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(54) **A CLADDING ASSEMBLY**

(57) A cladding assembly for a building structure. The cladding assembly including a building component, at least one cladding element and a fastener to attach the cladding element to the building component. A first fastener member is mounted on the building component and a second fastener member engages the first member to attach a cladding element to the building component.

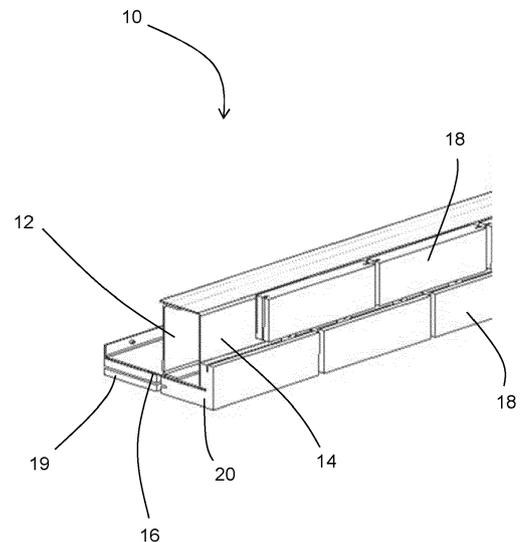


FIG. 1

Description

FIELD

[0001] The present teachings relate to a cladding assembly for a building structure, a fastener assembly for a building structure, and a building structure.

BACKGROUND

[0002] When constructing a building structure, it is known to achieve the appearance of a traditional brickwork wall using profiled brick slips mounted onto an underlying structural frame of the building to cover an internal or external wall surface. Brick slips are traditionally manufactured either via an extrusion process, or are cut from a traditionally manufactured brick, and an array of said brick slips are typically mounted to a building component (e.g. a lintel or wall panel) so as to provide a traditional 'brick' wall finish.

[0003] One method of covering a wall surface is to mount the brick slips directly onto the wall surface, e.g. using an adhesive. Whilst adhesively mounting is relatively simple, the bond between the brick slips and the wall structure may not be sufficient.

[0004] The present teachings seek to overcome or at least mitigate one or more problems associated with the prior art.

SUMMARY

[0005] A first aspect of the teachings provides a cladding assembly for a building structure, the cladding assembly comprising: a building component; at least one cladding element; and a mounting arrangement for attaching the at least one cladding element to the building component, wherein the mounting arrangement comprises a fastener assembly comprising a first fastening member mounted on the building component and a second fastening member configured to releasably engage the first fastening member, and wherein, in use, the second fastening member engages the first fastening member and the cladding element to attach said cladding element to a building component.

[0006] When the second fastening member engages the first fastening member, the fastener assembly is configured and arranged to engage the cladding element to attach said cladding element to the building component.

[0007] The fastener assembly is configured to apply a compressive force to the cladding element towards the building component so as to form a mechanical fixing therebetween. Put another way, the fastener assembly is configured to urge the cladding element onto the building component. This arrangement has been found to provide an improved mechanical fixing arrangement to secure the cladding element to the building component.

[0008] Providing a first fastening member that is mounted onto the building component enables an oper-

ator to attach the second fastening member onto the first fastening member (i.e. onto the building component) without requiring operator access behind the building component. This arrangement has been found to facilitate the construction of a cladding assembly by enabling the fastener assembly (and so the cladding elements) to be secured to the building component from in front of a building structure.

[0009] The first fastening member may be configured to be releasably mounted on the building component.

[0010] This arrangement has been found to facilitate the construction of a cladding assembly by only requiring an operator to mount the first fastening members in the desired locations. This, in turn, enables the fastener assemblies to be positioned to accommodate different sized cladding elements on the building component.

[0011] The fastener assembly may be provided as a removable sub-assembly of the cladding assembly.

[0012] Providing the fastener assemblies as sub-assemblies of the building component has advantageously been found to facilitate assembly of the cladding assembly.

[0013] The first and second fastening members may each comprise corresponding threaded surfaces, and wherein the first and second fastening members may be configured and arranged to engage via said threaded surfaces.

[0014] Providing the first and second fastening members as threaded fasteners has been found to further facilitate in the mounting of cladding elements onto the building component.

[0015] In one arrangement, the first fastening member is a female fastener comprising an internal threaded surface and the second fastening member is a male fastener, e.g. a bolt or screw.

[0016] The first fastening member may be a female fastener, e.g. in the form of a sleeve, comprising an internal threaded surface, and the second fastening member may be a male fastener, e.g. a bolt or screw, comprising an external threaded surface.

[0017] The cladding assembly may comprise first and second cladding elements arranged adjacent to each other on the building component. When the second fastening member engages the first fastening member, the fastener assembly may be configured and arranged to engage the first and second cladding elements to attach said first and second cladding elements to the building component.

[0018] The first fastening member may be at least partially interposed between the first and second cladding elements.

