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(54) **COVERING**

(57) Covering (1), comprising:
 - at least two beams (2);
 - a screen (3) tensionable between these beams (2), wherein at least one said beam (2) is provided with a gutter (6) which extends under a side edge (7, 7', 7'', 7''') of the screen (3), wherein a side wall (8) of this gutter (6)

is arranged under this screen (3); and
 - and a sealing element (9) which is displaceable between a first position, in which a clear opening is present between the side wall (8) of the gutter (6) and the screen (3), and a second position, in which the sealing element (9) closes off this opening.

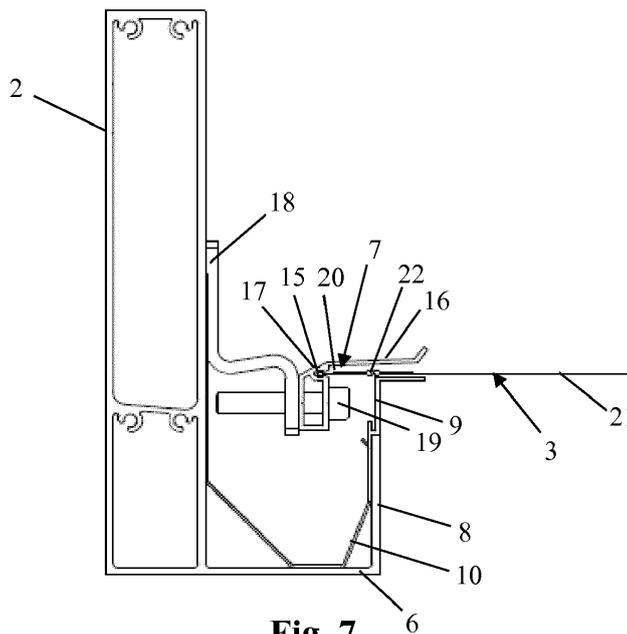


Fig. 7

Description

[0001] The present invention relates to a covering comprising at least two beams and a screen arranged between these beams, wherein at least one said beam is provided with a gutter which extends under a side edge of the screen, wherein a side wall of this gutter is arranged at a distance under this screen.

[0002] Different types of coverings exist in which a screen is arranged between two beams. The present invention relates to such coverings in which the beams are fixedly arranged. Optionally, these beams may be fitted so as to be detachable. However, in the fitted position, these form part of a fixed structure.

[0003] In a first embodiment, it is possible to arrange such a screen between these beams in a fixed manner by tensioning this screen between these beams. KR100820369 and WO 2014/043779 describe systems for tensioning such a screen, however still without a gutter in the beams.

[0004] In a second embodiment, it is possible to provide such a screen on a screen roller so as to be able to be rolled up and unrolled, wherein this screen is tensioned between these beams in the unrolled position. Examples thereof are known from EP 2 343 418 A1 and EP 2 345 772 A2.

[0005] In a third embodiment, it is possible to provide such a screen so as to be foldable, wherein this screen is attached to various crossbeams which are slidable with respect to the beams. In the unfolded position, this screen may in this case extend between the beams in a tensioned manner. Such coverings are known, for example, from EP 2 578 767 A2.

[0006] Such coverings are usually used to protect an outdoor space, as an awning, pergola, veranda, patio covering, carport, etc. More and more often, such coverings are also provided with closable side walls, so that the outdoor space cannot only be closed from above, but also on its sides. In this case, it is a drawback that the screen of such a covering is typically arranged at a certain distance above the gutter. In order to provide the screen so as to be slidable and/or so as to be able to be tensioned between the beams, the screen in this case also extends at a certain distance above a side wall of the gutter. Above this side wall of the gutter, a clear opening is provided in the continuation of this side wall between the gutter and the screen. Insects can then still penetrate into said outdoor space via this opening between the screen and the gutter.

[0007] It is an object of the present invention to prevent insects from being able to penetrate via said opening between the screen and the gutter.

[0008] This object of the invention is achieved by providing a covering comprising at least two beams and a screen arranged between these beams, wherein at least one of said beams is provided with a gutter which extends under a side edge of the screen, wherein a side wall of this gutter is arranged at a distance under this screen,

and wherein the covering comprises a sealing element which is displaceable between a first position, in which a clear opening is present between the side wall of the gutter and the screen, above the side wall of the gutter, or between the sealing element and the screen, and a second position, in which the sealing element at least partly closes off this opening.

[0009] The screen of such a covering is a screen in the broadest sense and may, for example, be a woven fabric, but may, for example, also be a plastic membrane or film. This screen may have various shapes. It may, for example, be substantially triangular or quadrangular or alternatively polygonal.

[0010] This screen is preferably tensionable or tensioned between said beams.

[0011] By providing such a displaceable sealing element, the opening between the screen and the gutter can now be closed off at least partly, preventing insects from penetrating between the screen and the gutter. Preferably, the sealing element is in this case designed to close off said opening virtually completely in the second position.

[0012] A sealing element or a covering according to the present invention preferably extends along the entire length over which the side edge of the screen extends above the side wall of the gutter. However, it is also possible to arrange different shorter sealing elements next to each other which can close off the opening between the screen and the gutter together.

[0013] Such a sealing element may in this case more specifically be attached to the screen or form part of the screen.

[0014] However, in a preferred embodiment, the sealing element is arranged separately from the screen. The screen may then be attached between the beams without experiencing a great degree of disruption from this displaceable sealing element, when this displaceable sealing element is in its first position.

[0015] In a specific embodiment, the sealing element is displaceable in a direction perpendicular to the screen.

[0016] The expression displaceable in a direction perpendicular to the screen is understood to mean that the sealing element extends further away from the screen in the second position than in the first position.

[0017] Preferably, in this case, this displacement is then substantially perpendicular to this screen.

[0018] Ensuring a displaceability of the sealing element perpendicular to the screen makes it possible to ensure that the sealing element interferes with the fastening of the screen and/or the draining via the gutter to a minimum degree.

[0019] In a particularly preferred embodiment, the sealing element is arranged adjacent to the side wall of the gutter so as to be slidable with respect to this side wall.

[0020] Such a sealing element may be of a compact design, as may any means to make this sealing element displaceable. A sealing element which is displaceable in this way may also be configured in a simple aesthetic

manner. If the sealing element is displaceable in this way, the sealing element will interfere with draining via the gutter as little as possible. In this way, the displaceability of the sealing element is hampered as little as possible by the gutter.

[0021] In order to accommodate the sealing element in the covering so as to be slidable with respect to the side wall, the covering preferably comprises one or several resilient elements in order to press the sealing element against this side wall. By means of such resilient elements, such a sealing element may be fastened in a particularly simple manner, in which the slidability can be ensured in a simple manner without requiring additional displacement means for the purpose.

[0022] Such resilient elements are then preferably configured as leaf springs. On the outer side of the gutter, such leaf springs may be incorporated in an aesthetic way. On the inner side of the gutter, these leaf springs may be accommodated in this gutter so as to cause as little disruption as possible with regard to drainage via this gutter.

[0023] Preferably, such resilient elements are at least partly arranged in the gutter so that visual hinder nuisance from these resilient elements is limited under the covering. Still more preferably, these are accommodated completely in the gutter, so that these are completely hidden from view under the covering.

[0024] The sealing element of a covering according to the present invention may be made of different materials and in different ways.

[0025] This may be made, for example, of plastic or of metal, this for example via bending or via extrusion, etc.

[0026] Such a sealing element may be at least partly flexible. Preferably, such a sealing element is rigid, so that it is able to close off the said opening with a large degree of certainty.

[0027] So as to be able to displace the sealing element in a simple manner, this preferably comprises an engagement element, which is engageable in order to displace the sealing element.

[0028] This engagement element is in this case preferably configured as a flange.

