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(54) **ACCESSORY FOR ADJUSTING THE DISTANCE BETWEEN A HINGE AND A PROFILE OF A WINDOW OR DOOR AND HINGE PROVIDED WITH SUCH AN ACCESSORY**

ZUBEHÖRTEIL FÜR DIE VERSTELLUNG DES ABSTANDS ZWISCHEN EINEM SCHARNIER UND EINEM PROFIL EINES FENSTERS ODER EINER TÜR UND SCHARNIER MIT EINEM SOLCHEN ZUBEHÖRTEIL

ACCESSOIRE POUR LE RÉGLAGE DE LA DISTANCE ENTRE UNE CHARNIÈRE ET UN PROFILÉ D'UNE FENÊTRE OU D'UNE PORTE ET UNE CHARNIÈRE AVEC UN TEL ACCESSOIRE

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(73) Proprietor: **Van Parys, Remi Emiel**
8790 Waregem (BE)

(72) Inventor: **Van Parys, Remi Emiel**
8790 Waregem (BE)

(74) Representative: **Donné, Eddy et al**
Bureau De Rycker nv
Arenbergstraat 13
2000 Antwerpen (BE)

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Description

[0001] The invention relates to an accessory for adjusting the distance between a hinge and a profile of a window or door for a building and a hinge equipped with such an accessory.

[0002] To mount a turnable leaf of a window or door in the fixed frame of the window or door in a building, use is made of hinges, which as known are formed by two hinge leaves with which the hinge is fastened to the leaf and the fixed frame, whereby the hinge parts are hingeably connected together by means of a hinge pin.

[0003] When mounting the leaf in the fixed frame, it is important that the position of the leaf in the fixed frame can be adjusted to be able to easily open and close the door or window without snaring and to be able to easily operate the closing mechanism without pinching.

[0004] It is already known from BE 1.016.414 that an accessory with an adjustable thickness can be used for this purpose that is affixed between the hinge and the profile of the window or door to which the hinge is fastened during the mounting of the window or door.

[0005] This accessory is composed of two plate-shaped parts that are affixed together by one side and which are each provided on this side with a wedge-shaped relief with wedge-shaped elements that are such that when both parts are moved with respect to one another in the longitudinal direction with their wedge-shaped elements, the plate-shaped parts move away from one another so to speak, such that the thickness of the accessory can be adjusted by a mutual movement of the plate-shaped parts.

[0006] The thickness of the accessory is infinitely adjustable by means of an adjustment screw that is also provided to keep the plate-shaped parts in place with respect to one another in the aforementioned longitudinal direction.

[0007] A disadvantage of this known accessory is that a tool is required to be able to make the aforementioned adjustment by means of an adjustment screw.

[0008] The facilities for adjustment by means of an adjustment screw also burden the production cost.

[0009] An accessory is known from DE 31.14.660 for furniture doors in the form of a plate-shaped part that is provided on one side with upright teeth that in the mounted situation grip in corresponding slots that are provided to this end in a hinge leaf of the hinge.

[0010] This accessory is manually movable in the longitudinal direction to adjust the furniture door and after adjustment is secured by means of a screw with which the hinge leaf concerned is fastened to the piece of furniture.

[0011] However, these types of hinges are not suitable for heavy doors and windows of a building, as the forces with which the hinge leaf and the accessory must be fastened by means of the aforementioned screw ensure that, when screwing down the screw, the accessory inevitably moves with respect to the hinge leaf on account

of the smooth edges of the aforementioned teeth.

[0012] In addition, a precise adjustment is not possible and when taking down and remounting a door or window the adjustment has to be made again.

[0013] The purpose of the present invention is to provide a solution to one or more of the aforementioned and other disadvantages.

[0014] To this end the invention concerns an accessory for adjusting the distance between a hinge of a window or door and a profile of a window or door, whereby this accessory is composed of two essentially plate-shaped parts that are affixed together by one side and which are movably affixed with respect to one another by these sides in a certain sliding direction, whereby the sides that are affixed together are each provided with one or more wedge-shaped elements that are such that when both parts are moved with respect to one another with their wedge-shaped elements in one or another direction according to the aforementioned sliding direction, the thickness of the accessory increases or decreases, whereby both plate-shaped parts are formed such that they are freely movable, manually without tools, over a distance with respect to one another in the mounted situation of the accessory, between the hinge and the aforementioned profile of the window or door, whereby both plate-shaped parts (12a,12b) are held together by means of an elastic lip (39) that is affixed on one of the two plate-shaped parts (12a,12b) and which is elastically tightly hooked behind the other plate-shaped part (12a,12b) and whereby the elastic lip (39) extends in the sliding direction (X-X') and is hooked behind one of the two plate-shaped parts (12a,12b) through a passage (40) in the other plate-shaped part (12a,12b).

[0015] Thanks to an accessory according to the invention the position of the leaf in the fixed frame can be easily done manually without the need for any tools.

[0016] To this end preferably at least one of the two plate-shaped parts are provided with at least one manual operating element that in the mounted situation of the accessory is accessible between the hinge and the aforementioned profile of the window or door for a manual movement of both plate-shaped parts with respect to one another in the sliding direction.

[0017] In this way the fitter can easily make the adjustment.

[0018] Preferably this operating element is formed by an elongated body that extends in the aforementioned sliding direction in line with the plate-shaped element concerned on which it is mounted, such that the operating element is accessible in all circumstances and can easily be grasped by the fitter.

[0019] According to the invention both plate-shaped parts are held together by means of an elastic lip that is affixed on one of the two plate-shaped parts and which is elastically tightly hooked behind the other plate-shaped part.

[0020] In this way the two parts always remain held together in the correct position, such that the accidental

loss of one of the two parts is prevented and moreover the fitter does not need to concern himself with the correct mounting.

[0021] Preferably the sides turned towards one another of both plate-shaped parts are provided with ribs that extend in a direction transverse to the aforementioned sliding direction, which prevents the unwanted sliding in or out from one another of the parts and ensures that both parts maintain their mutual position with a certain resistance against movement.

[0022] To fasten the accessory on the window or door, preferably at least one passage is provided in the accessory for a screw, whereby this passage is formed by a sub-passage in each of the two plate-shaped parts, whereby these sub-passages have different lengths in the aforementioned sliding direction and of which one sub-passage is formed as a fitted hole for the screw and the other is formed as a slip hole.

[0023] This provides the advantage that to adjust the thickness of the accessory in the mounted situation with screws only the plate-shaped part with the slip hole must be moved as the plate-shaped part with the fitted hole is prevented from moving by the screws, which makes the adjustment easier and reproducible.

[0024] The invention also relates to a hinge that is provided with an accessory according to the invention, whereby the hinge comprises two hinge leaves that are hingeably connected together and of which at least one hinge leaf is provided with one or more passages corresponding to the aforementioned passages in the accessory for a screw.

[0025] This provides the advantage that the accessory and the hinge together can be fastened to the window or door by means of the same screws and thus no extra screw holes are required in the window or door.

[0026] The hinge according to the invention can also be provided with an accessory for the sideways adjustment of the position of a hinge leaf of the hinge on a profile of a window or door, whereby the hinge leaf is provided with a slot that, in the mounted situation of the hinge leaf on the profile, extends in a direction that runs obliquely with respect to the longitudinal direction of the profile, and whereby the hinge is provided with an accessory that is constructed as a sliding piece that is affixed between the hinge leaf and the profile and which is provided with a guide rib with which the sliding piece is movably affixed in a groove of the profile and which is provided with a peg that is guided in the slot of the hinge leaf.

[0027] The sideways adjustment of the hinge on the profile can thereby be very easily done within certain limits by simply moving the sliding piece in the aforementioned groove of the profile.

[0028] With the intention of better showing the characteristics of the invention, a preferred embodiment of an accessory according to the invention for adjusting the distance between a hinge and a profile of a window or door as well as a hinge equipped therewith, are described hereinafter by way of an example, without any limiting

nature, with reference to the accompanying drawings, wherein:

figure 1 schematically shows a perspective view of a section of a window that is equipped with a hinge and an accessory according to the invention;
figure 2 shows a section of the window and the hinge of figure 1 in an exploded view;
figure 3 shows the section that is shown in figure 2, but from another point of view;
figure 4 shows the accessory that is indicated by F4 in figure 2, but in an assembled state;
figure 5 shows the accessory of figure 4 seen from behind according to arrow F5;
figure 6 shows the part indicated by F6 in figure 2 on a larger scale;
figure 7 shows a view according to arrow F7 in figure 6;
figure 8 shows the part indicated by F8 in figure 2 on a larger scale;
figure 9 shows a cross-section along line IX-IX in figure 5;
figure 10 shows a view of the accessory such as that of figure 5, but in a different assembled state;
figure 11 shows a cross-section along line XI-XI in figure 10;
figure 12 shows the section indicated by F12 in figure 3 on a larger scale;
figure 13 shows a perspective view such as that of figure 1, but for an alternative embodiment of an accessory and hinge according to the invention;
figures 14 and 15 show views such as those of figures 2 and 3, but for the alternative embodiment of figure 13;
figures 16 and 17 respectively show a front view and back view of the section that is indicated by the bracket F16 in figure 14, but in a mounted situation;
figures 18 and 19 show analogous drawings to those of figures 4 and 5, but for the alternative embodiment of figure 13;
figure 20 shows the section of the hinge of figure 13 that is indicated by F20;
figure 21 shows a perspective view of the section indicated by F21 in figure 20 on a larger scale;
figure 22 shows the back of the section shown in figure 21;
figure 23 shows a cross-section according to line XXVIII-XXVIII of figure 20;
figures 24 and 25, respectively 26 and 27, are analogous representations to those of figures 20 and 23, but for other mounted situations.

[0029] Figure 1 shows a section of a window 1 comprising a profile 2 of the fixed frame of the window 1 and a profile 3 of the leaf of the window 1, whereby these profiles 2 and 3 are hingeably connected together by means of a hinge 4 that is composed of two hinge leaves 6 and 7 that are connected together by means of a hinge

pin 8.

[0030] The hinge 4 is fastened to the profiles 2 and 3 by means of screws 9 that are screwed through appropriate passages 10 in the screw leaves and in passages 11 in the aforementioned profiles 2 and 3.

[0031] The hinge 4 comprises an essentially plate-shaped accessory 12 according to the invention that in this case is mounted between the hinge leaf 7 and the profile 3 and which to this end is provided with passages 13 for the screws 9, whereby to this end these passages have the same distance between centres A from one another as the distance between centres A between the passages 10 in the hinge leaf 7.

[0032] The accessory 12 is composed of two plate-shaped parts 12a and 12b with sub-passages 13a and 13b for the screws 9.

[0033] The first plate-shaped part 12a is movably affixed by the back 14a onto the hinge leaf 7 along a sliding direction X-X', to which the plate-shaped part 12a concerned is affixed by two opposite edges between two guides, respectively a guide 17 that in the example is formed by a U-shaped folded rib 19 that forms a groove 20 where the movable plate-shaped part 12a concerned is movably held by its edge 15 and a guide 18 that is formed by an upright wall 21 that forms a guide for the edge 16 of the hinge leaf 7 and which in this case is formed by a separate guide element 18 that can be snapped onto a free edge 22 of the hinge leaf 7.

[0034] The snap-fastenable guide 18 is constructed as an L-profile of which one wall forms the aforementioned upright wall 21 and there are elastic lips 24 at a distance from the other wall 23 at the end around a folded edge 25 to form a small hook with which the guide 18 can be snap-fastened behind a groove 26 along the aforementioned edge 22 of the hinge leaf 7, as is best seen in figure 12.

[0035] The snap-fastenable guide 18 is provided at the ends of a stop wall 27, whereby the distance between the stop walls 27 corresponds to the length of the edge 22, so that in the mounted situation the guide 18 cannot move in the sliding direction X-X'.

[0036] The sub-passages 13a in the plate-shaped part 12a are constructed as slip holes such that, when the hinge 4 is mounted with screws 9, the plate-shaped part 12a remains movable over the length of the slip holes in the sliding direction X-X' with respect to the hinge leaf 7.

[0037] Furthermore the hinge is provided with means that enable the position of the movable plate-shaped element 12a with respect to the hinge leaf 7 to be read.

[0038] In the example shown these means are formed by a mark 28 in the form of a tooth affixed on the edge 16 of the movable plate-shaped part 12a that is movably held in a rectangular window 29 in the aforementioned upright wall 21 opposite a graduated scale 30 on the outside of the aforementioned upright wall 21.

[0039] The plate-shaped part 12a is provided at both ends with an operating element 31 with an elongated body that can be grasped by the fingers of a fitter and

which extends in the aforementioned sliding direction X-X' in line with the plate-shaped element 12a concerned, such that in a mounted situation of the accessory 12 the operating elements 31 remain accessible between the hinge leaf 7 and the aforementioned profile 3 for a manual movement by a fitter, at least insofar the leaf of the window 1 is turned sufficiently open.

[0040] At the same time means can be provided to keep the part 12a in position and to be able to move it incrementally with respect to the hinge leaf 7 and thus to provide a resistance against unwanted movement of the part 12a.

[0041] In the example these means are formed by both surfaces being provided with toothings or ribs at certain places where the plate-shaped element 12a is in contact with the hinge leaf 7, such as for example ribs 32 on the back 14 of the plate-shaped element 12a that move opposite ribs 33 on the lips 24, or in the form of ribs 34 opposite a tooth 35 on the upright wall 21 of the guide 18, which is snap-fastened to the hinge leaf 7.

[0042] The second plate-shaped part 12b is provided with sub-passages 13b for the screws 9 in the form of fitted holes with a diameter that is somewhat greater than the diameter of the screws 9 so that in the mounted situation of the accessory, this plate-shaped part 12b concerned is prevented from moving with respect to the hinge leaf 7 by the screws 9, while the first plate-shaped part 12a can move with respect to the second part 12b.

[0043] Both parts 12a and 12b are provided with a relief on the sides turned towards one another, with corresponding wedge-shaped elements 36 and 37 that can best be seen in figures 7 and 8 and which are arranged in series behind one another in the sliding direction X-X' and as it were form toothings extending alongside one another that are located with respect to one another in the sliding direction X-X' according to a slanted pattern.

[0044] The toothings that are formed by the wedge-shaped elements 36 and 37 fit into one another and are affixed movably against one another by their oblique sides such as can be seen in the cross-section in figures 9 and 11 in which it can be seen that in figure 11 the teeth are completely moved into one another, while in figure 9 the plate-shaped part 12b is moved upwards with respect to the other part 12a, such that the outermost surfaces 14a and 14b of the accessory 12 are as it were pushed away from one another, which comes down to the thickness D of the accessory 12 in figure 9 being greater than the thickness D of the accessory 12 in figure 11.

[0045] The oblique sides of the wedge-shaped elements 36 and 37 are provided with ribs 38 that extend in a direction transverse to the aforementioned sliding direction X-X' and which must provide a resistance against the accidental sliding apart of the parts 12a and 12, and in this way form means to incrementally move the plate-shaped parts 12a and 12b with respect to one another and keep them in position.

[0046] By the slanted toothings next to one another fitting into one another, a guide is also obtained from the

parts 12a and 12b mutually in the direction X-X'.

