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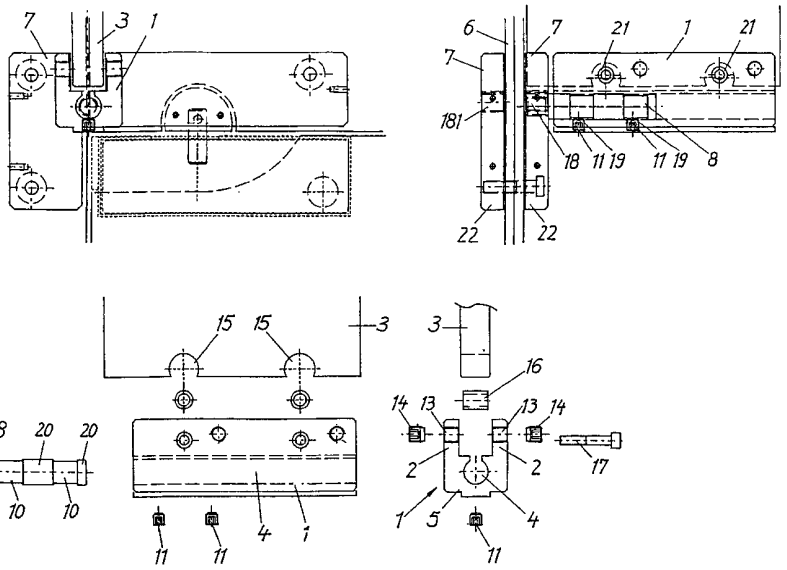
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(54) Title: FITTING ASSEMBLY



(57) Abstract: The present invention relates to a fitting assembly provided at an edge portion of a structural panel which abuts at an angle against a wall (6), and is mounted thereto. An edge fitting (1) grasps the panel (3) at an edge portion thereof, and comprises two plate members (2) which are arranged parallel to and at a distance from each other, as well as a web portion (5) connecting the plate members (2) with each other. A slide guide (4) is formed in the web portion (5) and extends in the longitudinal direction of said edge fitting (1). In said slide guide (4) a bar (8) is slidingly received and guided, with said bar (8) being designed as a locking bar whose locking end (9) protrudes from the edge fitting (1) and engages into a receiving element (18) formed at said wall (6). The edge fitting (1) is provided with a detachable fixing device by means of which the bar (8) may be detachably fixed in the slide guide (4).

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Fitting assembly

The present invention relates to a fitting assembly provided at an edge portion of a structural panel, in particular of a structural glass panel, with the structural panel abutting at an angle against a wall at which the structural panel is mounted.

In prior art, various forms of fitting assemblies for structural panels, in particular glass panels, are known which may be arranged and fixed at edge portions of said panels and whose designs differ depending on the intended use, for example as supporting structures, ornamental fittings etc.. Fitting assemblies of this type usually comprise two opposing clamping plates between which an edge portion of the panel is received.

In order to fix a panel to a wall at an angle, the panel is received between angularly formed pairs of clamping plates which are provided by joining two clamping plate members at a predetermined angle by welding so that an angular clamping plate defining two predetermined plate planes is formed. One "leg" of each pair of clamping plates is fixed to a wall or structural panel. The other panel is received between the clamping plate legs protruding from said wall and fixed between said clamping plates by means of screws extending through the clamping plates and the panel. Said angular clamping plates comprising the protruding legs have to be brought in accurate vertical alignment with the panel, and the distance between said protruding legs has to be adjusted in accordance with the thickness of the panel. If said panel or the adjoining panel forming the wall part are to be exchanged or replaced, they need to be dismantled, i.e. the clamped joint between the clamping plates is to be disconnected. In addition, the clamping plate legs receiving the panel between them can only be removed from said panel, which is, for example, suspended at its upper edge, by removing the clamping plate assembly from the wall or from the panel forming said wall.

It is an object of the present invention to provide a fitting assembly of the initially described type whose manufacture is relatively easy and inexpensive, and which is particularly suitable for structural panels which are to be arranged at an angle.

The fitting assembly according to the present invention comprises an edge fitting grasping the panel like a fork at an edge portion thereof, and having two plate members arranged parallel to and at a distance from each other as well as a web portion which connects the plate members with each other and has a slide guide formed therein, which slide guide extends in the longitudinal direction of said edge fitting and guides a bar which is slidingly received therein, with said bar being designed as a locking bar whose locking end protrudes from the edge fitting and engages into a receiving element formed at said wall, and said edge fitting being provided with a detachable fixing device by means of which the bar may be detachably fixed in the slide guide.

The edge fitting is essentially formed by a profile rail having a u-shaped cross section and comprising two plate members, i.e. the legs of the u-profile, and a web portion connecting said plate members so that the edge fitting may be arranged at the panel prior to its assembly at the wall. The edge fitting may be fixed to the wall by means of the slide guide which forms a part of the fitting assembly and wherein the bar is slidingly received. Said slide guide is essentially a longitudinal guide formed in the web portion of the profile rail and having a guide opening with a round or polygonal cross section. Depending on the shape of the slide guide, the bar is formed with a round or polygonal cross section. The bar, which may be slidingly displaced within the slide guide, may be fixed at the desired position in the slide guide by means of the detachable fixing device. The panel abutting against the wall at an angle is locked at the receiving element by engaging the bar with the receiving element provided in the wall. The edge fitting may be removed from the panel, whose upper edge portion is preferably

fixed at a ceiling wall, without the receiving element having to be removed from the wall. Further, the edge fitting may be disassembled from the wall without having to be separated from the panel, which is effected by pulling said edge fitting grasping the panel between its plate members off the locking bar fixed in the receiving element. As an alternative, the locking bar may also be disconnected from the slide guide at the end of the fitting assembly facing away from the receiving element so that the locking bar may be withdrawn from the receiving element without disassembling the edge fitting from the panel.

The present invention is particularly advantageous, although not limited thereto, for a fitting assembly of a skylight panel, as it permits the edge fitting to be disassembled from the glass panel, which is suspended at its upper edge, without having to disassemble the glass panel itself.

Preferably, the fixing device comprises at least one hole which extends through the web portion of the edge fitting and opens into the slide guide, through which hole a clamping screw abuts against the locking bar so that a clamping joint is formed. The hole may extend into said slide guide either from the outer surface or bottom of the web portion so that it is parallel to the plate members, or from a lateral surface so that it is perpendicular to the plate members.

According to a further development of the present invention, the edge fitting comprises a detachable clamping device by means of which the edge portion of the panel may be detachably clamped between the plate members. According to a further embodiment, the clamping devices provided at the two plate members of said edge fitting may each comprise at least one hole which extends perpendicularly to the longitudinal direction of the edge fitting, with said holes being arranged opposite to each other and each having a clamping screw extending therethrough which abuts against the panel so that a clamping joint is formed.

According to a preferred embodiment of the present invention, the wall which is abutted against by the edge fitting grasping said panel is also formed as a panel, and preferably as a glass panel, at which a mounting plate is fixed. In this embodiment, the receiving element to be engaged by the end of the locking bar is formed in the mounting plate.

According to a further embodiment of the present invention, the end of the locking bar is threaded. As an alternative, the end of the locking bar may also be formed as a threaded pin comprising an external thread, which may be threaded into the receiving element comprising a tap hole. The end of the locking bar may also be provided with an internal thread which is threaded onto a threaded pin forming the receiving element and being arranged at the mounting plate, or in a hole formed in the mounting plate. Further, the receiving element may be engaged by the end of the locking bar so that a clamping joint is formed. In particular with this embodiment, or when the end of the locking bar is provided with an external thread, the bar may be formed as a hollow bar or tube portion.