[0019] In this way, the fastener member sets a minimum separation between adjacent cladding elements on the building component. This advantageously helps to ensure the spacing between adjacent cladding elements is able to receive a sufficient volume of mortar.

[0020] Opposing edge faces of the first and second cladding elements may be arranged to abut against the

first fastening member.

[0021] Advantageously, in this way the external diameter of the first fastening member determines the spacing between adjacent cladding elements. This helps to ensure consistent placement of cladding elements over the building component.

[0022] The building component may comprise an aperture therein, and the first fastening member may be configured to be mounted in the aperture.

[0023] This has been found to facilitate assembly of the cladding assembly by providing a straightforward way in which to mount the first fastening member to the building component.

[0024] The first fastening member may be moveable in the aperture between a first position in which the first fastening member is removable from the building component and a second position in which the first fastening member is secured to the building component.

[0025] The first aperture position may comprise an enlarged opening of the aperture into which the first fastening member is insertable, and the second aperture position may comprise a reduced diameter slot extending from the enlarged opening.

[0026] In this way, the aperture of the building component works as a keyhole having a first part/region into which the first fastening member can be inserted/removed, and a second part/region in which the first fastening member cannot be inserted or removed. This has been found to facilitate removably mounting the first fastening member to the building component.

[0027] The first fastening member may comprise a groove on an external surface thereof, said groove may be configured to receive an edge of the aperture therein to mount the first fastening member to the building component. The groove may define a reduced diameter region of the first fastening member.

[0028] Providing an external groove on the first fastening member, i.e. on the fastening sleeve, enables the first fastening member to engage the slot so as to facilitate positioning and fitting of the first fastening member on the building component.

[0029] The first fastening member may comprise a pair of opposing grooves on the external surface thereof, said grooves may be configured to receive opposing edges of the aperture therein to mount the first fastening member to the building component. The grooves may define a reduced diameter region of the first fastening member.

[0030] Providing a pair of opposing grooves on the first fastening member, i.e. on the fastening sleeve, further aids alignment and fitting of the first fastening member on the building component.

[0031] The opening may be dimensioned to have a diameter equal to or greater than an external diameter of the first fastening member. The slot may be dimensioned to have a diameter equal to or greater than the reduced diameter region of the first fastening member formed by the groove(s) and/or less than an external diameter of the first fastening member.

[0032] The first aperture position may comprise an enlarged opening of the aperture into which the first fastening member is insertable, and the second aperture position may comprise a reduced diameter slot extending from the enlarged opening. The opening may be dimensioned to have a diameter equal to or greater than an external diameter of the first fastening member. The slot may be dimensioned to have a diameter less than an external diameter of the first fastening member and equal to or greater than a reduced diameter region defined by the groove or grooves.

[0033] Each cladding element may comprise an outer surface distal to the building component, an inner surface proximate to the building component, and four edge faces extending therebetween.

[0034] Each cladding element may comprise an abutment surface on or near an edge face, e.g. in the form of one or more of an opening, channel, groove, recess or shoulder.

[0035] The second fastening member may comprise a flanged projection arranged to engage the abutment surface to attach the cladding element to the building component.

[0036] The flanged projection may comprise a circular or rectangular washer mounted to the second fastening member.

[0037] The cladding element may comprise an abutment surface on or near two opposing edge faces of the cladding element.

[0038] The cladding element may comprise an abutment surface on each edge face thereof.

[0039] The use of multiple abutment surfaces enables the cladding element to be mechanically secured to the building component at multiple points. This further secures the cladding element to the building component, thus improving the robustness of the cladding assembly.

[0040] The mounting arrangement may comprise an end bracket removably attached proximate an edge of the building component. The end bracket may be configured and arranged to engage the cladding element to attach said cladding element to the building component.

[0041] The end bracket may be provided as a substantially L-shaped bracket.

[0042] The end bracket provides a terminal support for engaging with cladding elements located at the peripheral edge of an area of cladding. In this way, the end bracket ensures that an outer cladding element is still sufficiently secured to the cladding assembly, thus improving the robustness of the cladding assembly.

[0043] The building component may comprise a return arm extending away from, e.g. perpendicularly away from, the edge of the building component, and the end bracket may be removably secured to said return arm.

[0044] The return arm helps to increase the structural strength of the building component and so improves the robustness of the cladding assembly. This in turn helps to improve the mechanical attachment of the end bracket, and so the cladding element, to the building component.

[0045] The cladding assembly may comprise a substantially L-shaped cladding element arranged to extend around a corner region of the building component.

[0046] The cladding assembly may comprise an alignment arrangement for aligning the L-shaped cladding element onto the building component.

[0047] This arrangement facilitates assembly of the cover elements, and so aids in the construction of the cladding assembly.

[0048] The alignment arrangement may comprise a projection extending from the building component that is received in a corresponding recess in the L-shaped cladding element.

[0049] The cladding element may be a brick slip (e.g. comprising clay), a masonry slip (e.g. comprising natural or cast stone), a ceramic tile, a wooden tile, or a concrete tile.

[0050] The building component may be a lintel or a cladding frame.

