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(54) **Window assembly with cover panel assembly to cover window opening**

(57) A window assembly suitable for being mounted in a window opening. The assembly comprising a window frame made up of a number of frame members where one of said frame members is fastened to the window opening, a window sash made up of a number of sash elements, a mounting fitting which connects one of said sash elements with one of said frame members, a window pane arranged in said window sash and a cover panel assembly comprising a number of cover panel elements, where one of said cover panel elements is fastened to one of said frame members such that the surface of the window opening which faces the centre of the window assembly is at least partially covered by said cover panel

element. The cover panel assembly is arranged such that in a cross section taken through one of the sides of the window assembly and being arranged on a plane which is perpendicular to the longitudinal axis of the frame member of said side of the window assembly, the cover panel element covers at least a portion of a surface of the frame member which faces in towards the centre of the window assembly and such that the outermost edge of the surface of the cover panel which faces in towards the centre of the window assembly is arranged flush with or closer to the centre of the window assembly than the innermost edge of the surface of the window sash element which is arranged on the inside of the window pane and which faces in towards the centre of the window assembly.

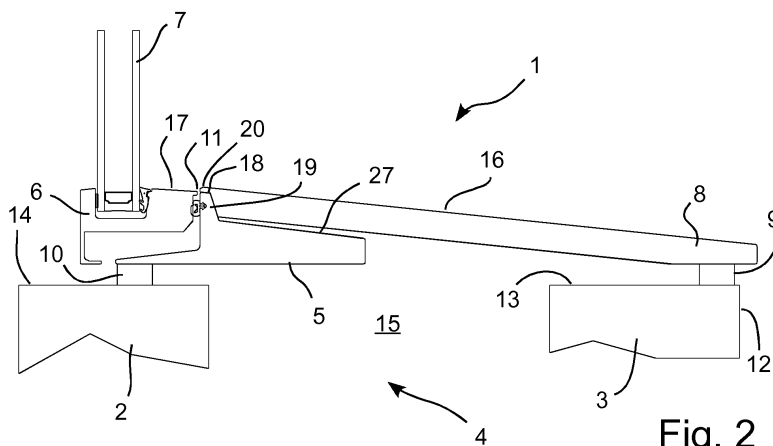


Fig. 2

Description

[0001] The current invention relates to a window assembly suitable for being mounted in a window opening, said window assembly comprising a window frame made up of a number of frame members where one of said frame members is fastened to the window opening, a window sash made up of a number of sash elements, a mounting fitting which connects one of said sash elements with one of said frame members, a window pane arranged in said window sash and a cover panel assembly comprising a number of cover panel elements, where one of said cover panel elements is fastened to one of said frame members such that the surface of the window opening which faces the centre of the window assembly is at least partially covered by said cover panel element.

Description of related art

[0002] In many window assemblies mounted in window openings in a wall of a house, there is a large distance between the innermost edge of the frame members and the inner side of the wall of the house. In many modern houses, the walls are hollow and are filled with insulation. The distance between the window frame and the inside surface of the house wall means that the frame does not cover the gap in the wall and therefore access is given to the insulation arranged within the wall. This is not practical or aesthetically pleasing and it is therefore desired to cover this gap with a cover panel.

[0003] These cover panels are also sometimes called extension jambs or extension frames since they extend the width of the jamb or frame to match the thickness of the wall in which the window assembly is mounted. Some people also refer to cover panels as casings or trim. The bottom cover panel is also called a sill.

[0004] Cover panels are typically installed by the carpenter who installs the window assembly and can be made from different types materials, for example gypsum boards, flat pieces of wood, flat pieces of plastic, etc. In the past couple of years, pre-manufactured cover panel assemblies can be purchased which can be assembled and installed by less experienced workers and still achieve a high quality finish.

[0005] Some examples of currently available cover panels and cover panel assemblies are disclosed in US6829865, W003033834, US6389763, and US6141922.

Summary of the invention

[0006] A first aspect of the current invention is to provide a window assembly according to the introductory paragraph which is better than the window assemblies known in the art.

[0007] This is provided according to the features of the characterizing portion of claim 1.

[0008] When discussing the features of the window as-

sembly, some sort of reference is needed in order to describe the relationship between the different components. In the current specification the relative terms are used in a context where the window assembly is mounted in an outer wall of a house. The terms inside and outside refer to respectively the inside of the house and the outside of the house. For example, the term "outwardly facing" would be something which faces in a direction looking from the inside of the house towards the outside of the house.

[0009] In order to specify the placement of a component on a plane which is parallel to the plane of the window assembly, the phrases "towards the centre of the window assembly" and "towards the periphery of the window assembly" are used. The periphery of the window assembly is the outermost edge of the window assembly. So something which is close to the periphery of the window assembly is also located close to the edge of the window opening. In contrast, something which is located close to the centre of the window assembly is located far from the edge of the window opening.

[0010] In addition, it should be mentioned that when the term "looking towards" or "facing towards" are used, it is meant that the normal to the surface which is referred to has a normal vector which has a component which is directed towards the centre of the window assembly. If the surface is not planar, then the average normal vector of the surface would have a component which is pointing towards the centre of the window assembly.

[0011] Additional aspects of the invention are disclosed by the additional features mentioned in the dependent claims and/or mentioned in the description of this specification.

[0012] It should be emphasized that the term "comprises/comprising/comprised of" when used in this specification is taken to specify the presence of stated features, integers, steps or components but does not preclude the presence or addition of one or more other features, integers, steps, components or groups thereof. For example, in the claims it is stated that one frame member is fastened to the window opening. However, according to the above paragraph, this should be interpreted as at least one frame member is fastened to the window opening. In other words, just because the word "one" is used in a claim, the scope of protection of the claim should not be limited to "one" item.

Brief description of the drawings

[0013] In the following, the invention will be described in greater detail with reference to embodiments shown by the enclosed figures. It should be emphasized that the embodiments shown are used for example purposes only and should not be used to limit the scope of the invention.

[0014] Figure 1 shows a schematic perspective view of a portion of a first embodiment of a window assembly according to the invention.

[0015] Figure 2 shows a schematic side view of the portion of the window shown in figure 1.

[0016] Figure 3 shows a schematic cross section view of a second embodiment of a window assembly but which is similar to the embodiment shown in figures 1-2.

[0017] Figures 4-6 show three different embodiments of how the cover plate could be attached to the frame member.

[0018] Figure 7 shows a schematic perspective view of a portion of a third embodiment of a window assembly according to the invention.

[0019] Figure 8 shows a schematic side view of the portion of the window assembly shown in figure 7.

[0020] Figure 9 shows a schematic cross section view of a fourth embodiment of a window assembly.

[0021] Figure 10 shows a schematic cross section view of a fifth embodiment of a window assembly.

[0022] Figure 11 shows a schematic cross section view of a sixth embodiment of a window assembly.

[0023] Figure 12 shows a schematic cross section view of a seventh embodiment of a window assembly.

[0024] Figure 13 shows a schematic cross section view of an eighth embodiment of a window assembly.