[0047] The parts 12a and 12b are held together by means of an elastic lip 39 that is affixed to one of the two plate-shaped parts, in this case on part 12b, and which is elastically tightly hooked behind the back 14a of this plate-shaped part 12a via a passage 40 in the other part 12a, or as in the example shown, behind a sloping base of a deepened section 41 in this back 14a.

[0048] The end of the lip 39 is preferably provided with ribs 42 that can mesh with ribs 43 on the base of the deepened section 41.

[0049] The use of a hinge 4 according to the invention is simple and as follows.

[0050] The hinge is fastened to the profiles 2 and 3 of the fixed frame and the leaf of the window 1 by means of the screws 9, as shown in figure 1.

[0051] The screws 9 for fastening onto the profile 3 of the leaf are inserted through the passages 10 in the hinge leaf 7 and through the passages 13 in the accessory 12, and screwed tight in the passages 11 in the profile 3, but not completely tightened such that a movement of the movable plate-shaped part 12a of the accessory 12 remains possible.

[0052] Then the plate-shaped part 12a is moved upwards or downwards by means of an operating element 31 in order to thus move this part 12a of the accessory 12 with respect to the other part 12b of the accessory 12 in order to adjust the thickness D of the accessory 12 in this way according to desire, and thereby also the position of the leaf in the frame of the window 1.

[0053] Once the accessory 12 has been set to the desired thickness D, the screws 9 can be completely tightened such that the parts 12a and 12b of the accessory can no longer move and the thickness of the accessory 12 takes on a fixed value.

[0054] In order to correct the position of the leaf if necessary, it is sufficient for the screws 9 of the hinge leaf 7 to be slightly loosened and to move the movable part 12 of the accessory 12 by hand to the desired position and then to tighten the screws 9 again.

[0055] If the leaf of the window 1 must be taken down for one or another reason, the position of the movable part 12a of the accessory can be read off beforehand by noting the position of the mark 28 with respect to the graduated scale 30, so that when refitting the leaf in the frame the movable part 12a can be brought back to the same position.

[0056] It goes without saying that the accessory 12 can also be used separately between a conventional hinge without guides 17 and 18 and a profile 3.

[0057] It is clear that the accessory can also be used to adjust the distance of the hinge leaf 6 with respect to the profile 2 of the fixed frame.

[0058] It is clear that the number of wedge-shaped elements 36, 37 can vary from one per plate-shaped part to a number of elements per plate-shaped part.

[0059] Figure 13 shows a variant of a hinge according to the invention with a variant embodiment of the acces-

sory 12 as described above, and of an additional accessory 44 to be able to adjust the lateral position of the hinge leaf 6 with respect to the profile 2.

[0060] In this case, the first accessory 12 is provided with a guide element 45 that replaces the aforementioned guides 17 and 18 and brings them together into one element in the form of a plate 46 with two parallel guides 17 and 18 thereon in the form of upright walls 19 and 21, between which the plate-shaped part 12a of the connecting piece 12 is movably affixed and is clipped between them by providing the sides of these guides 17 and 18 that are turned towards one another with clips 47.

[0061] In this case the guide element 45 is provided with taps 48 whereby the guide element 45 can be clamped in passages 49 of the hinge leaf 7.

[0062] Just like the guide 18, the guide element 45 is also provided with a window 29 with a graduated scale 30 for the reading of the mark 28, and on the inside of the plate 46 is provided with ribs 33 that can mesh with ribs 32 on the back 14a of the plate-shaped part 12a of the accessory 12.

[0063] The guide element 45 is made as one component of plastic for example by injection moulding so that the clips 47 and taps 48 can be realised in one injection operation.

[0064] The second accessory 44 is intended to adjust the sideways position of the hinge leaf 6 according to a direction Z-Z' transverse to the longitudinal direction of the profile 2.

[0065] The hinge leaf 6 is incorporated in a groove 51 of the profile 2 of the fixed frame with a certain sideways play with a thickened section 50. The passages 10 for the screws 9 in the hinge leaf 6 are constructed in this case as slotted holes 10 that extend along the longitudinal direction of the profile 2, in order to be able to also make a height adjustment of the leaf, and these slotted holes 10 are somewhat larger than the diameter of the shank of the screws 9 to enable a sideways movement of the hinge leaf 6.

[0066] The second accessory 44 is constructed as a sliding piece 52 that is affixed between the hinge leaf 6 and the profile 2 and which is provided with a guide rib 53 with which the sliding piece 52 is movably affixed in the axial direction in a groove 54 of the profile 2, and which is provided with a peg 55 that is guided in a slot 56 of the hinge leaf 6, whereby this slot 56 runs obliquely with respect to the longitudinal direction of the profile 2.

[0067] The peg 55 and the hinge leaf 6 are provided with horizontal marks 57, respectively 58, that enable their mutual position to be indicated.

[0068] In the situation of figures 20 and 23 the marks are at the same height, corresponding to a neutral position of the hinge leaf 6 whereby the thickened section 50 of the hinge leaf 6 is located approximately centrally in the groove 54 with a play S and S' on both sides of the thickened base 50.

[0069] To adjust the sideways position of the hinge leaf 6 when mounting the window the screws 9 of the hinge

leaf 6 are not fully tightened and the sliding piece 52 with the peg 48 is moved upwards or downwards according to the desired position.

[0070] Figures 24 and 25 show a situation whereby the sliding piece 52 is moved downwards with respect to the neutral position of figures 20 and 23 and whereby the thickened section 50 is pushed to the right in the groove 54 to a maximum, whereby the play S is a maximum and the play S' is zero.

[0071] In figures 26 and 27 the sliding piece 52 is moved upwards to move the hinge leaf 6 in the other direction, resulting in a maximum play S'.

[0072] It goes without saying that an adjustment between these two extreme situations is possible.

[0073] It is clear that certain parts of the accessories can be entirely or partially integrated into the hinge itself.

[0074] The present invention is by no means limited to the embodiment described as an example and shown in the drawings, but such an accessory and hinge can be realised in different variants without departing from the scope of the invention, as defined by the claims.

Claims

1. Accessory for adjusting the distance between a hinge (4) of a window (1) or door for a building and a profile (2,3) of a window (1) or door, whereby this accessory (12) is composed of two essentially plate-shaped parts (12a and 12b) that are affixed against one another by one side and which are movably affixed with respect to one another by these sides in a certain sliding direction (X-X'), whereby the sides that are affixed against one another are each provided with one or more wedge-shaped elements (36,37) that are such that when both parts (12a and 12b) are moved with respect to one another with their wedge-shaped elements (36,37) in one or another direction according to the aforementioned sliding direction (X-X'), the thickness D of the accessory increases or decreases, wherein both plate-shaped parts (12a and 12b) are formed such that they are freely movable, manually without tools, over a distance with respect to one another in the mounted situation of the accessory (12), between the hinge (4) and the aforementioned profile (2,3) of the window (1) or door, **characterised in that** both plate-shaped parts (12a,12b) are held together by means of an elastic lip (39) that is affixed on one of the two plate-shaped parts (12a,12b) and which is elastically tightly hooked behind the other plate-shaped part (12a,12b) and whereby the elastic lip (39) extends in the sliding direction (X-X') and is hooked behind the other plate-shaped part (12a,12b) through a passage (40) in the other plate-shaped part (12a,12b).
2. Accessory according to claim 1, **characterised in that** at least one of the two plate-shaped parts

(12a,12b) is provided with at least one operating element (31) that in the mounted situation of the accessory (12) is accessible between the hinge (4) and the aforementioned profile (2,3) of the window (1) or door for a manual movement in the sliding direction (X-X') of both plate-shaped parts (12a,12b) with respect to one another.

3. Accessory according to claim 2, **characterised in that** the aforementioned operating element (31) is formed by an elongated body that extends in the aforementioned sliding direction (X-X') in line with the plate-shaped part (12a) concerned on which it is mounted.
4. Accessory according to any one of the previous claims, **characterised in that** the accessory (12) is provided with a guide for the mutual movement of the plate-shaped elements (12a,12b) only in the sliding direction (X-X').
5. Accessory according to claim 4, **characterised in that** the aforementioned guide is formed by the wedge-shaped elements on each plate-shaped part being formed by at least two adjoining toothings located next to one another that are slanted with respect to one another in the sliding direction.
6. Accessory according to any one of the previous claims, **characterised in that** it is provided with means (38,42,43) to be able to incrementally move the plate-shaped parts (12a and 12b) of the accessory (12) with respect to one another and to keep them in position.
7. Accessory according to claims 5 and 6, **characterised in that** these means are formed by ribs (38) on the sides of the toothings of both plate-shaped parts (12a,12b) oriented towards one another, whereby these ribs (38) extend in a direction transverse to the aforementioned sliding direction (X-X').
8. Accessory according to any one of the previous claims, **characterised in that** the accessory (12) is provided with at least one passage (13) for a screw (9) that is intended for fastening the hinge (4) with interjacent accessory (12) to the window (1) or door, whereby this passage (13) is formed by a sub-passage (13a,13b) in each of the two plate-shaped parts (12a,12b), of which at least one sub-passage (13a) is formed as a slip hole and the other sub-passage (13b) is formed as a fitted hole for the screw (9).
9. Accessory according to any one of the previous claims, **characterised in that** it is provided with at least one guide element (18,45) that is provided with means to fasten it to a hinge leaf (7) and that forms a slide guide for one or both plate-shaped parts (12a

and 12b) along the aforementioned sliding direction (X-X').

10. Accessory according to claim 9, **characterised in that** means (32-35) are provided to be able to incrementally move at least one of the plate-shaped parts (12a and 12b) and to keep them in position with respect to the hinge leaf (7). 5
11. Hinge provided with an accessory according to any one of the previous claims, **characterised in that** the hinge (4) comprises two hinge leaves (6,7) that are hingeably connected together and of which at least one hinge leaf (7) is provided with one or more passages (10) corresponding to the aforementioned passages (13) in the accessory (12) for a screw (9). 10 15
12. Hinge according to claim 11, **characterised in that** the hinge leaf (7) concerned is provided with two parallel guides (17,18) between which at least one of the two plate-shaped parts (12a) is held movably in the sliding direction (X-X') by its edges (15,16). 20
13. Hinge according to claims 9 and 12, **characterised in that** one or both guides (17,18) form part of an aforementioned guide element (18,45) that is fastened to the hinge leaf. 25
14. Hinge according to claim 12 of 13, **characterised in that** the sides of the moveable plate-shaped part (12a) and the hinge leaf (7) concerned that are oriented towards one another are at least partially provided with a toothing in order to be able to incrementally manually move the moveable plate-shaped part (12a) in the sliding direction (X-X'). 30 35
15. Hinge according to any one of the claims 12 to 14, **characterised in that** means are provided that enable the position of the slidable plate-shaped element (12a) with respect to the hinge leaf (7) to be read. 40
16. Hinge according to claim 15, **characterised in that** the aforementioned means are formed by a graduated scale (30) on the outside of the aforementioned upright wall (21) and a mark (28) that moves along this graduated scale (30) when moving the movable plate-shaped part. 45
17. Hinge according to claim 16, **characterised in that** the mark (28) is formed by a tooth affixed on the edge (16) of the movable plate-shaped part (12a) that is held in a window (29) in the aforementioned upright wall (21), whereby the graduated scale extends along this window (29). 50
18. Hinge according to any of the previous claims, **characterised in that** the hinge is provided with an ad-

ditional accessory for the sideways adjustment of the position of a hinge leaf (6) of the hinge on a profile (2) of a window or door, for which the hinge leaf is provided with a slot (56) that, in the mounted situation of the hinge leaf (6) on the profile (2), extends in a direction that runs obliquely with respect to the longitudinal direction of the profile (2), and that the hinge is provided with an accessory (44) that is constructed as a sliding piece (52) that is affixed between the hinge leaf (6) and the profile (2) and which is provided with a guide rib (53) with which the sliding piece (52) is movably affixed in a groove (54) of the profile (2) and which is provided with a peg (55) that is guided in the slot (56) of the hinge leaf (6).

Patentansprüche

1. Zubehörteil zum Anpassen des Abstands zwischen einem Scharnier (4) eines Fensters (1) oder einer Tür für ein Gebäude und einem Profil (2, 3) eines Fensters (1) oder einer Tür, wobei dieses Zubehörteil (12) aus zwei im Wesentlichen plattenförmigen Teilen (12a und 12b) besteht, die über eine Seite aneinander befestigt sind und über diese Seiten in Bezug aufeinander in eine bestimmte Verschiebungsrichtung (X-X') beweglich befestigt sind, wobei die aneinander befestigten Seiten jeweils mit einem oder mehreren keilförmigen Elementen (36, 37) versehen sind, die derart ausgebildet sind, dass beim Bewegen beider Teile (12a und 12b) in Bezug aufeinander mit ihren keilförmigen Elementen (36, 37) in einer oder einer anderen Richtung gemäß der zuvor erwähnten Verschiebungsrichtung (X-X') die Dicke D des Zubehörteils zunimmt oder abnimmt, wobei beide plattenförmige Teile (12a und 12b) derart ausgebildet sind, dass sie frei, manuell ohne Werkzeuge, über einen Abstand in Bezug aufeinander in der montierten Situation des Zubehörteils (12) zwischen dem Scharnier (4) und dem zuvor erwähnten Profil (2, 3) des Fensters (1) oder der Tür beweglich sind, **dadurch gekennzeichnet, dass** beide plattenförmige Teile (12a, 12b) durch eine elastische Lippe (39) zusammengehalten werden, die an einem der zwei plattenförmigen Teile (12a, 12b) befestigt ist und elastisch fest hinter dem anderen plattenförmigen Teil (12a, 12b) eingehakt ist, und wobei sich die elastische Lippe (39) in der Verschiebungsrichtung (X-X') erstreckt und hinter dem anderen plattenförmigen Teil (12a, 12b) durch einen Durchgang (40) in dem anderen plattenförmigen Teil (12a, 12b) eingehakt ist. 55
2. Zubehörteil nach Anspruch 1, **dadurch gekennzeichnet, dass** mindestens einer der zwei plattenförmigen Teile (12a, 12b) mit mindestens einem Bedienelement (31) versehen ist, das in der montierten

Situation des Zubehörteils (12) zwischen dem Scharnier (4) und dem zuvor erwähnten Profil (2, 3) des Fensters (1) oder der Tür für eine manuelle Bewegung in der Verschiebungsrichtung (X-X') beider plattenförmiger Teile (12a, 12b) in Bezug aufeinander der zugänglich ist.