[0051] Each cladding element may be attached to the building component by one or more adhesives.

[0052] A second aspect of the teachings provides a kit of parts for a cladding assembly, the kit of parts comprising: at least one cladding element; and a mounting arrangement for attaching the at least one cladding element to a building component, wherein the mounting arrangement comprises a fastener assembly comprising a first fastening member mountable on a building component and a second fastening member configured to releasably engage the first fastening member, and wherein, in use, the second fastening member engages the first fastening member and the cladding element to attach said cladding element to a building component.

[0053] A third aspect of the teachings provides a fastener assembly for attaching a cladding element to a building component, the fastener assembly comprising: a first fastening member configured to be mountable onto a building component; and a second fastening member configured to releasably engage the first fastening member, wherein, in use, the second fastening member engages the first fastening member and a cladding element to attach said cladding element to a building component.

[0054] When the first fastening member is mounted on a building component and the second fastening member engages the first fastening member, the second fastening member is configured to engage a cladding element to attach said cladding element to the building component.

[0055] The fastener assembly may be configured and arranged to engage the first and second cladding elements to attach said first and second cladding elements to the building component.

[0056] The first fastening member may be configured to be releasably mounted on the building component.

[0057] In one arrangement, the first fastening member is a female fastener comprising an internal threaded surface and the second fastening member is a male fastener, e.g. a bolt or screw.

[0058] The first fastening member may be a female fastener, e.g. in the form of a sleeve, comprising an internal threaded surface, and the second fastening member may be a male fastener, e.g. a bolt or screw, comprising an external threaded surface.

[0059] The building component may comprise an aperture therein, and the first fastening member may be configured to be mounted in the aperture.

[0060] The first fastening member may comprise a groove on an external surface thereof, said groove may be configured to receive an edge of the aperture therein to mount the first fastening member to the building component. The groove may define a reduced diameter region of the first fastening member.

[0061] The first fastening member may comprise a pair of opposing grooves on the external surface thereof, said grooves may be configured to receive opposing edges of the aperture therein to mount the first fastening member to the building component. The grooves may define a reduced diameter region of the first fastening member.

[0062] A fourth aspect of the teachings provides a building structure comprising: a wall defining a surface; and a cladding assembly according to the first aspect, wherein the cladding assembly at least partially covers the surface of the wall.

[0063] A fifth aspect of the teachings provides a method of assembling a cladding assembly, the method comprising the steps of: mounting a first fastening member to a building component; engaging a cladding element with a second fastening member; engaging the first fastening member with the second fastening member so as to attach the cladding element to the building component.

BRIEF DESCRIPTION OF THE DRAWINGS

[0064] Embodiments will now be described with reference to the accompanying drawings, in which:

Figure 1 is an isometric view of a cladding assembly according to an embodiment;

Figures 2A and 2B are front and bottom views of the cladding assembly of Figure 1;

Figure 3 is a partial cross-sectional view of the cladding assembly of Figure 1;

Figure 4 is an isometric view of a mounting arrangement of the cladding assembly of Figure 1;

Figure 5 is a side view of a fastener assembly of the mounting arrangement of Figure 4;

Figure 6 is a cross-sectional view of the cladding assembly of Figure 1; and

Figure 7 is an isometric view of the cladding assembly of Figure 1 in-situ on a building structure.

DETAILED DESCRIPTION OF EMBODIMENT(S)

[0065] Referring firstly to Figures 1, 2A and 2B, a cladding assembly is illustrated and is indicated generally at 10. The cladding assembly 10 is intended to be installed on a building structure (not shown) so as to at least partially cover one or more surfaces of the building structure.

[0066] The cladding assembly 10 includes a building component 12 that is intended to be mounted to, or installed on, a building structure. In the illustrated arrangement, the building component 12 is a lintel, for example for a doorway, archway, window opening, or a panel etc.. The lintel 12 includes a front surface 14 and a lower surface, or soffit, 16. In alternative arrangements, the building component may be a panel of a building structure, for example the building component 12 may be a cladding frame.

[0067] The cladding assembly 10 includes an array of cladding elements 18 covering the surfaces of the building component 12. In the illustrated arrangement, the cladding elements 18 covering the lower surface 16 of the building component 12 are underslung or overhanging cladding elements 18. Thus, the cladding assembly 10 includes a series or underslung or overhanging cladding elements 18.

[0068] The cladding element 18 is a brick slip, for example formed from clay, but it will be understood that alternative cladding elements such as a masonry slip (e.g. comprising natural or cast stone), a ceramic tile, a wooden tile, or a concrete tile may be used.

[0069] A first cladding element 19 of the cladding elements 18 is substantially rectangular in front view. The first cladding element 19 is substantially cuboid. A series of the first cladding elements 19 are positioned over the front 14 surface of the building product. A series of first cladding elements 19 are positioned over the lower surface 16 of the building component 12 so as to be underslung or overhanging.

