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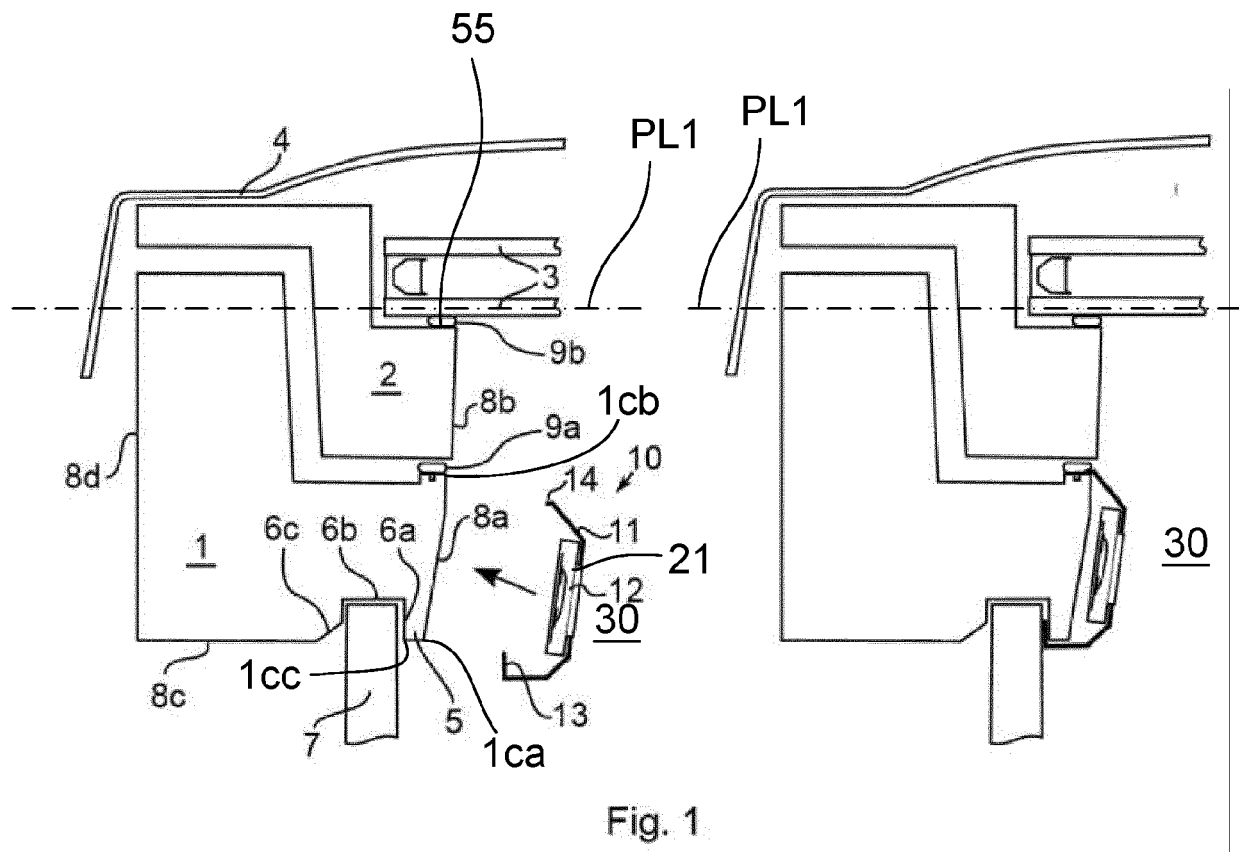
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KH MA MD TN(71) Applicant: **VKR Holding A/S****2970 Hørsholm (DK)**(72) Inventor: **WIIG, Martin Schwartz****Hørsholm (DK)**(74) Representative: **Zacco Denmark A/S****Arne Jacobsens Allé 15****2300 Copenhagen S (DK)**(30) Priority: **30.12.2020 DK PA202001484**(54) **SKYLIGHT ELECTRIC ILLUMINATION**

(57) The present disclosure relates to a skylight with electric light. A cover with electric light is attached to the skylight frame while the remaining skylight installation and function is undisturbed.

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Description

[0001] This disclosure relates generally to building skylights also known as roof windows and more particularly to electric light implementations. Moreover, the disclosure relates to a method of retrofitting an illumination element on a pre-installed building skylight.

Background

[0002] Building skylights (hereafter skylights) fitted with electric illumination gain popularity. Because the electric light blends with daylight and can provide increased wellbeing and digital control of the electric illumination allows to extend or boost the daylight. And because the natural and artificial light originate from the same source the effect is more convincing. Such skylights are shown in EP2644801B1, BE1018299, PL126644U1.

[0003] However skylights have a long service lifetime and it is not feasible to replace a skylight merely to gain an electric light feature.

[0004] BE1018299 mentioned above shows retrofit of light bars by adhesive. A profile with LED's is adhered to the oblique curb extension. US2020056424 discloses another solution for providing artificial light in a window.

Summary

[0005] In view of the above, it may be advantageous to provide a skylight with electric illumination which is more flexible in regards to existing windows, e.g. in relation to retrofitting. A further or alternative objective may be to provide a solution which may be easily removed and/or serviced and/or possibly upgraded (for example if the light source such as LED's wear out). Another objective may be to provide a solution which is easily adapted to various skylights with various frame designs.

[0006] The present disclosure relates to a building skylight with a light aperture according to a first aspect. This skylight comprises a glazing, a frame with four profiles surrounding the aperture, and a cover. An outer first frame surface of one or more of said profiles extends towards a plane defined by a major surface of the the glazing, and said outer first frame surface is preferably an outermost side surface of the profile that faces said aperture. The cover comprises an illumination element comprising an electric light arrangement. A part of the cover extends over at least a part of the first frame surface, and said part of the cover comprises an outer surface that faces away from said first frame surface and abuts said aperture.

[0007] The cover comprises a tongue which may abutts a peripheral rim leg of the frame, where said rim leg supports a dry wall. Alternatively the cover may comprise a tongue extending in between the glazing and a surface of the frame facing and being proximate the glazing. In still further embodiments of the present disclosure,

the cover may comprise a first tongue which may abutts a peripheral rim leg of the frame, where said rim leg supports a dry wall, and moreover, the cover may comprise a further tongue extending in between the glazing and a surface of the frame facing and being proximate the glazing.

[0008] This may e.g. provide a solution that allows an easy and user friendly installation of electric illumination on a skylight. It may moreover be flexible/adaptable in regards to existing windows, e.g. in relation to retrofitting. Additionally or alternatively, it may provide a solution which may be easily removed and/or serviced and/or possibly upgraded (for example if the LED's wear out). Moreover or alternatively, it may provide a solution which is easily adapted to various skylights with various frame designs.

[0009] Additionally, a cover according to various embodiments of the present disclosure may help to reduce or even avoid visible damages or marks on the original skylight due to cover installation, if the cover is subsequently removed. For example when renting a home.

[0010] A need of mechanical fasteners that may make visible marks on at least visible parts of the skylight profile(s) may e.g. be reduced or even avoided by embodiments of the present disclosure, as existing openings/gaps/spaces may be used for fastening the cover. Studies have shown that permanent damage and risk of bad mechanical fastener fit may cause users to refrain from buying products.

[0011] Said aperture may be a sash aperture provided by sash profiles of a sash/movable frame that is configured to move between an open and a closed position, and where the sash/movable frame supports the glazing, such as an insulated glazing.

[0012] The aperture may alternatively be an aperture of a fixed frame of the skylight that is configured to support the sash by means of a hinge connection so that the sash can move, such as pivot, relative to the fixed frame/fixation frame

[0013] In still further embodiments, the aperture may be an aperture of a fixed frame to which the glazing is attached, and where that frame and supported glazing, such as insulated glazing, is configured not to move.

[0014] In one or more embodiments of the present disclosure, the cover comprising the illumination element may comprise, such as have, a tongue, such as a terminal tongue, which abutts and engages the peripheral rim leg and/or the glazing.

[0015] In one or more embodiments of the present disclosure, said tongue for engaging the peripheral rim may extend less than 12 mm, such as less than 6 mm, for example less than 3 mm in between the drywall and the rim leg. In some embodiments, the tongue for engaging the peripheral rim leg may extend at least 2 mm in between the drywall and the rim leg.

[0016] Additionally or alternatively, said tongue extending in between the glazing and a surface of the frame facing and being proximate the glazing may extend less

than 10 mm, such as less than 5 mm, for example less than 3 mm in between the glazing and the surface of the frame facing and being proximate the glazing. In some further or alternative embodiments, said tongue extending in between the glazing and a surface of the frame facing and being proximate the glazing may extend at least 2 mm such as at least 3 mm, such as between 2 mm and 10 mm in between the glazing and the surface of the frame facing and being proximate the glazing.

[0017] This may e.g. enable a user friendly installation and/or correct installation of the cover.

[0018] The first surface of the pre-installed window may originally be designed to be a visible, uncovered surface of the profile that faces the aperture and provide a, preferably major, part of the surface of the frame facing the aperture. The cover may however have been retrofitted onto the window to cover this first surface.

[0019] The first surface may be a portion of the skylight frame which is exposed to the building interior when the skylight is in use but when said and the cover is not placed to cover the surface.

[0020] In one or more embodiments of the building skylight according to the first aspect, the cover supports the light arrangement. This may provide fast and easy light installation, and/or help to reduce mistakes during installation.

[0021] In one or more embodiments of the building skylight according to the first aspect, the cover may comprise an at least partly transparent material through which light from the light arrangement is configured to pass. Additionally or alternatively, the cover according to one or more embodiments of the building skylight according to the first aspect comprises, such as have, light exit apertures.

[0022] As mentioned, the rim leg may support a dry wall. That may be relevant if the cover is e.g. mounted on a fixed frame. Said support of the dry wall may be provided directly or indirectly, before and/or after installation of the cover.

[0023] In one or more embodiments of the building skylight according to the first aspect, said tongue extends in between the dry wall and said rim leg.

[0024] In one or more embodiments of the building skylight according to the first aspect, the rim leg may provide a surface facing a slit/groove in the frame, where the drywall extends into the slit/groove. In some embodiment, the cover may extend into a slit/groove in the rim leg.

[0025] In one or more embodiments of the building skylight according to the first aspect, the cover may provide a resilient cross section and a resulting clamping force between the opposite ends/edges of the cover when mounted on the frame due to said resilient cross section.

[0026] The cover may provide a resilient cross section due to one or more resilient parts, such as wall parts, of the cover. The cover may provide a resulting clamping force as a consequence of the cover material providing a "restoring force" where the cover tries to get back to its resting position. The resting position is where where the

cover is de-mounted from the skylight and the cover is not deformed by a biasing force, such as by hand, to get to a state where it can be attached to the skylight as intended.

5 **[0027]** The cover may comprise a thin material thereby providing a resilient clamp.

[0028] In one or more embodiments of the building skylight according to the first aspect, the cover comprises a resilient wall part, and said cover provides a resulting clamping force around a part of the exterior of said profile due to said resiliency. This may be provided due to a wall part being forced away from its resting position by said profile.

10 **[0029]** Utilizing cover resiliency for cover fastening may e.g. help to provide an improved holding of the cover onto the skylight and/or help to provide a solution where the need of further fixation means, such as screws, clamps, nails or the like, may be reduced or completely superfluous.

20 **[0030]** In one or more embodiments of the present disclosure, at least said tongue for engaging the peripheral rim and/or said tongue extending in between the glazing and a surface of the frame facing and being proximate the glazing may have a thickness of 2 mm or less, such as below 1.5 mm, such as around 1 mm. In embodiments of the present disclosure, the whole cover wall may have a thickness of 2 mm or less, such as below 1.5 mm, for example around 1 mm. In some embodiments of the present disclosure, the tongue thickness and/or the entire cover wall thickness may be between 0.4 mm and 2 mm, such as between 0.4 mm and 1.5 mm.

25 **[0031]** This may e.g. help to enable a user friendly installation and/or correct installation of the cover, and/or a solution that is space saving.

