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(54) REBATE SYSTEM FOR CONNECTING GLAZING OR A PANEL TO AN INSULATING WALL AT AN ANGLE

(57) The present invention relates to a rebate system (1) for connecting glazing (2) or a panel to an insulating wall (16, 17, 18) at an angle, comprising:
- glazing (2) or a panel;
- a firmly fixed inner frame profile (3) that forms a stop (4);
- a pressure lip (6) for gripping at least a part of an edge of the glazing (2) or panel between the stop (4) and the pressure lip (6);
- a thermal-break profile (5), which forms a thermal break between the stop (4) and the pressure lip (6) and that forms a second thermal break, viewed in a direction (A) transverse to the wall (16, 17) and away from the glazing (2) or panel.

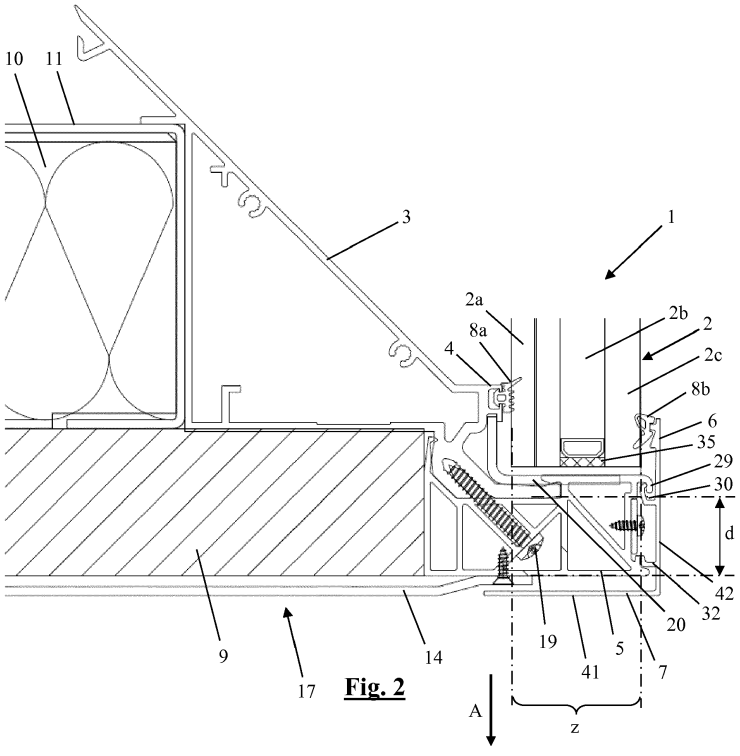

Fig. 2

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Description

[0001] The present invention relates to a rebate system for connecting glazing or a panel to an insulating wall at an angle, comprising:

- glazing or a panel;
- a firmly fixed inner frame profile that forms a stop for the glazing or panel;
- a pressure lip for mounting at least a part of an edge of the glazing or panel between the stop and the pressure lip;
- and a thermal-break profile, which forms a thermal break between the stop and the pressure lip.

[0002] The insulating wall may be a vertical wall or a roof element or a floor element of corbelling for example such as a floor element of a bay.

[0003] "Connecting glazing or a panel to an insulating wall at an angle" means that at the height of this connection the plane in which this insulating wall mainly extends differs from the plane in which the glazing or panel mainly extends.

[0004] In buildings with insulating walls of this kind, we want to be able to guarantee a reliable insulating function of the shell of the building over the whole shell of the building. Cold bridges are undesirable. Connection of insulating walls of this kind to glazing (or a panel replacing said glazing) often causes problems.

In existing rebate systems, wherein glazing is connected to an insulating wall of this kind at an angle, this glazing comes quite a long way from this angle when we want to guarantee the insulating function over this complete angled connection. Where we allow the glazing to come quite close to the angle of such a connection, at the height of this connection we allow at least a part of the insulating function to lapse, or a connection is made wherein the glass lies well away from the edge.

[0005] The aim of the present invention is to provide a rebate system of this kind wherein the glazing or a panel replacing said glazing can be fitted tightly against the corner of the connection of this glazing or panel to the insulating wall, without the insulating function of the shell of a building in which this rebate system is adopted being compromised thereby.

[0006] This aim of the invention is achieved by providing a rebate system for connecting glazing or a panel to an insulating wall at an angle, comprising:

- glazing or a panel;
- a firmly fixed inner frame profile that forms a stop for the glazing or panel;
- a pressure lip for mounting at least a part of an edge of the glazing or panel between the stop and the pressure lip;
- and a thermal-break profile, which in the installed state forms a thermal break between the stop and the pressure lip and forms a second thermal break, viewed in a transverse direction to the wall and away from the glazing or panel.

[0007] In order to form a thermal break, the thermal-break profile preferably has a heat resistance R that is greater than the heat resistance of the stop. This heat resistance R is preferably greater than 0.23 m^2K/W, even more preferably greater than 0.28 m^2K/W and very preferably greater than 0.33 m^2K/W.

[0008] "Transverse to the wall" means, in this application, transverse to the plane in which this wall mainly extends at the height of the connection of the glazing or panel to this wall.

[0009] Wherever glazing is mentioned hereinafter in this application, this also comprises a panel that can serve as a replacement for this glazing.

[0010] In existing rebate systems, for insulated connection of glazing or a panel to an insulating wall at an angle, on the one hand a conventional thermal break is provided between the stop and the pressure lip (typically the glazing bead) and on the other hand a separate thermal break is made between the stop and a finishing element. With the existing thermal breaks, this ensures a quite extensive solution wherein the glazing is well clear of the corner of the connection.

[0011] Where the glazing is allowed to come closer to the corner of the connection in existing rebate systems, only a conventional thermal break is provided between the stop and the pressure lip. The thickness of the thermal break in a direction transverse to the wall and away from the glazing is then insufficient to have an insulating function in this direction, according to current insulation requirements.

[0012] Now, according to the invention, by providing a thermal-break profile that incorporates both the function of a conventional thermal break between the stop and the pressure lip, and additionally a thermal break function viewed in a direction transverse to the wall and away from the glazing or panel, it is now possible to ensure that the glazing can be installed closer to the corner of the connection of this glazing on the insulating wall, than was the case in the prior art, without the insulating function of the shell of a building in which this rebate system is adopted being compromised thereby.

The insulating function of the thermal-break profile can then be combined in known ways with the insulating function of the cavity of the glazing and with the insulating function of insulating material from the insulating wall. The necessary insulating function is thus guaranteed over the corner of this connection.

In a specific embodiment the rebate system comprises a finishing element for finishing the connection of the glazing or panel to the wall. The thermal-break profile then forms the second thermal break preferably between the stop and this finishing element.

[0013] The thermal-break profile may optionally be made up of several partial profiles that are assembled into one continuous whole. These partial profiles are then

fastened to one another so that together they form one break profile. However, the thermal-break profile is preferably built up as one piece. With a one-piece break profile, less assembly work is required.

The thermal-break profile is preferably made entirely from heat-insulating material. Optionally this thermal-break profile may also comprise a fastening profile for example made of aluminium, to which elements made of heat-insulating material are fastened, so long as the thermal-break profile can provide both said thermal breaks in its whole and in the installed state.

[0014] The thermal-break profile may then optionally also form part of the inner frame profile. For this purpose the inner frame profile may for example be made of a composite material, for example such as a glass-fibre-reinforced pultrusion profile.

[0015] When the thermal-break profile is made of one or more individual profiles, separately from the inner frame profile, it preferably extends in a direction viewed transverse to the wall and away from the glazing or panel to an insulating thickness further out than the inner frame profile.

