

Description

[0001] The present invention relates to an outdoor partition having a partition top, a partition bottom and at least two partition sides extending between the partition top and the partition bottom thereby delimiting a partition plane, said partition comprising: a load-bearing structure including posts and/or beams and at least one plank fastening bracket attached thereto, said plank fastening bracket including at least one flange, which protrudes from the load-bearing structure in a plane parallel to the partition plane; and a plurality of planks extending in parallel with the partition plane, where each plank has two ends, a length direction extending between the two ends, and at least two side surfaces extending in the length direction from one end towards the other. The invention also relates to a method of building an outdoor partition.

[0002] Such outdoor partitions have been known for decades and are used for example for blocking view, for dividing large areas into smaller spaces, or between neighbouring properties to indicate the position of a property line. The existing outdoor partitions, however, are either are so complicated to assemble that they are not suitable for do-it-yourself building or do not match the architecture of modern buildings.

[0003] It is therefore a first object of the invention to provide an outdoor partition, which is of a relatively simple construction and of a minimalistic design.

[0004] It is a second object of the invention to provide a method for building an outdoor partition, which is simple to build and resulting in a partition with a minimalistic design.

[0005] In a first aspect of the invention the first object is achieved with an outdoor partition as described above where at least one end surface of each plank is provided with an end groove, where the flange(s) of the plank fastening bracket(s) extend(s) into end grooves of the planks, and where the planks are arranged with an inner surface facing an outer surface of the load-bearing structure and overlapping the posts and/or beams so that the outer surface, which is parallel to the partition plane, is covered by the planks and hidden from view when seen in a direction perpendicular to the partition plane.

[0006] In other words, the flanges of the plank fastening brackets protrude in a plane distanced from outer surface of the load-bearing structure in a direction perpendicular to the partition plane so that the planks do not extend between the posts and/or beams inside the space defined by the load-bearing structure but in a plane outside the load-bearing structure. The inner surface of each plank will thus be located adjacent to the outer surface of load-bearing structure, while an outer surface of each plank will be facing away from the load-bearing structure.

[0007] By using an engagement between flanges of the plank fastening brackets and end grooves of the planks for keeping the planks in position in relation to the load-bearing structure, the need for screws or like fasteners, which are visible in the finished partition, is con-

siderably reduced. This not only leads to a partition with a more minimalistic appearance but also reduces the risk of the planks not being attached correctly.

[0008] By the planks overlapping the posts and/or beams, so that substantially the entire outer surface of the load-bearing structure is covered by the planks, only the joints between planks and possibly sections of the plank fastening brackets will be visible. This not only contributes to a partition with a minimum of visible details but also eliminates or at least reduces the need for the use of cover strips or the like, thus potentially eliminating a step in the building process.

[0009] It is noted that the designation "outdoor partition" is intended to indicate that the product is designed to serve as an outdoor divider having a wall-like character, but that it is within the scope of the invention to use the partition as a fence and to use the method for building fences.

[0010] The width of the end grooves is preferably somewhat larger than the width of the flanges, such that the insertion of the flanges in the end grooves does not result in tensions in the material of the planks, as such tensions may potentially cause damage to the planks.

[0011] In one embodiment, the length of at least some of the planks corresponds to the distance between two plank mounting brackets, so that these planks are retained by plank mounting brackets at both ends.

[0012] Depending on the intended use of the partition, it will often be advantageous that plank fastening brackets and planks are provided on two opposite outer surfaces of the load-bearing structure. In this way the outdoor partition looks substantially the same from both sides, and the load-bearing structure is hidden from view from both sides. Another advantage is that a space is created between the planks on the two opposite sides of the partition. This space may in itself serve insulating purposes, particularly it may provide sound insulation, but it may also be filled wholly or partially with a filler material improving the insulating properties. As an example, filling the space with a high density material will provide sound insulation.

[0013] To hide the load-bearing structure entirely and/or protect it from the weather, one or more side covers may be arranged at partition sides and/or one or more top cover may be arranged along the partition top. Such side and top covers may be made from the same material as the planks in order to achieve a homogeneous design. They may, however, also be made from different material(s) having other desired properties, such as for example copper or zinc for achieving a good weather proofing. Other metals and polymers may also be used.

[0014] A bottom cover, which closes a possible gap between the planks and the ground, may also be provided.

[0015] As the outer surface of the outside partition will be defined almost entirely by the outer surfaces of the planks, smooth joints between neighbouring planks and between planks and plank fastening brackets will result

in a smooth surface of the entire outside partition and thus in a partition with a homogeneous appearance.

[0016] In one embodiment, such smooth joints are achieved by at least one plank fastening bracket being a rail bracket extending substantially over the entire length of a post and/or beam to which it is attached. Such continuous rail brackets have the advantage that all planks ending at the post or beam to which a rail bracket is attached will be kept in the same plane. If using separate plank fastening brackets, small variations in the position and angling of the bracket or in the post or beam to which it is attached may result in the planks being located at different distances from the partition plane, which may potentially result in the outer surface of the partition not being even.

[0017] The rail brackets may be embodied in many different ways and one outdoor partition may include two or more different types of rail brackets. In one embodiment at least one rail bracket has an H-shaped cross-section, where one leg of the H-shape is arranged in abutment against the outer surface of the load-bearing structure while the two flanges formed by the other leg of the H are in engagement with end grooves of planks and/or covers. Similarly, a U-shaped rail bracket may be arranged with one leg in abutment against the load-bearing structure and the other leg in engagement with end grooves of planks. In a still further embodiment, the rail brackets have a wing shaped cross-section, where a centre section adapted for engagement with the outer surface of the load-bearing structure is off-set in relation to two side sections serving as flanges. In yet another embodiment, the rail brackets have an "S"-shaped cross-section, where one side off-set in relation to the other side section, one side being adapted for engagement with the outer surface of the load-bearing structure and the other serving as a flange.

[0018] Local plank fastening brackets adapted for engagement with only one plank may, but do not need to have the same cross-sectional shapes as described for the rail brackets above.

[0019] Rail brackets or local brackets may also be used for the attachment of covers.

[0020] In one embodiment, smooth joints are achieved by at least one flange of a plank fastening bracket extending into at least one groove in at least one side surface of a plank. In this way not only the ends but also the side of the plank is secured in its intended position, which will particularly be relevant for the planks adjacent to the partition top and the partition bottom when the planks extend substantially horizontally and for the planks adjacent to the partition sides when the planks extend substantially vertically.

[0021] A similar or further advantage is gained by using planks, which are provided with a feather at one side and a groove at the other, so that neighbouring planks may engage and be fixated in relation to each other along their length direction. This is particularly useful if using local plank fastening brackets, i.e. not rail brackets, as

some planks may then be attached to the plank fastening brackets while other are kept in place only by the engagement with neighbouring planks or by such an engagement in combination with additional fasteners such as nails or screws.

[0022] In one embodiment, smooth joints between planks extending in continuation of each other in their length direction are achieved by each plank being provided with an end groove at one end surface and with an end feather at the other end surface, and by the end feather of at least one first plank being in engagement with the end groove of at least one second plank so that the first and second planks are interconnected end-to-end. This allows the use of planks, which are shorter than the distance between the plank fastening brackets and/or the interconnection of planks at positions displaced in relation to the plank fastening brackets in order to give the partition a desired visual appearance.

[0023] As a supplement to the plank fastening brackets, at least some of the planks may be connected to the load-bearing structure and/or to each other by additional fasteners, such as nails or screws. It is also possible to use glue or adhesive for this purpose.

[0024] The invention particularly lends itself to outdoor partitions, where at least some planks are made of impregnated wood or wood-based material, but planks of other materials including composites may also be employed. It is possible to use planks of different material, width, surface texture, or the like in one partition, and to provide spaces between planks.

[0025] The load-bearing structure may for example be made from laminated wood or impregnated timber, but other materials including steel and composites may also be used. Post and beams may be provided in a pre-assembled state, for example as rectangular cassettes adapted for being connected to a foundation or to steel posts. Different parts of the load-bearing structure may be made from different materials.

[0026] A second aspect of the invention relates to a method of building an outdoor partition having a partition top, a partition bottom and at least two partition sides extending between the partition top and the partition bottom thereby delimiting a partition, said method comprising the steps of erecting a load-bearing structure including posts and/or beams,

attaching at least one plank fastening bracket to a post and/or beam such that at least one flange of a plank fastening bracket protrudes from the load-bearing structure in a plane parallel to the partition plane, and

connecting a plurality of planks to the plank fastening bracket(s) in a manner so that the planks extend in parallel with the partition plane, where each plank has two ends, a length direction extending between the two ends, and at least two side surfaces extending in the length direction from one end towards the other,

where the planks are arranged so that the flange(s) of the plank fastening bracket(s) extend(s) into end grooves of the planks provided at at least one end surface of each plank, and

where the planks are arranged with an inner surface facing an outer surface of the load-bearing structure and overlapping the posts and/or beams so that the outer surface of the load-bearing structure, which extends in parallel to the partition plane, is covered by the planks and hidden from view.

[0027] As explained with reference to the first aspect of the invention, arranging the planks so that the flanges of the plank fastening brackets extend into end grooves of the planks provided at at least one end surface of each plank keeps the planks in position in relation to the load-bearing structure. This means that the need for screws or like fasteners, which are visible in the finished partition is considerably reduced, thus leading to an appearance with less details. Furthermore, the risk of the planks not being attached correctly, for example due to the builder using too few screws or the screws not being driven correctly into the load-bearing structure, is reduced.

[0028] Likewise, the fact that the planks are arranged so that they overlap the posts and/or beams so that the outer surface of the load-bearing structure is covered by the planks and substantially hidden from view, means the vertical lines formed by the post in many prior art partitions are largely eliminated. Instead only the joints between planks and possibly smaller sections of the plank fastening brackets are visible.

[0029] Embodiments and advantages described with reference to the first aspect of the invention also applies to the second aspect of the invention and vice versa unless otherwise stated.

[0030] When building the outdoor partition and using rail brackets as plank fastening brackets, the planks may be attached to the load-bearing structure by engaging an end groove of each plank with one end of a flange of the plank fastening brackets and then sliding each plank in relation to the rail bracket while keeping the flange in engagement with the end groove until the plank reaches its intended position. In one embodiment, the length of the planks corresponds to the distance between two rail brackets, so that the planks are retained at both ends while sliding in relation to the two rail brackets.

[0031] Sliding the planks into place entails that all planks can be brought into engagement with the plank fastening brackets before possibly fixating them by means of by means of additional fasteners, such as nails or screws. This allows a precision positioning to be performed when all planks have been mounted on the rail brackets before the final fixation. Alternatively, the fixation of the planks can be left out, so that the planks remain displaceable along the rail brackets, thus allowing them to be moved in order to adapt the partition to different needs during its lifespan.

[0032] If the distance between plank fastening brack-

ets is longer than the length of the planks, planks can be interconnected end-to-end by bringing an end feather of at least one first plank in engagement with the end groove of at least one second plank. This may be used simply to allow the formation of a partition with dimensions larger than the length of the planks, but is it also possible to use such interconnection of planks as a design feature, for example interconnecting planks of different colour, texture, and/or material to give the partition a desire look.

