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(54) **A DEVICE FOR FLASHING A PART OF A STANDING SEAM, A KIT OF PARTS FOR FLASHING A ROOF ELEMENT, AND A METHOD OF FLASHING A ROOF ELEMENT**

(57) A device for flashing a part of a standing seam in a roof comprising flat roofing panels interconnected through standing seams during flashing a roof element, comprises:

a lower part (30) comprising a flat piece (31) with an elongated recess (32) extending in a longitudinal direction (33) from a side edge (34), a raised wall (35) extending along an edge (36) of said recess (32), said raised wall (35) extending to an upper edge (37) of the raised wall,

said raised wall (35) providing a waterproof connection with the flat piece (31); and
an upper part (50) movable relative to the lower part (30), the upper part comprising a cover portion (51) for covering at least a part of the recess (32) and a space between parts of the raised wall (35) on either side of the recess (32), when the upper part (50) is applied to the lower part (30).

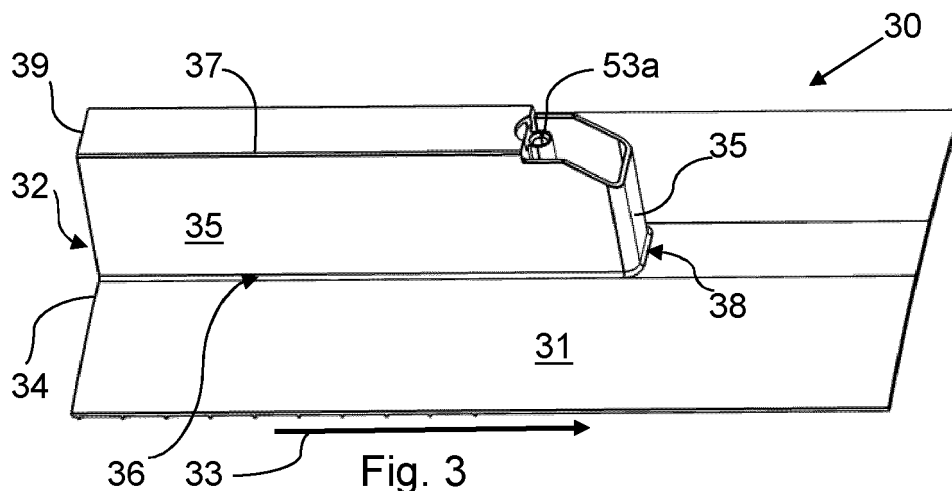


Fig. 3

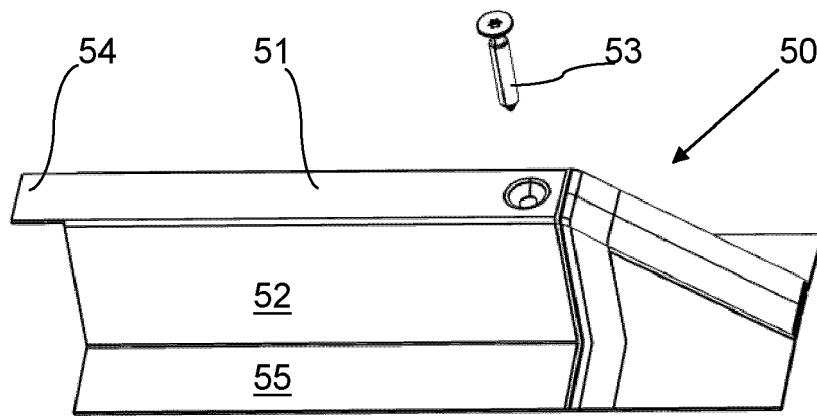


Fig. 4

Description

[0001] The present invention relates to a device for flashing a part of a standing seam in a roof comprising flat roofing panels interconnected through standing seams.

[0002] The present invention further relates to a kit of parts for flashing a roof penetrating element or roof element, such as a roof window, for mounting in a slanted roof with a roof covering comprising flat roofing panels interconnected by standing seams, said flashing comprising flashing members including a bottom flashing member for flashing along a lower side of the roof penetrating element or roof element.

[0003] Further the invention relates to a method of flashing a roof element, such as a roof window, in a sloping roof with a roof covering comprising flat roofing panels, possibly of sheet metal, with standing seams.

[0004] EP 3 599 321 A1 discloses a kit of parts for flashing a roof element, such as a roof window, in a sloping roof with a roof covering comprising flat roofing panels, possibly of sheet metal, with standing seams. The kit of parts comprises a bottom flashing member having at least a section with a generally L-shaped cross-section with a first leg configured to be arranged against a side of the roof element and a second leg configured to be at least in part positioned above the flat roofing panels to seal between the roof element and the flat roofing panels. Fig. 1 of the accompanying drawings shows an installed roof window with a flashing according to EP 3 599 321 A1. It is noted that the second leg of the bottom flashing member covers the standing seams right below the roof window and accordingly the second leg of the bottom flashing member is raised from the surface of the flat roofing panels proper. To keep water from penetrating under the second leg of the bottom flashing member in heavy winds, according to EP 3 599 321 A1 an elongated filling member is provided between adjacent standing seams to fill the space between the second leg of the bottom flashing member and the surface of the flat roofing panels.

[0005] It is an object of the present invention to provide a device, and a flashing comprising such device, that provides for mounting the bottom flashing member in abutment against or in close proximity to the surface of the roof covering without the bottom flashing member being raised from the surface of the roof covering by standing seams interconnecting flat roofing panels.

[0006] Further it is an object of the invention to provide a method of flashing a roof penetrating element or roof element using the flashing of the invention.

[0007] This is obtained by a device as mentioned by way of introduction, said device comprising a lower part comprising a flat piece of material, an elongated recess extending in a longitudinal direction of the elongated recess from a side edge of the flat piece, a raised wall extending along an edge of said recess, said raised wall extending from the edge of the recess to an upper edge

of the raised wall, said raised wall providing a waterproof connection with the flat piece of material along the recess on either side thereof from an end of the recess distal from said side edge and at least a distance towards the side edge; and an upper part movable relative to the lower part, the upper part comprising a cover portion for covering at least a part of the recess and a space between parts of the raised wall on either side of the recess, when the upper part is applied to the lower part. At least parts of the raised wall and flat piece adjacent the connection should be solid to provide for sealing against penetration of water through a flashing using the device as will be explained below.

[0008] Whereas a two-part device as mentioned above, according to the knowledge of the applicant, is not known in the prior art, elements resembling the upper part mentioned above are used according to e.g. US 5 027 576 A; US 5 605 018 A; and US 4 420 913 A.