[0070] A second cladding element 20 of the cladding elements 18 is substantially L-shaped in cross-section. A series of the second cladding elements 20 are arranged along the elongate length of the building component 12. The second cladding elements are arranged to extend around a corner region of the building component 12 between the front and lower surfaces 14, 16 of the building component 12. It will be understood that in some arrangements, e.g. when the building component is substantially flat panel or frame, the second cladding elements 20 may not be provided on the cladding assembly 10.

[0071] Referring now to Figure 2, a mounting arrangement is provided to attach the cladding elements 18 to the building component 12. The mounting arrangement includes an array of fastener assemblies 21. Each fastener assembly 21 engages the building component 12 and at least one cladding element 18 so as to attach said cladding element 18 to the building component 12.

[0072] Each cladding element 18 includes an outer sur-

face 22 distal to the building component 12, an inner surface 24 proximate to the building component 12, and four edge faces 26 extending between said inner and outer surfaces 22, 24. Each cladding element 18 includes a surface, e.g. an abutment surface, 28 against which a part of the fastener assembly 21 abuts or engages so as to apply a force to said cladding element 18.

[0073] In the illustrated embodiment, the abutment surface 28 is formed by a recessed channel 29 in an edge face 26 of the cladding element 18. In alternative arrangements, it will be appreciated that the abutment surface 28 may be formed by an opening, groove, recess or shoulder that is positioned on or adjacent to an edge face 26 of the cladding element 18. The cladding element 18 is provided with an abutment surface 28 on each of the four edge faces 26 thereof. In the illustrated arrangement, the abutment surfaces extend substantially around an entirety of the perimeter of the cladding element 18. In alternative arrangements, the cladding element 18 may only include abutment surfaces 28 on two edge faces 26, e.g. two opposing edge face 26. It will be understood that the abutment surface 28 may extend along a part of the respective edge face 26 of the cladding element 18 or may extend substantially along an entirety of the said edge face 26 (e.g. to extend substantially around the perimeter of the cladding element 18).

[0074] The fastener assembly 21 includes a first fastening member 30 that is able to be mounted onto the building component 12. The fastener assembly 21 includes a second fastening member 32 that is able to releasably engage the first fastening member 30. A part of the fastener assembly 21 abuts against the cladding element 18 to mount the cladding element 18 to the building component 12.

[0075] When the first fastening member 30 is mounted on the building component 12, and the first and second fastening members 30, 32 are engaged, the second fastening member 32 is configured and arranged to engage the cladding element 18 to attach said cladding element 18 to the building component 12. In this way, the fastener assembly 21 applies a force, e.g. a compressive force, to the cladding element 18 towards the building component 12 to form a mechanical fixing therebetween. Put another way, the fastener assembly 21 urges the cladding element 18 onto the building component 12 to mount said cladding element 18 to the building component 12.

[0076] The fastener assembly 21 includes a flanged projection 34 that is arranged to engage the abutment surface 28 of the cladding member 18. The flanged projection 34 extends from the second fastening member 32. In the illustrated arrangement, the flanged projection 34 is provided in the form of a washer that is positioned on, or mounted to, the second fastening member 32. The second fastening member 32 includes an enlarged head portion 36 at a distal end thereof that the washer 34 abuts against. It will be understood that the flanged projection 34 may be circular, square, rectangular or any other suitable shape. Although the flanged projection has been

described as being separate from the second fastening member 32, it will be appreciated that in alternative arrangements the flanged projection 34 may be integrally formed with the second fastening member 32.

[0077] As discussed above, the second fastening member 32 is able to engage, or to be secured to, the first fastening member 30. The first and second fastening members 30, 32 may be threaded fasteners. In the illustrated arrangement, the first fastening member 30 is a female threaded fastener and the second fastening member 32 is a male fastening member. In alternative arrangements, different fastening configurations may be provided such as a push-fit locking configuration, but it will be appreciated that any suitable arrangement may be used.

[0078] The first fastening member 30 defines an opening 38 therethrough and includes an internal threaded surface along said opening 38. Put another way, the first fastening member 30 is a fastening sleeve. In the illustrated arrangement, the second fastening member 32 is a bolt or a screw having an external threaded surface. It will be understood that as the first fastening member 30 is screwed into the second fastening member 32, the force applied to the cladding element 18 by the fastener assembly 21, in use, is increased. Whilst the first and second fastening members 30, 32 have been described as being female and male fasteners, respectively, it will be appreciated that the first fastening member 30 may be a male fastener and the second fastening member 32 may be a female fastener or sleeve fastener.

[0079] As is illustrated, adjacent cladding elements 18 are positioned on the building component 12 such that the abutment surfaces 28 of the opposing edge faces 26 are substantially co-planar. The flanged projection 34 of the fastener assembly 21 is substantially planar and extends into the recessed channels 29 of each cladding element to abut against and engage the respective abutment surfaces 28. In this way, the fastener assembly 21, e.g. via the second fastening member 32, engages the first and second cladding elements 18 to attach said first and second cladding elements 18 to the building component 12.