3. Zubehörteil nach Anspruch 2, **dadurch gekennzeichnet, dass** das zuvor erwähnte Bedienelement (31) durch einen länglichen Körper gebildet ist, der sich in der zuvor erwähnten Verschiebungsrichtung (X-X') in einer Linie mit dem betreffenden plattenförmigen Teil (12a) erstreckt, an dem er angebracht ist.
4. Zubehörteil nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** das Zubehörteil (12) mit einer Führung für die wechselseitige Bewegung der plattenförmigen Elemente (12a, 12b) nur in der Verschiebungsrichtung (X-X') versehen ist.
5. Zubehörteil nach Anspruch 4, **dadurch gekennzeichnet, dass** die zuvor erwähnte Führung durch die keilförmigen Elemente auf jedem plattenförmigen Teil gebildet ist, die aus mindestens zwei angrenzenden Verzahnungen gebildet sind, die sich nebeneinander befinden und in Bezug aufeinander in der Verschiebungsrichtung abgeschrägt sind.
6. Zubehörteil nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** es mit Mitteln (38, 42, 43) versehen ist, um die plattenförmigen Teile (12a und 12b) des Zubehörteils (12) schrittweise in Bezug aufeinander bewegen und sie in Position halten zu können.
7. Zubehörteil nach Anspruch 5 und 6, **dadurch gekennzeichnet, dass** diese Mittel durch Rippen (38) an den Seiten der Verzahnungen beider plattenförmiger Teile (12a, 12b) gebildet sind, die zueinander hin ausgerichtet sind, wobei sich diese Rippen (38) in einer Querrichtung zu der zuvor erwähnten Verschiebungsrichtung (X-X') erstrecken.
8. Zubehörteil nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** das Zubehörteil (12) mit mindestens einem Durchgang (13) für eine Schraube (9) versehen ist, die für ein Befestigen des Scharniers (4) mit dem dazwischen liegenden Zubehörteil (12) an dem Fenster (1) oder der Tür vorgesehen ist, wobei dieser Durchgang (13) durch einen Teildurchgang (13a, 13b) in jedem der zwei plattenförmigen Teile (12a, 12b) gebildet ist, von denen mindestens ein Teildurchgang (13a) als eine Gleitbohrung ausgebildet ist und der andere Teildurchgang (13b) als eine Passbohrung für die Schraube (9) ausgebildet ist.

9. Zubehörteil nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** es mit mindestens einem Führungselement (18, 45) versehen ist, das mit Mitteln zum Befestigen davon an einem Scharnierblatt (7) versehen ist und eine Gleitführung für einen oder beide plattenförmige Teile (12a und 12b) entlang der zuvor erwähnten Verschiebungsrichtung (X-X') bildet.
10. Zubehörteil nach Anspruch 9, **dadurch gekennzeichnet, dass** Mittel (32-35) vorgesehen sind, um mindestens einen der plattenförmigen Teile (12a und 12b) schrittweise bewegen und sie in Bezug auf das Scharnierblatt (7) in Position halten zu können.
11. Scharnier, versehen mit einem Zubehörteil nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** das Scharnier (4) zwei Scharnierblätter (6, 7) umfasst, die gelenkig miteinander verbunden sind und von denen mindestens ein Scharnierblatt (7) mit einem oder mehreren Durchgängen (10) versehen ist, die den zuvor erwähnten Durchgängen (13) in dem Zubehörteil (12) für eine Schraube (9) entsprechen.
12. Scharnier nach Anspruch 11, **dadurch gekennzeichnet, dass** das betreffende Scharnierblatt (7) mit zwei parallelen Führungen (17, 18) versehen ist, zwischen denen mindestens einer der zwei plattenförmigen Teile (12a) durch seine Kanten (15, 16) in der Verschiebungsrichtung (X-X') beweglich gehalten wird.
13. Scharnier nach Anspruch 9 und 12, **dadurch gekennzeichnet, dass** eine oder beide Führungen (17, 18) einen Teil eines zuvor erwähnten Führungselements (18, 45) bilden, das an dem Scharnierblatt befestigt ist.
14. Scharnier nach Anspruch 12 oder 13, **dadurch gekennzeichnet, dass** die Seiten des beweglichen plattenförmigen Teils (12a) und des betreffenden Scharnierblatts (7), die zueinander hin ausgerichtet sind, zumindest teilweise mit einer Verzahnung versehen sind, um den beweglichen plattenförmigen Teil (12a) schrittweise manuell in der Verschiebungsrichtung (X-X') bewegen zu können.
15. Scharnier nach einem der Ansprüche 12 bis 14, **dadurch gekennzeichnet, dass** Mittel vorgesehen sind, die ein Auslesen der Position des verschiebbaren plattenförmigen Elements (12a) in Bezug auf das Scharnierblatt (7) ermöglichen.
16. Scharnier nach Anspruch 15, **dadurch gekennzeichnet, dass** die zuvor erwähnten Mittel durch eine gradierte Skala (30) an der Außenseite der zuvor erwähnten aufrechten Wand (21) und eine Markie-

rung (28) gebildet sind, die sich entlang dieser graduerten Skala (30) bewegt, wenn der bewegliche plattenförmige Teil bewegt wird.

17. Scharnier nach Anspruch 16, **dadurch gekennzeichnet, dass** die Markierung (28) durch einen Zahn gebildet ist, der an der Kante (16) des beweglichen plattenförmigen Teils (12a) befestigt ist, der in einem Fenster (29) in der zuvor erwähnten aufrechten Wand (21) gehalten wird, wobei sich die gradierte Skala entlang dieses Fensters (29) erstreckt. 5
18. Scharnier nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** das Scharnier mit einem zusätzlichen Zubehörteil für die seitliche Anpassung der Position eines Scharnierblatts (6) des Scharniers an einem Profil (2) eines Fensters oder einer Tür versehen ist, wofür das Scharnierblatt mit einer Aussparung (56) versehen ist, die sich in der angebrachten Situation des Scharnierblatts (6) an dem Profil (2) in einer Richtung erstreckt, die in Bezug auf die Längsrichtung des Profils (2) schräg verläuft, und dass das Scharnier mit einem Zubehörteil (44) versehen ist, das als ein Gleitstück (52) konstruiert ist, das zwischen dem Scharnierblatt (6) und dem Profil (2) befestigt ist und mit einer Führungsrippe (53) versehen ist, mit der das Gleitstück (52) beweglich in einer Nut (54) des Profils (2) befestigt ist und die mit einem Zapfen (55) versehen ist, der in der Aussparung (56) des Scharnierblatts (6) geführt wird. 10 15 20 25 30

Revendications

1. Accessoire pour le réglage de la distance entre une charnière (4) d'une fenêtre (1) ou d'une porte pour un bâtiment et un profilé (2, 3) d'une fenêtre (1) ou d'une porte, dans lequel cet accessoire (12) se compose de deux parties possédant une configuration essentiellement en forme de plaque (12a et 12b) qui sont fixées l'une contre l'autre par un côté et qui sont fixées de manière amovible l'une par rapport à l'autre par ces côtés dans une certaine direction de glissement (X-X'), dans lequel les côtés qui sont fixés l'un contre l'autre sont chacun muni d'un ou de plusieurs éléments possédant une configuration cunéiforme (36, 37) qui sont tels que, lorsque les deux parties (12a et 12b) sont soumises à un déplacement l'une par rapport à l'autre avec leurs éléments possédant une configuration cunéiforme (36, 37) dans l'une ou l'autre direction conformément à la direction de glissement susmentionnée (X-X'), l'épaisseur D de l'accessoire augmente ou diminue, dans lequel les deux parties possédant une configuration en forme de plaque (12a et 12b) sont réalisées d'une manière telle qu'elles sont librement mobiles, à la main en l'absence d'outils, sur une distance l'une par rapport à 35 40 45 50 55

l'autre à l'état monté de l'accessoire (12), entre la charnière (4) et le profilé susmentionné (2, 3) de la fenêtre (1) ou de la porte, **caractérisé en ce que** les deux parties possédant une configuration en forme de plaque (12a, 12b) sont maintenues ensemble au moyen d'une lèvre élastique (39) qui est fixée sur une des deux parties possédant une configuration en forme de plaque (12a, 12b) et qui est accrochée fermement de manière élastique derrière l'autre partie possédant une élastique (39) s'étend dans la direction de glissement (X-X') et est accrochée derrière l'autre possédant une configuration en forme de plaque (12a, 12b) par l'intermédiaire d'un passage (40) pratiqué dans l'autre possédant une configuration en forme de plaque (12a, 12b).

2. Accessoire selon la revendication 1, **caractérisé en ce qu'**au moins une des deux parties possédant une configuration en forme de plaque (12a, 12b) est munie d'au moins un élément opérationnel (31) qui, à l'état monté de l'accessoire (12), est accessible entre la charnière (4) et le profilé susmentionné (2, 3) de la fenêtre (1) ou de la porte pour un mouvement manuel dans la direction de glissement (X-X) des deux parties possédant une configuration en forme de plaque (12a, 12b) l'une par rapport à l'autre.
3. Accessoire selon la revendication 2, **caractérisé en ce que** l'élément opérationnel susmentionné (31) est réalisé au moyen d'un corps allongé qui s'étend dans la direction de glissement susmentionnée (X-X') en ligne avec la partie concernée possédant une configuration en forme de plaque (12a) sur laquelle il est monté.
4. Accessoire selon l'une quelconque des revendications précédentes, **caractérisé en ce que** l'accessoire (12) est muni d'un guide pour le mouvement réciproque des éléments possédant une configuration en forme de plaque (12a, 12b) uniquement dans la direction de glissement (X-X').
5. Accessoire selon la revendication 4, **caractérisé en ce que** le guide susmentionné est réalisé au moyen des éléments possédant une configuration cunéiforme sur chaque partie possédant une configuration en forme de plaque, réalisés à l'aide d'au moins deux dentures adjacentes situées l'une à côté de l'autre qui sont inclinées l'une par rapport à l'autre dans la direction de glissement.
6. Accessoire selon l'une quelconque des revendications précédentes, **caractérisé en ce qu'**il est muni de moyens (38, 42, 43) pour pouvoir déplacer de manière incrémentielle les parties possédant une configuration en forme de plaque (12a et 12b) de l'accessoire (12) l'une par rapport à l'autre et pour les maintenir en position.

7. Accessoire selon les revendications 5 et 6, **caractérisé en ce que** ces moyens sont réalisés à l'aide de nervures (38) sur les côtés des dentures des deux parties possédant une configuration en forme de plaque (12a, 12b) orientées l'une vers l'autre, dans lequel ces nervures (38) s'étendent dans une direction transversale par rapport à la direction de glissement susmentionnée (X-X').
8. Accessoire selon l'une quelconque des revendications précédentes, **caractérisé en ce que** l'accessoire (12) est muni d'au moins un passage (13) pour une vis (9) qui est destinée à fixer la charnière (4) avec un accessoire intermédiaire (12) à la fenêtre (1) ou à la porte, dans lequel ce passage (13) est réalisé à l'aide d'un passage secondaire (13a, 13b) dans chacune des deux parties possédant une configuration en forme de plaque (12a, 12b), au moins un passage intermédiaire (13a) parmi lesdits passages étant réalisé sous la forme d'un trou de glissement et l'autre passage intermédiaire (13b) étant réalisé sous la forme d'un trou adapté à la vis (9).
9. Accessoire selon l'une quelconque des revendications précédentes, **caractérisé en ce qu'il** est muni d'au moins un élément de guidage (18, 45) qui est muni de moyens pour le fixer à une lame de charnière (7) et qui forme un guide de glissement pour l'une des deux parties possédant une configuration en forme de plaque (12a et 12b) ou pour les deux le long de la direction de glissement susmentionnée (X-X').
10. Accessoire selon la revendication 9, **caractérisé en ce que** l'on prévoit des moyens (32-35) qui permettent de déplacer de manière incrémentielle au moins une des parties possédant une configuration en forme de plaque (12a et 12b) et pour les maintenir en position par rapport à la lame de charnière (7).
11. Charnière munie d'un accessoire selon l'une quelconque des revendications précédentes, **caractérisée en ce que** la charnière (4) comprend deux lames de charnière (6, 7) qui sont reliées en articulation l'une à l'autre et au moins une lame de charnière (7) parmi ces dernières est munie d'un ou de plusieurs passages (10) de manière correspondante aux passages susmentionnés (13) dans l'accessoire (12) pour une vis (9).
12. Charnière selon la revendication 11, **caractérisée en ce que** la lame de charnière (7) concernée est munie de deux guides parallèles (17, 18) entre lesquels au moins une des deux parties possédant une configuration en forme de plaque (12a) est maintenue en mobilité dans la direction de glissement (X-X') par ses bords (15, 16).
13. Charnière selon les revendications 9 et 12, **caractérisée en ce qu'un** guide ou les deux guides (17, 18) font partie d'un élément de guidage susmentionné (18, 45) qui est fixé à la lame de charnière.
14. Charnière selon la revendication 12 ou 13, **caractérisée en ce que** les côtés de la partie mobile possédant une configuration en forme de plaque (12a) et de la lame de charnière (7) concernée qui sont orientés l'un vers l'autre sont munis au moins en partie d'une denture pour pouvoir déplacer manuellement de manière incrémentielle la partie mobile possédant une configuration en forme de plaque (12a) dans la direction de glissement (X-X').
15. Charnière selon l'une quelconque des revendications 12 à 14, **caractérisée en ce que** l'on prévoit des moyens qui permettent de lire la position de l'élément coulissant possédant une configuration en forme de plaque (12a) par rapport à la lame de charnière (7).
16. Charnière selon la revendication 15, **caractérisée en ce que** les moyens susmentionnés sont réalisés à l'aide d'une échelle graduée (30) sur le côté externe de la paroi verticale susmentionnée (21) et à l'aide d'un repère (28) qui se déplace le long de cette échelle graduée (30) lorsqu'on déplace la partie mobile possédant une configuration en forme de plaque.
17. Charnière selon la revendication 16, **caractérisée en ce que** le repère (28) est réalisé à l'aide d'une dent fixée sur le bord (16) de la partie mobile possédant une configuration en forme de plaque (12a) qui est maintenue dans une fenêtre (29) dans la paroi verticale susmentionnée (21), dans laquelle l'échelle graduée s'étend le long de cette fenêtre (29).
18. Charnière selon l'une quelconque des revendications précédentes, **caractérisée en ce que** la charnière est munie d'un accessoire supplémentaire pour le réglage latéral de la position d'une lame de charnière (6) de la charnière sur un profilé (2) d'une fenêtre ou d'une porte, pour lequel la lame de charnière est munie d'une fente (56) qui, à l'état monté de la lame de charnière (6) sur le profilé (2), s'étend dans une direction qui part en oblique par rapport à la direction longitudinale du profilé (2), et **en ce que** la charnière est munie d'un accessoire (44) qui est réalisé sous la forme d'une pièce coulissante (52) qui est fixée entre la lame de charnière (6) et le profilé (2) et qui est munie d'une nervure de guidage (53) avec laquelle la pièce coulissante (52) est fixée de manière amovible dans une rainure (54) du profilé (2) et qui est munie d'une cheville (55) qui est guidée dans la fente (56) de la lame de charnière (6).