[0025] Figure 14 shows a schematic cross section view of a ninth embodiment of a window assembly.

Detailed description of the embodiments

[0026] The portion of the window assembly 1 shown in figures 1 and 2 is a portion of one side of the window assembly. The figure shows what appears to be the bottom portion of the window assembly, however the person skilled in the art will be able to appreciate that the portion could also be one of the vertical sides or the top portion of the window assembly. In other words, the complete window assembly could be arranged such that the horizontal bottom portion, the vertical side portions and the horizontal top portion all had an arrangement which was the same as the portion shown in figures 1 and 2.

[0027] The portion of the window assembly 1 shown in figures 1 and 2 comprises an outer wall portion 2, an inner wall portion 3, a hollow space 4 between the outer and inner walls filled with insulation (not shown), a frame member 5, a sash element 6, a double glazed window pane 7, a cover panel element 8, a inner sealing bead 9 arranged at the inside of the window assembly and an outer sealing bead 10 arranged at the outside of the window assembly.

[0028] The frame member 5 is one of four frame members which make up a rectangular window frame as is typical in window assemblies. The frame member is fastened to the inner and/or the outer wall via a bracket (not shown) or other form of mounting arrangement. Details of the mounting are not shown as they will be known to the person skilled in the art. The sash element 6 is one of four sash elements which make up a rectangular window sash surrounding the glass pane. The window sash is in this embodiment pivotably attached along one side

of the window sash to one or more of the window frame members. The front sealing bead 10 seals the gap between the window opening and the window frame. Due to the window frame, window sash, window pane and outer sealing bead, the window opening is sealed to prevent the outside environment from contacting the inside environment.

[0029] In order to seal the window opening from the inside to create a finished appearance, the window assembly has a cover panel 8 which is arranged to cover the space between the innermost edge 11 of the sash and the innermost surface 12 of the inner wall 3. In the current embodiment, the cover panel is arranged such that it covers the entire surface 27 of the frame member which is arranged on the inside of the innermost edge (11) of the sash element and which faces the centre of the window assembly. In this way, when looking out at the side of the window assembly from the centre of the window in the closed position of the window assembly, the frame member is not visible at all. The cover panel also covers the gap 4 between the inner and outer walls as well as the surface 13 of the inner wall 3 which faces the centre of the window opening. In the current embodiment, the surface 13 of the inner and the surface 14 of the outer wall are arranged at the same distance from the centre of the window assembly, however in other embodiments, as will be shown later, the two surfaces could be arranged at different heights.

[0030] It can also be seen from the figures that there is space 15 available underneath the cover panel wherein different types of accessories could be integrated. A non limited set of examples of accessories is comprised of motors for window actuators, insect nets, sun screens, curtains, ventilation and lights.

[0031] The cover panel can be manufactured from many different materials and surfaces which will give very different visual impressions. Some non limiting examples are: copper, zinc, glass, matte plastic, transparent/translucent plastic, aluminum coated materials, foil coated materials and wood based materials. It is an advantage of the cover panel arrangement of this embodiment that the entire visual aspect of the window can be changed simply by changing the cover panel elements. This gives a lot of design freedom to the interior decorator who can actually use the window assembly itself as a design parameter. For example, the window cover panel elements could be chosen to match a sofa or to match with the type of floor covering chosen.

[0032] In addition, since the inside portion of the frame member is completely covered, the builders, when installing the window frame or when working on the house in general do not have to pay particular attention to how the frame is treated. The frame can be marked up and cosmetically damaged without being visible to the user once the cover panel is installed. This also allows the window manufacturer to use materials for the frame which are of lower cost and/or lower cosmetic quality. Instead the window manufacturer can focus on strength

and workability of the frame material. This is especially important for wooden windows where large pieces of cosmetically fine wood, which would be required in a visible wooden frame, are relatively expensive.

[0033] The integrated cover panels also give a complete clean expression to the window assembly. In a typical window assembly, one can see the window sash, the window frame and the window cover panel. In the current embodiment, the user only sees the window cover panel and the sash. Furthermore, in the current embodiment, the cover panel is arranged such that the surface 16 of the cover panel which faces in towards the centre of the window assembly is arranged slightly closer to the centre of the window assembly than the surface 17 of the sash element which is arranged on the inside surface of the glass pane and which faces in towards the centre of the window assembly. In this way, there will be a slight shadow at the transition between the cover panel and the sash which will blend out the transition. This will give a smooth visual impression where the sash element and the cover panel appear to merge into one element. This gives a very clean impression which will not distract the user's eyes.

[0034] The offset between the centre facing surface of the sash element and the centre facing surface of the cover panel element is due to the fact that in the current embodiment, the centre facing surface 17 of the sash element is arranged flush with a centre facing surface 18 of a protrusion 19 on the frame element arranged adjacent the sash element. This protrusion ensures a smooth transition in situations where no cover panel according to the current invention is used. In order for the cover panel to cover this protrusion of the frame member completely, the cover panel comprises a thin protrusion 20 which is arranged at the outermost edge 28 of the cover panel and which is arranged to cover the protrusion 19 of the frame member. The thinner the protrusion 20 of the cover panel is made, the smaller the offset between the centre facing surface of the sash element and the centre facing surface of the cover panel will be. However, at the same time, the thinner the protrusion 20 of the cover panel is made, the greater the risk that the protrusion 20 will break off or warp over time. As will be shown later, in other embodiments (see figures 7 and 8), the protrusion on the cover panel is not present which will expose the protrusion of the frame member. In other embodiments (see figures 9-13), the protrusion 19 on the frame member is removed and the cover element can therefore cover the frame element completely without the need for a protrusion on the cover panel.

[0035] It should be noted that in this embodiment, the window sash is presented as a single integrated element. However as will be known to the person skilled in the art, in many cases the window sash is comprised of a sash profile and a glazing bead which holds the window pane in the sash profile. The person skilled in the art should therefore understand that the current invention will also cover sash elements which are comprised of multiple el-

ements and that the surface of the sash element as mentioned above will also refer to the surface of a glazing bead which is mounted on the sash profile. Examples of such profiles can be seen in figures 12 and 13.

[0036] As can be seen from the figures, there is no trim on the inside edge of the cover panels which distracts the eyes of the viewer. Instead the focus of the eyes is taken away from the outer trim and is instead focussed on the cover panel and further on to the view. In order to seal the gap between the cover panel and the inner wall, a sealing bead 9 is arranged in the gap. The sealing bead is pulled slightly back behind the front edge of the cover panel and behind the inside surface of the inner wall. A small shadow will be created under the front edge of the cover panel which will hide the sealing bead from view. This also gives a lightness to the assembly and decreases the physical outer dimensions of the window assembly.

[0037] In the current embodiment, the cover panel has been arranged at an angle to the normal vector of the window assembly such that the cover panel slopes slightly in the direction from the window pane to the inside surface of the inner wall.