[0080] In the illustrated arrangement, the recessed channels 29 extend inwardly along an axis that is parallel to both the inner and outer surfaces 22, 24 of the cladding element 18. In alternative arrangements, it will be understood that the recessed channels 29 may have a non-rectangular cross-sectional profile such that the abutment surfaces 28 are not co-planar (e.g. each abutment surface 28 may be inclined or curved), and the flanged projection 34 of the fastener assembly 21 may be shaped to conform to the profile of the abutment surface 28.

[0081] When the cladding assembly 10 is assembled, a part of the first fastening member 30 projects forwardly from the building component 12. Put another way, when the cladding assembly 10 is assembled, the first fastening member is at least partially positioned between (i.e. at least partially interposed between) the adjacent clad-

ding elements 18. The opposing edge faces 26 of the adjacent cladding elements 18 are arranged to abut against opposing surfaces of the first fastening member 30. In this way, the width of the first fastener member 30 sets the separation between adjacent cladding elements 18, which helps to ensure a consistent spacing of cladding elements 18 over the building component 12.

[0082] Referring now to Figures 4 and 5, the fastener assembly 21 is configured to be removably mounted on the building component 12.

[0083] The fastener assembly 21 enables an operator to mount the first fastening member 30 to the building component 12, to position the cladding elements 18 on the building component 12, to engage the flanged projection 34 on the cladding elements 18, and to secure the second fastening member 32 to the first fastening member 30. This arrangement enables the second fastening member 32 to be secured to the first fastening member 30, e.g. to secure a cladding element 18 to the building component 12, without requiring operator access behind the surface of the building component 12.

[0084] Providing a fastening assembly 21 that can be selectively attached to the building component 12 enables an operator to only mount fasteners assemblies 21 to the building component 12 at desired locations, which, in turn, may enable an operator to mount different sized cladding elements 18 to the building component 12 (e.g. by omitting certain fastener assemblies).

[0085] The first fastening member 30 is configured to be releasably and removably mounted on the building component 12. In the arrangement shown, the first fastening member 30 is configured to be mounted in an aperture 40 in the building component 12. The aperture 40 in the building component 12 includes an enlarged opening 42 and a reduced diameter elongate slot 44 extending from the opening 42. Put another way, the aperture 40 is keyhole-shaped.

[0086] The opening 42 is dimensioned to have a diameter equal to or greater than the external diameter of the first fastening member 30. Put another way, the opening 42 is dimensioned such that the first fastening member 30 is able to be inserted therein. In the arrangement shown, the first fastening member 30 is a substantially cylindrical sleeve and the opening 42 is substantially circular. The substantially circular opening 42 has a greater diameter than the external diameter of the substantially cylindrical fastener 30. In arrangements where the first fastening member 30 is non-circular in cross-section, it will be understood that the opening 42 will be dimensioned such that the first fastening member 30 is able to be inserted into said opening 42.

[0087] The first fastening member 30 is moveable in the aperture 40 between a first position, e.g. in the enlarged opening 42, in which the first fastening member 30 is able to be removed from the building component 12 and a second position, e.g. in the reduced diameter slot 44, in which the first fastening member 30 is secured to the building component 12. Put another way, the first

fastening member 30 is moveable in the aperture 40 between a first position, e.g. in the enlarged opening 42, in which the first fastening member 30 is able to be moved in a direction away from (e.g. perpendicularly away from) the surface of the building component 12, and a second position, e.g. in the reduced diameter slot 44, in which the first fastening member 30 cannot be moved away from the surface of the building component 12. In this way, the aperture 40 of the building component 12 works as a keyhole having a first part into which the first fastening member can be inserted/removed, and a second part in which the first fastening member cannot be inserted or removed.

[0088] The first fastening member 30 includes a pair of opposing external grooves 46. Each groove 46 is configured to receive a side edge 48 of the aperture 40 therein to mount the first fastening member 30 to the building component 12. In some alternative arrangements, the first fastening member 30 may only include a single external groove 46 and so will only receive and engage a single side edge 48 of the aperture 40. The external grooves work to provide a region of the first fastening member 30 having a reduced external diameter. The grooves or slots 46 work to engage the edge or opposing edges of the aperture 40 when the first fastening member 30 is in the second position so as to secure the first fastening member 30 to the building component 12.

[0089] The elongate slot 44 is dimensioned to have a diameter equal to or greater than the external diameter of the reduced diameter region of the first fastening member 30. Put another way, the elongate slot 44 is dimensioned such that the first fastening member 30 is able to slide therealong via the grooves 46.

[0090] The arrangement of the fastener assembly 21 described above provides the fastener assembly 21 as a removable sub-assembly of the cladding assembly. This enables the fastener assembly 21 to be assembled prior to being installed on the cladding assembly 21, to facilitate construction of the cladding assembly 10 on a building site.

[0091] Referring now to Figure 6, a fastener assembly 21 is positioned at opposing sides of an L-shaped cladding element 20. Each fastener assembly 21 is interposed between the L-shaped cladding element 20 and the adjacent cladding element 19.

