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(54) **BALCONY GLAZING ARRANGEMENT**

ANORDNUNG FÜR EINE BALKONVERGLASUNG

ENSEMBLE D'UN VITRAGE DE BALCON

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Description

Technical Field

[0001] The present invention relates to a balcony glazing arrangement comprising a balcony glazing and at least one holding device.

[0002] The present invention also relates to a balcony comprising such a balcony glazing arrangement.

[0003] The present invention also relates to a method of mounting a balcony glazing of such a balcony glazing arrangement.

Background Art

[0004] Known holding devices of this type consist of holding members, that have a horizontal leg and a vertical leg. One balcony glazing arrangement with such a holding member is known from document WO 95/22664 A1.

[0005] When glazing a balcony, that has a balcony slab and a ceiling slab located directly there above, a frame assembly is placed on support members, attached to an edge face of the balcony slab and protruding slightly from said edge face. The frame assembly is then attached to the holding members secured to a corresponding edge face of the ceiling slab and projecting slightly there from.

[0006] The vertical legs of the holding members abut against the edge face of the ceiling slab and their horizontal legs project there from at the lower ends of the vertical legs. The holding members are attached to the front edge face of the ceiling slab by means of bolts extending through an elongated hole in each vertical leg thus permitting some height adjustment of the horizontal leg. The frame assembly abuts from below against the horizontal legs of the holding members and is attached thereto by means of bolt connections that extend through an elongated hole in each horizontal leg thus allowing some adjustment of the distance of an upper profile element from the edge face of the ceiling slab.

[0007] Any dimensional tolerances in height and width can thus be accommodated for thanks to the possibility to adapt the vertical position of the holding members and the lateral position of the bolt connections.

Summary of the Invention

[0008] The object of the present invention is to provide a balcony glazing arrangement with a holding device for holding of a frame member forming part of a balcony glazing, said holding device enabling easy mounting of the balcony glazing.

[0009] This object is achieved by a balcony glazing arrangement with the features of claim 1.

[0010] Means of a holding device for holding of an upper frame member forming part of a balcony glazing, said balcony glazing being mounted between a lower slab and an upper slab located there above, said holding device being characterized in that the holding device comprises

an attachment part adapted for attachment of the holding device to the upper slab, and an engagement part that is arranged on the attachment part and is displaceable vertically relative to the attachment part between a mounting position in which the engagement part allows mounting of the balcony glazing, and an operative position in which the engagement part is engaging said upper frame member for holding the balcony glazing.

[0011] A holding device designed in this way enables very easy and time efficient mounting of a balcony glazing. Further, adjustment to accommodate for dimensional tolerances is rendered possible in a very simple and tool free manner during mounting.

[0012] In this context vertically displaceable means that the engagement part is movable along a vertical line, i.e. a plumb line, or along a line that is substantially parallel to a vertical line. A line that is substantially parallel to a vertical line refers to a line deviating 0-30° from a vertical line.

[0013] The engagement part and the attachment part are preferably so interconnected that rotation of the engagement part relative to the attachment part is prevented, which means that the engagement part is guided in a manner that only allows displacement in a plane or along a straight line between the mounting position and the operating position.

[0014] In one embodiment the engagement part of the holding device has an elongated hole in which the attachment part is received. A coupling portion of the attachment part and the elongated hole of the engagement part are preferably designed such that displacement of the engagement part relative to the attachment part is allowed in one plane while rotation of the engagement part relative to the attachment part is prevented. In one embodiment, the elongated hole is an elongated through hole.

[0015] In one embodiment the attachment part of the holding device has a through hole, preferably an elongated hole, through which the engagement part extends at least in the operative position.

[0016] Preferably the engagement part of the holding device is displaceable in a horizontal direction relative to an edge face of the upper slab, which allows adjustment of the distance of the engagement part from the upper slab. Possible dimensional tolerances sideways can thus be compensated for thanks to the ability to adapt the sideways position of the engagement part.

[0017] In one embodiment the engagement part is displaceable in a horizontal direction along the attachment part.

[0018] In one embodiment the engagement part has a retaining pin extending in a substantially vertical direction both when the engagement part is in the mounting position and when the engagement part is in the operative position. In this context a substantially vertical direction refers to a direction deviating 0-30° from a vertical plane.

[0019] In one exemplary embodiment the engagement part has an arcuate portion, for instance in the form of a

circular sector shaped portion, which, in the operative position, engages with the upper frame member. In one exemplary embodiment the engagement part has a fork shaped portion, which, in the operative position, engages with a projecting portion of the upper frame member.

[0020] Preferably the holding device comprises a support member that is arranged on the attachment part and adapted to engage with a lower frame member of a further balcony glazing above said balcony glazing. A holding device designed in this way allows very easy and time efficient mounting of a plurality of balcony glazings on a house wall for glazing of balconies on different floors. Such a holding device can thus hold a balcony glazing at a lower balcony thanks to the engagement part and simultaneously support an additional balcony glazing at an adjacent upper balcony thanks to the support member. This renders it possible to use the holding device as a combined holding and support means when mounting adjacent balcony glazings, thus creating a very robust and compact solution for mounting of a plurality of balcony glazings on a house wall for glazing balconies on different floors.

[0021] In one embodiment, the support member is displaceable in a vertical direction, which allows for easy adjustment to accommodate for possible dimensional tolerances in height when mounting vertically adjacent balcony glazings.

[0022] Another object of the invention is to provide a balcony that renders easy mounting of a frame assembly possible for enabling glazing of the balcony.

[0023] This object is achieved by means of a balcony comprising a balcony glazing arrangement according to the invention.

[0024] Another object of the present invention to provide a method of mounting a balcony glazing that has an upper frame member between a lower slab and an upper slab located there above by means of a holding device attached to the upper slab, wherein said holding device comprises an attachment part and an engagement part arranged on the attachment part. This object is achieved by means of a method that comprises vertically displacing of the engagement part relative to the attachment part from a mounting position, in which the engagement part allows mounting of the balcony glazing, to an operative position, in which the engagement part engages with said upper frame member and holds the balcony glazing.