[0038] The embodiment shown in figure 3 is essentially identical to the embodiment shown in figures 1 and 2, however a trim element 21 has been integrated with the seal 22 located between the inside surface 23 of the window pane and the outwardly facing surface 24 of the inner portion 25 of the sash element 6. The trim element is arranged such that the surface 26 of the trim element which faces in towards the centre of the window assembly is arranged flush with the surface 16 of the cover panel which faces in towards the centre of the window assembly. The trim element could be arranged without any fixed connection to the centre facing surface 17 of the actual sash element, or it could be fastened to the centre facing surface 27 via an adhesive or via other means for example velcro or other form of snap mechanisms. The trim element could also be supplied independently of the seal element. The trim element could be made from the same material as the cover panel. In this way, it would be possible to provide a set comprising a cover panel assembly and a set of trim elements. A user could then mount new trim elements to the window sash and a new cover panel assembly to the window frame and thereby change the entire visual impression of the window assembly without changing any of the structural components of the window assembly.

[0039] Figures 4-6 show different embodiments of ways of fastening the cover panel assembly to the frame members. Common between the different embodiments are that some form of clip 30,31,32 is arranged at the outermost end of the cover panel and some form of clip 33,34,35 is arranged at the inner most end of the frame element. In this way, the cover panel is supported at two points on the frame member. In the three embodiments, the clips at the outermost edge of the cover panel are arranged such that the clip is attached to the frame mem-

ber either via gluing or via a fastener and the cover panel is arranged with a slot into which the clip is pressed during mounting. The clip then holds on to the inside surfaces of the slot via a sort of tooth arrangement which bites into the sides of the slot in order to hold the cover panel firmly attached to the frame member. The clip arranged at the innermost end of the frame member is attached either to the surface (29) of the cover panel which faces the periphery of the window assembly and/or to the inwardly and/or centre facing surface 27 of the frame member. Since there is more room at this point, the clip can be arranged in many different ways. Three options are shown in the figures. As can be seen, the presence of a protrusion 20 on the cover panel hides the details of the clips and ensures a clean transition between the cover element and the sash. It can also be seen for example by comparing figures 5 and 6, that even if there are dimensional tolerances between the frame and the cover panels, the arrangements shown in figures 4-6 will absorb the tolerances without decreasing the clean appearance of the window assembly. This is important since the cover panel is usually one of a four cover panels which have been joined in a cover panel assembly. In order for the joints between the cover panel elements of the cover panel assembly to be formed properly, it is important that the connection between the frame members and the cover panels does not pull the frame members apart and that slight differences in the sizes between the cover panel assembly and the window frame are not obviously visible to the viewer of the assembled window assembly.

[0040] The embodiment 50 shown in figure 7 and 8 is again very similar to the embodiment shown in figures 1 and 2. Therefore the same reference numerals will be used. The only difference between the embodiment 50 of figures 7 and 8 and the embodiment 1 of figures 1 and 2 is that the cover panel 51 does not have a protrusion 20 which covers the protrusion 19 of the frame member. Instead, the centre facing surface 16 of the cover panel is arranged flush with the centre facing surface 18 of the protrusion 19 of the frame member 5. Since the centre facing surface 18 of the protrusion 19 of the frame member 5 is also arranged flush with the centre facing surface 17 of the sash element 6, all the centre facing surfaces of the frame member, sash element and cover element are arranged in the same plane. This will also give a very clean visual impression with no disturbing elements in the window assembly. The fact that the small surface of the protrusion 19 of the frame member is visible can be used to create a unique visual expression.

[0041] The embodiment 60 shown in figure 9 also comprises a frame member 5, a sash member 6, a window pane 7 and a cover panel 8. In this embodiment the frame member is arranged without a protrusion 19 adjacent the sash member 6. In this way the centre facing surface 61 of the frame element is arranged at an offset to the centre facing surface 62 of the sash element. This allows the cover panel 8 to completely cover the frame element without the need for any thin protrusions at the outermost

edge of the cover panel. The centre facing surface 16 of the cover panel is therefore arranged completely flush with the centre facing surface 62 of the sash element 6. It can also be seen that the outwardly facing surface 63 of the cover panel is arranged to abut the inwardly facing surface 64 of the sash element. Furthermore, the surface 65 of the cover panel which faces towards the periphery of the window opening is arranged to support on the centre facing surface 61 of the frame member.

[0042] The embodiment 70 shown in figure 10 is very similar to the embodiment shown in figure 9. The difference in this case is that the centre facing surface 13 of the inner wall 3 is arranged closer to the centre of the window assembly than the centre facing surface 14 of the outer wall 2. In this case, the centre facing surface 16 of the cover panel 8 is arranged horizontally and without any slope. It could be imagined that an embodiment such as the one shown in figure 10 is used as the bottom portion of the window assembly and the embodiment shown in figure 9 is used as the top and side portions of the window assembly. The bottom portion could advantageously be arranged horizontal so that it can be used as a window sill where items, for example flower pots, can be placed.

[0043] The embodiment 80 shown in figure 11 is also very similar to the embodiment shown in figure 9. The difference in this case is that the cover panel element 8 is extended in such a way that the outermost edge 81 of the centre facing surface 16 of the cover panel 8 abuts the inside surface 23 of the window pane. In this case the portions of both the sash element and the frame member which are located in on inside of the inner surface 23 of the window pane are completely covered. This will give a very clean visual impression as the viewer will not see any connection lines between different elements of the window assembly.

[0044] The embodiment 90 shown in figure 12 is almost identical to the one shown in figure 9. The only difference is in the shape of the frame member and the shape of the sash element which is a two part sash element, a sash profile 94 and a glazing bead 95. The glazing bead is snapped onto the sash profile in order to hold the window pane 7 in place. In this case, the centre facing surface of the sash element according to the understanding of this patent specification is actually the centre facing surface 96 of the glazing bead.

[0045] This embodiment also shows in more detail, the arrangement of the cover panel at the inside edge of the cover panel. As can be seen the inside edge 91 of the cover panel is arranged on the inside of a plane 92 which is flush with the inside surface 93 of the inner wall 3. A sealant bead 9 is arranged in the gap between the surface 97 of the cover panel which faces the periphery of the window opening. The sealant bead is arranged at a short distance from the inside edge of the inner wall.

[0046] The embodiment 100 shown in figure 13 is almost identical to the one shown in figure 12. The difference is that at the end of the cover panel 101 a casing/

trim 102 is attached to cover the gap 103 between the cover panel and the centre facing surface 13 of the window opening in the wall.

[0047] The embodiment 110 shown in figure 14 shows an embodiment which is similar to the embodiment shown in figure 9, but where the cover panel 111 abuts the innermost side 112 of the frame element such that the entire centre facing surface 113 of the frame member 5 is visible. The centre facing surface 114 of the cover panel, the centre facing surface 113 of the frame member and the centre facing surface 115 of the sash element are all arranged at an angle to the normal of the window assembly. In addition all the mentioned centre facing surfaces are arranged co-planar.