This insulating thickness is said thickness of the thermal-break profile wherein the insulating material of this thermal-break profile with which a thermal break is produced, has an insulating function in said direction according to the current insulation requirements. For the usual materials from which such thermal breaks are made, this requires 10 to 30 mm of material to provide a thermal break function. Then preferably within this insulating thickness a heat resistance R is attained that is greater than 0.23 m^2K/W, even more preferably greater than 0.28 m^2K/W and very preferably greater than 0.33 m^2K/W.

[0016] Owing to the thickness of the thermal-break profile that is necessary to provide the thermal break function viewed in a direction transverse to the wall, it is also simpler to fasten finishing parts and/or wall elements thereto. In a preferred embodiment, the finishing element in the installed state is then also fastened to the thermal-break profile. For this purpose, this finishing element may be fastened either directly to this thermal-break profile, for example by means of screws, clips, or adhesive, etc., or optionally indirectly for example with a plastic fastening profile. Preferably this finishing element is then always installed as tightly as possible on the thermal-break profile.

In a specific embodiment the finishing element is fastenable to the thermal-break profile by means of a click connection.

[0017] The finishing element is preferably installed at least partially in a zone in the extension of the glazing, so as to be able to obtain a whole that is as compact as possible.

[0018] Moreover, the finishing element is preferably configured as a finishing profile, since this allows simple installation of the rebate system.

[0019] Alternatively this finishing element may also be a glass element, such as projecting glass or another wall element, such as a projecting wall covering. This finishing element may thus for example also form part of a wall covering element for covering the insulating wall.

[0020] Owing to the thickness of the thermal-break profile, which is necessary in order to be able to provide the thermal break function viewed in a direction transverse to the wall, this thermal-break profile may also more simply be given the necessary rigidity so as to be able to make the pressure lip therewith.

In a first specific embodiment, for this purpose the pressure lip may be allowed to form part of the finishing element.

In a second specific embodiment, for this purpose the pressure lip may be allowed to form part of the thermal-break profile.

[0021] In an especially preferred embodiment, the finishing element is configured as a corner profile for finishing the connection of the glazing or panel to the wall and moreover, this corner profile also forms the pressure lip for mounting the edge of the glazing or panel between the stop and the pressure lip.

This corner profile is preferably made as one piece and then further comprises a first leg that connects to the wall and a second leg that forms the pressure lip. Moreover, this corner profile preferably forms a seamless finish between the wall and the glazing or panel. The first leg and the second leg of the corner profile are then preferably installed at the same angle relative to each other as the angle at which the glazing or panel connects to the wall. A corner profile of this kind with a first leg that connects to the wall and a second leg that forms the pressure lip is moreover preferably fastened to the thermal-break profile by means of this second leg. In this way, the connection between the corner profile and the thermal-break profile can be made sufficiently rigid for the second leg to be able to fulfil the function of a pressure lip, without visible fasteners, for example such as screws, being required for this.

[0022] The corner profile may then for example be attached to the thermal-break profile by means of a hooked leg and a supporting leg. The glazing provides clamping of the hooked connection. Through the thickness of the thermal-break profile, both the hooked leg and the supporting leg may be provided on the second leg.

[0023] The finishing between the glazing or panel and the wall may then be provided without visible fasteners and without additional finishing elements being required for concealing the fasteners for fastening the pressure lip. In the prior art, wherein a pressure lip is installed in an outdoor environment, this pressure lip should typically be fastened by means of visible fasteners, after which these fasteners are concealed from view by means of a finishing element. Because the corner profile incorporates both the function of a pressure lip and of a finishing element, these functions are combinable in a far more compact space.

[0024] Preferably, the glazing of a rebate system according to the present invention comprises an inner layer

of glass, a cavity and an outer layer of glass. A panel for replacing the glazing may also comprise an inner layer, a cavity or insulating core and an outer layer. Where layers of glass for glazing are mentioned hereunder, this also refers *mutatis mutandis* to corresponding layers in panels for replacing said glazing.

In embodiments of this kind, the inner frame profile preferably extends, in the installed state, viewed in a zone in the extension of the glazing, at most in the extension of at least a part of the inner layer of glass and a part of the cavity. Where there is further mention of layers of glass in glazing, this also refers *mutatis mutandis* to corresponding layers in panels for replacing said glazing.

For this purpose, this inner frame profile is installable completely outside this zone on one side of the glazing, namely the side adjacent to the inner layer of glass. The inner frame profile is also mainly installable on this side and partially in a zone in the extension of the inner layer of glass. Optionally the inner frame profile may incorporate this last-mentioned zone over its full thickness. Optionally the inner frame profile is also installable partly in a zone in the extension of the cavity. However, the thermal break preferably extends over at least a part of the zone in the extension of the cavity over said insulating thickness. Even more preferably, this thermal break then extends from the cavity to the finishing element.

[0025] In the installed state, the thermal-break profile of a rebate system according to the present invention is preferably fastened to the inner frame profile.

The thermal-break profile is fastenable in many ways to the inner frame profile, for example by means of screws and/or with adhesive and/or by means of hooked elements and/or click-fitting means and/or by rolling the thermal-break profile into one or more slots provided for this purpose in the inner frame profile, etc.

For this purpose the inner frame profile may for example be provided with a hooked element for fastening the thermal-break profile to the inner frame profile. In that case the thermal-break profile is preferably provided with a corresponding hooked element for hooking the thermal-break profile into the hooked element of the inner frame profile.

In a specific embodiment the thermal-break profile is fastenable on the inner frame profile by means of a click connection.

[0026] In a preferred embodiment, the thermal-break profile is mainly configured as a lattice profile. In this way, an especially lightweight thermal-break profile is producible, which nevertheless has the necessary rigidity.

[0027] The aim of the present invention is also achieved by providing a projecting frame element that comprises a rebate system according to the present invention as described above. This aim is then achieved for example by providing a bay that comprises a rebate system according to the present invention as described above. Or this aim is achieved for example by providing a roof truss that comprises a rebate system according to the present invention as described above.

[0028] Furthermore, the aim of the present invention is also achieved by providing a building that comprises an insulating wall and a rebate system according to the present invention as described above, with glazing that connects at an angle to the insulating wall.

[0029] The present invention is now explained in more detail on the basis of the detailed description given hereunder of some preferred rebate systems according to the present invention. The intention of this description is exclusively to give explanatory examples and point out further advantages and features of the present invention, and so is not to be interpreted as a limitation of the field of application of the invention or of the patent rights claimed in the claims.

[0030] In this detailed description, reference numbers are used for referring to the appended drawings, wherein

- Fig. 1 shows a bay, which is incorporated in an insulating wall and comprises several rebate systems according to the present invention;
- Fig. 2 shows a section through a rebate system from the bay in Fig. 1, in plane AA in Fig. 1;
- Figs. 3 to 8 show sectional views of different steps in the assembly of the rebate system from Fig. 2;
- Fig. 9 shows a cross-section of an alternative rebate system for the bay in Fig. 1;
- Figs. 10 to 15 show sectional views of different steps in the assembly of the rebate system from Fig. 9;
- Fig. 16 shows a cross-section of a possible rebate system for connecting the glazing (2) to the roof element (16) from the bay in Fig. 1.

[0031] The bay (15) shown in Fig. 1 is provided to be incorporated in an opening in a facade (18) of a building. This bay (15) comprises a roof element (16), a floor element (17) and three side walls, which are filled with glazing, which is not shown in this figure. The glazing that is installed on the lateral sides of the bay (15), is connected in each case with a rebate system according to the present invention, to the insulating facade (18) of the building. At the top, this glazing is connected, on the lateral sides of the bay (15), just like the glazing (2) at the front of the bay (15), with a rebate system (1) according to the present invention, as shown in Fig. 16, to the insulating roof element (16). On the underside, this glazing is connected, on the lateral sides of the bay (15), just like the glazing (2) at the front of the bay (15), with a rebate system (1) according to the present invention, to the insulating floor element (17), as shown in Figs. 2 to 15.