[0009] The device of the invention provides for a method of flashing a roof element wherein, according to the present invention, the method comprises the steps of:

- a) mounting a full roofing panel at a first side of the roof element;
- b) mounting at least two lower roofing panels below the roof element, a seam between the at least two lower roofing panels extending down the roof from a position adjacent a lower side of the roof element;
- c) for each standing seam between lower roofing panels, removing the standing seam between said two lower roofing panels from an upper edge thereof proximal the roof element and a predetermined distance away from the roof element leaving a cut upper edge of the standing seam and a gap between adjacent cut edges of the lower roofing panels;
- d) mounting the lower part of the device to cover said upper edge and the adjacent part of the standing seam;
- e) making for each cut standing seam a cut-out at a lower edge of a bottom flashing member to accommodate the raised wall of the lower part of the device;
- f) mounting the bottom flashing member; and
- g) for each cut standing edge, mounting the upper part of the device

whereby the cover portion is placed over the elongated recess of the lower part.

[0010] It is noted that by the term "full roofing panes" as used herein should be understood a roofing panel that is not cut due to regard to the roof element in question.

[0011] Further it should be noted that as used herein terms like "up", "down", "above", "below", "upper", "lower", etc. refer to an intended mounted position of the elements in question.

[0012] In an embodiment the lower part and the upper part are separate parts. This facilitates production and provides a neath result of installation.

[0013] In some embodiments the lower part and the

upper part are made of different materials. E.g. the lower part may be made of moulded plastics material and e.g. the upper part may be made of folded sheet metal.

[0014] In an embodiment the cover portion comprises a second wall adapted to extend along at least a part of the raised wall on an external side thereof relative to the recess. This provides for sealing the roof around the flashing and a cut-out therein.

[0015] In an embodiment the upper part at a lower end of the second wall comprises a flange portion extending laterally outwards relative to the cover portion and the recess. This provided for securing the bottom flashing member to the flat roofing panels.

[0016] In an embodiment means are provided for releasably connecting the lower part and the upper part to each other with the cover portion in place covering at least a part of the recess and a space between parts of the raised wall on either side of the recess. This on one hand provides for securing the upper part and on the other hand provides for detaching the upper part when convenient during installation of a flashing.

[0017] Different means for releasably connecting the two parts are envisaged and may comprise at least one of:

a screw penetrating the upper part and being screwed into the lower part;

a flap on one of the first and the upper part for folding around an edge of the other of the first and the upper part; and

a protrusion on one of the first and the upper part clicking into a recess on the other of the first and the upper part.

[0018] In an embodiment the lower part is provided with an elongated element rotatably mounted below the flat piece opposite the raised wall, the elongated element preferably mounted by a fastening element penetrating the lower part through a hole in the lower part and fixed to the elongated element, said fastening element being provided for engagement with a tool to rotate the elongated element in a plane parallel to the flat piece, and preferably said elongated element being rotatable through approx. 90° only between a first position in which the elongated element is extending parallel to the recess and a second position cross-wise thereto. The elongated element in a convenient way provides for securing the lower part to the flat roofing elements.

[0019] In an embodiment the elongated element is a flat elongated element extending at either side from the fastening element, the flat elongated element extending in a plane parallel to a plane of the flat piece, the flat elongated element having at either side of the fastening element a retaining surface facing the flat piece, preferably said retaining surface being slightly screw-wise tilted around an axis extending in a longitudinal direction of the flat elongated element. This further facilitates installation of the lower part and securing it to flat roofing panels.

[0020] In an embodiment the lower part at the end of the recess distal from the side edge comprises a hole for penetration of a fastening element, and the lower part comprises, on a side of the lower part opposite the raised wall, a raised portion at the hole. Instead of using a rotatable flat elongated element for securing the lower part to the flat roofing panels, it is possible to insert e.g. a screw to penetrate through the lower part and into a batten in the roof construction to secure the lower part directly to said batten. In such case the raised portion at the end of the recess distal from the side edge may abut on the batten and around the raised portion space may be left for the adjacent roofing panels between the batten and a remaining part of the flat piece beside the raised portion. Preferably it is thereby avoided that peripheral parts of the flat piece raises when the screw, and thus the lower part, is tightened to the batten.

[0021] In an embodiment the flat piece of the lower part is bend or curved to be concave on the side of the lower part opposite the raised wall. In an embodiment, an end portion of the flat piece opposite said side edge relative to the hole extends at an angle of 5°-25°, especially 10°-20°, and further especially 13°-17° downward, as seen in a longitudinal, vertical section, relative to a plane of a portion of the flat piece comprising the elongated recess. Hereby it is preferably further secured that the peripheral parts of the flat piece do not raise in the mounted condition thus avoiding that said peripheral parts lift the second leg of the bottom flashing member, when mounted.

[0022] Further the object is obtained by a flashing for a roof penetrating element or roof element, such as a roof window, for mounting in a slanted roof with a roof covering comprising flat roofing panels interconnected by standing seams, said flashing comprising flashing members including a bottom flashing member for flashing along a lower side of the roof penetrating element and at least one device according to the invention.

[0023] Finally the object is obtained by a method of flashing a roof element, such as a roof window, in a sloping roof with a roof covering comprising flat roofing panels, possibly of sheet metal, with standing seams, as indicated above.

[0024] In the following the invention will be explained in further detail by means of an example of an embodiment having reference to the drawings, in which

Fig. 1 shows a roof window installed in a sloping roof using a prior art flashing;

Fig. 2 shows a roof window during installation in a sloping roof using a flashing according to the present invention;

Fig. 3 is a perspective view from above of a lower part of a device according to the invention;

Fig. 4 is a perspective view from above of an upper part of the device according to the invention;

Fig. 5 is a perspective view from below of the lower part;

Fig. 6 is a bottom view of the lower part;

Fig. 7 shows a longitudinal, vertical section of the upper part;

Fig. 8 shows a longitudinal, vertical section of the lower part;

Fig. 9 shows a section as indicated by line IX-IX in Fig. 8;

Figs. 10-12 are respectively top view, perspective view, and end view of a flat elongated element;

Fig. 13 is a side view of a second embodiment of the lower part of the device according to the invention;

Fig. 14 shows a longitudinal section of the lower part shown in Fig. 13;

Fig. 15 shown a section along the line XV-XV in Fig. 13; and

Fig. 16 is a longitudinal, vertical section showing a roof window during installation in a sloping roof using a flashing comprising the second embodiment of the lower part to according to the present invention.

[0025] The present invention relates to the flashing of a roof element, which e.g. could be a roof window; a solar panel; etc. In the following as an example the flashing of a roof window is illustrated.

[0026] Thus, Fig. 1 shows a roof window 10 installed and flashed in a sloping roof with a roof covering comprising flat roofing panels 12, 12a interconnected by rigid, standing seams 14, 14a.

[0027] For flashing the window, flashing members are used which comprise a bottom flashing member 16' having at least a section with a generally L-shaped cross-section with a first leg 16a' configured to be arranged against a side of the roof window and a second leg 16b' configured to be at least in part positioned above the roof covering to seal between the roof window and the roof covering.

[0028] Fig. 1 shows, as mentioned above, a prior art flashing of the window 10 whereby especially the bottom flashing member 16' is arranged differently compared to the present invention. Thus, the second leg 16b' is arranged on top of standing seams 14a between flat roofing panels 12a below the window 10 as explained in EP 3 599 321 A1 (incorporated herein by reference).

