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(54) **ASSEMBLY OF A WINDOW SECTION AND A SCREEN DEVICE**

(57) Assembly (1), of a window section (5) and a screen profile assembly (2) for mounting a lateral side of a screen for screening off the window section (5), comprising a basic profile (6) with:
- a side wall (7) to be fitted to the window section (5) for fastening the basic profile (6) against the window section (5);
- a rear wall (11), which is raised relative to the side wall (7) in order to be raised relative to the window section (5); and
a flange (8) at the level of the rear wall (11), for fastening the basic profile (6) against the window section (5), wherein this flange (8) is raised relative to the side wall (7) on the side opposite to the side where the rear wall (11) is raised t and is displaced in a transverse direction (D), transverse to the rear wall (11) and away from the side wall (7) by a distance Δd relative to the rear wall (11), with $0 < \Delta d \leq$ the transverse frame tolerance (d_{rt}).

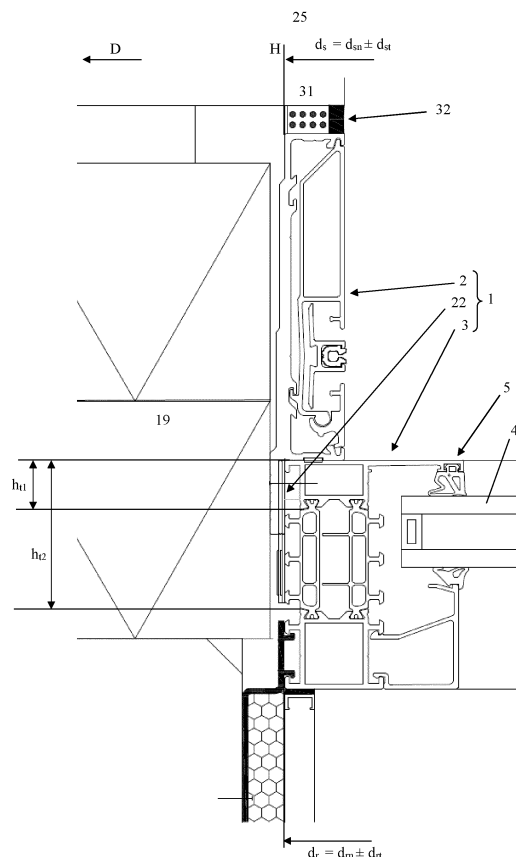


Fig. 1

Description

[0001] The present invention relates to an assembly of a window section, comprising a window profile assembly, for forming a window frame for mounting glazing to form the window section and a screen device, comprising a screen profile assembly, comprising a screen holding profile for mounting a lateral side of a screen in order to screen off the window section, the screen profile assembly comprising a basic profile for mounting the screen profile assembly against the window section, wherein this basic profile comprises a side wall, which is intended to be applied on the window section for fastening the basic profile against the window section and comprises a rear wall, which is raised relative to the side wall in order to be raised relative to the window section, wherein the window section, viewed in a transverse direction transverse to the rear wall, comprises a nominal transverse frame outside dimension and the screen device comprises, in the transverse direction, a nominal transverse screen outside dimension, wherein the rear wall of the basic profile comprises a reference line, which is provided in order to delimit this nominal transverse screen outside dimension and wherein the nominal transverse frame outside dimension is equal to the nominal transverse screen outside dimension.

[0002] The window profile assembly of said profile assembly comprises window profiles that are assembled to form a window frame, which is intended for the mounting of glazing. A window frame of this kind is also suitable for and is also often used for mounting for example panels or grilles, etc. Whenever glazing is mentioned, this also applies *mutatis mutandis* to any other suitable wall elements. A window section is intended to mean both separate windows or doors and walls with various windows and/or doors installed adjacent to each other.

[0003] The screen profile assembly is provided for mounting a lateral side of a screen in order to screen off this window section. Moreover, a screen of this kind may assume various forms. A screen device of which this screen and this screen profile assembly form part may for example comprise a screen that is windable and unwindable on a cloth roller, which may be configured as an insect screen or as a blackout curtain, etc., and wherein the cloth roller is then typically installed in a screen housing.

[0004] Examples of screen profile assemblies wherein a side wall of a basic profile of this screen profile assembly is applied against a window section for fastening the basic profile against the window section are for example described and illustrated in BE 1 018 779 A5. In this patent publication, various fastening methods and associated fasteners are described for mounting a screen profile assembly against a window section.

[0005] In DE 297 08 747 U1, a screen profile assembly with a screen guide profile for guiding a roller shutter is secured to a window section. In DE 2 221 988 A1, a screen guide profile for guiding a lateral side of a roller

shutter is secured by means of a suitable window profile to a window section.

[0006] The screen profile assemblies are fastened to window profiles of a window section of this kind. There is a tendency to make these window profiles narrower and narrower, viewed in the transverse direction, in so-called minimalistic window sections. Then it is also desired to join the screen profile assemblies in this transverse direction just as narrowly on these window profiles by also making said side wall of the basic profile just as narrow. Thus, there is less and less space for fastening a screen profile assembly of this kind in a sturdy manner against these window profiles. It is difficult to fit other fasteners for example such as screws on the width of these side walls, for example such as is the case in DE 297 08 747 U1. Thus, in practice, often screen profile assemblies are fastened to window profiles, which are made wider in the transverse direction than these window profiles.

[0007] There is also a tendency to make the window sections - and thus also the screen devices that are installed in front of said window sections - larger and larger. In these larger screen devices, ever larger forces have to be received by the screen profile assemblies and transmitted to the window sections via the window profiles. Certainly when the screen is mounted on opposite sides with a thickening of its lateral sides in a screen holding profile and this screen holding profile is mounted by means of spring elements in the screen profile assembly for keeping the screen under tension in the transverse direction, large dynamic loads are exerted on these screen profile assemblies.

[0008] The present invention relates to assemblies wherein the nominal window outside dimension is equal to the nominal screen outside dimension. Theoretically, it is then desirable that, in the transverse direction, the width of the window section is equal to the width of the screen device. For this purpose, the window profiles and profiles of the screen profile assembly will then be given desired dimensions or be sawn to a desired dimension to achieve this aim. When assembling window profiles to a window frame, the width obtained in the transverse direction will in practice, however, typically deviate somewhat from this desired nominal window outside dimension. Similarly, the width obtained for a screen device in the transverse direction will in practice, through assembly of the components thereof, deviate somewhat from the desired nominal screen outside dimension.

[0009] For these deviations, dimensional tolerances are stipulated, within which these deviations should remain.

[0010] The permitted dimensional tolerances are prescribed by national trade organizations, which also co-operate internationally. In Belgium it is for example the Federatie van Aluminium Constructeurs (FAC), in the Netherlands, VMRG and in Germany Gütegemeinschaft Fenster Fassaden und Haustüren e.V.

[0011] Thus, the outside dimensions of a joinery ele-

ment according to these specifications may not deviate by more than about 1.5 mm up to 1 metre of outside dimension relative to the nominal dimensions and by not more than about 2 mm for joinery elements with larger dimensions than 1 metre outside dimension. At a nominal transverse frame outside dimension of up to 1 metre, the transverse frame outside dimension should thus remain within ± 1.5 mm of the nominal transverse frame outside dimension. The transverse frame tolerance is then 1.5 mm. At a nominal transverse frame outside dimension that is greater than 1 metre, this transverse frame outside dimension should remain within ± 2 mm of the nominal transverse frame outside dimension. The transverse frame tolerance is then 2 mm. Similarly, for a nominal transverse screen outside dimension of up to 1 metre, the transverse screen outside dimension should remain within ± 1.5 mm of the nominal transverse screen outside dimension and for a nominal transverse screen outside dimension that is greater than 1 metre, it should remain within ± 2 mm of the nominal transverse screen outside dimension. The transverse screen tolerance is then 1.5 mm and 2 mm respectively.

[0012] With the existing profile assemblies it is difficult to keep to said tolerances within the width of a window profile, so that screen profile assemblies therefore are also often made wider than the window profiles.

[0013] When, with a screen profile assembly for example as described and illustrated in DE 297 08 747 U1, the transverse screen outside dimension is less than the nominal transverse screen outside dimension and/or the transverse frame outside dimension is greater than the nominal transverse frame outside dimension, it is not then possible to mount this screen device against the window section.

[0014] The aim of the present invention is to provide a screen profile assembly of this kind which, taking into account permitted dimensional tolerances, is fastenable in an aesthetic, but also sturdy manner on minimalistic window sections and moreover is able to transmit the necessary forces on this window section.

[0015] This aim of the invention is achieved by providing an assembly of a window section, comprising a window profile assembly for forming a window frame for mounting glazing, to form the window section, and a screen device, comprising a screen profile assembly, comprising a screen holding profile for mounting a lateral side of a screen in order to screen off the window section, and comprising a basic profile for mounting the screen profile assembly against the window section, wherein this basic profile:

- comprises a side wall, which is intended to be fitted on the window section for fastening the basic profile against the window section;
- comprises a rear wall, which is raised relative to the side wall so as to be raised relative to the window section; and
- at the level of the rear wall, is provided with a flange

for fastening the basic profile against the window section, wherein this flange is raised relative to the side wall on the side opposite to the side where the rear wall is raised relative to the side wall;

wherein the window section comprises, in a transverse direction, viewed transversely to the rear wall, a nominal transverse frame outside dimension and the screen device comprises, in the transverse direction, a nominal transverse screen outside dimension, wherein the rear wall comprises a reference line, which is intended to delimit this nominal transverse frame outside dimension, wherein the nominal transverse frame outside dimension is equal to the nominal transverse screen outside dimension, wherein the window section is manufactured with a transverse frame outside dimension in the transverse direction, with a transverse frame tolerance relative to the nominal transverse frame outside dimension and wherein the flange is mounted in the transverse direction and displaced from the side wall by a distance Δd relative to the reference line, with $0 \leq \Delta d \leq$ the transverse frame tolerance.