[0025] In this context vertically displacing means that the engagement part is displaced along a vertical line, i. e. a plumb line, or along a line which is substantially parallel to a vertical line. A line that is substantially parallel to a vertical line refers to a line deviating 0-30° from a vertical line.

[0026] Further advantages and features of the invention are revealed in the description below and in the appended claims.

Brief Description of the Drawings

[0027] The invention will now be described with reference to the appended drawings.

Fig. 1 is a front view showing a glazed balcony, provided with a holding device according to the present invention.

Fig. 2 shows the balcony from the right in fig. 1.

Fig. 3 is an exploded view of a holding device in a larger scale.

Fig. 4 is a sectional view of the holding device shown in fig. 3.

Fig. 5a-c illustrate mounting of a frame member forming part of a balcony glazing.

Description of Preferred Embodiments

[0028] The balcony illustrated in the drawings comprises a horizontal balcony slab 1 and horizontal ceiling slab 2 that is located right above and, in the case at hand, constitutes a balcony slab of an upper balcony. The balcony slab 1 may similarly constitute the ceiling slab of a lower balcony. Each of the two slabs 1 and 2 comprises a steel frame 1a, 2a, which is composed of steel profiles having a square cross section, and a concrete slab 1b, 2b, which is supported by the steel frame 1a, 2a. Each of the two slabs 1 and 2 is in a conventional way attached to a house wall (not shown).

[0029] The balcony is glazed and has a front comprising a fixed lower wall panel 15 of sheet metal and a plurality of glass panes 16, 16', 16" horizontally displaceable in relation to each other. The wall panel 15 and the glass panes 16, 16', 16" are mounted in a frame assembly comprising an upper horizontal profile element 17, a lower horizontal profile element 18 and an intermediate horizontal profile element 19. Together the frame assembly 17, 18, 19, the wall panel 15 and the glass panes 16, 16', 16" form a balcony glazing 9. The upper 17 and lower 19 profile elements of the frame assembly, and thus the balcony glazing 9, are held by holding devices 3, 20 according to the present invention. The wall panel 15 is mounted between the lower profile element 18 and the intermediate profile element 19. The glass panes 16, 16', 16" are in a way known mounted between the upper profile element 17 and the intermediate profile element 19 and are displaceable in relation to each other. The profile elements 17, 18, 19 are preferably made of aluminium. In the drawings a typical lower profile element 18' is shown of a frame assembly of the upper balcony. The two lower profile elements 18 and 18' look the same. The upper balcony is glazed in the same way and has a front comprising a fixed lower wall panel 15' of sheet metal and a plurality of glass panes (not shown) horizontally displaceable in relation to each other and forming part of a balcony glazing 9' of the upper balcony.

[0030] Two upper holding devices 3, comprising an attachment part 5 and an engagement part 6, are attached

spaced apart to a front edge face 4 of the ceiling slab 2.

[0031] The attachment part 5 comprises a partially threaded shaft 7. A first threaded portion 7a of the shaft 7 is received in a frame member 2a of the ceiling slab 2. Said first threaded portion 7a has radial grooves 7b that cooperate with a keyhole-shaped orifice 36 in frame member 2a, thus preventing withdrawal of the attachment part 5 and rotation of the attachment part relative to the frame member 2a. Hence one end of the shaft 7 engages with a side wall of the frame member 2a such that rotation of the attachment part 5 relative to the frame member 2a is prevented. A nut 11 is provided on the threaded portion 7a of the attachment part 5 rendering possible a very robust attachment of the attachment part 5. Further the attachment part 5 comprises a coupling portion 7d having two planar side surfaces 7e which are parallel to each other, wherein said portion 7d is arranged to be received by an elongated hole 6a formed in the engagement part 6.

[0032] The engagement part 6 includes a retaining pin 8 that engages with a longitudinal channel 17a arranged in the upper frame member 17. The engagement part 6 has an elongated hole in the form of an elongated through hole 6a, through which the coupling portion 7d of the attachment part extends, thus permitting vertical displacement of the engagement part 6 relative to the attachment part 5 and horizontal displacement of the engagement part 6 along the attachment part 5, while rotation of the engagement part 6 relative to the attachment part 5 is prevented. The elongated hole 6a comprises two planar wall faces 6d that are parallel to each other, which is best illustrated in fig. 4. The planar side surfaces 7e of the attachment part 5 are parallel with each other and with the planar wall faces 6d of the elongated hole. The planar side faces 7e interact with the wall faces 6d in a form fitting manner, permitting displacement of the engagement part 6 in one plane, but preventing rotation of the engagement part 6 relative to the attachment part 5, i.e. in a rotation preventing manner. The engagement part 6 can thus be displaced vertically along a vertical line L1 between a mounting position, illustrated in fig. 5a, and an operative position, illustrated in fig. 5c, as illustrated by arrows A in fig. 4 and arrow D in fig. 5c. Further, the distance of the engagement part 6 from the front edge face 4 of the ceiling slab 2 can be adjusted by displacing the engagement part 6 along the attachment part 5.

[0033] The wall faces 6d of the elongated hole 6a and the planar side faces 7e of the attachment part 5 thus form a planar guide for the engagement part 6, i.e. a guide that limits the freedom of movement of the engagement part 6 in one plane. The engagement part 6 can thus be displaced in a plane in relation to the attachment part 6 while rotation of the engagement part 6 around the attachment part 5 is prevented.

[0034] The holding device 3 comprises two set screws 13, by means of which the engagement part 6 can be locked onto the attachment part 5 to prevent movement of the engagement part 6 relative to the attachment part

5 in the operative position. The attachment part 5 has a plurality of conical holes 14 for receiving said screws 13, hence allowing a very robust securing of the engagement part 6 by means of the set screws 13. The set screws 13 extend through and cooperate with threaded holes 6b of the engagement part 6.

[0035] The holding device 3 further comprises a locking pin 39 for temporary locking of the engagement part 6 in a mounting position, which facilitates mounting of a glazing portion. Each of the attachment part 5 and the engagement part 6 have holes 41 and 43, respectively, for receiving the locking pin 39.