The locking bar received in the guide channel of said slide guide may be shorter than the edge fitting, or longer than the edge fitting so that it protrudes therefrom.

According to a further embodiment of the present invention, the locking bar comprises a tool receiving part at its end engaging the edge fitting and slide guide, respectively. This tool receiving part may be designed as a slot, or a socket or head to be engaged by a spanner or the like, i.e. as any male or female element to be engaged by a tool so that the locking bar may be screwed onto or unscrewed from the receiving element by means of the tool. For the embodiment of the invention having the locking bar which is shorter than the edge fitting, a hexagon socket has turned out to be particularly advantageous, since the locking bar may thus be engaged through the opening of the slide guide by a box spanner, for example, in order to disassemble the locking bar from its receiving element, while

the edge fitting remains fixed to the panel.

According to a further embodiment of the present invention, two edge fittings are arranged such that the outer surfaces of their web portions abut against each other, with the protruding locking bars of said edge fittings engaging into two receiving elements arranged at a vertical distance from each other either in the wall or in a mounting plate, so that two structural panels arranged on top of each other and abutting against one and the same wall may be fixed. To connect the two abutting edge fittings with each other, each web portion is provided with an undercut longitudinal slot formed in its outer surface and extending in the longitudinal direction of the edge fitting, into which longitudinal slots a common profile rail may be slidingly inserted so that the two edge fittings are detachably locked at each other.

The edge fitting comprising the cross section according to the present invention is preferably formed as an extruded section from which the required length is cut. It is thus possible, for example, to form the undercut longitudinal slot in the edge fitting when the section is extruded.

According to yet a further embodiment of the present invention, two ore more edge fittings are arranged at a distance from each other across the length of the panel, said edge fittings being each clamped to the panel and slidingly arranged on the bar protruding from the first edge fitting by means of their slide guides, and fixed to said bar. First, the bar may be threaded into the receiving element, for example, after which the edge fittings may be slidingly arranged at the desired position on the bar, and subsequently the panel may be clamped between the edge fittings. If the locking bar is shorter than the first edge fitting, the locking bar is only received by a front portion of the slide guide formed in the first edge fitting. Afterwards, the locking bar may be fixed in its receiving element, and then the edge fitting may be pushed onto said locking bar, or the locking bar may be fixed in its receiving

element through the opening of the slide guide provided in the edge fitting fixed to the panel. Afterwards, an extension bar is inserted into the slide guide of said first edge fitting from the other end of the latter, and fixed in said slide guide by means of a fixing device. Then, the other edge fittings are pushed onto this extension bar protruding from the first edge fitting, and clamped to the panel at a predetermined distance from each other. The extension bar serves both as an additional safety device for the individual edge fittings fixed to the panel, since each edge fitting is supported by a bar which is also fixed to other edge fittings, and as a protection for the edge portion at the bottom of the panel.

According to another embodiment of the present invention, the slide guide for the bar is shorter than the edge fitting. In this case, only the part of the web portion where the slide guide is to be formed has a greater thickness, whereas the adjacent part of the web portion is narrower. The panel is provided with a recess in its edge portion, which is engaged by the slide guide. In this embodiment, the edge fitting is pushed onto the locking bar fixed in the receiving element.

Another fitting assembly according to the present invention provided at an edge portion of a structural panel, and in particular a peripheral fitting assembly of a structural glass panel, comprises an edge fitting grasping the panel at an edge portion thereof, and being provided with two plate members arranged parallel to and at a distance from each other as well as with a web portion connecting the plate members with each other and having a slide guide formed therein, said slide guide extending in the longitudinal direction of said edge fitting and guiding a bar which is slidingly received therein, with the ends of said bar engaging into a plurality of edge fittings which are arranged at said panel at a predetermined distance from each other, and a detachable fixing device being provided at the edge fitting by means of which the bar may be detachably fixed in the slide guide.

In accordance with a further development, the fixing device comprises at least one hole formed at the level of the slide guide and extending perpendicularly to the longitudinal direction of the edge fitting, through which hole a clamping screw abuts at the bar so that a clamping joint is formed.

According to an advantageous further development, the web portion comprises an undercut longitudinal slot formed in its outer surface and extending in the longitudinal direction of the edge fitting, by means of which the edge fitting may be pushed onto a matching shoulder formed on a supporting base so that said shoulder is received in said longitudinal slot.

Advantageously, all the bars provided in accordance with the present invention may be formed as hollow bars.

According to a further development of the edge fitting, each of the plate members is provided with a longitudinal slot extending longitudinally in its free top surface, and the outer surface of the web portion is provided with two longitudinal slots arranged opposite the longitudinal slots in the plate members, said longitudinal slots preferably having a semi-circular cross section. Preferably, each of the longitudinal slots provided in the plate members and in the outer surface of the web portion has a supporting strip arranged thereto having a longitudinal slot of semi-circular cross section formed therein, the arrangement being such that the slots in the plate members and web portions are each aligned with the slot of the associated supporting strip, with a compressible round retaining cord being placed between said mutually aligned longitudinal slots. Preferably, the cross section of said round detaining cord is slightly larger than that of the channel formed by each pair of mutually aligned longitudinal slots, so that the supporting strips are not directly held by the edge fitting. The portions of the edge fitting which protrude from said panel, and are thus visible, are provided with covers abutting against the edge fitting and fixed thereto so that said portions are covered. The upper and lower edges of said

covers are doubly bent so that the two supporting strips arranged above and under the edge fitting, respectively, are grasped by said double bend of the associated cover.

The present invention will now be described in more detail and by way of example with reference to the accompanying drawing, wherein Figs. 1 to 7 are schematical views showing various embodiments of the fitting assembly according to the present invention.

Fig. 1 shows the fitting assembly according to the present invention in an assembled state as well as front and side views of a detail of said assembly. The fitting assembly, which is arranged at an angle at a wall 6, comprises an edge fitting 1 made from a profile rail having a substantially u-shaped cross section. The edge fitting 1 comprises two plate members 2 which are arranged parallel to and at a distance from each other, and a web portion 5 connecting the plate members 2 with each other and having a slide guide 4 formed therein which forms a guide channel with a circular cross section and extends in the longitudinal direction and across the entire length of said edge fitting 1. The guide channel of the slide guide 4 extends in the longitudinal direction of the edge fitting 1 and is open at both of its ends in longitudinal direction, and at the top, i.e. it is opening into the space between the plate members 2, which is particularly advantageous when the edge fitting 1 is manufactured as an extruded section. The lower edge portion of a panel 3 is grasped between the plate members 2 of the edge fitting 1, and one of the lateral edges of the panel 3 abuts against a wall 6 which is formed as a panel. The wall panel 6 has a mounting plate 7 fixed thereto, with the mounting plate 7 of this embodiment being additionally provided with a panelling 22 which covers the mounting plate 7. A bar 8 formed as a locking bar is slidingly received in the slide guide 4, and has a locking end 9 which protrudes from the edge fitting 1. The locking end 9 is provided with an external thread and engages into a receiving element 18 formed with a matching internal thread so that the locking end 9 may be received therein. The

side of the wall facing away from the mounting plate 7 is provided with a further mounting plate 7 permitting the attachment of a further fitting assembly according to the present invention (not shown), which may be fixed in a receiving element 181. The mounting plates 7 may be designed as a pair of conventional clamping plates suitable for the connection of two adjacently arranged structural panels (not shown). The edge fitting 1 comprises two holes 13 in each of its plate members 2 with said holes 13 being arranged opposite to each other and having each a clamping screw 14 extending therethrough which abuts against the panel 3 so that the panel 3 is detachably fixed in the edge fitting 1.