[0033] As also mentioned above, an outdoor partition looking substantially the same from both sides can be achieved by providing planks on two opposite outer surfaces of the load-bearing structure thus creating a space between the planks on the two opposite sides of the partition. Providing a filler material in this space may provide the partition with sound insulating properties. It is also possible to use a filler material, which is visible through gaps between planks, thereby contributing to the look of the partition. In a still further embodiment, plants are allowed to grow in the filler material.

[0034] Gaps between planks may be achieved by the use of distance keepers, such as strips, attached to plank fastening brackets. It is also possible to keep or fill gaps between planks with a board or panel, such as for example a sheet of glass serving as a window in the partition.

[0035] By arranging one or more side covers at partition sides and/or arranging one or more top covers along the partition top, a space between planks on two sides of the partition may be closed off, and such covers may also contribute to giving the partition a desired look. Such covers may also serve to fixate planks in relation to rail brackets. If the total width of the planks mounted on a rail bracket correspond to the length of the rail bracket and a cover is then mounted in continuation of the planks at the end of the rail bracket, the planks will be prevented from sliding in relation to the rail brackets and thus kept in place. For this purpose, it is also possible to provide a rail bracket with one or two end stops, one possibly being integrated in one end of the rail so that planks can only be mounted from the other end of the rail.

[0036] In one embodiment, at least some of the planks are further fixated by at least one side surface of at least one plank being brought into engagement with at least one flange of a plank fastening bracket and/or by means of additional fasteners chosen from the group comprising nails, screws, staples, glue, and adhesives. Engagement between feathers and grooves provided at side surfaces of planks may also be used for fixating planks in relation to each other.

[0037] In the following, the invention will be described in more detail with reference to the drawing, where

Fig. 1 is a partially exploded and partially cut-away perspective view of a partition according to the invention,

Fig. 2 is a cross-sectional view along the line II-II in Fig. 1, but showing the partition in an assembled state,

Fig. 3 is a cross-sectional view along the line III-III in Fig. 1, but showing the partition in an assembled state,

Fig. 4 is a cross-sectional view along the line IV-IV in Fig. 1, but showing the partition in an assembled state,

Fig. 5 corresponds to Fig. 2 but showing a different embodiment of the invention,

Fig. 6 corresponds to Fig. 3 but showing a different embodiment of the invention,

Fig. 7 corresponds to Fig. 4 but showing a different embodiment of the invention,

Fig. 8 is a horizontal cross-section at a corner, where two sections of a partition extend perpendicular to each other,

Fig. 9 corresponds to Fig. 8 but showing a larger angle between two sections of a partition,

Fig. 10 corresponds to Fig. 9 but showing a different embodiment of cover strips,

Fig. 11 corresponds to Fig. 3 but showing a different embodiment,

Fig. 12 corresponds to Fig. 1 but showing a still further embodiment,

Fig. 13 corresponds to Fig. 3 but showing the embodiment in Fig. 12,

Fig. 14 corresponds to Fig. 4 but showing the embodiment in Fig. 12,

Fig. 15 corresponds to Fig. 13 but showing a different embodiment,

and

Fig. 16 corresponds to Fig. 1143 but showing a different embodiment.

[0038] In the following the same reference number will be used for features having substantially the same function, even though they are not necessarily identical.

[0039] An outdoor partition 1 including a load-bearing structure 2 and a plurality of planks 3 is shown in a partially assembled state in Fig. 1. This partition 1 includes two sections extending in continuation of each other, but only parts of the left-hand section is shown.

[0040] The load-bearing structure 2 includes posts 21 and beams 22 interconnected by corner brackets 23 thereby forming a framework. Plank fastening brackets in the form of rail brackets 4 are attached to the posts and extend substantially over the entire height of each post.

[0041] In this embodiment the rail brackets 4 have a riffled surface in order to provide a good engagement with the surface of wooden planks, but it is to be understood that a similar surface roughness may be achieved in other ways or that the surface may be smooth. The same applies to other brackets described herein.

[0042] Further rail brackets 51, 52 are provided at the top and at the bottom of the partition, respectively, the first being adapted for keeping an uppermost plank (not shown in Fig. 1) in place and the second being adapted for engagement with a lowermost plank and for attaching

a bottom cover 62.

[0043] The partition 1 further includes a top cover 61 forming a partition top in the assembled state and a side cover 63 forming a partition side in the assembled state.

[0044] A partition plane C is delimited by the partition top, the partition bottom and the partition bottom.

[0045] Turning now to Fig. 2 which is a cross-sectional view of the partition in the assembled state, it is seen how planks 3 extend in parallel with the partition plane C on both sides of the load-bearing structure, which is here represented only by a single post 21.

[0046] The end surface 33 of each plank 3 is provided with an end groove 34 and each plank fastening brackets 4 has a wing shaped cross-section with two flanges 41, each of which extends into an end groove in a plank 3. The flanges 41 protrude from the load-bearing structure in a plane B, which is parallel to the partition plane C, and a length direction L of each plank also extends in parallel with the partition plane, these planes and directions only being shown at the top of Fig. 2 for clarity.

[0047] When building the outdoor partition 1 using rail brackets 4 as plank fastening brackets, the planks 3 may be connected to the rail brackets by engaging the end groove(s) 34 of each plank with a bracket flange 41 and then sliding the plank 3 in relation to the rail bracket while keeping the flange in engagement with the end groove. In Fig. 1 ten planks 3 have been brought into their intended position by inserting them at the top of the right-hand section of the partition 1 and then sliding them downwards. An eleventh plank 3 is shown half-way between the top and its intended position, arrow F_1 indicating the downwards movement. At the left-hand section of the partition, only half of which is shown, two planks are being slid into place as a pair as indicated by the arrow F_2 and a third plank is located higher up.

[0048] In this embodiment plank fastening brackets 4 and planks 3 are provided on two opposite outer surfaces 20 of the load-bearing structure so that a space 24 is formed between the planks 3 and the posts 21. This space 24 may be filled with a filler material (not shown), such as acoustic panels, in order to allow the outdoor partition to function as a noise barrier.

[0049] The planks 3 are arranged with an inner surface 30 abutting the outer surface 20 of the load-bearing structure and overlapping the post 21 so that the outer surface of the load-bearing structure is almost entirely covered by the planks and hidden from view, when seen in a direction perpendicular to the partition plane as indicated by the arrow E. The only part of the load-bearing structure, which is seen from this angle, is the rail brackets 4 and the screws 42 used for attaching them to the posts 21, but as the gap G between the planks is relatively narrow and relatively deep they will not be clearly visible.

[0050] Fig. 3 shows a vertical cross-section where the corner brackets have been removed for clarity. Here it is seen that each plank 3 is provided with a feather 35 extending in the plank length direction L along the upper side surface and a groove 36 in the lower side surface,

and that these feathers and grooves are in engagement with grooves and feathers of neighbouring planks in the mounted state. This engagement prevents the formation of gaps between planks in a vertical direction and also keeps the planks in position in relation to each other in a horizontal direction perpendicular to the partition plane C. The latter means that a plank having a tendency to bend, for example as a result of shrinkage, will to some extent be kept in place by the neighbouring planks. In this embodiment back side grooves 37 are further provided to reduce the risk of plank deformation. Moreover, the front section of each plank has inclined upper and lower edges 38 in order to make the horizontal gaps between planks less distinct, to facilitate drainage of water, and to reduce the risk of dirt collecting at the horizontal gaps.

[0051] The side groove 36 of the lowermost plank is in engagement with a bottom rail bracket 52 resembling the rail brackets 4 used for engagement with the end grooves 34 and preferably extending substantially over the entire length of the beam 22. It is, however, to be understood that this rail bracket 52 may be embodied differently and that local brackets may be used instead or that bottom brackets may be left out entirely. In this embodiment the bottom rail bracket 52 on the left-hand side of the partition is also used for attachment of a bottom cover 62, but such a bottom cover is not always needed. It is therefore contemplated that the bottom rail bracket may have only a single flange projecting upwards.

[0052] Likewise, the feathers 35 of the uppermost planks are each in engagement with a top rail bracket 51. The top rail brackets 51 have an L-shaped cross-section and are attached to the top side of the load-bearing structure, which has subsequently been covered with a top cover 61. This embodiment of the top rail brackets allows the distance between the uppermost plank and the top of the partition and hence the height of the top cover 61 to be kept at a minimum, thus contributing to a partition with a minimalistic appearance.

[0053] In the drawing all brackets are shown as being attached by means of screws but it is to be understood that other means of attachment including nails, glues, and adhesives may be employed.

[0054] Likewise, even though the planks 3 in the embodiments shown are attached only by the engagement with the brackets 4, 51, 52 it is to be understood that additional fasteners, such as nails or screws, may be used as a supplement for connecting at least some of the planks to the load-bearing structure. For example, the uppermost and lowermost planks may be attached to the beams 22 by means of such fasteners instead of fixated by the top and bottom rail brackets 51, 52, or additional fasteners may be used as a supplement to the rail brackets.

[0055] Turning now to Fig. 4 it is seen how the end of the partition 2 is covered by a side cover 63. An inner surface of the side cover 63 abuts on an end surface 25 of a post 21 and is attached thereto for example by means

of screws or nails (not shown). In this embodiment the planks 3 extend substantially to the centre of the post 21 and are attached using rail brackets 4 corresponding to those shown in Fig. 2. This means that there is a gap between the end surfaces 33 of the planks 3 and the side cover 63. In this embodiment this gap is covered by a cover strip 7, which, as is also seen in Fig. 1, is inserted from the side onto the right-hand flange 41 of the rail bracket 4, said cover strip having a groove corresponding to the end grooves 34 of the planks but extending over the length of the cover strip.

[0056] Another or supplemental solution is to integrate the cover strips 7 in the side cover 63, which would then have a U-shaped cross-section much like the top cover 61 shown in Fig. 3. In the embodiment shown in Fig. 4 the side cover 63 and cover strips 7 are made from wood, which is preferably the same as used for the planks, but it is also possible to make them from a thinner material, such as metal, as is the case with the top cover 61 in Fig. 3. This is particularly relevant if integrating the cover strips 7 in the side cover 63. If using a thinner material, a possible level difference between the outer surface of the planks 3 and the side cover/cover strips should be taken into account.

[0057] It is not necessary to arrange planks closely side by side over the entire extent of a partition or partition section. As an example, the uppermost plank 3 in Fig. 1 might be kept in the position shown rather than shifted downwards as shown by the arrow F₁. This may be achieved in several ways, including attaching the plank 3 to the posts 21 by means of screws, but it is presently contemplated to use distance keeper strips (not shown) resembling the cover strips 7, only shorter, which are attached to the rail brackets 4 at either end of the plank 3. This will provide an opening in the partition, which may serve as a window and/or give access to the space 24 inside the partition. It is further noted that openings of different shapes may be achieved by providing auxiliary post and/or beams, which divide a partition section into smaller sections, and possibly provide additional brackets on these auxiliary post and/or beams.