[0036] The holding device 3 further comprises a support member, in the form of a support pin 10 that engages the frame assembly, forming part of the lower profile element 18' of the upper balcony. The support pin 10 has a threaded portion 10a which is received in and engages with a threaded hole 6c of the engagement part 6, thus allowing the adjustment of the position of the support pin 10 relative to the engagement part 6 in the vertical direction, i.e. adjustment of the height of the support pin 10. Hence the support pin 10 is displaceably mounted on the engagement part 6, the height of which can be adjusted by rotating the support pin 10. Mounting of the holding device 3 will be described later. When the holding device 3 has been mounted, the retaining pin 8 and the support pin 10 are directed in a vertical direction. When the holding device 3 is installed (fig. 5a), the attachment part 6 is unable to rotate relative to the ceiling slab 2.

[0037] The holding device 3 further comprises a stop, in the form of a nut 12, preventing withdrawal of the engagement part 6 arranged on the attachment part 5. The nut 12 is arranged on a threaded end portion 7c of the shaft 7.

[0038] Two lower holding devices, in the form of support devices 20 comprising an attachment part 22 and a support part 23, are attached spaced apart to a front edge face 21 of the balcony slab. Each support device 20 comprises a partially threaded shaft 24. A first threaded portion 24a of the shaft 24 is received in a frame member 1a of the balcony slab 1. The support part 23 has a support pin 25 that engages a longitudinal channel 18a provided in the lower frame member 18. Thus the support device 20 supports and retains the lower profile element 18 of the frame assembly. The support pin 25 has a threaded portion which is received in and engages with a threaded hole in the support part 23, hence allowing adjustment of the height of the support pin 25. Thus the support pin 25 is displaceably mounted on the support part 23.

[0039] Hence the lower profile element 18 has a longitudinal channel 18a in its bottom. The frame assembly rests on the supporting devices 20 with its lower profile element 18. The support pin 25 of each support device 20 is accordingly placed in the channel 18a of the lower profile element 18.

[0040] The lower profile element 18' of the upper balcony also has a longitudinal channel in its bottom. The

frame assembly of the upper balcony rests on the lower holding devices 3 by means of its lower profile element 18'. The support pin 10 of each holding device 3 is accordingly placed in the longitudinal channel of the lower profile element 18'.

[0041] Mounting of a holding device 3 according to the present invention will now be described. In this case the holding device 3 is mounted on a frame member 2a forming part of a balcony frame.

[0042] The attachment part 5 of the holding device 3 is somewhat angled inserted in a circular hole in an outer side wall of frame member 2a and is then turned so that the grooves 7b cooperate with the narrower part of the keyhole-shaped hole 36 in an inner side wall of the frame member 2a. A portion, in the form of the threaded portion 7a, of the engagement part 5 is hence received by the frame member 2a. Further, shaft 7 is hereby prevented from rotating about its own longitudinal axis, i.e. about a horizontal axis. A stop member 37, which includes a plug 38, is then positioned so that the engagement part 5 is prevented from being rotated backwards from its mounted position, where after the nut 11 is tightened. The distance of the retaining pin 8 from the frame member 2a can be adjusted by moving the engagement part 6 along the attachment part 5, on which the engagement part 6 is slidably mounted. Further, the height of the support pin 10 can be adjusted by rotating the support pin 10. The holding device 3 thus allows adjustment for any dimensional tolerances in a very simple manner.

[0043] Referring to fig. 5a-c mounting of a frame member 17 forming part of a balcony glazing 9 will now be described. In the mounting position, as illustrated in fig. 5a, the locking pin 39 of the holding device 3 is inserted in the engagement part 5 and the attachment part 6. The locking pin 39 holds the engagement part 6 in an upper position, which permits simple and easy attachment of the upper profile element 17 of the balcony glazing, as schematically illustrated by arrow B in fig. 5a. When the balcony glazing 9 has been placed on the lower holding device 20, the locking pin 39 is removed, as illustrated by arrow C in fig. 5b, after which the engagement part 6 is moved vertically along a vertical line L1 (fig. 4) to its operative position, as illustrated by arrow D in fig. 5c. In its operative position, illustrated in fig. 5c, the retaining pin 8 engages with channel 17a of the upper frame member 17 and holds the frame member 17 and thus the balcony glazing 9. Finally, the set screws 13 are tightened in order to prevent rotation of the engagement part from its operative position. Thus the set screws 13 prevent rotation of the engagement part 6 and the attachment part 5 in relation to each other when mounting of the balcony glazing 9 is completed.

[0044] When mounting a balcony glazing 9' on the upper balcony, the height of the displaceable support pin 10 is adjusted if necessary in order compensate for any dimensional tolerances. Then the balcony glazing 9' of the upper balcony is mounted in a way corresponding to the one described above with reference to figs. 5a-c. The

T-shaped holding device 3 hence holds the balcony glazing 9 while supporting a balcony glazing 9' of the upper balcony.

[0045] It will be appreciated that many variations of the above described embodiments are possible within the scope of the appended claims.

[0046] In the foregoing a holding device has been described which is attached to a profile element 2a forming part of a steel frame, that supports a concrete slab 2b. It is understood that a holding device according to the invention may be attached to other types of balcony slabs, such as concrete or steel slabs.

[0047] In the above it has been described that the engagement part has an elongated hole, in which the attachment part is received, to enable vertical displacement in relation to the attachment part. It is understood that the holding device can be designed in other ways to accomplish this. For example, the attachment part can have a through hole, in which the engagement part is received at least in the operative position. In this embodiment, the engagement part is thus shifted vertically relative to the attachment part in that a portion of the engagement part, when the mounting a balcony glazing, is pushed down through said through hole formed in the attachment part. The through hole of the attachment part is in this case preferably elongated, which allows adjustment of the distance to the edge face of the upper slab in the horizontal direction, i.e. of the position of the engagement part in a horizontal direction. When the horizontal position of the engagement part has been adjusted, the engagement part can be locked by one or a plurality of set screws to prevent the engagement part from moving in relation to the attachment part in the operative position.