The fixing device by means of which the bar 8 is fixed in the slide guide 4 comprises two holes 19 which extend from the outer surface or bottom of the web portion through said web portion and open into the slide guide 4 so that clamping screws 11 may be screwed into said holes 19 to abut against the locking bar 8 so that a clamping joint is formed. As may be seen from the drawing, said clamping screws are preferably designed as grub screws with a hexagon socket, which do not protrude from the web portion 5 when fixed. In this embodiment, the bar 8 is provided with two groove-like portions 10 having a smaller diameter than the respectively adjoining flange portions 20 acting as slide surfaces in the slide guide 4. The end of the bar facing away from the locking end 9 may be provided with a tool receiving part formed at and/or in its flange portion 20, with said tool receiving part being formed as a slot, a socket or a head to be engaged by a tool. In order to thread the bar 8 into the receiving element 18, or to unscrew it therefrom, a tool may be inserted through the opening of the slide guide 4 so that it engages the tool receiving part provided at the bar 8. Thus, the bar 8 may be threaded into the receiving element 18, or unscrewed therefrom, while the edge fitting 1 remains fixed to the panel 3. The portions 10 are arranged along the length of the bar 8 in such a way that they are positioned at the holes 19 when the fitting assembly is assembled. Thus, the clamping screws 11 engage into

the portions 10 so that the bar 8 is also positively locked in its position in the slide guide.

The panel 3 of this embodiment comprises two cut-outs 15 in the shape of a three-quarter circle, which are engaged by two sleeves 16 preferably made of plastic and serving as an additional support for the panel 3. The sleeves 16 are held between the plate members 2 by means of screws 17 extending through holes 21 which are provided in both plate members 2. However, the panel 3 may also be held between the plate members 2 only by means of the clamping device comprising the clamping screws 14 so that the cut-outs 15 at the edge of panel 3 need not be provided.

In Fig. 2, two edge fittings 1 are arranged at a distance from each other at the lower edge of the panel 3. The bar 8 forming the locking bar is formed as a hollow bar, with the locking end 9 comprising an internal thread. The receiving element 18 is designed as a threaded pin which is enclosed by the locking end 9 in the assembled state. The threaded pin of the receiving element 18 is supported in a hole formed in the mounting plate 7, and may be designed as a countersunk screw whose head is received in a countersunk hole formed at the rear of the mounting plate 7. In this embodiment, the free end of the threaded pin protrudes from a hole in the panelling 22 which may be dimensioned such that the locking end 9 provided with the internal thread may be threaded onto the pin through the panelling 22 and to a position where it abuts against the mounting plate 7. The rod 8 of this embodiment is shorter than the edge fitting 1 and is only received in a front portion of the slide guide 4. An extension bar 23 formed as a hollow bar is inserted into the slide guide 4 from the other end of the edge fitting 1. Four holes 19 are provided at a distance from each other in the outer surface of the web portion of the edge fitting 1 abutting against the wall, in which holes 19 four clamping screws 11 are received two of which abut against the bar 8 and the other two of which abut against the extension bar 23 so that clamping joints are formed. Thus, the bar 8 is held

in the locking position, and the extension bar 23 is fixed in the slide guide 4. The second edge fitting 1 is basically similar to the first edge fitting 1, with its slide guide 4 being pushed onto the free end of the extension bar 23. The second edge fitting 1 is fixed at the respective position on the extension bar 23 by means of two clamping screws 11 extending through holes 19 formed in the outer surface of the web portion. The panel 3 comprises two cut-outs 15 formed at its lower edge at the positions of the edge fittings 1 and having the shape of a three-quarter circle, which are engaged by two sleeves 16 received between the plate members 2.

In the fitting assembly shown in Fig. 3, the bar 8 comprising the locking end 9 is formed integrally with the extension bar 23, with the other parts and features of the fitting assembly being similar to those shown in Fig. 2. The bar 8 is a hollow bar comprising an internal thread at its locking end. The locking end engages the receiving element 18 formed as a threaded pin which is supported in a hole provided in the mounting plate 7. The engagement is effected by the locking end 9 being inserted through a hole provided in the panelling 22. The bar 8 may have a tool receiving part (not shown) arranged centrally in the longitudinal direction thereof, which may be engaged by a tool so that the bar 8 may be rotated when it is received in the edge fittings 1 and the latter are already fixed to the panel 3.

Fig 4 shows an embodiment of the fitting assembly in particular in accordance with claim 11, wherein two edge fittings 1 are arranged such that the outer surfaces of their web portions abut against each other so that two panels 3 arranged on top of each other and abutting against one and the same wall 6 may be fixed. Each of the two edge fittings 1 comprises a slide guide 4 of the type described above, wherein a locking bar 8 is received. Each of the bars 8 has an internal thread formed at its locking end 9, and the two locking ends 9 engage two receiving elements 18 formed at a suitable distance from each other in one and the same mounting plate 7. The receiving

elements 18 are formed by threaded pins which are supported in holes formed in the mounting plate 7 and protrude through holes in the panelling 22. Each of the adjoining web portions of the edge fittings 1 comprises an undercut longitudinal slot 24 formed in its outer surface and extending in the longitudinal direction of the edge fitting, which longitudinal slots 24 combine to receive a profile rail 25 having an essentially double-T cross section so that the two edge fittings 1 are connected with each other. Both edge fittings 1 are fixed at a separate panel 3. Each web portion 5 is provided with holes 19 extending perpedicularly to the plane defined by the panel and opening into the slide guide 4 so that clamping screws 11 may be inserted into said holes 19 which detachably fix the respective bar 8 to the slide guide 4 of the associated edge fitting 1. The undercut longitudinal slot 24 may be formed during the manufacture, i.e. extruding, of the profile rail from which the edge fitting 1 is made.

Fig. 5 shows a fitting assembly whose slide guide 41 is shorter than the edge fitting 1. In this case, the web portion 51 in which the slide guide 41 is to be formed has a greater thickness as compared to the previous embodiments, whereas the web portion 51 adjacent to the former is narrower. The slide guide 41 is closed towards the receiving gap for the panel, i.e. on its top side, and may have a circular or rectangular cross section, the latter being shown in the drawing at 42. The bar 8 engaging into said slide guide 42 may have an essentially round or square cross section. The edge fitting 1 of this embodiment may also be cut at the required length from an extruded section, with the web portion adjoining the slide guide 41, 42 being machined by milling so that its thickness is accordingly reduced. However, it is also possible to press an insert comprising the slide guide 41, 42 between the plate members 2. The panel 3 comprises a recess 26 formed in its edge portion, which is engaged by the web portion comprising the slide guide 41, 42 so that a large edge portion of the panel 3 may be grasped between the plate members 2.

Fig. 6 shows a fitting assembly wherein three edge fittings 1 are arranged at a predetermined distance from each other at the lower edge of a panel. Said edge fittings 1 may have different lengths, but are otherwise similarly formed. The fitting assembly of this embodiment is particularly suitable as a floor-type fitting. The edge fittings 1 are formed with slide guides 4, which extend through their entire length and are fixed by means of holes 19 and clamping screws 11 to a common bar 8 made of tube material. By means of a clamping device comprising the holes 13 and clamping screws 14, the edge portions of the panel 3 are clamped between the plate members of the edge fittings 1. The outer surface or bottom of the web portion is formed with an undercut longitudinal slot 27, as may be seen in Fig. 7, which extends in the longitudinal direction of the edge fitting and by means of which the edge fitting 1 may be pushed, for example, onto a profile rail fixed at the floor and being designed as a supporting base 33 on which the edge fittings 1 grasping the panel 3 are supported.