[0058] Alternative embodiments of the plank fastening brackets 4 and bottom rail bracket 52 are shown in Figs 5-7. Here both the plank fastening brackets 4', which are shown in Figs 5 and 7, and the bottom rail bracket 52', which is shown in Fig. 6, are U-shaped with one leg of the U-shape attached to the load-bearing structure 21, 22. The other leg of the U-shape projects as a flange and is in engagement with a groove in the plank(s). These brackets 4', 52' thus only have one flange adapted for engagement with planks 3. As may be seen from Fig. 7, the use of a plank fastening bracket 4' with only one flange allows the bracket to be displaced towards the end surface 25 of the post 21 so that the planks 3 may extend further to cover a larger part of the post 21 than in Fig. 4. This means that the cover strips 7 shown in Fig. 4 can be dispensed with.

[0059] When planks 3 are arranged end-to-end as in

Fig. 5, the U-shaped plank fastening brackets are arranged side-by-side. The embodiment shown has the advantage that the mounting screws 42 are hidden being the planks in the assembled state of the outdoor partition. This means that the screws are protected from weathering and may also be considered to be advantageous from an aesthetic point of view. Instead of mounting two U-shaped brackets side-by-side, an H-shaped bracket may be used.

[0060] The broken lines surrounding the load-bearing structure 2, planks 3, and side covering 63 in Figs 4 and 7 indicate the extend of the top cover 61 shown in Figs 3 and 6. As is seen, the top cover extends over the entire underlying structure thus protecting it against weathering.

[0061] Fig. 8 illustrates how a corner, where two sections of a partition meet at a 90 degrees angle, can be made. As is seen by comparing this figure to Fig. 4, the first section 11 is embodied exactly as the end of the partition in Fig. 1. The second section 12 is almost identical, but includes no side cover, only cover strips 7. It would also be possible to leave out the side cover 63 entirely and instead allow the planks 3' on the right-hand side of the second section 12 to extend over the post 21 of the first section 11 so that they cover the end surface 25 of the post 21 of the second section 12. In that case the associated plank fastening bracket 4' could advantageously be mounted on the end surface 25 of the post 21 of the second section 12.

[0062] Figs 9 and 10 illustrate how a corner, where two sections 11, 12 of a partition meet at a 135 degrees angle, can be made. Each section here includes an end post 21 as in Fig. 8, but there is no need for a side cover as the cover strips 7, 7" come together, substantially closing off a space 24' between the posts 21. As may be seen the cover strips 7" used at the exterior angle are longer than standard, but all other components are as in Fig. 1-4. It is thus only necessary to provide cover strips 7" of different widths in order to provide a kit for building outdoor partitions, which allows virtually any angle between sections of the partition.

[0063] Fig. 10 only differs from Fig. 9 in that the cover strips 7, 7" are bevelled so that they fit tightly together leaving no gap between them. These cover strips can thus only be used for one specific mutual angle between partition sections, whereas the cover strips 7, 7" in Fig. 9 allow a certain tolerance.

[0064] In the embodiments shown in Figs 1-10 the posts 21 are made from laminated wood including three layers and a steel rod 28 is embedded in the centre layer. This provides for a particularly dimensionally stable and robust load-bearing structure, but traditional impregnated timber or other material including steel and composites may also be used. Beams are here shown as being made from traditional impregnated timber. The load-bearing structure may also be built from pre-fabricated cassettes.

[0065] Fig. 11 shows a different embodiment, where

the beams 22 are also made of three-layer laminated wood. As is seen by comparison to Fig. 3, this embodiment further differs in that the top cover 61 is made of more voluminous material, for example wood, polymer, or a cement-bound material, giving the partition a different appearance, and in that the bottom cover is integrated in the bottom rail bracket 52.

[0066] A still further embodiment is shown in Figs 12-15, where the planks 3 extend vertically instead of horizontally as in Figs 1-11. As may be seen by comparison to Figs 1-4, the bottom rail brackets 52 have here take over the function of the rail brackets 4 in Figs 1-11, coming into engagement with the end grooves 34 in the planks, while the vertical rail brackets 4 are now in engagement with side grooves.

[0067] When building a partition as in Figs 12-15, the planks 3 can be mounted sideways by sliding them along the top and bottom rail brackets 51, 52 instead of downwards as in Fig. 1, but the mounting method is otherwise substantially the same and it is therefore only the details, which are different from the embodiment in Figs 1-11, which will be described here.

[0068] The fact that the planks 3 are mounted with their length direction L extending vertically means that gravity will not force the planks into contact with each other. This in turn means that the interconnection between grooves 36 and feathers 35 on the side surfaces of the planks 3 may not be as strong as when planks are oriented horizontally. In this embodiment the planks are therefore fastened to an auxiliary beam 22' of the load-bearing structure provided adjacent to the centre of the planks by means of additional fasteners, here in the form of screws 42'. The planks 3 used in this embodiment are provided with a surface profiling including a longitudinal recess making them appear as two planks, and the screws 42' are inserted in the longitudinal recesses where they will be protected from weathering and partially hidden from view, at least from some angles.

[0069] The auxiliary beam 22' also provides extra dimensional stability to the load-bearing structure, which is furthermore provided with braces 29, only one of which is visible in Fig. 11.

[0070] At the top, the top rail brackets 51 are shown as overlapping and thus fixating end feathers 39 of the planks 3, but it will be understood that flanges of the top rail brackets 51 might equally well extend into and engage with end grooves in the planks provided instead of these feathers. Such an embodiment is shown in Fig. 15.

[0071] In Figs 12-15 the plank fastening brackets are of the same type as shown in Figs 1-4, but brackets of the types shown and described with reference to Figs 5-7 may equally well be used.

[0072] A still further embodiment of a plank fastening bracket is shown in Fig. 16. Whereas the corresponding bracket 4' shown and described with reference to Fig. 7 was U-shaped, this bracket 4" is L-shaped with one leg extending along the end surface 25 of the post 21 underneath the side cover 63 and the other engaging with a

side groove 36 of the plank 3. This allows the planks 3 to come into direct contact with the load-bearing structure.

[0073] In partitions with planks extending vertically, corners and section joints may be embodied in the same way as shown for partitions with horizontal planks in Figs 8-10.

Claims

1. An outdoor partition having a partition top, a partition bottom and at least two partition sides extending between the partition top and the partition bottom thereby delimiting a partition plane, said partition comprising a load-bearing structure including posts and/or beams and at least one plank fastening bracket attached thereto, said plank fastening bracket including at least one flange, which protrudes from the load-bearing structure in a plane parallel to the partition plane, and a plurality of planks extending in parallel with the partition plane, where each plank has two ends, a length direction extending between the two ends, and at least two side surfaces extending in the length direction from one end towards the other, **characterized in that** at least one end surface of each plank is provided with an end groove, **that** the flange(s) of the plank fastening bracket(s) extend(s) into end grooves of the planks, and **that** the planks are arranged with an inner surface facing an outer surface of the load-bearing structure and overlapping the posts and/or beams so that the outer surface of the load-bearing structure is covered by the planks and hidden from view.
2. An outdoor partition according to claim 1, where plank fastening brackets and planks are provided on two opposite outer surfaces of the load-bearing structure.
3. An outdoor partition according to claim 1 or 2, where one or more side covers are arranged at partition sides and/or one or more top cover is arranged along the partition top.
4. An outdoor partition according to one or more of the preceding claims, where at least one plank fastening bracket is a rail bracket extending substantially over the entire length of a post and/or beam to which it is attached.
5. An outdoor partition according to claim 5, where at least one rail bracket has a U- or H-shaped cross-section, where one leg of the U- or H-shape is arranged in abutment against the load-bearing struc-

ture while the flange formed by the other leg of the U or the two flanges formed by the other leg of the H is/are each in engagement with an end groove of one or more planks.

6. An outdoor partition according to one or more of the preceding claims, where at least one flange of a plank fastening bracket extends into at least one groove in at least one side surface of a plank.
7. An outdoor partition according to one or more of the preceding claims, where each plank is provided with an end groove at one end surface and with an end feather at the other end surface, and where the end feather of at least one first plank is in engagement with the end groove of at least one second plank so that the first and second planks are interconnected end-to-end.
8. An outdoor partition according to one or more of the preceding claims, further including fasteners, such as nails or screws, connecting at least some of the planks to the load-bearing structure.
9. An outdoor partition according to one or more of the preceding claims, where at least some planks are made of impregnated wood or wood-based material.
10. A Method of building an outdoor partition having a partition top, a partition bottom and at least two partition sides extending between the partition top and the partition bottom thereby delimiting a partition, said method comprising the steps of erecting a load-bearing structure including posts and/or beams, attaching at least one plank fastening bracket to a post and/or beam such that at least one flange of the plank fastening bracket protrudes from the load-bearing structure in a plane parallel to the partition plane, and connecting a plurality of planks to the plank fastening bracket(s) in a manner so that the planks extend in parallel with the partition plane, where each plank has two ends, a length direction extending between the two ends, and at least two side surfaces extending in the length direction from one end towards the other, **characterized in that** the planks are arranged so that the flange(s) of the plank fastening bracket(s) extend(s) into end grooves of the planks provided at at least one end surface of each plank, and **that** the planks are arranged with an inner surface facing an outer surface of the load-bearing structure and overlapping the posts and/or beams so that the outer surface of the load-bearing structure is covered by the planks and substantially hidden from view.
11. A method according to claim 10, where at least one

plank fastening bracket is a rail bracket and where at least some of the planks are connected to the plank fastening bracket(s) by engaging the end groove of each plank with one end of a flange and then sliding the plank in relation to the rail bracket while keeping the flange in engagement with the end groove.

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12. A method according to claim 10 or 11, where planks are interconnected end-to-end by bringing an end feather of at least one first plank in engagement with the end groove of at least one second plank.
13. A method according to one or more of claims 10-12, including providing planks on two opposite outer surfaces of the load-bearing structure thus creating a space between the planks on two opposite sides of the partition, and possibly including providing a filler material in this space.
14. A method according to one or more of claims 10-13, further including arranging one or more side covers at partition sides and/or arranging one or more top covers along the partition top.
15. A method according to one or more of claims 10-14, where at least some of the planks are further fixated by at least one side surface of at least one plank being brought into engagement with at least one flange of a plank fastening bracket and/or by means of additional fasteners chosen from the group comprising nails, screws, staples, glue, and adhesives.