[0048] In the above it has been described that the engagement part comprises a retaining pin. It is essential for the invention that the engagement part, in the operative position, engages with the upper frame member and not how the engagement part is designed in detail to achieve this. It will be appreciated that various detailed configurations of an engagement part are possible leading to the described property of allowing, in a mounting position, mounting of a balcony glazing, and of allowing, in an operative position, engagement with a top frame member. In order to exemplify this, it can be mentioned that the engagement part may have an arcuate portion, for example in the form of a circular sector-shaped part, which, in the operative position, engages with the upper frame member. Alternatively, the engagement part may have a fork-shaped part which, in the operative position, engages with a projecting portion of the upper frame member.

Claims

1. A balcony glazing arrangement comprising a balcony glazing (9) and at least one holding device (3),

which is arranged to hold an upper frame member (17) forming part of the balcony glazing (9), said balcony glazing (9) being mountable between a lower slab (1) and an upper slab (2) located there above, wherein the holding device (3) comprises an attachment part (5) adapted for attachment of the holding device (3) to the upper slab (2), **characterized in that** the holding device (3) comprises an engagement part (6) that is arranged on the attachment part (5) and, when the holding device (3) is attached to the upper slab (2), is displaceable vertically relative to the attachment part (5) between a mounting position in which the engagement part (6) allows mounting of the balcony glazing (9), and an operative position in which the engagement part (6) is engaging said upper frame member (17) thereby holding the balcony glazing (9).

2. The balcony glazing arrangement according to claim 1, wherein the engagement part (6) and the attachment part (5) are so interconnected that rotation of the engagement part (6) relative to the attachment part (5) is prevented.
3. The balcony glazing arrangement according to any preceding claim, wherein the engagement part (6) of the holding device (3) has an elongated hole (6a) in which the attachment part (5) is received.
4. The balcony glazing arrangement according to claim 3, wherein a portion (7d) of the attachment part (5) and the elongated hole (6a) of the engagement part are designed such that displacement of the engagement part (6) relative to the attachment part (5) is allowed in one plane whilst rotation of the engagement part (6) relative to the attachment part (5) is prevented.
5. The balcony glazing arrangement according to one of claims 3-4, wherein the elongated hole (6a) is a through hole.
6. The balcony glazing arrangement according to any preceding claim, wherein the engagement part (6) of the holding device (3) is displaceable in a horizontal direction relative to an edge face (4) of the upper slab (2).
7. The balcony glazing arrangement according to any preceding claim, wherein the engagement part (6) is displaceable in a horizontal direction along the attachment part (5).
8. The balcony glazing arrangement according to any preceding claim, wherein the engagement part (6) has a retaining pin (8).
9. The balcony glazing arrangement according to any

preceding claim, wherein the holding device (3) comprises a support member (10) that is arranged on the attachment part (6) and adapted to engage with a lower frame member (18') of a further balcony glazing (9') above said balcony glazing (9).

10. A balcony comprising a balcony glazing arrangement (3, 9, 17) according to any preceding claim.
11. Method of mounting a balcony glazing (9) of a balcony glazing arrangement according to one of the claims 1-9 that has an upper horizontal frame member (17) between a lower slab (1) and an upper slab (2) located there above by means of a holding device (3) attached to the upper slab (2), wherein said holding device (3) comprises an attachment part (5) for attachment of the holding device (3) to the upper slab (2) and an engagement part (6) arranged on the attachment part (5) and displaceable vertically relative to the attachment part (5) between a mounting position, in which the engagement part (6) allows mounting of the balcony glazing (9), and an operative position, in which the engagement part (6) is engaging said upper horizontal frame member (17) thereby holding the balcony glazing (9), wherein said method comprises vertically displacing the engagement part (6) from the mounting position to the operative position.

Patentansprüche

1. Anordnung für eine Balkonverglasung umfassend eine Balkonverglasung (9) und mindestens eine Haltevorrichtung (3), die zum Halten eines oberen Rahmentails (17) angeordnet ist, das einen Teil der Balkonverglasung (9) bildet, wobei die Balkonverglasung (9) zwischen einer unteren Platte (1) und einer darüber liegenden oberen Platte (2) anbringbar ist, wobei die Haltevorrichtung (3) ein Befestigungsteil (5) umfasst, das für die Befestigung der Haltevorrichtung (3) an der oberen Platte (2) ausgelegt ist, **dadurch gekennzeichnet, dass** die Haltevorrichtung (3) ein Eingriffsteil (6) umfasst, das am Befestigungsteil (5) angeordnet ist und das, wenn die Haltevorrichtung (3) an der oberen Platte (2) angebracht ist, relativ zum Befestigungsteil (5) senkrecht verschiebbar ist, zwischen einer Montageposition, in der das Befestigungsteil (6) eine Montage der Balkonverglasung (9) ermöglicht, und einer operativen Position, in der das Eingriffsteil (6) mit dem oberen Rahmentail (17) in Eingriff steht, wodurch die Balkonverglasung (9) gehalten wird.
2. Anordnung für eine Balkonverglasung nach Anspruch 1, wobei das Eingriffsteil (6) und das Befestigungsteil (5) derart miteinander verbunden sind, dass die Drehung des Eingriffsteils (6) relativ zum

Befestigungsteil (5) verhindert wird.

