HATCHES FOR USE IN BOATS

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ABSTRACT

This invention relates to a hatch opening on two opposite sides, which is mounted on a frame by articulation means disposed on two opposite faces of the hatch and the frame, wherein the articulation means comprise a plurality of pairs of lugs respectively integral with the hatch and the frame, at least one pair of which comprises a lug integral with the hatch which presents a housing open on one side, constituting a bearing in which is pivotally mounted a pin fixed to another lug integral with the frame and of which at least one other pair comprises a lug integral with the frame which presents a housing open on the opposite side, in which is pivotally mounted a pin fixed on another lug integral with the hatch.

This hatch is intended for use on boat decks and roofs.

4 Claims, 4 Drawing Figures
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HATCHES FOR USE IN BOATS

The present invention relates to a hatch opening on two opposite sides, which may be manoeuvred entirely from inside without outside intervention.

In boats, it is current practice to use hatches opening on one side, which enable different types of openings to be closed, located particularly on the bridge of a boat, and ventilation to be assured when there is fog or when it is raining hard.

However, the fact of ensuring the opening on one side only does not enable all the conditions of aeration which depend on the orientation of the wind and the boat to be fulfilled.

To remedy this disadvantage, hatches have already been made which open on two opposite sides, in which the means of articulation on a frame are constituted by hinges whose pins are removable so as to enable the hatch to be released on one side, whilst conserving the means of articulation on the other side.

However, such a device presents numerous drawbacks, particularly as far as reassembling the pins in the hinges is concerned, in view of the difficulties met with for engaging said pins in the holes of the hinges. Moreover, when the pins of the hinges are dismantled, the hatch may move freely on the bridge of the vessel and, in bad weather, it may be thrown into the sea. Furthermore, this device makes it necessary to go up onto the bridge to change sides as regards the pins of the hinges.

To remedy these disadvantages, a hatch opening on two opposite sides is used according to the invention, which presents means of articulation in which the pins remain integral with the hatch or frame and do not require any particular dismantling or reassembling of members.

In accordance with the invention, the hatch is mounted on a chassis by articulation means disposed on two opposite faces of the hatch and the frame, said articulation means comprising a plurality of pairs of lugs integral respectively with the hatch and the frame, at least one pair of which comprises a lug integral with the hatch which presents a housing open on one side constituting a bearing in which is pivotally mounted a pin fixed to another lug integral with the frame and of which at least one other pair comprises a lug integral with the frame which presents a housing open on the opposite side, in which is pivotally mounted a pin fixed on another lug integral with the hatch.

With this articulation device, it is possible to raise the hatch from the inside or the outside as desired and even to turn the hatch completely back, the hatch resting on the bridge of the boat whilst the articulation means remain engaged, thus ensuring that the hatch is held in position and does not move on the bridge, as is the case with the known devices.

Furthermore, the hatch is provided with concealable toggle fasteners which enable the hatch to be closed.

The invention will be more readily understood upon reading the following description with reference to the accompanying drawings, in which:

FIG. 1 is a plane view of a hatch according to the invention, mounted on its frame.

FIG. 2 is a section along II—II of FIG. 1, of the hatch in closed position.

FIG. 3 is the same view in section of the hatch open on the right-hand side.

FIG. 4 is the same view in section of the hatch open on the left-hand side.

Referring now to the drawings, FIGS. 1, 2, 3 and 4 show a hatch 1 mounted on a frame 2 which may be fixed in particular to the roof and deck of a boat.

The hatch 1 is constituted of a frame 3 made in particular of cast metal, like frame 2, and in which is mounted, with the interposition of a seal 4, a sheet 5 of transparent or tinted plastics material.

On its circumference, the hatch 1 is provided with an elastic seal 6 which may be compressed on the frame 2 to ensure the seal in closed position.

On two of the opposite faces of the hatch 1 there are provided means for articulating the hatch 1 to the frame 2, which comprise a first series of pairs of lugs 7 and 8, 9 and 10, 11 and 12, and a second series of pairs of lugs 7a and 8a, 9a and 10a, 11a and 12a. Since the articulation means are arranged symmetrically on the two sides of the hatch 1, only the means located on one side will be described.