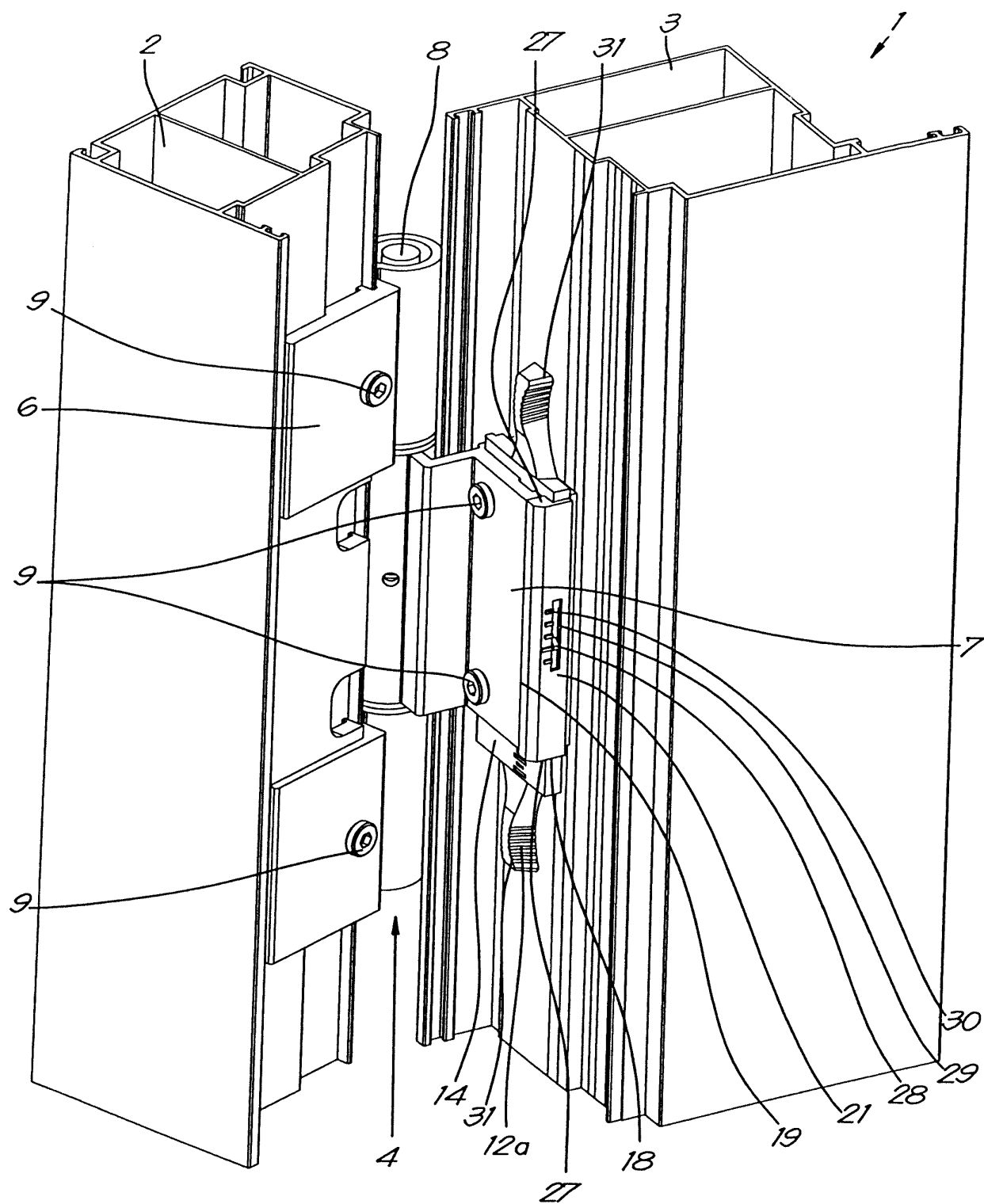
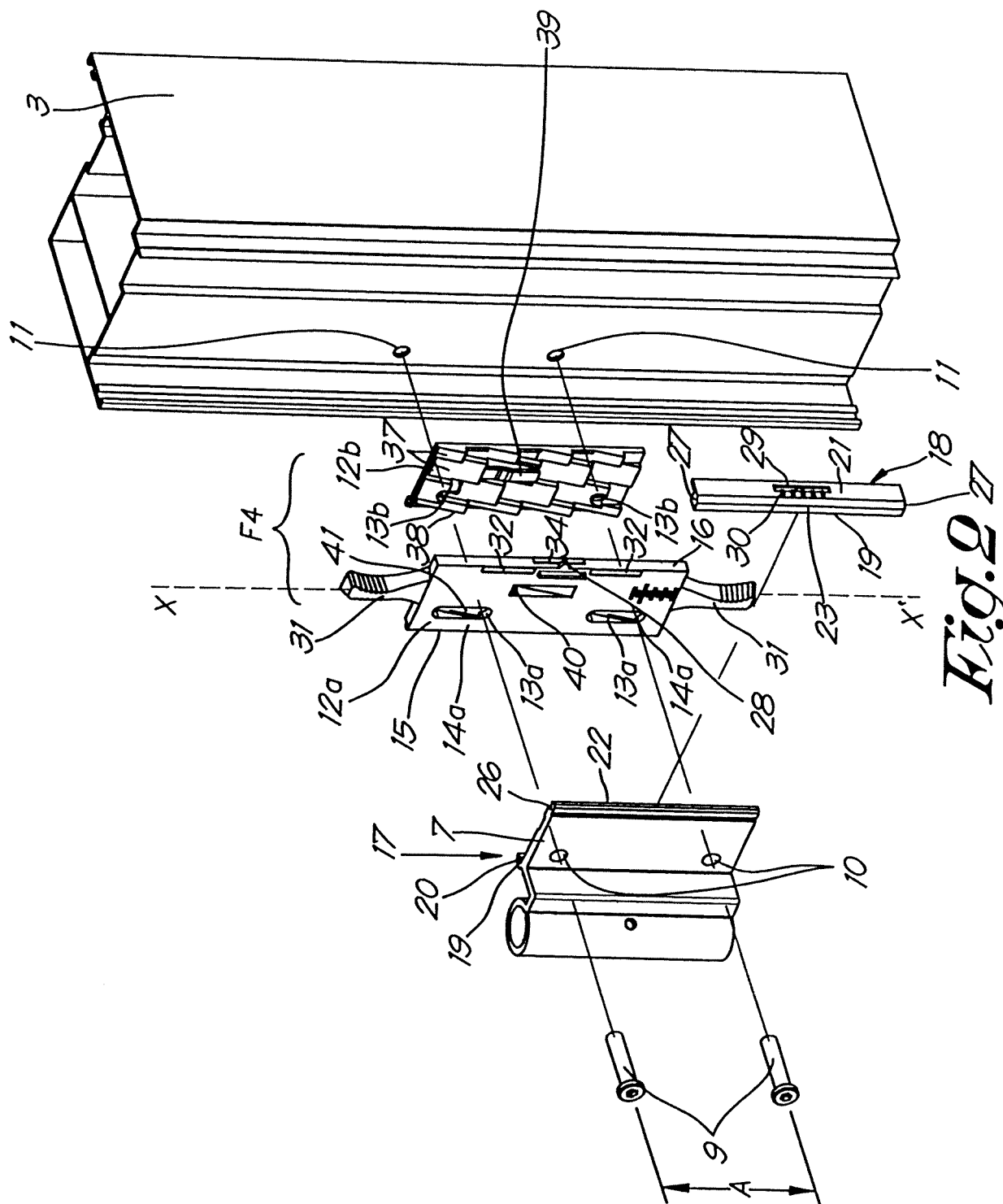