30 **[0032]** In one or more embodiments of the building skylight according to the first aspect, the cover may extend around at least two outer corner areas of said profile, such as at least three or at least four outer corner areas of said profile. In further embodiments of the present disclosure, one or more of said corner areas may be located at the termination of said first frame surface of the profile.

35 **[0033]** This may help to provide an advantageous fastening of the cover and/or help to provide an aesthetically desirable solution.

40 **[0034]** In some embodiments of the present disclosure, the angle between the first frame surface and the other outer surface of the profile that is terminated at said outer corner or corners may be larger than 180°, such as larger than 220°, such as larger than 260°.

45 **[0035]** In one or more embodiments of the present disclosure, the cover has been arranged at the skylight due to a retrofitting of the cover onto the profile so as to cover at least a part of said first surface that would otherwise be visible as an outermost surface of the frame facing the aperture.

50 **[0036]** In one or more embodiments of the building skylight according to the first aspect, at least on one skylight side, such as two opposing skylight sides, such as four

skylight sides, one or more of said cover may cover the first frame surface of an otherwise visible fixed frame, or covers the first frame surface of an otherwise visible movable frame.

[0037] In one or more embodiments of the present disclosure, the electric light arrangement comprises an LED array interconnected by conductors.

[0038] In one or more embodiments of the present disclosure, the electric light arrangement comprises an LED array with multiple drivers whereby zones and/or skylight sides may be individually controlled.

[0039] In one or more embodiments of the building skylight according to the first aspect, the first frame surface may extend from the peripheral rim leg and towards the glazing.

[0040] In one or more embodiments of the building skylight according to the first aspect, the tongue may abut the glazing. In one or more embodiments of the building skylight according to the first aspect, the tongue may abut a seal placed between said glazing, and moreover abut said surface of the frame that faces and is proximate the glazing.

[0041] In embodiments of the present disclosure, the tongue of the cover may be placed between the seal and the surface of the frame facing and being proximate the glazing, thereby providing that the seal may abut the glazing.

[0042] In embodiments of the present disclosure, the tongue of the cover may be placed between the seal and the glazing, e.g. so that the tongue abuts the glazing at one side of the tongue and so that the tongue abuts the seal at the other side of the tongue. Hereby the seal abuts the surface of the frame that faces and is proximate the tongue.

[0043] In one or more embodiments of the present disclosure, said frame comprises a movable frame connected to a fixation frame by means of a hinge, such as a pivot hinge, wherein said first surface is a surface of the movable frame.

[0044] In one or more embodiments of the building skylight according to the first aspect, the frame comprises a movable frame connected to a fixed fixation frame of the skylight by means of a hinge, such as a pivot hinge, wherein said first surface is a surface of the fixation frame.

[0045] In one or more embodiments of the building skylight according to the first aspect, the frame comprises a movable frame connected to a fixed fixation frame of the skylight by means of a hinge, such as a pivot hinge, wherein said first surface is a surface of the movable frame.

[0046] In one or more embodiments of the building skylight according to the first aspect, the frame comprises a movable frame connected to a fixed fixation frame of the skylight by means of a hinge, such as a pivot hinge, wherein one or more resilient gaskets is/are configured to be deflected by and support on said cover when the movable frame is in a closed position.

[0047] In one or more embodiments of the present dis-

closure, the electric light arrangement may be arranged opposite to the first surface.

[0048] The one or more gaskets may be placed so as to extend between a profile of the movable frame and a profile of the fixed frame before the cover was installed. Here, when the movable frame is in the closed position, the resilient gasket, that may be attached to one of the movable frame or the fixed frame, touches and is deflected by a surface of the other frame. After cover installation, the cover may cover a part of that surface where the gasket previously touched, but will now provide a new support for the original gasket.

[0049] The present disclosure moreover relates to a method according to second aspect of the present disclosure. This method is a method of retrofitting an illumination element on a pre-installed building skylight, where the pre-installed skylight comprises a light aperture for allowing sunlight to pass into the interior of the building at which the skylight is arranged. The pre-installed skylight comprises a glazing and a frame with four profiles surrounding the aperture. Said frame comprises an outer first frame surface of one or more of said profiles, wherein said outer first frame surface is an outermost visible side surface of the profile that faces and abuts said aperture, and where the outer first frame surface is provided by an integrated wall of the profile. The method according to the second aspect comprises:

- providing a cover, wherein the cover comprises an illumination element comprising an electric light arrangement, and wherein the cover comprises at least one tongue,
- arranging said cover so that it extends over and covers at least a part of said first frame surface, and so that a surface of the part of the cover that covers the first frame surface faces and abuts said aperture,
- providing a fixation of the cover at the frame, where said fixation comprises placing a tongue of the cover so that it abuts a peripheral rim leg of the frame, and/or placing a tongue of the cover so that it extends in between the glazing and a surface of the frame facing and being proximate the glazing.

[0050] The method may further comprise the step of connecting said electric light arrangement to an electric power source.

[0051] In one or more embodiments of the present disclosure, the first surface has a length extending in the longitudinal direction of the profile, and wherein the cover is designed to have a length that is at between 20% and 100%, such as between 50% and 100%, such as between 80% and 100% of the length of the first frame surface.

[0052] In one or more embodiments of the present disclosure, the skylight/roof window comprises a handle arrangement comprising a grip part attached to a handle base, wherein said handle base is configured to move, such as pivot, when the grip part is pulled, and thereby

control engagement means that engages a movable frame of the fixation frame and the fixed frame, e.g. for locking and unlocking purpose, and wherein the cover extends in between the frame profile and the handle base when the movable frame is in a closed position. This handle arrangement may e.g. be present solutions on skylights placed in a building roofs that has a pitch above 17°, such as above 30°, and these handle arrangements are often placed at the skylight top. This solution may provide easy installation of a cover with electric light in a desirable position of such skylights.

[0053] In one or more embodiments of the method according to the second aspect, said cover comprises a resilient part, and wherein said fixation of the cover at the frame comprises deforming said resilient part from a resting position so that said cover provides a restoring force and thereby a holding force, such as when mounted at the skylight so that the cover clamps around at least a part of the frame profile.

[0054] This may be provided so as to increase/enhance the fixation of the cover at the skylight. In one or more embodiments, the resilient part may be a resilient wall part of the cover.

[0055] The restoring force may e.g. be a clamping force provided so as to clamp around a part of the profile.

[0056] In one or more embodiments of the present disclosure, said method provides a building skylight according to any of claims 1-12 and/or a building skylight according to one or more of the embodiments of the first aspect described above.

[0057] The present disclosure additionally, in a third aspect, relates to a method of retrofitting an illumination element on a pre-installed building skylight, the skylight comprising a light aperture for allowing sunlight to pass into the building at which the skylight is arranged, wherein the pre-installed skylight comprises a glazing and a frame with four profiles surrounding the aperture, wherein said frame comprises an outer first frame surface of one or more of said profiles, wherein said outer first frame surface is configured to be an outermost, visible side surface of the profile that faces and abuts said aperture, and where the outer first frame surface is provided by an integrated wall of the profile. Said method according to the third aspect may at least comprise the steps of

- providing a cover, wherein the provided cover comprises an illumination element comprising an electric light arrangement, a resilient wall part, and at least one tongue,
- arranging said cover so that it extends over and covers at least a part of said first frame surface, and so that a surface of the part of the cover that covers the first frame surface faces and abuts said aperture,
- providing a fixation of the cover at the frame, where said fixation comprises deforming said resilient part, from a resting position so that said cover provides a restoring force, and thereby a holding force, such as a clamping force around a part of the exterior of the

profile, when mounted at the skylight.

[0058] The deforming may be provided by hand and/or by means of a hand too. The resilient part may be a cover wall part or another suitable resilient part.

[0059] The method according to the third aspect may further comprise the step of connecting said electric light arrangement to an electric power source.

[0060] It is generally understood that the first surface of the pre-installed window is originally designed to be a visible, uncovered surface of the profile that faces the aperture and provide a, preferably major, part of the surface of the frame facing the aperture. During said retrofitting, the cover however covers this surface and may reduce the minimum and/or maximum distance to an opposing frame profile, of the aperture (determined e.g. parallel to the glazing when the window is in a closed position). In return, however, this may provide an esthetically pleasing solution that allows retrofitting of electric light onto the skylight.

[0061] The present disclosure moreover, in a fourth aspect, relates to a building skylight with a light aperture comprising:

- 25 a frame with four profiles surrounding the aperture
- a glazing
- the frame comprises a peripheral rim leg
- a first frame surface extends from the peripheral rim leg towards the glazing
- 30 an illumination element abuts the peripheral rim leg
- or an illumination element abuts the glazing
- and the illumination element extends over at least part of the first frame surface
- 35 and the illumination element has an electric light arrangement.

[0062] In a further embodiment of the fourth aspect, the illumination element has a terminal tongue which abuts and engages the peripheral rim leg or the glazing.

[0063] In a further embodiment of the fourth aspect, the illumination element comprises a cover which supports the light arrangement.

[0064] In a further embodiment of the fourth aspect, the cover cross section has a tubular span of more than 180 degrees, such as more than 200 degrees, such as more than 250 degrees.

[0065] In a further embodiment of the fourth aspect, the cover comprises at least partly transparent material.

[0066] In a further embodiment of the fourth aspect, the cover has light exit apertures.

[0067] In a further embodiment of the fourth aspect, the cover provides a resilient cross section and a resulting clamping force between the opposite ends.

[0068] In a further embodiment of the fourth aspect, the at least on one skylight side, such as four skylight sides, the illumination element covers the visible fixed frame first frame surface or the illumination element covers the visible movable frame first surface.

[0069] In a further embodiment of the fourth aspect the electric light arrangement comprises an LED array interconnected by conductors.

[0070] In a further embodiment of the fourth aspect, the electric light arrangement comprises an LED array with multiple drivers whereby zones and/or sides may be individually controlled.

[0071] The different features of the above-mentioned aspects of the disclosure can be combined in any combination.

[0072] Other objectives, features and/or advantages of the present invention may or will appear from the following detailed disclosure, from the attached dependent claims as well as from the drawings.

Brief Description of the Drawings

[0073] The foregoing aspects and other teachings of the present disclosure will now be described in more detail, reference being made to the enclosed drawings, in which certain examples are shown. Like numbers refer to like elements throughout.

Fig. 1 shows cross section of an outwards opening skylight with a light arrangement at the fixed frame portion.

Fig. 2 shows cross section of an outwards opening skylight with a light arrangement at the movable frame/sash portion.

Fig. 3 shows cross section of a pivoting type skylight where part of the frame opens inwards with a light arrangement at the fixed frame portion.

Fig. 4 shows cross section of a pivoting type skylight where part of the frame opens inwards with a light arrangement at the movable frame portion.

Fig. 5 shows cross section of a pivoting type skylight where a top part of the frame opens inwards and a bottom part opens outwards, and with a light arrangement at the movable frame portion according to further embodiments of the present disclosure.

Fig. 6 shows cross section of a pivoting type skylight with a light arrangement at the fixed frame portion according to embodiments of the present disclosure.

Fig. 6a shows cross section of a cover for installation as illustrated in fig. 6.

Fig. 7 shows cross section of a pivoting type skylight with a light arrangement at both a fixed frame portion and movable frame portion according to embodiments of the present disclosure.

Figs. 7a and 7b shows cross section of covers for

installation as illustrated in fig. 7.

Figs. 8-10 illustrates various embodiments cover installation on a skylight that comprises a fixation frame/ fixed frame and does not comprise a movable frame.

Fig. 11 shows an embodiment of the present disclosure where the cover 11 is secured to the frame profile 1 of the fixed frame by means of mechanical securing means.

Fig. 11a shows cross section of covers for installation as illustrated in fig. 11.

Fig. 12 shows a simplified frame according to embodiments of the present disclosure.

Fig. 12a shows a cover for installation on the frame of fig. 12 to cover a surface of the frame abutting the frame aperture, according to embodiments of the present disclosure.

