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(54) **Window construction with a pane placed against a frame**

Fensterbau wobei das Fenster an einen Rahmen gestellt wird

Construction de fenêtre avec placement de la vitre contre un châssis

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(56) References cited:
**FR-A- 2 541 359 US-A- 3 016 548
US-A- 3 093 844 US-A- 3 978 535
US-A- 6 105 320 US-A1- 2003 110 718
US-B1- 6 557 480**

- **PATENT ABSTRACTS OF JAPAN** vol. 007, no. 279
(M-262), 13 December 1983 (1983-12-13) & JP 58
156478 A (YAMAHA HATSUDOKI KK), 17
September 1983 (1983-09-17)

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Description

BACKGROUND OF THE INVENTION:

Field of the invention

[0001] The invention relates to a window construction comprising a pane with two main sides, which pane can be placed with one of the main sides against a frame of a ship's construction, which window construction further comprises a mounting section, with which the pane can be connected to the frame of a ship's construction. Such a window construction is often used in ships so that of a whole wall only glass is visible on the outside. In this the pane is connected to the next pane via a thin cement layer.

Prior art

[0002] Such a window construction is known from closest prior art document US-A-200310110718. In this known window construction a pane is clamped against a frame of a ship's construction with a mounting section which is present on the other main side of the pane as with which the pane is placed against the frame of the ship's construction.

Summary of the invention

[0003] An objective of the invention is to provide a window construction of the sort described in the preamble with which the pane can be better placed on the frame of a ship's construction. For this purpose the window construction according to the invention is characterised in that solely on that main side of the pane with which the pane will be placed against a frame of a ship, a mounting section is fastened, and in that the opposite side of the pane is free from any mounting sections. The pane with its circumference edge present on the frame can thus be connected via the mounting section fastened on one side of the pane to a frame of a ship's construction and is not, clamped against the frame with the mounting section on the other side of the pane as the side with which the pane is in contact with the frame as with the known window construction. In this way the pane can be fastened to the frame without a part of the mounting section being on the outside of the pane.

[0004] Preferably the window construction according to the invention, in addition to the pane mentioned, comprises a further pane, which is present parallel to the above pane and is kept at a distance from it by means of spacers, in which the circumference of the further pane lies within the circumference of the pane mentioned, so that a circumference edge of the pane mentioned protrudes past the further pane, and in which the main side mentioned, with which the pane mentioned can be placed against a frame of a ship's construction, is that side of the pane mentioned that is turned towards the further

pane, in which the mounting section is present on the circumference edge of the pane mentioned. In these so-called double insulating panes, in the known window construction, the inside pane is glued to the frame of the ship, in which the weight of the thicker outermost pane and the strain on the spacer must be taken up fully by the relatively narrow glued connection between the spacer and the outer plate. This causes regular leakage in the known window construction between both insulating panes. In double insulating panes the window construction according to the invention thereby offers even more advantages than in window constructions with a single pane.

[0005] In the window construction according to the invention the mounting section is preferably glued to the pane.

[0006] An embodiment of the window construction according to the invention is characterised in that the window construction comprises at least one clamping block, which is detachable from the mounting section and which is provided with a hole with a screw thread in which a clamping bolt is present, which can be adjusted in a direction that is mainly at right angles to the main side of the pane, so that the window construction can be clamped against a strip, which is present on the frame of a ship's construction, in which the strip is present between the pane and the clamping bolt. Preferably a part of the mounting section is present opposite the clamping bolt in the adjustment direction of the clamping bolt, so that the strip can be clamped between this part and the clamping bolt.

[0007] A further embodiment of the window construction according to the invention is characterised in that the mounting section is provided with a groove on a side turned away from the main side of the pane for mounting a section for a woodwork finish or for mounting a covering strip

Brief description of the drawings

[0008] The invention will be elucidated more fully below on the basis of drawings in which embodiments of the window construction according to the invention are shown. In these drawings:

Figure 1 shows a first embodiment of the window construction according to the invention; and
Figure 2 shows a second embodiment of the window construction according to the invention.