[0016] By means of a flange of this kind, forces that arise can be taken up and transmitted better. There is better resistance to loading of the screen profile assembly among other things because the fastening is not transverse to the load, but in the opposite direction from the load.

[0017] The profiles of a screen profile assembly of this kind and more specifically said basic profile are then preferably manufactured in aluminium, for example by extrusion.

[0018] Because narrower window profiles are typically also made deeper, in this direction there is sufficient space with these window profiles to fasten a flange against it here.

[0019] By providing a flange of this kind for fastening the basic profile against the window section, the side wall can be made narrower. The side wall can then also be made narrow, so that in contrast to the basic profile from DE 297 08 747 U1, it is no longer possible to fit screws through this side wall for fastening the basic profile. The basic profile is then only fastened to the window section by means of screws through the flange.

[0020] Because the flange is provided at the level of the rear wall, a screen profile assembly of this kind can be connected in an aesthetic manner to a narrow window profile in a minimalistic window section. However, the solution according to the present invention is also useful with window sections that are not minimalistic. With a narrower side wall, there is free space next to this side wall for mounting additional frame elements, for example such as an insect screen. With lifting and sash windows, alongside said narrower side wall there is extra space for movable parts of the window section.

[0021] In order to be able to meet said tolerance, viewed in a direction transverse to the rear wall, the flange is mounted displaced from the side wall by a distance Δd

relative to the reference line, with $0 < \Delta d \leq$ the transverse frame tolerance.

[0022] Preferably $\Delta d =$ the transverse frame tolerance.

[0023] As stated, with these joinery elements with larger dimensions, the transverse frame outside dimension may deviate by about 2 mm from the nominal transverse frame outside dimension.

[0024] A screen device of which the screen profile assembly forms a part, is typically also provided with a screen housing in which a roll-up/roll-down screen is housed. This screen housing may also deviate by about 2 mm from the transverse screen outside dimension. Said screen profile assemblies are typically mounted on either side of the screen adjacent to and under this screen housing.

[0025] When the screen housing deviates by -2 mm and the window profile assembly deviates by +2 mm, this is compensated at $\Delta d =$ the transverse frame tolerance by means of Δd , by allowing the flange to connect on either side against the respective window profile. When the screen housing deviates by -2 mm or the window profile assembly deviates by +2 mm, the flange may be allowed to abut on one side against the respective window profile and on the other side fit 2 plates of 1 mm as distance pieces or fit a distance piece of 1 mm on either side. When the screen housing deviates by +2 mm and the window profile assembly deviates by -2 mm, the distance pieces may be fitted between the flanges of the screen profile assemblies on either side of the screen device and the respective window profiles. On either side, for example 4 plates of 1 mm are then required as distance pieces, which compensate 8 mm in total. When everything is measured and supplied accurately, for example 2 plates of 1 mm should be fitted as distance pieces on either side, which compensate 4 mm in total. In this way, ± 4 mm may thus be compensated. The Δd makes this all possible.

[0026] Also when $0 < \Delta d <$ the transverse frame tolerance, there is already a definite improvement for mounting screen devices for window sections relative to the prior art.

[0027] The side wall is preferably of flat configuration on the side of the flange next to the aforementioned flange and is preferably free from further projecting parts to allow maximum abutment to the window section and thus be able to transmit the necessary forces, without having to make the side wall wider in the transverse direction.

[0028] More preferably, in the transverse direction the side wall has a dimension (width) that is less than the distance (height) by which the flange is raised relative to the side wall.

[0029] In an especially preferred embodiment, in the transverse direction the side wall has a width that is less than 30 mm. Even more preferably this width is less than or equal to 25 mm.

[0030] In order to fasten the flange to the window section, the flange is preferably provided with screw holes

for fastening the basic profile to the window section by means of screws.

[0031] These screw holes are preferably provided in such a way that screws fitted therein extend roughly parallel to the side wall.

[0032] The flange is more preferably provided, on its side away from the side wall, with grooves for positioning screws for fastening the basic profile to the window section. Said grooves preferably extend roughly parallel to the side wall.

[0033] A screen profile assembly of an assembly according to the invention is preferably provided with a seal, in order to form a moisture barrier between the basic profile and the window section.

[0034] Said seal is preferably configured as an elastic sealing element.

[0035] Said seal meets the ARGE guideline that is applicable in DACH countries.

[0036] Said seal can stop water when the side wall, under the influence of forces that act upon the screen profile assembly, tends to come loose from the window section. Wind-driven rain could otherwise penetrate between the basic profile and the underlying window section.

[0037] Typically, for this purpose, in the prior art, sealant would be applied along the edges of said basic profile. A seal as mentioned above is preferably integrated in the basic profile, so that no additional sealing has to be applied manually.

[0038] As an alternative to the seal or in addition to the seal, the basic profile may be provided with a slot in order to form a moisture barrier between the basic profile and the window section.

[0039] The basic profile is preferably provided with both a slot and a seal, wherein the seal is fitted in this slot.

[0040] The seal preferably extends over the full depth of the slot and preferably also projects relative to the slot.

[0041] The slot preferably comprises a substantially C-shaped cross-section.

[0042] The seal itself may more specifically comprise a substantially round cross-section. The seal and the optional slot for fastening this seal may be mounted on or in the side wall.

[0043] The profiles of a screen profile assembly of an assembly according to the invention preferably define together a mounting opening, through which the screen extends in the installed state. This mounting opening is preferably provided in a front wall of the screen profile assembly, which is mounted on the side of the screen profile assembly opposite to the side of the screen profile assembly where the rear wall of the basic profile is installed. The rear wall of the basic profile then preferably also forms the rear wall of the screen profile assembly.

[0044] The basic profile of the screen profile assembly is intended to be fastened against a window profile of the window profile assembly, for mounting the screen profile assembly against the window section that is formed by means of this window profile assembly.

[0045] The basic profile of the screen profile assembly should then be mounted on this window profile before this window profile is brought into a building in which the window section is installed, so that the flange can extend between the window profile and an adjacent building element (a wall of the building or an adjacent installed window profile).

[0046] The side wall more preferably comprises a contact surface that is fitted against a corresponding contact surface of the window profile assembly. Both contact surfaces are then preferably of flat configuration and preferably free from projecting parts, to allow maximum abutment of the side wall to this window profile.

[0047] When the window profile assembly of an assembly according to the present invention comprises aluminium profiles, at an intermediate distance from the side wall these will be provided with one or more thermal breaks. To avoid cold bridges, the flange then preferably projects relative to the side wall by a distance that is less than or equal to the distance over which the thermal break of the aforementioned thermal breaks that is mounted closest to the side wall extends relative to the side wall. Even more preferably, the flange projects relative to the side wall by a distance that is less than said intermediate distance of the side wall from said thermal break that is mounted closest to the side wall.

[0048] An assembly according to the present invention preferably comprises distance pieces, for fastening the basic profile against the window section when securing the flange on the window profile assembly, so as to be able to fasten one or more of these distance pieces between the flange and the window profile assembly, where necessary.

[0049] Said distance piece further comprises at least one basic body, which is intended to extend in the installed state between the flange and the window profile assembly.

[0050] The basic body preferably has a dimension (height) corresponding to the distance (height) by which the flange projects relative to the side wall. This height of the basic body is preferably equal to this height of the flange, so that an installer, when fitting the basic body between the flange and the window profile assembly, knows that the distance piece is fitted deeply enough when the basic body is located completely between the flange and the window profile assembly and does not extend farther from the side wall than the flange.

[0051] The assembly may moreover more specifically comprise screws for fastening the flange on the window profile assembly. The basic body is then preferably provided with a slot with barbs, for receiving an aforementioned screw herein for fixation of this distance piece relative to this screw.

[0052] Besides the basic body, each distance piece may also comprise an engaging element that is intended to extend in the installed state farther from the side wall than the flange, so as to be able to engage on this engaging element in order to fasten it between the flange

and the window profile assembly.

[0053] The basic body is preferably of compression-resistant construction. To avoid cold bridges, preferably the distance pieces are not or are only slightly heat-conducting.

[0054] The present invention is now explained in more detail on the basis of the following detailed description of some preferred assemblies according to the present invention. The purpose of this description is purely to give illustrative examples and to point out further advantages and features of these assemblies, and are not in any way to be interpreted as a limitation of the field of application of the invention or of the patent rights claimed in the claims.

[0055] In this detailed description, reference numbers are used for referring to the appended drawings, in which:

- Fig. 1 shows, in cross-section, a first embodiment of an assembly according to the present invention with a first embodiment of a screen profile assembly and a first embodiment of a window profile assembly, installed in a window opening in a wall of a building;
- Fig. 2 shows, in cross-section, a second embodiment of a screen profile assembly according to the present invention;
- Fig. 3 shows separately, in cross-section, the first embodiment of a screen profile assembly from Fig. 1;
- Fig. 4 shows, in cross-section, a third embodiment of a screen profile assembly according to the present invention;
- Fig. 5 shows separately, in cross-section, the third embodiment of a screen profile assembly from Fig. 4, in the cut-away state, with some sets of one embodiment of distance pieces;
- Fig. 6 shows a part of the third embodiment of a screen profile assembly from the cross-section from Fig. 4 in more detail;
- Fig. 7 shows in cross-section, in more detail, a part of the basic profile of the first embodiment of a screen profile assembly from Fig. 3;
- Fig. 8 shows in cross-section, in more detail, a part of the basic profile of the third embodiment of a screen profile assembly from Fig. 4;
- Fig. 9 shows a distance piece from Fig. 5 separately in perspective;
- Fig. 10 shows, in cross-section, the distance piece from Fig. 9;
- Fig. 11 shows, in cross-section, a second embodiment of an assembly according to the present invention with the second embodiment of a screen profile assembly and a second embodiment of a window profile assembly, installed in a window opening in a wall of a building;
- Fig. 12 shows, in cross-section, a third embodiment of an assembly according to the present invention with the second embodiment of a screen profile assembly and a third embodiment of a window profile assembly, installed in a window opening in a wall of

a building;

- Fig. 13 shows, in cross-section, a fourth embodiment of an assembly according to the present invention with the first embodiment of a screen profile assembly and a fourth embodiment of a window profile assembly, installed in a window opening in a wall of a building;
- Fig. 14 shows, in cross-section, a fifth embodiment of an assembly according to the present invention with the third embodiment of a screen profile assembly and the fourth embodiment of a window profile assembly, installed in a window opening in a wall of a building;
- Fig. 15 shows, in cross-section, a sixth embodiment of an assembly according to the present invention with the second embodiment of a screen profile assembly and a fifth embodiment of a window profile assembly, installed in a window opening in a wall of a building.

