



(11) **EP 2 157 272 A2**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:  
**24.02.2010 Bulletin 2010/08**

(51) Int Cl.:  
**E06B 7/10 (2006.01)**

(21) Application number: **09447037.4**

(22) Date of filing: **07.08.2009**

(84) Designated Contracting States:  
**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 SE SI SK SM TR**  
Designated Extension States:  
**AL BA RS**

(71) Applicant: **Reynaers Aluminium, naamloze vennootschap**  
**2570 Duffel (BE)**

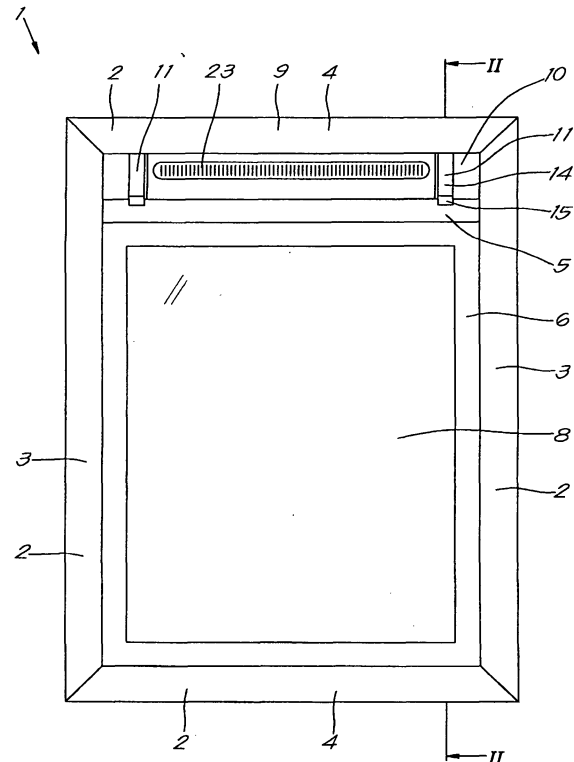
(72) Inventor: **VanderVelden, Stefan**  
**2600 Berchem (BE)**

(30) Priority: **12.08.2008 BE 200800443**

(74) Representative: **Donné, Eddy et al**  
**Bureau M.F.J. Bockstael nv**  
**Arenbergstraat 13**  
**2000 Antwerpen (BE)**

(54) **Frame for a window, door or the like**

(57) Frame (1) for a window, a door or the like, which is formed of mutually connected posts (2), **characterised in that** an additional post (5) is provided on the inside or outside of the frame (1) by means of a rigid fastening, which together with the aforesaid frame (1), in particular called the main frame, forms a secondary frame (6) for mounting a panel (8) or a pivoting or sliding wing (25), and in that the aforesaid additional post (5) is mounted at a distance from one of the posts (9) of the main frame (1) so as to form a ventilation passage (10), and in that the aforesaid additional post (5) continues between two parallel posts (3) of the main frame (1) and is connected to the opposite post (9) of the main frame (1), which connects the above-mentioned parallel posts (3), by means of supports (11) which are mounted at a distance from one another.



*Fig. 1*

**EP 2 157 272 A2**

## Description

**[0001]** The present invention concerns a frame for a window, a door or the like.

**[0002]** In particular, the invention aims a fixed frame which is fixed in a wall opening and which is formed of posts that are mutually connected.

**[0003]** It is known that such frames can be provided with ventilation means.

**[0004]** To this end, in the known devices, the surface of the glass panel or the like is selected somewhat smaller than the surface which is surrounded by the frame, such that a ventilation post can be provided above the glass panel.

**[0005]** A disadvantage is that said ventilation post must be installed simultaneously with the glass panel, and consequently this can only be done at the building site.

**[0006]** Another disadvantage is that the presence of the ventilation post hinders the installation of glazing beads.

**[0007]** Yet another disadvantage is that many punch holes need to be provided to create openings.

**[0008]** In order to avoid said installation on the building site, it is also possible to provide the ventilation post above the fixed frame, such that the ventilation post is enclosed in the space between the fixed frame and the wall opening. A disadvantage is that with such a mounting, the fixed frame cannot be anchored in the wall on all sides due to the presence of the post.

**[0009]** An additional disadvantage is that the dimensions of the ventilation post must correspond with the dimensions of the space provided in the frame.

**[0010]** The present invention aims to remedy one or several of the above-mentioned and/or other disadvantages by providing a frame for a window, a door or the like which is formed of mutually connected posts, whereby an additional post is provided on the inside or the outside of the frame by means of a rigid fastening, whereby the additional post, together with the aforesaid frame, in particular called the main frame, forms a secondary frame for mounting a panel or a pivoting or sliding wing, whereby the aforesaid additional post is mounted at a distance from one of the posts of the main frame so as to form a ventilation passage, and whereby the aforesaid additional post continues between two parallel posts of the main frame and is connected to the opposite post of the main frame, which connects the above-mentioned parallel posts, by means of supports which are mounted at a distance from one another.