Fig. 7 shows an advantageous embodiment of the edge fitting 1, wherein each of the plate members 2 is provided with a longitudinal slot 28 in its free top surface, which extends in the longitudinal direction of the edge fitting and has an essentially semicircular cross section. The outer surface or bottom of the web portion is also provided with two longitudinal slots having an essentially semicircular cross section, which are arranged opposite the longitudinal slots 28 in the plate members 2. Supporting strips 29 which are each formed with a longitudinal slot 30 of semicircular cross section are arranged at the edge fitting 1 so that their slots 30 face the longitudinal slots 28 provided in the plate members and in the outer surface of the web portion, respectively, and each pair of mutually aligned longitudinal slots 28, 30 form a channel with an essentially circular cross section. A compressible round retaining cord which is larger in diameter than said channel is placed between each pair of mutually aligned slots 28, 30 so that the supporting strips 29 are not directly held by the edge fitting 1. The portions of the edge

fitting which protrude from said panel 3 and are thus visible are provided with covers 32 whose upper and lower edges are doubly bent so that the two supporting strips 29 arranged above and under the edge fitting 1, respectively, are grasped by said doubly bent edges of the associated cover, whereby the compressible retaining cord 31 is compressed. The elastic, round retaining cord 31 biases the supporting strips 29 outwardly against the respective cover edge extending vertically to the plane defined by the panel so that the cover 32 is clamped to the edge fitting 1. The covers 32 may be pushed onto the edge fitting 1 from a lateral edge of the latter and parallel to the plane defined by the panel, or, if made of an elastic material, clamped onto the edge fitting 1 from the front side.

Patent claims

1. Fitting assembly provided at an edge portion of a structural panel, in particular of a structural glass panel, with the structural panel abutting at an angle against a wall (6) at which the structural panel is mounted, the fitting assembly comprising an edge fitting (1) grasping the panel (3) at an edge portion thereof, and having two plate members (2) arranged parallel to and at a distance from each other as well as a web portion (5) connecting the plate members (2) with each other and having a slide guide (4) formed therein, said slide guide (4) extending in the longitudinal direction of said edge fitting (1) and guiding a bar (8) which is slidingly received therein, with said bar (8) being designed as a locking bar whose locking end (9) protrudes from the edge fitting (1) and engages into a receiving element (18) formed at said wall (6), said edge fitting (1) being provided with a detachable fixing device by means of which the bar (8) may be detachably fixed in the slide guide (4).

2. Fitting assembly according to claim 1, with said edge fitting (1) comprising a detachable clamping device by means of which the edge portion of the panel (3) may be detachably clamped between the plate members (2).

3. Fitting assembly according to claim 1 or 2, with said wall (6) being formed as a panel at which a mounting plate (7) is fixed, said mounting plate (7) being provided with the receiving element (18) and engaged by the locking end (9).

4. Fitting assembly according to one of the claims 1 to 3, with the locking end (9) being threaded.

5. Fitting assembly according to claim 4, with the locking end (9) being designed as a threaded pin, and the receiving element (18) being provided with a threaded tap hole wherein said threaded pin may be received.

6. Fitting assembly according to claim 4, with the thread at the locking end (9) being designed as an internal thread which receives a threaded pin forming the receiving element (18) and being arranged at the mounting plate (7) or in a hole formed in the mounting plate (7).

7. Fitting assembly according to one of the claims 1 to 6, with the locking bar (8) being shorter than the length of the edge fitting (1).

8. Fitting assembly according to one of the claims 1 to 7, with the locking bar (8) being provided with a tool receiving part at its end (20) opposite, i.e. facing away from, its locking end (9).

9. Fitting assembly according to one of the claims 1 to 8, with the fixing device comprising at least one hole (19) which extends through the web portion (5) of the edge fitting (1) and opens into the slide guide (4), through which hole (19) a clamping screw (11) abuts against the locking bar (8) so that a clamping joint is formed.

10. Fitting assembly according to one of the claims 2 to 9, wherein each clamping device provided at the plate members (2) of said edge fitting (1) comprises at least one hole (13) which extends perpendicularly to the longitudinal direction of the edge fitting (1), with said holes (13) being arranged opposite each other and each having a clamping screw (14) extending therethrough which abuts against the panel (3) at opposite sides thereof so that a clamping joint is formed.

11. Fitting assembly according to one of the claims 1 to 10, with two edge fittings (1) being arranged such that the outer surfaces of their web portions (5) abut against each other, and the protruding locking bars (8) of said edge fittings (1) engaging into two receiving elements (18) arranged at a vertical distance from each other, so that two structural panels (3) arranged on top of each other and abutting against

one and the same wall (6) may be fixed.

12. Fitting assembly according to claim 11, wherein each web portion (5) comprises an undercut longitudinal slot (24) formed in its outer surface and extending in the longitudinal direction of the edge fitting (1), into which longitudinal slot (24) a common profile rail (25) is slidingly inserted so that the two edge fittings (1) are detachably connected.

13. Fitting assembly according to one of the claims 1 to 12, with two or more edge fittings (1) being arranged at a distance from each other across the entire length of the structural panel (3), said edge fittings (1) being pushed onto the bar (8) protruding from the first edge fitting (1) by means of their slide guides (4), and fixed to said bar (8).

14. Fitting assembly according to claim 13, wherein the bar (8) comprising the locking end (9) terminates within the slide guide (4) of the first edge fitting (1), and is adjoined by an extension bar (23) which protrudes from the other end of the first edge fitting (1) and on which the other edge fittings (1) are received.

15. Fitting assembly according to claims 8 to 12, wherein said locking bar (8) may be screwed and unscrewed, respectively, from said receiving element (18) through the guide channel provided in the slide guide (4) while the edge fitting (1) is fixed to the panel (3).

16. Fitting assembly according to one of the claims 1 to 12, wherein the slide guide (41, 42) is shorter than the length of the edge fitting (1), and the panel (3) comprises a peripheral recess (26) which is engaged by the slide guide (41, 42).

17. Fitting assembly provided at an edge portion of a structural panel, and in particular a peripheral fitting assembly of a structural glass panel, comprising an edge fitting (1) which grasps the panel (3) at an edge portion

thereof, and is provided with two plate members (2) arranged parallel to and at a distance from each other as well as a web portion (5) connecting the plate members (2) with each other and having a slide guide (4) formed therein, said slide guide (4) extending in the longitudinal direction of said edge fitting (1) and guiding a bar (8) which is slidingly received therein, with the ends of said bar (8) engaging into a plurality of edge fittings which are arranged at said panel (3) at a predetermined distance from each other, with a detachable fixing device being provided at the edge fitting (1) by means of which the bar (8) may be detachably fixed in the slide guide (4).