[0029] Referring to Fig. 2, a roof penetrating element, in the present example the roof window 10 is mounting in a slanted roof with a roof covering comprising the flat roofing panels 12, 12a interconnected by the standing seams 14, 14a. For flashing the window 10, flashing members are used including a bottom flashing member 16 for flashing along a lower side 10a of the window 10. The bottom flashing member 16 has a section with a generally L-shaped cross-section with a first leg 16a configured to be arranged against the lower side 10a of the window and a second leg 16b configured to be at least in part positioned above the flat roofing panels 12a to seal between the window 10 and the roof covering.

[0030] Due to the device of the present invention, it is possible to install the bottom flashing member 16 (see Fig. 2) with its second leg 16b abutting or in close prox-

imity to the surface of flat roofing panels 12a between standing seams 14a interconnecting the same.

[0031] Thus, to provide for the second leg 16b of the bottom flashing member 16 abutting or being in close proximity to the surface of the flat roofing panels 12a between the standing seams 14a, a device has been provided in accordance with the present invention said device comprising a lower part 30 and an upper part 50.

[0032] The device will be described in detail below. Initially however, its function will be described, still referring to Fig. 2, by explaining the method of flashing the window 10.

[0033] Thus, the device of the invention provides for a method of flashing a roof element, the method comprising the steps of:

- a) mounting a full roofing panel 12 (see Fig. 1) at a first side of the window 10;
- b) mounting lower roofing panels 12a below the window 10, seams 14a between the lower roofing panels 12a extending down the roof from a position adjacent a lower side 10a of the window 10;
- c) for each standing seam 14a between lower roofing panels 12a, removing part of the standing seam 14a between the lower roofing panels 12a from an upper edge 12b thereof proximal the window and a predetermined distance away from the window leaving a cut upper edge 18 of the respective standing seam 14a and a gap 19 between adjacent cut edges of the lower roofing panels 12a;
- d) mounting the lower part 30 of the device to cover said upper edge 18 and the adjacent part of the standing seam 14a;
- e) making for each cut standing seam, a cut-out 20 at a lower edge 22 of the bottom flashing member 16 to accommodate a raised wall 35 of the lower part 30 of the device;
- f) mounting the bottom flashing member 16; and
- g) for each cut standing edge 14a, mounting the upper part 50 of the device whereby a cover portion 51 of the upper part 50 is placed over an elongated recess 32 of the lower part 30.

[0034] Hereby the flashing of the lower edge 22 of the window 10 is finished, the upper cut edge(s) 18 being flashed by means of the device including to the two parts 30 and 50.

[0035] Referring now to Figs. 3-12 the details of the present embodiment of the device are as follows.

[0036] The device comprises, as mentioned, the lower part 30 which per se comprises a flat piece 31 of material, the elongated recess 32 which extends in a longitudinal direction 33 of the elongated recess from a side edge 34 of the flat piece 31, and the raised wall 35 extending along an edge 36 of the recess 32, said raised wall 35 extending from the edge of the recess to an upper edge 37 of the raised wall. The raised wall 35 provides a waterproof connection with the flat piece 31 of material along the recess

on either side thereof from an end 38 of the recess 32 distal from said side edge 34 and at least a distance towards the side edge 34. In the present embodiment the raised wall 35 and flat piece 31 as a whole is solid.

[0037] The device further comprises the upper part 50 which is movable relative to the lower part 30. In the present embodiment the lower part 30 and the upper part 50 are separate parts, as it is seen in the drawings.

[0038] The upper part 50 comprises the cover portion 51 for covering at least a part of the recess 32 and a space between parts of the raised wall 35 on either side of the recess 32, when the upper part 50 is applied to the lower part 30.

[0039] The lower part 30 and the upper part 50 may be made of the same material or may be made of different materials. E.g. the lower part 30 may be made of moulded plastics material and e.g. the upper part 50 may be made of folded sheet metal.

[0040] In the embodiment shown the cover portion 51 comprises a second wall 52 adapted to extend along at least a part of the raised wall 35 on an external side thereof relative to the recess 32.

[0041] In the present embodiment means are provided for releasably connecting the two parts 30, 50 and more specifically, in the present embodiment these means comprise a screw 53 for penetrating the upper part 50 to be screwed into a hole 53a provided in the lower part 30 for accepting the screw 53. Further a flap 54 is provided on the upper part 50 for folding around an edge 39 on the lower part.

[0042] Additionally, or alternatively, it is envisaged that a protrusion on one of the raised wall 35 and the second wall 52 will click or snap into a recess in the other of these two walls when the upper part 50 is placed in the right position on the lower part 30.

[0043] In the embodiment shown, the upper part 50 at a lower end of the second wall 52 comprises a flange portion 55 extending laterally outwards relative to the cover portion 51 and the recess 32.

[0044] Further, in the embodiment shown, the lower part 30 is provided with a flat elongated element 40 rotatably mounted below the flat piece 31 opposite the raised wall 35. The elongated element 40 is mounted by a fastening element in the form of a screw 41 penetrating the lower part 30 through a hole 41a in the lower part 30 and screwed into to be fixed to the elongated element 40. The screw 41 is provided for engagement with a tool, namely a screwdriver, to rotate the elongated element 40 in a plane parallel to the flat piece 31.

[0045] In the present embodiment the elongated element 40 is rotatable through approx. 90° only between a first position in which the elongated element 40 is extending parallel to the recess 32 and a second position cross-wise thereto. This limitation of the rotation of the elongated element 40 is obtained by the elongated element 40 having a shaft part 44 inserted in a hole of the lower part 30 wherein the shaft part 44, see Fig. 9 has a non-circular cross-section and the hole has a likewise non-circular

cross-section allowing the shaft part 44 to be rotated only approx. 90° in the hole between the above-mentioned first position and second position.

[0046] In the present embodiment the elongated element is a flat elongated element 40 extending at either side from the fastening element 41, the flat elongated element extending in a plane parallel to a plane of the flat piece 31. The flat elongated element has at either side of the fastening element a retaining surface 42 facing the flat piece 31. The retaining surface is slightly screw-wise tilted around an axis extending in a longitudinal direction 43 of the flat elongated element.

[0047] During flashing of a roof element or roof window 10 as mentioned above, when mounting the lower part 30 of the device the flat elongated element 40 is placed in the above-mentioned first position to be inserted into the gap 19 between the cut edges of adjacent lower roofing panels 12a. Subsequently the flat elongated element 40 is rotated by means of a tool such as a screwdriver to the second position whereby the retaining surfaces 42 reaches under the roofing panels 12a to secure the lower part 30 on the roofing panels 12a. This action is facilitated by the screw-wise tilt of the retaining surfaces.

[0048] In another embodiment shown in Figs. 13-15 the lower part 30' at the end 38 of the recess distal from the side edge 34 comprises a hole 41a' for penetration of a fastening element 41', and the lower part 30' comprises, on a side of the lower part opposite the raised wall 35, a raised portion 46 at the hole 41a'. Instead of using a rotatable flat elongated element for securing the lower part to the flat roofing panels, it is possible to insert e.g. a screw to penetrate through the lower part and into a batten in the roof construction to secure the lower part directly to said batten.