Detailed description of the drawings

[0009] Figure 1 shows a first embodiment of the window construction according to the invention. The window construction 1 is placed against a frame 3 of a ship's construction. The frame 3 has an upright 7 to which a strip 9 is welded. The window construction 1 has two parallel panes 11, 13 kept apart by a spacer 10 and con-

nected together along the circumference. In this one of the panes 11, which is present on the outside of the window construction, is larger than the other pane 13. One of the main sides 17 of this largest pane 11 is placed near its edges 15 against the frame 3.

[0010] A mounting section 19 is glued to this main side 17 of the pane 11, which is connected to the strip 9 of the frame. For this purpose clamping blocks 23 have been inserted in a groove 21 in the mounting section, which are provided with holes with a screw thread, in which clamping bolts 25 are present. These clamping bolts can be adjusted in a direction at right angles to the main side 17 of the pane 11. In this a part 27 of the mounting section 19 is present opposite the clamping bolts 25, in the adjustment direction of the clamping bolts, so that the strip 9 of the frame is clamped between this part 27 and the clamping bolts 25.

[0011] The window construction 1 is finished by applying a cement layer 29 to the edges 15 of the pane 11 and between the mounting section 19 and the window 5, as well as by clicking a flexible covering strip 31 into a protrusion 35 present in a side 33 of the mounting section 19 turned away from the main side of the pane. Moreover a flexible strip 37 is present between the pane 11 and the frame 3.

[0012] Figure 2 shows a second embodiment of the window construction according to the invention. All parts of this window construction 41, which are equal to those of the first embodiment, are indicated by the same reference numbers. In this window construction 39, the pane 11 is connected to a bottom 43 of the frame 3 of the ship's construction, in which strips 45 are fastened to the bottom 43. Moreover in this a section 47 has been provided in the protrusion 35 to provide a woodworking finish instead of a covering strip.

[0013] Although in the above the invention is explained on the basis of the drawings, it should be noted that the invention is in no way limited to the embodiments shown in the drawings. The invention also extends to all embodiments deviating from the embodiments shown in the drawings within the context defined by the claims.

Claims

1. Window construction (1; 41) comprising a pane (11) with two main sides, which pane can be placed with one of the main sides (17) against a frame (3) of a ship's construction, which window construction further comprises a mounting section (19), with which the pane can be connected to the frame of a ship's construction, **characterised in that** solely on that main side (17) of the pane (11) with which the pane will be placed against a frame (3) of a ship the said mounting section (19) is fastened, and **in that** the opposite side of the pane is free from any mounting sections.

2. Window construction (1; 41) according to claim 1, **characterised in that** the window construction (1; 41), in addition to the pane mentioned (11), comprises a further pane (13), which is present parallel to and is kept apart from the pane mentioned by means of spacers (10), in which the circumference of the further pane (13) lies within the circumference of the pane mentioned (11), so that a circumference edge (15) of the pane mentioned (11) protrudes past the further pane (13), and in which the main side mentioned (17), with which the pane mentioned (11) can be placed against a frame (3) of a ship's construction, is the side (17) of the pane mentioned (11) that is turned towards the further pane (13), in which the mounting section (19) is present on the circumference edge (15) of the pane mentioned (11).

3. Window construction (1; 41) according to claim 1 or 2, **characterised in that** the mounting section (19) is glued to the pane (11).

4. Window construction (1; 41) according to claim 1, 2 or 3, **characterised in that** the window construction (1; 41) comprises at least one clamping block (23) which is detachable from the mounting section (19) and which is provided with a hole with a screw thread in which a clamping bolt (25) is present, which can be adjusted in a direction that is mainly at right angles to the main side (17) of the pane (11), so that the window construction (1; 41) can be clamped against a strip (9) present on the frame (3) of a ship's construction, in which the strip is present between the pane (11) and the clamping bolt (25).