3. Anordnung für eine Balkonverglasung nach einem der vorhergehenden Ansprüche, wobei das Eingriffsteil (6) der Haltevorrichtung (3) ein Langloch (6a) aufweist, in dem das Befestigungsteil (5) aufgenommen wird. 5
4. Anordnung für eine Balkonverglasung nach Anspruch 3, wobei ein Abschnitt (7d) des Befestigungsteils (5) und das Langloch (6a) des Eingriffsteils derart ausgebildet sind, dass eine Verschiebung des Eingriffsteils (6) relativ zum Befestigungsteil (5) in einer Ebene erlaubt ist, während die Drehung des Eingriffsteils (6) relativ zum Befestigungsteil (5) verhindert wird. 10
5. Anordnung für eine Balkonverglasung nach einem der Ansprüche 3-4, wobei das Langloch (6a) ein Durchgangslot ist. 20
6. Anordnung für eine Balkonverglasung nach einem der vorhergehenden Ansprüche, wobei das Eingriffsteil (6) der Haltevorrichtung (3) in einer horizontalen Richtung relativ zu einer Kantenfläche (4) der oberen Platte (2) verschiebbar ist. 25
7. Anordnung für eine Balkonverglasung nach einem der vorhergehenden Ansprüche, wobei das Eingriffsteil (6) in horizontaler Richtung entlang des Befestigungsteils (5) verschiebbar ist. 30
8. Anordnung für eine Balkonverglasung nach einem der vorhergehenden Ansprüche, wobei das Eingriffsteil (6) einen Haltestift (8) aufweist. 35
9. Anordnung für eine Balkonverglasung nach einem der vorhergehenden Ansprüche, wobei die Haltevorrichtung (3) ein Stützelement (10) umfasst, das auf dem Befestigungsteil (6) angeordnet und ausgelegt ist, um mit einem unteren Rahmenteil (18') einer weiteren Balkonverglasung (9') über der Balkonverglasung (9) in Eingriff zu kommen. 40
10. Balkon, umfassend eine Anordnung für eine Balkonverglasung (3, 9, 17) nach einem der vorhergehenden Ansprüche. 45
11. Verfahren zur Montage einer Balkonverglasung (9) einer Anordnung für eine Balkonverglasung nach einem der Ansprüche 1-9, die ein oberes horizontales Rahmenteil (17) zwischen einer unteren Platte (1) und einer darüber liegenden oberen Platte (2) aufweist, das mittels einer Haltevorrichtung (3) an der oberen Platte (2) befestigt ist, wobei die Haltevorrichtung (3) ein Befestigungsteil (5) für die Befestigung der Haltevorrichtung (3) an der oberen Platte (2) und ein Eingriffsteil (6) umfasst, 50

das am Befestigungsteil (5) angeordnet ist und relativ zum Befestigungsteil (5) senkrecht verschiebbar ist, zwischen einer Montageposition, in der das Befestigungsteil (6) eine Montage der Balkonverglasung (9) ermöglicht und einer operativen Position, in der das Eingriffsteil (6) mit dem oberen Rahmenteil (17) in Eingriff steht, wodurch die Balkonverglasung (9) gehalten wird, wobei das Verfahren ein vertikales Verschieben des Eingriffsteils (6) von der Montageposition in die operative Position umfasst.

Revendications

1. Ensemble de vitrage de balcon comprenant un vitrage de balcon (9) et au moins un dispositif de maintien (3) conçu pour maintenir un élément de cadre supérieur (17) faisant partie du vitrage de balcon (9), ledit vitrage de balcon (9) pouvant être monté entre une plaque inférieure (1) et une plaque supérieure (2) située au-dessus, dans lequel le dispositif de maintien (3) comprend une partie de fixation (5) adaptée pour fixer le dispositif de maintien (3) à la plaque supérieure (2), **caractérisé en ce que** le dispositif de maintien (3) comprend une partie d'engagement (6), laquelle est disposée sur la partie de fixation (5) et peut, lorsque le dispositif de maintien (3) est fixé à la plaque supérieure (2), se déplacer verticalement par rapport à la partie de fixation (5), entre une position de montage dans laquelle la partie d'engagement (6) permet le montage du vitrage de balcon (9), et une position opérationnelle dans laquelle la partie d'engagement (6) engage ledit élément de cadre supérieur (17), maintenant ainsi le vitrage de balcon (9). 15
2. Ensemble de vitrage de balcon selon la revendication 1, dans lequel la partie d'engagement (6) et la partie de fixation (5) sont interconnectées de manière à empêcher une rotation de la partie d'engagement (6) par rapport à la partie de fixation (5). 20
3. Ensemble de vitrage de balcon selon l'une quelconque des revendications précédentes, dans lequel la partie d'engagement (6) du dispositif de maintien (3) comporte un trou oblong (6a) dans lequel est reçue la partie de fixation (5). 25
4. Ensemble de vitrage de balcon selon la revendication 3, dans lequel une partie (7d) de la partie de fixation (5) et le trou oblong (6a) de la partie d'engagement sont conçus de manière à permettre un déplacement de la partie d'engagement (6) par rapport à la partie de fixation (5) dans un plan, tout en empêchant la rotation de la partie d'engagement (6) par rapport à la partie de fixation (5). 30
5. Ensemble de vitrage de balcon selon l'une des re- 35

vendications 3 à 4, dans lequel le trou oblong (6a) est un trou traversant.

6. Ensemble de vitrage de balcon selon l'une quelconque des revendications précédentes, dans lequel la partie d'engagement (6) du dispositif de maintien (3) est déplaçable dans une direction horizontale par rapport à une face de bord (4) de la plaque supérieure (2). 5
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7. Ensemble de vitrage de balcon selon l'une quelconque des revendications précédentes, dans lequel la partie d'engagement (6) est déplaçable dans une direction horizontale le long de la partie de fixation (5). 15
8. Ensemble de vitrage de balcon selon l'une quelconque des revendications précédentes, dans lequel la partie d'engagement (6) comporte une broche de retenue (8). 20
9. Ensemble de vitrage de balcon selon l'une quelconque des revendications précédentes, dans lequel le dispositif de maintien (3) comprend un élément de support (10) disposé sur la partie de fixation (6) et adapté pour s'engager avec un élément de cadre inférieur (18') d'un autre vitrage de balcon (9') au-dessus dudit vitrage de balcon (9). 25
10. Balcon comprenant un ensemble de vitrage de balcon (3, 9, 17) selon l'une quelconque des revendications précédentes. 30
11. Procédé pour le montage d'un vitrage de balcon (9) d'un ensemble de vitrage de balcon selon l'une des revendications 1 à 9, lequel comporte un élément de cadre horizontal supérieur (17) entre une plaque inférieure (1) et une plaque supérieure (2) située au-dessus, à l'aide d'un dispositif de maintien (3) fixé à la plaque supérieure (2), 35
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dans lequel ledit dispositif de maintien (3) comprend une partie de fixation (5) permettant de fixer le dispositif de maintien (3) à la plaque supérieure (2) et une partie d'engagement (6) disposée sur la partie de fixation (5) et déplaçable verticalement par rapport à la partie de fixation (5), entre une position de montage, dans laquelle la partie d'engagement (6) permet le montage du vitrage de balcon (9), et une position opérationnelle dans laquelle la partie d'engagement (6) engage ledit élément de cadre horizontal supérieur (17), maintenant ainsi le vitrage de balcon (9), ledit procédé comprenant le déplacement vertical de la partie d'engagement (6) de la position de montage vers la position opérationnelle. 45
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55