**[0011]** An advantage is that the secondary frame of the window, the door or the like can be mounted in the manner that has been used up to now for conventional windows without any ventilation.

**[0012]** An advantage related thereto is that the frame can be fixed in the wall opening on all sides, such that a firm anchorage is obtained.

**[0013]** Another advantage is that the additional post can be put in the main frame before mounting the main

frame.

**[0014]** An additional advantage is that no special punch holes are required.

**[0015]** The space between the main frame and the additional post can be used to apply controllable ventilation means, consisting for example of one or several ventilation units which can be either or not removed, whereby these ventilation means may be self-regulating.

**[0016]** Another advantage is that the ventilation means must not be mounted simultaneously with the glass panel.

**[0017]** Yet another advantage is that the ventilation units are easy to replace and to maintain.

**[0018]** Another major advantage is that the supports are made as separate elements, such that a modular system is obtained, whereby the number of supports and the position of these supports can be adjusted as a function of the dimensions of the ventilation units to be applied and/or of the passage in the post.

**[0019]** According to a practical variant of the invention, the supports are thereby provided in a sliding and/or clamping manner in a guide in the additional post.

**[0020]** Thus is obtained a frame whereby the user has the possibility to provide several ventilation units in the frame, whereby every ventilation unit is fixed in the ventilation passage by means of two supports, and whereby every unit can be individually removed or replaced.

**[0021]** In order to better explain the characteristics of the invention, the following preferred embodiment of a frame according to the invention is described with reference to the accompanying drawings, in which:

figure 1 schematically represents a front view of the frame according to the invention;

figure 2 is a section according to line II-II in figure 1, but for a frame which has already been provided with a glass panel and additional parts;

figure 3 shows the section of figure 2 when opened;

figures 4 to 6 represent the section of figure 2 in some alternative embodiments of the invention.

**[0022]** Figure 1 schematically represents a frame 1 for a window, a door or the like, which frame 1 is formed of mutually connected posts 2 in the known manner.

**[0023]** The aforesaid frame 1, called in particular the main frame, is built of two pairs of parallel posts 3-4 which have been mitred, such that they can be provided within a rectangular wall opening.

**[0024]** According to the invention, this main frame 1 is provided with an additional post 5, which together with the main frame 1 forms a secondary frame 6. In the embodiment of figures 1 to 4, this secondary frame forms a smaller inner frame.

**[0025]** The posts 2 of the main frame 1 and the additional post 5 are provided with an inwardly protruding rib 7, against which a glass panel 8 or another panel may rest, as shown in figure 2.

**[0026]** According to the invention, the additional post

5 is mounted at a distance from a post 2, i.e. in the given embodiment of the figures the upper post 9 of the main frame 1, so as to form a ventilation passage 10.

**[0027]** According to the invention, the additional post 5 continues between two parallel posts 3 of the main frame 1, and the additional post 5 is connected to said upper post 9 of the main frame 1 by means of one or several supports 11.

**[0028]** In a preferred embodiment, several supports 11 are mounted at a distance from one another, and the supports 11 are firmly fixed to a post 9 of the main frame 1, for example by means of screws 12.

**[0029]** It is clear that, in this embodiment, the supports are not part of the frame, but that they are made as separate elements so as to obtain a modular system.

**[0030]** The supports 11 can be provided in a sliding manner in relation to the additional post 5 in a guide 13 provided to that end.

**[0031]** In an alternative embodiment of the invention, the supports 11 may be firmly fixed in a guide 13 of the additional post 5 provided to that end, and they may be provided in a clamping manner in a guide of the opposite post.

**[0032]** In other practical embodiments of the invention, the supports 11 may also be arranged in a clamping manner or they may be mounted upside down.

**[0033]** Neither is it excluded to fix the supports 11 by means of screws.

**[0034]** In the given embodiment, each of the above-mentioned supports 11 is formed of a body 14 which is provided with a foot 15 on the bottom side extending at an angle in relation to the body 14.

**[0035]** The above-mentioned foot 15 has a shape which is fit to cooperate with the guide 13 of the additional post 5. In the given embodiment, said guide 13 consists of two standing ribs 16 on the additional post 5, whereby the far ends 17 of the ribs 16 are at right angles to the ribs 16.

**[0036]** In a practical embodiment of the invention, the above-mentioned ventilation passage 10 can be sealed on the inside by means of a valve 18 arranged in a revolving manner between a closed and an open position, which valve 18 is represented in the section of figures 2 and 3, in a closed and open position respectively.