[0048] It is to be noted that the figures and the above description have shown the example embodiments in a simple and schematic manner. The fine structural details have not been shown since the person skilled in the art should be familiar with these details and they would just unnecessarily complicate this description and the figures.

[0049] It should also be noted that the specification contains other inventions than the ones mentioned in the claims. The person skilled in the art will understand that these inventions could be filed as divisionals later on. For example, one additional invention is a window assembly where the surfaces of the cover elements which face the centre of the window assembly, the surfaces of the window sash which are arranged on the inside of the window pane and which face the centre of the window assembly and/or the surfaces of the frame member which face in towards the centre of the window assembly and which are arranged on the inside of the innermost edge of the surface of the sash member which is arranged on the inside of the window pane and which faces in towards the centre of the window assembly are arranged co-planar with each other and at an angle other than parallel to the normal to the plane of the window assembly. The surfaces could for example, be arranged at an angle of between 1 and 30 degrees to the normal of the plane of the window assembly.

[0050] It should also be noted that the reference numerals used in the claims typically only refer to one embodiment. But it should be clear to the person skilled in the art that the claims also cover embodiments having reference numerals which are not present in the claims. Should the reference numerals of all the embodiments be added to the claims, then the large number of reference numerals would make the claims harder to understand.

Claims

1. A window assembly (1) suitable for being mounted in a window opening (13,14), said window assembly comprising a window frame made up of a number of frame members (5) where one of said frame mem-

bers is fastened to the window opening, a window sash made up of a number of sash elements (6), a mounting fitting which connects one of said sash elements with one of said frame members, a window pane (7) arranged in said window sash and a cover panel assembly comprising a number of cover panel elements (8), where one of said cover panel elements is fastened to one of said frame members such that the surface (13,15) of the window opening which faces the centre of the window assembly is at least partially covered by said cover panel element, **characterized in that** said cover panel assembly is arranged such that in a cross section taken through one of the sides of the window assembly and being arranged on a plane which is perpendicular to the longitudinal axis of the frame member of said side of the window assembly, the cover panel element covers at least a portion of a surface (27) of the frame member which faces in towards the centre of the window assembly and such that the outermost edge (28) of the surface (16) of the cover panel which faces in towards the centre of the window assembly is arranged flush with or closer to the centre of the window assembly than the innermost edge (11) of the surface (17) of the portion (25) of the window sash element (6) which is arranged on the inside of the window pane and which faces in towards the centre of the window assembly.

2. A window assembly (1) according to claim 1, **characterized in that** the cover panel assembly is arranged such that the cover panel element (8) in said cross section completely covers said surface (27) of the frame member (5) which faces in towards the centre of the window assembly and which is located to the inside of the innermost edge (11) of the surface (17) of the portion (25) of the window sash element (8) which is arranged on the inside of the window pane (7) and which faces in towards the centre of the window assembly.
3. A window assembly (60) according to claim 1 or 2, **characterized in that** the cover panel assembly is arranged such that in said cross section, an outwardly facing surface (63) of the cover panel element (8) abuts an inwardly facing surface (63) of the sash element (6).
4. A window assembly (80) according to claim 1, 2 or 3, **characterized in that** the cover panel assembly is arranged such that in said cross section, the cover panel element (8) at least partially covers the sash element (6) when seen from the centre of the window assembly.
5. A window assembly (80) according to any one of claims 1-4, **characterized in that** said cover panel assembly is arranged such that in said cross section,

the outermost edge (81) of the cover panel element (8) abuts the inside surface (23) of the window pane (7).

6. A window assembly (90) according to any one of claims 1-5, **characterized in that** in said cross section the innermost edge (91) of the cover panel element (8) is arranged on the inside of the plane (92) of the innermost surface (93) of the wall (3) in which the window opening is arranged. 5
7. A window assembly (90) according to claim 6, **characterized in that** in said cross section a sealing bead (9) is applied between the cover panel (8) and the window opening (13) at a distance of more than 5 mm from the inside surface (92) of the wall and/or from the innermost edge (91) of the cover panel. 10
8. A window assembly (1) according to any one of claims 1-7, **characterized in that** the window assembly comprises mounting clips (30,33) which are fastened to the window frame (5) and which engage with at least some of the cover panel elements (8) in order to hold the cover panel assembly fastened to the window frame and where the clips and the cover panel elements are arranged such that the cover panel elements are fastened to the clips by displacing the cover panel assembly in a direction normal to the plane of the window assembly and towards the outside of the window assembly. 15
9. A window assembly (1) according to any one of claims 1-8, **characterized in that** in said cross section the surface (16) of the cover element (8) which faces in towards the centre of the window assembly is arranged at an angle to the normal vector of the window pane (7) of between 0 and 30 degrees. 20
10. A window assembly (1) according to any one of claims 1-9, **characterized in that** one of the sash elements (6) comprises a trim piece (21) which is arranged on the surface (17) of the sash element which faces in towards the centre of the window assembly and which is arranged on the inside of the window pane (7), and where the surface (26) of the trim piece which faces in towards the centre of the window assembly is arranged flush with the surface (16) of the cover panel which faces in towards the centre of the window assembly. 25
11. A window assembly (1) according to claim 10, **characterized in that** said trim piece (21) is integrated with a seal element (22) which is placed between an outwardly facing surface (24) of the sash element (6) and the inside surface (23) of the window pane (7). 30
12. A window assembly (60) according to any one of

claims 1-11, **characterized in that** in said cross section, a surface (65) of the cover panel (8) which faces the periphery of the window assembly is supported on a surface (61) of the frame member (5) which faces towards the centre of the window assembly.

13. A window assembly (1) according to any one of claims 1-12, **characterized in that** a cross section taken through a first side of the window assembly on a plane which is perpendicular to the longitudinal axis of the frame member (5) of said first side of the window assembly is the same as a cross section taken through a second side of the window assembly on a plane which is perpendicular to the longitudinal axis of the frame member (5) of said second side of the window assembly. 35
14. A window assembly (1) according to claim 13, **characterized in that** a cross section taken through a third side of the window assembly on a plane which is perpendicular to the longitudinal axis of the frame member (5) of said third side of the window assembly is the same as the cross section taken through the first and second side of the window assembly. 40
15. A window assembly (1) according to any one of claims 1-14, **characterized in that** said window frame comprises four frame members (5) having identical cross sections and **in that** said window sash comprises four sash elements (6) having identical cross sections, said cross sections being taken on planes which are perpendicular to the longitudinal axes of the frame members or sash elements respectively. 45