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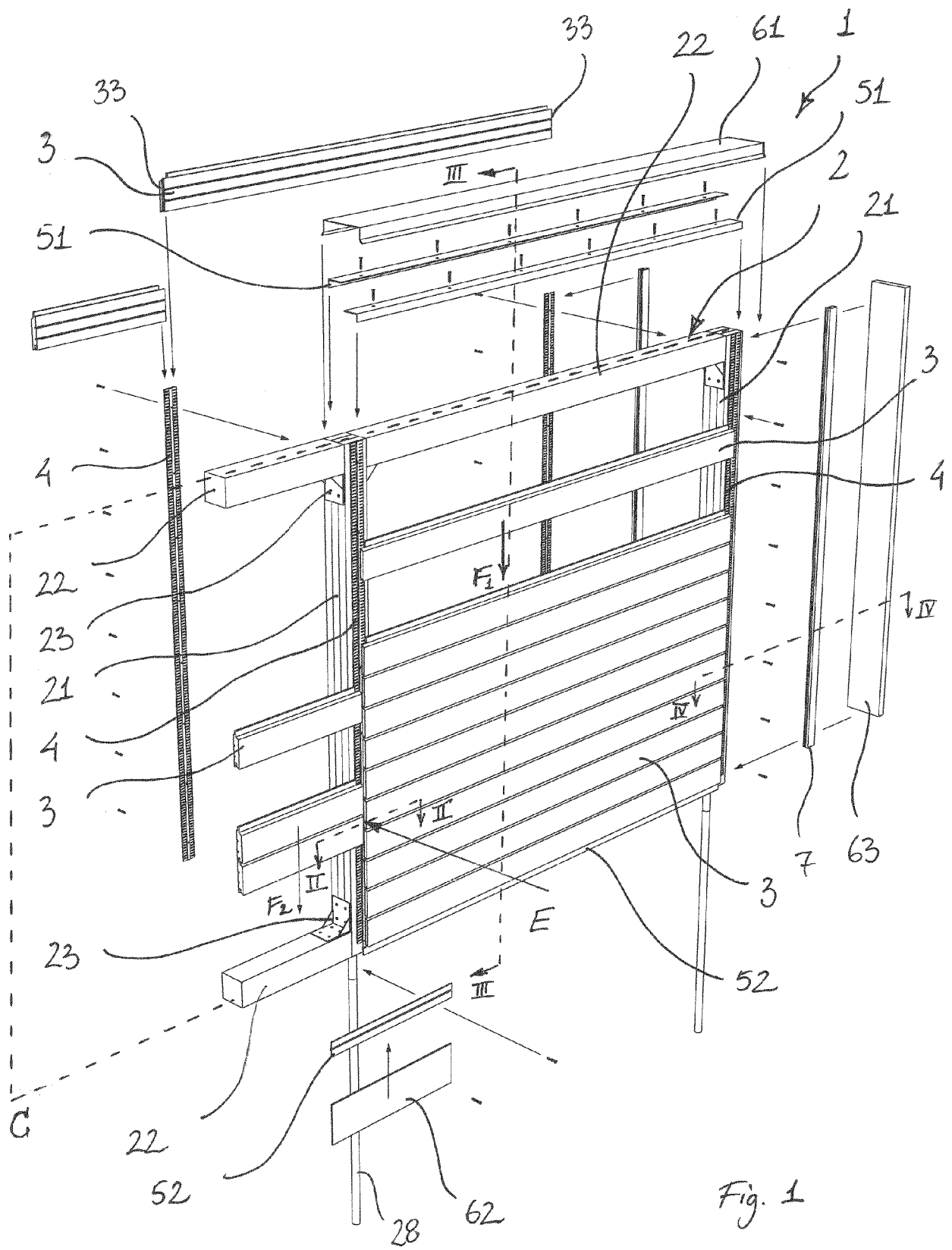
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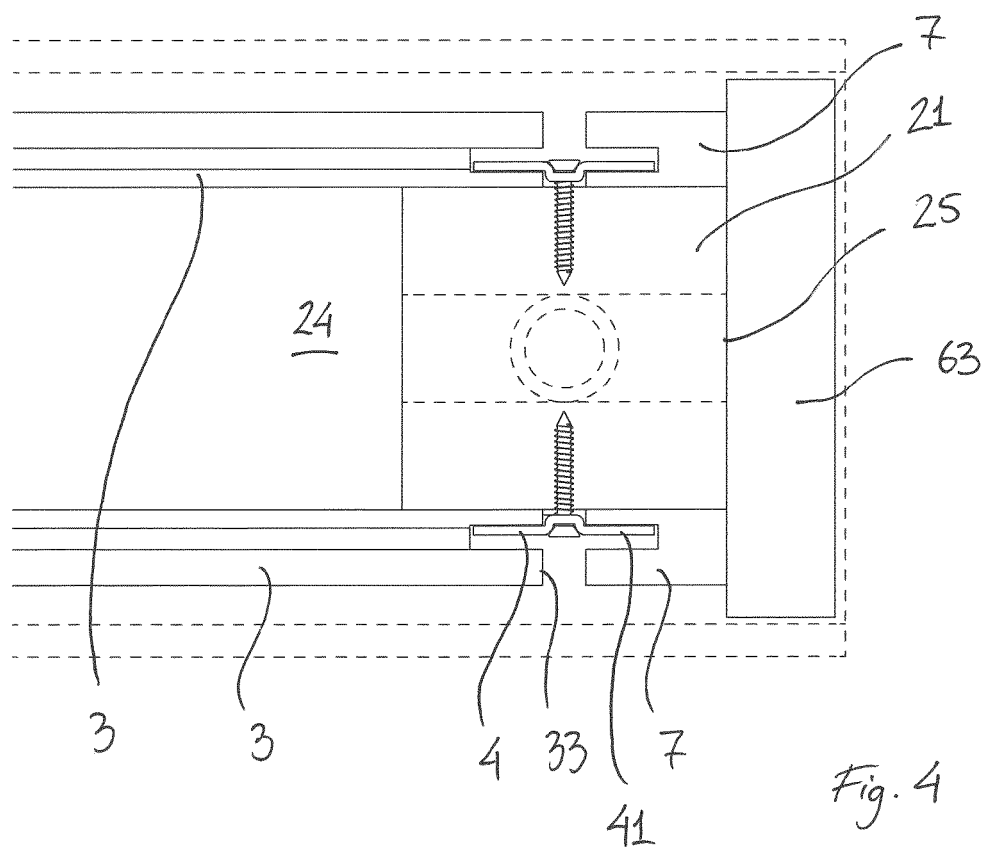