Figs. 13a and 13b shows embodiments of outer corners around which the cover comprising the light arrangement will extent, and the surfaces that meets at the corners, according to embodiments of the present disclosure.

Detailed Description

[0074] Fig. 1 shows schematically a cross section of a skylight and more specific a flat roof window with a fixed frame profile 1 and a moving frame 2 according to embodiments of the present disclosure. The frame has four profiles defining and enclosing a skylight aperture 30. The skylight has a glazing 3 such as an insulated glazing to cover the aperture. A top cover 4 may also be present to protect the window from water for example in the form of a dome, curved glass or planar glass.

[0075] The fixed frame 1 and moving frame 2 have a first surface 8a,8b. The first surface 8a, 8b is visible and/or tangible from the inside of the building. The first surface 8a, 8b is the portion of the skylight frame, which is exposed to the building interior when the skylight is in use, such as installed in a building. The fixed frame 1 has a first surface 8a. The first surface 8a extends from a peripheral rim leg 5 to a seal 9a. The moving frame 2 has a first surface 8b. The first surface 8b extends from the glazing 3 to the seal 9a. It is noted that fixed skylights which do not open (embodiments hereof are described in more details later on in relation to figs. 8-10) do not have a moving frame 2, and in such situations the frame 1 and frame 2 will simply be fixed relative to each other or the frame 1 and frame 2 may be a unitary fixed frame. The frame 1 also has a second surface 8c facing the roof. And a third surface 8d facing opposite to the first surface 8a.

[0076] The frame 1 has a peripheral rim leg 5 which is used for installing a drywall 7 and the peripheral rim leg 5 extends down substantially perpendicular away from the glazing 3 (or a plane PL defined by a major surface, such as the inner major surface of the glazing, when the movable frame is in a closed position as illustrated). Often, but not always, the peripheral rim leg 5 is provided in association with a drywall groove 6. In this case the drywall groove 6 has a first vertical part 6a towards peripheral the rim leg 5, a second horizontal part 6b and a third sloping or vertical part 6c. The sloping part 6c is used if the drywall is installed angled (not shown). The three groove parts 6a, 6b, 6c such as surfaces form a groove/ slit 6 to receive the drywall 7.

[0077] At least one seal 9b is provided between the glazing 3 and the moving frame 2. At least one seal 9a is provided between the moving frame 2 and the fixed frame 1. The seals ensure the skylight is airtight and water vapour tight.

[0078] Fig. 1 shows an illumination element 10 which extends over at least part of the first frame surface 8a. In this example the illumination element 10 is installed on the fixed frame 1. The illumination element 10 has a cover 11 which supports an electric light arrangement 12. The cover has a terminal tongue 13 which can engage the peripheral rim leg 5 by insertion between the peripheral rim leg 5, 6a and the drywall 7. Hereby the illumination element covers and hides the fixed frame surface 8a partly or entirely. This may e.g. create an effect the skylight frame is hidden. One advantage may be that an old skylight can be hidden and all that remains visible is natural and electric light.

[0079] Fig. 2 illustrates the same flat roof window as fig. 1. Here an illumination element 10 extends over at least part of the first frame surface 8b. In this example the illumination element 10 is installed on the movable frame 2. The cover has a tongue, such as a terminal tongue 13 which can engage the glazing 3 by insertion between the glazing 3 and the seal 9b. Hereby the illumination element covers and hides the movable frame surface 8b partly or entirely.

[0080] Fig. 3 shows a cross section of side profiles of a skylight of a pivoting roof window type, such as a centre pivot roof window, according to embodiments of the present disclosure. This differs from the window type illustrated in figs. 1 and 2 by the fact, that the moving frame 2 can move inwards due to pivot hinges known in the art indicated by number 15. The remaining elements substantially correspond to the ones disclosed above. In further embodiments, the skylight may be top-hung (not illustrated).

[0081] In this example the illumination element 10 is installed on the fixed frame 1. The illumination element 10 extends over at least part of the first frame surface 8a. The illumination element 10 has a cover 11, which supports an electric light arrangement 12. The cover has a terminal tongue 13, which can engage the peripheral rim leg 5 by insertion between the peripheral rim leg 5

and the drywall 7. Hereby the illumination element covers and hides the fixed frame surface 8a partly or entirely.

[0082] As also can be seen from fig 3, the cover 11 may in embodiments of the present disclosure be designed so after installation, it will extend over a part of the surface of the dry wall 7, and hereby, the electric light arrangement 12 may be arranged opposite to the surface of the dry wall 7 rather than e.g. opposite to the surface 8a.

[0083] Fig. 4 shows the same window as fig. 3. In this example, an illumination element 10 extends over at least part of the first frame surface 8b. In this example, the illumination element 10 is installed on the movable frame 2. The cover has a terminal tongue 13 which can engage the glazing 3 by insertion between the glazing 3 and the seal 9b. Hereby the illumination element covers and hides the movable frame surface 8b partly or entirely.

[0084] The illumination element 10 is elongated and preferably matches the length of the skylight. It is possible to arrange two illumination elements 10 on opposite sides of the window, such as the left side of the aperture and the right side of the aperture and/or at the top and/or the bottom. It is also possible to have the illumination element 10 at three or all four sides of the aperture.

[0085] The illumination element 10 is elongated and comprises a cover 11 which supports an electric light arrangement 12. The cover 11 is not limited to a sheet but can also comprise a body or profile. The cover 11 must not necessarily be solid but may also have perforations or openings. The cover 11 may also comprise a lid to access the light arrangement 12. The cover 11 may comprise a thin material thereby providing a resilient clamp.

[0086] The cover 11 has a terminal tongue 13 which is adapted to be inserted into a narrow gap such as between the glazing 3 and frame 2 or such as between peripheral rim leg 5 and frame 1. Opposite to the tongue 13, the extremity 14 may have a hook tip 14. Hereby the cover 11 is easy to snap on to the skylight.

[0087] The cover 11 cross section may have a tubular span of more than 180 degrees, such as more than 200 degrees, such as more than 250 degrees. This is understood such that the cover 11 cross section extends from the terminal tongue 13 to the opposite extremity 14 and forms a profile angle extending more than 180 degrees, such as more than 200 degrees, such as more than 250 degrees. For example the fig 4 cover 11 has a span of 270 degrees from the terminal tongue 13 to the opposite extremity 14. Hereby the cover may, such as can hold or clamp onto the frame.

[0088] In other example the cover 11 may be secured by tape, fasteners etc.

[0089] The light arrangement 12 may comprise a LED array of discrete LED's interconnected by conductors. A driver may control the LED's and possibly individual zones or individual skylight sides. An integral or separate lens may direct and focus the light. A diffusing cover may be provided at the light arrangement or the cover 11 may

be transparent and possibly provide diffusing effect. A light guide may also be employed. Alternatively or additionally the light arrangement 10 may employ a light emitting film source etc.

[0090] It is understood that the fixed frame 1 and movable frame 2 may also be referred to as the frame profile 1 of the fixed frame or frame profile of the movable frame 2 in the present document. Generally, the frame(s) 1,2 may comprise four profiles as also illustrated in fig 12 which together forms/defines the mentioned aperture 30. Hence, in the figures showing a part of the frame, reference to the frame profile 1 or 2 rather than the frame as such may be provided.

[0091] Fig. 5 shows a cross section of a top 40 and bottom 50 of a of a skylight of a pivoting roof window type, such as a centre pivot roof window, according to embodiments of the present disclosure. The top 40 comprises a top profile arrangement 40 comprising a fixed frame profile 1 of the fixed frame and a movable frame profile 2 of the movable frame, and the bottom comprises a bottom frame arrangement 50, comprising a fixed frame profile 1 of the fixed frame and a movable frame profile 2 of the movable frame. These frame profiles are interconnected, e.g. by side profiles 1, 2 as illustrated in figs. 3-4, or another type of side profiles of the frame, see also fig 12. The skylight of fig. 5 is cut through the side profiles and the insulated glazing 3, for illustrative purposes so that the figure does not illustrate the full side profile length.

[0092] Fig.5 illustrates that a first cover 11 is placed at/retrofitted onto the top 40 of the frame 2 and another cover 11 is placed at/retrofitted onto the bottom 50 respectively to cover the respective surface 8b facing the aperture 30, of the profile of the movable frame 2.

[0093] As also previously described, the cover 11 comprises a tongue 13. This tongue 13 extends in both cases into a space between the glazing 3 and a surface 55 of the frame 2 facing and being proximate the glazing 3. Generally, the surface 55 may preferably start from the corner 2cb where the surface 8a is terminated. The surface 8b extends between the longitudinal corners 2ca, 2cb.

[0094] In some embodiments, as illustrated by the circular cut-out of the top 40, the tongue 13 may abut the frame surface 55 and a seal 9b, such as a gasket, placed between the tongue 13 and the glazing 30, thereby providing that the seal 9b may abut the glazing 30.

[0095] In embodiments of the present disclosure, the tongue 13 of the cover may be placed between the seal 9b and the glazing 30, e.g. so that the tongue 13 abuts the glazing at one side of the tongue 13 and so that the tongue abuts the seal 9b at the other side of the tongue. Hereby the seal 9b abuts the surface 55 of the frame that faces and is proximate the tongue 15 and the glazing 30.

[0096] The seal 9b may be a rubber seal or the like that originally came with the skylight and was preinstalled at the window, and in some embodiments, the cover tongue 13 may be slid/pushed in between the glazing

30 and seal 9b or in between the seal 9b and the surface 55 during cover 11 installation.

[0097] Fig. 5 moreover illustrates an embodiment of the present disclosure where the cover 11 comprises a wall part 11a that extends in between a handle arrangement and the profile 2 of the top 40.

[0098] In the embodiment of fig. 5, the top part comprises a handle arrangement 70 comprising a grip part 71 where a person by hand can grab the handle arrangement 70. Often that grip part 71 may be elongated and extend parallel to the longitudinal direction of the profile 2 at the top 40. When a person pulls the handle (in other embodiments an electrical actuator may directly or indirectly move/activate the handle), it pivots so that a handle base 72 moves away from the profile 2, and the base 72 is directly or indirectly connected to engagement means that engages the movable frame and the fixed frame. Hence, when pulling the handle 71, and the base 72 pivots, the movable frame/sash opens.

[0099] When the cover 11 is installed, the cover wall part 11a extends in between the profile 2 and the handle base 42 when the movable frame 2 is closed, and in certain embodiments, a part of the handle arrangement 70 may abut the cover wall 11a when the movable frame is in a closed position. The cover 11 may as illustrated, in some embodiments, extend around the profile 2 and may comprise a tongue part 14 that may support on a rear surface of the top profile (e.g. with a gasket between the tongue and the profile, and/or may extend into a groove (not illustrated) of the profile and/or the like.

[0100] The cover 11 also extends around and covers substantially the entire part of the profile surface 8b from the profile corner 2ca distant to the glazing and to the profile corner 2cb proximate the glazing. In further embodiments, the cover may extend over a larger part of the surface 8b length, See e.g. fig. 12 an description thereto.

[0101] During installation of the cover 11 at the top 40 profile 2 of the skylight (the cover 11 is illustrated in fig. 5a), the movable frame may be partly opened to ease installation of the cover 11.

[0102] Opening the movable frame may or may not be relevant or needed when installing a cover 11 according to embodiments of the present disclosure at the movable frame profile 2 at the skylight bottom 50. The cover for installation at the bottom 50 profile 2 of the movable frame is illustrated in fig. 5b.

[0103] The cover 11 generally comprises a surface 11s that is configured to be an outermost, visible side surface of the profile that faces and abuts the aperture 30 when the cover is installed on the frame. As can be seen in fig. 5, the installation of the cover 11 takes up a small part of the original aperture 30, and thereby, the distance between opposing profile 2 surfaces facing the aperture of parallel profiles (in this case top 40 and bottom 50 profiles of the movable frame) is reduced. The same may apply for the fixed frame aperture if a cover or covers 11 is/are provided to cover the surface 8a facing the aperture

of the fixed frame. In fig. 5, this reduced distance dis1 is provided as two covers 11 covers the top 40 and bottom 50 profiles 2 respectively, so that the surfaces 11s thereby abuts the aperture 30 and provides the aperture opening. Thus, the distance dis1 is reduced, the distance dis1 is measured parallel to the glazing and perpendicular to the longitudinal extent of the profiles 2.