[0049] Further in the embodiment shown in Figs. 13-15 the flat piece 31' of the lower part 30' is bend or curved to be concave on the side of the lower part opposite the raised wall 35, especially as shown in Figs. 13-16 an end portion 31a of the flat piece 31' opposite said side edge 34 relative to the hole 41a' to extend at an angle α of 5°-25°, especially 10°-20°, and further especially 13°-17° downward in a longitudinal, vertical section relative to a plane p of a portion of the flat piece 31' comprising the elongated recess 32.

[0050] Fig. 16 illustrates flashing of a roof window using the embodiment of device shown in Figs. 13-15.

[0051] Thus Fig. 16 is a view similar to Fig. 2 thus illustrating installation of a roof window 10, the view, however, being sectioned along a vertical plane extending in a direction of slope of the slanted roof and extending through the connection between two lower roofing panels 12a only one thereof thus being seen.

[0052] Fig. 16 shows the lower side 10a of the roof window 10. A batten 23 is mounted at a predetermined distance from the lower side 10a whereby the batten 23 provides support for the lower roofing panel 12a. The batten 23 may be mounted to extend perpendicularly to the direction of slope of the slanted roof, as it is generally

known in the art. When the lower roofing panels 12a are mounted and a part of the standing seam 14a has been removed as explained above with reference to Fig. 2, the lower part 30' is mounted by means of a fastening element, e.g. a screw 41', which is inserted through the hole 41a' and into the batten 23 as also indicated in Fig. 14. Hereby the raised portion 46 may abut and be tightened against the batten 23, space being left between the batten 23 and a remaining part of the flat piece 31' beside the raised portion 46 for the adjacent lower roofing panels 12a (not shown in Fig. 14).

[0053] Subsequent to mounting the lower part 30', the process of mounting and flashing continues as described above with reference to Fig. 2.

[0054] Due to the raised portion 46 avoiding that the lower surface of the flat piece 31' proper at the hole 41a' is tightened against the batten 23, and due to the concave shape of the flat piece 31' it is preferably in general avoided, that the peripheral parts of the flat piece raise in the mounted condition, thus avoiding that said peripheral parts lift the second leg 16b of the bottom flashing member 16, when mounted.

[0055] By means of the device according to the present invention is obtained that when the flashing is completed, the upper part 50 will retain the second leg 16b of the bottom flashing member 16 against the flat piece 31 of the lower part 30, 30' and the cover portion 51 of the upper part 50 will shield the raised wall 35, especially the upper part thereof, from precipitation. The lower part 30, 30' will shield the flat roofing panels 12a adjacent the upper cut edges 18 of the standing seams 14a and the adjacent gap 19 between cut edges of the flat roofing panels. Thus, the lower part 30, 30' will direct any water that might seep under the flange portion 55 of the upper part 50 and down the cut-out 20, down the roof on top of the flat roofing panels 12a. Slanted ribs 45 on the lower side of the flat piece promote the direction of any water down the roof.

Claims

1. A device for flashing a part of a standing seam (14) in a roof comprising flat roofing panels (12) interconnected through standing seams (14), said device comprising a lower part (30; 30') comprising a flat piece (31; 31') of material, an elongated recess (32) extending in a longitudinal direction (33) of the elongated recess from a side edge (34) of the flat piece (31; 31'), a raised wall (35) extending along an edge (36) of said recess (32), said raised wall (35) extending from the edge of the recess to an upper edge (37) of the raised wall, said raised wall (35) providing a waterproof connection with the flat piece (31; 31') of material along the recess (32) on either side thereof from an end (38) of the recess distal from said side edge (34) and at least a distance towards the side edge; and an upper part (50) movable relative

to the lower part (30; 30'), the upper part comprising a cover portion (51) for covering at least a part of the recess (32) and a space between parts of the raised wall (35) on either side of the recess (32), when the upper part (50) is applied to the lower part (30; 30').

2. A device according to claim 1, wherein the lower part (30; 30') and the upper part (50) are separate parts.

3. A device according to claim 1 or 2, wherein, the cover portion (51) comprises a second wall (52) adapted to extend along at least a part of the raised wall (35) on an external side thereof relative to the recess (32).

4. A device according to claim 3, wherein the upper part (50) at a lower end of the second wall (52) comprises a flange portion (55) extending laterally outwards relative to the cover portion (51) and the recess (32).

5. A device according to any one of claims 1 to 4, wherein means (53, 54) are provided for releasably connecting the lower part (30; 30') and the upper part (50) to each other with the cover portion (51) in place covering at least a part of the recess (32) and a space between parts of the raised wall (35) on either side of the recess (32).

6. A device according to claim 5, wherein the means for releasably connecting the lower part and the upper part comprises at least one of:

a screw (53) penetrating the upper part (50) and being screwed into the lower part (30; 30');
a flap (54) on one of the first and the upper part for folding around an edge (39) of the other of the first and the upper part; and
a protrusion on one of the first and the upper part clicking into a recess on the other of the first and the upper part.

7. A device according to any one of claim 1 to 6, wherein the lower part (30) is provided with an elongated element (40) rotatably mounted below the flat piece (31) opposite the raised wall (35), the elongated element preferably mounted by a fastening element (41) penetrating the lower part (30) through a hole (41a) in the lower part (30) and fixed to the elongated element (40), said fastening element being provided for engagement with a tool to rotate the elongated element (40) in a plane parallel to the flat piece (31), and preferably said elongated element being rotatable through approx. 90° only between a first position in which the elongated element (40) is extending parallel to the recess (32) and a second position crosswise thereto.

8. A device according to claim 7, wherein the elongated

element is a flat elongated element (40) extending at either side from the fastening element (41), the flat elongated element extending in a plane parallel to a plane of the flat piece, the flat elongated element having at either side of the fastening element a retaining surface (42) facing the flat piece (31), preferably said retaining surface being slightly screw-wise tilted around an axis extending in a longitudinal direction (43) of the flat elongated element.

9. A device according to any one of claims 1 to 8, wherein the lower part (30') at the end (38) of the recess distal from the side edge (34) comprises a hole (41a') for penetration of a fastening element (41'), and wherein the lower part (30') on a side of the lower part opposite the raised wall (35) comprises a raised portion (46) at the hole (41a').

10. A device according to any one of claims 1 to 9, wherein the flat piece (31; 31') of the lower part (30; 30') is bend or curved to be concave on the side of the lower part opposite the raised wall (35), preferably for an end portion (31a) of the flat piece (31') opposite said side edge (34) relative to the hole (41a') to extend at an angle (α) of 5°-25°, especially 10°-20°, and further especially 13°-17° downward in a longitudinal, vertical section relative to a plane (p) of a portion of the flat piece (31') comprising the elongated recess (32).

11. A kit of parts for flashing a roof penetrating element or roof element, such as a roof window (10), for mounting in a slanted roof with a roof covering comprising flat roofing panels (12) interconnected by standing seams (14) said kit of parts comprising flashing members including a bottom flashing member (16) for flashing along a lower side (10a) of the roof penetrating element and at least one device according to any one of claims 1 to 10.