5. Window construction (1; 41) according to claim 4, **characterised in that** a part (27) of the mounting section (19) is present opposite the clamping bolt (25) in the adjustment direction of the clamping bolt, so that the strip (9) can be clamped between this part (27) and the clamping bolt (25).

6. Window construction (1; 41) according to one of the preceding claims, **characterised in that** the mounting section (19) is provided with a protrusion (35) on the side (33) turned away from the main side (17) of the pane (11) for mounting a section (47) for a woodwork finish or for mounting a covering strip (31).

Patentansprüche

1. Fensterkonstruktion (1; 41), die eine Scheibe (11) mit zwei Hauptseiten umfasst, von denen eine der Hauptseiten (17) an einem Rahmen (3) einer Schiffskonstruktion angebracht werden kann, wobei die Fensterkonstruktion ferner ein Montageprofil (19) umfasst, das die Verbindung der Scheibe mit dem Rahmen der Schiffskonstruktion ermöglicht, **da-**

durch gekennzeichnet, dass das erwähnte Montageprofil (19) nur an jener Hauptseite (17) der Scheibe (11) befestigt ist, mit der die Scheibe an einem Rahmen (3) eines Schiffs angebracht wird, und dass die gegenüberliegende Seite der Scheibe frei von Montageprofilen ist.

2. Fensterkonstruktion (1;41) **dadurch gekennzeichnet, dass** die Fensterkonstruktion (1;41) neben der erwähnten Scheibe (11) eine weitere Scheibe (13) umfasst, die parallel und mit Hilfe von Abstandhaltern (10) im Abstand zu der erwähnten Scheibe angeordnet ist, wobei die äußeren Ränder der weiteren Scheibe (13) innerhalb der äußeren Ränder der erwähnten Scheibe (11) verlaufen, so dass die erwähnte Scheibe (11) mit einem der Ränder (15) über die weitere Scheibe (13) hinausragt, wobei es sich bei der erwähnten Hauptseite (17), mit der die erwähnte Scheibe (11) an einem Rahmen (3) einer Schiffskonstruktion angebracht werden kann, um die der weiteren Scheibe (13) zugewandte Seite (17) der erwähnten Scheibe (11) handelt und wobei das Montageprofil (19) entlang dem äußeren Rand (15) der erwähnten Scheibe (11) verläuft.
3. Fensterkonstruktion (1;41) nach einem der Ansprüche 1 oder 2, **dadurch gekennzeichnet, dass** das Montageprofil (19) auf die Scheibe (11) aufgeklebt ist.
4. Fensterkonstruktion (1;41) nach einem der Ansprüche 1, 2 oder 3, **dadurch gekennzeichnet, dass** die Fensterkonstruktion (1;41) mindestens eine Spannhalterung (23) umfasst, die lösbar mit dem Montageprofil (19) verbunden und mit einem mit Gewinde versehenen Loch versehen ist, in der sich eine Klemmschraube (25) befindet, die in einer hauptsächlich im rechten Winkel zur Hauptseite (17) der Scheibe (11) verlaufenden Richtung verstellbar ist, so dass die Fensterkonstruktion (1;41) gegen eine an dem Rahmen (3) einer Schiffskonstruktion vorhandene Schiene (9) geklemmt werden kann, wobei die Schiene zwischen der Scheibe (11) und der Klemmschraube (25) angeordnet ist.
5. Fensterkonstruktion (1;41) nach Anspruch 4, **dadurch gekennzeichnet, dass** ein Teil (27) des in der Verstellrichtung der Klemmschraube (25) liegenden Montageprofils (19) der Klemmschraube gegenüberliegt, so dass die Schiene (9) zwischen diesem Teil (27) und der Klemmschraube (25) festgeklammert werden kann.
6. Fensterkonstruktion (1;41) nach einem der vorangehenden Ansprüche, **dadurch gekennzeichnet, dass** das Montageprofil (19) an einer Seite (33), die der Hauptseite (17) der Scheibe (11) abgewandt ist, mit einer Aussparung (35) für die Montage eines Pro-

fils (47) versehen ist, um eine Holzverkleidung anbringen oder ein Verkleidungsprofil (31) montieren zu können.