[0032] The rebate systems (1) shown in each case comprise glazing (2), a firmly fixed inner frame profile (3) that forms a stop (4) for the glazing (2) and a pressure lip (6) for gripping an edge of the glazing (2) between said stop (4) and said pressure lip (6). The connection of the glazing (2) to the wall (17) is in each case finished with a finishing element (7). A thermal-break profile (5) on the one hand forms a thermal break between the inner frame profile (3) and the pressure lip (6). On the other

hand said thermal-break profile (5) forms a thermal break between the inner frame profile (3) and the finishing element (7). For this purpose said thermal-break profile (5) extends, viewed in a direction (A) transverse to the wall (17) and away from the glazing (2), to an insulating thickness (d) further than the inner frame profile (3), as indicated in Figs. 2, 9 and 16.

[0033] The wall (17) comprises, in the embodiments shown in Figs. 2 to 16, a structural part (11) and a wall covering (14), between which insulation (9, 10) is installed.

The insulation (9, 10) may be made from a variety of materials. In the embodiments shown, a first layer of insulation (9) made of polyurethane (PUR) or polyisocyanurate (PIR) is installed next to the wall covering (14). Away from the wall covering (14), a second layer of insulation (10) made of mineral wool (glass wool/rock wool) is applied next to this first layer of insulation (9).

[0034] On the side of the structural part (11) away from the wall covering (14), known inner wall covering (not shown), such as floor covering (for Figs. 2 to 15) or ceiling covering (for Fig. 16), may also be applied. Said floor covering or ceiling covering may assume various known forms.

The external wall covering (14) may also assume a whole variety of different forms, for example such as an aluminium plate (14) shown in Figs. 2 to 15 or a roof membrane (14) shown in Fig. 16.

[0035] The inner frame profile (3) and the finishing profile (7) are in each case aluminium profiles (3, 7), which may be made for example by extrusion.

[0036] The inner frame profile (3) may be fastened to the structural part (11) of the wall (17) in a whole variety of ways.

In the embodiments shown, this inner frame profile (3) comprises a sloping part that provides rigidity and serves as finishing for the floor (in Figs. 2 to 15) or ceiling (in Fig. 16) (or an interior wall). In this way, maximum light may also be brought in through the glazing (2). This inner frame profile (3) would, however, for example also mainly be made in the shape of a beam with a mainly rectangular cross-section, or may also assume a whole variety of other shapes. This inner frame profile (3) should be of sufficiently rigid design so as to be able to form a stop (4) for the glazing (2).

[0037] The glazing (2) shown is double glazing and for this purpose comprises an inner layer of glass (2a), a cavity (2b) and an outer layer of glass (2c). The inner layer of glass (2a) is made of laminated glass, but could also be of glass consisting of a single layer. For example, triple glazing could also be provided as glazing in place of double glazing, wherein an intermediate layer of glass is then installed between the inner layer of glass and the outer layer of glass.

In the first and the third embodiment shown (Figs. 2 to 8 and Fig. 16), all layers (2a, 2b, 2c) of the glazing (2) cover almost an identical area, so that they all extend to an almost equal distance from the wall (17).

In the second embodiment shown (Figs. 9 to 15), the outer layer of glass (2c) occupies a larger area than the other layers (2a, 2b) of the glazing (2) and this comes closer to the surface of the wall (17) than the other layers (2a, 2b) of the glazing. This outer layer of glass (2c) comes almost to the corner of the connection of the glazing (2) to the wall (17). In this embodiment, the inner layer of glass (2a) extends beyond the seal (35) of the cavity (2b), so that a gripping cavity (36) is formed between the two layers of glass (2a, 2c).

[0038] In the embodiments shown, the thermal-break profile (5) is in each case fastened directly to the inner frame profile (3).

In the first embodiment shown, this is by means of hooked elements (22, 23) and a click connection (24, 25), wherein screws (19) prevent displacement of the thermal-break profile (5) relative to the inner frame profile (3).

In the second embodiment shown, the thermal-break profile (5) is fastened by means of screws (19) to the inner frame profile (3).

In the third embodiment shown, thermal insulating strips (5a) of the thermal-break profile (5) are rolled into respective slots of the inner frame profile (3).

[0039] To allow simple fastening of the screws (19) in the first and the second embodiment, the thermal-break profile (5) is provided in this embodiment with a channel (28) and an access opening (27) to this channel (28) and the inner frame profile (3) is provided with a corresponding threaded channel (26). It is however also possible to fit these screws (19) at some other location.

The screws (19) shown, with which in the first and the second embodiment the thermal-break profile (5) is fixed relative to the inner frame profile (3), are in each case fitted slanting relative to the plane of the wall (17), with the head thereof towards the corner of the connection, which ensures simple mounting of the thermal-break profile (5) from the front of the bay (15). However, these screws (19) should also for example be mountable transversely to the wall (17).

The thermal-break profile (5) should also be fastenable to the inner frame profile by means of alternative fasteners, for example such as by means of brackets, adhesive, etc.

[0040] The parts of the thermal-break profile (5) with which the thermal breaks are made may be manufactured from a whole variety of thermal insulating materials. They are preferably made of plastic, for example such as acrylonitrile-butadiene-styrene (ABS) or polyamide (PA) or polypropylene (PP) or polyethylene (PE) or polyvinyl chloride (PVC) or a glass-fibre-reinforced variant of one of these materials, etc. For this purpose they may for example be produced by extrusion. They may also be made of glass-fibre-reinforced polyester or polyurethane pultrusion profiles.

In the first and the second embodiment, the thermal-break profile (5) shown is made entirely from a thermal insulating material of this kind. This thermal-break profile (5) is in each case made hollow, with various cavities,

which are delimited with upper walls, lower walls and partitions, which together form a lattice structure. In this way, this thermal-break profile (5) can be made lightweight. The air in the cavities accounts for part of the insulating function of the thermal-break profile (5).

In the third embodiment shown, the thermal-break profile (5) is assembled from an aluminium fastening profile (38), in which two thermal insulating strips (5a) are rolled into corresponding slots. These thermal insulating strips (5a) are made from an aforementioned thermal insulating material and are commercially available as standard. These thermal insulating strips (5a) comprise various cavities. In the installed state, an additional cavity (40) extends between these insulating strips (5a) and between the inner frame profile (3) and the fastening profile (38). Together with the thermal insulating material of the thermal insulating strips (5a), the air in the cavities in these strips (5a) and in the additional cavity (40) between these strips (5a) provides part of the insulating function of the thermal-break profile (5).

[0041] In the first and the third embodiment shown (Figs. 2 to 8 and Fig. 16), the finishing profile (7) is a corner profile (7) that clicks tightly directly on the thermal-break profile (5) by means of clips (not shown), so that there are no visible fasteners. This corner profile (7) extends, after fastening with a first leg (41), partially over the wall (17) and with a second leg (42) partially over the glazing (2), to provide a seamless connection on the corner.

In the second embodiment (Figs. 9 to 15), the finishing profile (7) is a mainly flat profile (7) that is provided with a vertical fastening rib (34), over which clips that are not shown may be applied to click this finishing profile (7) into a fastening slot (33) in the thermal-break profile (5). Once again, no fasteners are visible. The finishing profile (7) then extends over a part of the wall (17) and next to the wall (17), to beyond the outer layer of glass (2c), to finish the connection of the glazing (2) to the wall (17). Instead of providing a finishing profile (7), it would also be possible to allow the finishing element of a rebate system according to the invention to form part of the wall covering.