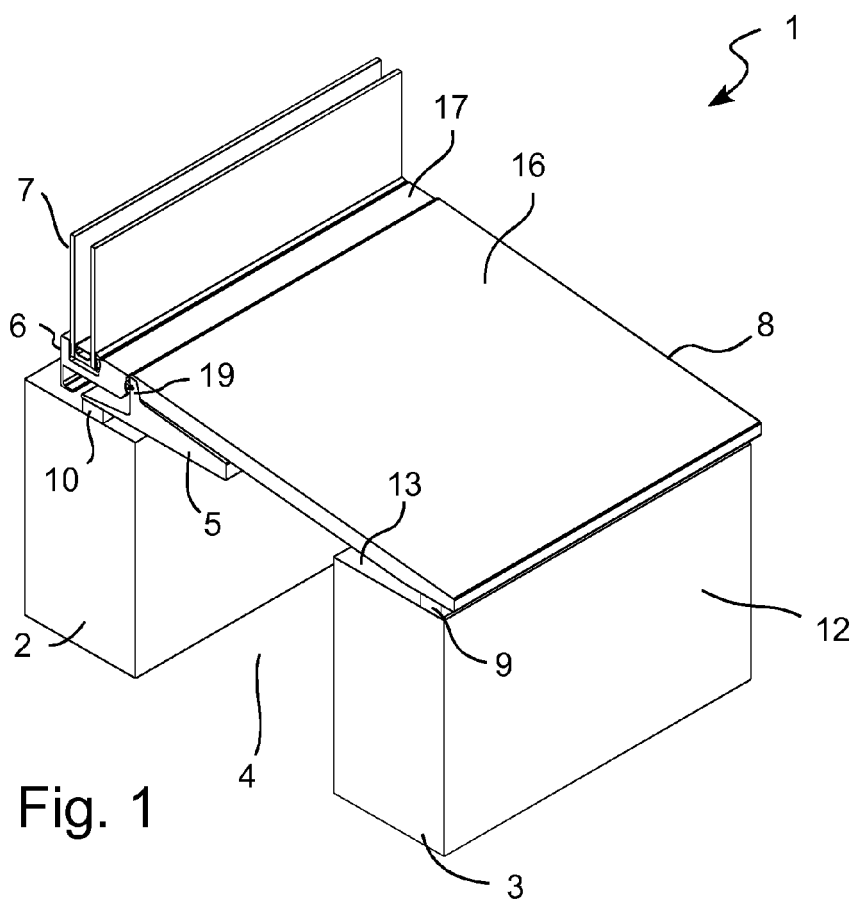


Fig. 1

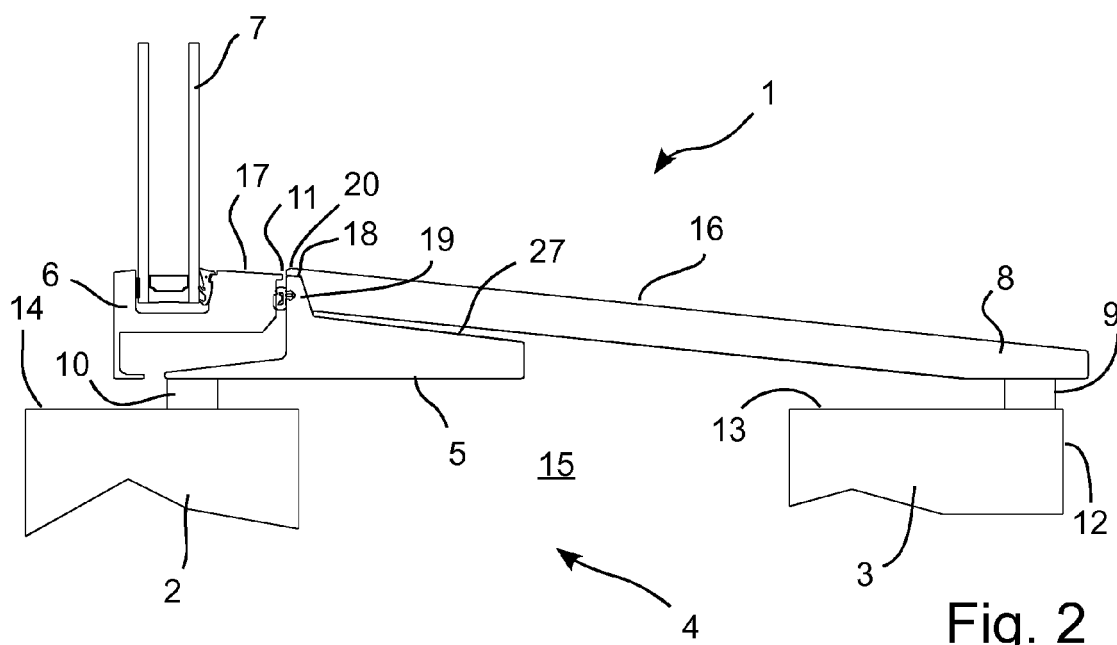


Fig. 2

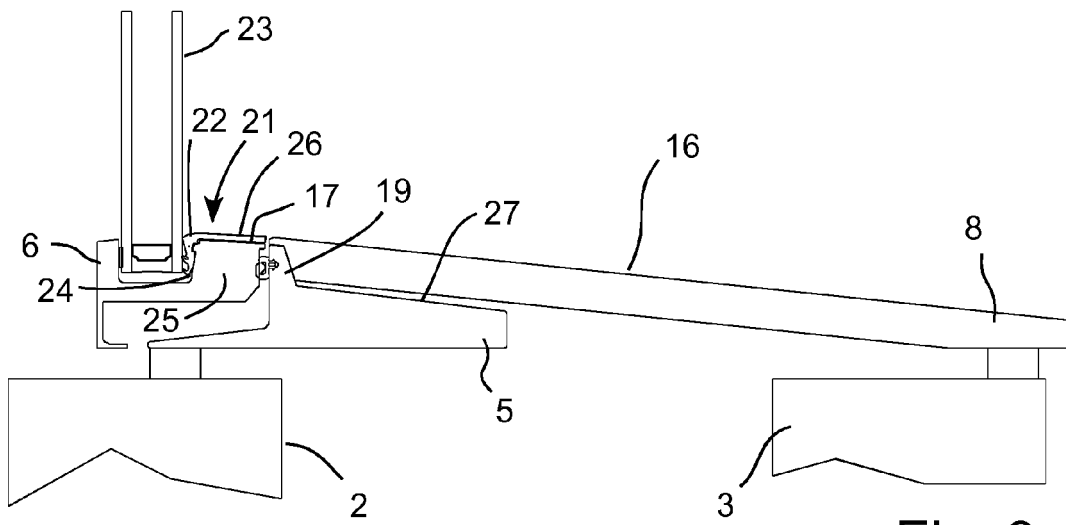


Fig. 3

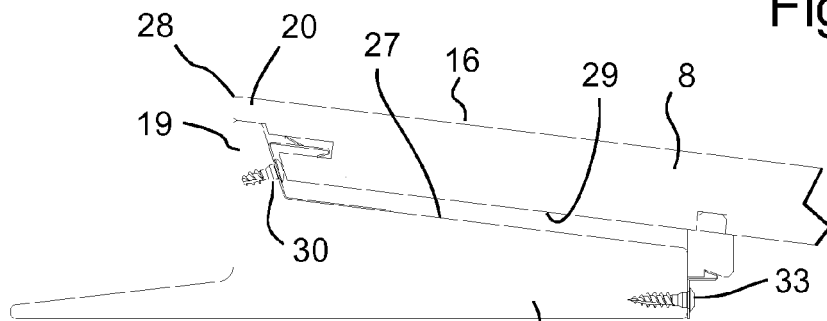