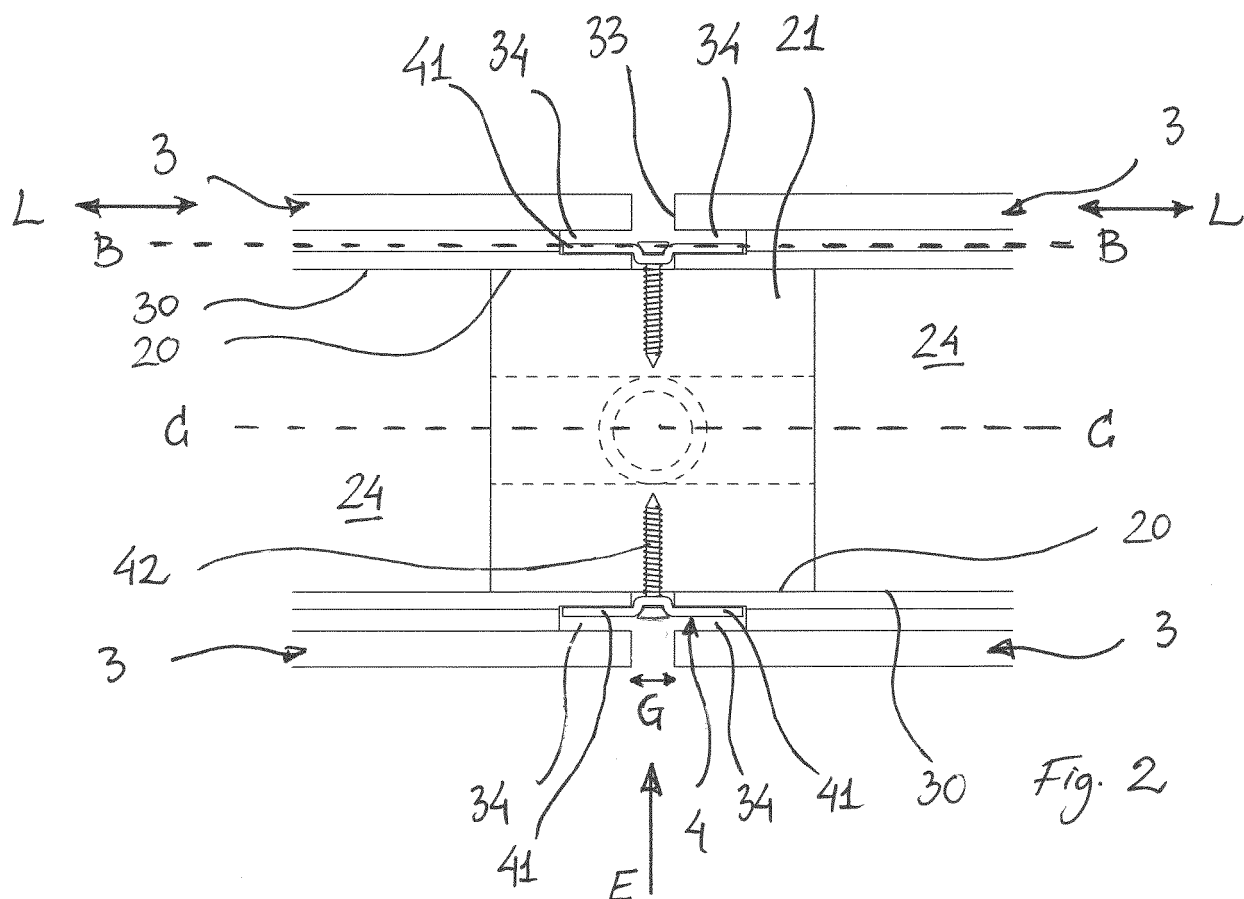
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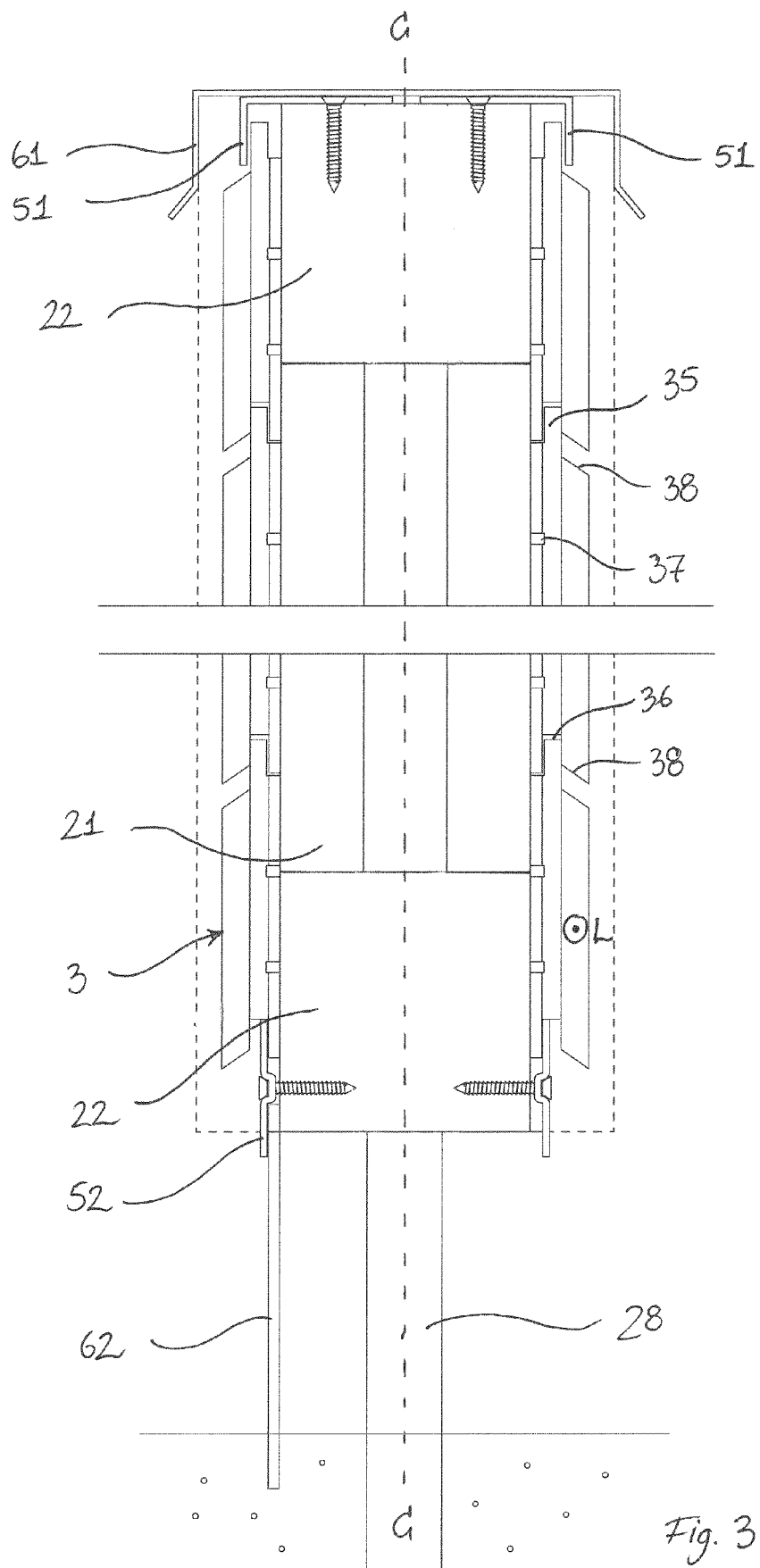
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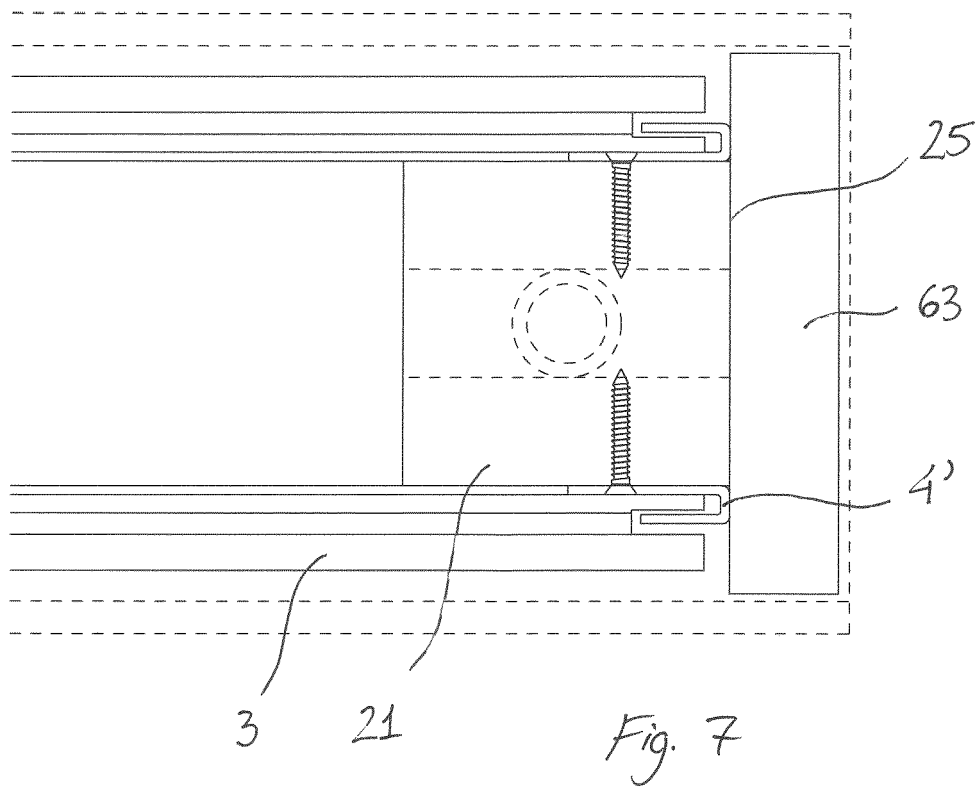