[0029] Such a flange can easily engaged on in several locations with respect to the sealing element compared to a sealing element which is only provided in a discrete location. Such a flange can also easily be accommodated in the covering in an aesthetic manner. In terms of production engineering, such a flange can also easily be produced together with the rest of the sealing element, this for example via bending or via extrusion.

[0030] A covering according to the present invention preferably furthermore comprises one or several securing elements for securing the sealing element in the second position, so that an undesired displacement thereof is prevented.

[0031] Preferably, the sealing element to this end comprises a bearing part which, in the second position, bears against the side wall of the gutter and a sealing part which

is arranged in a stepped manner with respect to the bearing part, wherein this sealing part, in the second position, extends above the side wall of the gutter in order to close off the opening between the side wall and the screen.

5 **[0032]** By means of such a bearing part and such a sealing part, the sealing element can be accommodated in the covering in a secure manner. The bearing part forms a securing element for securing the sealing element against a lateral displacement with respect to the side wall of the gutter. The step between the sealing part and the sealing element secures the sealing element against a downward displacement with respect to the side wall of the gutter. The screen itself secures the sealing element against an upward displacement. If the sealing element is, in addition, pressed against the side wall of the gutter by said resilient elements, then these resilient elements also secure the sealing element against a lateral displacement.

10 **[0033]** If such a sealing element comprising a said bearing part and a said sealing part also comprises a said flange, then this flange, at the top of the sealing part, preferably extends away from the gutter and perpendicular to this sealing part. In this way, this flange is arranged in the second position of the sealing element adjacent to the screen and thus helps to secure the sealing element in its second position against an upward displacement.

15 **[0034]** In the first position, the sealing element of a covering according to the present invention preferably extends at least partly in the gutter, so that visual and other nuisance caused by this sealing element and any means for holding and/or displacing this sealing element under the covering can be kept to a minimum.

20 **[0035]** If such a sealing element comprises a said flange, then this flange preferably extends away from the gutter, so that it is easily engageable.

25 **[0036]** In a specific embodiment, a covering according to the present invention comprises at least one mounting profile, to which the screen is attachable or attached, and which is attachable to a said beam, for fastening the screen to this beam. The covering then preferably also comprises tensioning means for each mounting profile which engage on this mounting profile in order to tension the screen with respect to the beams.

30 **[0037]** In an embodiment in which the screen is fixedly arranged between the beams, it is possible, due to these tensioning means, to fit the screen tension-free first and only then apply tension to the screen. This facilitates a crease-free fitting of such a screen. With a screen which can be rolled up and unrolled, such a fitting facilitates the rolling up and unrolling, in which case the screen may be tensioned between the beams.

35 **[0038]** The screen may either already be attached beforehand to the mounting profile or may be provided so as to be readily attachable thereto.

40 **[0039]** During production, it is easier to attach such a mounting strip under controlled conditions to such a mounting profile in a crease-free manner than when it has to be attached in situ.

[0040] However, in situ, it is for example also possible to attach a screen by means of, for example, a thickening similar to the systems from KR100820369 and WO 2014/043779.

[0041] In embodiments comprising a said mounting profile, the screen is provided with such a thickening preferably on at least one side edge, and the mounting profile is preferably provided with a fitting slot for holding said thickening therein.

[0042] A thickening on the side edge of such a screen may, for example, be provided in the form of a half zip, but may, for example, also be formed by a cord which is arranged in the side edge of the screen. Possible thickenings for a screen are, for example, known from FR 2 602 539, NL 1 014 061 and EP 1 491 712.

[0043] In embodiments comprising said tensioning means, these tensioning means are preferably provided in order to displace the mounting profile in a direction perpendicular to the corresponding side edge and in the plane of the screen for the purpose of tensioning the screen. In this way, the screen may be tensioned parallel to itself, without the screen chafing against guide elements to this end. With tensioning systems in which the screen is tautened at an angle, this screen is pulled over a guide edge, in which case the screen is subjected to a greater degree of wear due to friction with this guide edge and greater forces are required to tension the screen.

[0044] The tensioning means preferably comprise tightening bolts or tightening screws. By means of such tightening bolts or tightening screws, the screen can be tensioned in a continuously variable way. The tension of the screen can then also be readily readjusted in a continuous manner.

[0045] The tensioning means are preferably tensionable on the side of the screen where the connection of the corresponding mounting strip can be achieved.

[0046] The tensioning means may then be provided so as to be accessible more easily in a location where the connection is also brought about. Preferably, this a location where the screen will ultimately remain visible, so that it is possible to follow the end result of the fastening and tensioning of the screen. Preferably, these tensioning means are therefore tensionable in the first position via the opening in order to tension the screen with respect to the beams. If the tensioning means in the first position are engageable via this opening in order to be tensioned, then these may be readily hidden from view in the second position of the sealing element.

[0047] In order to further limit creasing, a covering according to the present invention with a first said mounting profile which is attachable to a first beam and to which the screen with a first side edge is attachable or attached, preferably also comprises at least one second such mounting profile, to which the screen is attachable or attached by a second side edge and which is attachable to a second beam of the covering, for fastening the screen between the beams.

[0048] Such a covering with a second mounting profile

then furthermore preferably comprises second tensioning means which engage with this second mounting profile for tensioning the screen with respect to these beams.

[0049] By means of such second tensioning means, tensioning of the screen can be split over various side edges. Each of the tensioning means can then take on a smaller part of the tension. In this way, it is easier to tension the screen evenly. Deviations can also be taken care of more easily if the screen can be tensioned on several sides.

[0050] If desired, the screen may then be attached on at least one other side edge without such tensioning means.

[0051] If the two said side edges are arranged at an angle with respect to each other, the screen may also be tensioned in several directions.

[0052] Still more preferably, the screen is attachable or attached, on at least two opposite side edges, to corresponding mounting profiles which are attachable to a corresponding beam of the covering, in order to attach the screen to beams of the covering which are arranged along these side edges.

[0053] A screen which is tensioned on several sides by means of said tensioning means may to this end be provided on all respective side edges with a said thickening and the corresponding mounting profiles may to this end be provided with a fitting slot for holding this thickening therein.

[0054] If the screen can be held on several side edges in such a way, it is possible to fasten the screen in a particularly aesthetic way. In addition, openings next to the screen can more readily be prevented by means of such a mounting profile. It is thus also easier to keep the screen tensioned after it has been tensioned.

[0055] One or several mounting profiles may be provided for each side edge.

[0056] The covering then preferably also comprises, for all respective side edges, tensioning means that engage with the corresponding mounting profile in order to tension the screen with respect to the beams.

[0057] In this way, the screen can easily be tensioned evenly and in different directions.

[0058] Furthermore, in such embodiments with mounting profiles, the screen preferably comprises, on one or several side edges, a detachable mounting strip which is attachable or attached to each corresponding mounting profile for fastening the screen to this mounting profile, and which is detachably attachable to a base screen of the screen. By means of such a detachable mounting strip, it is easier to attach the screen to the mounting profiles without the screen having to be fully spread out and laid down to this end. The mounting profiles do not have to be attached to all the necessary sides of the screen itself first. These may, at least for one side of the screen, be attached first to the beam, with the mounting strip attached thereto and with its thickening in the fitting slot. Then, the base screen can then be attached to this mounting strip.

[0059] The fastening between such a mounting strip and such a base screen is preferably provided in such a way that this fastening is also hidden from view in the second position of the sealing element.

[0060] In order to detachably attach the base screen to the mounting strip, various possible fastening means are known, such as for example a zip or a hook and loop fastener or other (re)closable fastening means.

[0061] Preferably, the mounting strip is in this case detachably attachable to the base screen and, still more preferably, the screen-tensioning system to this end comprises a zip. Such a zip is a simple fastening means to provide the mounting strip in a detachable way. This makes it possible to attach the base screen and the mounting strip in a smooth and secure manner. By means of such a zip, the base screen and the mounting strip can repeatedly be connected to each other in the same way. By means of such a zip, loads can be distributed correctly, so that creasing is reduced when tensioning the screen.