Fig. 1



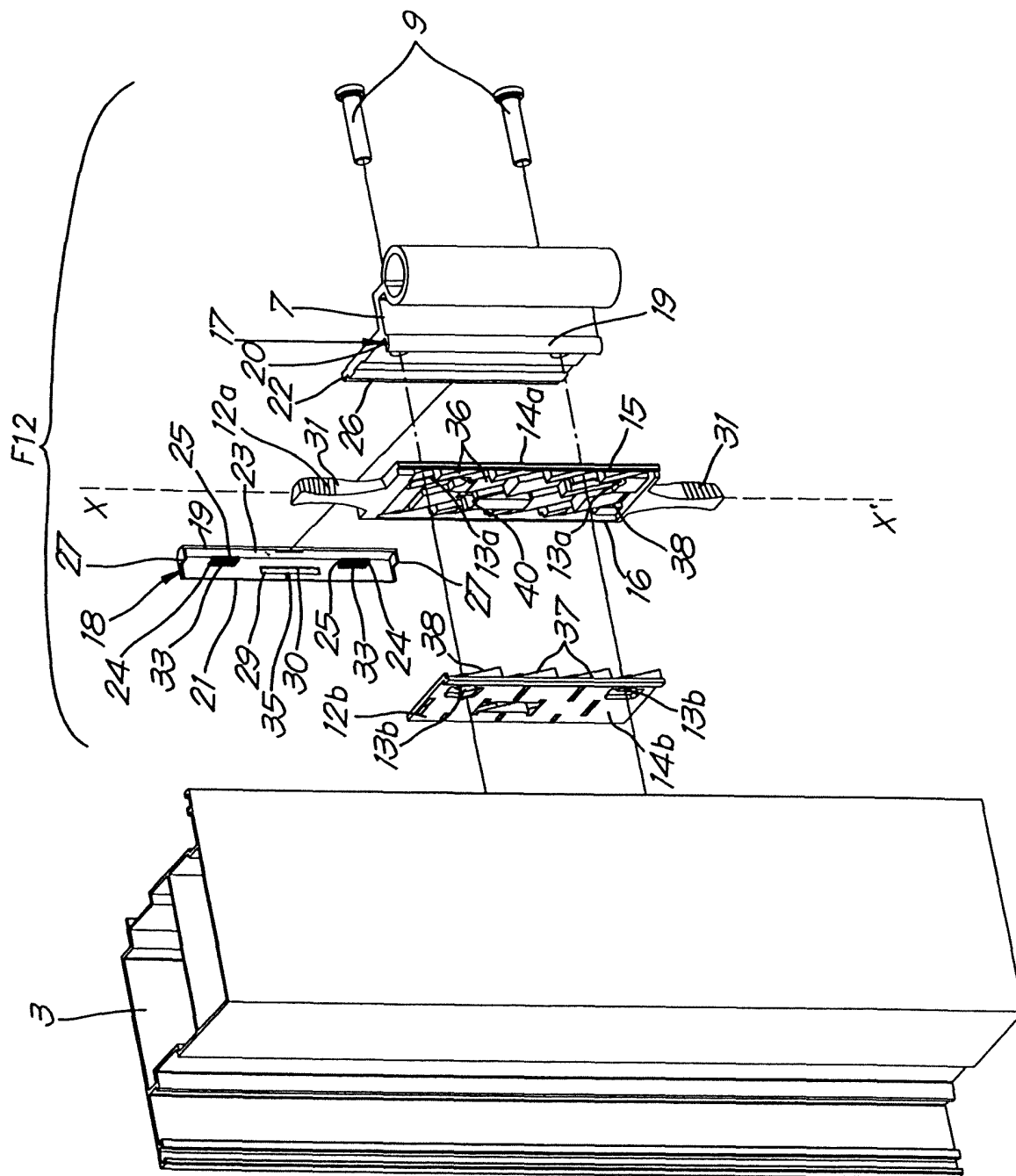


Fig. 3

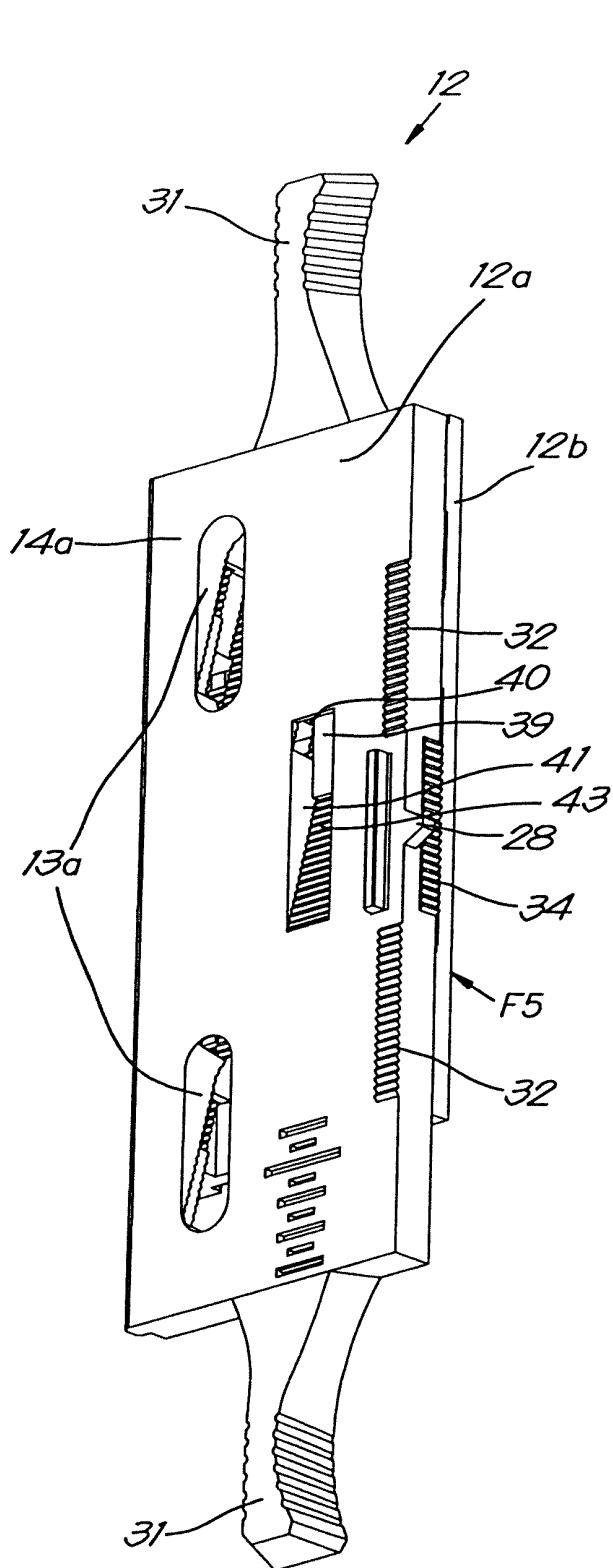


Fig. 4

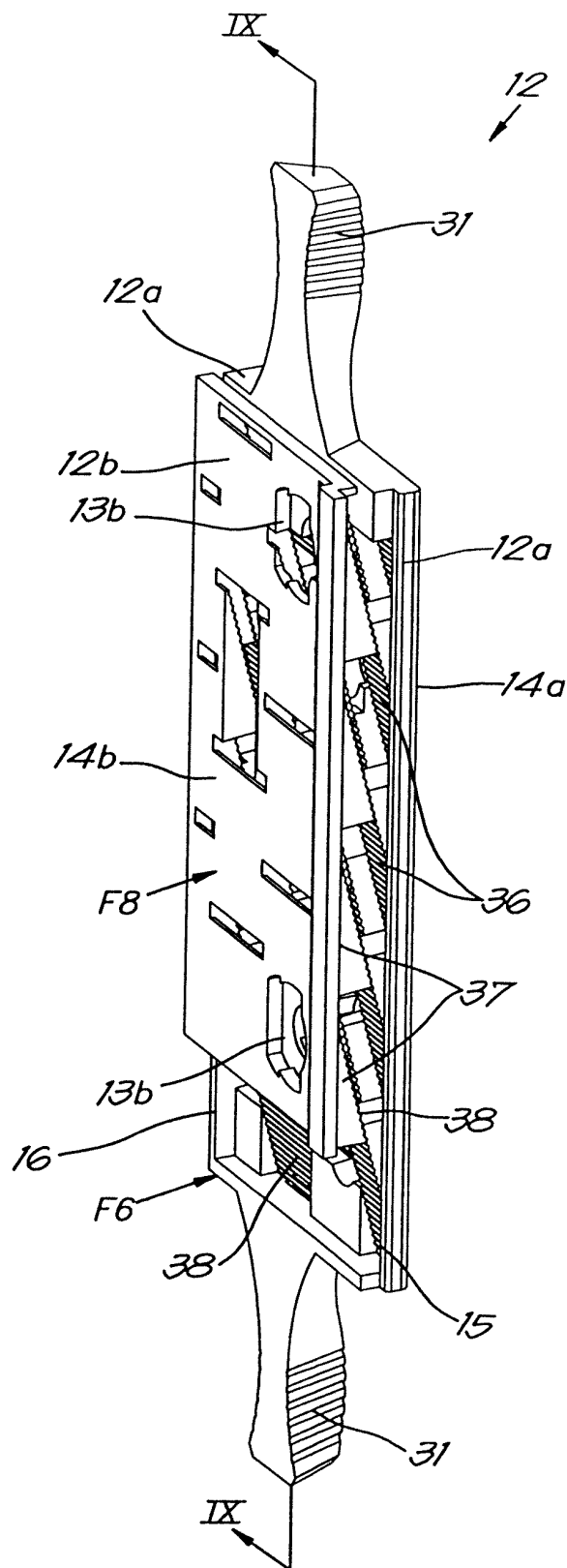


Fig. 5

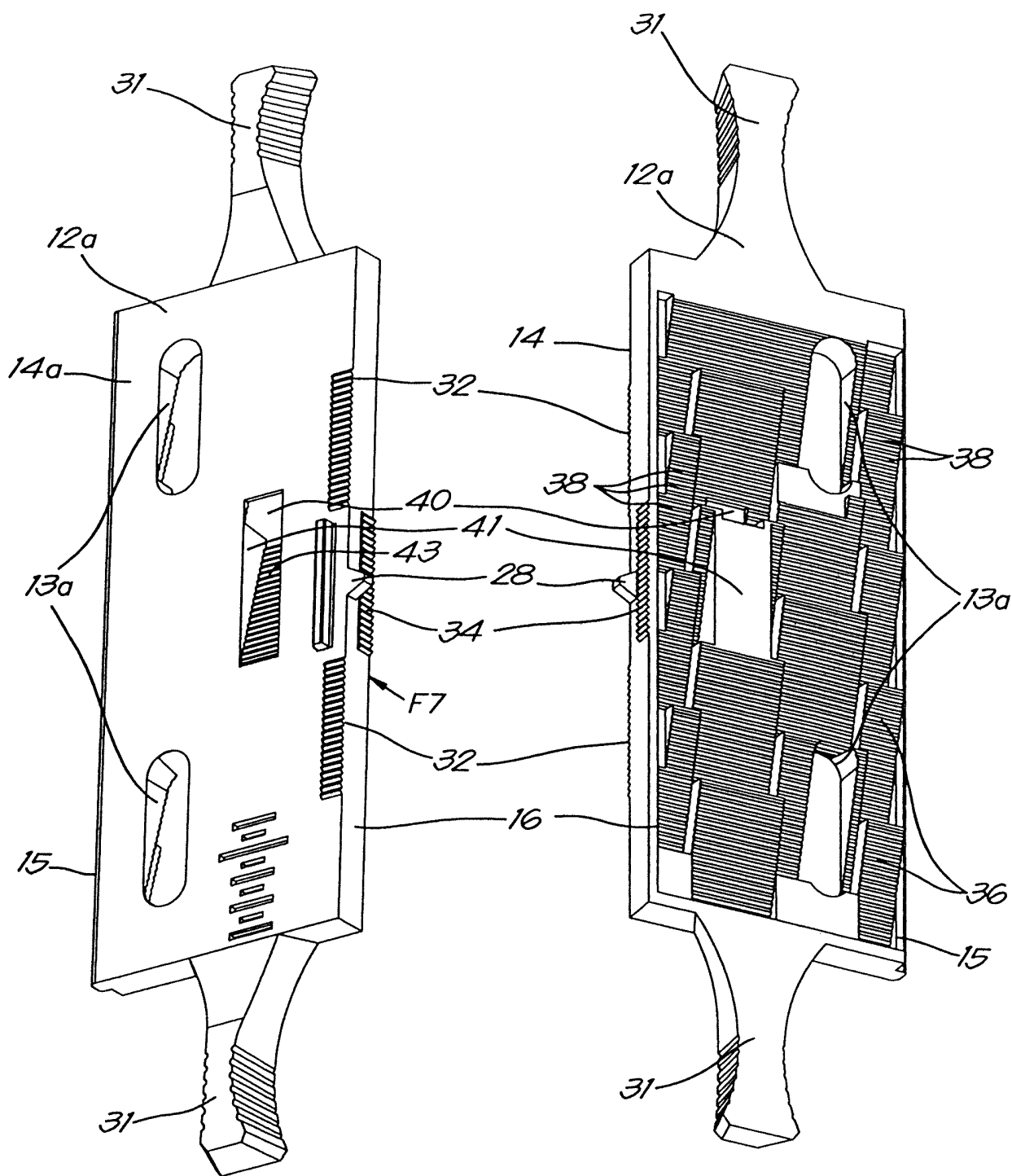


Fig. 6

Fig. 7

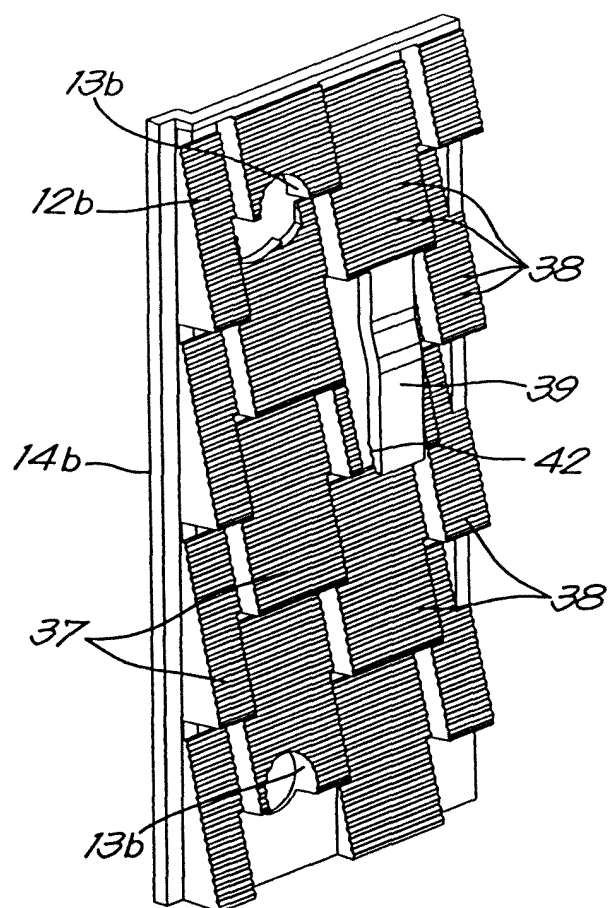


Fig. 8

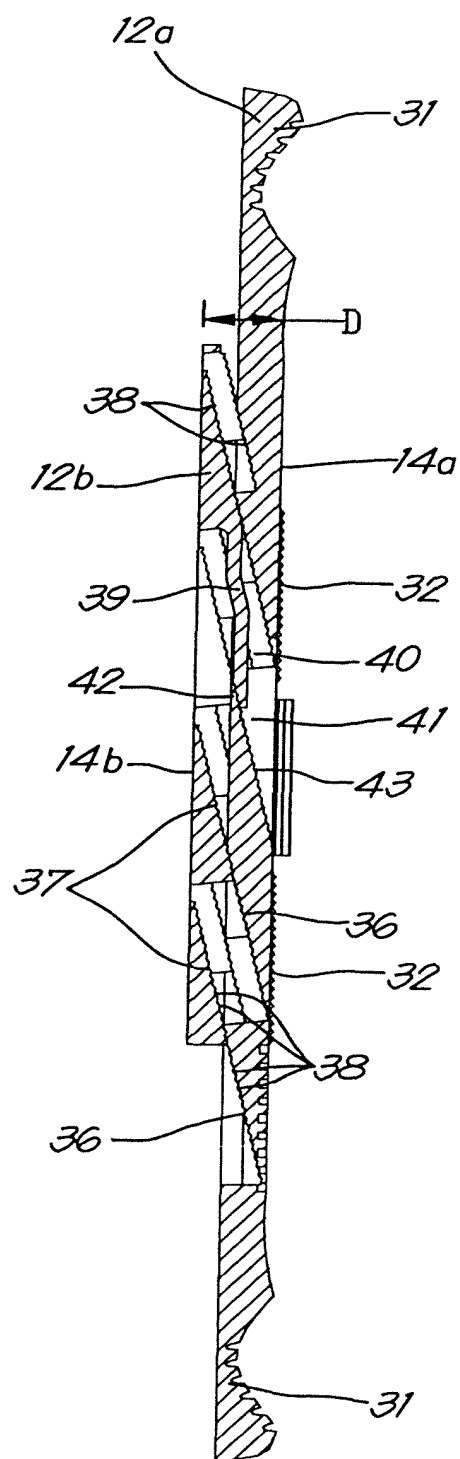


Fig. 9

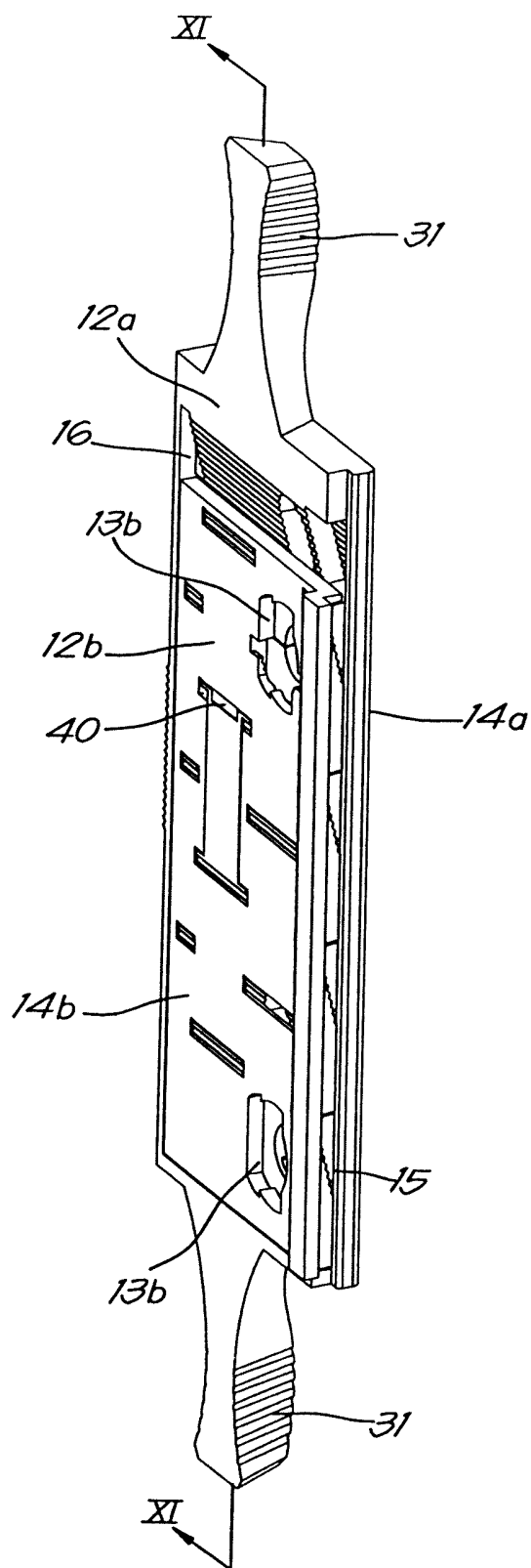


Fig. 10

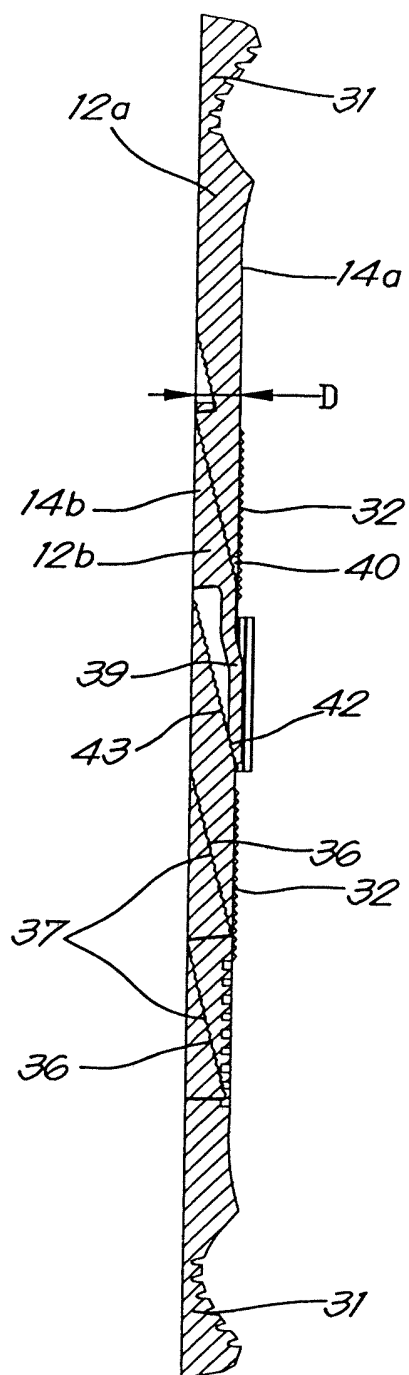
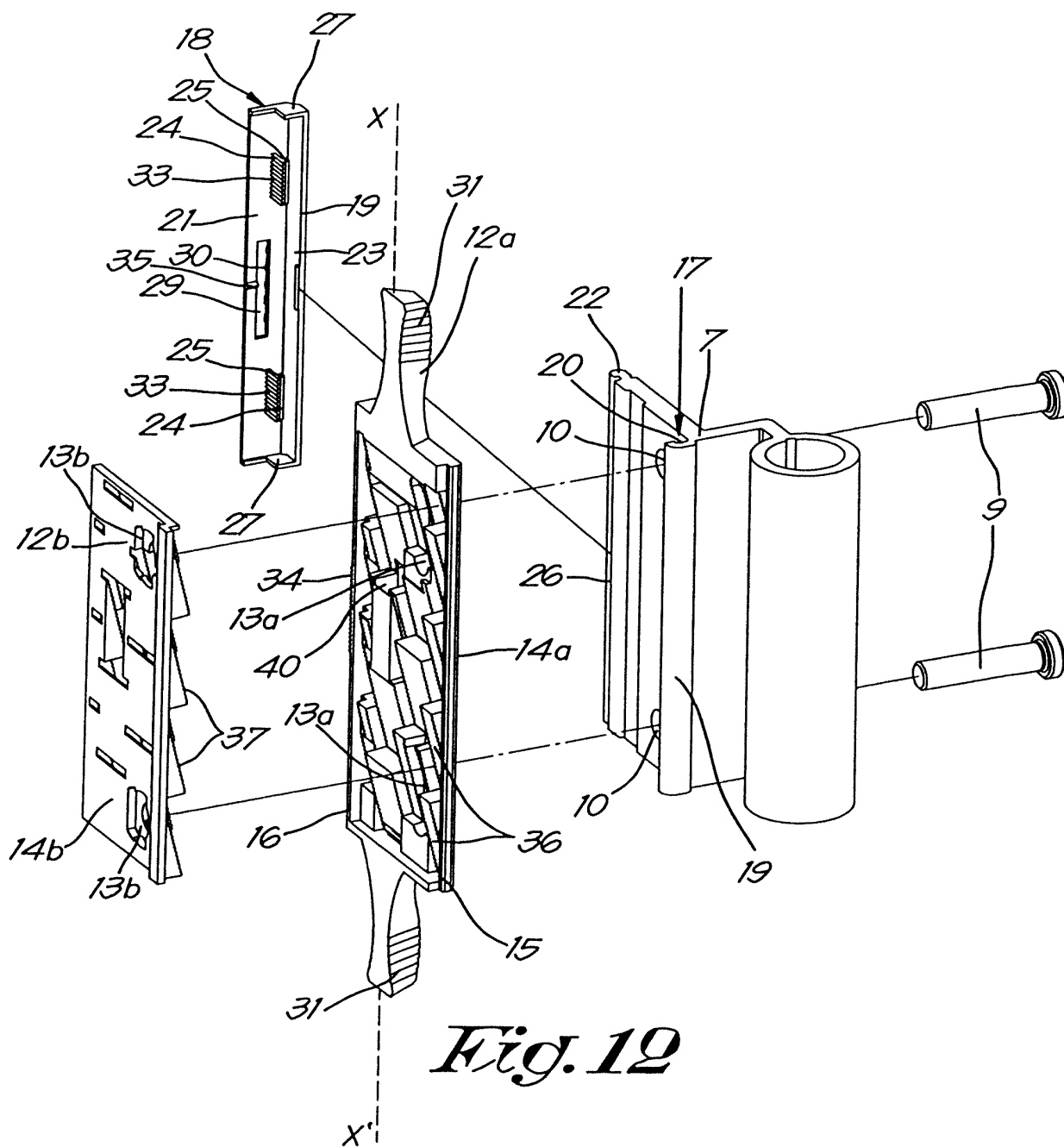