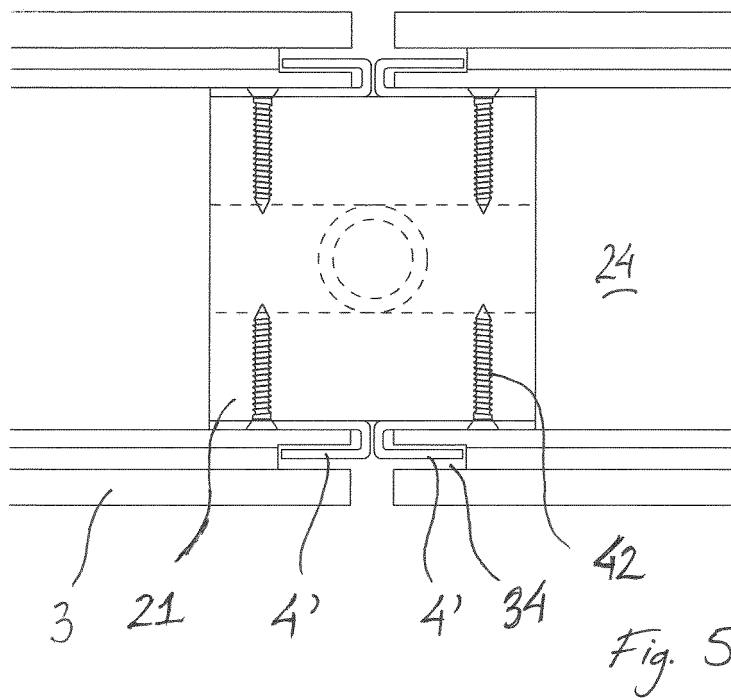
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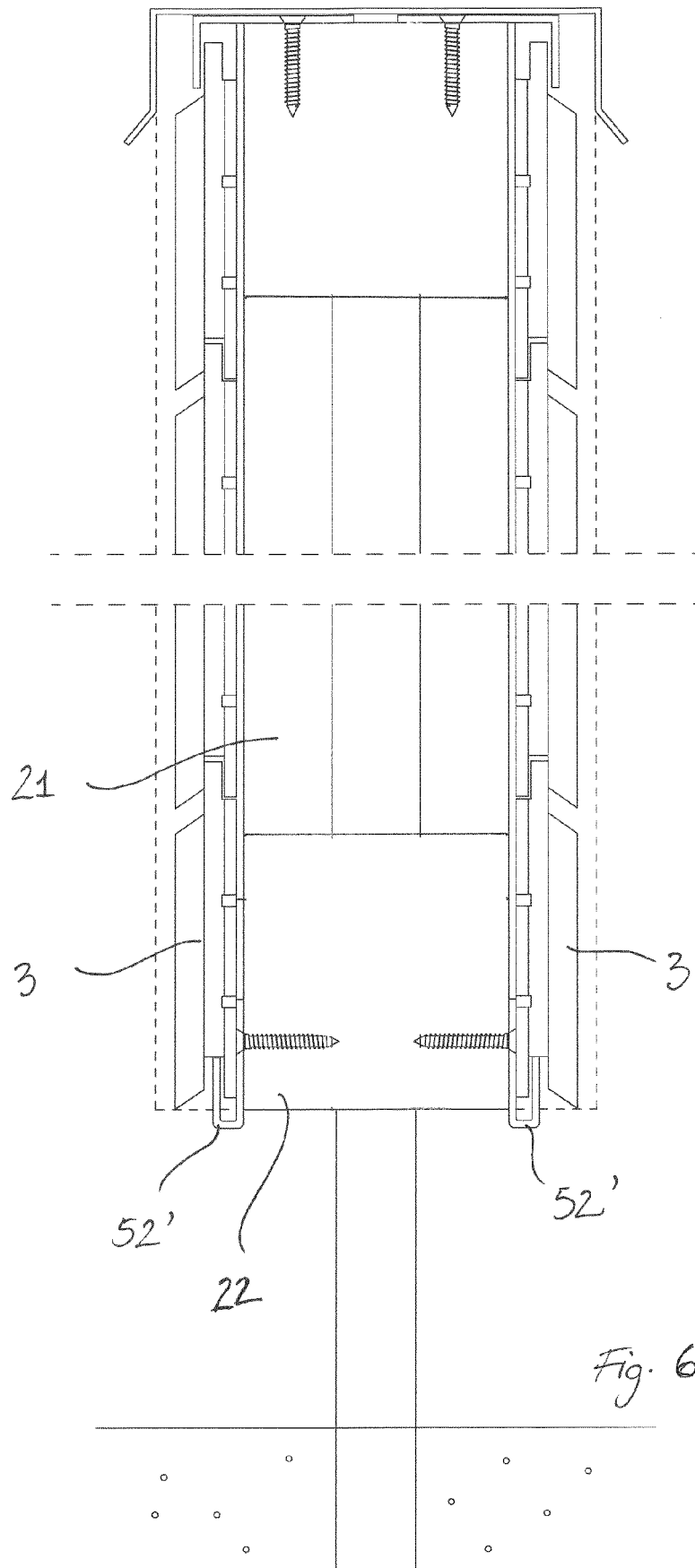
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