**[0037]** The valve 18 as represented is hinge-mounted by means of a hinge 19, provided on a foot 15 of the support 11, for example by means of a snap-in system.

**[0038]** However, it is not excluded according to the invention to integrate the hinge 19 in the additional post 5 and/or to connect it to the support 11 in any way whatsoever, such as for example by means of screws.

**[0039]** The valve 18 may be provided with a protruding cam 20 which may be in turn connected to a control element, not represented in the figures, such as for example a rod or the like.

**[0040]** In the embodiment of figure 1, the above-mentioned ventilation passage 10 is covered with a grid 21 on the other side, i.e. on the outside.

**[0041]** Naturally, the invention can also be realised without a grid 21.

**[0042]** In the given embodiment of figure 2, said grid 21 has been integrated in the additional post 5.

5 **[0043]** In another embodiment, the grid 21 can also be mounted on a post of the frame 1.

**[0044]** The grid 21 can be provided with an outwardly protruding drain post 22 which is part of the grid 21.

10 **[0045]** In an alternative embodiment, the drain post 22 can be provided as a separate post and loose from the additional post 5.

**[0046]** Neither is it excluded according to the invention to fix the grid 21 as a supplementary post on the additional post 5.

15 **[0047]** In alternative embodiments of the invention, the above-mentioned side of the ventilation passage 10 may be covered with a gauze.

**[0048]** In a practical embodiment of the invention, at least one removable ventilation unit 23 is provided in the space between the main frame 1 and the additional post 5.

**[0049]** The entire width of the space will be preferably filled with a series of ventilation units 23, whereby the width of each ventilation unit 23 mainly corresponds to the distance between the successive supports 11, such that the ventilation units 23 can be provided between the supports 11 or removed from in between them, for example for maintenance or repair activities.

25 **[0050]** In a practical embodiment, each of the above-mentioned ventilation units 23 is provided with fastening elements which snap in behind one or several of the edges, not represented in the figures, which define the ventilation passage.

30 **[0051]** The ventilation unit 23 may be either or not made as a self-regulating ventilation unit 23, such that a constant free flow of air is obtained.

**[0052]** The mounting of the frame 1 according to the invention is very simple and as follows.

40 **[0053]** In the workshop, the frame 1 is assembled in a traditional manner with the ventilation units 23. On the building site, the assembled frame is placed in the wall opening, after which the glass panel 8 can be placed.

**[0054]** Figure 4 shows an alternative embodiment whereby the glass panel 8 is not mounted directly in the fixed frame 1 as in figures 1 and 2, but whereby the glass panel 8 is provided in a wing 24 provided in a pivoting manner in an analogously fixed frame as that of figures 1 and 2.

45 **[0055]** Figure 5 shows another alternative embodiment to be applied in a composed element or the like.

**[0056]** Figure 6 shows yet another alternative embodiment related to a sliding door which is built-in in a fixed frame with an additional post so as to form an additional space to mount the ventilation units in.

55 **[0057]** As opposed to the embodiments of the preceding figures, the additional post 5 is hereby provided on the outside of the frame 1, and the secondary frame thus forms an outer frame which is larger than the main frame

1.

**[0058]** It is clear that the additional post can also be mounted with other means than with the described supports.

**[0059]** It is also clear that the ventilation units must not be necessarily made as removable cassettes, but that they may also be built-in as fixed ventilation units or elements.

**[0060]** The present invention is by no means restricted to the embodiments described by way of example and represented in the accompanying drawings; on the contrary, such a frame according to the invention can be made in all sorts of shapes and dimensions while still remaining within the scope of the invention.

### Claims

1. Frame (1) for a window, a door or the like, which is formed of mutually connected posts (2), **characterised in that** an additional post (5) is provided on the inside or outside of the frame (1) by means of a rigid fastening, which together with the aforesaid frame (1), in particular called the main frame, forms a secondary frame (6) for mounting a panel (8) or a pivoting or sliding wing (25), and **in that** the aforesaid additional post (5) is mounted at a distance from one of the posts (9) of the main frame (1) so as to form a ventilation passage (10), and **in that** the aforesaid additional post (5) continues between two parallel posts (3) of the main frame (1) and is connected to the opposite post (9) of the main frame (1), which connects the above-mentioned parallel posts (3), by means of supports (11) which are mounted at a distance from one another.

2. Frame (1) according to claim 1, **characterised in that** the supports (11) are provided in a guide (13) of the additional post (5) in a sliding or clamping manner and are firmly fixed to the opposite post (9) of the fixed frame (1).

3. Frame (1) according to claim 1, **characterised in that** the supports (11) are firmly fixed in a guide (13) of the additional post (5) and are provided in a clamping manner in a guide of the opposite post (9) of the fixed frame (1).