Revendications

1. Construction de fenêtre (1;41) comprenant une vitre (11) avec deux côtés principaux, laquelle vitre peut être placée, avec un des côtés principaux (17), contre un cadre (3) d'une construction de bateau, laquelle construction de fenêtre englobe également un profilé de montage (19) avec lequel la vitre peut être reliée au cadre de la construction de bateau, **caractérisée en ce que** ledit profilé de montage (19) est uniquement fixé sur le côté principal (17) de la vitre (11), avec lequel la vitre sera placée contre un cadre (3) d'un bateau et **en ce que** le côté opposé de la vitre est libre des profilés de montage.
2. Construction de fenêtre (1;41) selon la revendication 1, **caractérisée en ce que** la construction de fenêtre (1;41) comprend, outre ladite vitre (11), une autre vitre (13) qui se trouve parallèlement à ladite vitre (11) dont elle est séparée au moyen d'écarteurs (10) et **en ce que** le pourtour de l'autre vitre (13) se trouve au sein du pourtour de ladite vitre (11) de sorte que ladite vitre (11) se trouve en saillie de l'autre vitre (13) avec un bord de pourtour (15) et **en ce que** ledit côté principal (17), avec lequel ladite vitre (11) peut être placée contre un cadre (3) d'une construction de bateau est le côté (17) de ladite vitre (11) qui est orientée vers l'autre vitre (13), le profilé de montage (19) étant placé sur le bord de pourtour (15) de ladite vitre (11).
3. Construction de fenêtre (1;41) selon la revendication 1 ou 2, **caractérisée en ce que** le profilé de montage (19) est collé sur la vitre (11).
4. Construction de fenêtre (1;41) selon la revendication 1, 2 ou 3, **caractérisée en ce que** la construction de fenêtre (1;41) comprend au moins un bloc de serrage (23) qui est relié de manière amovible au profilé de montage (19) et qui est doté d'un trou avec filetage dans lequel un boulon de serrage (25) est présent, qui est réglable dans un sens essentiellement perpendiculaire par rapport au côté principal (17) de la vitre (11), de sorte que la construction de fenêtre (1;41) peut être serrée contre une barre (9) présente sur le cadre (3) d'une construction de bateau, laquelle barre est présente entre la vitre (11) et le boulon de serrage (25).
5. Construction de fenêtre (1;41) selon la revendication 4, **caractérisée en ce qu'une** partie (27) du profilé de montage (19) est présente dans le sens de réglage du boulon de serrage (25) en face du boulon

de serrage, de sorte que la barre (9) peut être serrée entre cette partie (27) et le boulon de serrage (25).

6. Construction de fenêtre (1;41) selon une des revendications précédentes, **caractérisée en ce que** le profilé de montage (19) est doté, sur un côté opposé (33) au côté principal (17) de la vitre (11), d'un évidement (35) pour montage d'un profilé (47) destiné à la finition ou au montage d'une barre de protection (31).