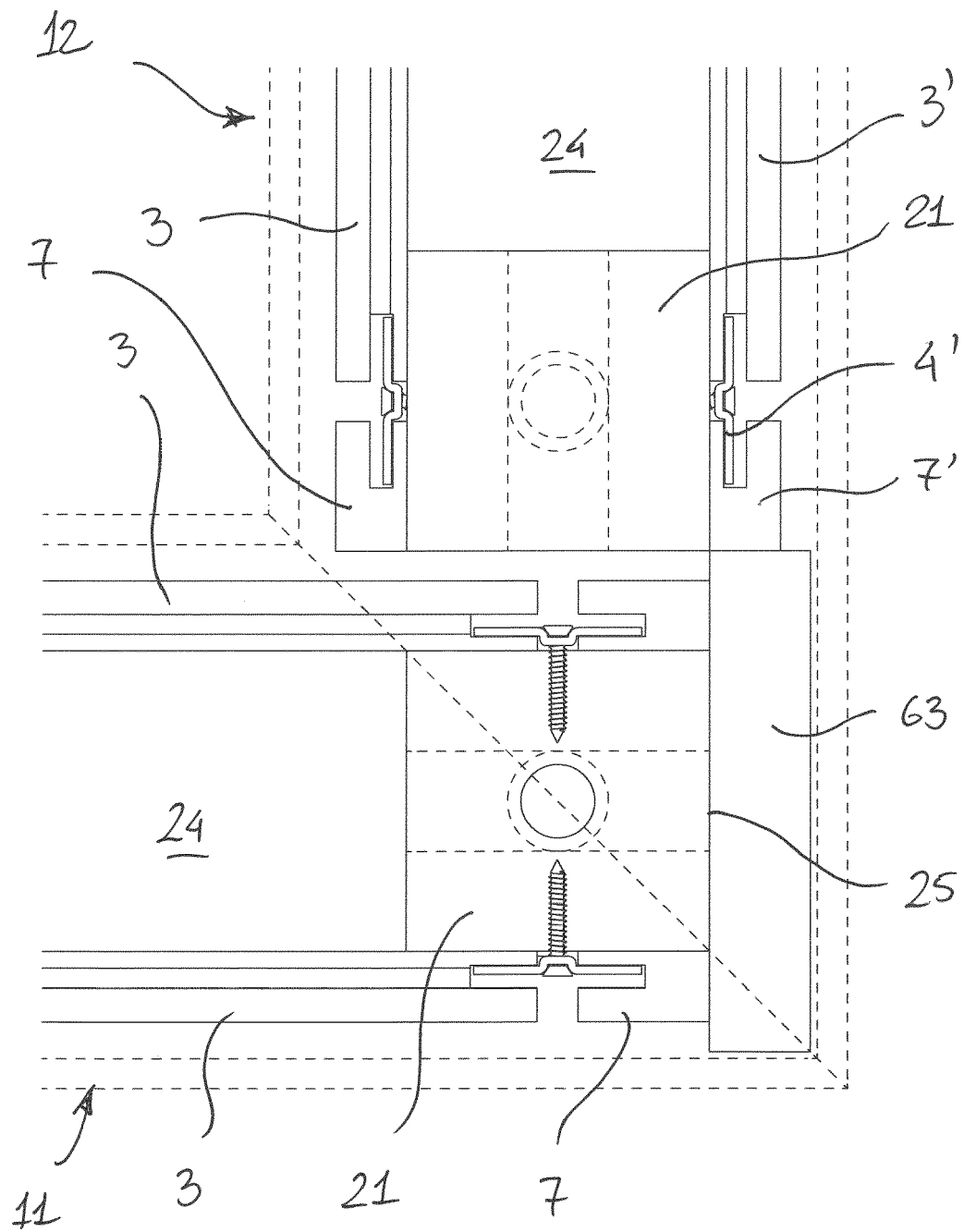
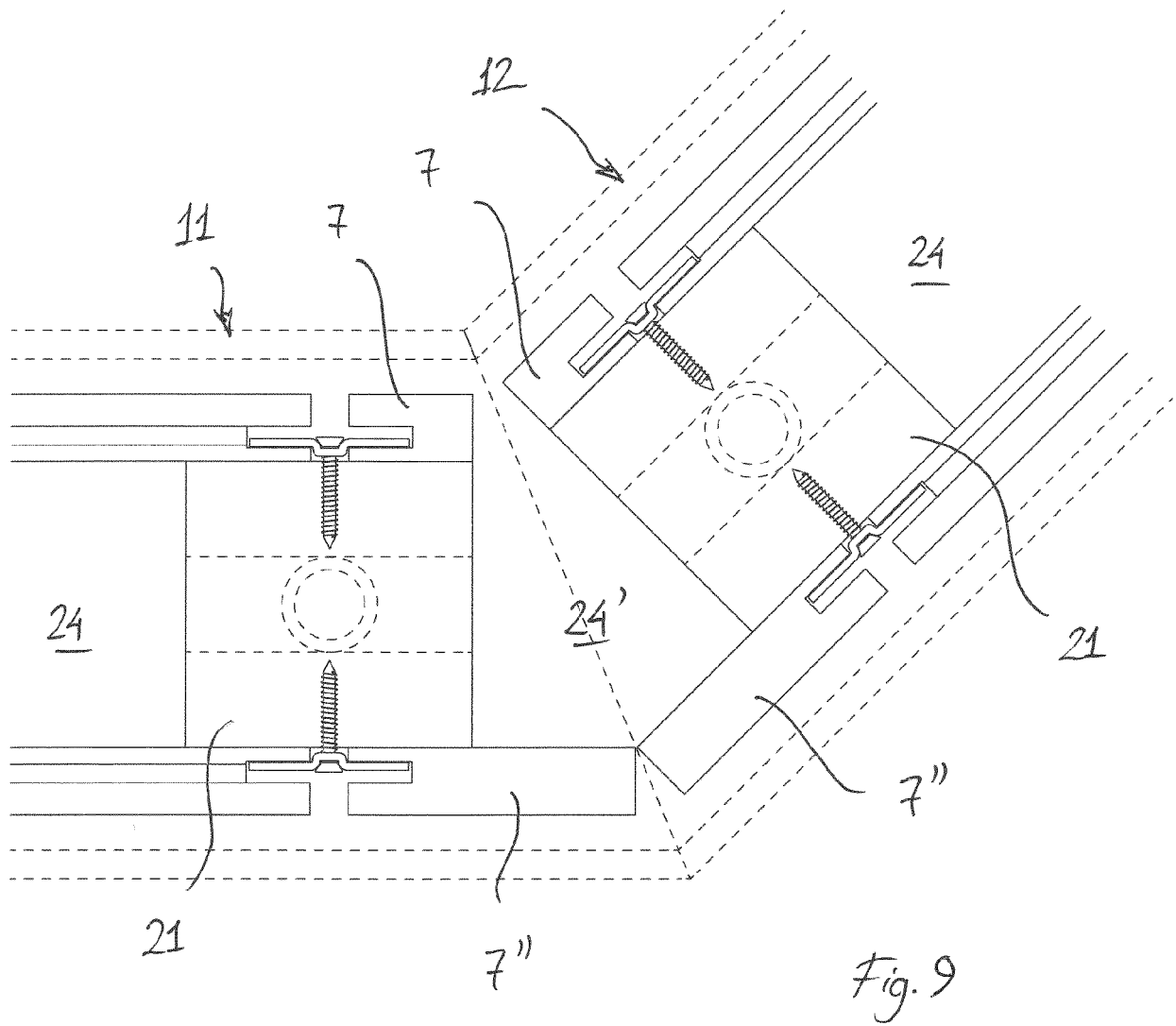
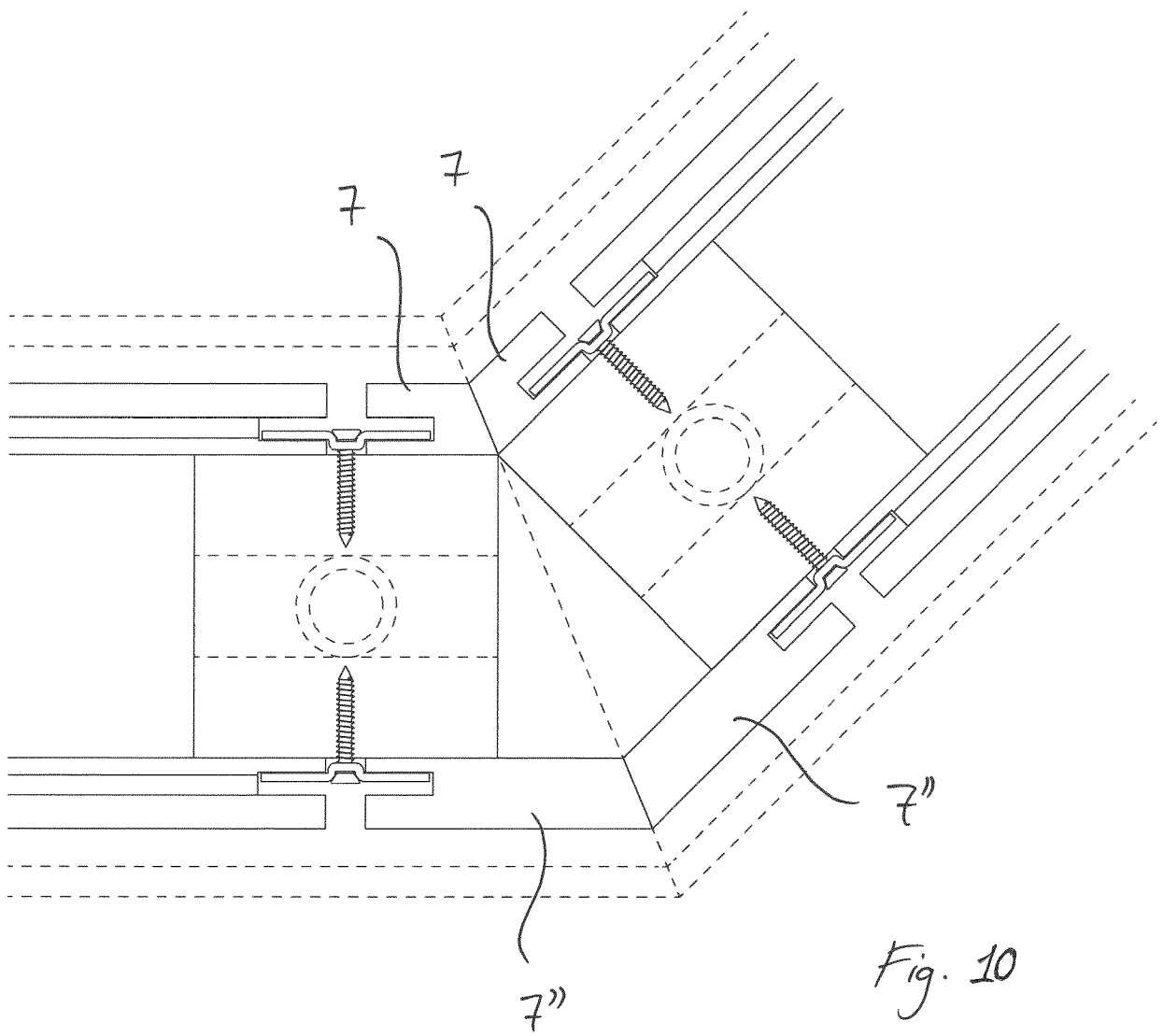
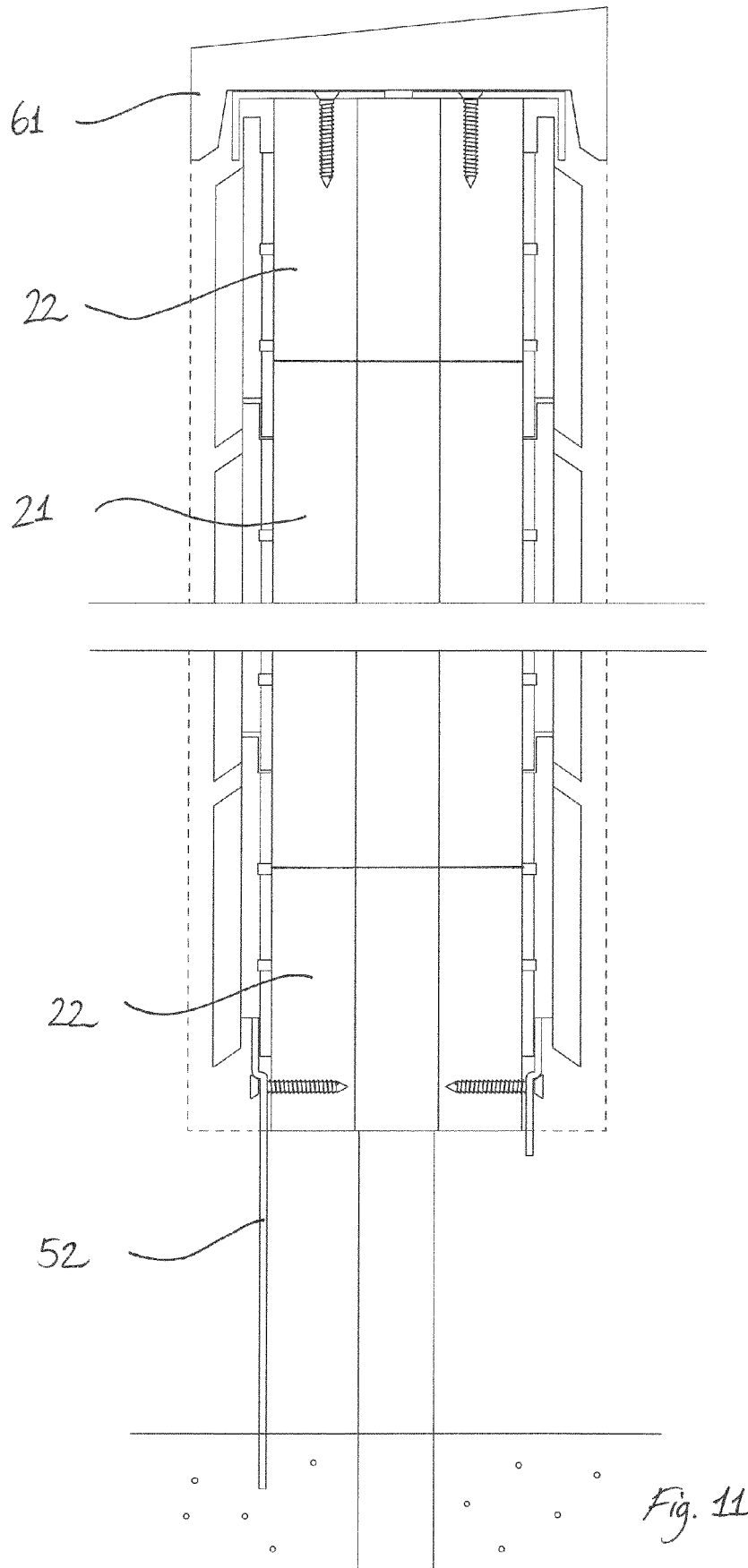
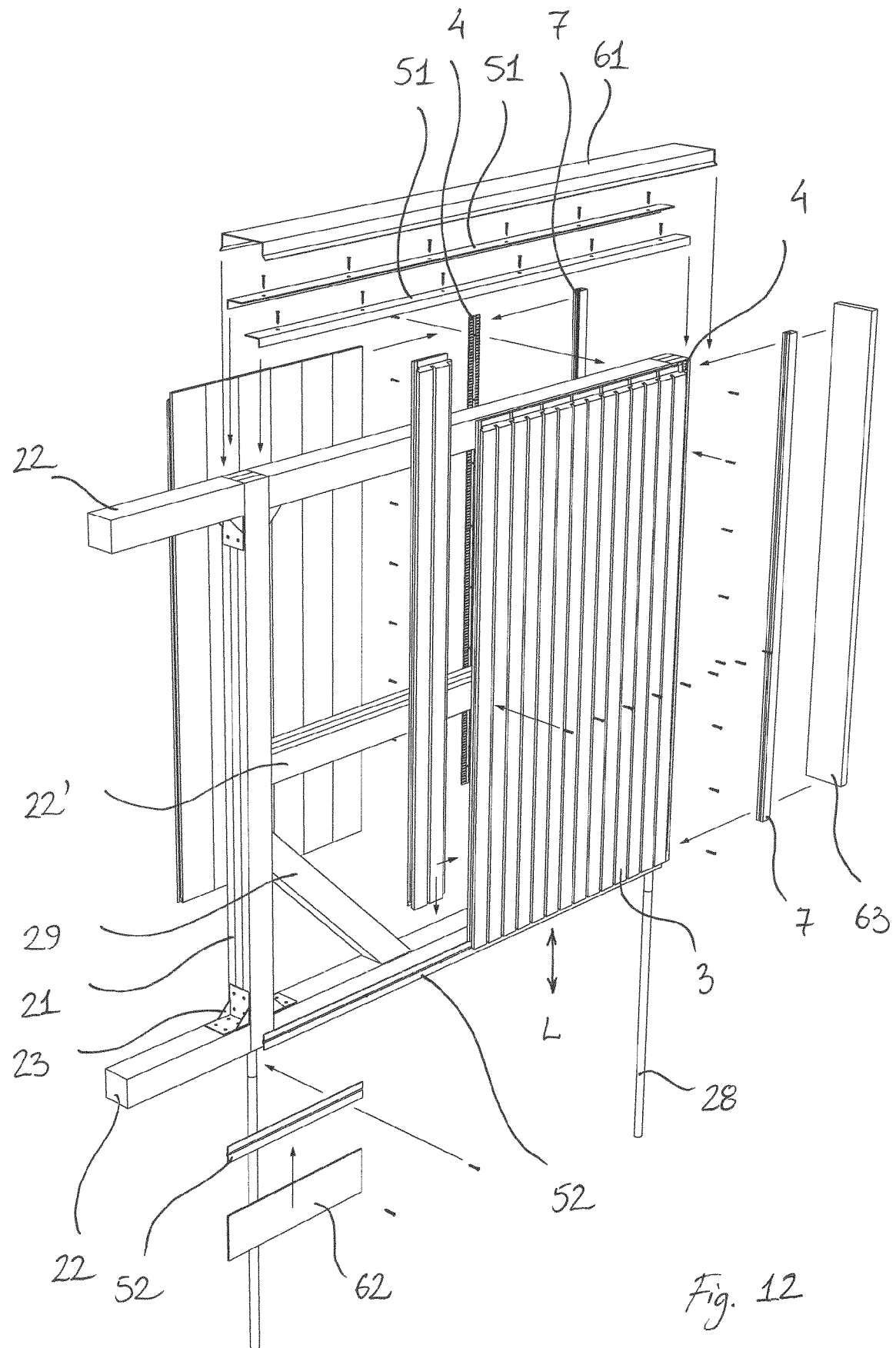