Fig. 4

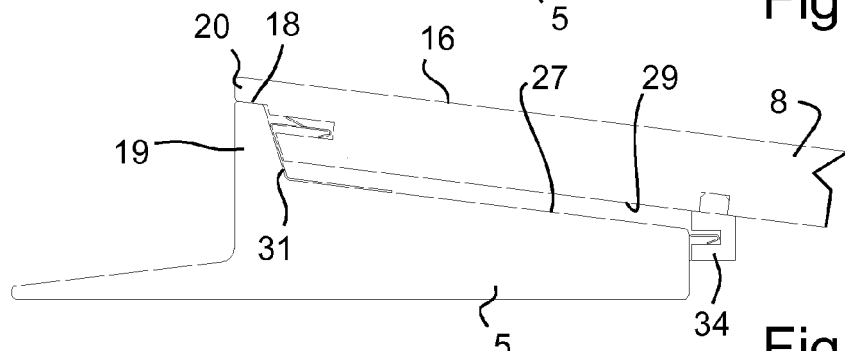


Fig. 5

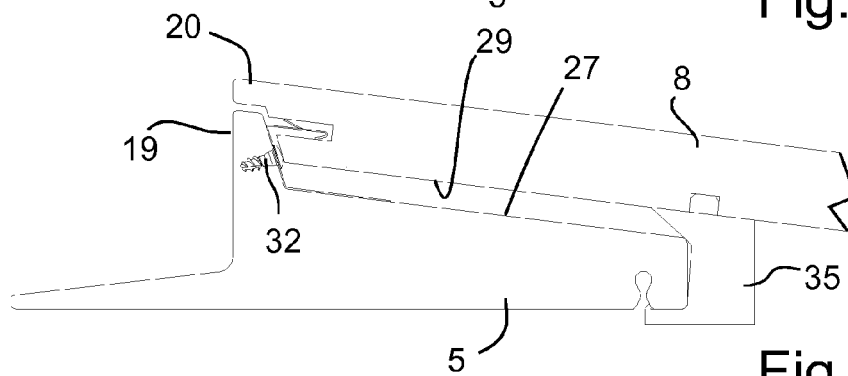
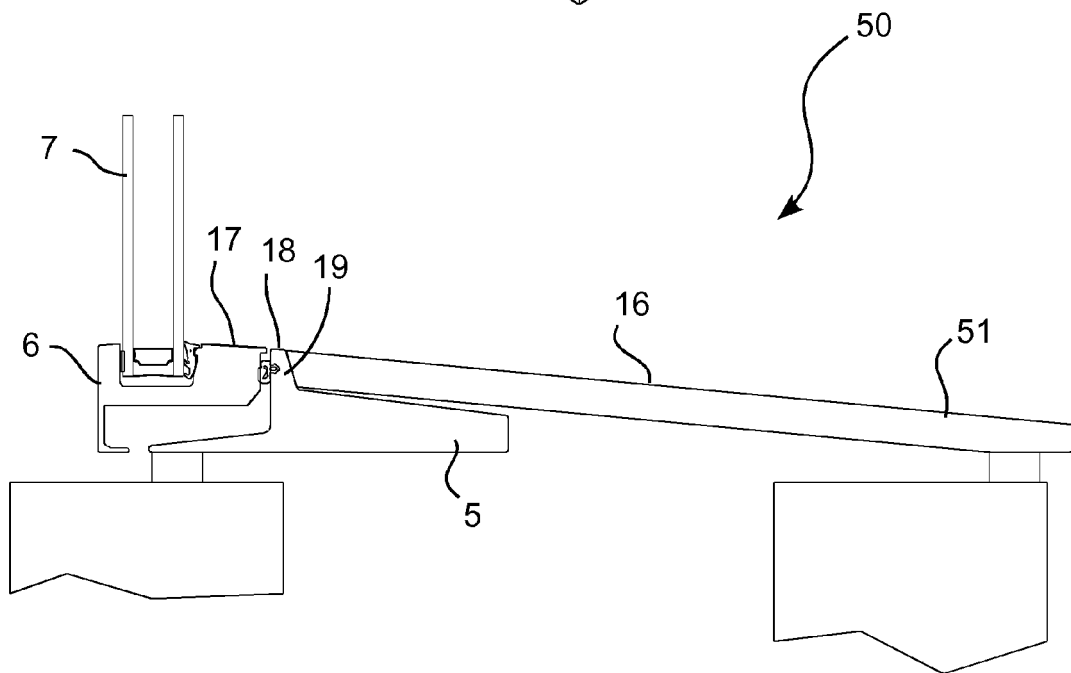
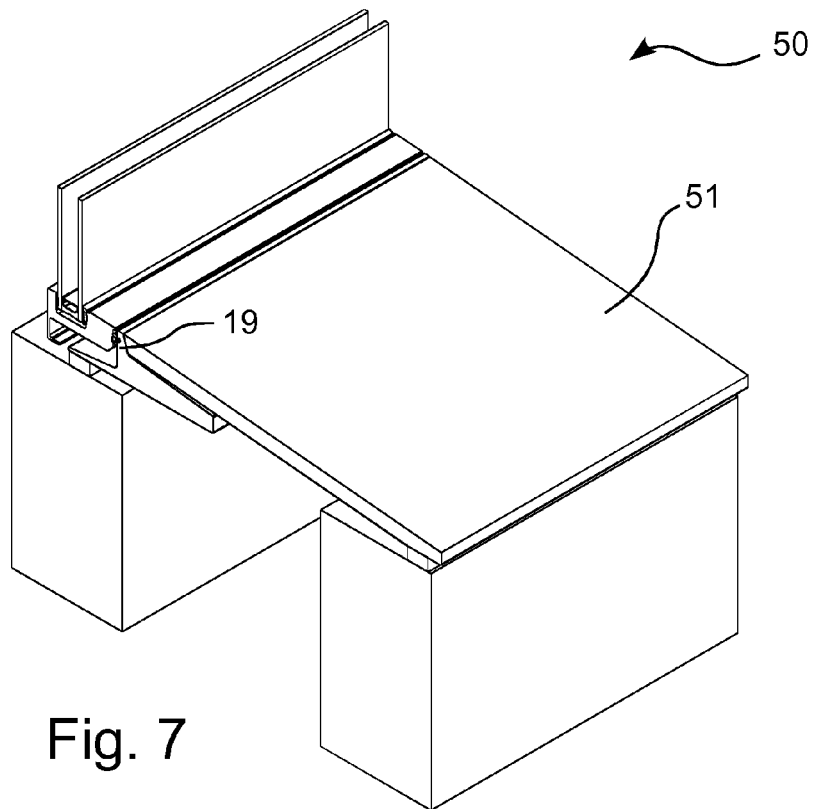