[0104] The maximum and/or minimum height and/or width of the aperture 30 (dependent on if a cover 11 is/are placed on top, bottom or side profile(s)) is thus reduced by installation of the cover(s) when compared to the normal aperture height and/or width before cover installation.

[0105] As mentioned previously, the first surface 8a, 8b may be the portion of the skylight frame which is exposed to the building interior when the skylight is in use.

[0106] This surface 8a, 8b is an outer frame surface that is an outermost visible side surface of the profile that faces and abuts the aperture 30 before the cover 11 installation, and where the surface 8a, 8b may preferably be provided by an integrated wall of the profile 2 that may not be removable from the rest of the profile without breaking the profile.

[0107] In fig. 5, two covers are installed at the movable frame, but it is understood that just one cover may be installed at one of the profiles 2 of the movable frame at either the top 40 or bottom 50.

[0108] As also described in more details later on, the cover may be resilient so that it provides a clamping force on the profile 2 when installed.

[0109] Fig. 6 illustrates an embodiment of the present disclosure, wherein the cover 11 is installed at the frame profile 1 of a fixed/fixation frame of the skylight. It may for example be a centre pivot type skylight as illustrated in figs 3, 4 and/or 5, or it may be a top hung type roof window, or it may be a flat roof roof window as illustrated in figs 1-2. Fig. 6a illustrates the cover 11 before installation of the cover as shown in fig. 6.

[0110] Here, one or more resilient gaskets 71, 72 is/are configured to be deflected by and support on the cover when the movable frame is in a closed position. The gasket 71 originally supported on and was probably at least to some extent deflected by the profile 1 surface 1a before the cover 11 installation. When the cover 11 was installed, the movable frame was opened and the cover was arranged so that the tongue 14 extend around the profile corner 1cb. Thereby, the gasket 71, when closing the movable frame, now support on the tongue 14 wall surface instead of the surface 1a.

[0111] Moreover, a second or alternative gasket 72 may be provided in some embodiments. This was originally configured to support on profile surface 8a. However. When the cover 11 was installed, the cover wall 11b covers that surface 8a, and now the gasket 72 is deflected by and support on this wall part 11b of the cover 11 that is placed between the first profile 1 and profile 2 of the movable frame, respectively, when the movable frame is moved into a closed position.

[0112] Fig. 6 moreover illustrates a further embodiment of the present disclosure where the cover 11 is shaped to provide a space 80 between the cover wall 11c and the profile surface 8a that was visible and exposed to the building interior after skylight installation in a building but before the cover 11 installation. This space provides that a part of the cover wall may be angled to provide a wall part such as a wall part comprising the partly transparent material 21 that faces at least partly towards the building interior to e.g. increase the amount of light from the light arrangement 12 entering into the building interior rather than towards the aperture 30. This may e.g. be relevant at lower skylight parts 50 of windows placed in a building roof that has a pitch above 17°, such as above 30°, but it may also be relevant in flat roof skylight types as e.g. seen in figs. 1 and 2, or at side profiles and/or top profiles 1, 2 of a pivot window such as a centre hung or top hung skylight type. See e.g. one or more of figs. 3-5.

[0113] In fig. 6, the cover is installed by placing the tongue 13 in the groove between the drywall 7 and the rim leg 5.

[0114] Fig. 7 illustrates that two covers 11 (illustrated in figs 7a and 7b respectively) are installed at the same side of a skylight, in this case a bottom part/side 50 of a pivot type skylight (see e.g. fig. 5). Here, the cover 11 that covers a part of the profile 1 of the fixed frame is installed substantially as illustrated in fig. 6, however where the space 80 of fig 5 has been reduced so that the light arrangement 12 primarily transmit the light towards the aperture 30.

[0115] The cover installed at the movable frame is placed so that the tongue 13 extends in between the surface 55 of the profile 2 and the glazing 3, see e.g. also fig. 5.

[0116] Figs. 8-10 illustrate schematically cross sectional views of various embodiments of installation of one or more covers 11 according to embodiments of the present disclosure, on a skylight that comprises a fixation frame/ fixed frame comprising profiles 1 and does not comprise a movable frame that provides that the glazing 3 can move. In these figures, as well as in figs 1-4, right side example illustrates the skylight with the cover 11 installed, and left side example illustrates the frame and cover 11 before cover installation. The fixed frame supports the glazing 3 that is attached to the fixed frame.

[0117] In fig. 8, the cover comprises two tongues 13 where one of the tongues is configured to abut a peripheral rim leg 5 of the frame that support a dry wall 7, whereas the other tongue 13 extends in between the glazing 3 and a surface 55 of the frame 1 profile, where this surface 55 faces and is proximate the glazing. Hereby, the cover comprises a cover wall that covers the profile surface 8a of the fixed frame that was visible and exposed to the building interior after skylight installation in a building but before the cover 11 installation. The covering of the profile surface 8a is provided all the way between the longitudinal, parallel corners 1ca, 1cb and

the cover 11 extend around these outer corners. This surface 8a, as also illustrated in various of the previously described figures, faces and abuts the aperture 3 before the cover 11 is installed.

[0118] In fig. 8, the cover 11 substantially covers the entire surface between the two outer corner portions 1ca, 1cb where the surface 8a facing the frame aperture 30 is terminated.

[0119] As previously mentioned, the cover may generally be resilient, such as so that the cover may provide a resilient cross section and a resulting clamping force between the opposite free ends/edges of the cover when mounted on the frame due to the resilient cross section.

[0120] In fig. 9 the cover 11 extends over a part of the first frame surface 8a, but not over the entire first frame surface 8a between the outer corners 1ca, 1cb. Instead, in fig. 9, the cover 11 only covers the surface 8a from the corner 1ca and to an intermediate groove/slit 90 in the surface 8a that faces the aperture. Here, the cover 11 comprises a tongue 14 that extends into this groove 90. However, the cover still comprises the tongue 13 that abutts the peripheral rim leg 5 of the frame supporting the dry wall 7.

[0121] Fig. 10 illustrates another embodiment of the present disclosure where the cover 11 extends over a part of the first frame surface 8a, but not over the entire first frame surface 8a between the outer corners 1ca, 1cb. Also here, the intermediate groove 90 is provided in the surface 8a between the corners 1ca, 1cb. the cover 11 only covers the surface 8a from the corner 1cb and to the intermediate groove/slit 90 in the surface 8a that faces the aperture. Here, the cover 11 comprises a tongue 14 that extends into this groove 90. However, the cover still comprises the tongue 13 that extends in between the glazing 3 and the surface 55 of the frame that faces and is proximate the glazing 3.

[0122] The same would apply in an embodiment where the frame is a movable frame, see e.g. fig. 5.

[0123] It is generally understood that the cover 11 may provide a resilient cross section due to one or more resilient parts, such as wall parts 20, of the cover. The cover may provide a resulting clamping force as a consequence of the cover material providing a "restoring force" where the cover tries to get back to its resting position where no biasing force is applied. For example, fig. 8 illustrates the cover 11 where dashed lines indicates the resting position of the cover, and where the solid lines of the corresponding part of the cover indicates the cover condition due to a biasing force that deforms the resilient part 20 of the cover 11. The resting position (dashed cover walls of fig. 8) is where where the cover is de-mounted from the skylight and the cover is not deformed by a biasing force, such as by hand or by a part of the skylight, to get to a state where it can be attached to the skylight as intended. The cover 11 may for example comprises a resilient wall part 20, and the cover 11 may provide a resulting clamping force around a part of the exterior of the profile 1, 2 due to said resiliency, such as due to a

wall part being forced away from it's resting position by said profile. This resiliency may generally be provided to obtain the clamping force in the various embodiments described above and/or below.

[0124] Fig. 11 illustrates an embodiment substantially corresponding to fig. 6 (or fig. 7), according to embodiments of the present disclosure. However, here, the cover 11 is also secured to the frame profile 1 of the fixed frame by means of one or more mechanical securing means 95, in this case screws (one is illustrated).

[0125] It is generally understood that in addition to obtaining a holding force on the frame profile 1, 2 due to resiliency of a part of the cover 11 as e.g. described above, or as an alternative thereto, the cover 11 may be secured by fastening means 95 such as tape and/or fasteners such as mechanical fasteners, such as wedges, clamps, screws, nails and/or the like. For example, in some embodiments, one or more screws (as in fig. 11) or the like may be driven into the relevant frame profile 1, 2, for example at a location between the movable frame 2 and the fixed frame, when the cover is mounted to provide an improves securing of the cover 11 to the profile 1, 2. The cover 11 may here in some embodiments be delivered with suitable screws or the like, and may have pre-provided holes in the cover, and e.g. also with sloping surfaces encircling the hole(s) so as to allow a screw head to be countersunk so the screw head surface is at least flush with the cover surface. In some existing skylights designs there may be sufficient space for this, for example in some skylight designs with movable frames pivoting around a centre portion or top hung roof windows.

[0126] However, it is understood that the cover 11 may in some embodiments be shaped and designed to be installed at the profile 1, 2 without the need of further mechanical holding means beyond the pre-provided shape of the cover itself, e.g. in combination with using the resiliency of the profile to provide a clamping force onto outer surfaces of the profile 1, 2 at which the cover is installed.

[0127] Fig. 11a illustrates an embodiment of the cover installed in fig. 11.

[0128] Generally, when moving the movable frame to an open position, if the skylight comprises a hinged movable frame as described in relation to various embodiments above, mounting of the cover and the optional securing means 95 may be more easy. In certain embodiments, opening the skylight may not even be needed during cover 11 installation.

[0129] Fig. 12 illustrates schematically and in perspective a simplified frame, in this case a fixation frame of the skylight comprising profiles 1. Many of the previously described details have been omitted from the figure to improve figure simplicity.

[0130] As can be seen, the profiles 1 of the fixation frame comprising the surfaces 8a facing and abutting the aperture 30 before cover installation have a length. In this case the frame comprises parallel side profiles 1 (see

also figs 1-4) having a first surface 8a with a first length L1, and parallel top and bottom profiles 1 having a surfaces 8a with a length L2. L1 and L2 may be different in some embodiments. The length L1, L2 extend along and parallel to the longitudinal direction of the respective profile.

[0131] The lengths L1, L2 are measured between interior corners of the frame where the respective surfaces 8a terminates.

in one or more embodiments of the present disclosure, the cover 11 (illustrated schematically and in perspective in fig. 12a) may be designed to have a length L3 that is at least 20%, such as at least 50%, such as at least 80% of the length L1, L2 of the surface 8a which it is designed to cover. In some embodiments, the cover 11 may be designed to have a length L3 that is at between 20% and 100%, such as between 50% and 100%, such as between 80% and 100% of the length L1, L2 of the surface 8a which it should cover. In some further embodiments, the length L3 of the cover may be below 80%, such as below 50%, such as below least 20% of the length L1, L2 of the surface 8a which it should cover.

[0132] For example, in one example, a first cover may cover substantially an entire surface having the length L2, and another cover or other covers 11 may cover only a part, such as less than 50% of the side profile surface 8a having the length L1.

[0133] However, in still further embodiments, the cover(s) 11 may be designed to substantially hide the entire surface 8a over the entire length L1, L2 of the surface 8a of one or more, such as two, three or all four profiles of the frame 1.

[0134] The same with regard to cover lengths L3 as described in various embodiments above may naturally be provided in other embodiments of the present disclosure for the surface 8b of one or more frame profiles 2 of a movable frame, if present.

[0135] Figs 13a and 13 b illustrates embodiments of the angle between the outer corners 1ca, 2cb around which the cover will extend is illustrated, according to embodiments of the present disclosure.