4. Frame (1) according to any one of the preceding claims, **characterised in that** the ventilation passage (10) can be sealed by means of a valve (18) on one side, arranged in a revolving manner between an open and a closed position.

5. Frame (1) according to claim 4, **characterised in that** the support (11) is provided with a foot (15) and **in that** the valve (18) is hinge-mounted by means of a hinge (19) which is fixed to the foot (15) of the

above-mentioned support (11) by means of a snap-in system or by means of a hinge which has been integrated in the additional post or by means of a hinge which is screwed on the additional post (5) or on the foot (15).

6. Frame (1) according to any one of the preceding claims, **characterised in that** the ventilation passage (10) is covered with a grid (21) or a gauze on one side.

7. Frame (1) according to claim 6, **characterised in that** the grid (21) is formed as a post which is fixed to or which is part of the additional post (5) or which is fixed to a post of the frame (1).

8. Frame (1) according to claim 6 or 7, **characterised in that** the grid (21) is provided with an outwardly protruding drain post (22) which is part of the grid (21) or which has been provided as a supplementary post.

9. Frame (1) according to any one of the preceding claims, **characterised in that** at least one removable ventilation unit (23) is provided in the space between the main frame (1) and the additional post (5).

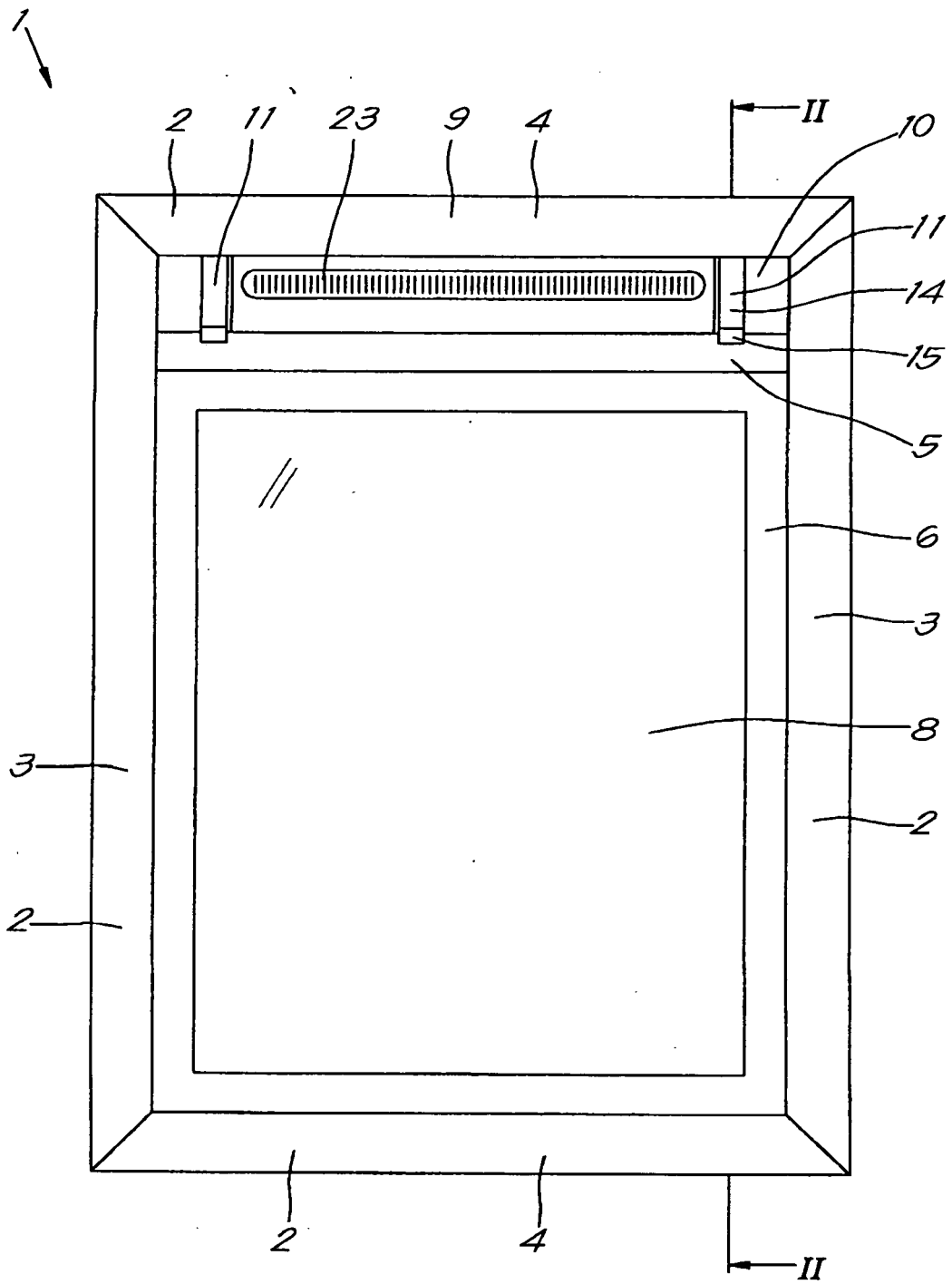
10. Frame (1) according to any one of the preceding claims, **characterised in that** the space is filled with a series of ventilation units (23) whose width mainly corresponds to the distance between the supports (11).