Fig. 8









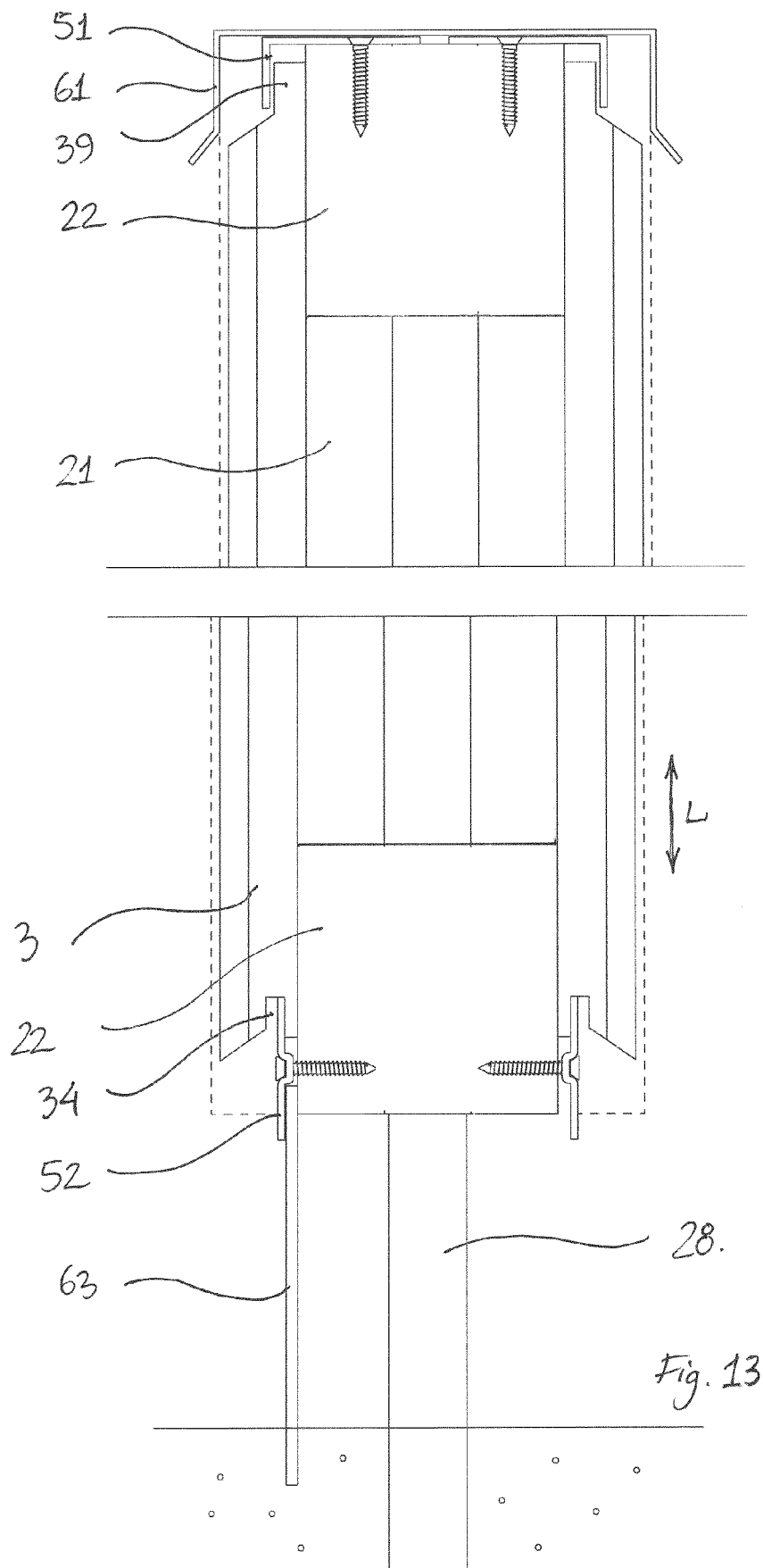
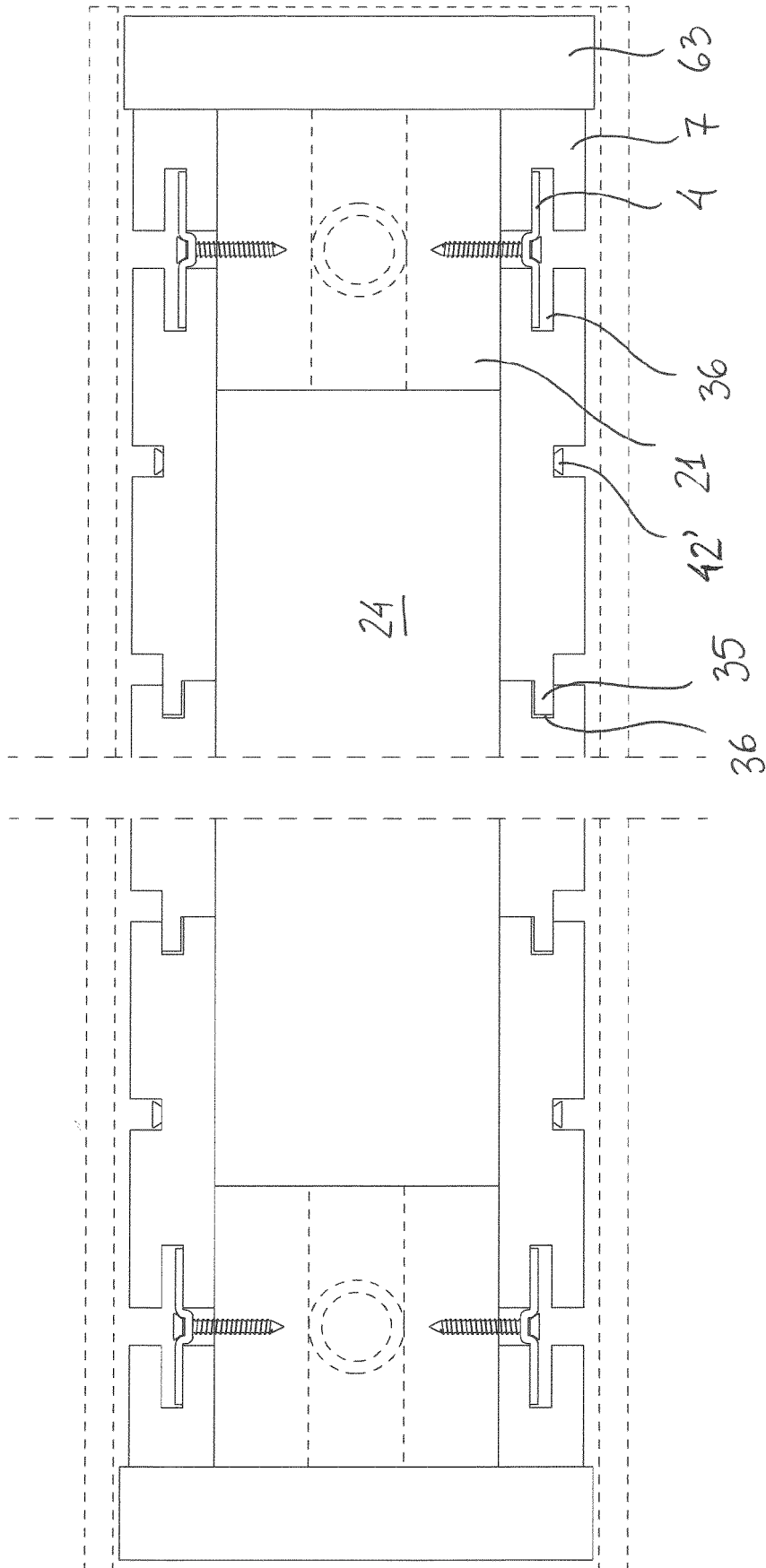
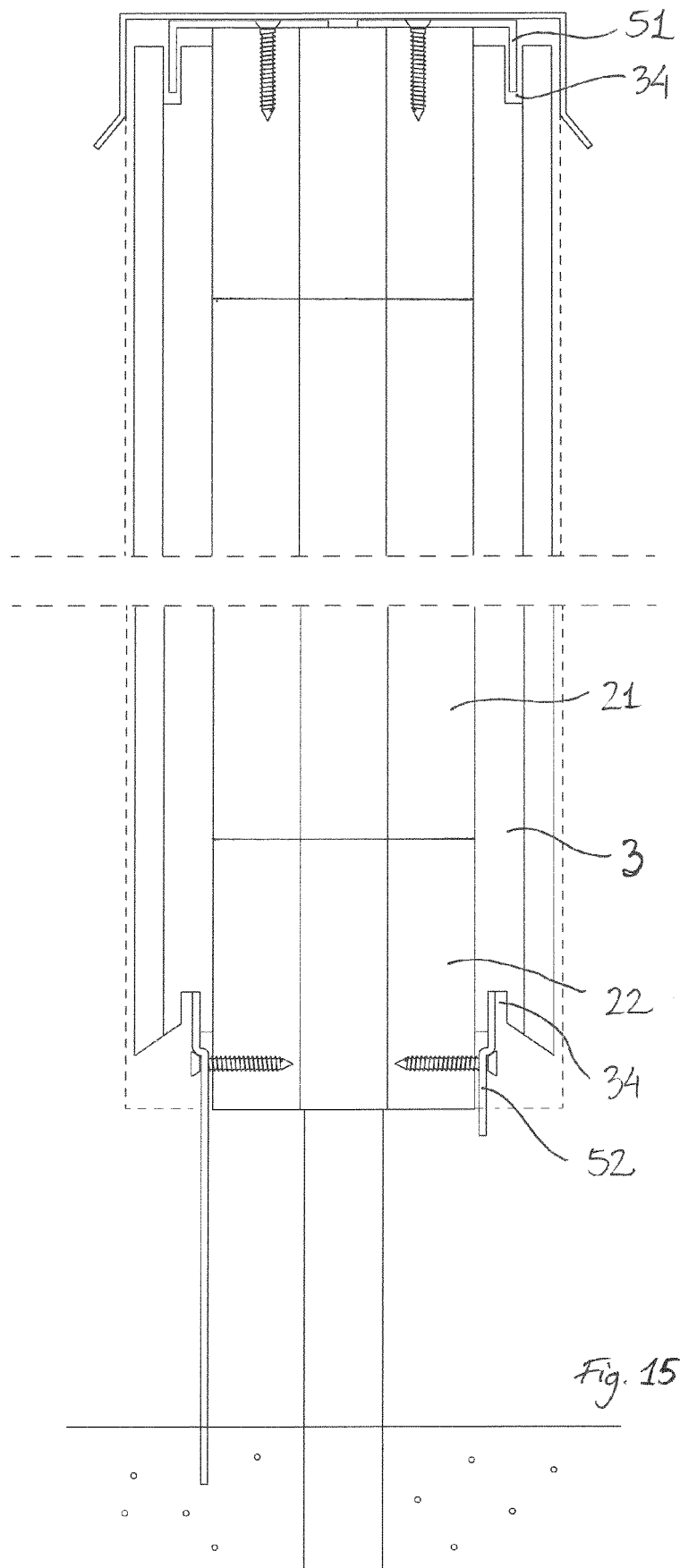


Fig. 13





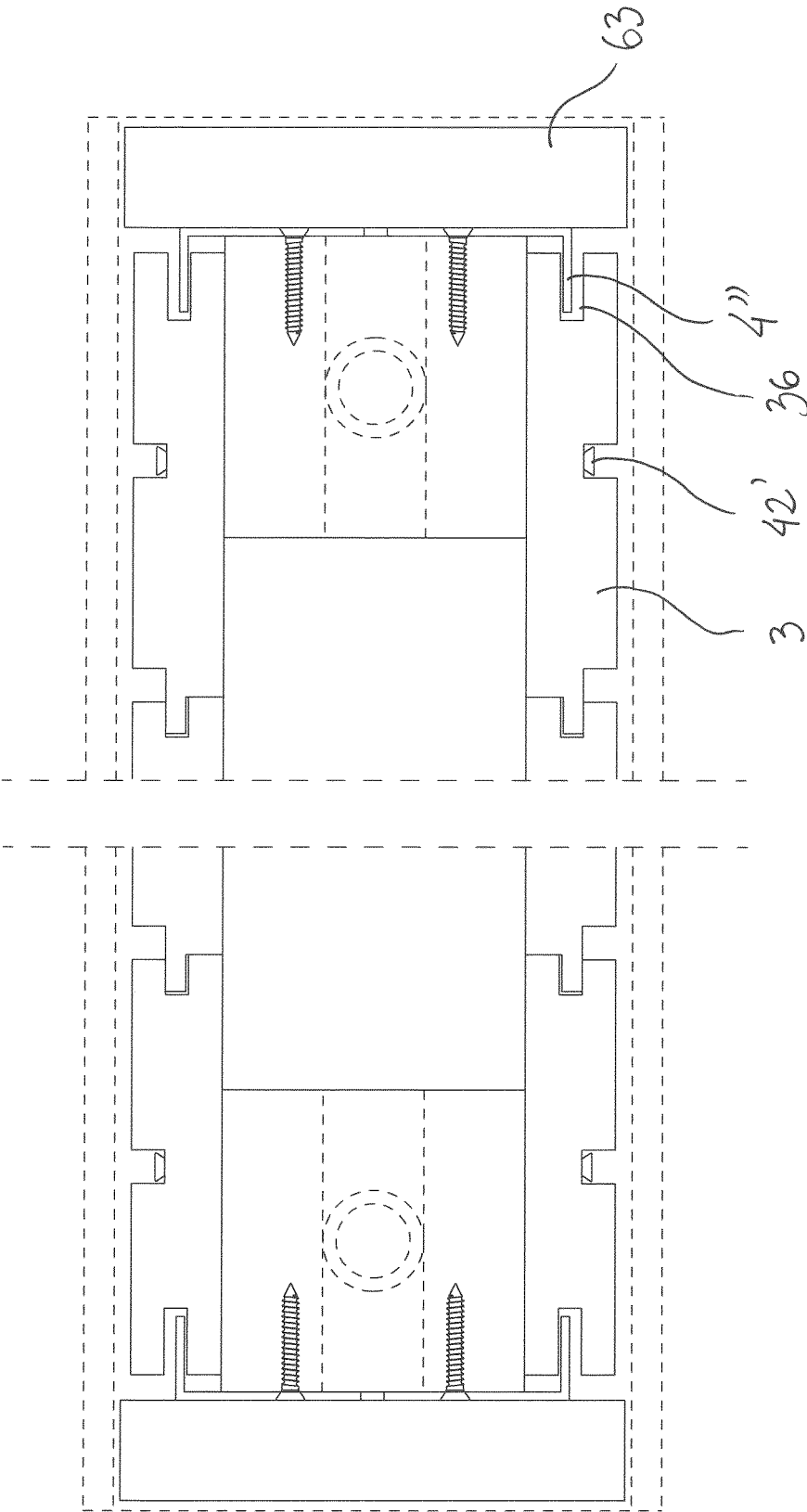


Fig. 16



EUROPEAN SEARCH REPORT

Application Number
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The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 8 March 2019	Examiner Bauer, Josef
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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