Fig. 11



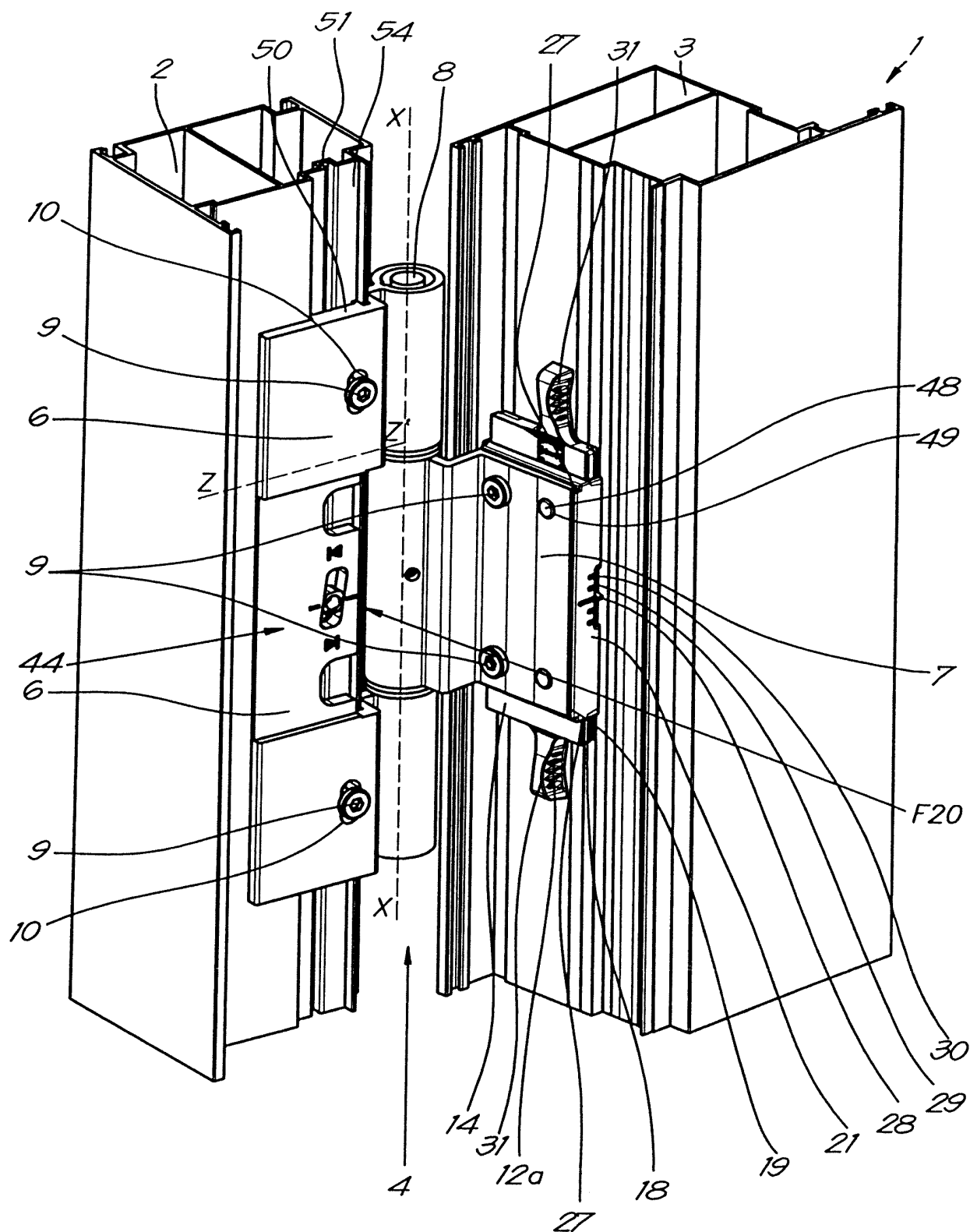


Fig. 13

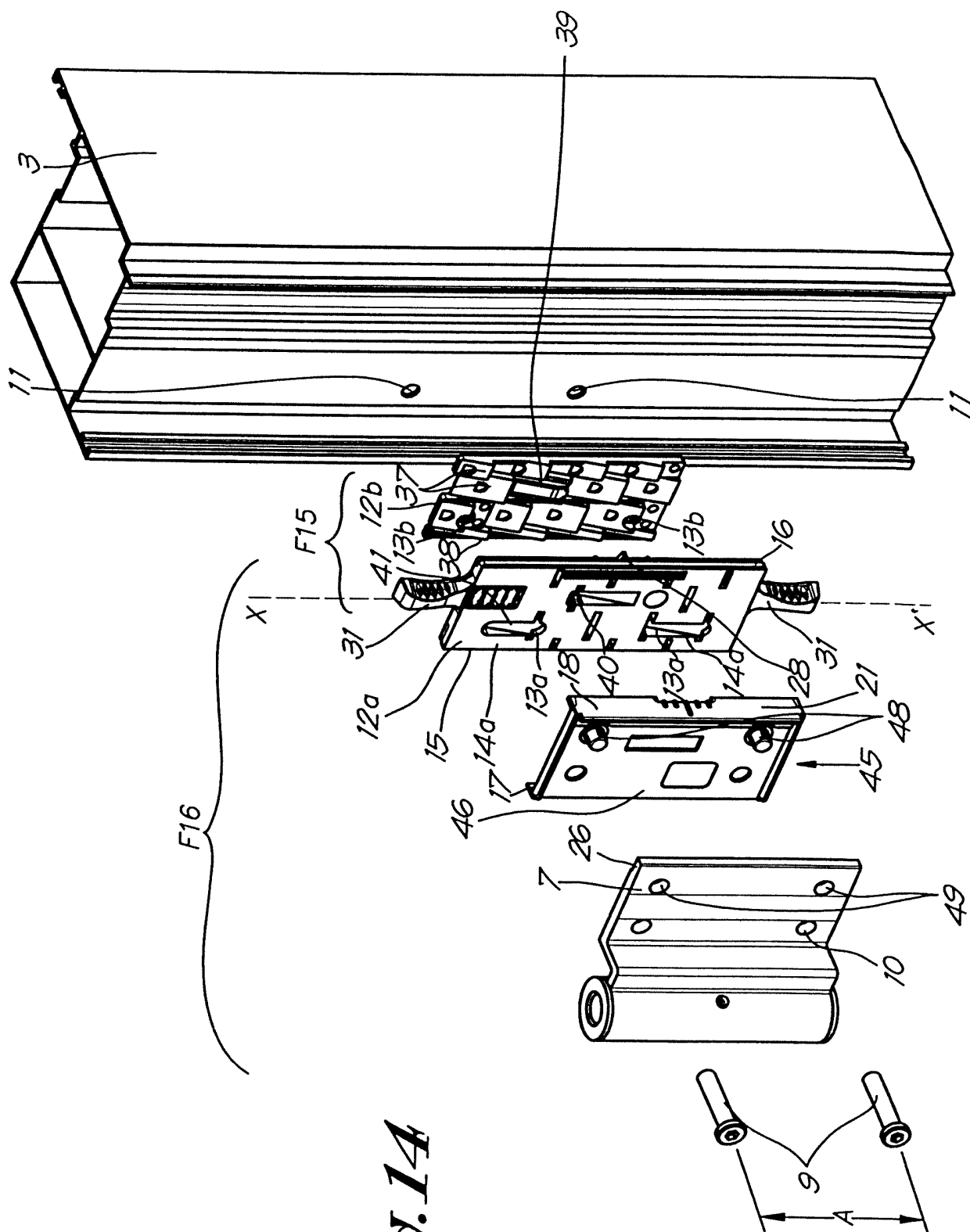


Fig. 14

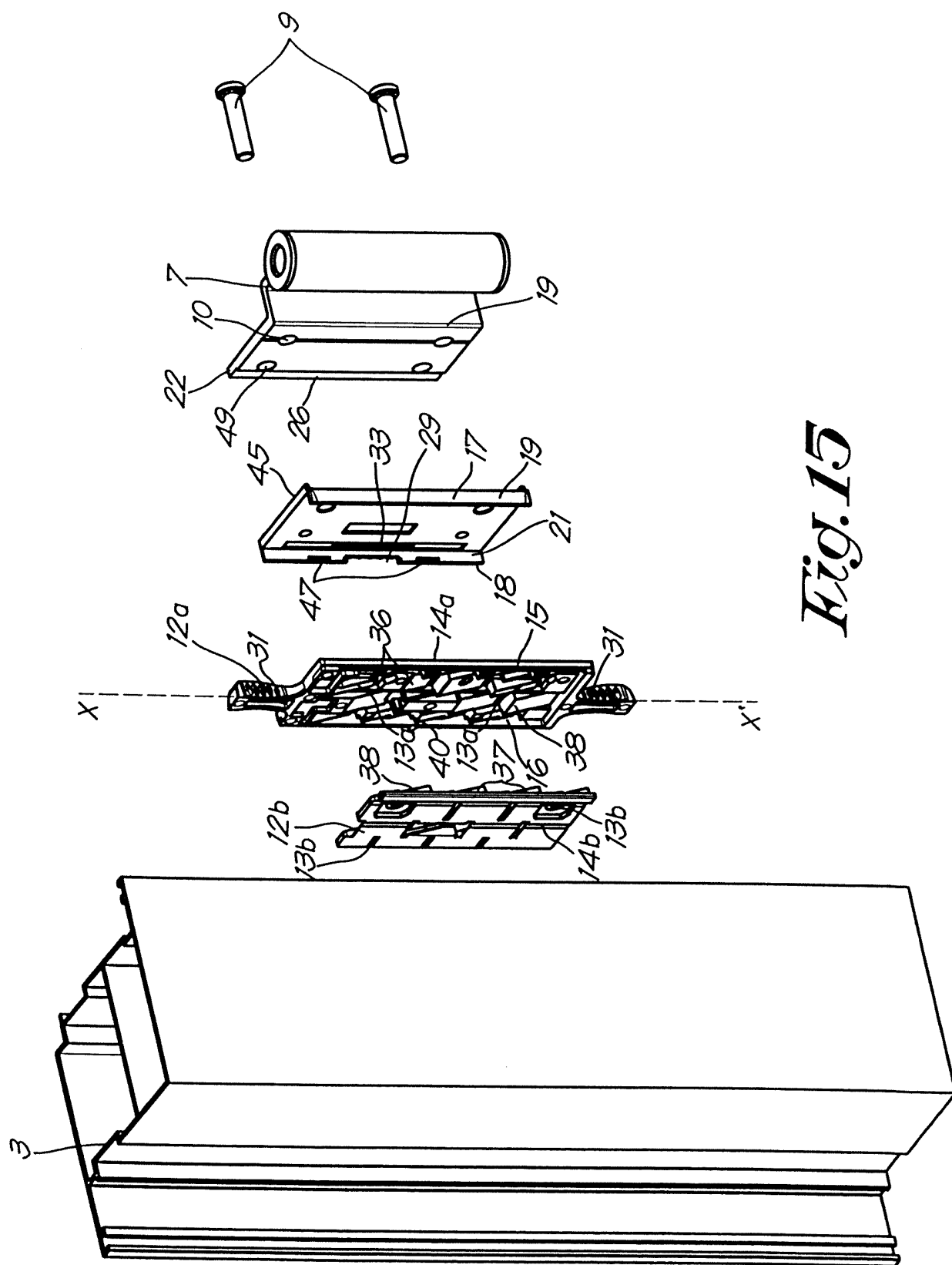


Fig. 15

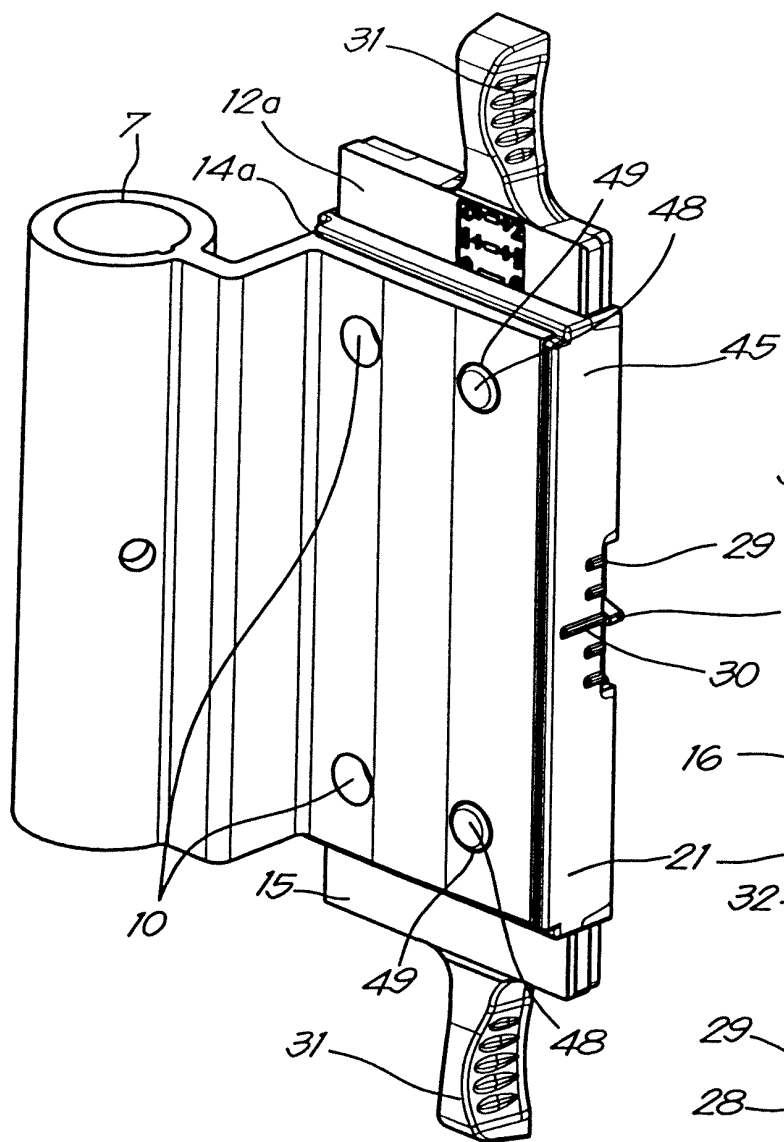


Fig. 16

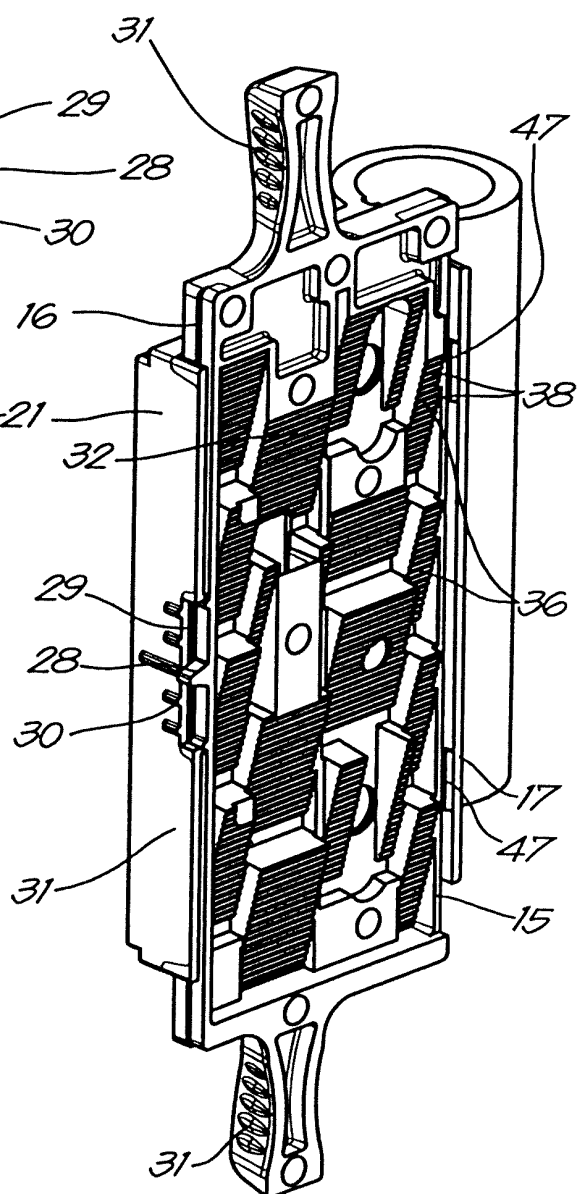


Fig. 17

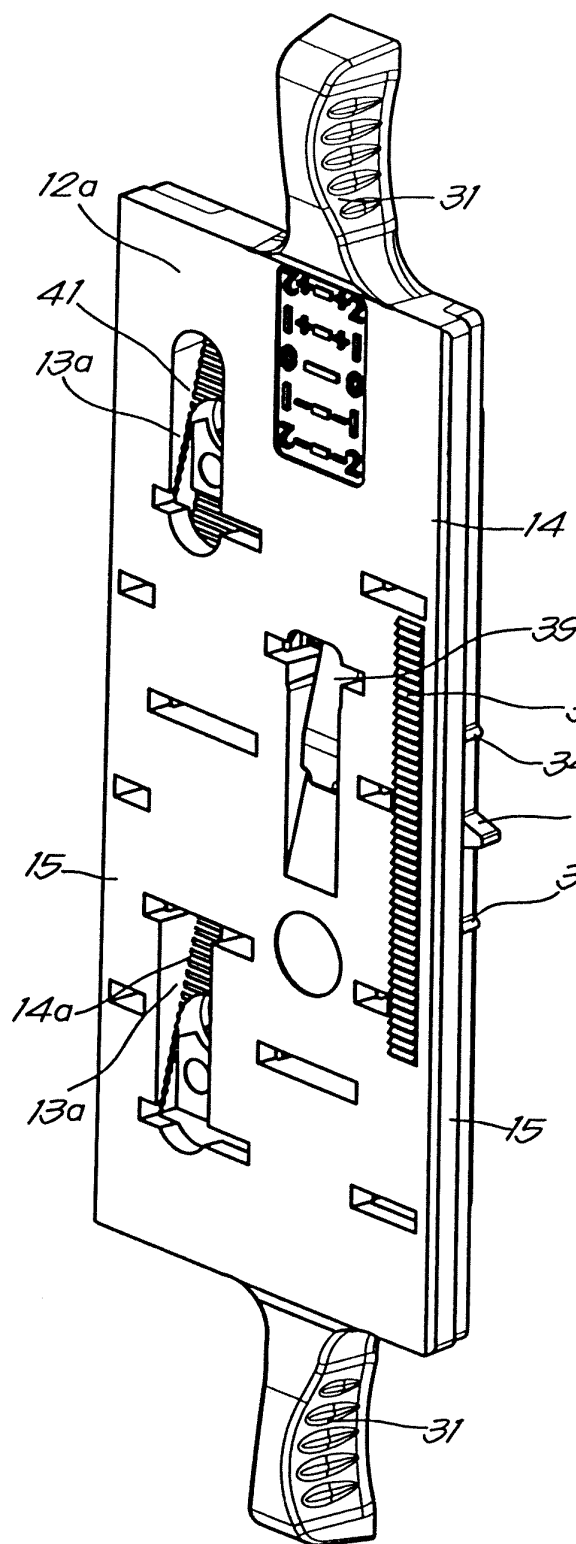


Fig. 18