Fig. 6



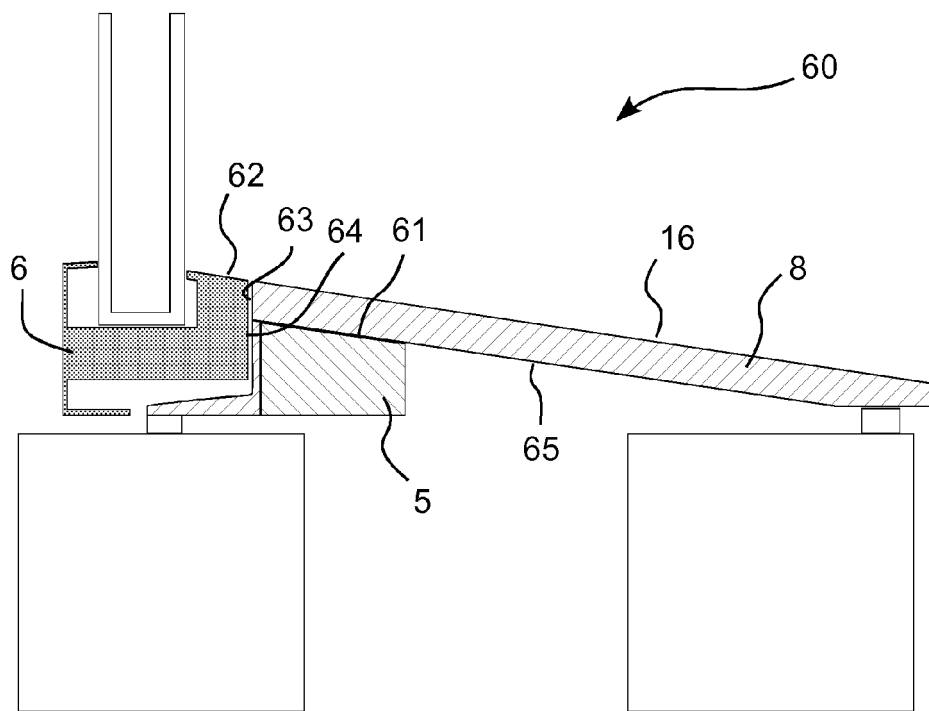


Fig. 9

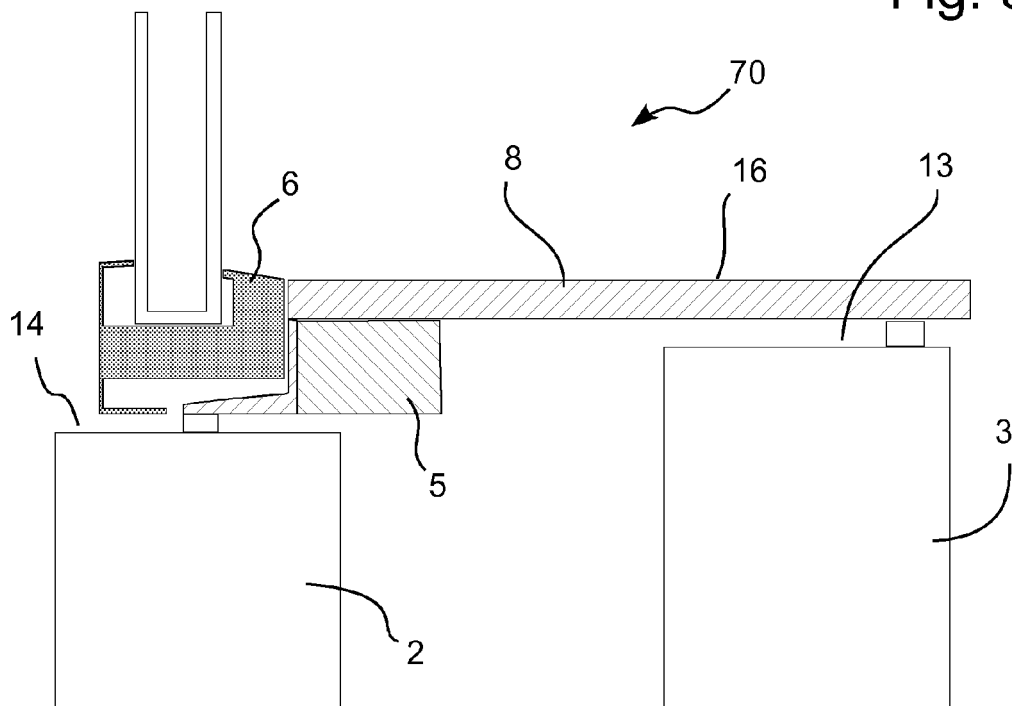


Fig. 10

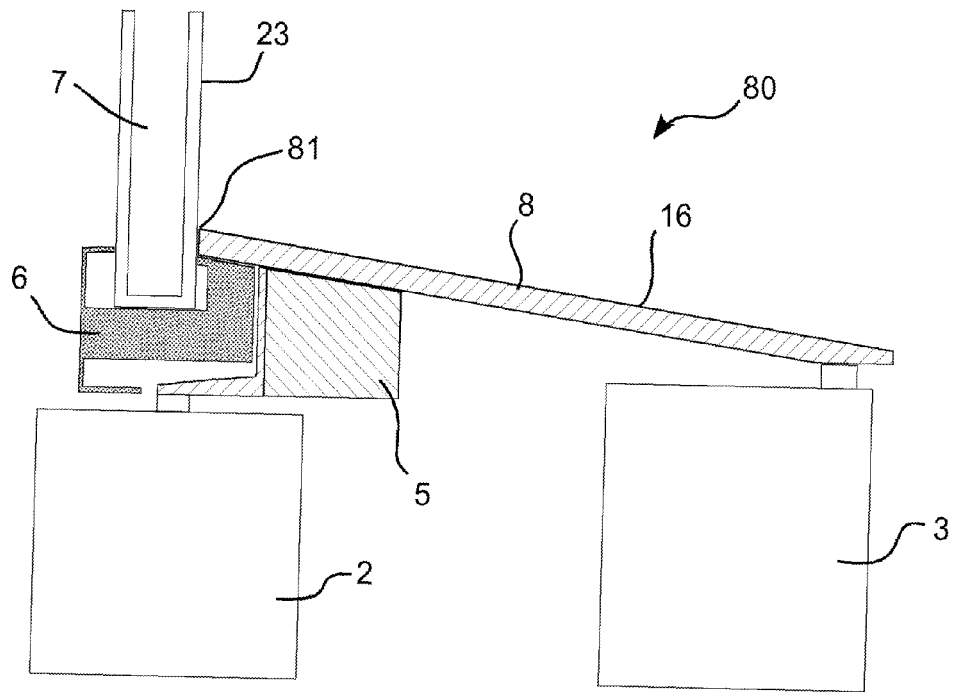


Fig. 11

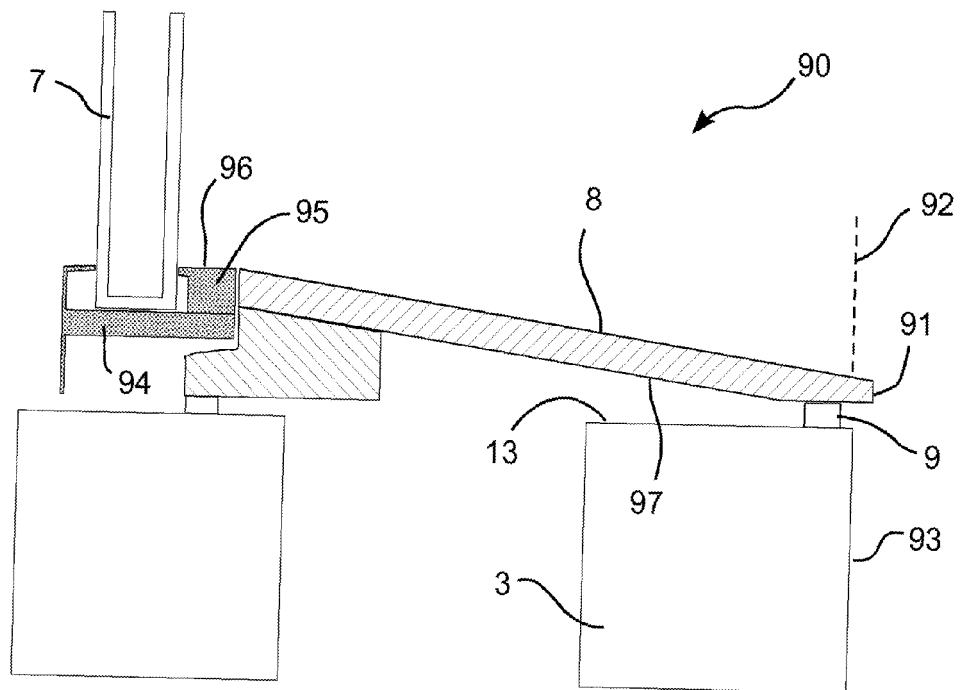
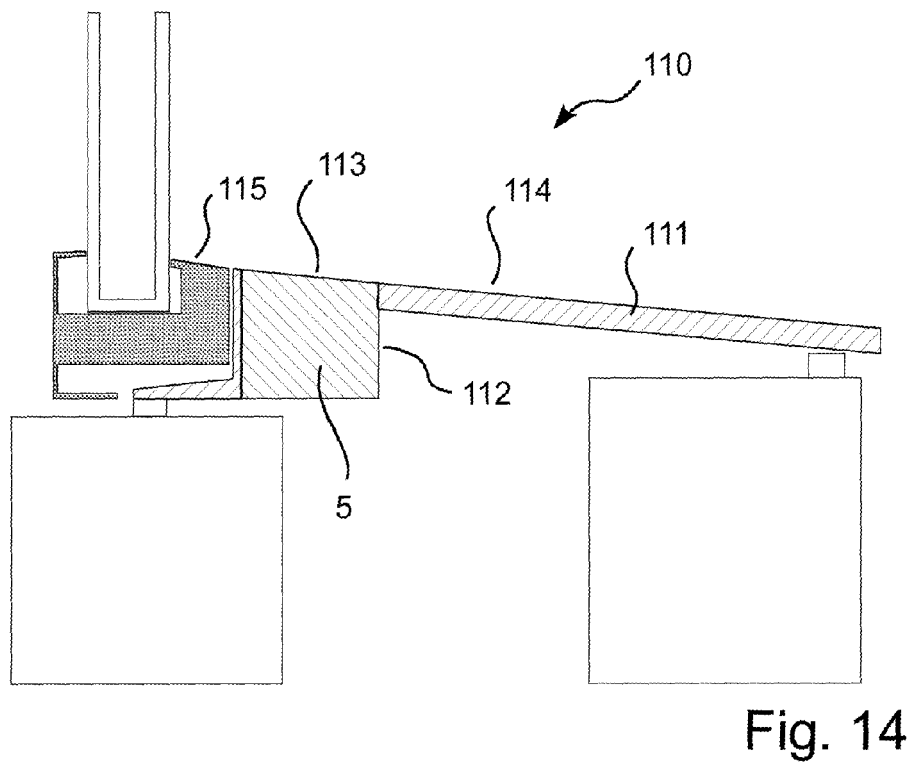
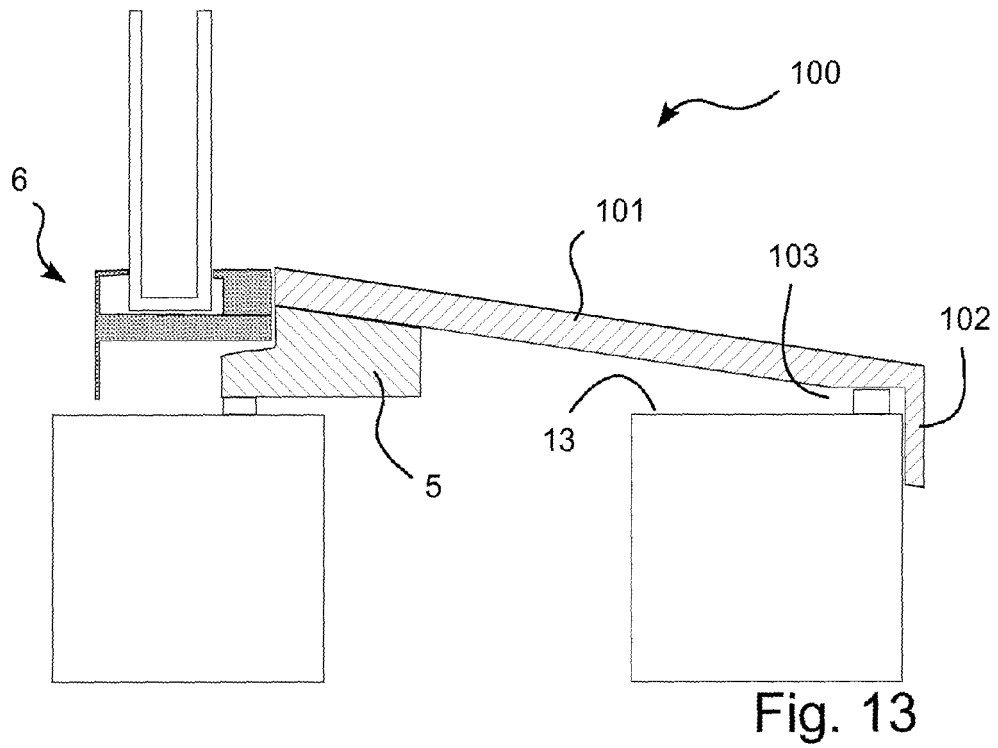


Fig. 12





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EUROPEAN SEARCH REPORT

Application Number
EP 08 15 4440

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			TECHNICAL FIELDS SEARCHED (IPC)
			E06B
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		19 August 2008	Blancquaert, Katleen
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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19-08-2008

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