[0092] The mounting arrangement includes an end bracket 48. The end bracket 48 is used as a terminal support for engaging with abutment surfaces 28 of cladding elements 18, 19, 20 located at the peripheral edge of an area of cladding (e.g. along an edge of the building component 12). The end bracket 48 is removably attached along an edge of the building component 12.

[0093] The end bracket 48 is configured and arranged to engage a peripheral cladding element 18 to attach said cladding element 18 to the building component 12. Put another way, the end bracket 48 engages an abutment surface 28 of a peripheral cladding element 18 so as to attach said cladding element 18 to the building compo-

nent 12.

[0094] The end bracket 48 is provided as a substantially L-shaped bracket. The substantially L-shaped bracket 48 is configured and arranged so as to effectively clamp a part of a cladding element 18 onto the building component 12. In the illustrated arrangement, the end bracket 48 is mounted to a return arm or mounting flange 49 of the building component 12. The return arm 49 extends away from (e.g. perpendicularly away from) the peripheral edge of the building component 12. In this way, the return arm 49 acts as a stiffening configuration of the building component 12 which helps to increase the structural strength of the building component 12 and so improves the robustness of the cladding assembly 10. This, in turn, helps to improve the attachment of peripheral cladding elements 12 to the building component 12.

[0095] The cladding assembly 10 includes an alignment arrangement for aligning the L-shaped cladding elements 20 onto the building component 12. The alignment arrangement forms part of the mounting arrangement of the cladding assembly 10. The alignment arrangement is provided in the form of complementary features on the cladding element 20 and the building component 12.

[0096] In the illustrated arrangement, a projection 50 extending from the building component 12. The projection 50, e.g. a projecting tab or lip, is received in a corresponding recess 52 provided on the L-shaped cladding element 20. The alignment arrangement also works to support the cladding element on the building component 12, e.g. whilst the cladding element 18 is secured to the building component 12 via one or more fastener assemblies 21 or end brackets 48. In alternative arrangements, it will be understood that the cladding element may be provided with a projection that is dimensioned to be received in a recess or aperture in the cladding element.

[0097] Although it has not been discussed, it will be understood that the cladding elements 18, 19, 20 may also be attached to the building component 12 using one or more adhesives. The adhesives may be applied between an inner face of the cladding element 18 and the building component 12.

[0098] Referring now to Figure 7, a building structure is illustrated and is indicated generally at 54. The building structure 54 includes a wall 58 that defines a surface 56. In the illustrated arrangement, the wall surface 56 forms part of an archway, for example for a doorway, window opening, or a panel etc.. The cladding assembly 10 described with reference to Figures 1 to 6 is mounted to the building structure 54 so as to cover the surface 56 of the wall 58.

[0099] Although the above discussion has been with reference to a pre-assembled cladding assembly 10 or building structure 54, it will be understood that the components described above may be provided in the form of a kit of parts used for attaching an array of cladding elements 18 onto a building component 12.

[0100] A method of assembling as cladding assembly

10, for example using a kit of parts, will now be described.

[0101] The first fastening member 30 of the fastener assembly 21 is releasably mounted to the building component 12. In the present arrangement, an array of apertures 40 are first formed in a surface of the building component 12 so as to enable the first fastening member 30 to be releasably secured thereto. The aperture 40 may be formed having an enlarged opening 42 and a reduced diameter elongate slot 44 extending from the opening 42.

[0102] In the arrangement shown, the first fastening member 30 may be inserted into the aperture 40 so as to be secured thereto. Mounting the first fastening member 30 to the building structure 12 may include inserting the first fastening member 30 into the enlarged opening 42 and sliding said first fastening member 30 along the slot 44.

[0103] One or more cladding elements 18 may then be positioned on the building component 12. The cladding elements 18 may be initially be held in place on the surface of the building component 12 by an adhesive.

[0104] A second fastening member 32 then may engage the one or more cladding elements 18 and the first fastening member 30. In this way, the fastener assembly 21, in the form of first and second fastening members 30, 32, attach the one or more cladding elements 18 onto the building component 12.

[0105] Although the teachings have been described above with reference to one or more preferred embodiments, it will be appreciated that various changes or modifications may be made without departing from the scope as defined in the appended claims.

Claims

1. A cladding assembly for a building structure, the cladding assembly comprising:

a building component comprising an aperture therein,

at least one cladding element; and

a mounting arrangement for attaching the at least one cladding element to the building component,

wherein the mounting arrangement comprises a fastener assembly comprising a first fastening member in the form of a sleeve comprising a groove on an external surface thereof, said groove receiving an edge of the aperture therein to mount the first fastening member to the building component, and a second fastening member configured to releasably engage the first fastening member, and

wherein, in use, the second fastening member engages the first fastening member and the cladding element to attach said cladding element to the building component.

2. A cladding assembly according to claim 1, wherein the fastener assembly is provided as a removable sub-assembly of the cladding assembly.