[0136] Fig. 13a illustrates the outer corner 2cb providing the transition between the surface 8b and the surface 55 facing the glazing 3, of the frame profile 2 of the movable frame. An angle α_1 between these outer surfaces 8a, 55 is indicated by the dashed sector of a circle.

[0137] Fig. 13b illustrates the rim leg 5 of the frame profile 1 of the fixation frame according to embodiments of the present disclosure. Here the outer corner 1ca provides the transition between the surface 8a and the surface 5a of the rim leg 5 that extend towards the groove receiving the drywall 7, as also previously disclosed. An angle α_1 between these outer surfaces 8a, 5a is indicated by the dashed sector of a circle.

[0138] In some embodiments of the present disclosure, the angle α_1 between the frame surface 8a and one or both outer surfaces 55, 5a of the profile that is terminated at/meet at said corners 1ca, 2cb may be larger than 180° , such as larger than 220° , such as larger than

260° . The same angle α_1 may in alternative or additional embodiments apply for other corners, such as one or both corners 1cb (see e.g. fig. 1 or fig. 6), 2ca (see e.g. fig. 11 or fig. 2 or fig. 5).

[0139] Generally, as illustrated in the various embodiments of figs. 3 and 6-7, a part of the surface 8a facing the frame aperture 30 provided by profiles 1 of the fixed frame, may be covered by a profile 2 part of the movable frame when the movable frame is in a closed position. In the embodiments of figs. 3-4, this applies for side profile(s) 1 of the fixed frame, and in figs 6-7 it applies for a bottom profile 1 of the fixed frame. The cover 11 extends all the way between the corners 1ca- 1cb, and hence, both a part of the surface 8a of the fixed frame that would maintain visible when the movable frame is closed and the cover was not installed, as well as a part of the surface 8a of the fixed frame that would only be visible when opening the movable frame and the cover 11 was not installed, may be covered by a wall of the cover 11.

[0140] In the various figures described above, the electric light arrangement 12 is illustrated as placed between the profile surface 8a, 8b and a wall part of the cover, e.g. by being supported by an interior wall surface of the cover that faces the frame profile 1, 2. However, in other embodiments, the electric light arrangement 12, or a part thereof, may be arranged at the exterior side of the cover 11 instead.

[0141] As can be seen from the various figures described above, the cover 11 may comprise two tongues 13, 14.

[0142] In previously described illustrated embodiments where the cover 11 is installed on a profile 2 of a movable frame, the first tongue 13, such as a terminal tongue, may be arranged in between the glazing 3 and a surface 55 of the frame facing and being proximate the glazing. The other tongue 14 may here e.g. be provided by letting the cover 11 extend partly around the periphery of the profile 2 as e.g. illustrated in the various embodiments of figs. 2, 4, 5 and 7 from a first corner 2cb proximate to the glazing 3, over a second corner 2ca distant the glazing (surface 8b facing the aperture 30 is provided between these two corners), and moreover therefrom around a further third corner 2cc to a wall part of the movable frame that may face a part of the fixed frame profile 1 when the sash is closed and/or face away from the aperture. This may provide a holding of the cover 11. Additionally or alternatively, this may provide that the cover 11 provides an impression of an unbroken surface when opening the skylight by moving the movable frame to an open position, and/or while the movable frame is in a closed position.

[0143] In the various embodiments of figs. 1, 3, 6, 7, 11 where the cover 11 is installed on a profile 1 of a fixed frame that is fixed unmovably to a building roof construction (not illustrated), the first tongue 13, such as a terminal tongue may abut the peripheral rim leg 5. In some embodiments, this rim leg supports a dry wall 7 extending into a groove as e.g. described in relation to fig. 1. The

tongue 13 may comprise a part extending into a groove in a space between the rim leg 5 and the drywall 7 surface. Moreover, the cover 11 extends into a space between the movable frame profile 2 and the fixed frame profile 1. Here, the cover 11 is placed so that a part of it extends from the first surface 1a and over/around a corner portion 1cb providing the transition from the first surface 8a to another outer surface of the profile 1 that is located in between the movable frame and the fixed frame (when the movable frame is in a closed position). Here, a further tongue 14 support, such as abut, a surface of the profile 1.

[0144] This may provide a holding of the cover 11. Additionally or alternatively, this may provide that the cover 11 provides/gives an impression of an unbroken surface when opening the skylight by moving the movable frame to an open position, and/or while the movable frame is in a closed position.

[0145] It is generally understood that the wall material of the cover 11 described above in relation to various embodiments may be made from any suitable material. For example, it may be made from a metal material such as plate steel, or it may be made from a polymer material such as a plastic material, or a fibre reinforced plastic material.

[0146] In one or more embodiments of the present disclosure, at least said tongue 13 for engaging the peripheral rim 5 and/or said tongue 13 extending in between the glazing and a surface 55 of the frame 2 facing and being proximate the glazing 3 may have a thickness of 2 mm or less, such as below 1.5 mm, such as around 1 mm. In embodiments of the present disclosure, the whole cover 11 wall may have a thickness of 2 mm or less, such as below 1.5 mm, for example around 1 mm. In some embodiments of the present disclosure, the tongue 13 thickness and/or the entire cover wall thickness may be between 0.4 mm and 2 mm, such as between 0.4 mm and 1.5 mm.

[0147] In one or more embodiments of the present disclosure, said tongue 13 for engaging the peripheral rim 5 may extend less than 12 mm, such as less than 6 mm, for example less than 3 mm in between the drywall 7 and the rim leg 5. In some embodiments, the tongue 13 for engaging the peripheral rim leg 5 may extend at least 2 mm in between the drywall 7 and the rim leg 5. This distance may e.g. be determined from the frame corner 1cc (see e.g. the various embodiments of figs. 1, 3, 5-7 and 11) of the rim leg 5.

[0148] The tongue 13 may extend in between the glazing 3 and surface 55, or in between the dry wall and the rim 5, to provide an improved fixation of the cover, and/or in order to provide an advantageous aesthetic finish after cover installation. In embodiments of the present disclosure where a tongue 13 of the cover extends in between the glazing 3 and a surface 55 of the frame facing and being proximate the glazing 3, as e.g. illustrated in several of the previously described figures, such as in figs 2, 4, 7 8 and/or 10, may extend less than 10 mm, such as less than 5 mm, for example less than 3

mm in between the glazing 3 and the surface 55 of the frame. This distance may be measured/determined from the corner part 2cb. In some further or alternative embodiments, said tongue 13 extending in between the glazing 3 and the frame surface 55 may extend at least 2 mm such as at least 3 mm, such as between 2mm and 10 mm in between the glazing 3 and the surface 55 of the frame facing and being proximate the glazing.

[0149] The disclosed covers 11 of the various examples described above have for example the advantage that factory assembly or retrofitting may be enhanced. Also there is no need for new window profiles and expensive manufacture tooling.

[0150] Some skylights have an electric actuator and thereby electric mains wiring is provided at the installation and upgrading with electric light is very feasible.

[0151] A further benefit may be or is, that by covering the visible part of the window and new appearance can be provided both when the light is on and off.

[0152] Although the aspects above have been described using an openable skylight, the invention is applicable to any type of fixed skylights.

[0153] The invention has mainly been described above with reference to a limited number of skylights and skylight types. However, as is readily appreciated by a person skilled in the art, other skylights than the ones disclosed above are within the scope of the invention, as defined by the patent claims. p

Claims

1. Building skylight with a light aperture (30) comprising:

- a glazing (3),
- a frame (1, 2) with four profiles surrounding the aperture (30), and
- a cover (11),

wherein an outer first frame surface (8a, 8b) of one or more of said profiles extends towards a plane (PL1) defined by a major surface of the the glazing (3), and wherein said outer first frame surface (8a, 8b) is an outermost side surface of the profile that faces said aperture (30),

wherein the cover (11) comprises an illumination element (10) comprising an electric light arrangement (12),

wherein a part of the cover (11) extends over at least a part of the first frame surface (8a, 8b), and wherein said part of the cover (11) comprises an outer surface (11s) that faces away from said first frame surface (8a, 8b) and abuts said aperture (30),

wherein the cover (11) comprises a tongue (13) which abutts a peripheral rim leg (5, 6a)

- of the frame (1, 2), said rim leg supporting a dry wall (7), and/or wherein the cover (11) comprises a tongue (13) extending in between the glazing (3) and a surface (55) of the frame (1, 2) facing and being proximate the glazing. 5
2. Building skylight according to any previous claim wherein the cover (11) supports the light arrangement (12). 10
 3. Building skylight according to any of the preceding claims, wherein the cover (11) comprises an at least partly transparent material (21) through which light from the light arrangement (12) is configured to pass and/or wherein the cover (11) comprises, such as have, light exit apertures. 15
 4. Building skylight according to any of the preceding claims, wherein said tongue (13) extends in between the dry wall (7) and said rim leg (5, 6a). 20
 5. Building skylight according to any of the preceding claims, wherein the cover (11) provides a resilient cross section and a resulting clamping force between the opposite ends (13,14) when mounted on the frame due to said resilient cross section. 25
 6. Building skylight according to any of the preceding claims, wherein the cover (11) comprises a resilient wall part (20), and wherein said cover provides a resulting clamping force around a part of the exterior of said profile due to said resiliency, such as due to a wall part being forced away from its resting position by said profile. 30 35
 7. Building skylight according to any of the preceding claims, wherein the cover (11) extends around at least two outer corner areas (1ca, 1cb, 2ca, 2cb, 2cc,) of said profile, such as at least three or at least four outer corner areas of said profile, such as wherein one or more of said corner areas (1ca, 1cb, 2ca, 2cb) is/are located at the termination of said first frame surface (8a,8b) of the profile. 40 45
 8. Building skylight according to any of the preceding claims, wherein at least on one skylight side, such as two opposing skylight sides, such as four skylight sides, one or more of said cover (11) covers the first frame surface (8a) of an otherwise visible fixed frame (1), or covers the first frame surface (8b) of an otherwise visible movable frame (2). 50
 9. Building skylight according to any of the preceding claims, wherein the first frame surface (8a,8b) extends from the peripheral rim leg (5, 6a) and towards the glazing (3). 55
 10. Building skylight according to any of the preceding claims, wherein the tongue (13) abutts the glazing (3) and/or wherein the tongue abuts a seal (9b) placed between said glazing and said surface (55) of the frame that faces and is proximate the glazing.
 11. Building skylight according to any of the preceding claims, wherein frame comprises a movable frame (2) connected to a fixed fixation frame (1) of the skylight by means of a hinge (15), such as a pivot hinge, wherein said first surface (8a) is a surface of the fixation frame.
 12. Building skylight according to any of the preceding claims, wherein frame comprises a movable frame (2) connected to a fixed fixation frame (1) of the skylight by means of a hinge (15), such as a pivot hinge, wherein one or more resilient gaskets (71, 72) is/are configured to be deflected by and support on said cover (11) when the movable frame (2) is in a closed position.
 13. Method of retrofitting an illumination element (10) on a pre-installed building skylight, the skylight comprising a light aperture (30) for allowing sunlight to pass into the building at which the skylight is arranged, wherein the pre-installed skylight comprises a glazing (3) and a frame (1, 2) with four profiles surrounding the aperture, wherein said frame (1, 2) comprises an outer first frame surface (8a,8b) of one or more of said profiles, wherein said outer first frame surface (8a, 8b) is an outermost visible side surface of the profile that faces and abuts said aperture, and where the outer first frame surface (8a, 8b) is provided by an integrated wall of the profile, said method comprising:
 - providing a cover (11), wherein the cover (11) comprises an illumination element (10) comprising an electric light arrangement (12), and wherein the cover comprises at least one tongue (13, 14),
 - arranging said cover (11) so that it extends over and covers at least a part of said first frame surface (8a,8b), and so that a surface of the part of the cover (11) that covers the first frame surface (8a,8b) faces and abuts said aperture,
 - providing a fixation of the cover at the frame (1, 2), where said fixation comprises placing a tongue (13, 14) of the cover so that it abutts a peripheral rim leg (5,6a) of the frame (1, 2, 3), and/or
 placing a tongue (13, 14) of the cover so that it extends in between the glazing (3) and a surface

(55) of the frame (1, 2) facing and being proximate the glazing.