[0042] In the first and the third embodiment shown (Figs. 2 to 8 and Fig. 16), the part of the second leg (42) of the corner profile (7) that extends over a part of the glazing (2), forms the pressure lip (6) for gripping the bottom edge of the glazing (2) between the stop (4) and said pressure lip (6). In view of the thickness (d) over which the thermal-break profile (5) extends under the inner frame profile (3), the thermal-break profile (5) is sufficiently rigid for fastening this corner profile (7) by means of its second leg (42) directly to said thermal-break profile (5), in such a way that this corner finishing profile (7) may also form the pressure lip (6). This second leg (42) is provided with a hooked leg (30) for hooking it firmly behind a hooked element (29) of the thermal-break profile (5) and a supporting leg (32) for supporting it at a distance from the hooked leg (30) against the thermal-break profile (5).

[0043] In the second embodiment shown, the thermal-break profile (5) is itself provided with a vertical edge (6), which forms the pressure lip (6). The thermal-break profile (5) is then itself rigid enough to perform the function of this pressure lip (6). This pressure lip (6) then grips in the gripping cavity (36) between the two layers of glass (2a, 2c) to grip the bottom edge of the inner layer of glass (2a) between the stop (4) and said pressure lip (6).

[0044] Sealing screens (8, 8a, 8b 12) are applied between the glazing (2) and the stop (4) on the one hand and the pressure lip (6) on the other hand. The sealing screens (8a, 8b) from the first and the third embodiment and the sealing screen (8) from the second embodiment between the stop (4) and the glazing (2) are known sealing screens (8, 8a, 8b). In the second embodiment, a foam tape (12) is provided as a sealing screen (12) between the pressure lip (6) and the glazing (2).

In the second embodiment, a further sealing element (13) is included under the outer layer of glass (2c), between said outer layer of glass (2c) and the finishing profile (7). In the third embodiment, a further sealing element (39) is applied between the roof membrane (14) and the corner profile (7).

[0045] In the first and the second embodiments shown, glass carriers (20) may also be seen, which are fitted at intervals under the glazing (2), for supporting the glazing (2). These glass carriers (20) are only required in rebate systems (1) where the glazing (2) is connected to an insulating floor element (17). Moreover, a supporting block (not shown) is fitted between said glass carrier (20) and the glazing (2) itself.

[0046] In the first embodiment shown, the thermal-break profile (5) is first hooked with its hooked element (23) over the hooked element (22) of the inner frame profile (3), as can be seen in Fig. 3. Then the thermal-break profile (5) is tilted until its clicking leg (24) clicks over the clicking element (25) of the inner frame profile (3), as can be seen in Fig. 4. In this way, the thermal-break profile (5) is already fastened to the inner frame profile (3). To prevent displacement of the thermal-break profile (5) relative to the inner frame profile (3), the thermal-break profile (5) is then screwed to the inner frame profile (3) by means of screws (19), as can be seen in Fig. 5. Then the glass carriers (20) are milled in and applied to the inner frame profile (3). A rubber seal (8a) is secured in a slot (21) provided for this purpose in the inner frame profile (3). The glazing (2) is then applied on the glass carriers (20) and against the rubber seal (8a), as can be seen in Fig. 6. Then the corner finishing profile (7) is hooked with its hooked leg (30) as hooking element behind the hooked element (29) in the thermal-break profile (5), as can be seen in Fig. 7. Next the corner finishing profile (7) is tilted and fixed in position on the thermal-break profile (5), with the aid of its supporting leg (32) in the corner finishing profile (7) and a corresponding lip (31) in the thermal-break profile (5). Finally, a rubber seal (8b) is then fitted between the corner finishing profile (7)

and the glazing (2), as can be seen in Fig. 8.

[0047] In the third embodiment shown, the thermal-break profile (5) is fastened to the inner frame profile (3) by rolling the thermal insulating strips (5a) of the thermal-break profile (5) into respective slots of the inner frame profile (3). A rubber seal (8a) is fastened in a slot provided for this purpose in the inner frame profile (3). The glazing (2) is then applied against the rubber seal (8a). Next, the corner finishing profile (7) is fastened in a comparable manner to the first embodiment and a rubber seal (8b) is fitted in a comparable manner between the corner finishing profile (7) and the glazing (2).

[0048] In the second embodiment shown, the glass carriers (20) are first fitted at intervals over the inner frame profile (3), as can be seen in Fig. 10. Then a rubber seal (8) is secured in a slot (21) provided for this purpose in the inner frame profile (3) and the glazing (2) is fitted on the glass carriers (20) and against the rubber seal (8), as can be seen in Fig. 11. Then the thermal-break profile (5) is positioned relative to the inner frame profile (3), as can be seen in Fig. 12. The vertical edge (6) of the thermal-break profile (5) is fitted in the gripping cavity (36) against the inner layer of glass (2a) to form the pressure lip (6), as can be seen in Fig. 13. The thermal-break profile (5) is then screwed onto the inner frame profile (3), as can be seen in Figs. 13 and 14. Finally the finishing profile (7) is clicked into the thermal-break profile (5) and a seal (13) is fitted between this finishing profile (7) and the outer layer of glass (2c), as can be seen in Fig. 15.

[0049] In this way, all fasteners in this second embodiment are located behind the outer layer of glass (2c). Only the finishing profile (7) projects beyond this outer layer of glass (2c).

[0050] In the embodiments shown, the inner frame profile (3) is mainly installed next to the glazing (2) on the side of the inner layer of glass (2a) and the hooked element (22) thereof extends partially into a zone under the inner layer of glass (2a). In the third embodiment shown, this hooked element (22) then extends to a zone above or below the cavity (2b).

Claims

1. Rebate system (1) for connecting glazing (2) or a panel to an insulating wall (16, 17, 18) at an angle, comprising:

   - glazing (2) or a panel;
   - a firmly fixed inner frame profile (3) that forms a stop (4) for the glazing (2) or panel;
   - a pressure lip (6) for gripping at least a part of an edge of the glazing (2) or panel between the stop (4) and the pressure lip (6);
   - a thermal-break profile (5), which in the installed state forms a thermal break between the stop (4) and the pressure lip (6);

   characterized in that

   - the thermal-break profile (5) in the installed state forms a second thermal break, viewed in a direction (A) transverse to the wall (16, 17) and away from the glazing (2) or panel.

2. Rebate system (1) according to Claim 1, **characterized in that** the rebate system (1) comprises a finishing element (7) for finishing the connection of the glazing (2) or panel to the wall (16, 17, 18) and **in that** the thermal-break profile (5) forms the second thermal break between the stop (4) and the finishing element (7).

3. Rebate system (1) according to Claim 2, **characterized in that** the finishing element (7) in the installed state is fastened to the thermal-break profile (5).

4. Rebate system (1) according to Claim 3, **characterized in that** the finishing element (7) is fitted at least partially in a zone (z) in the extension of the glazing (2) or panel.

5. Rebate system (1) according to one of Claims 3 or 4, **characterized in that** the finishing element (7) is configured as a finishing profile (7).

6. Rebate system (1) according to one of Claims 3 to 5, **characterized in that** the pressure lip (6) forms part of the finishing element (7).

7. Rebate system (1) according to Claim 6, **characterized in that** the finishing element (7) is configured as a corner profile (7) for finishing the connection of the glazing (2) or panel to the wall (16, 17, 18), wherein this corner profile (7) comprises a first leg (41) that is connected to the wall (16, 17, 18) and comprises a second leg (42) that forms the pressure lip (6).