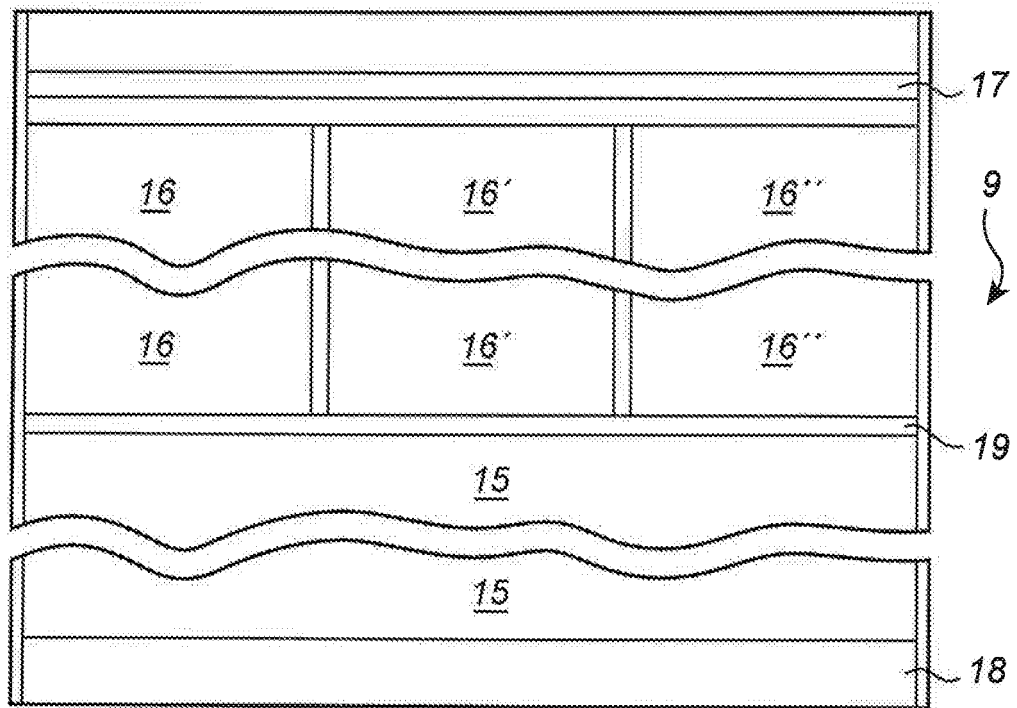


Fig. 1

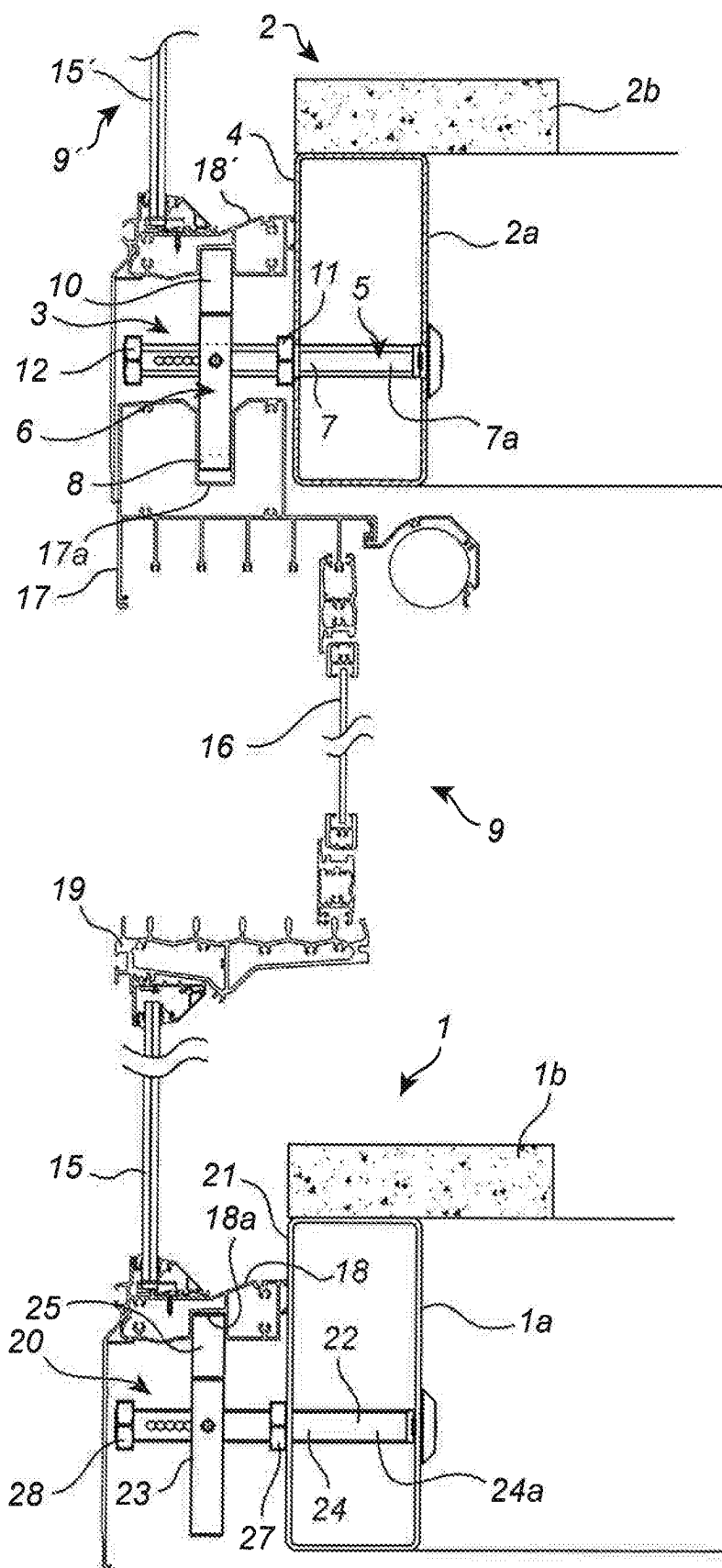


Fig. 2

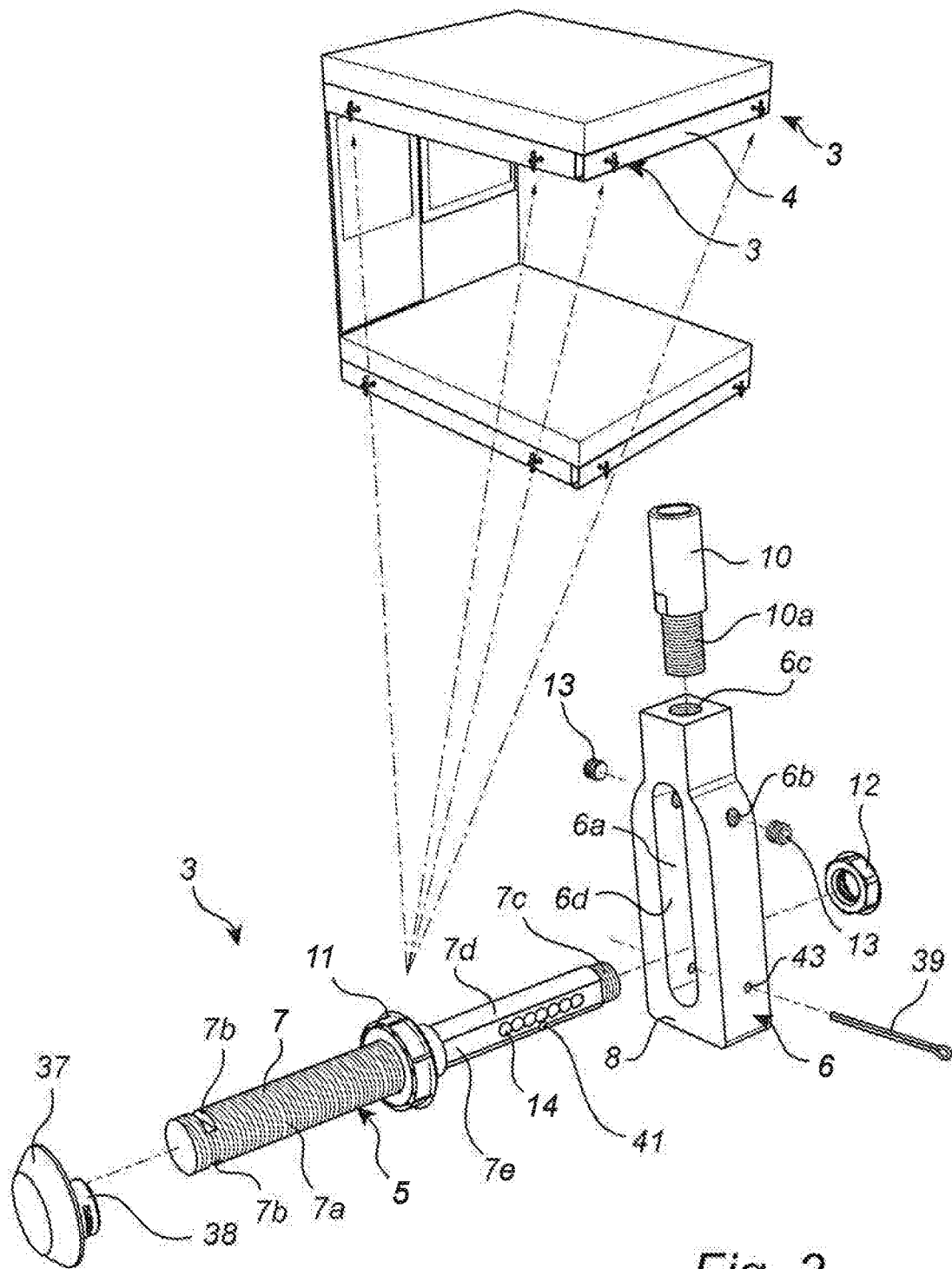


Fig. 3