14. Method according to claim 13, wherein said cover (11) comprises a resilient part such as a resilient wall part (20), and wherein said fixation of the cover at the frame (1, 2), comprises deforming said resilient part from a resting position so that said cover provides a restoring force and thereby a holding force, such as when mounted at the skylight so that the cover (11) clamps around at least a part of the frame (1, 2) profile.
15. Method according to claim 13 or 14, whereby said method provides a building skylight according to any of claims 1-12.

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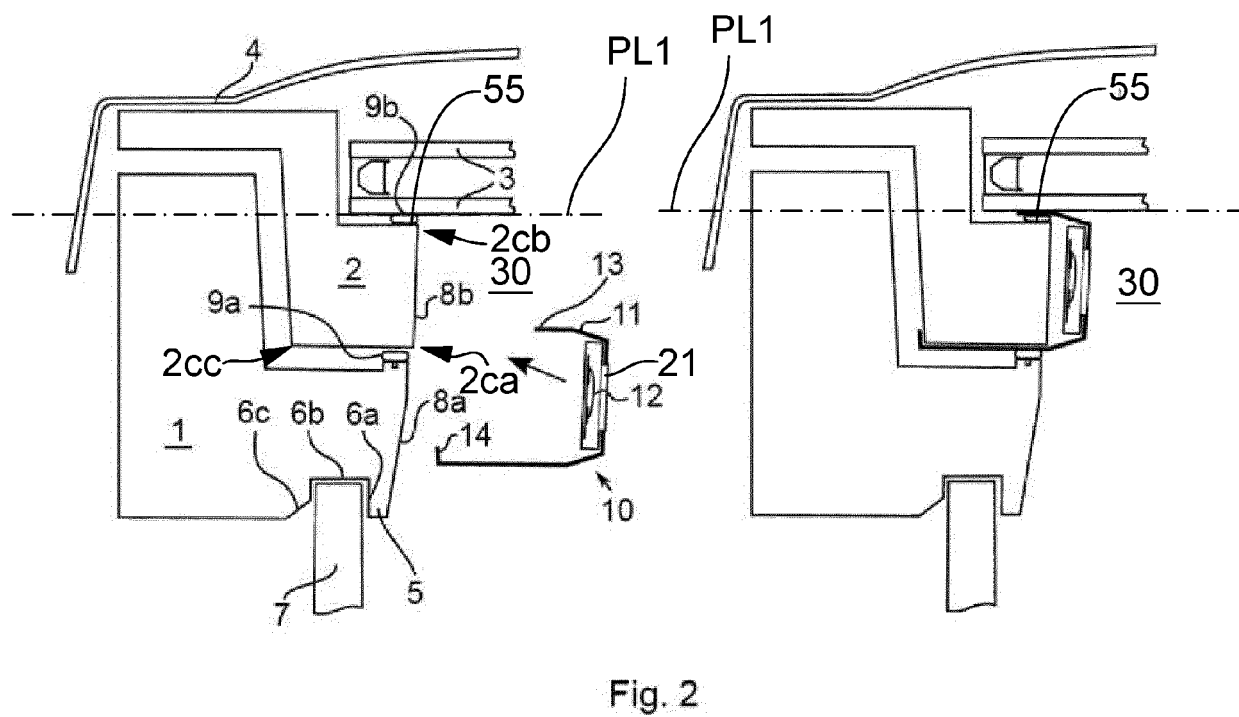
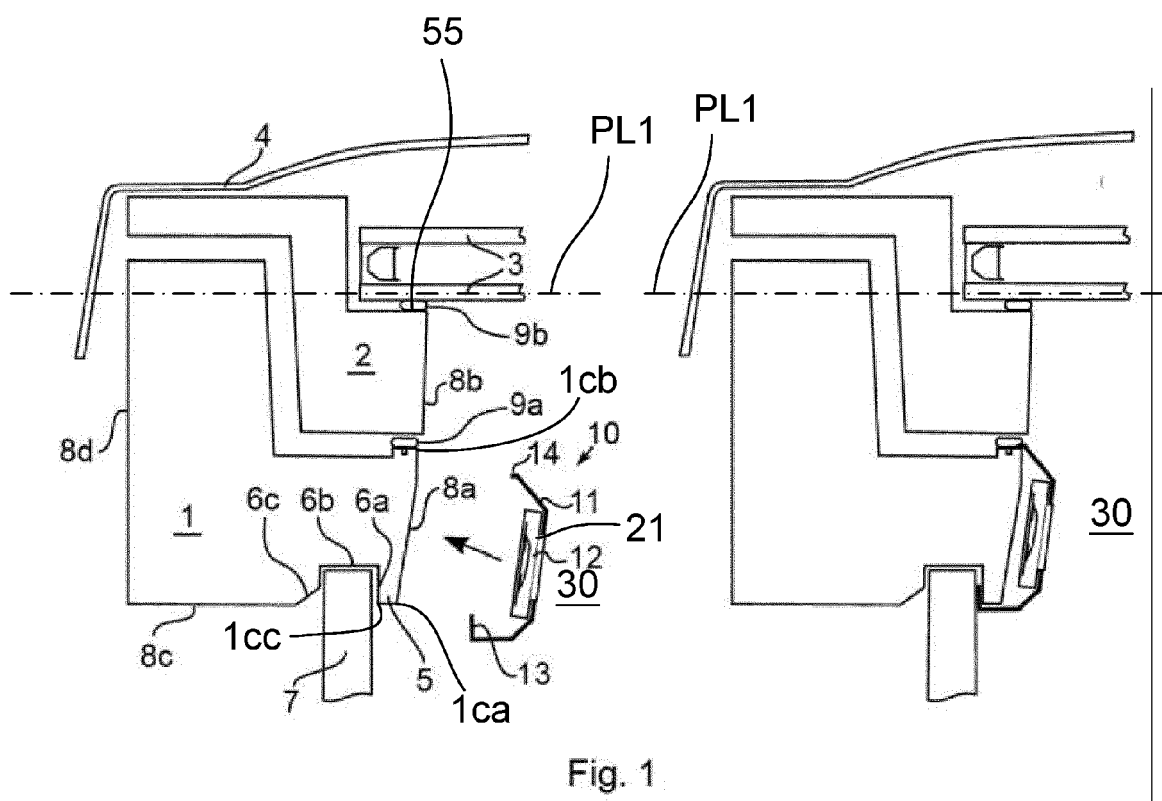
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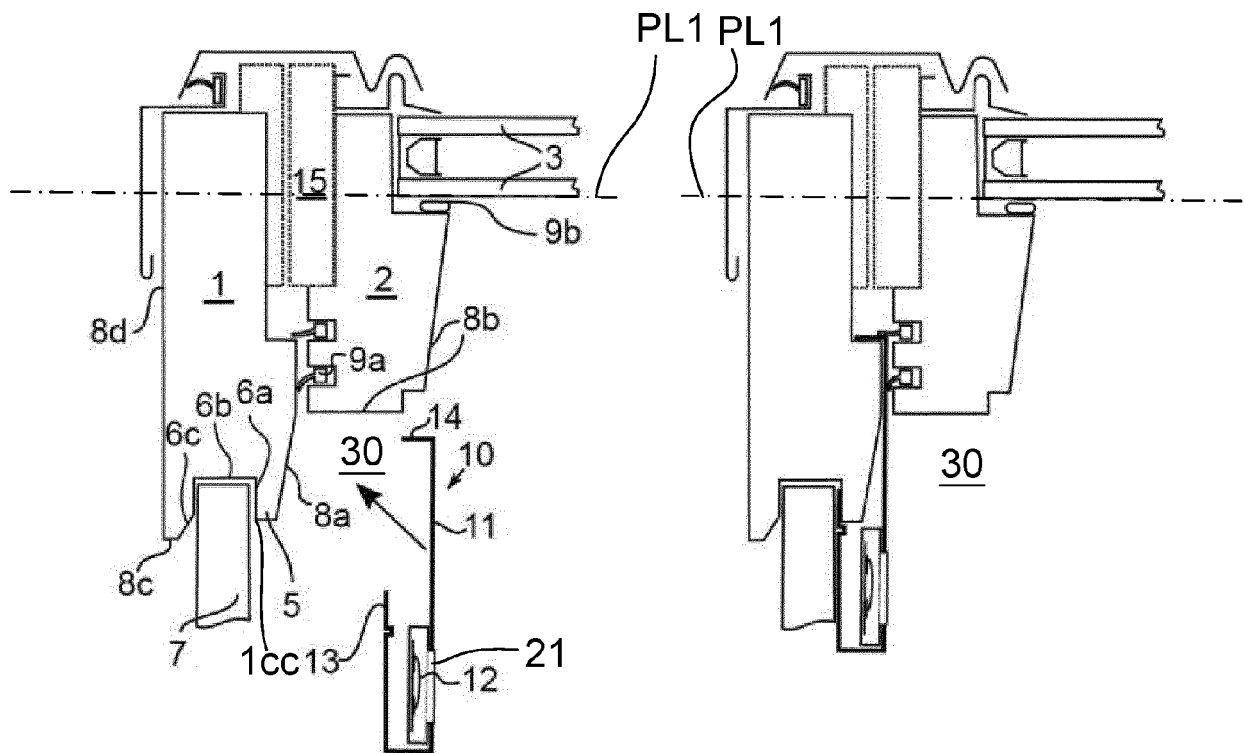