11. Frame (1) according to claim 9 or 10, **characterised in that** the ventilation unit (23) is self-regulating.

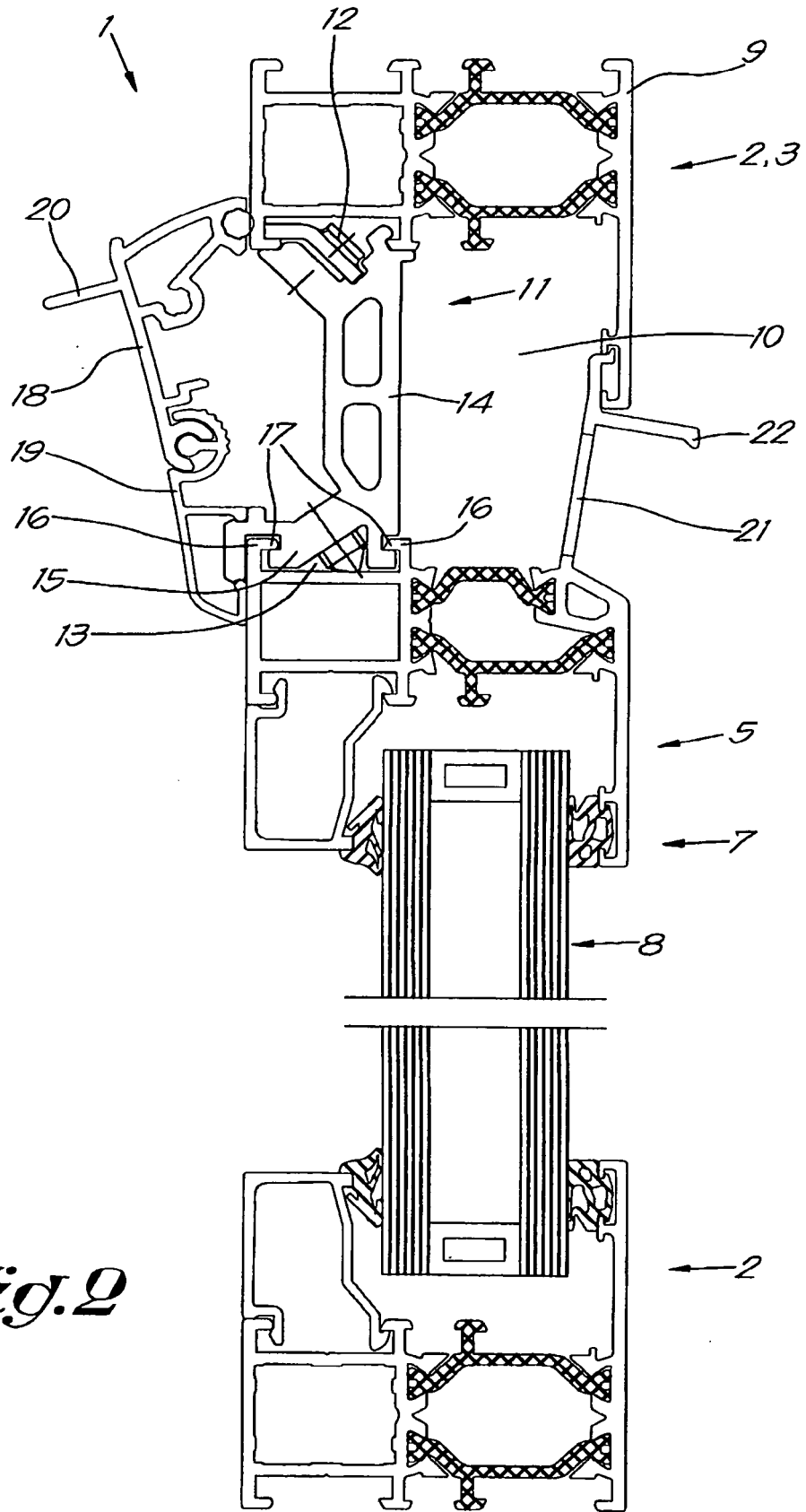
12. Frame (1) according to claim 10 or 11, **characterised in that** the ventilation units (23) are provided with fastening means which snap in behind one or several edges which define the ventilation passage (10).