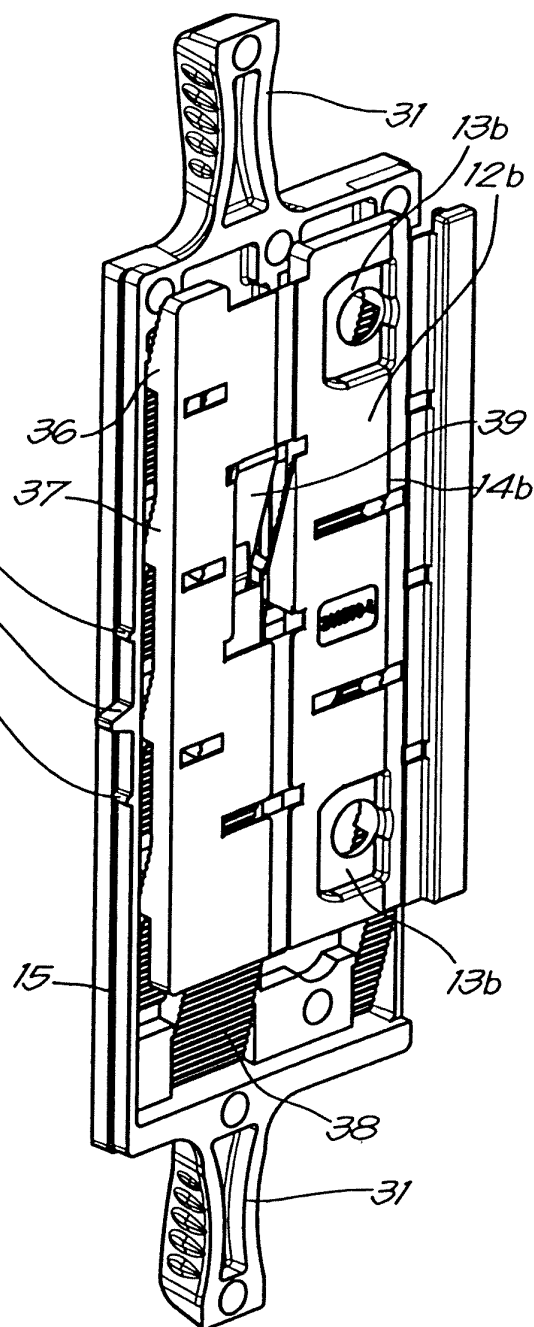


Fig. 19

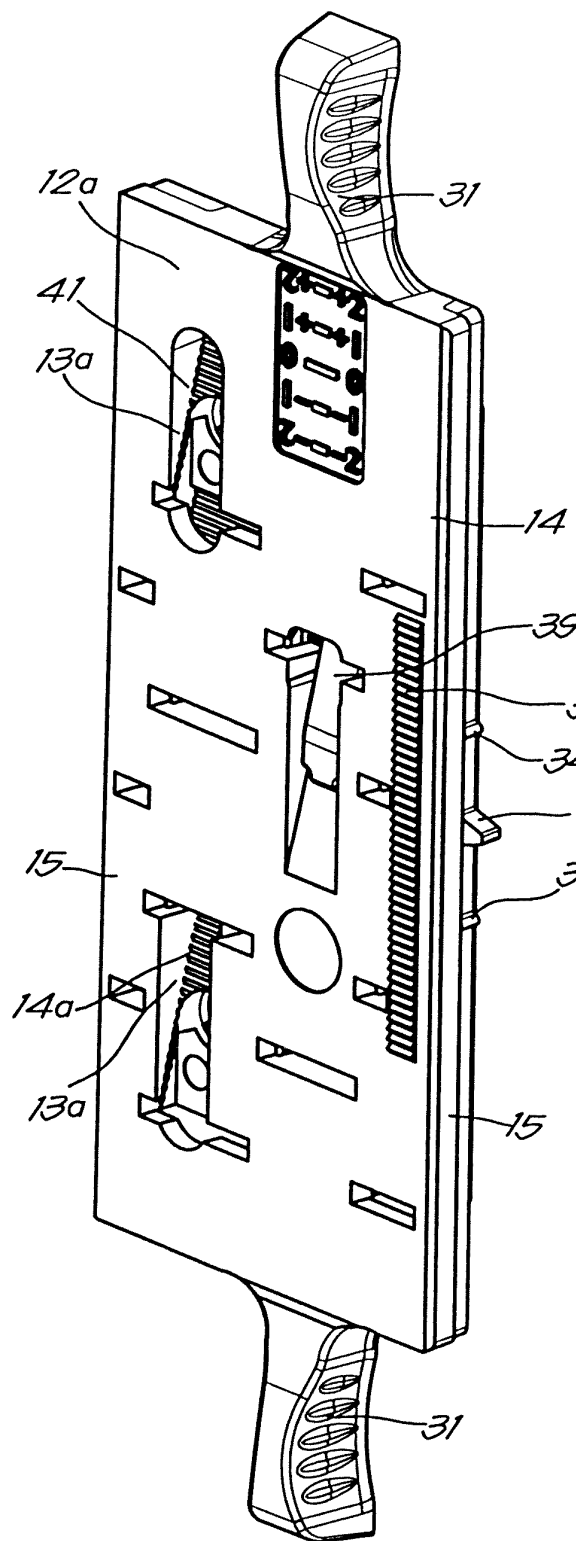


Fig. 18

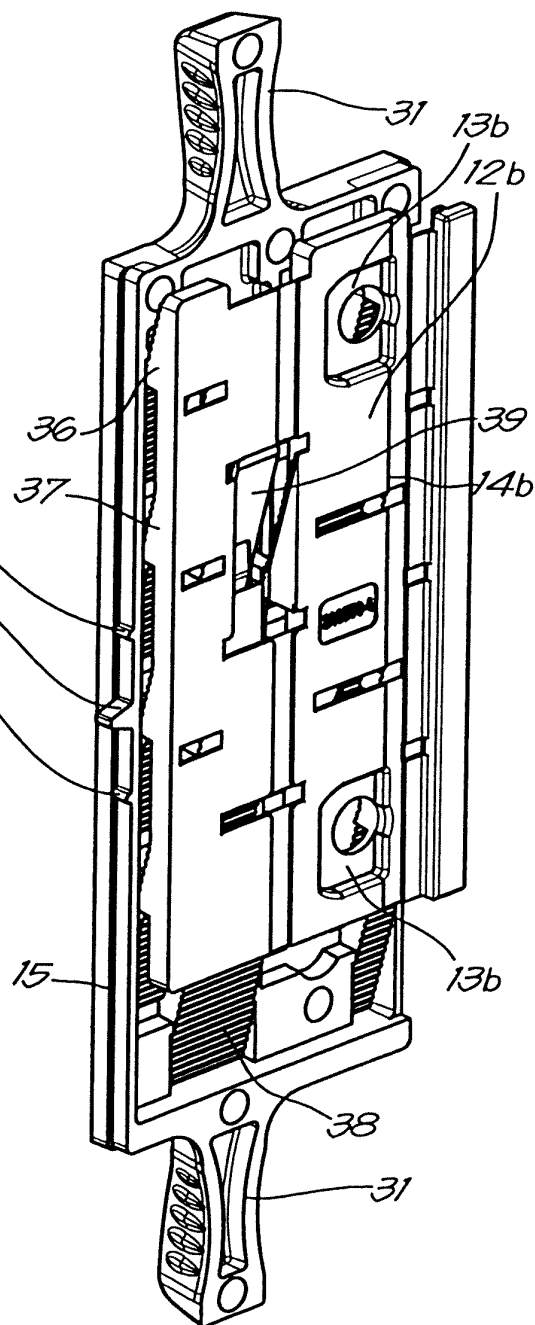


Fig. 19

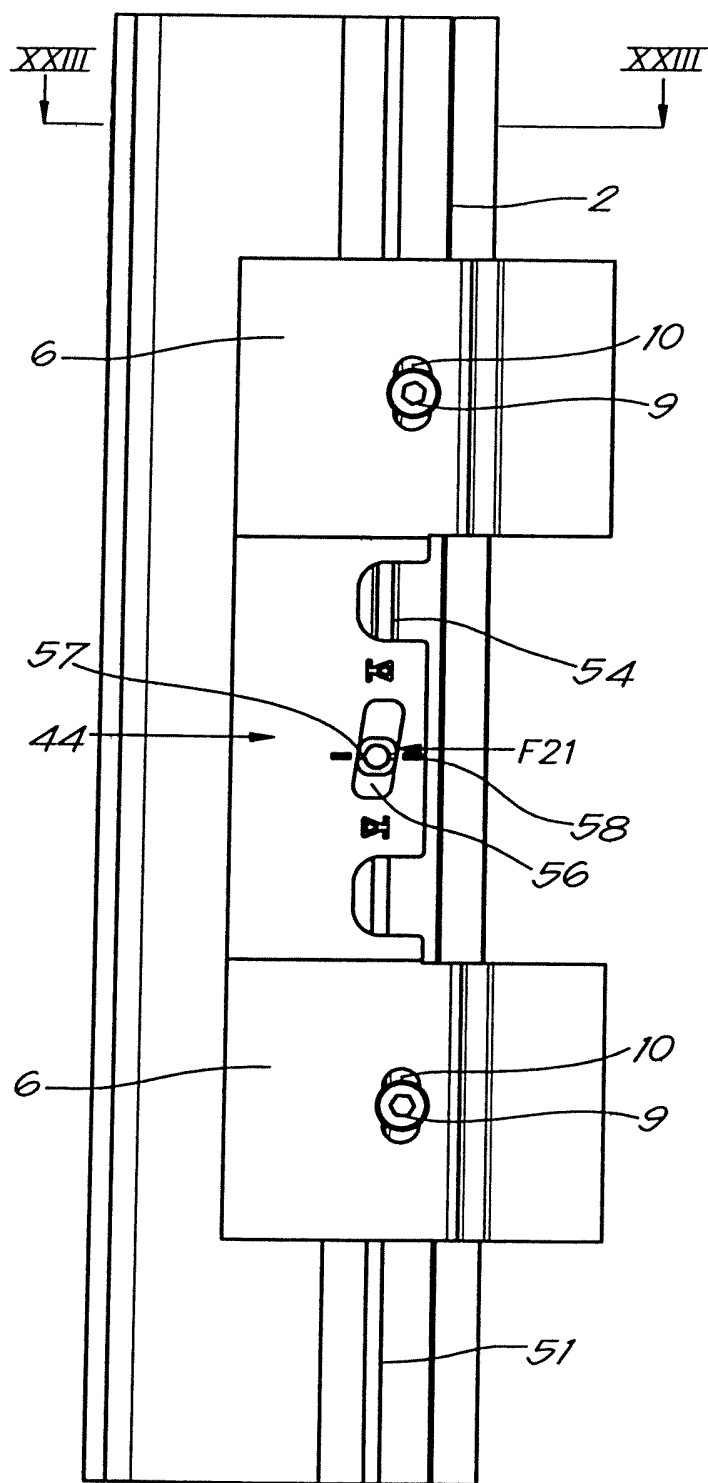


Fig. 20

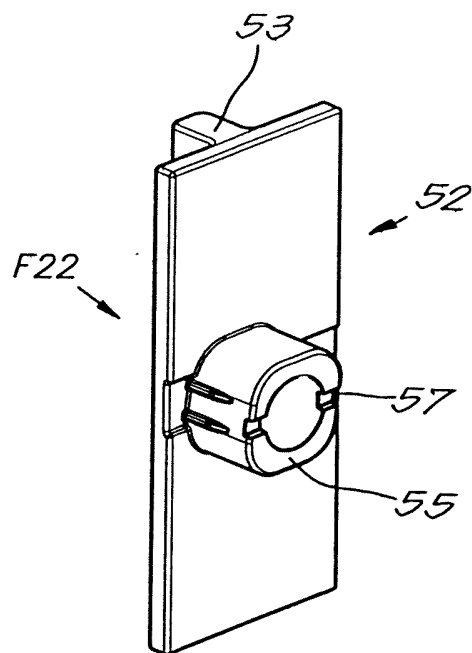


Fig. 21

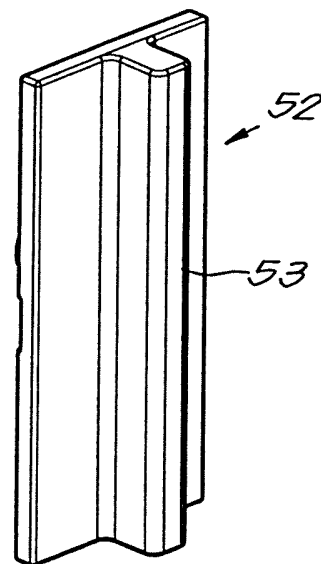


Fig. 22

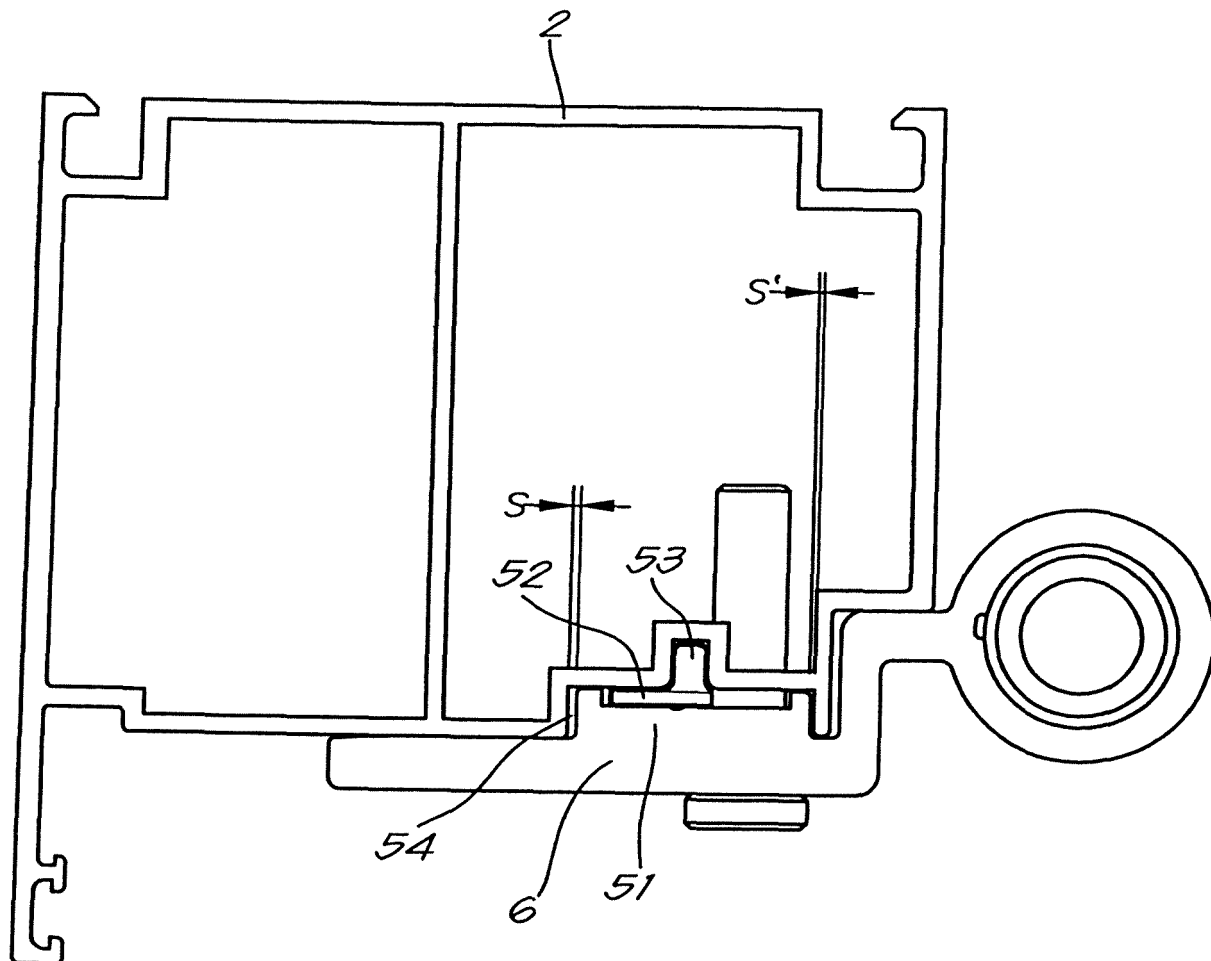