3. A cladding assembly according to any preceding claim, wherein the first fastening member is a female fastener comprising an internal threaded surface, and the second fastening member is a male fastener, e.g. a bolt or screw, comprising an external threaded surface.

4. A cladding assembly according to any preceding claim, comprising first and second cladding elements arranged adjacent to each other on the building component, wherein, when the second fastening member engages the first fastening member, the fastener assembly is configured and arranged to engage the first and second cladding elements to attach said first and second cladding elements to the building component, and wherein the first fastening member is at least partially interposed between the first and second cladding elements.

5. A cladding assembly according to claim 5, wherein opposing edge faces of the first and second cladding elements are arranged to abut against the first fastening member.

6. A cladding assembly according to any preceding claim, wherein the first fastening member is moveable in the aperture between a first position, in which the first fastening member is removable from the building component, and a second position, in which the first fastening member is secured to the building component.

7. A cladding assembly according to claim 7, wherein, in the first position, the first fastening member is located in an enlarged opening of the aperture into which the first fastening member is insertable, and, in the second position, the first fastening member is located in a reduced diameter slot extending from the enlarged opening.

8. A cladding assembly according to any preceding claim, wherein the first fastening member comprises a pair of opposing grooves on the external surface thereof, said grooves configured to receive opposing edges of the aperture therein to mount the first fastening member to the building component.

9. A cladding assembly according to any preceding claim, wherein the aperture comprises an enlarged opening and a reduced diameter slot extending from the enlarged opening, and wherein the enlarged opening is dimensioned to have a diameter equal to or greater than an external diameter of the first fastening member, and the slot is dimensioned to have

a diameter less than an external diameter of the first fastening member and equal to or greater than a reduced diameter region of the first fastening member defined by the groove or grooves.

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10. A cladding assembly according to any preceding claim, wherein each cladding element comprises an abutment surface on or near an edge face, e.g. in the form of one or more of an opening, channel, groove, recess or shoulder, and wherein the second fastening member comprises a flanged projection arranged to engage the abutment surface to attach the cladding element to the building component, optionally wherein the flanged projection comprises a circular or rectangular washer mounted to the second fastening member. 10
11. A cladding assembly according to any preceding claim, wherein the mounting arrangement comprises an end bracket removably attached proximate an edge of the building component, and wherein the end bracket is configured and arranged to engage the cladding element to attach said cladding element to the building component, optionally wherein the end bracket is provided as a substantially L-shaped bracket. 15
12. A cladding assembly according to claim 12, wherein the building component comprises a return arm extending away from, e.g. perpendicularly away from, the edge of the building component, and wherein the end bracket is removably secured to said return arm. 20
13. A cladding assembly according to any preceding claim, comprising a substantially L-shaped cladding element arranged to extend around a corner region of the building component, wherein the cladding assembly comprises an alignment arrangement for aligning the L-shaped cladding element onto the building component, wherein the alignment arrangement comprises a projection extending from the building component that is received in a corresponding recess in the L-shaped cladding element. 25
14. A kit of parts for a cladding assembly, the kit of parts comprising: 30
- at least one cladding element; and
 a mounting arrangement for attaching the at least one cladding element to a building component comprising an aperture therein, wherein the mounting arrangement comprises a fastener assembly comprising a first fastening member in the form of a sleeve comprising a groove on an external surface thereof, said groove receiving an edge of the aperture therein to mount the first fastening member to the building component, and a second fastening member 35
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configured to releasably engage the first fastening member, and
 wherein, in use, the second fastening member engages the first fastening member and the cladding element to attach said cladding element to a building component.

15. A fastener assembly for attaching a cladding element to a building component, the fastener assembly comprising:

a first fastening member in the form of a sleeve comprising a groove on an external surface thereof and configured to be mountable onto a building component; and
 a second fastening member configured to releasably engage the first fastening member, wherein, in use, the second fastening member engages the first fastening member and a cladding element to attach said cladding element to a building component.