[0056] The assemblies (1) illustrated according to the present invention comprise in each case:

- a window section (4) with a window profile assembly (3) for forming a window frame for mounting glazing (4), in order to form this window section (5);
- a screen device with several screen profile assemblies (2) for mounting a lateral side of a screen (not shown), in order to screen this window section (5);
- and distance pieces (22).

[0057] The window profile assembly (3) may assume several forms, as can be seen in Figs. 1 and 11-15, for example such as a window profile assembly (3) for a fixed window (5) or several adjacent fixed windows (5) (see Fig. 1), a window profile assembly (3) for an opening window (5) (see Fig. 11) or a window profile assembly (3) for sash windows (see Figs. 12-14). These may optionally be of minimalistic configuration (see Fig. 12). The window profile assemblies (3) shown comprise several profiles (21) made of aluminium, between which thermal breaks (36) are fitted.

[0058] In the embodiments shown, the screen device is a screen device with a roll-up/roll-down screen that is gripped on both lateral sides in a screen profile assembly (2). This roll-up/roll-down screen can be mounted rotatably in a screen housing of the screen device. In the figures, in each case only one of the two screen profile assemblies (2) is shown. The other one of the two screen profile assemblies (2) is configured as the mirror image of the screen profile assembly (2) that is shown.

[0059] In alternative embodiments, the screen may be installed fixed and then a screen profile assembly (2) may be installed on each side of this screen to grip the respective side of the screen.

[0060] The screen profile assembly (2) comprises in each case a basic profile (6) for mounting the screen profile assembly (2) against the window section (5).

[0061] A basic profile (6) may be configured per se as a so-called screen profile assembly (2) and then serves as a so-called screen holding profile. Besides this basic profile (6), this screen profile assembly (2) may, however, also comprise one or more additional profiles (15, 16, 17, 18), including for example a so-called screen holding profile (17).

[0062] In the embodiments shown, the screen profile assembly (2) comprises, besides the basic profile (6), an insert profile (15), which is mountable in a cavity (26) provided for this purpose, and a securing profile (16), for mounting the insert profile (15) in this cavity (26). The screen profile assemblies (2) shown further comprise a screen guide profile (17) as a so-called screen holding profile (17) that is mountable in a cavity (27) of the insert profile (15) by means of the securing profile (16). In the installed state, this screen guide profile (17) shown extends in a known way with its flanges (30) behind flanges (28, 29) of the insert profile (15) and securing profile (16).

This screen guide profile (17) is spring-mounted with spring elements (not shown) in the cavity (27), to tension the screen in the transverse direction (D). Various alternatives to these spring elements may be employed, for example as described and shown in EP 3 271 540 B1. A flexible screen guide (18), which is provided with a mounting opening (14), is fitted in the screen guide profile (17). A thickening on a lateral side of the screen (not shown) is gripped, in the installed state, in this flexible screen guide (18), so that the screen extends through this mounting opening (14). In alternative embodiments, said thickening of the screen may also be gripped directly in a screen guide profile (17).

[0063] In other alternative embodiments with a screen installed fixed instead of a roll-up/roll-down screen, the sides of the screen are then held in screen holding profiles that grip the screen. These screen holding profiles are also preferably mounted with spring elements in the screen profile assembly to keep the screen under tension.

[0064] In order to mount the basic profile (6) against the window section (5), it is provided with a flange (8), which is raised transversely relative to a side wall (7) of this basic profile (6). This side wall (7) is intended to be fitted on the window section (5). In the embodiments shown, the side wall (7) is in each case fitted against a window profile (21) of the window profile assembly (3), so as to fit it against the window section (5). The flange (8) is in each case screwed by means of screws (20) to this window profile (21). These screws (20) are only shown in Figs. 13-15. The flange (8) may optionally already be provided beforehand with the necessary screw holes. Furthermore, on its side away from the side wall (7), the flange (8) is provided with grooves (33) for positioning the screws (20) for fastening the basic profile (6) on the window section (5).

[0065] Besides the aforementioned side wall (7), the basic profile (6) comprises a rear wall (11) and a second side wall (13).

[0066] The rear wall (11) is raised transversely relative to the first-mentioned side wall (7) on the opposite side where said flange (8) is raised relative to this side wall (7).

[0067] The second side wall (13) of the basic profile (6) is also raised transversely relative to this rear wall (11), but on the opposite edge of the rear wall (11) than the edge where the first-mentioned side wall (7) is raised. The side walls (7, 13) and the rear wall (11) then also form the side walls and rear wall of the screen profile assembly (2). The screen profile assembly (2) further comprises a front wall (12), which in the embodiments shown is mainly formed by the insert profile (15) and partially also by the securing profile (16). The front wall (12) extends on the opposite side of the screen profile assembly (2) to the rear wall (11). The aforementioned mounting opening (14) in the flexible screen guide (18) also forms a mounting opening (14) in the front wall (12) of the screen profile assembly (2).

[0068] The flange (8) is provided approximately at the level of the rear wall (11).

[0069] The height (hf) to which the flange (8) is raised relative to the side wall (7) is in each case greater than the width (d_2) of the side wall (7). This height (hf) is in each case smaller than the total distance (h_{t2}) by which the thermal break (36) that is mounted closest to the side wall (7) extends relative to the side wall (7), in order to avoid cold bridges. In the embodiments in Figs. 13 and 14, this height (hf) is also smaller than the intermediate distance (h_{t1}) of the side wall (7) from this thermal break (36).

[0070] The window profile assemblies (3) are in each case assembled to form a window frame. With a nominal transverse frame outside dimension (d_m), the transverse frame outside dimension (d_r) obtained in this way may in practice show maximum deviation of the transverse frame tolerance (d_{rt}) relative to this nominal transverse frame outside dimension (d_m).

[0071] After assembly of a screen device with the components thereof, with a nominal transverse screen outside dimension (d_{sn}), the transverse screen outside dimension (d_s) obtained in this way may in practice show maximum deviation of the transverse screen tolerance (d_{st}) relative to this nominal transverse screen outside dimension (d_{sn}).

[0072] The nominal transverse screen outside dimension (d_{sn}) is selected equal to the nominal transverse frame outside dimension (d_m). The rear wall (11) of the basic profile (11) further comprises a reference line (H), which is intended to delimit this nominal transverse screen outside dimension (d_{sn}).

[0073] In a transverse direction (D) viewed transversely to the rear wall (11) and away from the side wall (7), the flange (8) is installed, displaced by a distance Δd relative to this reference line (H) of the rear wall (11). This reference line (H) of the rear wall (11) is shown in Figs. 7 and 8. This displacement Δd is preferably $0 < \Delta d \leq$ the transverse frame tolerance (d_{rt}). Thus, one or more distance pieces (22) may be fitted between the flange (8)

and the window profile (21), in order to be able to compensate the dimensional tolerances of the window profile assembly (3) and for example of the screen housing in which a roll-up/roll-down screen is installed. This displacement Δd is preferably equal to the transverse frame tolerance (d_{rt}) (or equal to the transverse screen tolerance (d_{st}), since the two are equal), as is the case in the embodiments shown. In these embodiments that are shown, joinery with dimensions greater than 1 m is assumed, so that the transverse frame tolerance (d_{rt}) is 2 mm and the transverse screen tolerance (d_{st}) is also 2 mm. The displacement Δd of the flange is now also 2 mm. The distance pieces (22) are made with a thickness (d_a) of 1 mm.

[0074] In Figs. 1 and 11-15, the transverse screen outside dimension (d_s) is equal to the nominal transverse screen outside dimension (d_{sn}) and the transverse frame outside dimension (d_r) is equal to the nominal transverse screen outside dimension (d_{rn}). Then 2 distance pieces (22) are fitted on either side to compensate the displacement Δd , so that 4 mm is compensated in total.

[0075] When the transverse screen outside dimension (d_s) deviates by -2 mm from the nominal transverse screen outside dimension (d_{sn}) and the transverse frame outside dimension (d_r) deviates by +2 mm from the nominal transverse screen outside dimension (d_{rn}), which is the maximum permitted, then the screen device can be mounted by allowing the flange (8) to abut on either side against the respective window profile of the window profile assembly (3). When the screen housing deviates by +2 mm and the window profile assembly deviates by -2 mm, which is the maximum permitted in the opposite direction, then 4 distance pieces (22) (this is the maximum number of distance pieces (22) as shown in Fig. 5) may be fitted on either side between the flanges (8) and the respective window profiles.

[0076] The basic profiles (6) shown may for example be manufactured from aluminium with a width that is less than 30 mm and may even be about 20 mm or less.

[0077] The distance pieces (22) shown comprise in each case a basic body (34) and an engaging element (35) projecting relative to the basic body (34).