12. A method of flashing a roof element, such as a roof window, in a sloping roof with a roof covering comprising flat roofing panels, possibly of sheet metal, with standing seams, using a kit of parts according to claim 11, wherein the method comprises the steps of:

- a) mounting a full roofing panel (12) at a first side of the roof element (10);
- b) mounting at least two lower roofing panels (12a) below the roof element, a seam (14a) between the at least two lower roofing panels extending down the roof from a position adjacent a lower side (10a) of the roof element (10);
- c) for each standing seam (14a) between lower roofing panels (12a), removing part of the standing seam (14a) between said two lower roofing panels (12a) from an upper edge (12b) thereof

- proximal the roof element and a predetermined distance away from the roof element leaving a cut upper edge (18) of the standing seam (14a) and a gap (19) between adjacent cut edges of the lower roofing panels (14a);
- d) mounting the lower part (30; 30') of the device to cover said cut upper edge (18) and the adjacent part of the standing seam (14a);
- e) making for each cut standing seam (14a) a cut-out (20) at a lower edge (22) of the bottom flashing member (16) to accommodate the raised wall (35) of the lower part (30; 30') of the device;
- f) mounting the bottom flashing member (16); and
- g) for each cut standing edge (14a), mounting the upper part (50) of the device whereby the cover portion (51) is placed over the elongated recess (32) of the lower part (30; 30').