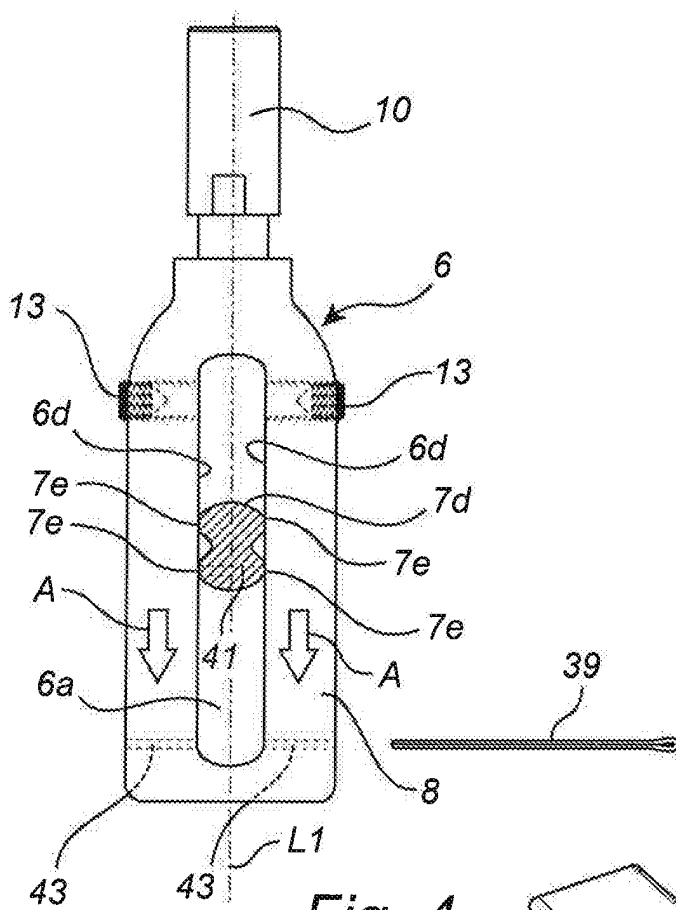


Fig. 4

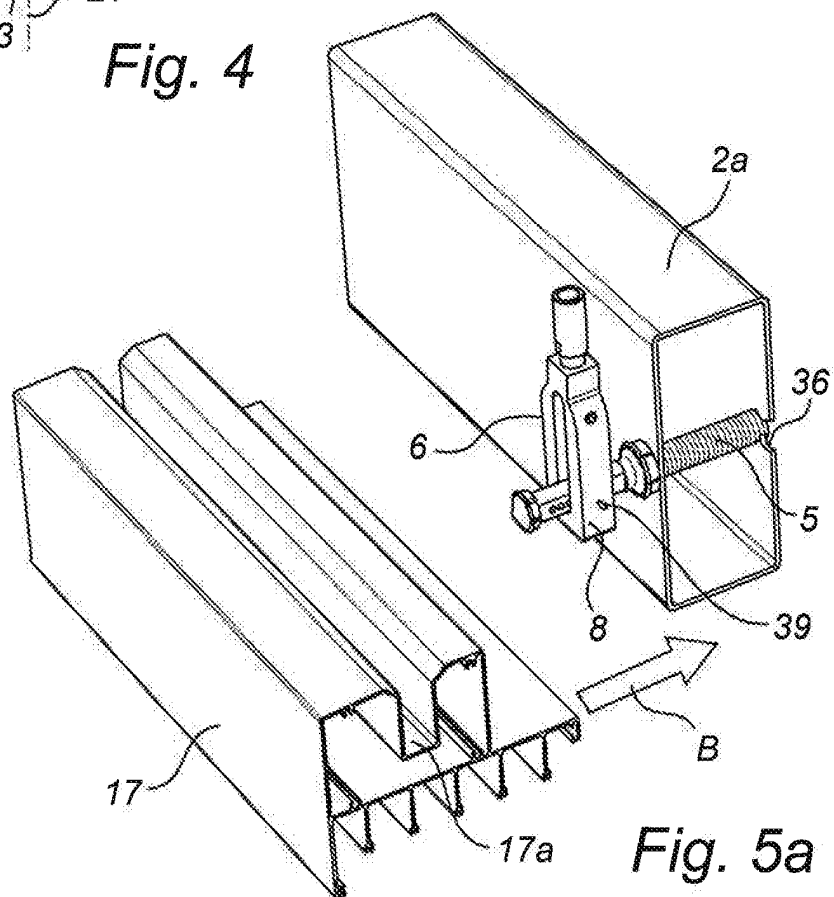


Fig. 5a

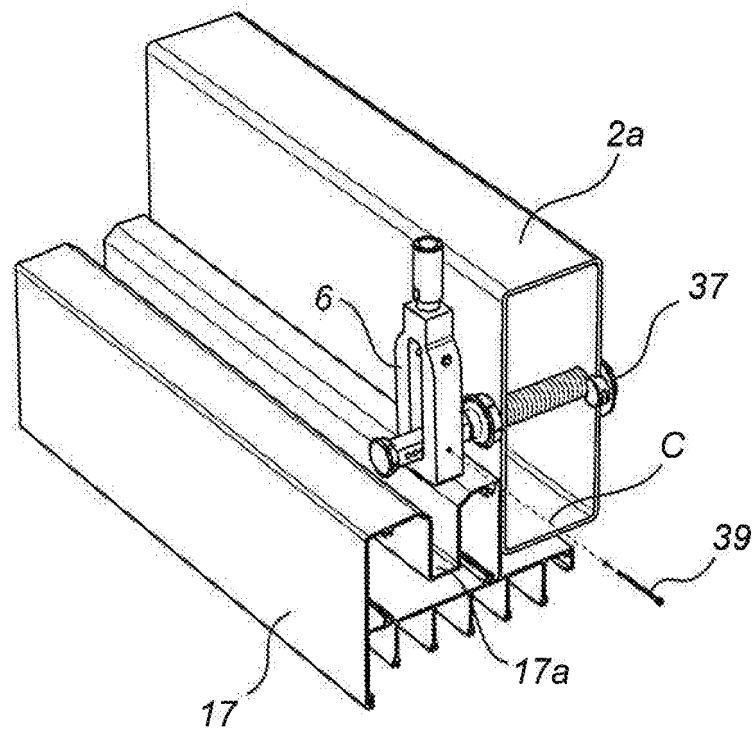