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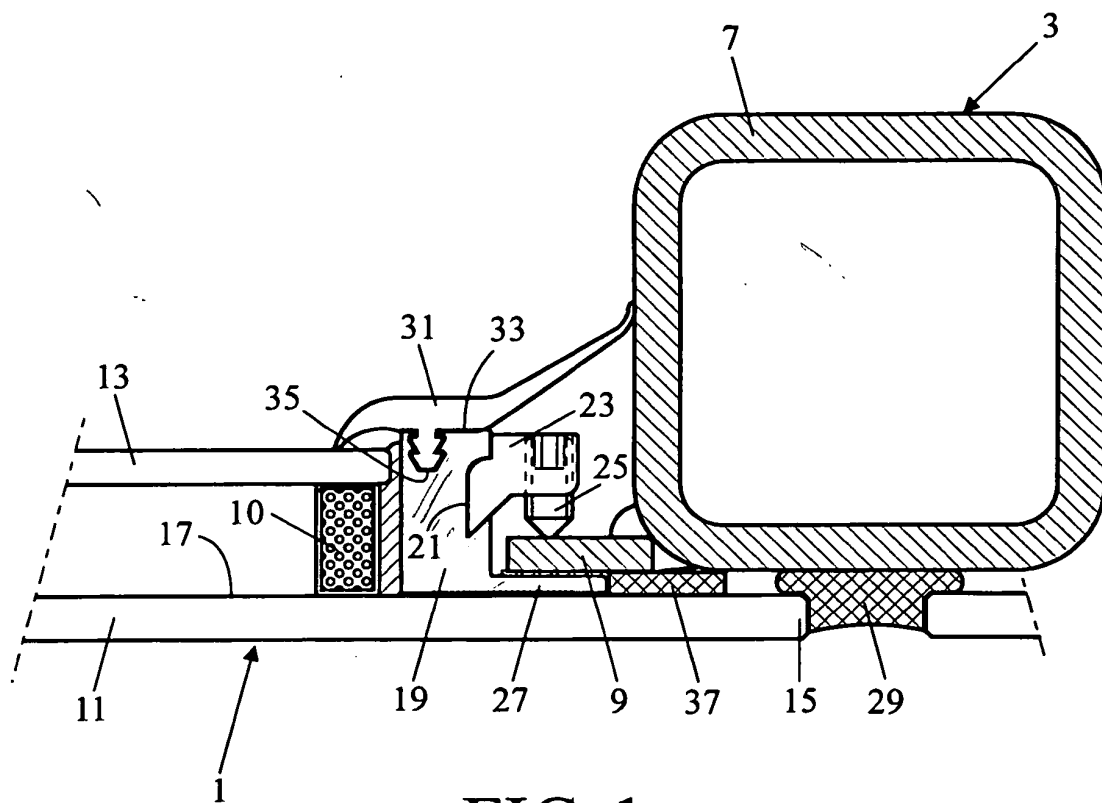


FIG. 1

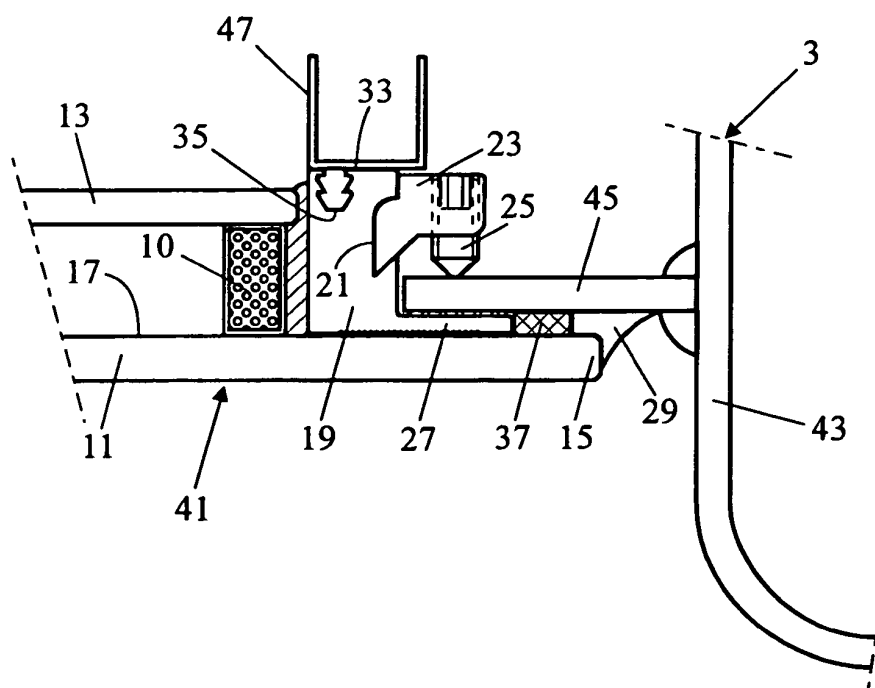


FIG. 2

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- US 200310110718 A [0002]