[0078] The basic body (34) is intended to extend in the installed state between the flange (8) and the window profile assembly (5). The basic body (34) then has in each case a height (h_a) that corresponds to the height (hf) of the flange (8). When fitting the distance piece (22) between the flange (8) and the window profile assembly (5), it is thus possible to ensure that the distance piece (22) is fitted deeply enough, by ensuring that this basic body (34) does not extend farther relative to the side wall (7) than the flange (8). For this purpose the distance piece (22) is also provided with a check line (37).

[0079] In order to fix the distance pieces (22), these are each provided with a slot (23) with barbs, for receiving a screw (20) for fixation of the distance piece (22) relative to the screw (20).

[0080] The thickness (d_a) of the distance pieces (22)

is, as in the embodiment shown, preferably selected so that said displacement Δd can be compensated with a multiple thereof.

[0081] The engaging element (35) is intended for securing the distance piece (22) and for this purpose extends in the installed state farther from the side wall (7) than the flange (8). This engaging element (35) is provided on one of its sides with a projecting part (38) and on its other side with a corresponding recess (39), so that distance pieces (22) fitted against each other can be aligned relative to each other by fitting a projecting part (38) of one distance piece (22) in the corresponding recess (39) of the other distance piece (22).

[0082] To avoid cold bridges, the distance pieces (22) have low or zero thermal conductivity. The basic body (34) is of compression-resistant configuration so as to be able to transmit the necessary forces. For this purpose the basic body (34) is also made wide enough (ba).

[0083] The basic profile (6) is thus fastened on the window profile (21) (wherein distance pieces (22) may be fitted between the flange (8) and the window profile (21)), before this window profile (21) is installed together with the rest of the window section (5) in a wall opening in a wall (19) of a building. When the window section (5) is then installed in this wall opening, the flange (8) will extend between this wall (19) and the window profile assembly (3). In Fig. 1, the screen profile assembly (2) is installed in this way in a cavity of a wall (19), wherein an elastic cement (32) is applied between the screen profile assembly (2) and the brickwork (31).

[0084] The embodiments shown in Figs. 2 to 4 for a screen profile assembly (2) according to the invention allow a great many possible arrangements, the arrangements in Figs. 1 and 11-15 illustrating just a few possibilities.

[0085] In Fig. 1, the first embodiment from Fig. 3 is installed in such a way that a screen guided with this is mounted tightly against the window section (5) in order to screen this window section (5).

[0086] When the insert profile (15) and the securing profile (16) are reversed relative to the position shown in Figs. 1 and 3, extra space is created between a screen guided with the screen profile assembly (2) and a window section (5), as can be seen in Fig. 13. This extra space may be utilized for fastening, besides the screen profile assembly (2), also an insect screen (24), in order to screen the opening window (5) additionally with this insect screen (24). For this purpose a fastening profile (25) of said insect screen (24) may be fastened besides the basic profile (6) against the window profile (21) of the window profile assembly (3).

[0087] With the screen profile assemblies (2) from Figs. 2 and 4, less or more additional space may be created between the screen and the window section (5), when the insert profile (15) and the securing profile (16) are reversed relative to the position shown there.

[0088] In the arrangement as shown in Fig. 12, the screen profile assembly (2) from Fig. 2 is mounted

against a minimalistic window profile (21) of a sash window (5), wherein a screen guided with this (not shown) is mounted tightly against this sash window (5).

[0089] In the arrangement in Fig. 15, the second embodiment from Fig. 2 is once again installed in such a way that a screen guided with this (not shown) is mounted tightly against the fixed windows of a window section (5).

[0090] In the arrangement as shown in Fig. 11, the insert profile (15) and the securing profile (16) of this screen profile assembly (2) are reversed, so that extra space is created for mounting an insect screen (24) between a screen guided with the screen profile assembly (2) (not shown) and the opening window (5).

[0091] In the arrangement as shown in Fig. 14, the screen profile assembly (2) from Fig. 4 is mounted against a minimalistic window profile (21) of a sash window (5), wherein a screen guided with this (not shown) is mounted far from the sash window (5), as the insert profile (15) and the securing profile (16) are reversed relative to the position from Fig. 4.

[0092] The embodiments shown of screen profile assemblies (2) according to the invention are in each case provided with a seal (9), to form a moisture barrier between the basic profile (6) and the window section (5).

[0093] For this purpose, the basic profile (6) is in each case provided with a slot (10) for fitting this seal (9) therein. In alternative embodiments this slot (10) itself would be able to serve as a moisture barrier.

Claims

1. Assembly (1) of a window section (5), comprising a window profile assembly (3) for forming a window frame for mounting glazing (4), to form the window section (5), and a screen device, comprising a screen profile assembly (2), comprising a screen holding profile (17) for mounting a lateral side of a screen in order to screen off the window section (5), and comprising a basic profile (6) for mounting the screen profile assembly (2) against the window section (5), wherein this basic profile (6):

- comprises a side wall (7), which is intended to be fitted on the window section (5) for fastening the basic profile (6) against the window section (5); and
- comprises a rear wall (11), which is raised relative to the side wall (7) in order to project relative to the window section (5);

wherein the basic profile (6) is provided at the level of the rear wall (11) with a flange (8) for fastening the basic profile (6) against the window section (5), wherein this flange (8) is raised relative to the side wall (7) on the side opposite to the side where the rear wall (11) is raised relative to the side wall (7), wherein the window section (5) comprises, in a trans-

- verse direction (D), viewed transversely to the rear wall (11), a nominal transverse frame outside dimension (d_{rn}) and the screen device comprises, in the transverse direction (D), a nominal transverse screen outside dimension (d_{sn}), wherein the rear wall (11) comprises a reference line (H), which is intended to delimit this nominal transverse screen outside dimension (d_{sn}) and wherein the nominal transverse frame outside dimension (d_{rn}) is equal to the nominal transverse screen outside dimension (d_{sn}), **characterized in that** the window section (5) is manufactured with a transverse frame outside dimension (d_r) in the transverse direction (D), with a transverse frame tolerance (d_{rt}) relative to the nominal transverse frame outside dimension (d_{rn}) and **in that** the flange (8) is installed in the transverse direction (D) and away from the side wall (7) displaced by a distance Δd relative to the reference line (H), with $0 < \Delta d \leq$ the transverse frame tolerance d_{rt} .
2. Assembly (1) according to claim 1, **characterized in that** the side wall (7) has, in the transverse direction (D), a dimension (d_z) that is less than the distance (h_f) by which the flange (8) is raised relative to the side wall (7).
 3. Assembly (1) according to one of the preceding claims, **characterized in that** the side wall (7) has, in the transverse direction (D), a dimension (d_z) that is less than 30 mm.
 4. Assembly (1) according to one of the preceding claims, **characterized in that** the flange (8) is provided with screw holes for fastening the basic profile (6) to the window section (5) by means of screws (20).
 5. Assembly (1) according to one of the preceding claims, **characterized in that** the flange (8) is provided, on its side away from the side wall (7), with grooves (33) for positioning screws (20) for fastening the basic profile (6) to the window section (5).
 6. Assembly (1) according to one of the preceding claims, **characterized in that** the basic profile (6) is provided with a slot (10) to form a moisture barrier between the basic profile (6) and the window section (5).
 7. Assembly (1) according to one of the preceding claims, **characterized in that** the screen profile assembly (2) is provided with a seal (9), to form a moisture barrier between the basic profile (6) and the window section (5).
 8. Assembly (1) according to one of the preceding claims, **characterized in that** $\Delta d =$ the transverse frame tolerance (d_{rt}).
 9. Assembly (1) according to one of the preceding claims, **characterized in that** the window profile assembly (3) comprises aluminium profiles and is provided, at an intermediate distance (h_{t1}) from the side wall (7), with one or more thermal breaks (36) and **in that** the flange (8) is raised relative to the side wall (7) by a distance (h_f), which is less than the total distance (h_{t2}) by which the thermal break (36) of said thermal breaks (36) that is mounted closest to the side wall (7) extends relative to the side wall (7).
 10. Profile assembly according to claim 9, **characterized in that** the flange (8) is raised relative to the side wall (7) by a distance (h_f) that is less than or equal to said intermediate distance (h_{t1}) from the side wall (7) to said thermal break (36) that is mounted closest to the side wall (7).
 11. Assembly (1) according to one of the preceding claims, **characterized in that** the profile assembly comprises distance pieces (22), in order to fasten one or more of these distance pieces (22) between the flange (8) and the window profile assembly (3) when fastening the flange (8) to the window profile assembly (3), for fastening the basic profile (6) against the window section (5).
 12. Assembly (1) according to claim 11, **characterized in that** the profile assembly comprises screws (20) for fastening the flange (8) to the window profile assembly (3) and **in that** each distance piece (22) comprises a basic body (34) that is intended to extend in the installed state between the flange (8) and the window profile assembly (3), wherein this basic body (34) is provided with a slot (23) with barbs, for receiving an aforementioned screw (20) therein for fixation of this distance piece (22) relative to this screw (20).
 13. Assembly (1) according to claim 11 or 12, **characterized in that** each distance piece (22) comprises a basic body (34) that is intended to extend in the installed state between the flange (8) and the window profile assembly (3), and an engaging element (35) that is intended to extend in the installed state farther from the side wall (7) than the flange (8), wherein the basic body (34) has a dimension (h_a), corresponding to the distance (h_f) by which the flange (8) is raised relative to the side wall (7), which is equal to this distance (h_f).