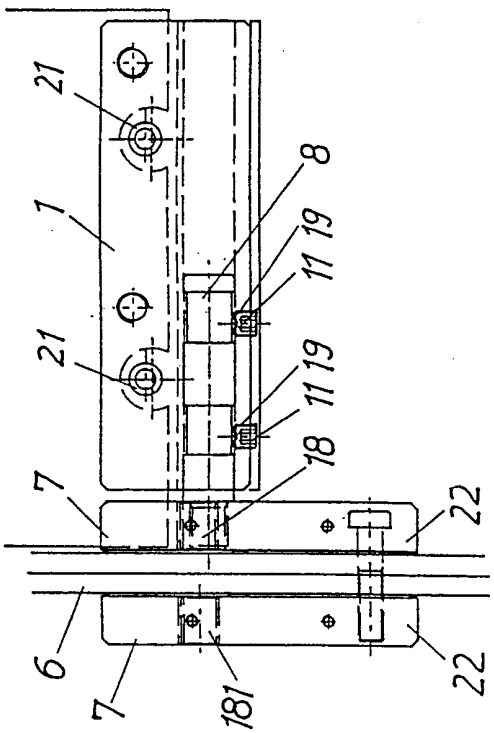
18. Fitting assembly according to claim 17, with said fixing device comprising at least one hole (19) formed at the level of the slide guide (4) and extending perpendicularly to the longitudinal direction of the edge fitting (1), through which hole (19) a clamping screw (11) abuts against the bar (8) so that a clamping joint is formed.

19. Fitting assembly according to claim 17 or 18, wherein the web portion (5) comprises an undercut longitudinal slot (27) formed in its outer surface and extending in the longitudinal direction of the edge fitting (1), by means of which the edge fitting (1) may be pushed onto a matching shoulder formed on a supporting base (33) so that said shoulder is received in said longitudinal slot (27).

20. Fitting assembly according to one of the claims 1 to 19, wherein each of the plate members (2) is provided with a longitudinal slot (28) extending longitudinally in its free top surface, and the outer surface of the web portion (5) is provided with two longitudinal slots (28) which are arranged opposite the longitudinal slots (28) in the plate members (2), said longitudinal slots (28) each having a semicircular cross section.

21. Fitting assembly according to claim 20, wherein supporting

strips (29), which are each provided with a longitudinal slot (30) of semicircular cross section, are arranged on the plate members (2) and at the outer surface of the web portion (5) so that they face the respective longitudinal slots (28) provided in the plate members (2) and in the outer surface of the web portion (5), with a compressible round retaining cord (31) being placed between each pair of said facing, mutually aligned longitudinal slots (28, 30), and wherein the portions of the edge fitting (1) which protrude from said panel (3) and are thus visible are covered by covers (32) which abut against the edge fitting (1), each of said covers (32) being provided with doubly bent edges at two of its opposing ends which doubly bent edges grasp the respective two supporting strips (29) extending parallel to the plane defined by the panel (3) so that said supporting strips (29) are pressed against the compressible round retaining cord (31).


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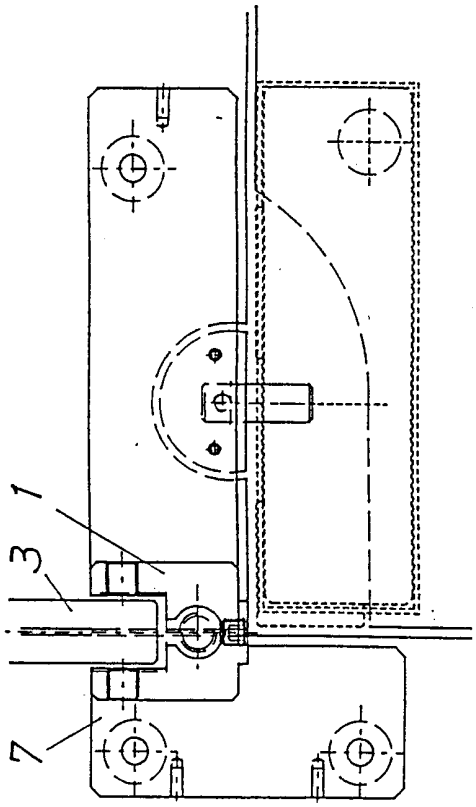
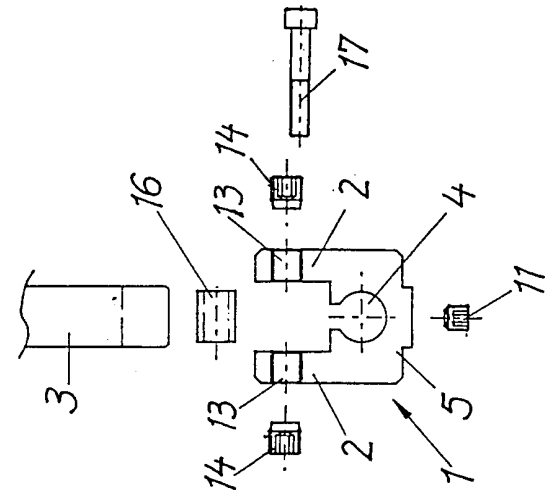
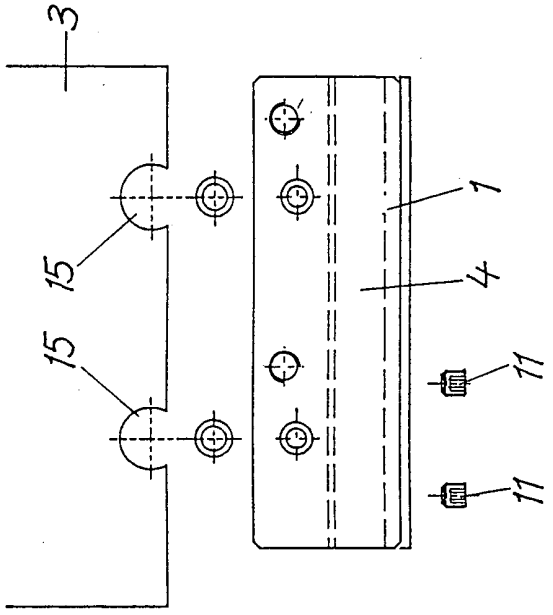
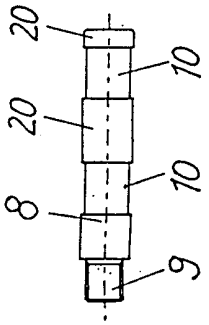