8. Rebate system (1) according to one of Claims 1 to 5, **characterized in that** the pressure lip (6) forms part of the thermal-break profile (5).

9. Rebate system (1) according to one of the preceding claims, **characterized in that** the glazing (2) or panel comprises an inner layer (2a), a cavity (2b) and an outer layer (2c) and **in that** the inner frame profile (3) in the installed state extends into a zone (z) viewed in the extension of the glazing (2), at most in the extension of at least a part of the inner layer of glass (2a) and a part of the cavity (2b).

10. Rebate system (1) according to one of the preceding claims, **characterized in that** the thermal-break profile (5) in the installed state is fastened to the inner frame profile (3).

11. Rebate system (1) according to Claim 9, **characterized in that** the inner frame profile (3) is provided with a hooked element (22) for fastening the thermal-break profile (5) to the inner frame profile (3).

12. Rebate system (1) according to one of the preceding claims, **characterized in that** the thermal-break profile (5) is mainly configured as a lattice profile.

13. Bay (15), **characterized in that** said bay (15) comprises a rebate system (1) according to one of the preceding claims.

14. Roof truss, **characterized in that** said roof truss comprises a rebate system (1) according to one of the preceding claims.

15. Building, **characterized in that** the building comprises a rebate system (1) according to one of Claims 1 to 13.

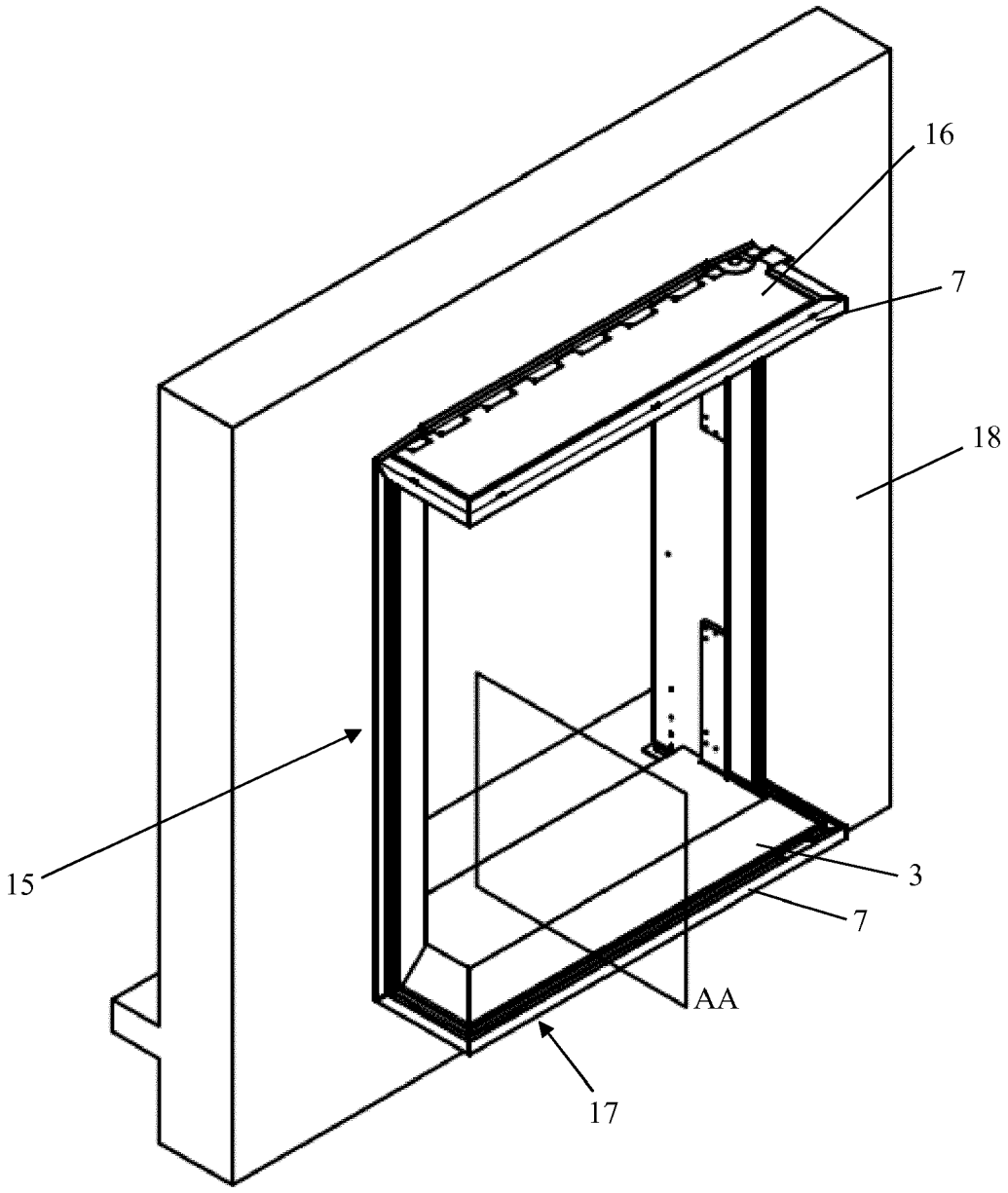

Fig. 1

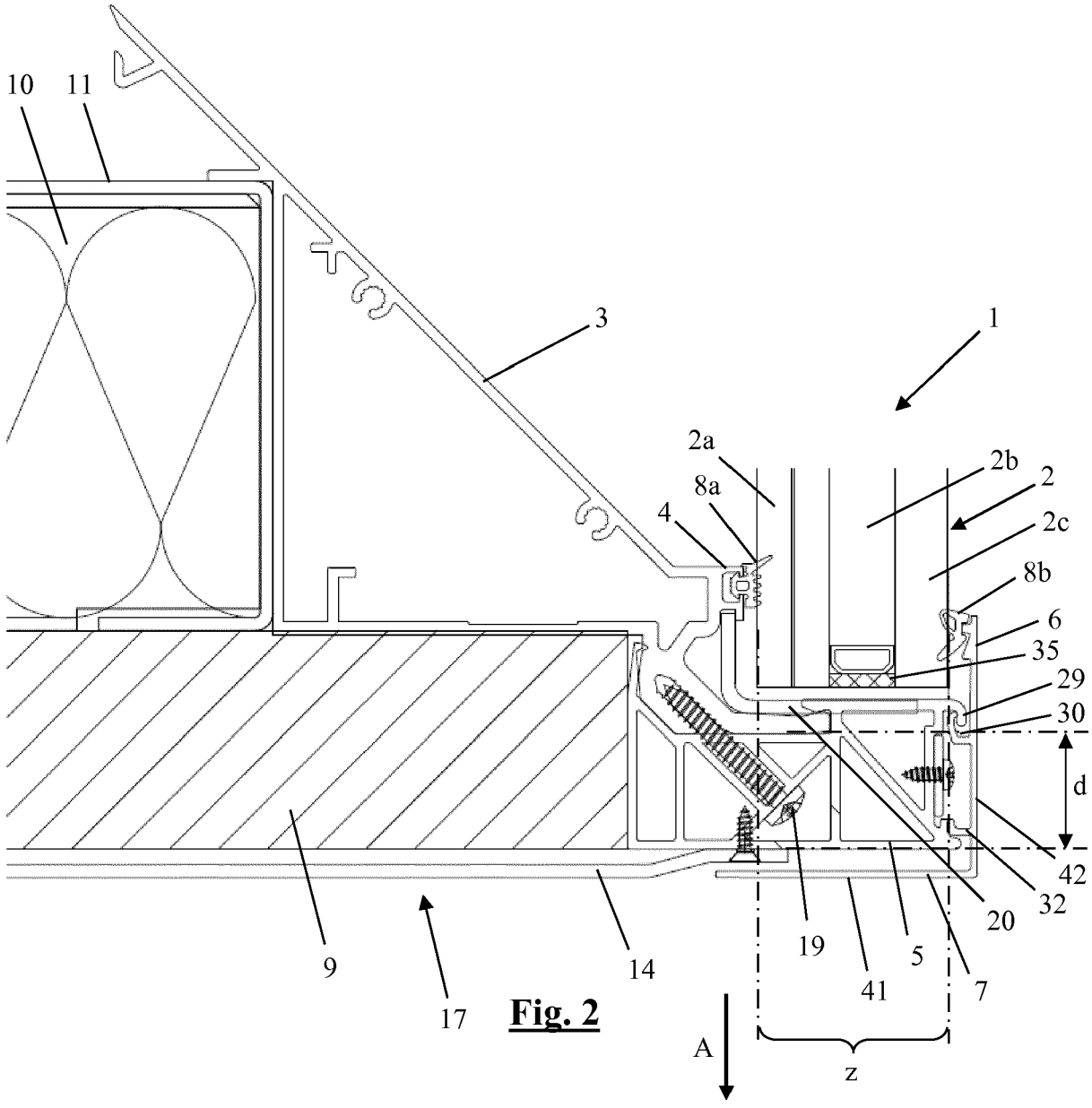

Fig. 2