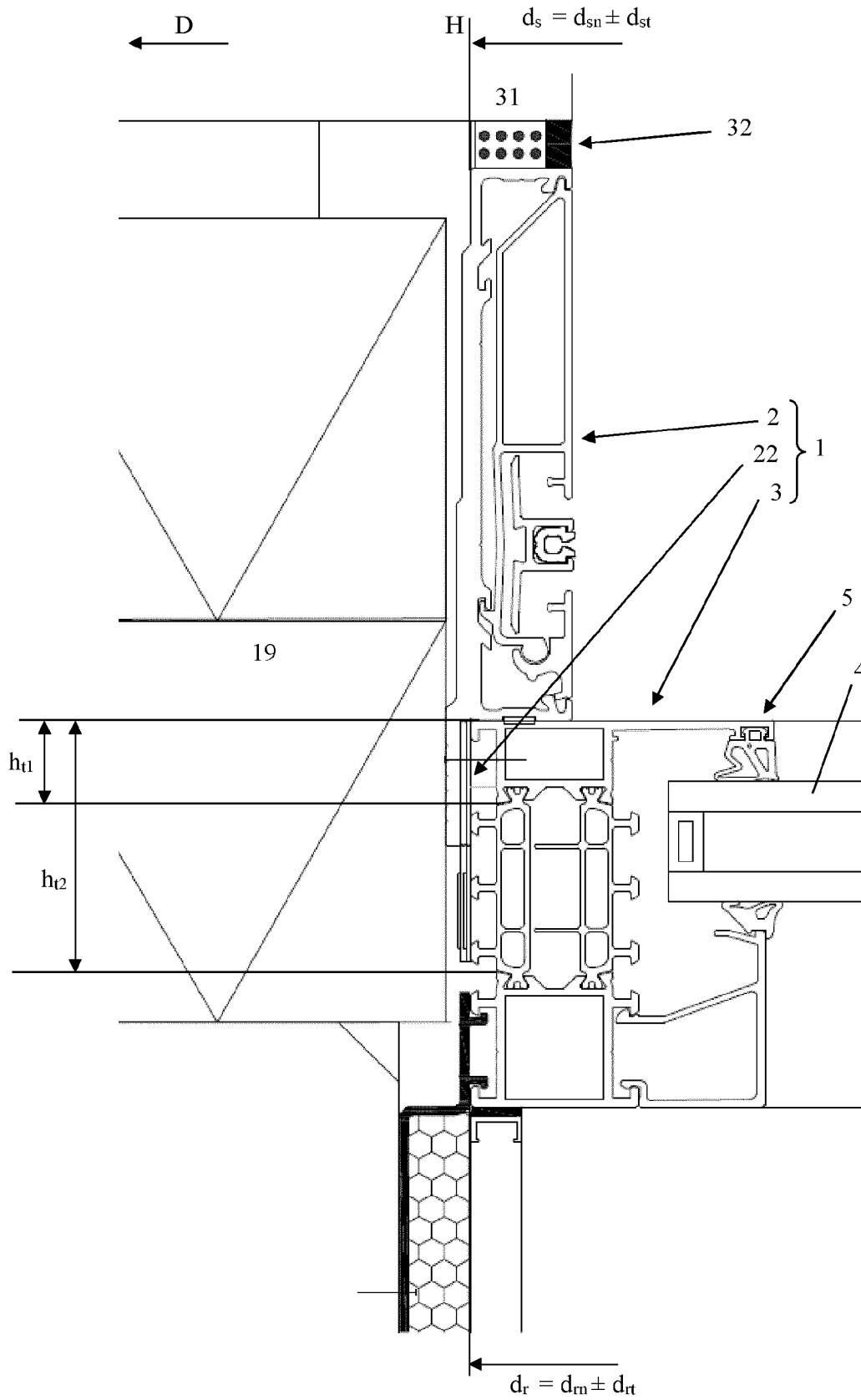


Fig. 1

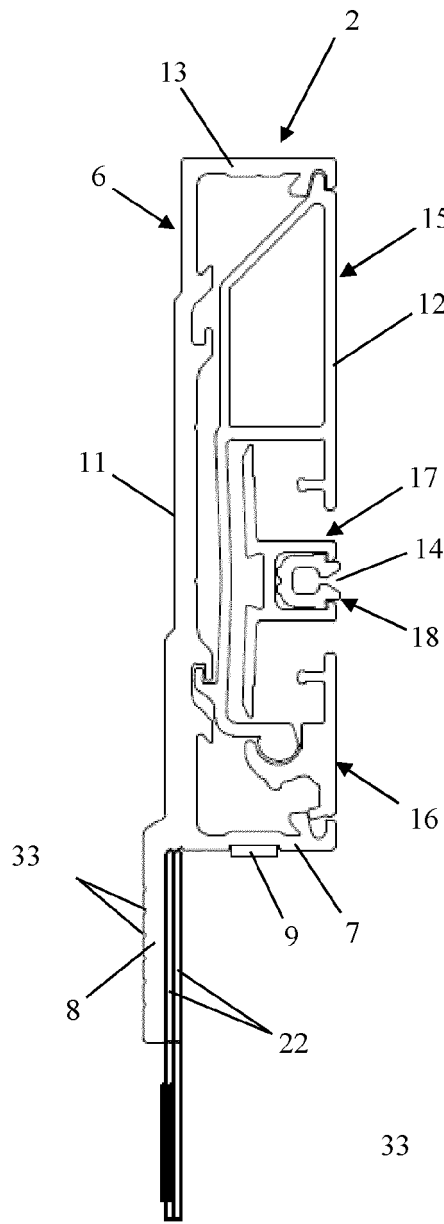


Fig. 2

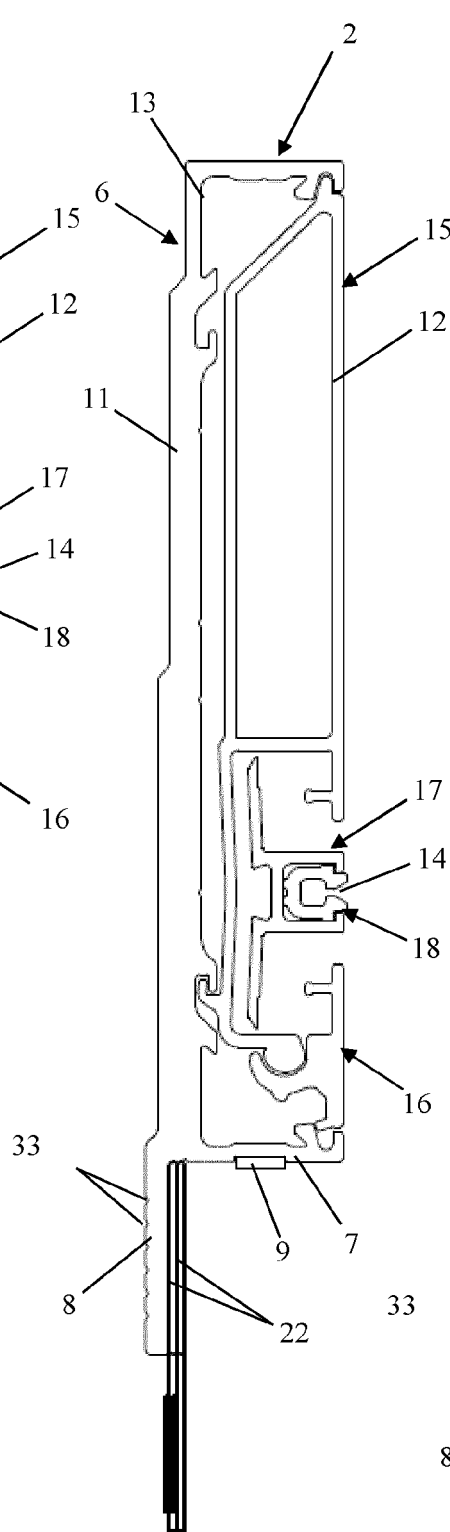


Fig. 3

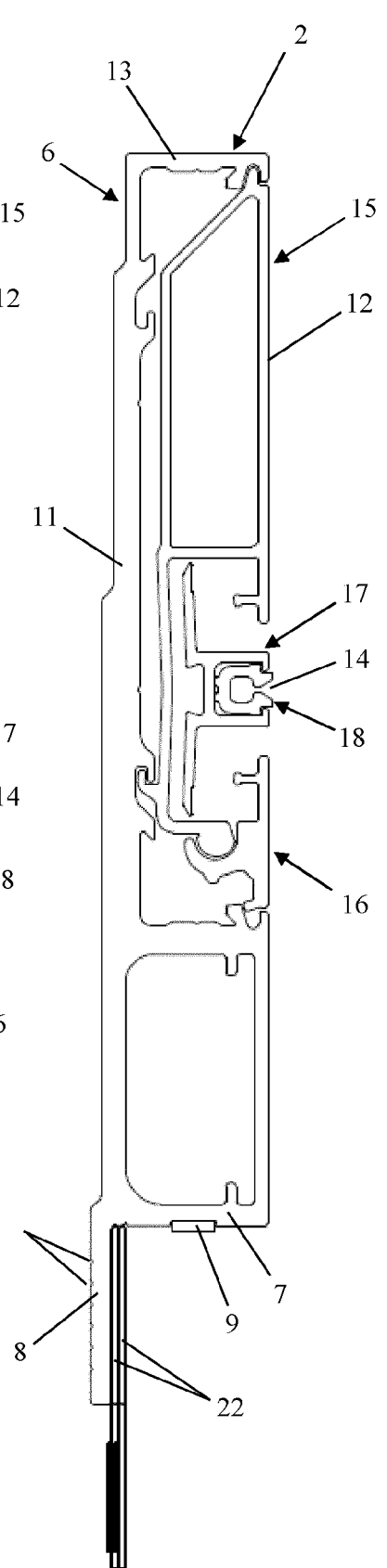


Fig. 4

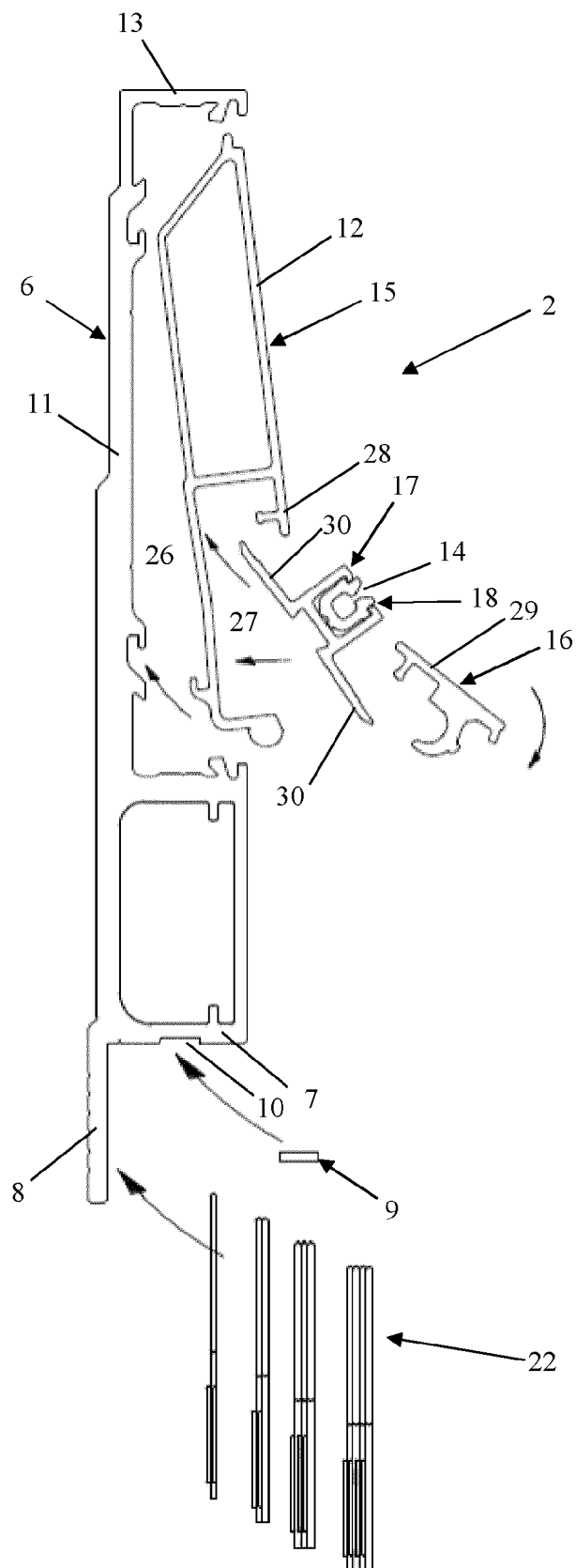


Fig. 5