[0062] With a covering comprising a second mounting profile, the screen then preferably comprises, on the second side edge, a second mounting strip which is attachable or attached to the second mounting profile for fastening the screen to the second mounting profile and which is attachable to the base screen.

[0063] It is then readily possible to first attach the mounting profile with the mounting strip to the beam on this side before then attaching the base screen to the mounting strip.

[0064] In a particularly preferred embodiment of such a covering comprising a second mounting profile, the second side edge is arranged opposite the former side edge, so that the screen can be tensioned evenly and without creasing.

[0065] If this second side edge is in addition provided with a said second mounting strip, then it is readily possible, for example, to roll up the base screen initially and attach it between both detachable mounting strips while unrolling the base screen. This is certainly readily possible if the base screen on both sides is attachable to the corresponding mounting strips by means of the same zip.

[0066] If the covering comprises tensioning means and corresponding mounting profiles on all side edges of the screen, then the covering preferably comprises a mounting strip on all side edges, said mounting strip being provided with the corresponding thickening and being attachable to the base screen, this having the aforementioned advantages of such a mounting strip.

[0067] With such an embodiment, the base screen is preferably first attached to a corresponding mounting strip on one side edge, before this base screen is attached to corresponding mounting strips on other side edges.

[0068] In the case of a quadrangular base screen, the base screen is in particular preferably rolled up first, first attached to the corresponding detachable mounting strip on the free side edge and then attached to corresponding detachable mounting strips on both sides simultaneously

while the base screen is being unrolled in order, finally, to attach the last side edge to the corresponding detachable mounting strip.

[0069] A covering according to the present invention may, more specifically, comprise a roof structure, wherein the screen is tensioned in the fitted position under this roof structure in order to form a ceiling.

[0070] By means of such a roof structure, the structure of the covering can readily be constructed with the roof structure forming part thereof. This roof structure may also ensure that a frame which comprises said beams and in which the screen is tensioned does not deform during tensioning of this screen.

[0071] In this case, this roof structure may be provided in order to protect the covering against weather conditions, so that the screen does not have to be modified to this end.

[0072] To this end, such a roof structure may be constructed from steel deck, at least partly. Steel deck is a profiled steel plate which forms the load-bearing skin of the roof structure. Such steel deck is lightweight and can be installed quickly.

[0073] The present invention will now be explained in more detail by means of the following detailed description of a preferred covering according to the present invention. The sole aim of this description is to give illustrative examples and to indicate further advantages and particulars of the present invention and may therefore not be interpreted as a limitation of the area of application of the invention or of the patent rights defined in the claims.

[0074] In this detailed description, reference numerals are used to refer to the attached drawings, in which:

- Fig. 1 shows a covering according to the present invention in cross section;
- Fig. 2 shows a first embodiment of a part of the covering from Fig. 1 in more detail in cross section at the location of a beam, with the sealing element in the first position;
- Fig. 3 shows the first embodiment from Fig. 2 of a part of the covering from Fig. 1 in more detail in cross section at the location of a beam, with the sealing element in the second position;
- Fig. 4-7 shows a second embodiment of a part of the covering from Fig. 1 in more detail in cross section at the location of a beam, in which the screen is attached to the beam in various steps (Figs. 4-6) and is tensioned (Fig. 6), with the sealing element being in the first position, after which the sealing element is brought to the second position (Fig. 7);
- Fig. 8 shows in more detail and in cross section how the mounting strip in Fig. 4 is attached to the mounting profile;
- Fig. 9 shows in more detail and in cross section how the base screen in Fig. 5 is attached to the mounting strip;
- Fig. 10 shows in more detail and in cross section how the screen in Fig. 6 is tensioned;

- Fig. 11 shows in more detail and in cross section how the sealing element from the second embodiment in Figs. 4-7 is brought to its second position;
- Fig. 12 diagrammatically shows how the screen from the second embodiment can be attached to the covering from Fig. 1 by unrolling the base screen;
- Fig. 13 shows the covering from Fig. 1 in bottom view;
- Fig. 14 shows the covering from Fig. 1 in perspective from below.

[0075] The illustrated covering (1) comprises a screen (3) which, in the fitted position, is fixedly arranged in the covering (1). However, this screen (3) is tensionable in an adjustable way, as will be explained further below.

[0076] Mutatis mutandis, alternative coverings (1) may be elaborated in which the screen (3) can be rolled up on and unrolled from a screen roller, or is arranged in the covering (1) so as to be foldable.

[0077] The covering (1) illustrated in Fig. 1 comprises posts (4) to be able to place the covering (1) on the ground. Typically, there are four posts (4) which support four beams (2) which have been assembled to form a frame. It is also possible for two single beams (2) to be provided instead of four beams (2), or three beams (2) which have been arranged in a triangle with respect to each other. Instead of supporting the covering (1) by means of said posts (4), it is also possible, for example, to attach one or several of the beams of this covering (1) to a wall.

[0078] At the bottom of the beams (2), between these beams (2), a screen (3) is tensioned, in all directions, as is indicated by the arrows in Fig. 13. This screen (3) forms a ceiling for the covering (1).

[0079] In the illustrated embodiment, steel deck (5) is arranged between these beams (2) which ensures that the beams (2) do not bend when tensioning the screen (3).

[0080] At least one beam (2) of the covering (1) is provided with a gutter (6), as can be seen more clearly in Figs. 2 to 8 with two different illustrated embodiments. This gutter (6) is provided for draining off the precipitation falling on the covering.

[0081] In the tensioned position of the screen (3), this gutter (6) extends under a side edge (7, 7', 7'', 7''') of the screen (3). In this case, a side wall (8) of the gutter (6) is arranged under this screen (3).

[0082] In both illustrated embodiments, the screen (3) is a substantially rectangular screen (3) which is attached on each of its side edges (7, 7', 7'', 7''') to the beams (2) by means of mounting profiles (16), tightening screws (19) and tensioning brackets (18). To this end, the screen (3) is provided with a half zip (15) on each of its side edges (7, 7', 7'', 7'''), which half zip may be held in a corresponding fitting slot (17) in a corresponding mounting profile (16).

[0083] The mounting profiles (16) are attached to the beams (2) of the covering (1) by means of tensioning brackets (18) and tightening screws (19). By means of

these tightening screws (19), the screen (3) can be tensioned on four sides.

[0084] The screen (3) is in each case attachable and tensionable to the corresponding beam (2) just above the gutter (6) by means of the tightening screws (19). To this end, the tightening screws (19) are screwed to the tensioning brackets (18) above this gutter (6) and the tensioning brackets (18) are in turn attached to the beams (2) above this gutter (6). By tightening the tightening screws (19), the corresponding mounting profile (16) is displaced to above the gutter (6) until the side wall (8) of the gutter (6) is arranged under the screen (3).

[0085] In the first illustrated embodiment, a flexible sealing element (9) is attached at the bottom of the screen (3). In the non-tensioned position of the screen (3), in which the tightening screws (19) are not yet tightened up against the tensioning brackets (18), there is still a clear opening between the side wall (8) of the gutter (6) and the screen (3), as can be seen in Fig. 2. Via this opening, a hand tool can engage on the tightening screws (19) in order to screw the tightening screws (19) towards the tensioning brackets (18) and, if desired, tighten them against these tensioning brackets (18). When tensioning the screen (3) by means of the tightening screws (19), the sealing element (9) is also displaced towards the gutter (6). As can be seen in Fig. 3, this flexible sealing element (9) may then, in the tensioned position of the screen (3), be moved across the side wall (8) of the gutter (6) in order thus to close off the opening between the side wall (8) of the gutter (6) and the screen (3), so that insects can no longer penetrate into the space under the covering (1) via this opening.