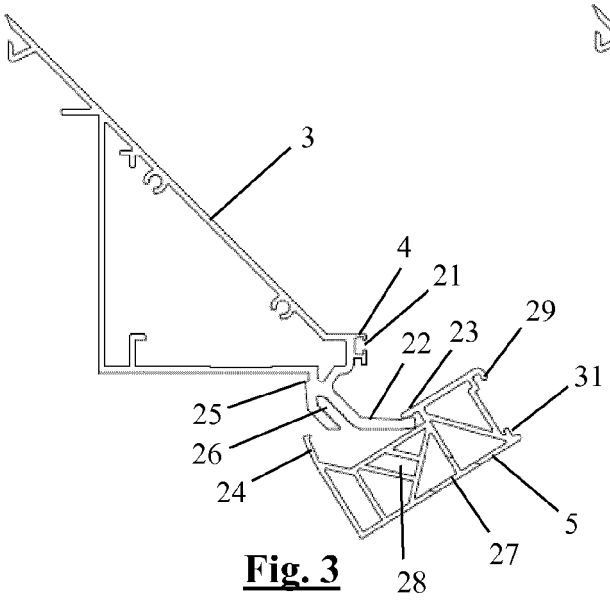

Fig. 3

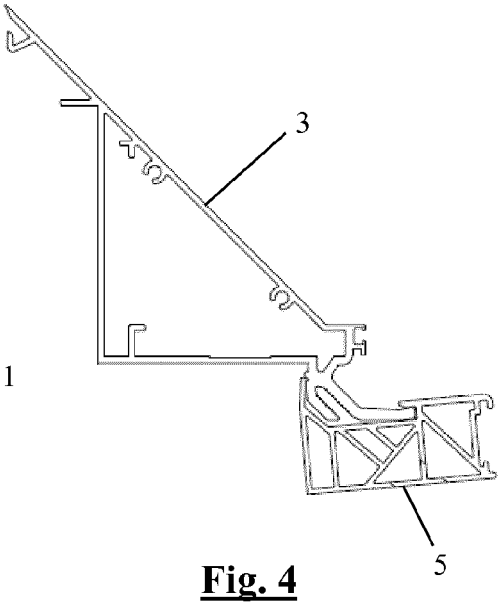

Fig. 4

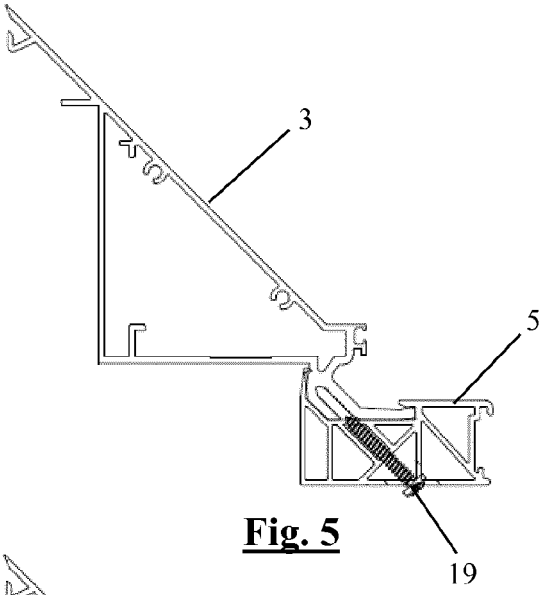

Fig. 5

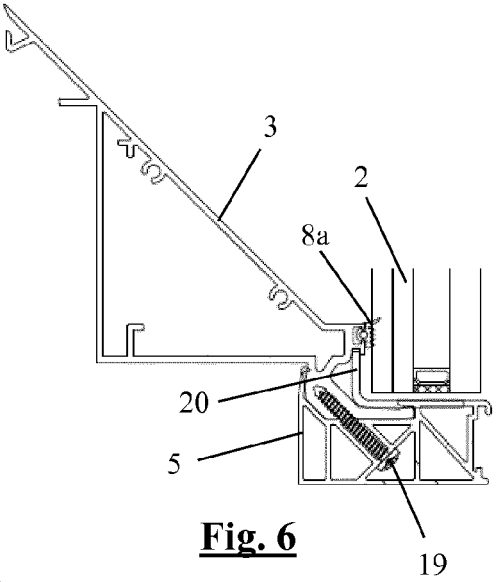

Fig. 6

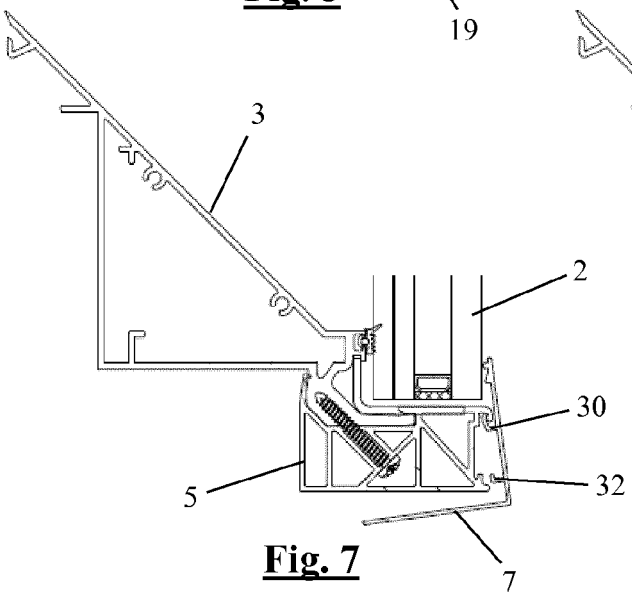

Fig. 7

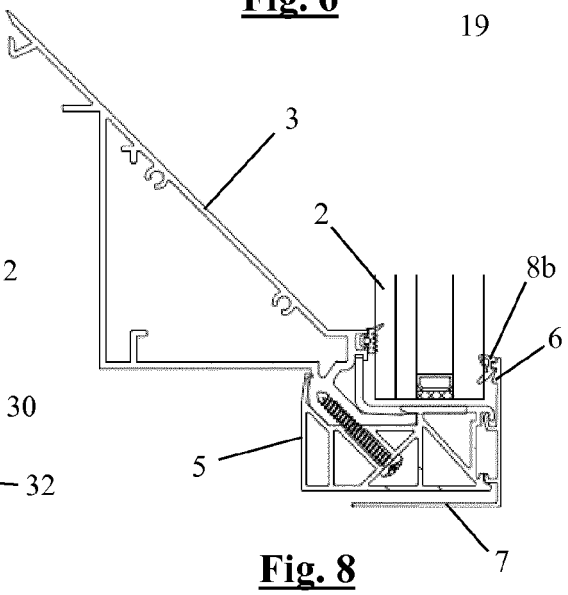

Fig. 8

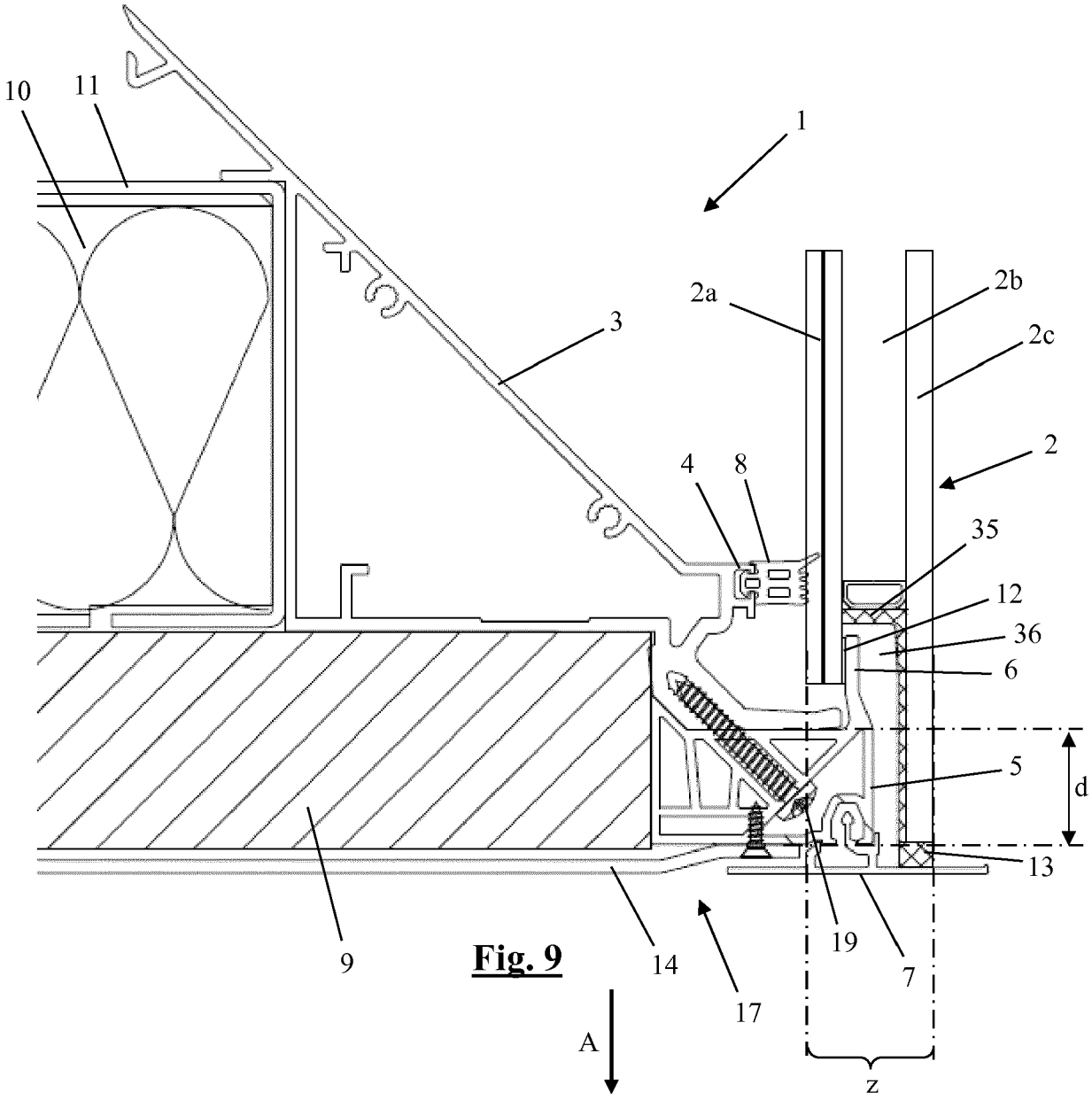

Fig. 9

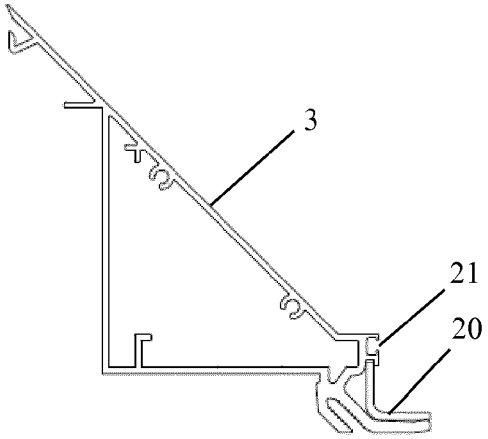

Fig. 10

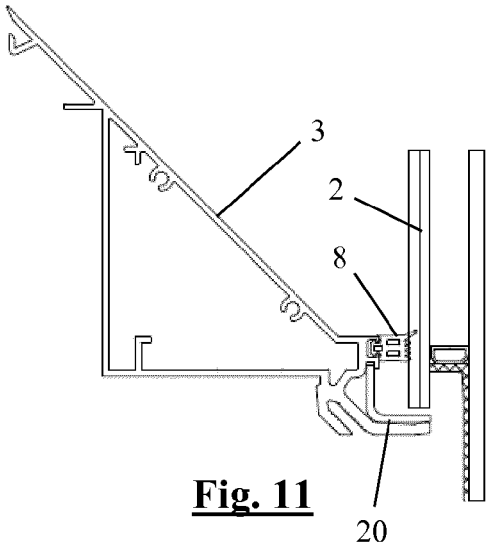

Fig. 11

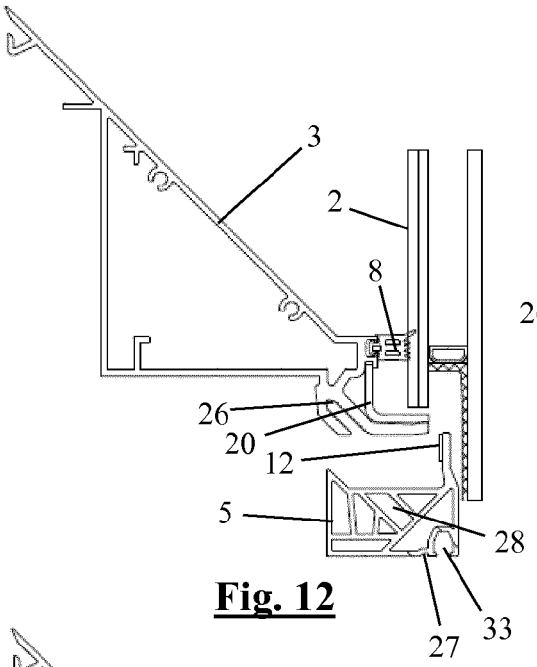

Fig. 12

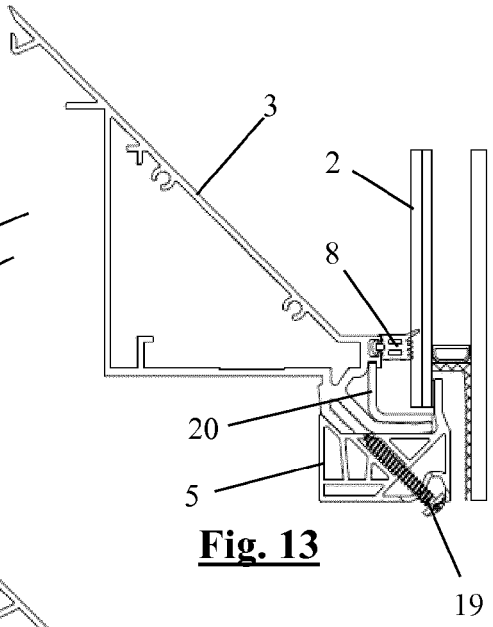

Fig. 13

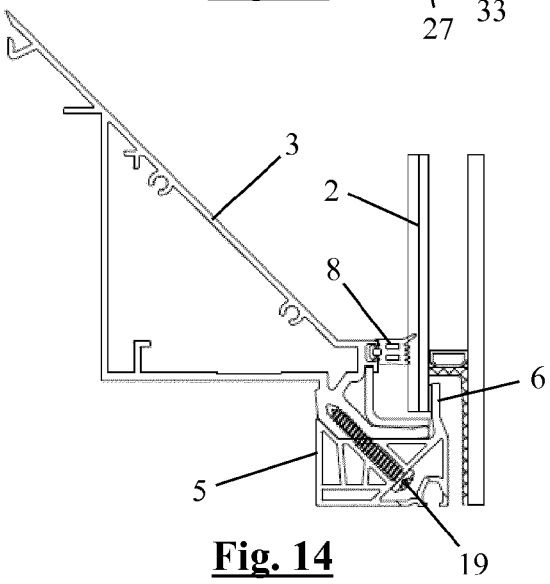

Fig. 14

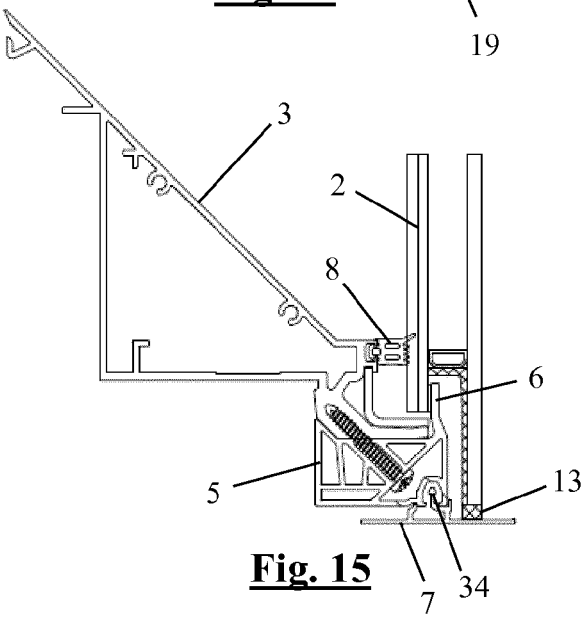

Fig. 15

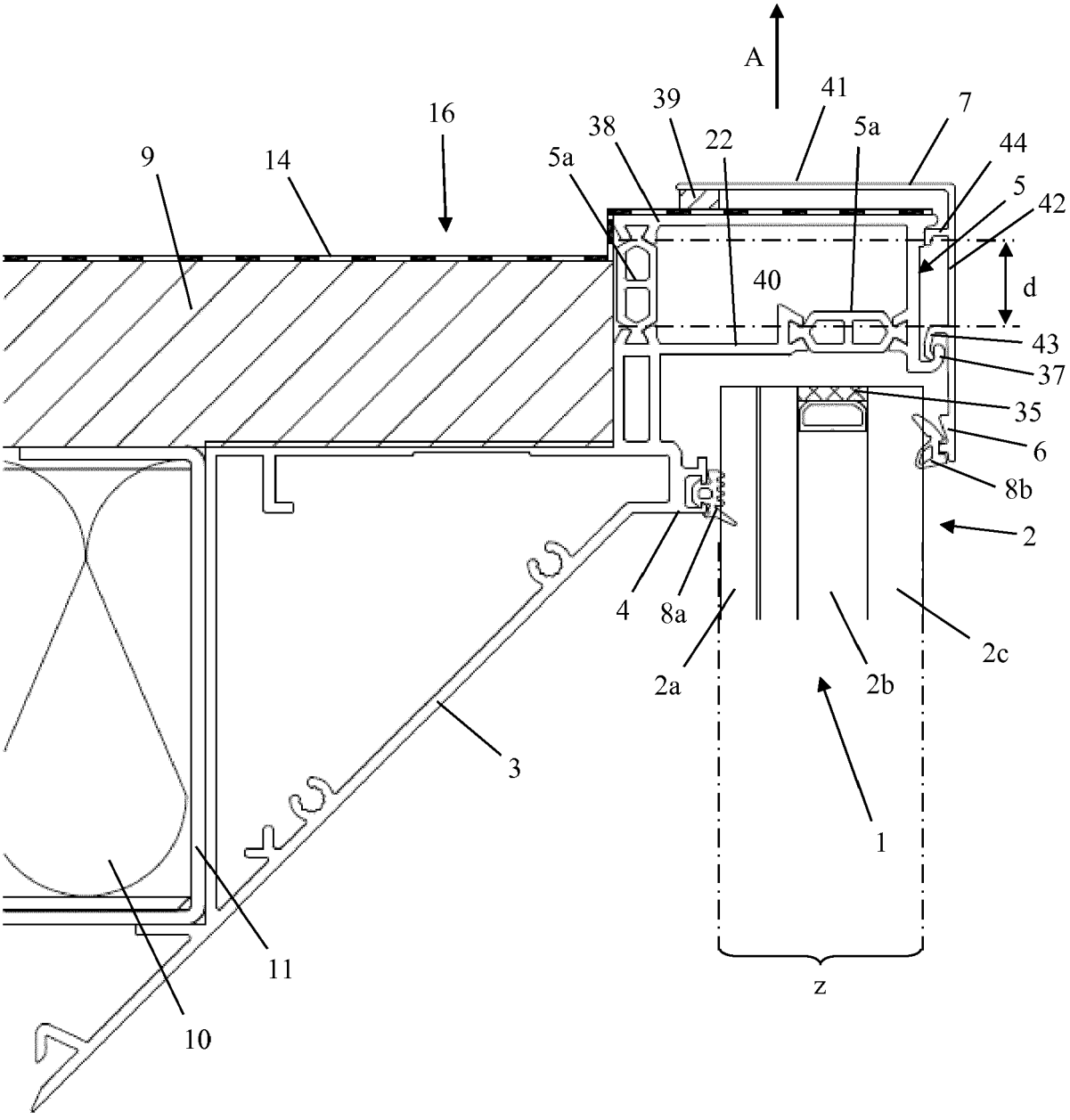
A
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Fig. 16

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EUROPEAN SEARCH REPORT

Application Number
EP 19 17 7284

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 4 543 756 A (KAMINAGA HIROMITSU [JP] ET AL) 1 October 1985 (1985-10-01) * figures 1,4 * * column 2, line 14 - column 3, line 21 *	1-7,9-15	INV. E06B1/36 E06B3/263 E06B3/58
X	GB 2 023 703 A (REYNOLDS D A) 3 January 1980 (1980-01-03) * the whole document *	1,8,10, 11,13,15	ADD. E06B3/54
X	FR 2 670 251 A1 (ALUVAR SA [FR]) 12 June 1992 (1992-06-12) * figures 1,2,10,11 *	1,2,5, 9-15	

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 September 2019	Blancquaert, Katleen

CATEGORY OF CITED DOCUMENTS

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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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19-09-2019

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82