Fig. 3

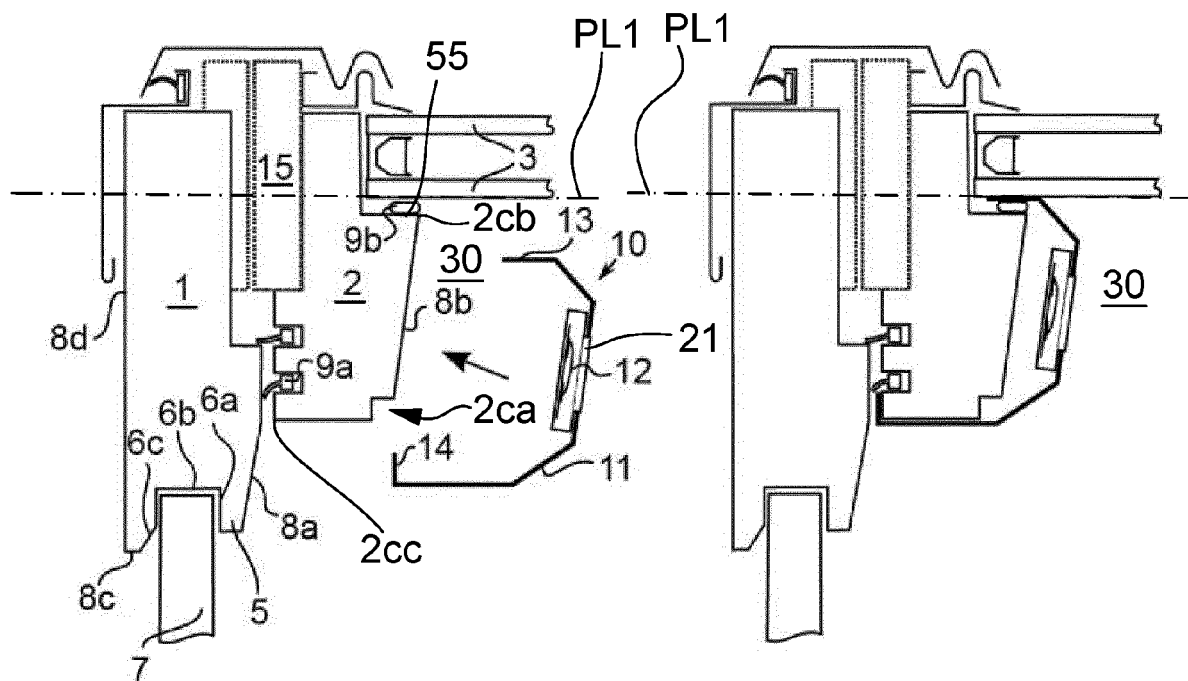
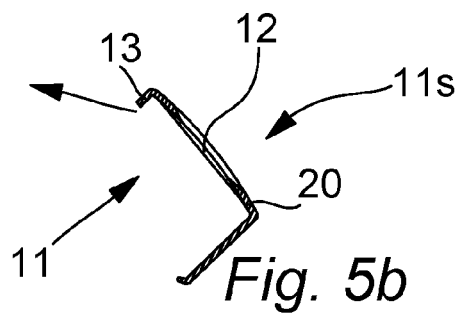
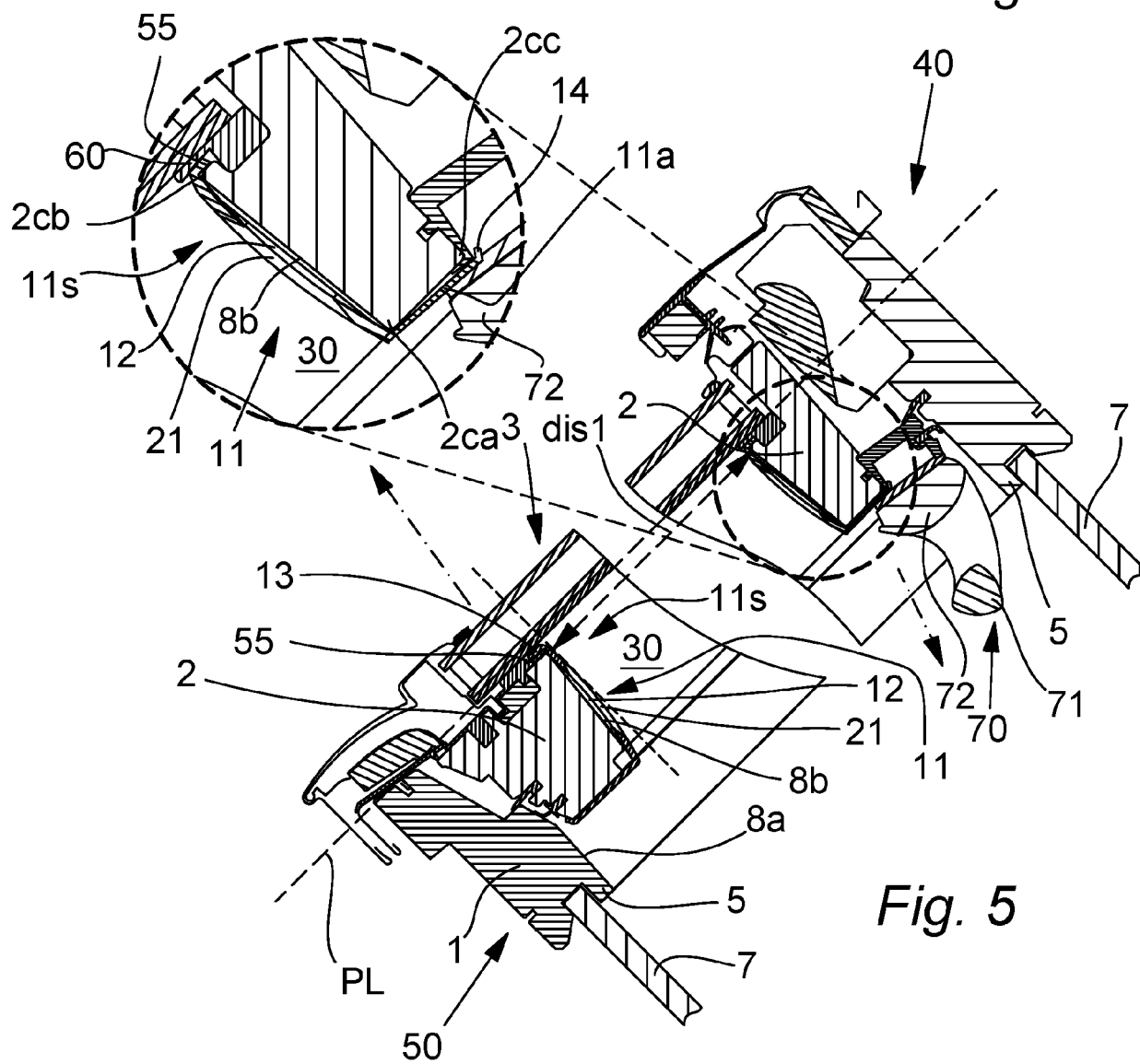
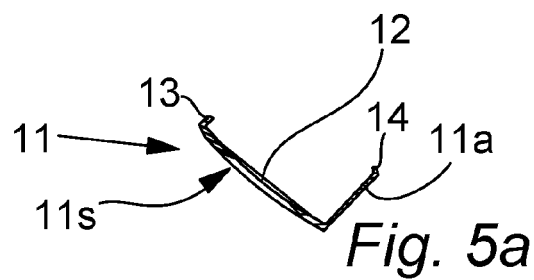
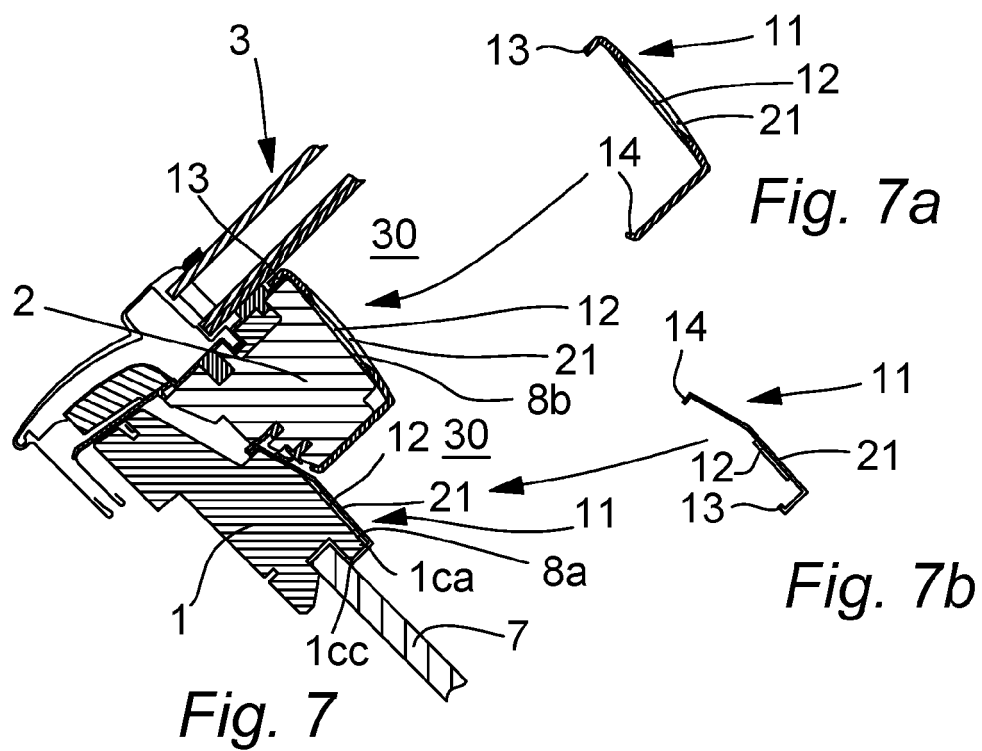
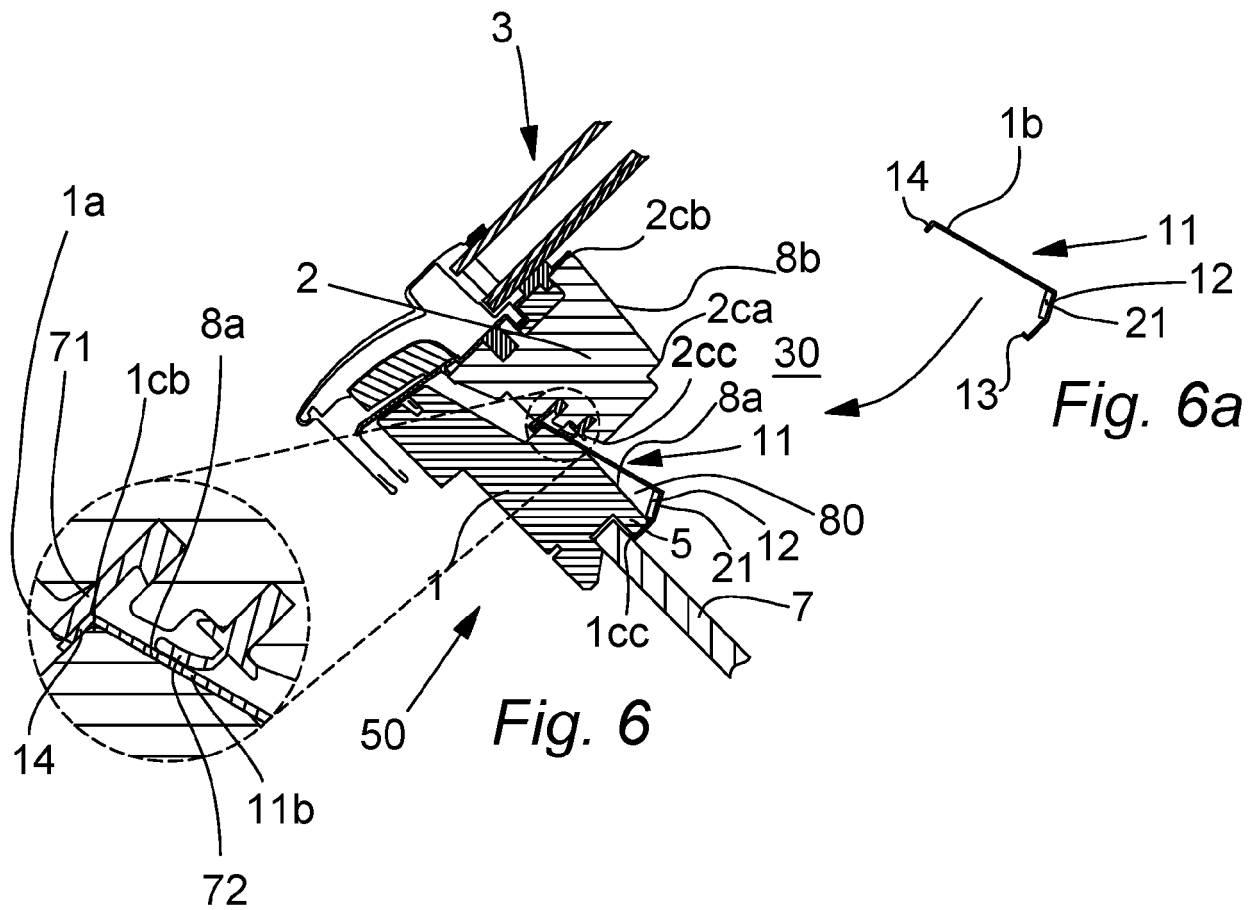
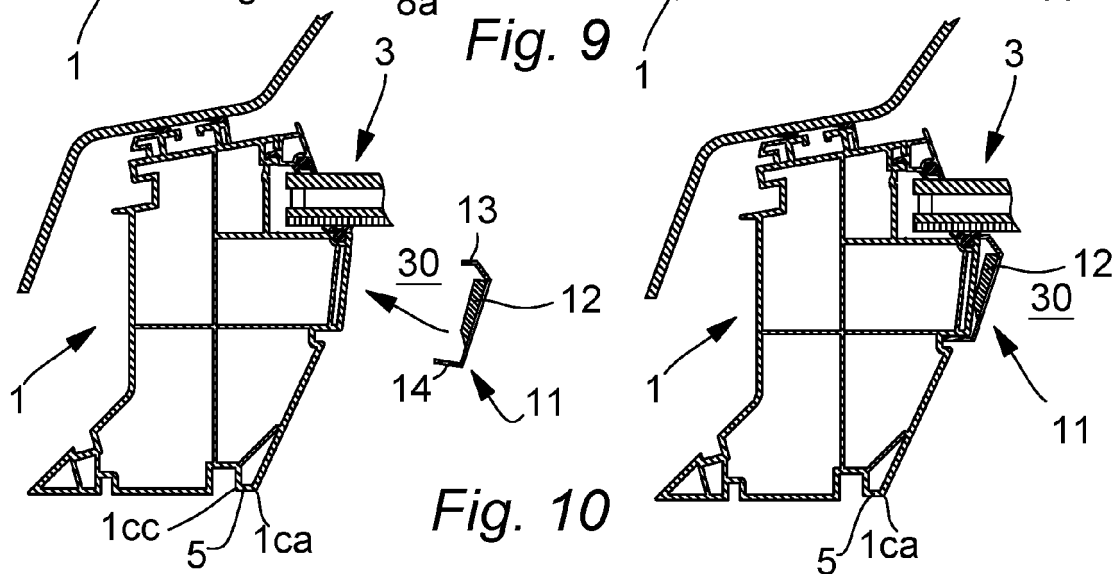