As is shown in FIGS. 1, 2, 3 and 4, the lugs 8 and 12 which are integral with the frame 2, present housings 13 and 14 open on one side and constituting bearings in which are engaged pins 15, 16 fixed respectively on the lugs 7 and 11 integral with the hatch 1.

In the median part of the hatch, between lugs 8 and 12, the lug 10 or 10a integral with the frame 2 is provided with a pin 17, 17a which may be mounted to pivot in a housing 18, 18a open on the side opposite the housings 13 and 14, constituting a bearing and provided in a lug 9, 9a integral with the hatch 1.

On each articulated side of the hatch are provided, on the inside, toggle fasteners 19, 19a, 19b, 19c which each comprise a rod 20 engaged in a hole of a lug 21 integral with the frame 2. The rod 20 has on the one hand a threaded end 22 on which a nut 23 is screwed and on the other hand a head provided with two teeth 24, 24a, which may abut on two bosses 25, 25a integral with the hatch 1 when this latter is closed and when the nut 23 is screwed against the lug 21 of the head and the teeth 24, 24a.

Between the bosses 25, 25a, there is a space 26 permitting the passage of the head and the bosses 24, 24a, to release the toggle fastener and permit the hatch 1 to open.

There are provided on the two edges perpendicular to the edges bearing the articulation means, two telescopic bars 27, 27a which comprise an element 28 articulated about a screw 29 fixed to the hatch 1, said element 28 having a bore in which is slidably mounted an element 30 articulated about a screw 31 fixed to the frame 2. A lock screw 32 makes it possible to hold the telescopic bars 27, 27a in a position corresponding to a predetermined opening of the hatch 1, as shown in FIGS. 3 and 4.

Furthermore, the hatch 1 is provided with outside handles 33, 33a and inside handles 34, 34a.

With the hatch 1 being closed, as shown in FIGS. 1 and 2, the toggle fasteners being in their closed position, it is necessary, for opening the hatch, to unscrew the nuts 23 of the toggle fasteners 19, 19a, 19b, 19c and to release the teeth 24, 24a, from bosses 25, 25a to permit their passage into the space 26.

Then, it is sufficient to pivot the hatch 1 either about pins 15, 16 and 17 to open to the right, as shown in FIG. 3, or about pins 15a, 16a, 17a, to open to the left, as shown in FIG. 4.
In the case of the hatch opening, in particular to the right, the pins 15a and 16a may be released from recesses 13a and 14a since their opening is directed upwardly, whilst the housing 18a whose opening is directly downwards on the side opposite the recesses 13a and 14a may be released from the pin 17a which is fixed to frame 2.

The telescopic bars 27, 27a contribute to the guiding of the hatch and ensure that it is maintained in open position when the screws 32 and 32a are locked.

If the rocking movement is continued, the hatch 1 may be totally folded back after the elements 28 and 30 have been separated from the telescopic bars.

What I claim is:

1. A hatch assembly in which the hatch can be opened on a selected one of two opposite sides, which comprises a frame, a hatch, and articulation connector means disposed on each of two opposite sides of said hatch to connect same to said frame for pivotal movement relative to the frame about a selected one of two axes each located along a corresponding one of said opposite sides of the hatch, said connector means including on each side of the hatch at least one pin-bearing lug connected to the hatch received in an open-housing lug connected to the frame, and at least one pin-bearing lug connected to the frame received in an open-housing lug connected to the hatch, the openings of said open-housing lugs connected to the frame and connected to the hatch being oriented to face in respectively opposite directions.

2. A hatch assembly according to claim 1 including on each side of said hatch a pair of pin-bearing lugs connected to the hatch and received in open-housing lugs connected to said frame, and an open-housing lug connected to the hatch between said pin-bearing lugs and receiving a pin-bearing lug connected to said frame.

3. A hatch assembly according to claim 1 including releaseable lock means disposed on each side of said hatch, said lock means including parts connected to said hatch and parts connected to said frame that are mutually cooperable to secure the hatch to the frame in a closed position.

4. A hatch assembly according to claim 1 including telescopically extendible brace means connected to said hatch and connected to said frame, said brace means including lock means operable to secure the brace means in a given state of extension to hold the hatch at a corresponding open position.

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