13. Frame (1) according to any one of the preceding claims, **characterised in that** the main frame (1) is a fixed frame to be mounted in a wall opening.

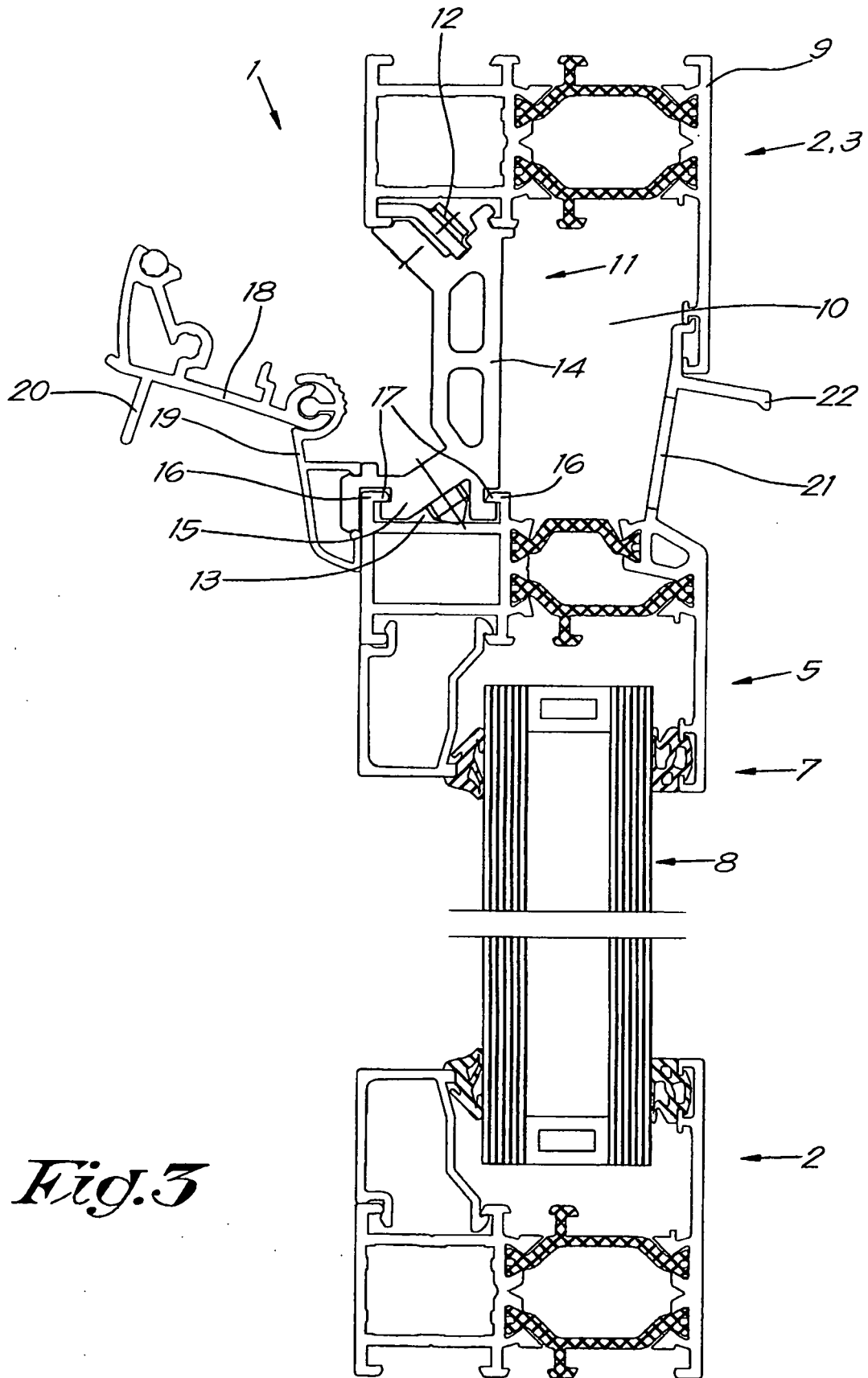
14. Frame (1) according to any one of the preceding claims, **characterised in that** the main frame (1) is a frame of a pivoting or sliding wing (24) of the window or the door.