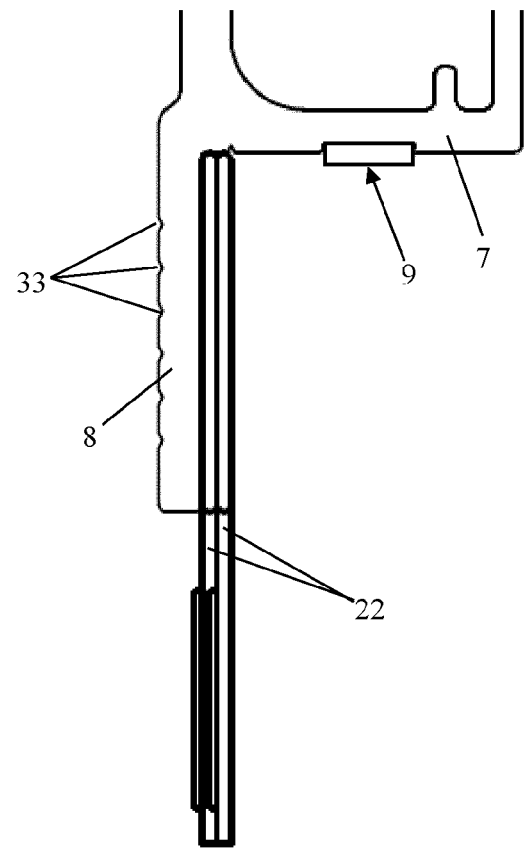


Fig. 6

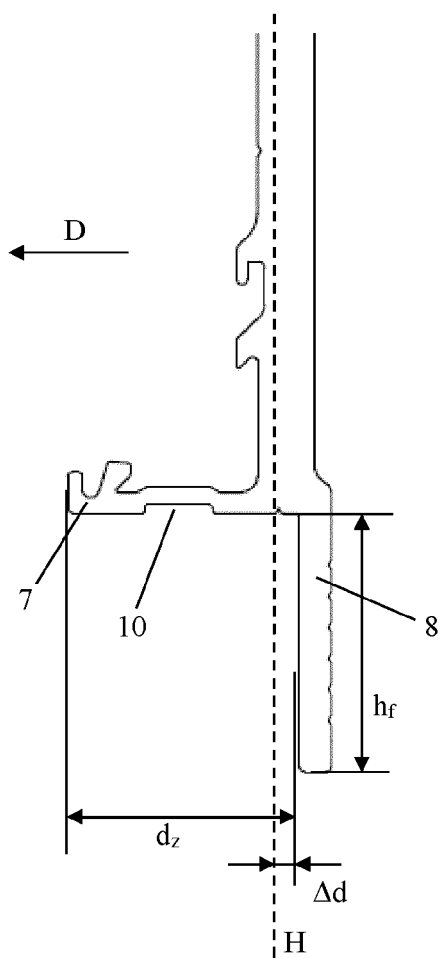


Fig. 7

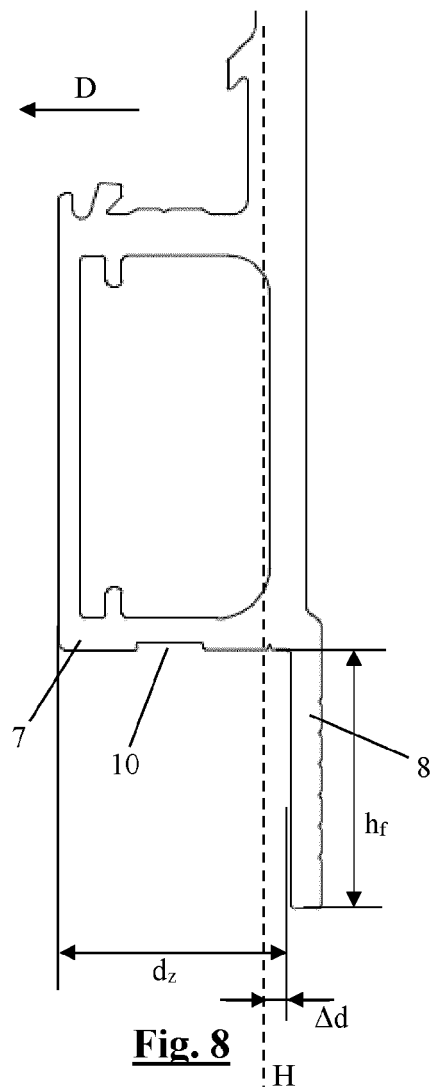


Fig. 8

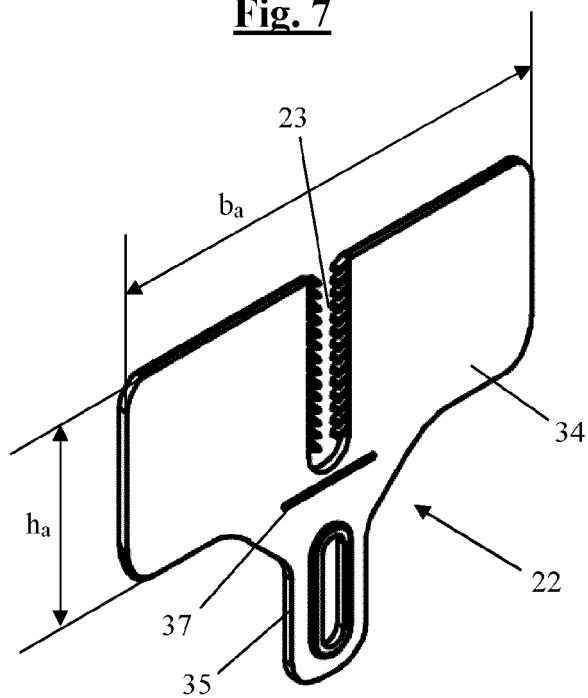


Fig. 9

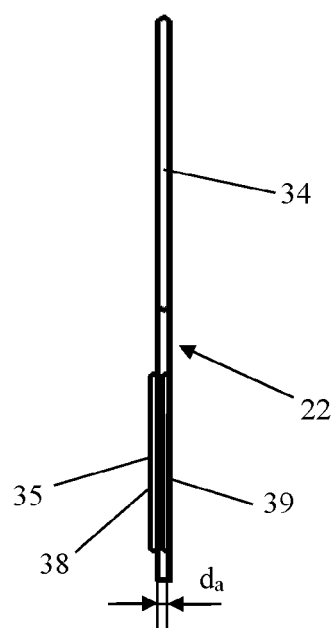
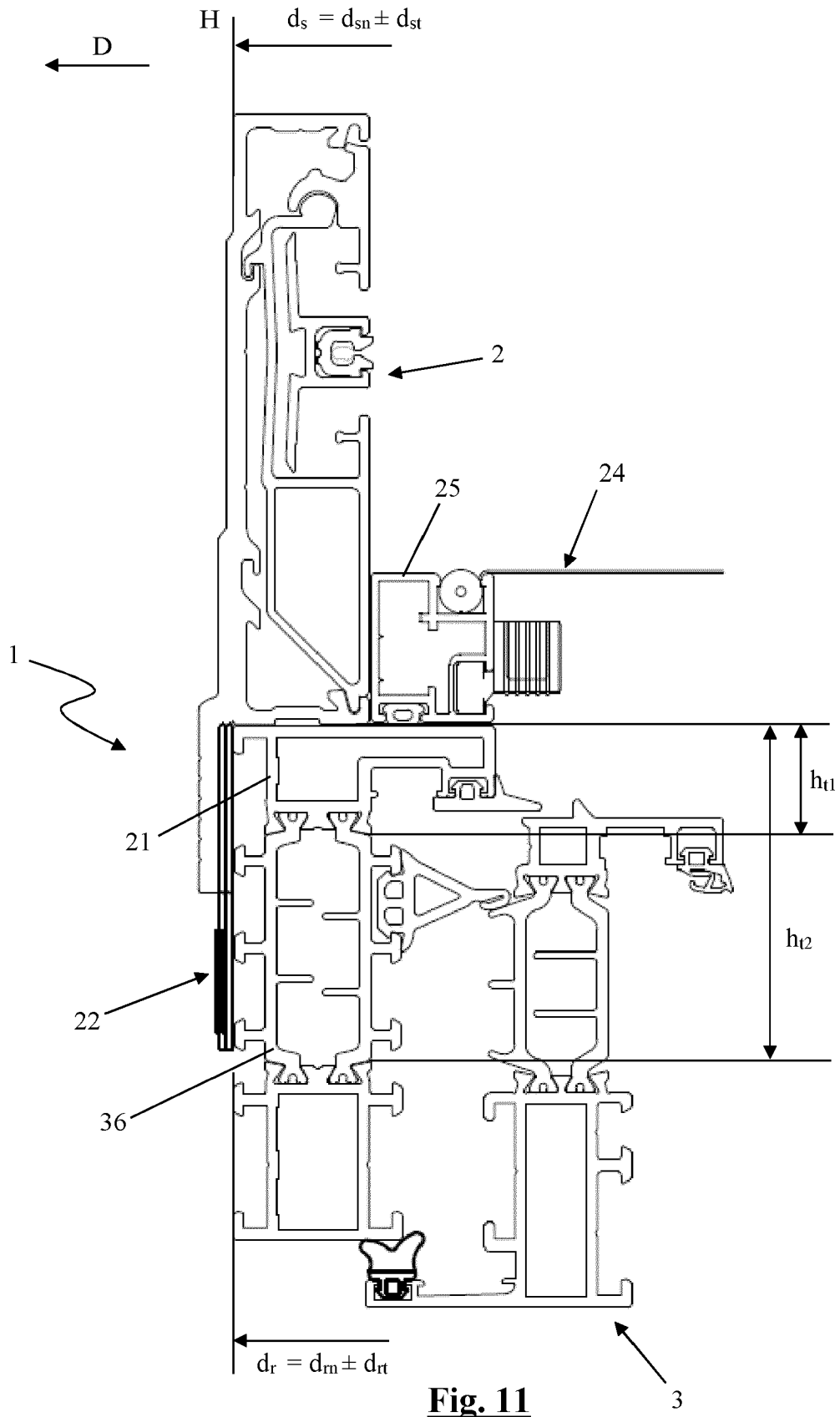