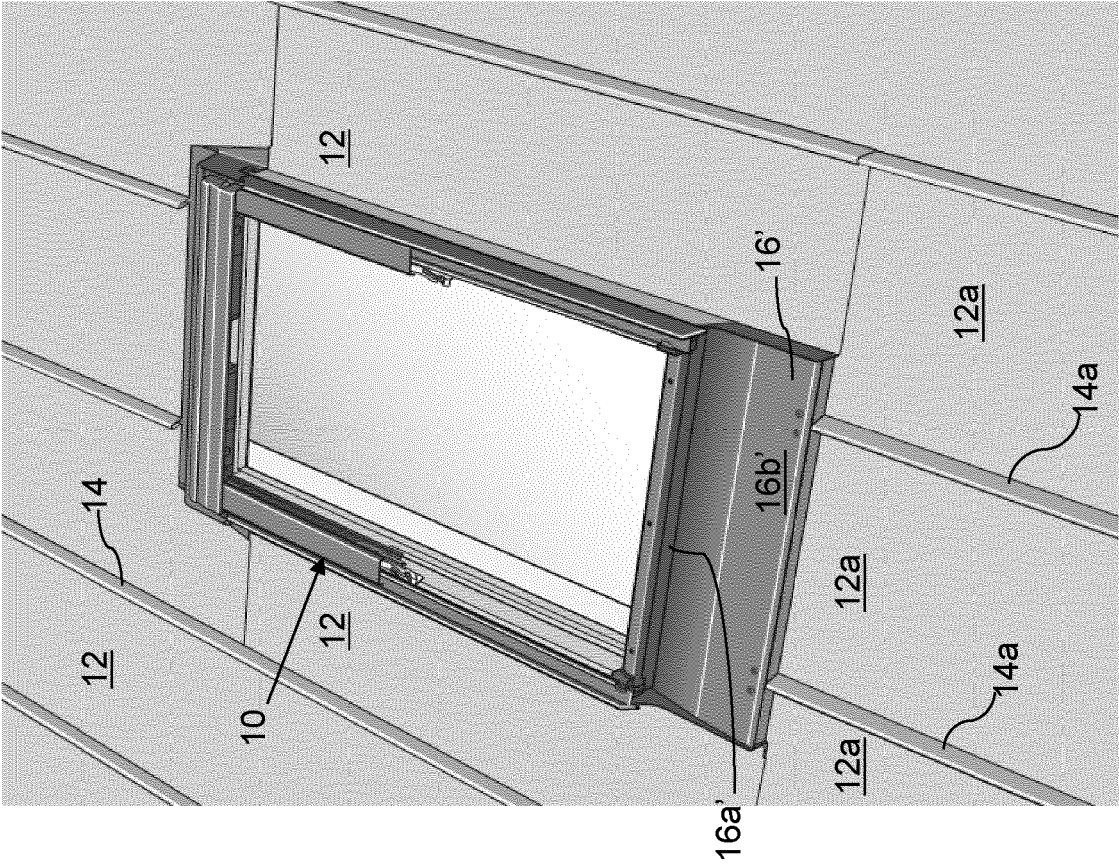


Fig. 1

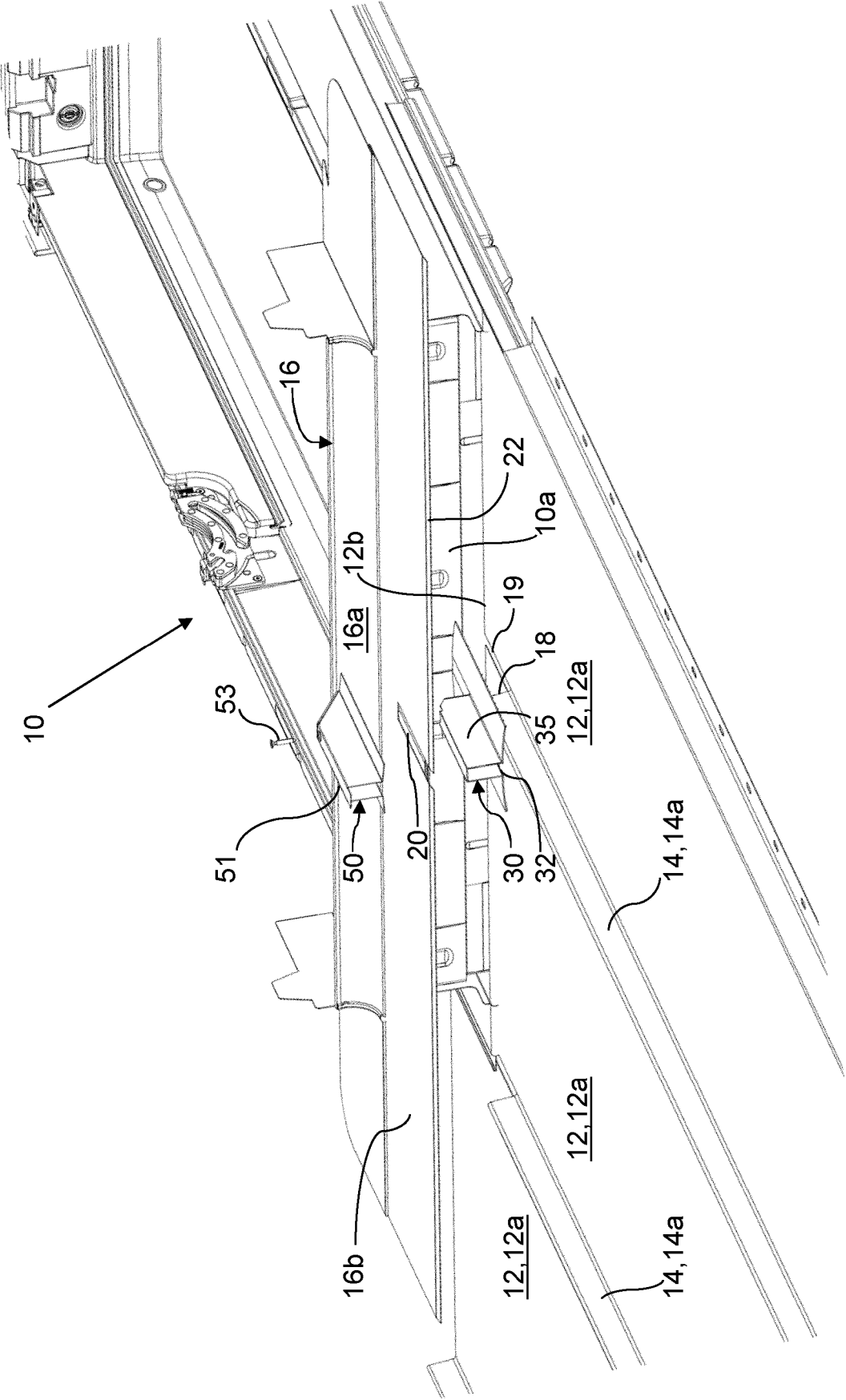


Fig. 2

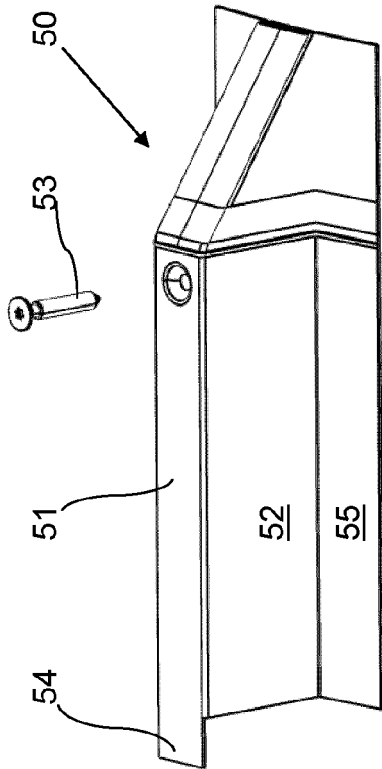


Fig. 4

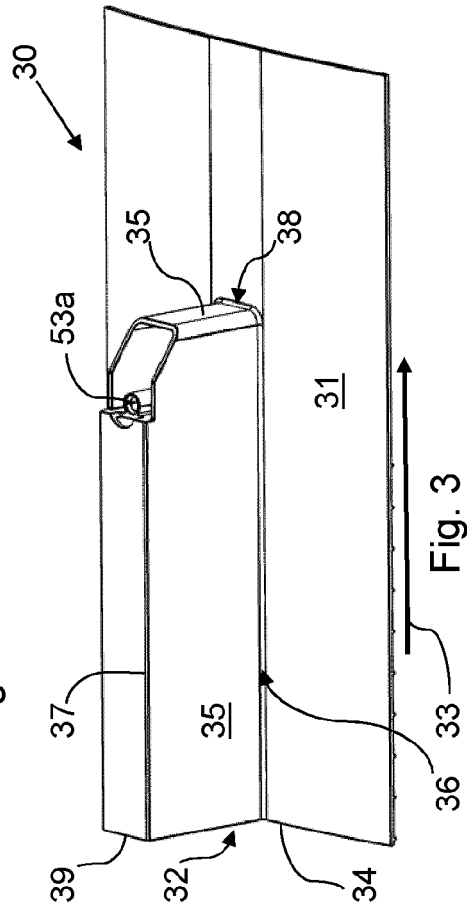