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Fig. 1


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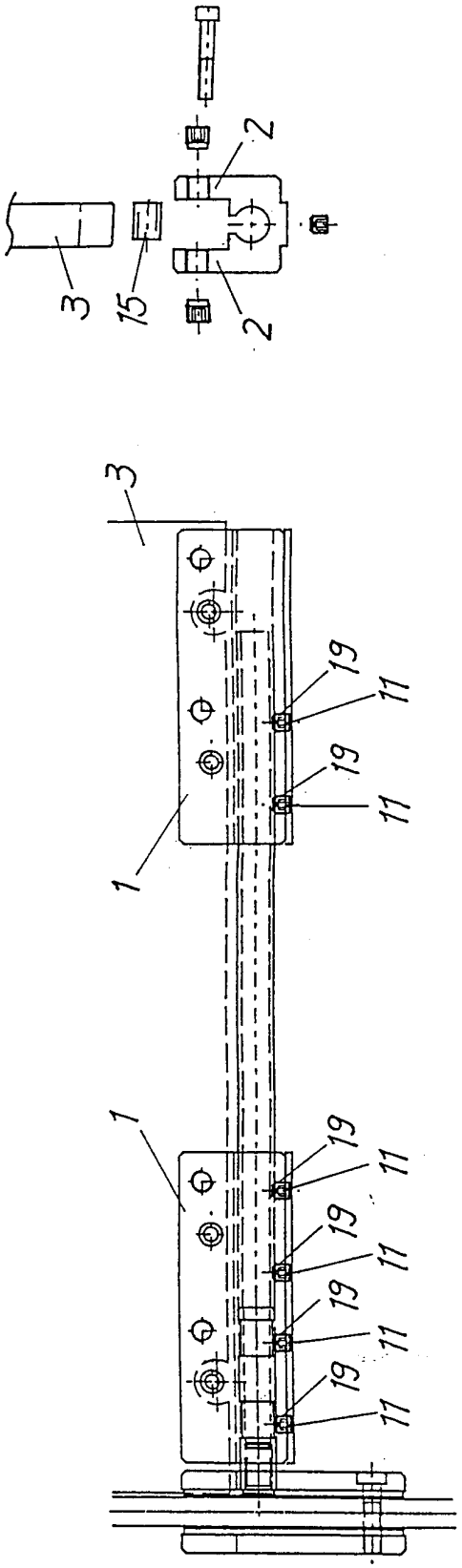
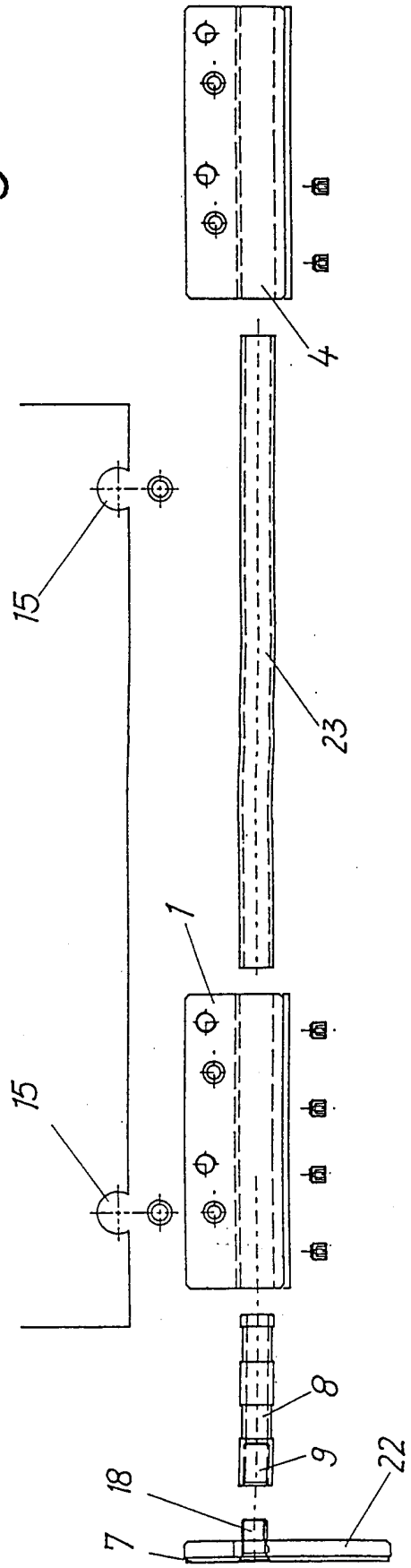