Fig. 10



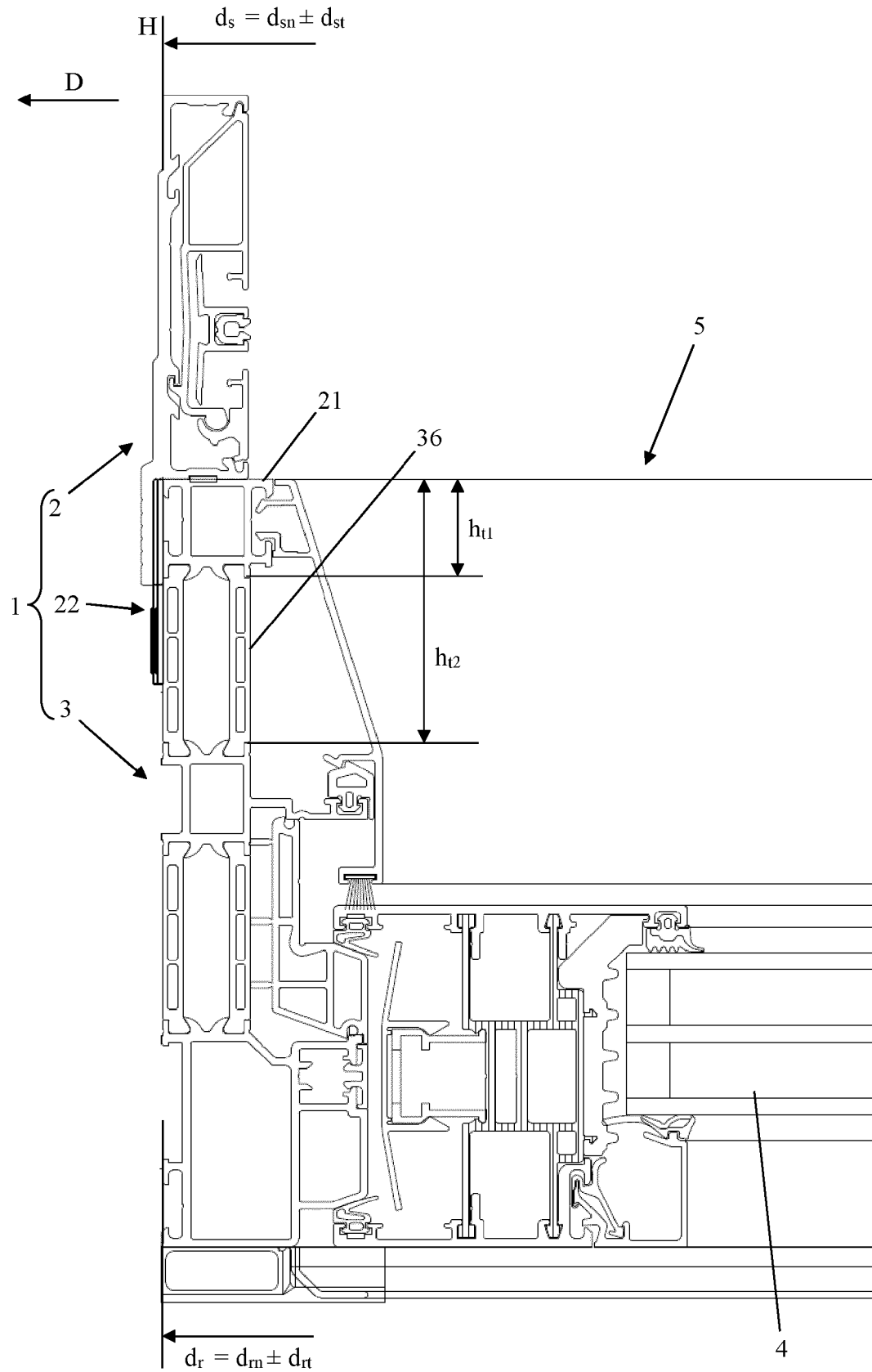


Fig. 12

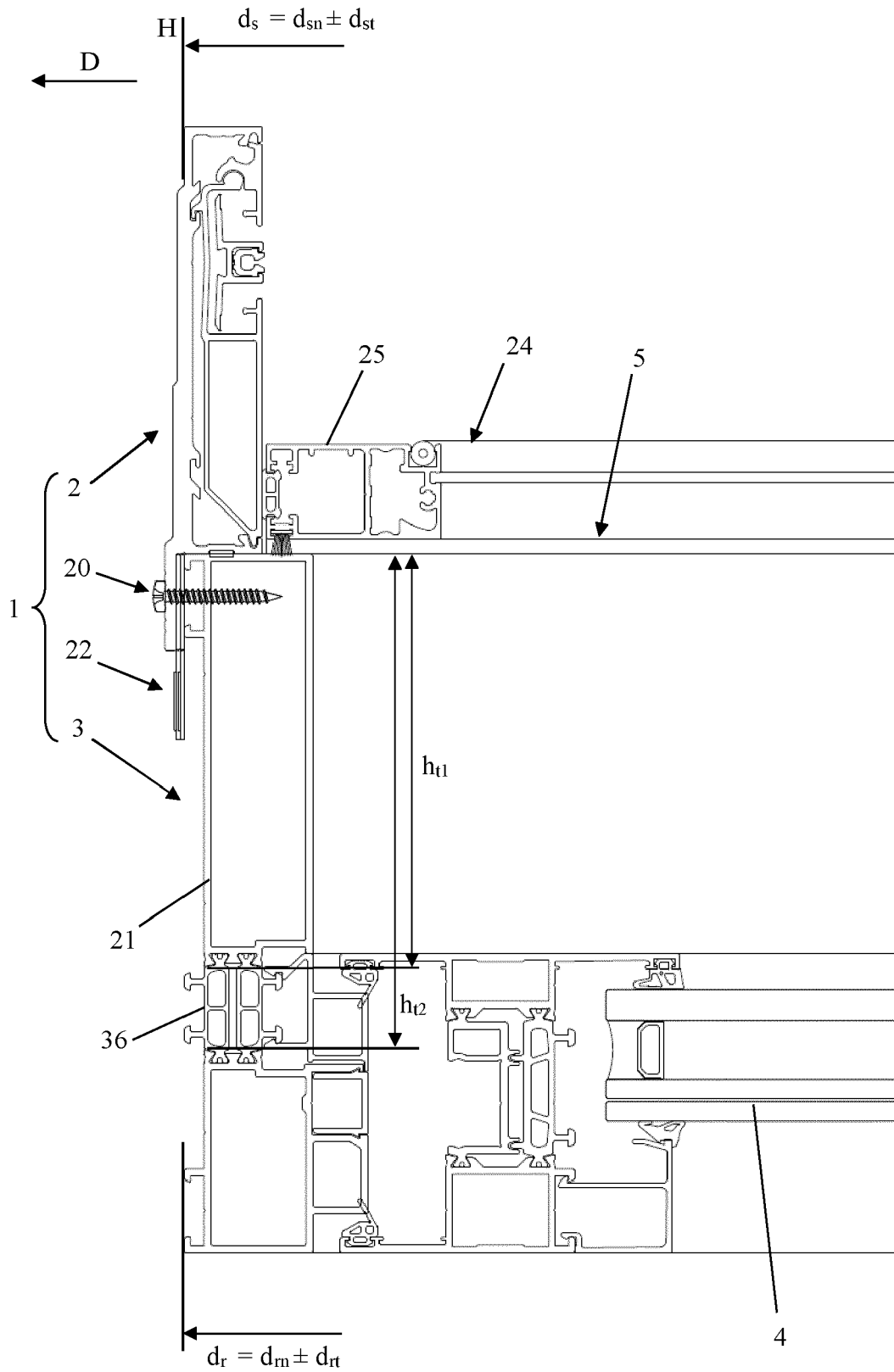


Fig. 13

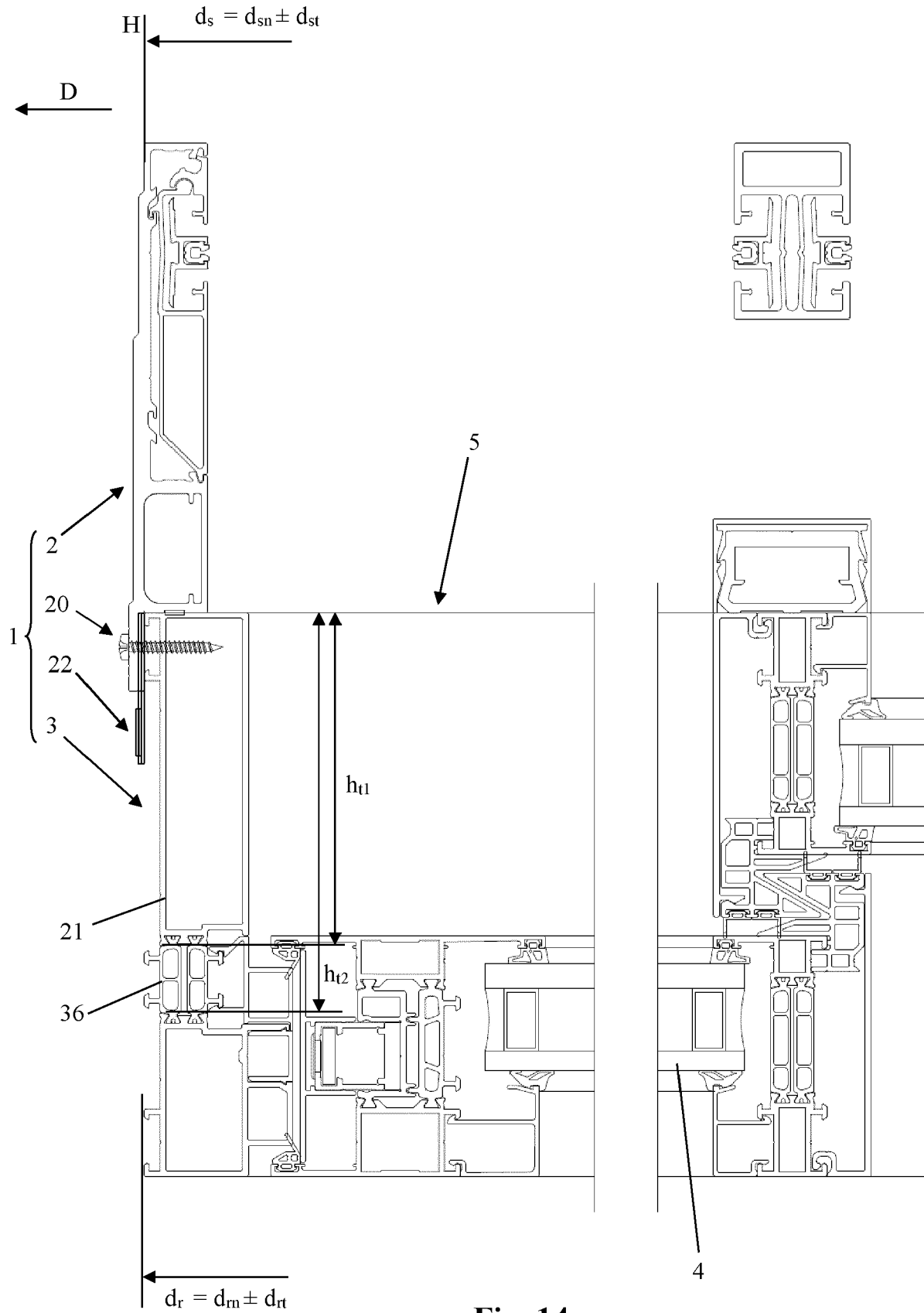


Fig. 14

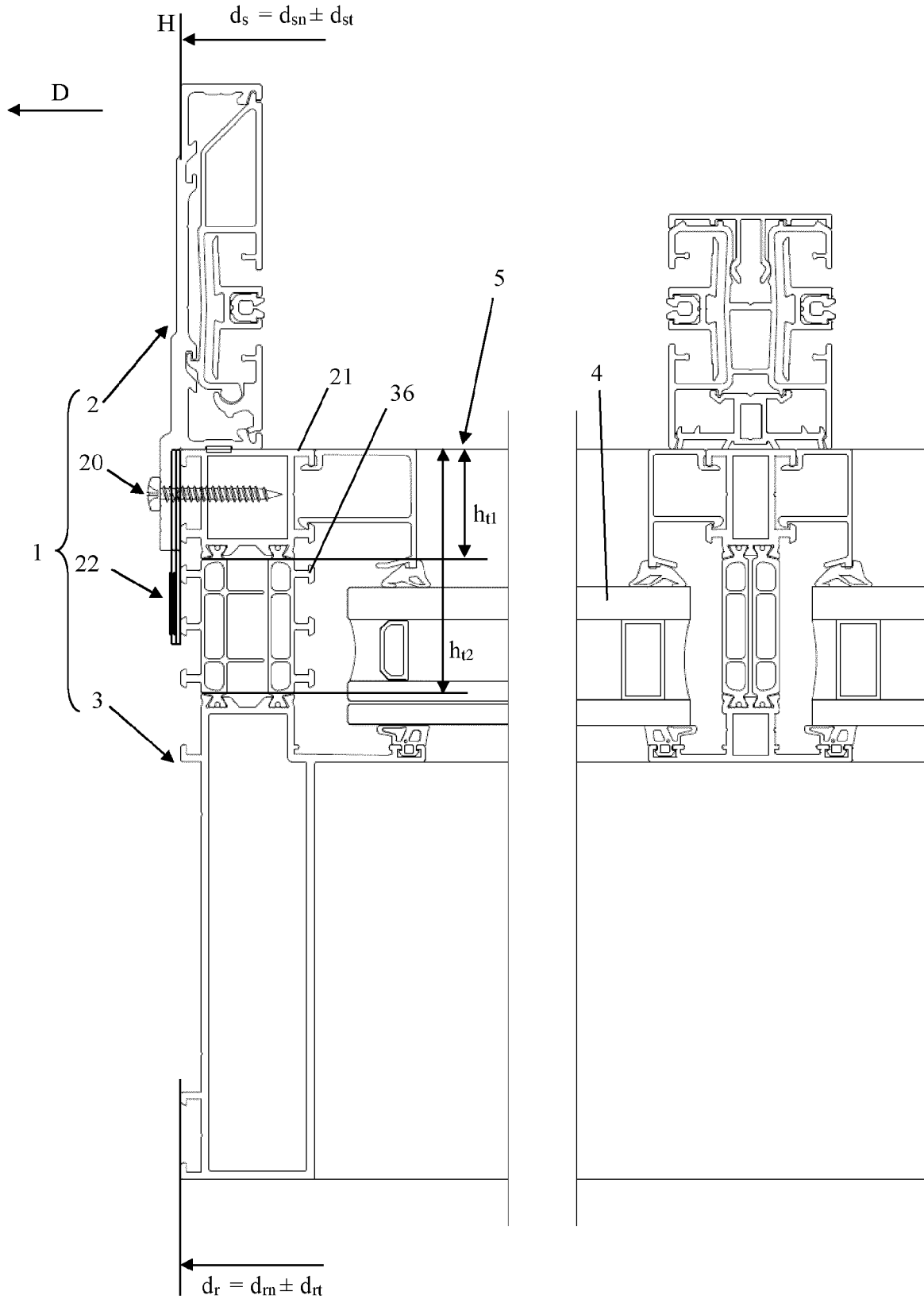


Fig. 15



EUROPEAN SEARCH REPORT

Application Number

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Y	* figures 1-4 *	6, 7	E06B1/68
A	* page 7, paragraph 7 - page 11, paragraph 1 *	12, 13	ADD. E06B3/263
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A	* figures 1-2 * * pages 5-7 *	1-5, 8-13	E06B3/26
A	DE 10 2016 111266 A9 (HEROAL - JOHANN HENKENJOHANN GMBH & CO KG [DE]) 15 February 2018 (2018-02-15) * figure 6 * * paragraph [0045] *	1-13	
			TECHNICAL FIELDS SEARCHED (IPC)
			E06B
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 31 January 2023	Examiner Blancquaert, Katleen
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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31-01-2023

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