Fig. 5b

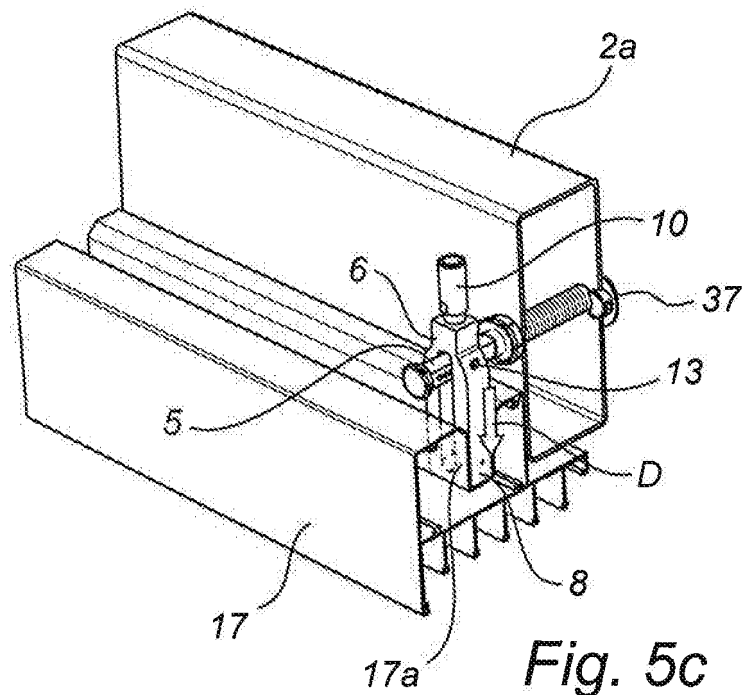


Fig. 5c

REFERENCES CITED IN THE DESCRIPTION

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