06-01-2004
		US 2004031431 A1	19-02-2004
US 8899169 B1	02-12-2014	NONE	
US 2014060414 A1	06-03-2014	NONE	