Fig. 2



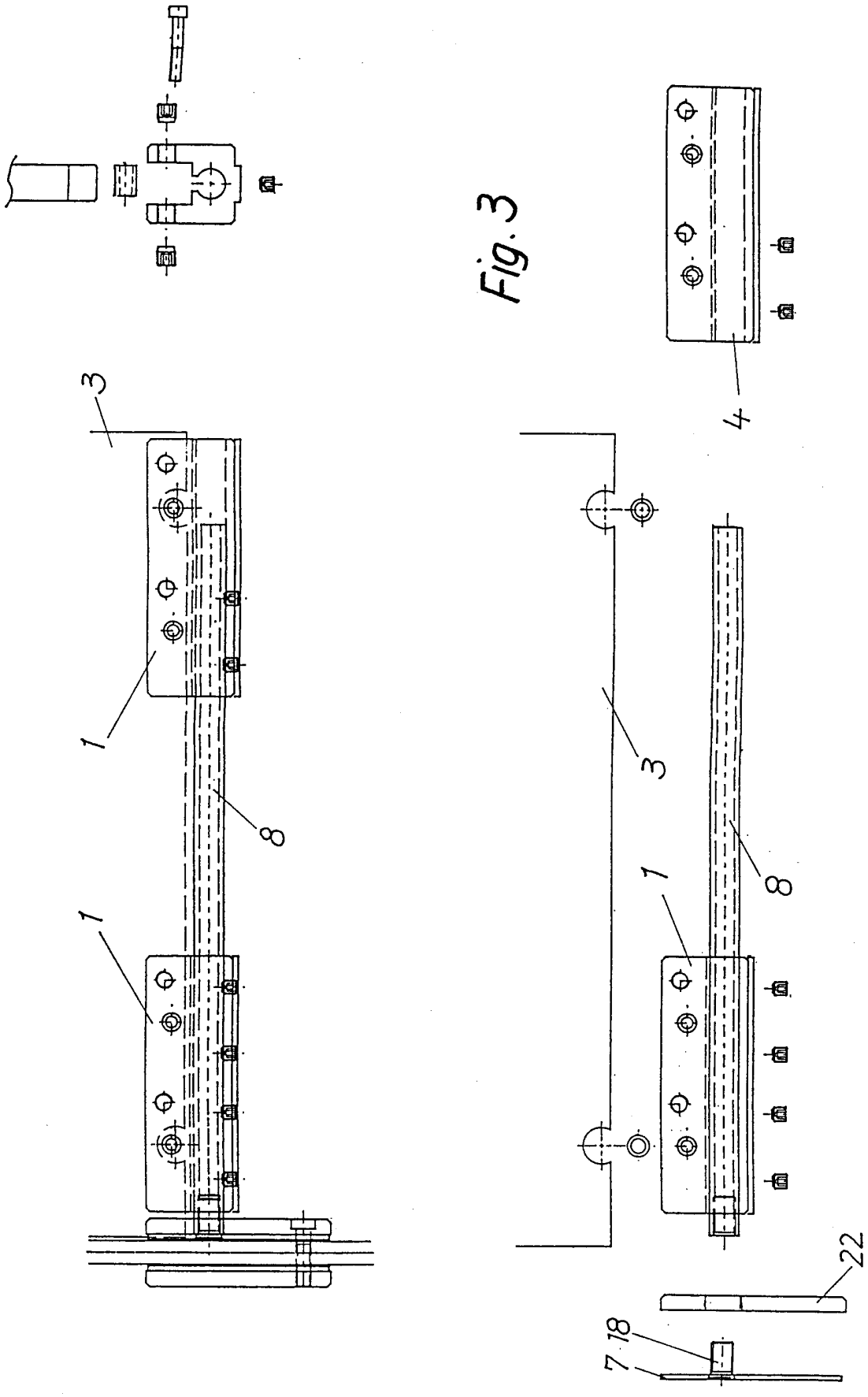


Fig. 3

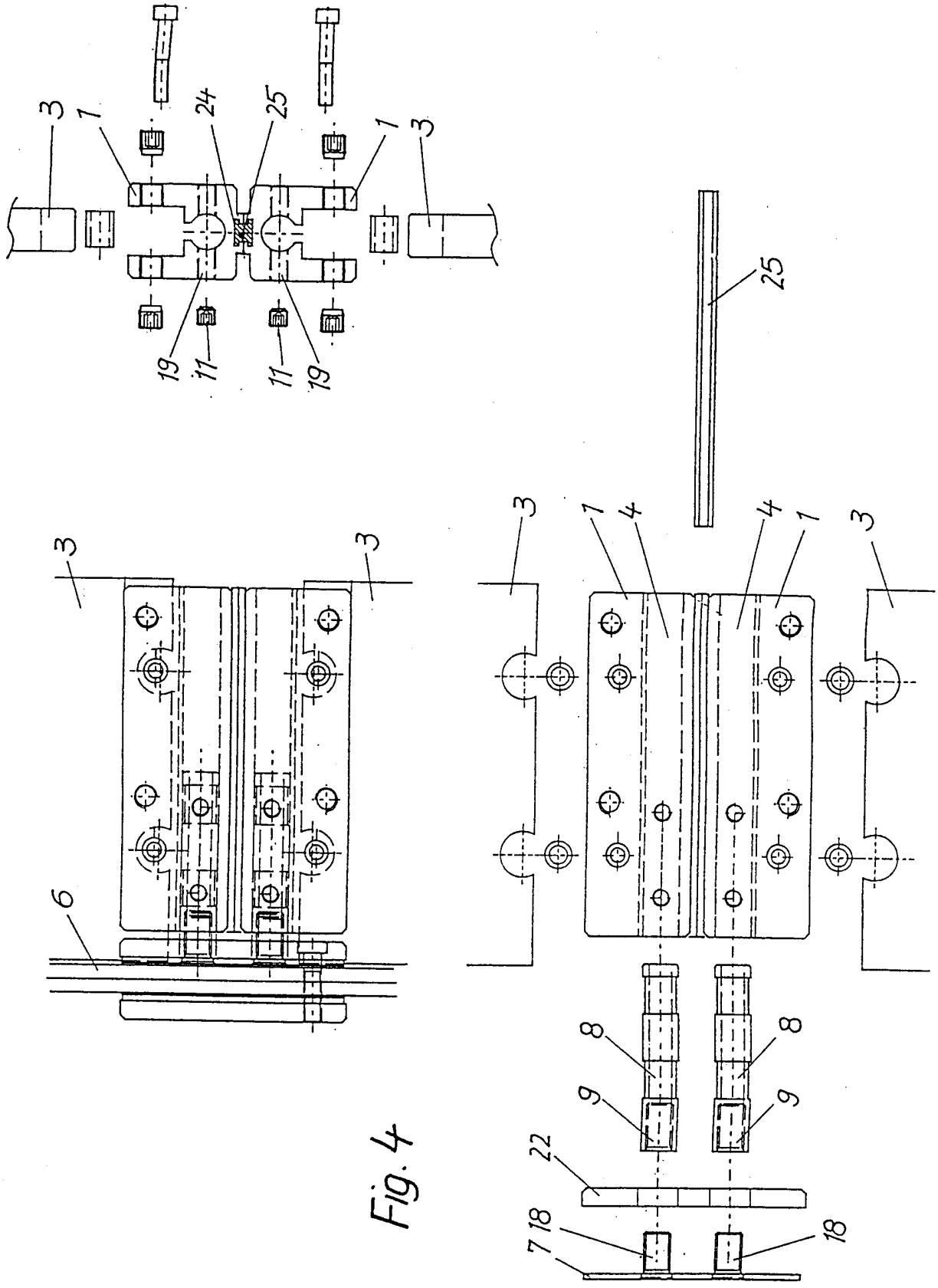


Fig. 4

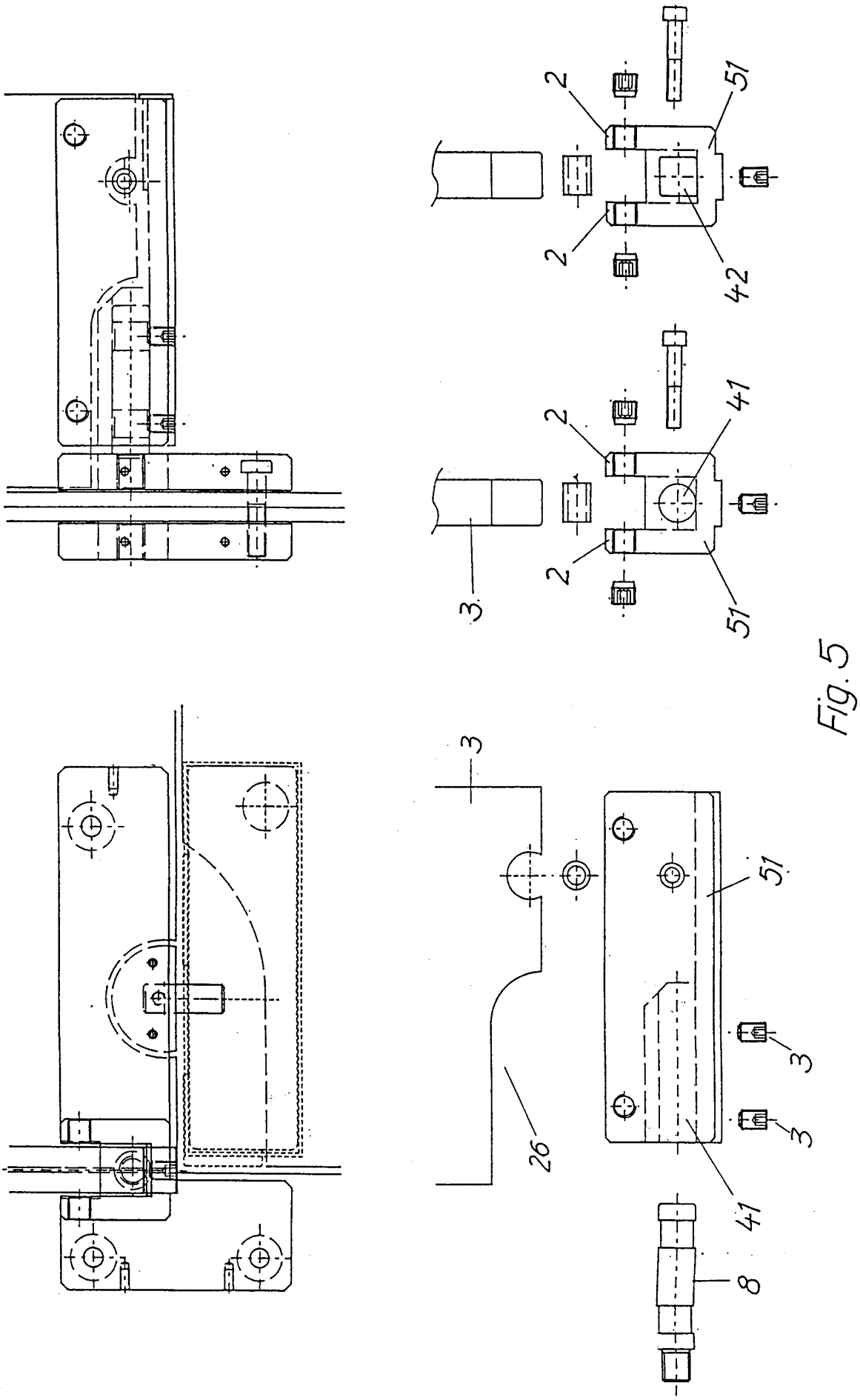


Fig. 5

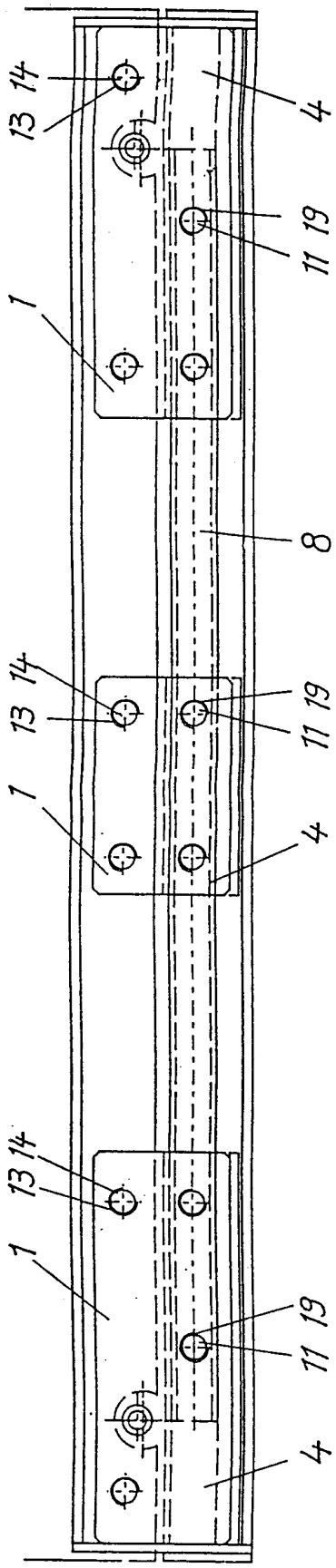
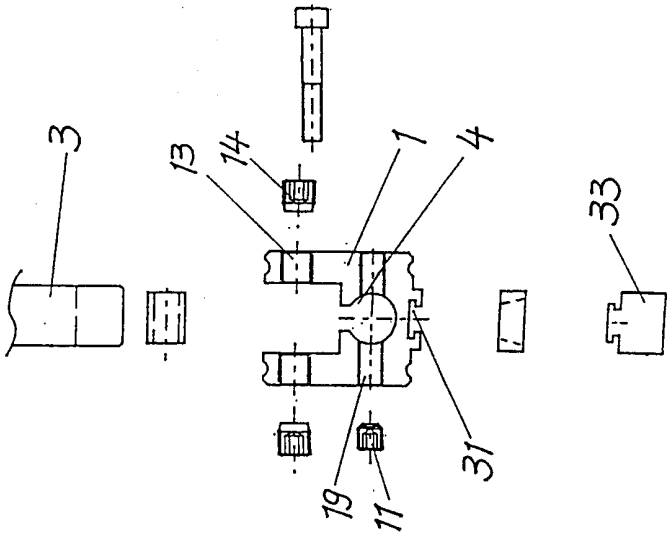
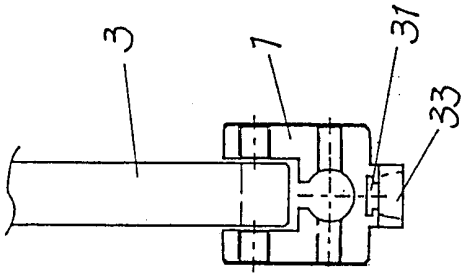

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Fig. 6


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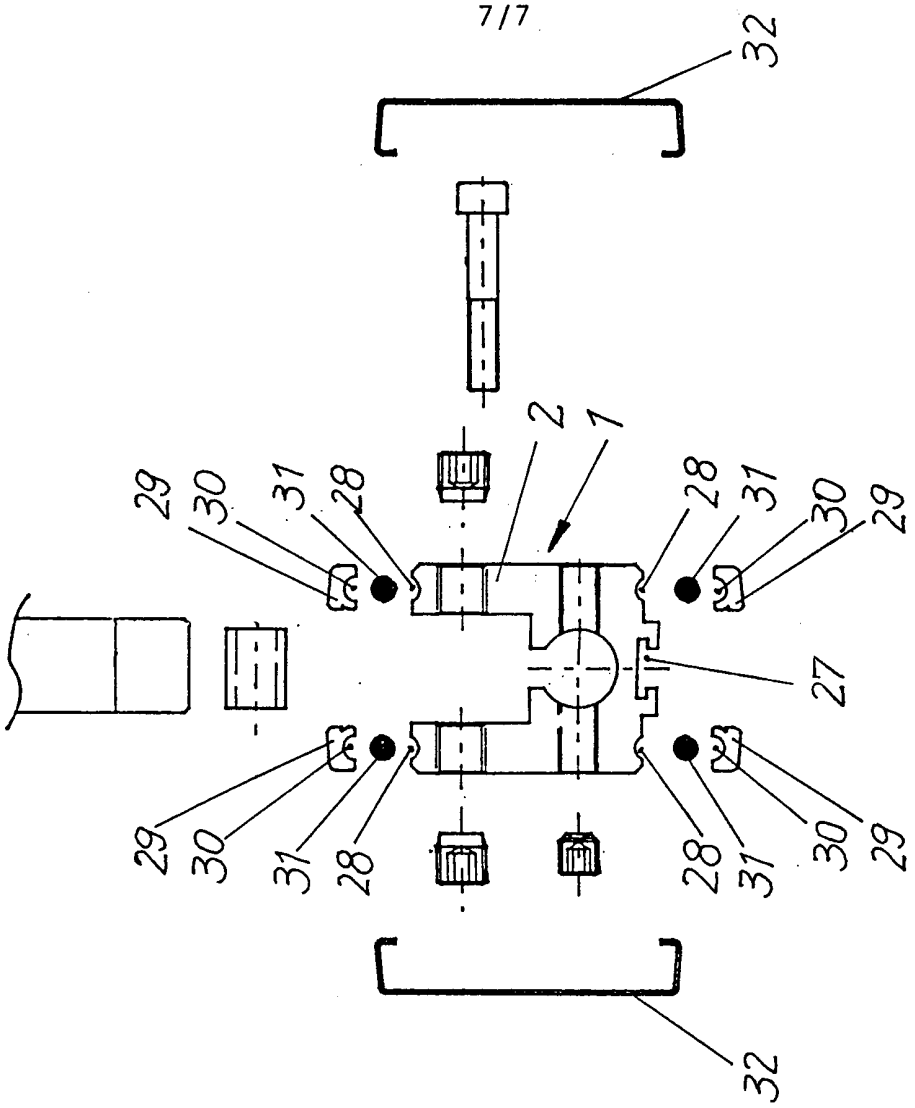
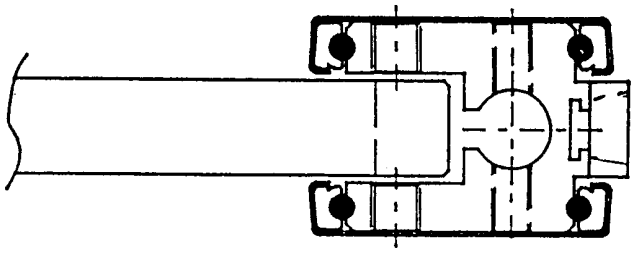


Fig. 7



INTERNATIONAL SEARCH REPORT

Ir. ational Application No
PCT/EP 99/05539

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 E06B1/38 E06B3/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 E06B E04D F16B F16S E05D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 235 694 A (VER GLASWERKE GMBH ;CASMA SPA (IT)) 9 September 1987 (1987-09-09) column 7, line 19 -column 8, line 23 figures 5,5A	1,17
A	EP 0 581 140 A (PETER REICHERT GMBH DREHEREI U) 2 February 1994 (1994-02-02) column 4, line 26 -column 5, line 11 figures 7,9	1,17

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

° Special categories of cited documents :

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"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

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Date of the actual completion of the international search	Date of mailing of the international search report
29 March 2000	06/04/2000

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Verdonck, B

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/EP 99/05539

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		AT 44070 T	15-06-1989
EP 0581140 A	02-02-1994	DE 9209806 U	26-11-1992
		AT 145962 T	15-12-1996