[0086] In the second illustrated embodiment, the screen (3) comprises a rectangular base screen (21) and four detachable mounting strips (20). Each mounting strip (20) is detachably attachable to a side edge (7, 7', 7'', 7''') of the base screen (21) by means of a zip (22).

[0087] To this end, each side edge (7, 7', 7'', 7''') of the base screen (21) is provided with a half zip which may be made, for example, of polyester or nylon. To this end, this half zip may be welded, for example, to the base screen (21) with a weld seam.

[0088] Each mounting strip (20) is provided with a corresponding half zip on both its longitudinal sides. This mounting strip (20) may then be coupled to the half zip of the corresponding side edge (7, 7', 7'', 7''') of the base screen (21) by means of one of these half zips.

[0089] The other one of the two half zips (15) may be used to attach the mounting strip (20) to the mounting profile (16), as has been described above and as is illustrated in Fig. 4, this in order to attach the screen (3) to this mounting profile (16).

[0090] In order to attach the screen (3) to the beams (2) and tension it, in this second embodiment, the mounting profile (16) with a mounting strip (20) arranged thereon is first attached to the tensioning brackets (18) by means of tightening screws (19), without already tightening these tightening screws (19) onto the tensioning

brackets (18), as can be seen in Figs. 4 and 8. Subsequently, the base screen (21) is fixed to the mounting strip (20) by zipping, as can be seen in Figs. 5 and 9. In this case, the base screen (21) is initially rolled up, as can be seen in Fig. 12, and is fixed on its clear side edge (7) by zipping onto the corresponding mounting strip (20) by means of the zip (22). Then, the base screen (16) is attached on both sides (7', 7'') simultaneously to the corresponding mounting strips (20) by means of the corresponding zips (22) while the base screen (21) is being unrolled, as is illustrated in Fig. 12. Finally, the last side edge (7''') is then attached to the corresponding mounting strip (20) by means of the corresponding zip (22). In this way, the screen (3) is then fitted in the covering (1) in a tension-free manner. Subsequently, the tightening screws (19) are tightened, in which case the mounting profiles (16) are displaced towards the beams (2) in a direction perpendicular to the corresponding side edge (7, 7', 7'', 7''') and in the plane of the screen (3). In this way, the screen (3) is tensioned. Above the gutter (6), the tightening screws (19) may be engaged on by a hand tool in order to tension the screen (3), in this case via an opening which extends between the screen (3) and the side wall (8) of the gutter (6). In this case, the tightening screws (19) are screwed towards the tensioning brackets (18) and, if desired, tightened onto these tensioning brackets (18), as can be seen in Figs. 6 and 10.

[0091] The tightening screws (19) are tensionable in the covering (1), viewed on the underside of the screen (3). The zips (22) may preferably also be fixed to this underside by zipping.

[0092] In this second embodiment, a sealing element (9) is arranged separately from the screen (3). Adjacent to the side wall (8) of the gutter (6), this sealing element (9) is slidable between a first position and a second position.

[0093] In the first position, this sealing element (9) substantially extends in the gutter (6), as can be seen in Figs. 4 to 6. In this case, there is a clear opening between the side wall (8) of the gutter (6) and the screen (3). In the first position, the tightening screws (19) can be tightened through this opening.

[0094] After the screen (3) has been tensioned, this sealing element (9) may be brought into the second position, in which it closes off the opening between the side wall (8) of the gutter (6) and the screen (3), as can be seen in Figs. 7 and 11. The tensioning brackets (18), tightening screws (19) and the mounting strip (17) are then hidden from view by the sealing profile (9). In the second position, the sealing element (9) also ensures that no insects can penetrate through the opening between the gutter (6) and the screen (3).

[0095] The sealing element (9) is configured as a rigid sealing profile (9) which comprises a bearing part (11) which, in the second position, bears against the side wall (8) of the gutter (6) and a sealing part (13) which is arranged in a stepped manner with respect to the bearing part (11) and, in the second position, extends above the

side wall (8) of the gutter (6) in order to close off the opening between the side wall (8) and the screen (3), as can be seen in Fig. 11.

[0096] This sealing element (9) presses against the side wall (8) of the gutter (6) by means of leaf springs (10) which are arranged in the gutter (6). These leaf springs (10) allow a sliding movement of the sealing element (9) with respect to this side wall (8). In this case, the sealing element (9) is then displaceable between its first position and its second position in a direction perpendicular to the screen (3).

[0097] In order to be able to slide the sealing element (9) in a simple manner, a flange (14) is provided at the top of the sealing part (13), which flange (14) extends at the top of the sealing element (9), away from the gutter (6) and perpendicular to the sealing part (13). This flange (14) may be engaged on at various locations in order to displace the sealing element (9) with respect to the side wall (8) of the gutter (6).

[0098] Due to the fact that, in both embodiments, the tightening screws (19) are tensionable on the underside of the screen (3) when the sealing element (9) is in its first position, these tightening screws (19), as well as the tensioning brackets (18), are hidden from view by this sealing element (9) when this sealing element (9) is brought into its second position.

[0099] Due to the fact that, in the second embodiment, the mounting strip (20) is pulled to above the gutter (6) when tightening the tightening screws (19), this mounting strip (20) is also hidden from view by the sealing element (9) when it is brought into its second position. In this case, the flange (14) also hides the zip (22) from view as well.

35 Claims

1. Covering (1), comprising at least two beams (2) and a screen (3) arranged between these beams (2), wherein at least one said beam (2) is provided with a gutter (6) which extends under a side edge (7, 7', 7'', 7''') of the screen (3), wherein a side wall (8) of this gutter (6) is arranged at a distance under this screen (3), **characterized in that** the covering (1) comprises a sealing element (9) which is displaceable between a first position, in which a clear opening is present between the side wall (8) of the gutter (6) and the screen (3), above the side wall (8) of the gutter (6), or between the sealing element (9) and the screen (3), and a second position, in which the sealing element (9) at least partly closes off this opening.
2. Covering (1) according to Claim 1, **characterized in that** the sealing element (9) is arranged separately from the screen (3).
3. Covering (1) according to one of the preceding claims, **characterized in that** the sealing element

- (9) is displaceable in a direction perpendicular to the screen (3).
4. Covering (1) according to Claim 3, **characterized in that** the sealing element (9) adjacent to the side wall (8) of the gutter (6) is arranged so as to be slidable with respect to this side wall (8). 5
 5. Covering (1) according to Claim 4, **characterized in that** the covering (1) comprises one or several resilient elements (10) in order to press the sealing element (9) against this side wall (8). 10
 6. Covering (1) according to Claim 5, **characterized in that** the resilient elements (10) are configured as leaf springs (10). 15
 7. Covering (1) according to one of the preceding claims, **characterized in that** the sealing element (9) comprises an engagement element (14) which is engageable in order to displace the sealing element (9). 20
 8. Covering (1) according to Claim 7, **characterized in that** the engagement element (14) is configured as a flange (14). 25
 9. Covering (1) according to one of the preceding claims, **characterized in that** the sealing element (9) comprises a bearing part (11) which, in the second position, bears against the side wall (8) of the gutter (6) and comprises a sealing part (13) which is arranged in a stepped manner with respect to the bearing part (11), wherein this sealing part (13), in the second position, extends above the side wall (8) of the gutter (6) in order to close off the opening between the side wall (8) and the screen (3). 30
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 10. Covering (1) according to Claims 8 and 9, **characterized in that** the flange (14), at the top of the sealing part (13), extends away from the gutter (6) and perpendicular to this sealing part (13). 40
 11. Covering (1) according to one of the preceding claims, **characterized in that** the sealing element (9), at least in the first position, extends at least partly in the gutter (6). 45
 12. Covering (1) according to one of the preceding claims, **characterized in that** this covering (1) comprises at least one mounting profile (16), to which the screen (3) is attachable or attached, and which is attachable to a said beam (2) for fastening the screen (3) to these beams (2), and **in that** this covering (1) comprises tensioning means (19) which engage on the mounting profile (16) in order to tension the screen (3) with respect to this beam (2). 50
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 13. Covering (1) according to Claim 12, **characterized in that** the tensioning means (19) are tensionable in the first position via the opening.
 14. Covering (1) according to Claim 12 or 13, **characterized in that** the screen (6) comprises a base screen (21) and a mounting strip (20) which is attachable or attached to the mounting profile (16) for fastening the screen (3) to the mounting profile (16) and which is attachable to the base screen (21).
 15. Covering (1) according to Claim 14, **characterized in that**, in the fitted position, the sealing element (9) hides the mounting strip (20) from view in the second position.