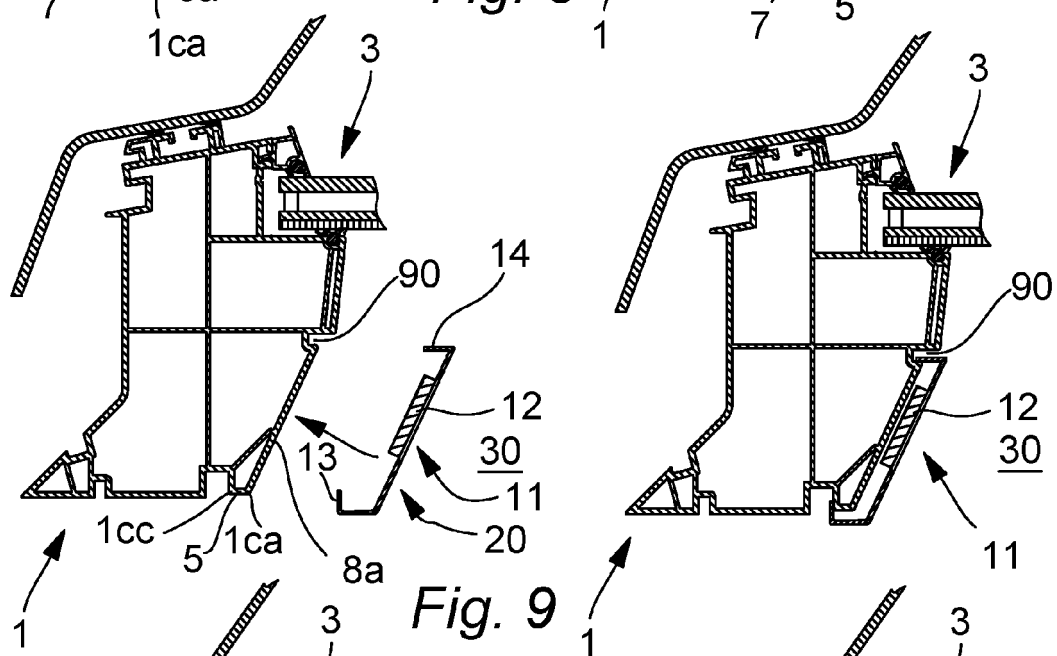
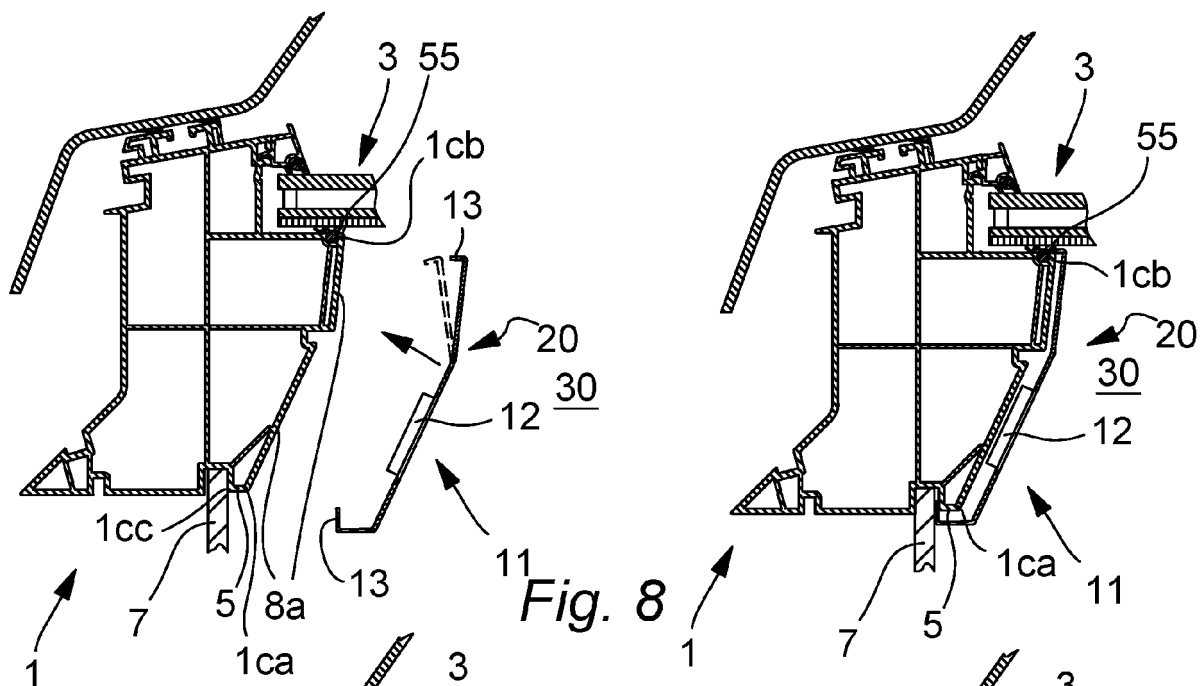
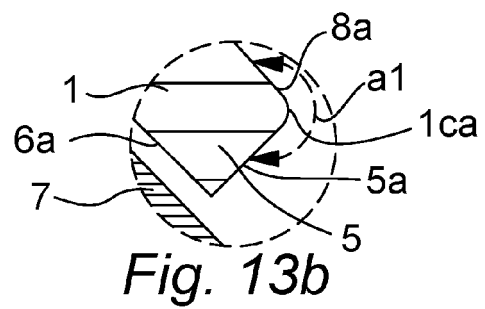
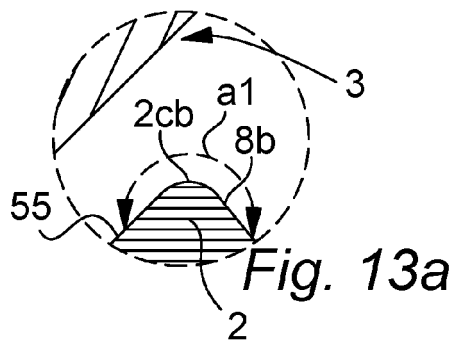
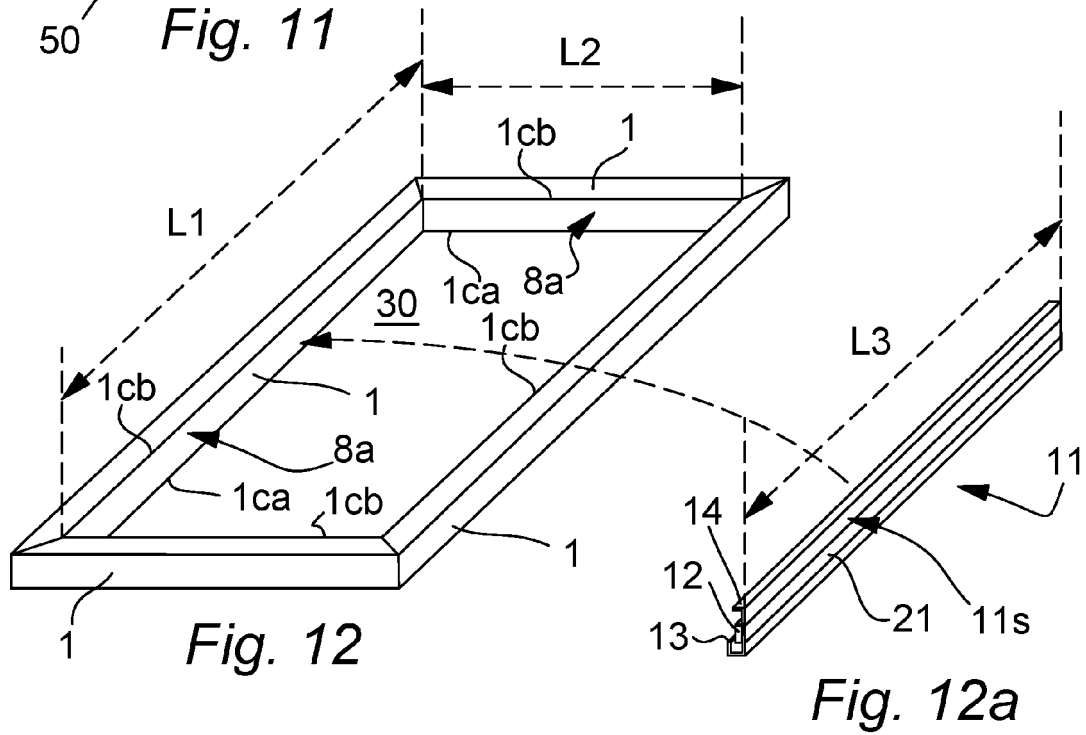
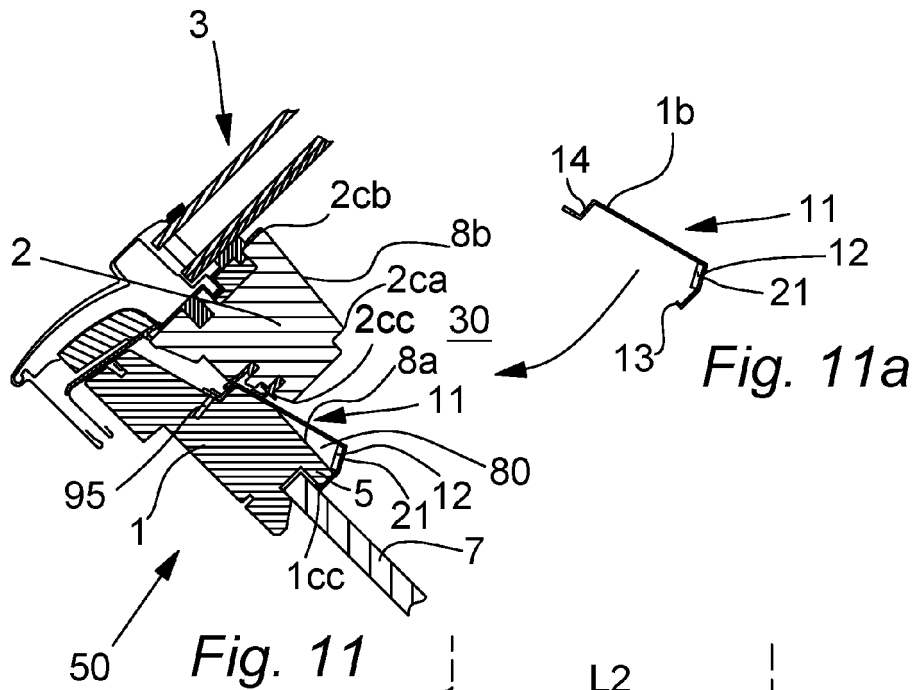


Fig. 4











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