Fig. 3

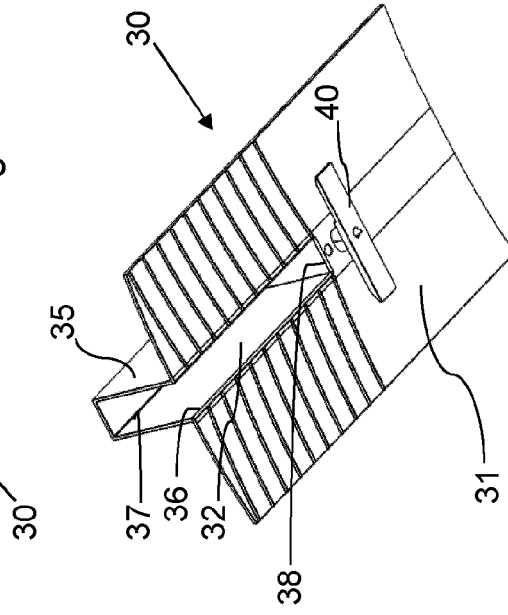


Fig. 5

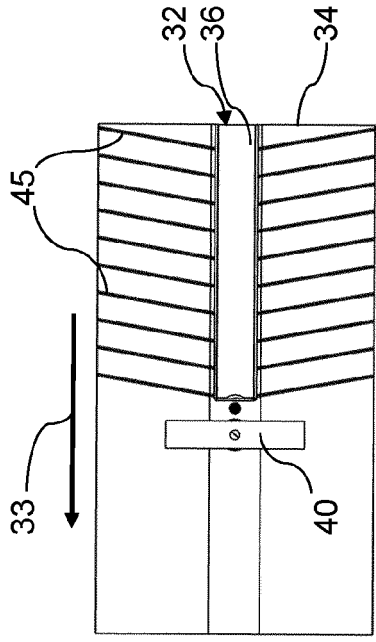
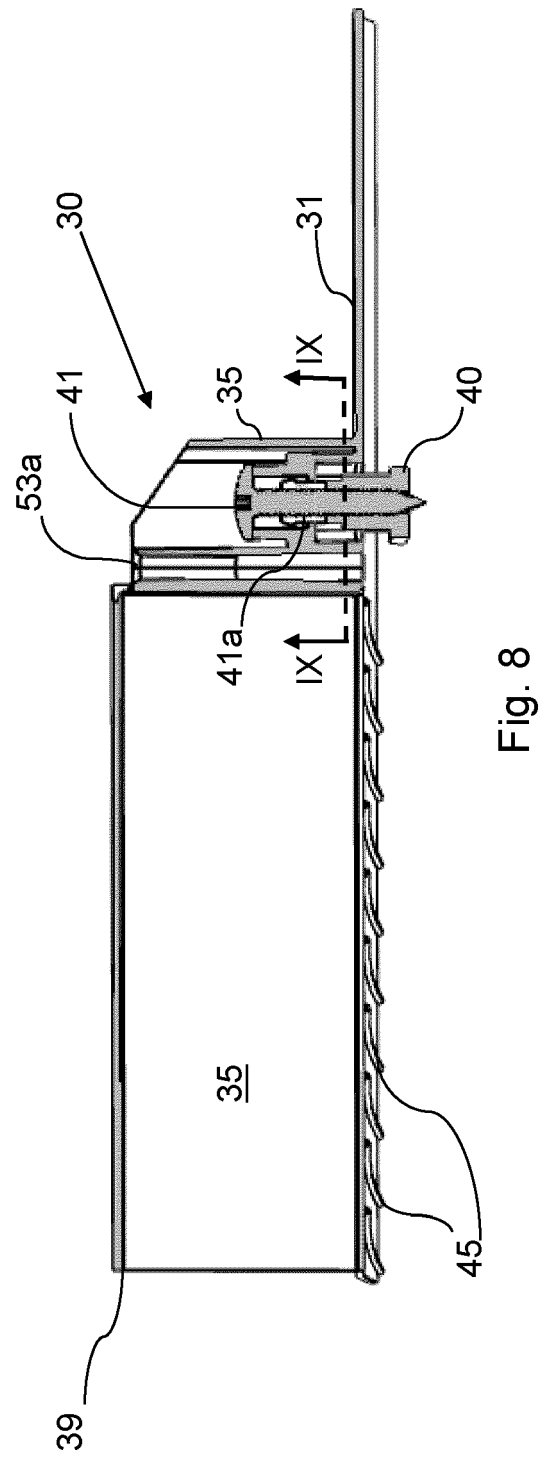
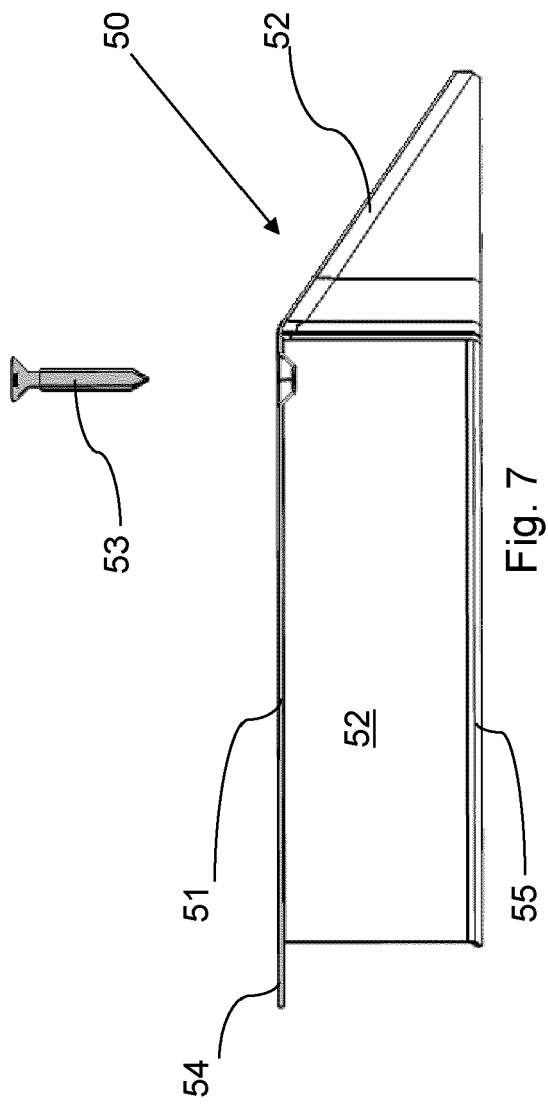