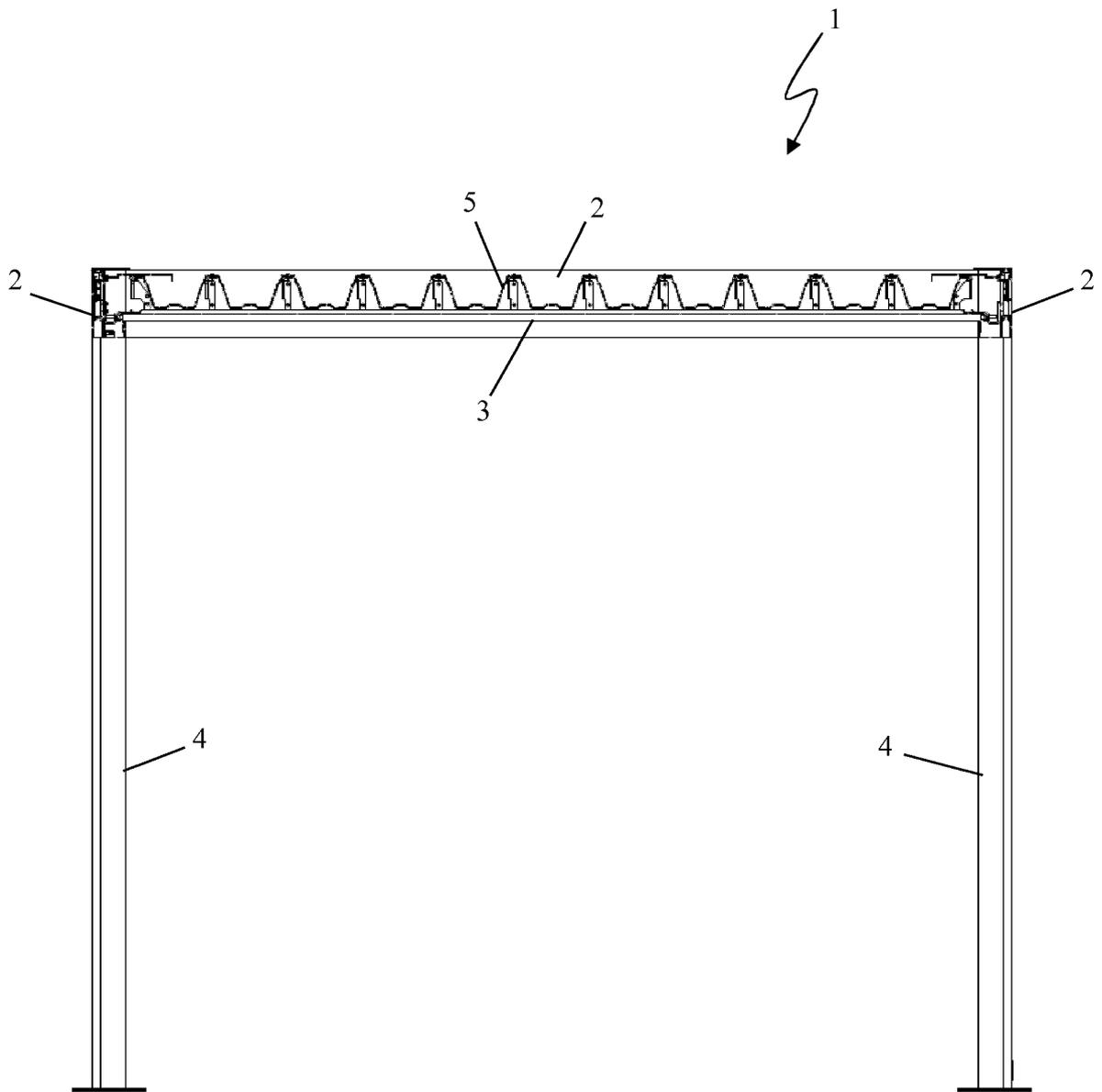


Fig. 1

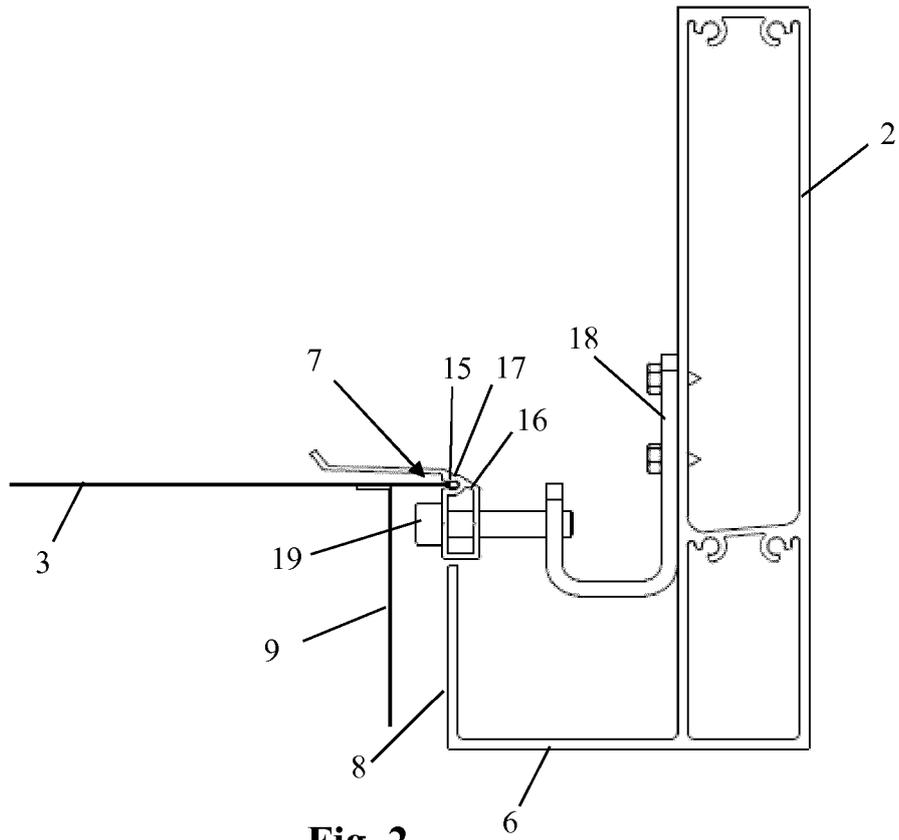


Fig. 2

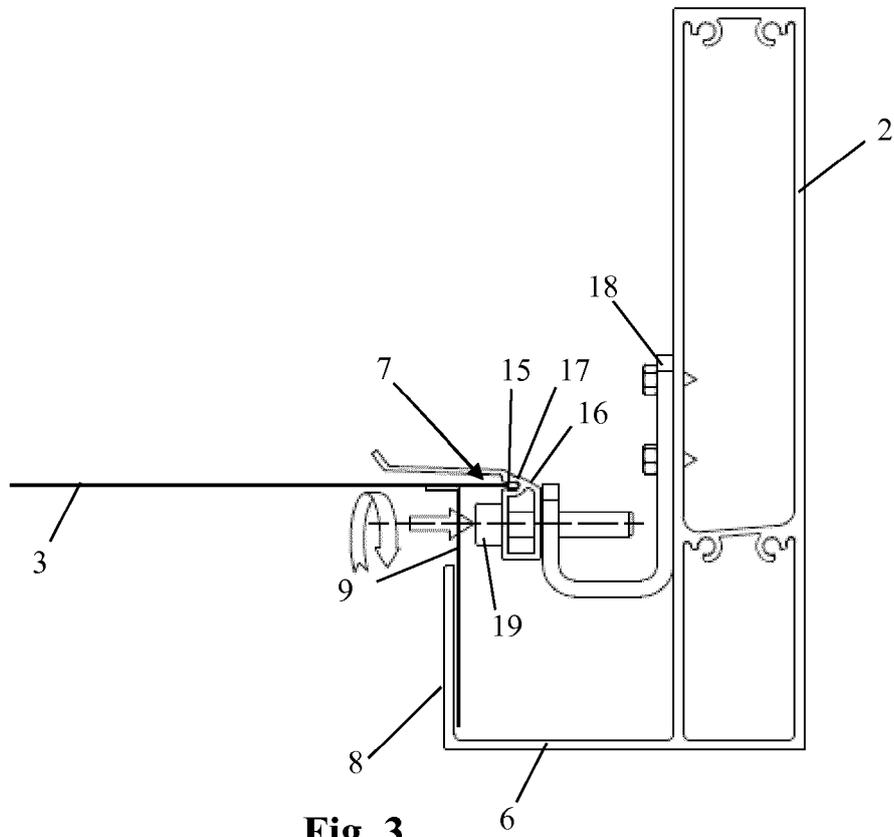


Fig. 3

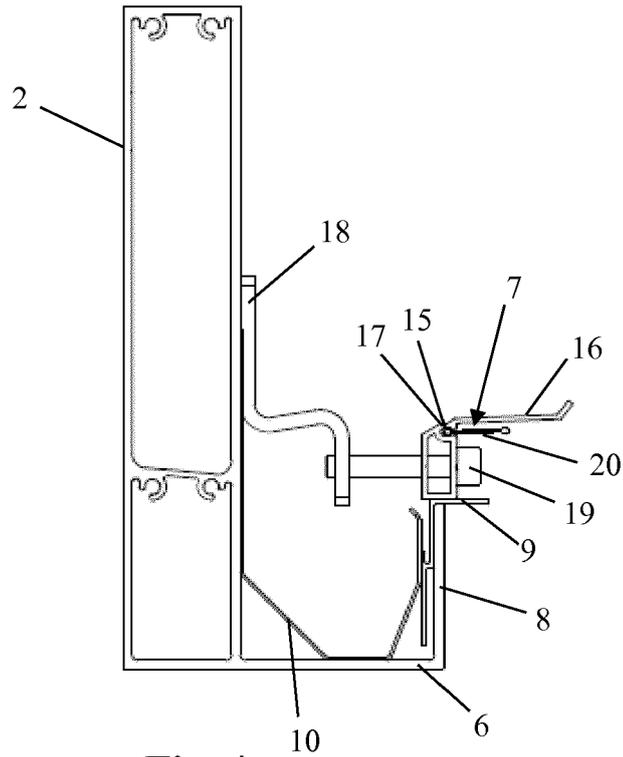


Fig. 4

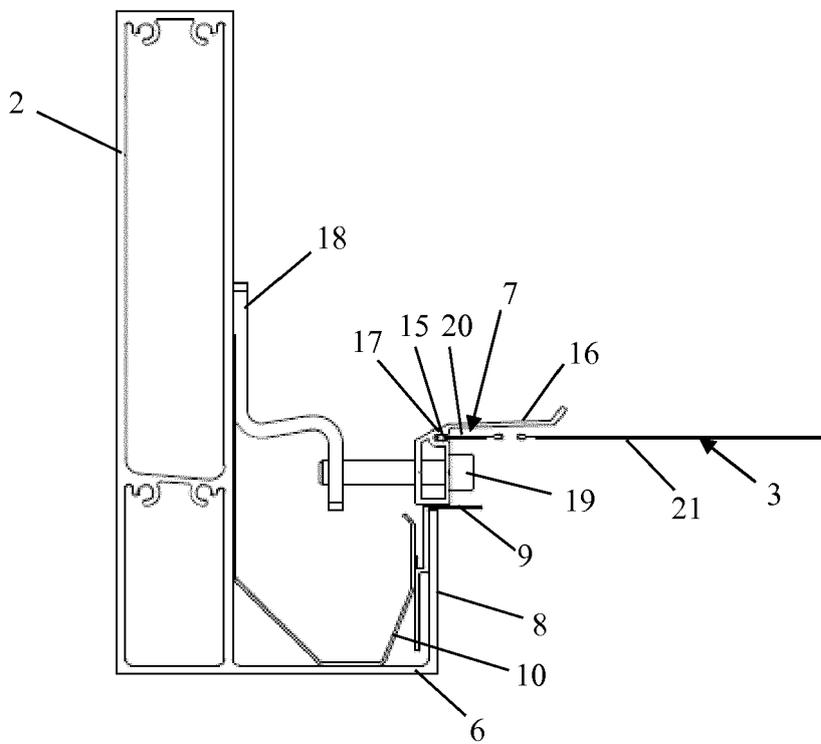


Fig. 5

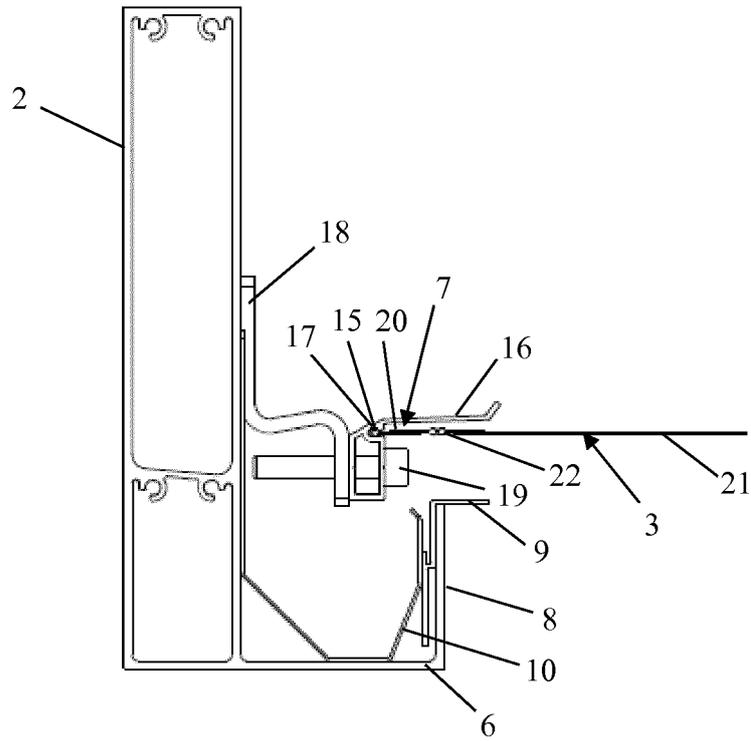


Fig. 6

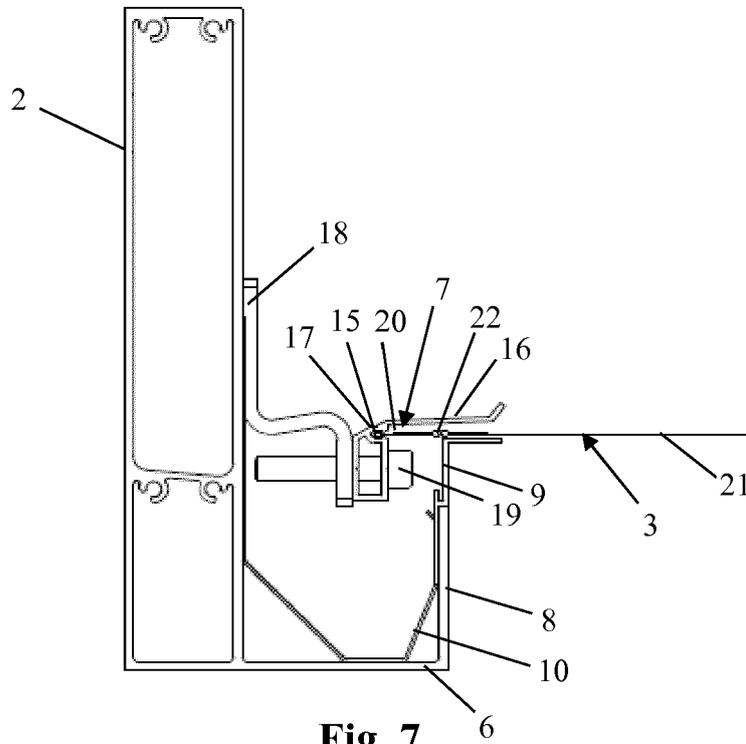


Fig. 7

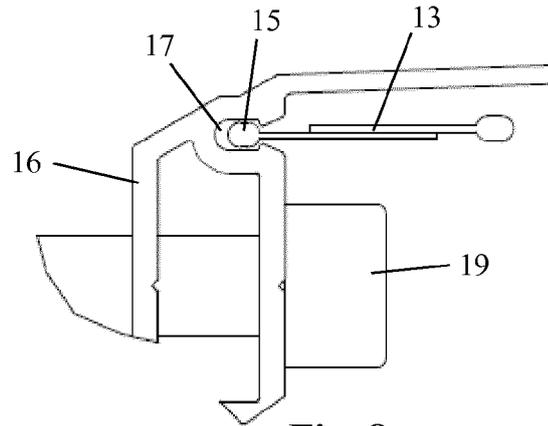


Fig. 8

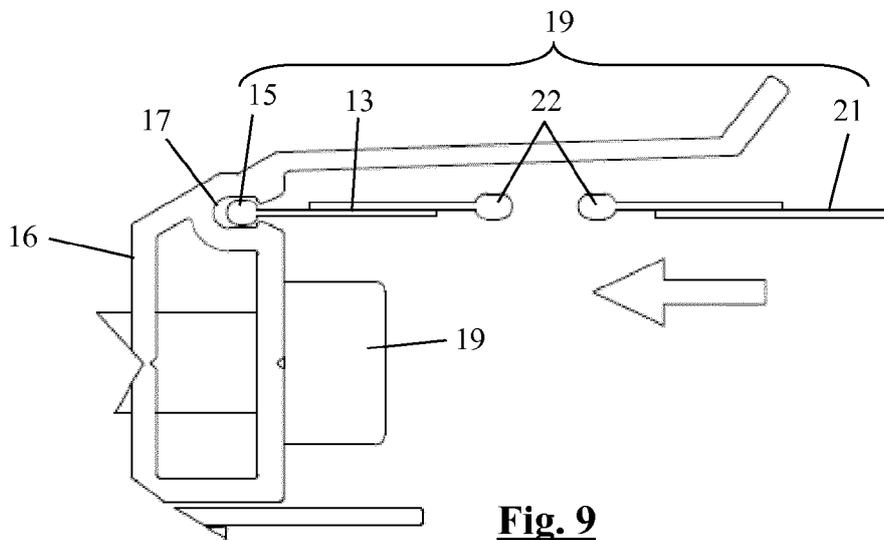


Fig. 9

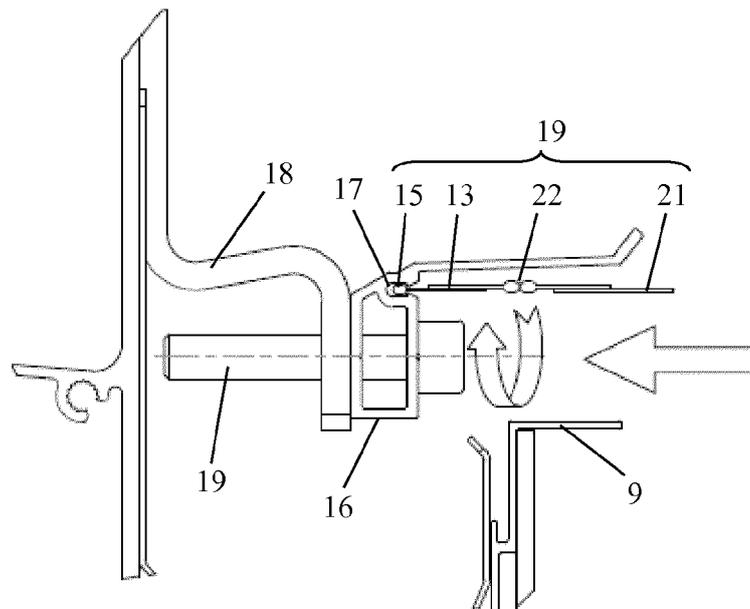


Fig. 10

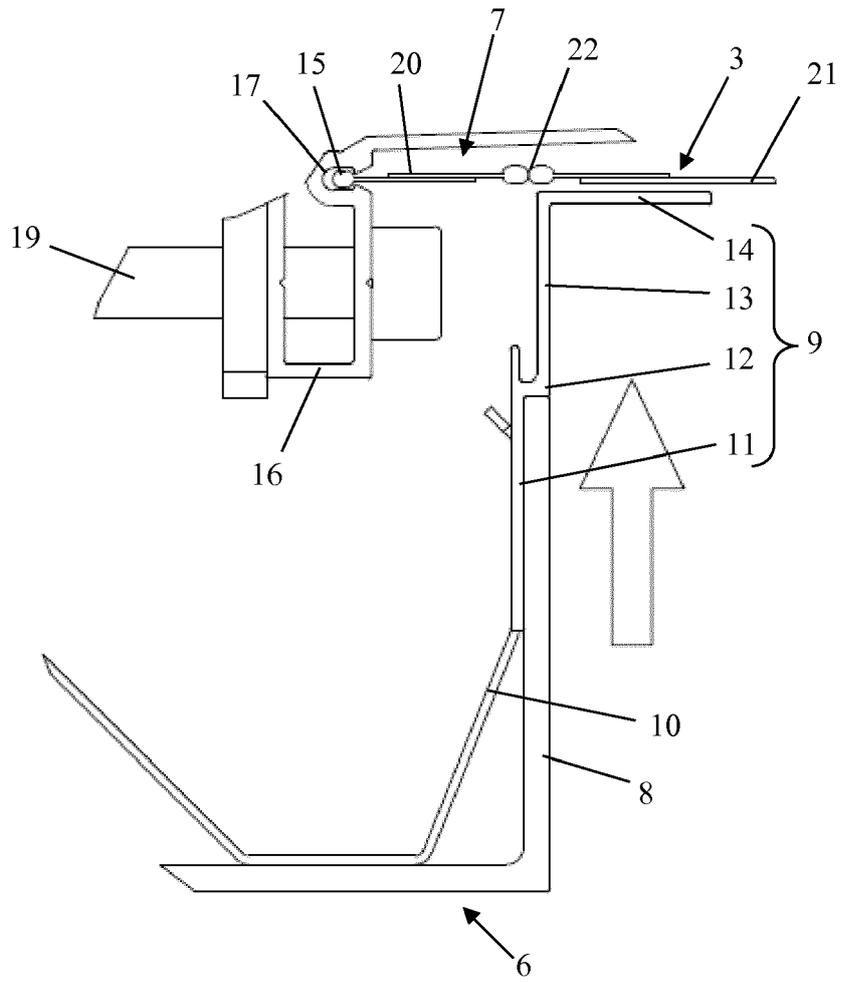


Fig. 11

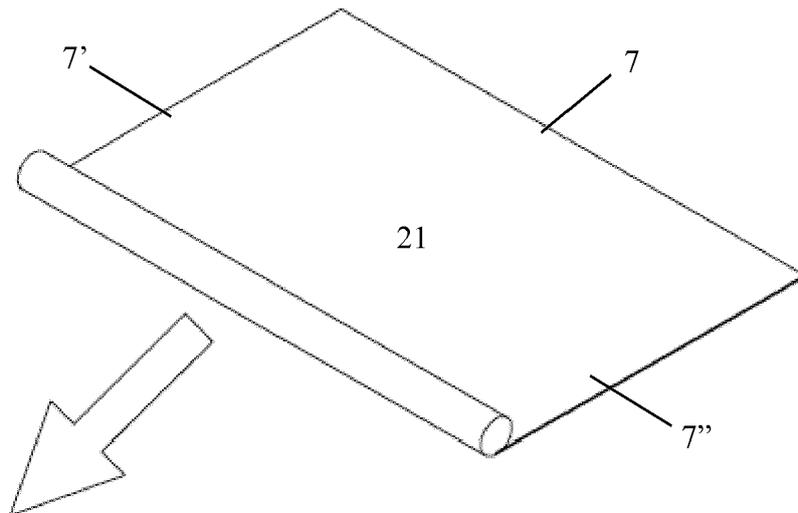