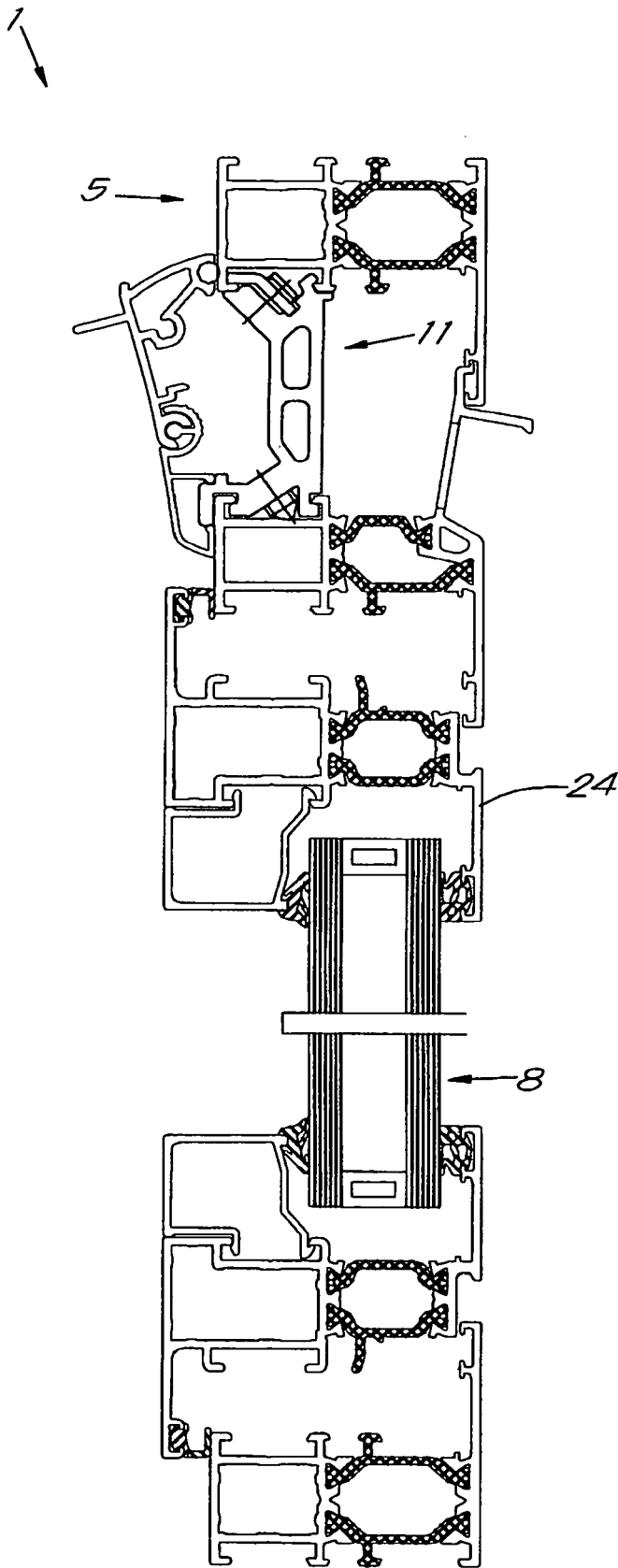
*Fig. 1*



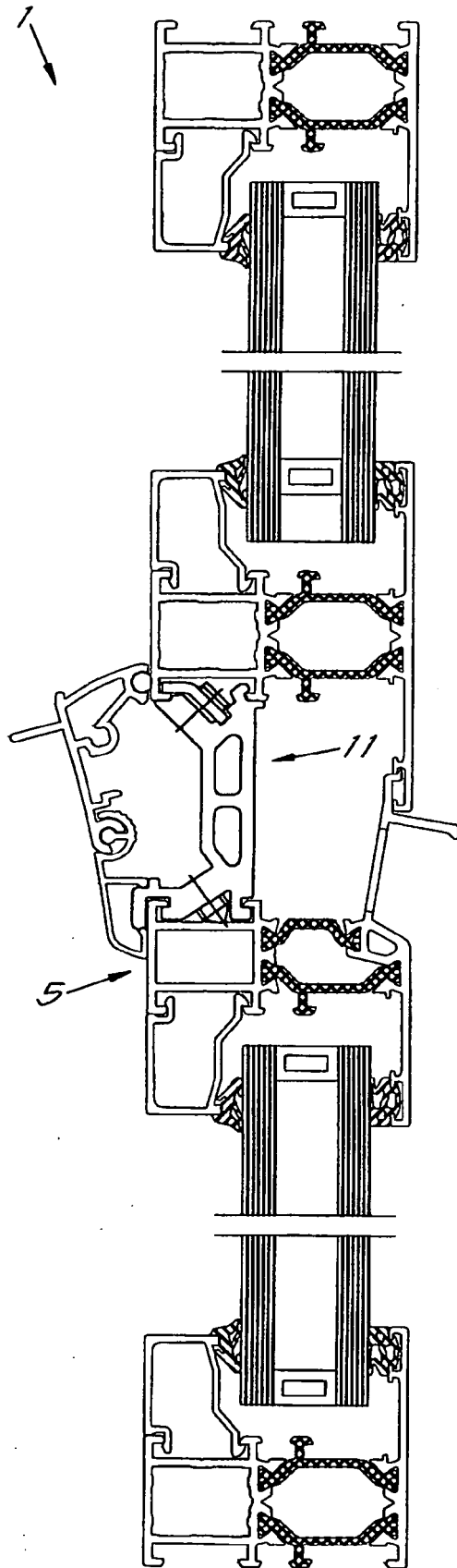