Fig. 6



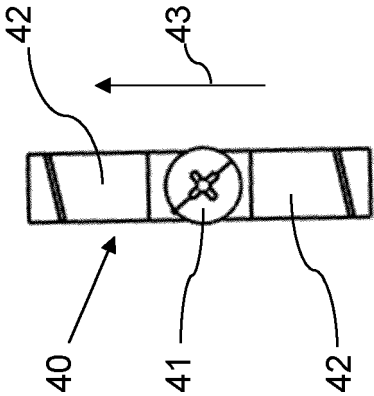


Fig. 10

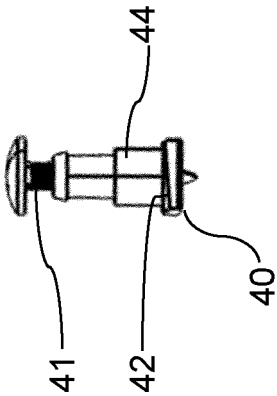


Fig. 12

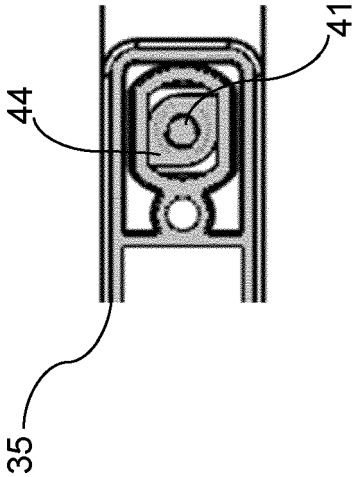


Fig. 9

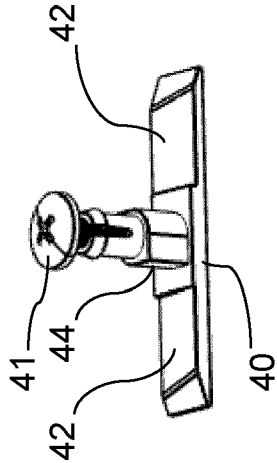


Fig. 11

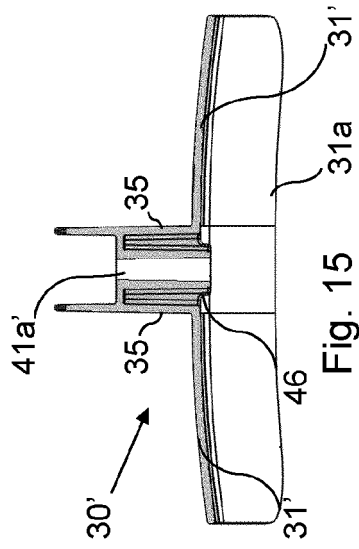


Fig. 15

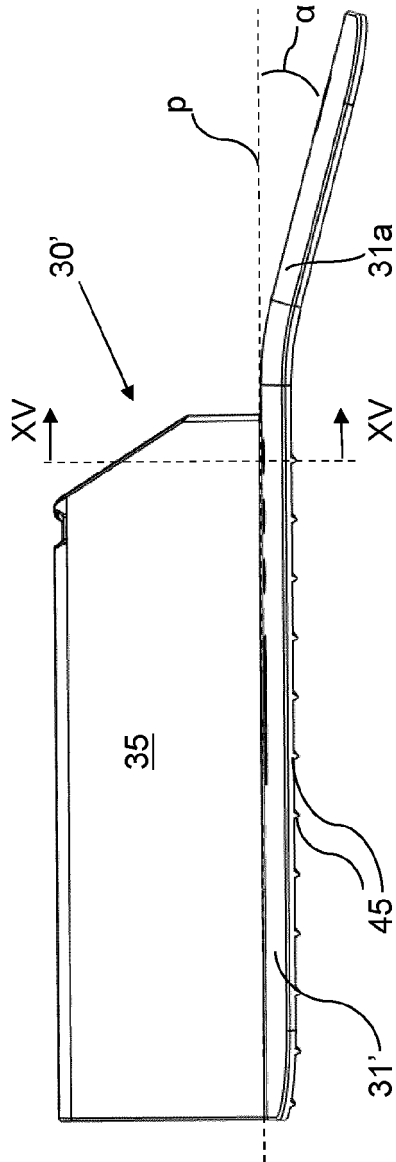


Fig. 13

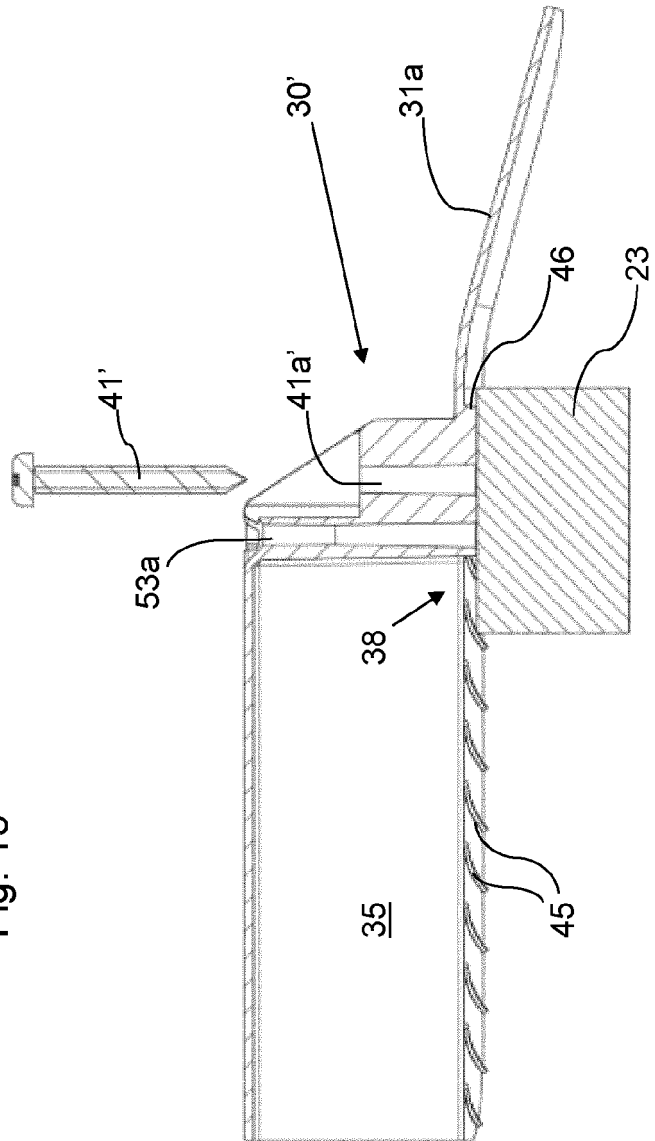


Fig. 14

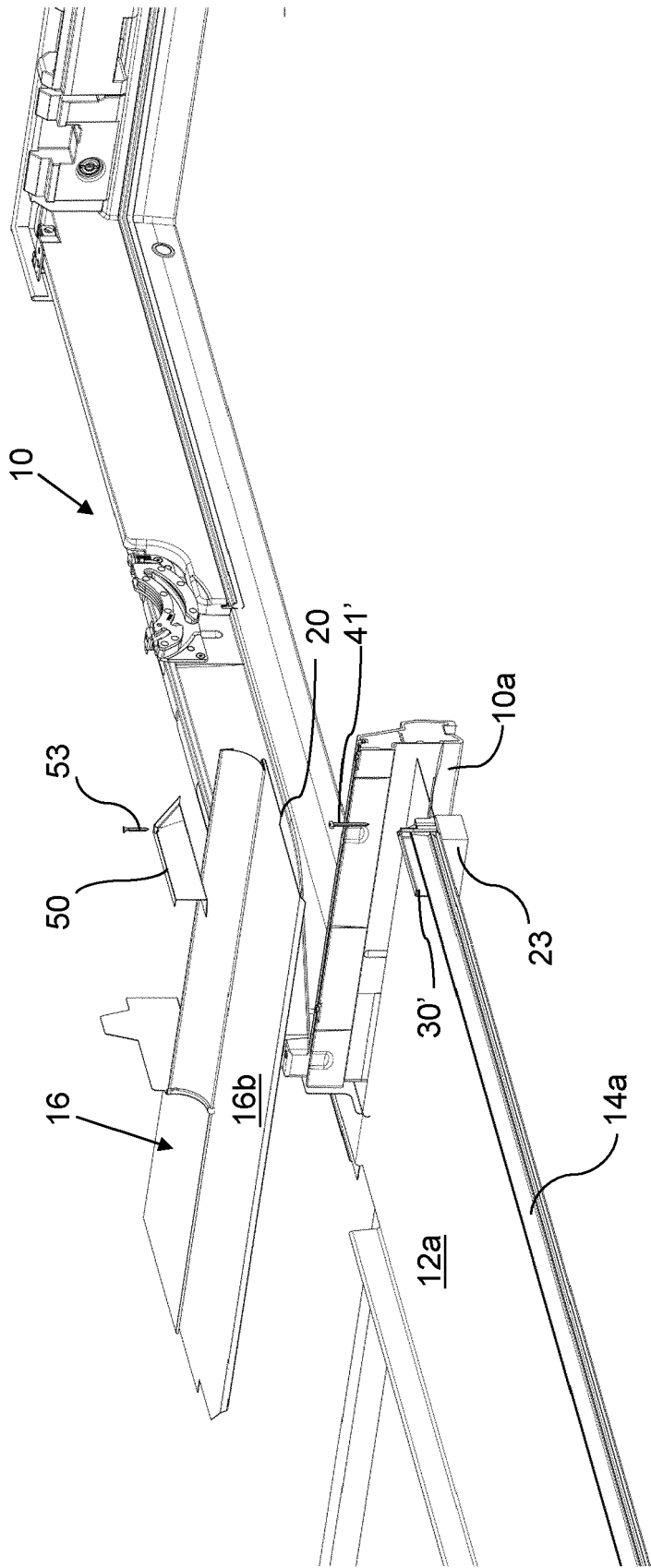


Fig. 16



EUROPEAN SEARCH REPORT

Application Number

EP 23 17 4077

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 5 027 576 A (GUSTAVSSON LARS A [SE]) 2 July 1991 (1991-07-02)	1-6, 10	INV. E04D13/147
A	* figures 1, 2, 4, 5 * -----	7-9, 12	
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A	* paragraph [0025]; figure 8 * -----	7-9, 12	E04D
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	* figures 1, 4 * * page 3, lines 29-30 * -----		

TECHNICAL FIELDS
SEARCHED (IPC)

E04D

The present search report has been drawn up for all claims

Place of search

The Hague

Date of completion of the search

4 October 2023

Examiner

Tran, Kim Lien

CATEGORY OF CITED DOCUMENTS

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04-10-2023

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