Fig. 12

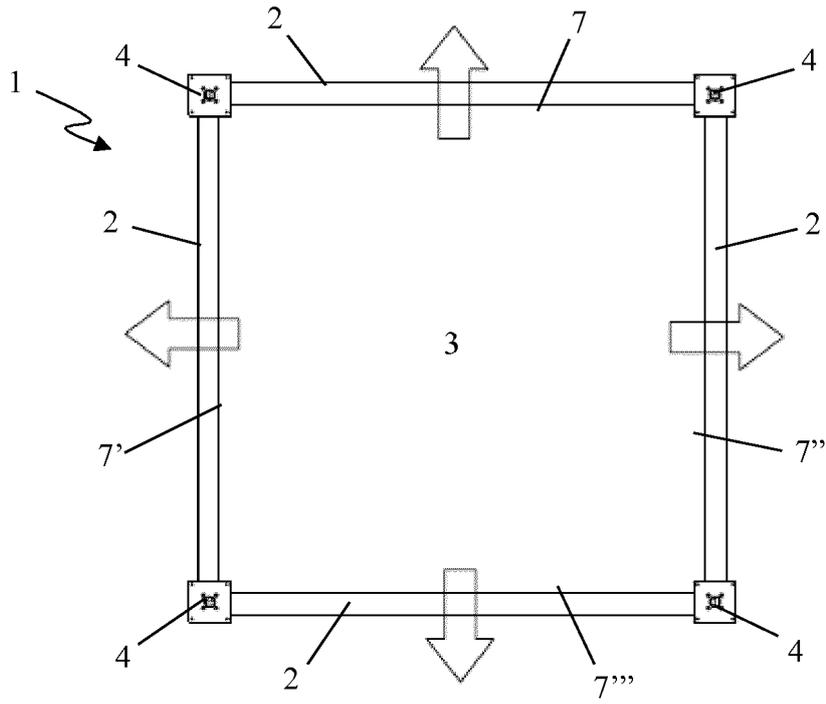


Fig. 13

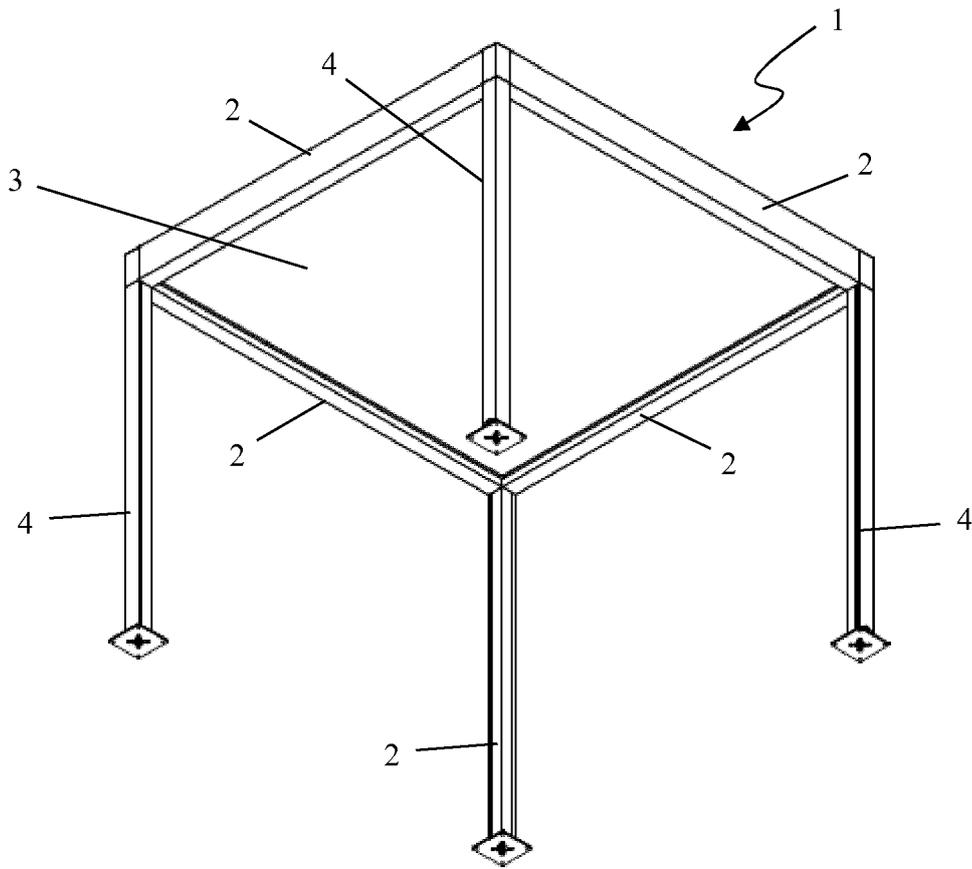


Fig. 14



EUROPEAN SEARCH REPORT

Application Number
EP 19 15 1876

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X A	DE 10 2016 001390 B3 (ELMENDORFF MICHAEL [DE]) 6 July 2017 (2017-07-06) * paragraph [0001] - paragraph [0054]; figures 1-6 *	1-4, 7-12,14 5,6,13, 15	INV. E04H15/58 E04F10/02
A	EP 2 468 976 A1 (GREINER & GUTMANN GBR [DE]) 27 June 2012 (2012-06-27) * paragraph [0005] - paragraph [0085]; figures 1-17 *	1-15	ADD. E04H15/32 E04H6/02
A	DE 20 2014 008425 U1 (NOVAVERT GMBH & CO KG [DE]) 26 January 2016 (2016-01-26) * paragraph [0001] - paragraph [0035]; figures 1-2 *	1-15	
			TECHNICAL FIELDS SEARCHED (IPC)
			E04B E04F E04H G09F A01G E04D
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 10 April 2019	Examiner Dieterle, Sibille
CATEGORY OF CITED DOCUMENTS		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	
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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 19 15 1876

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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10-04-2019

10	Patent document cited in search report	Publication date	Patent family member(s)	Publication date
	DE 102016001390 B3	06-07-2017	NONE	

15	EP 2468976 A1	27-06-2012	DE 102010055461 A1	21-06-2012
			EP 2468976 A1	27-06-2012
			US 2012153081 A1	21-06-2012

20	DE 202014008425 U1	26-01-2016	NONE	

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Patent documents cited in the description

- KR 100820369 [0003] [0040]
- WO 2014043779 A [0003] [0040]
- EP 2343418 A1 [0004]
- EP 2345772 A2 [0004]
- EP 2578767 A2 [0005]
- FR 2602539 [0042]
- NL 1014061 [0042]
- EP 1491712 A [0042]