*Fig. 2*



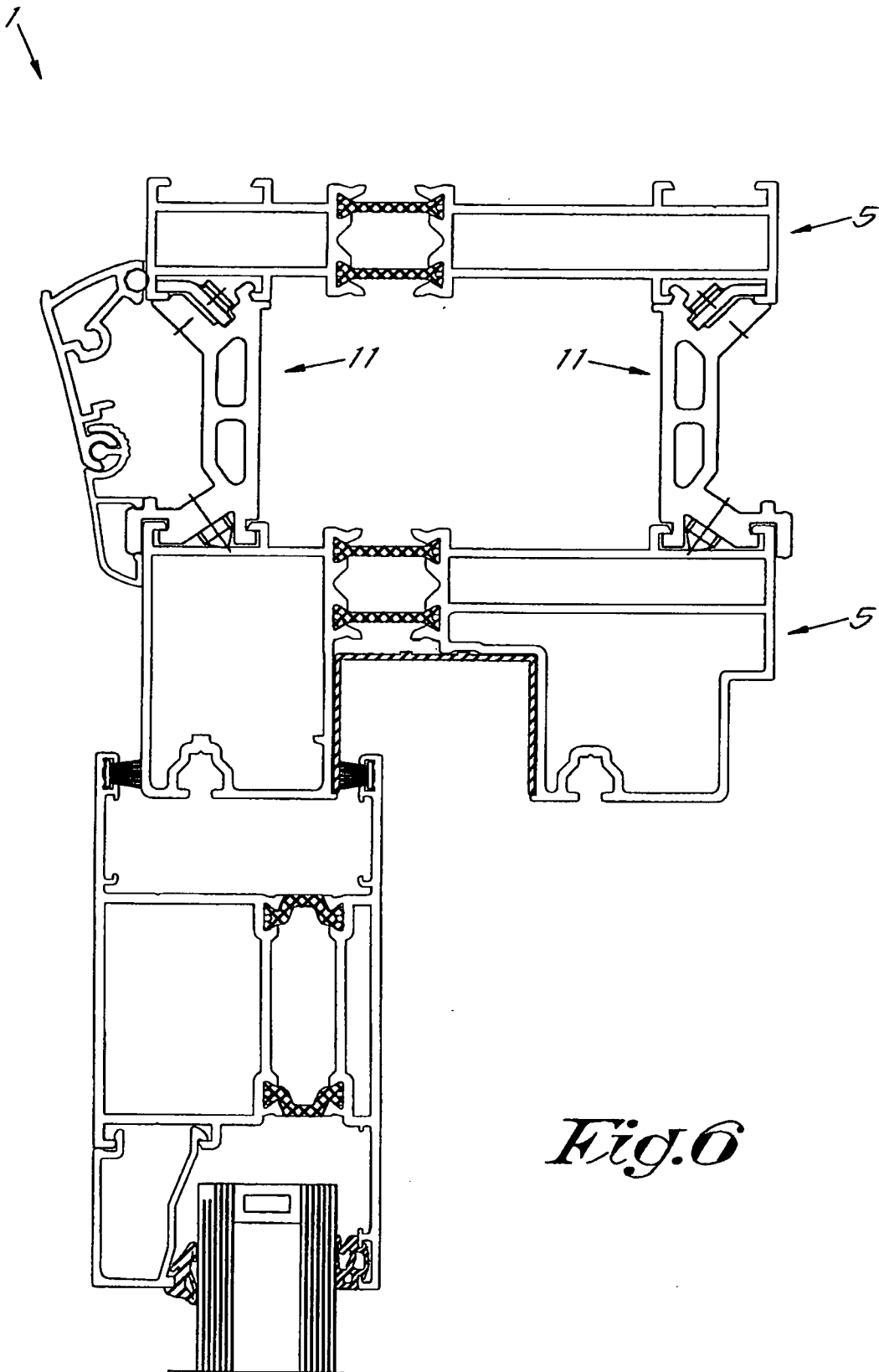
*Fig. 3*



*Fig. 4*



*Fig.5*



*Fig.6*