Fig. 23

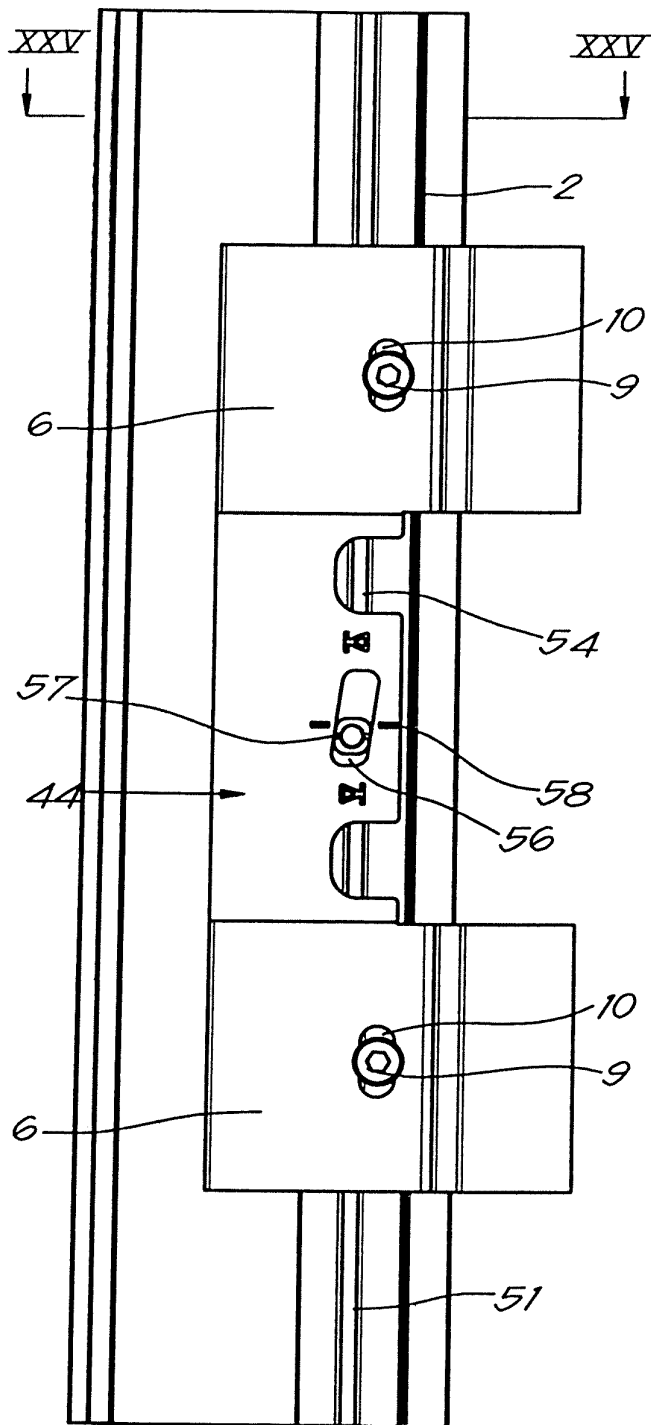


Fig. 24

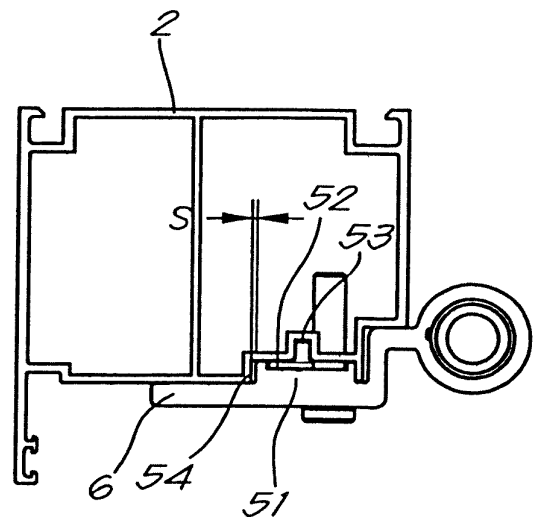


Fig. 25

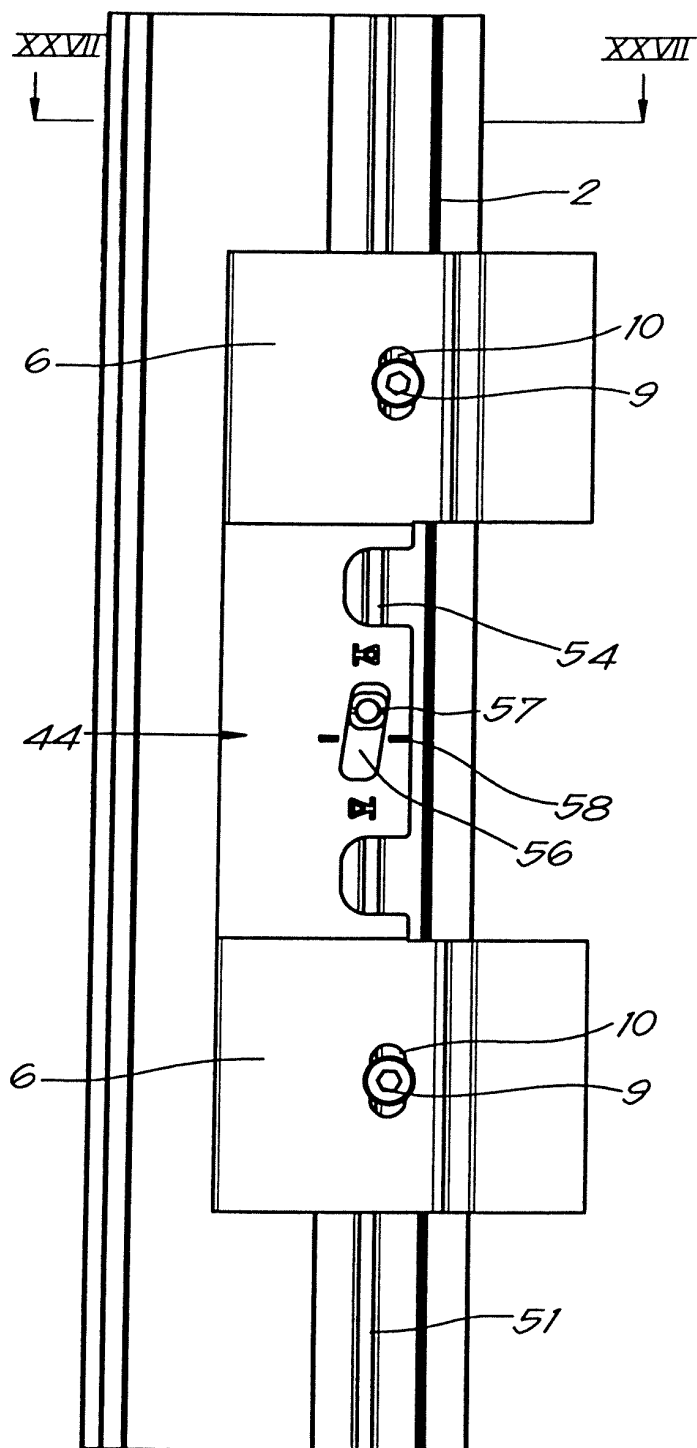


Fig. 26

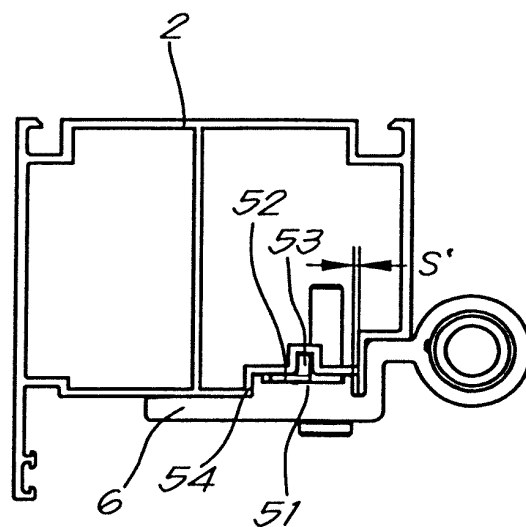


Fig. 27

REFERENCES CITED IN THE DESCRIPTION

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