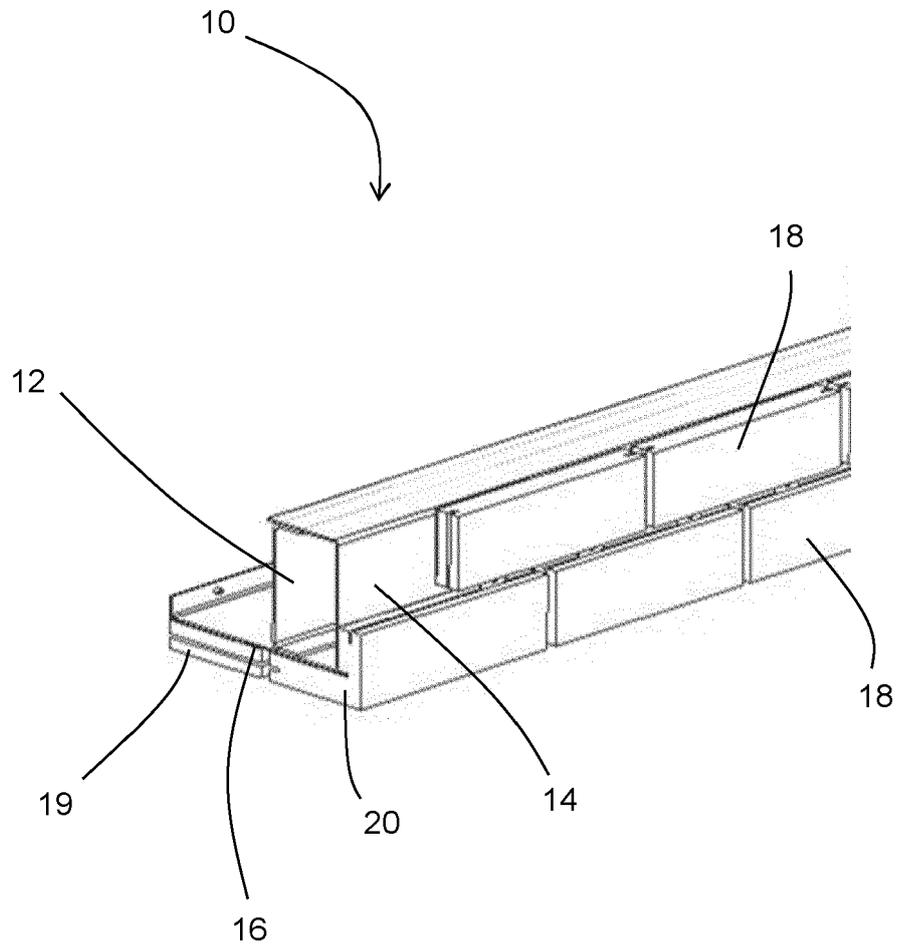


FIG. 1

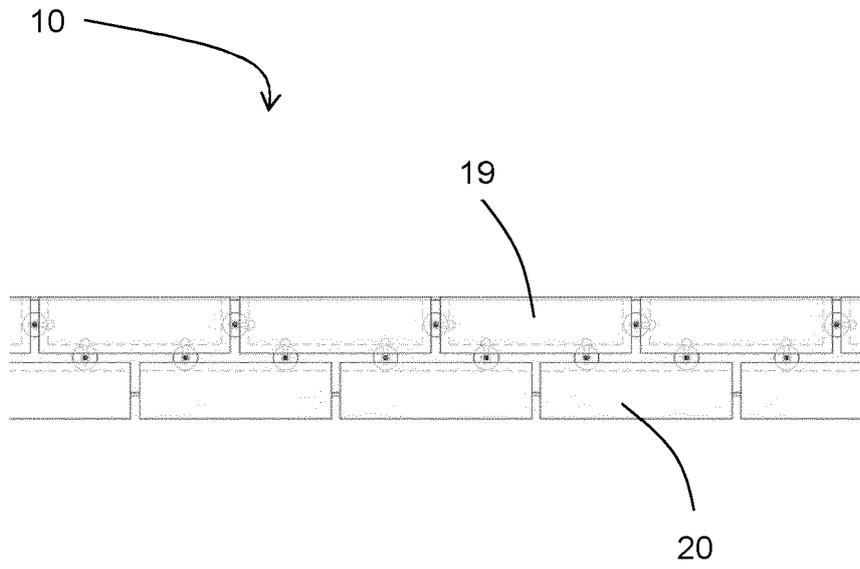


FIG. 2A

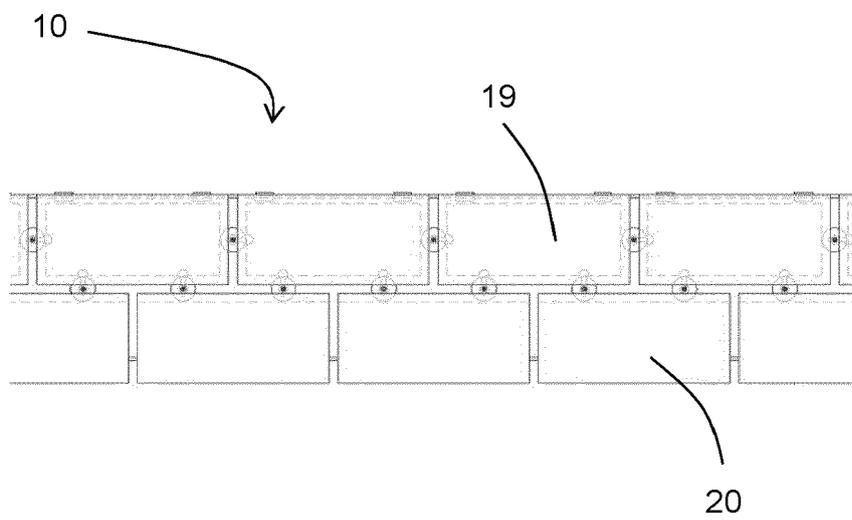


FIG. 2B

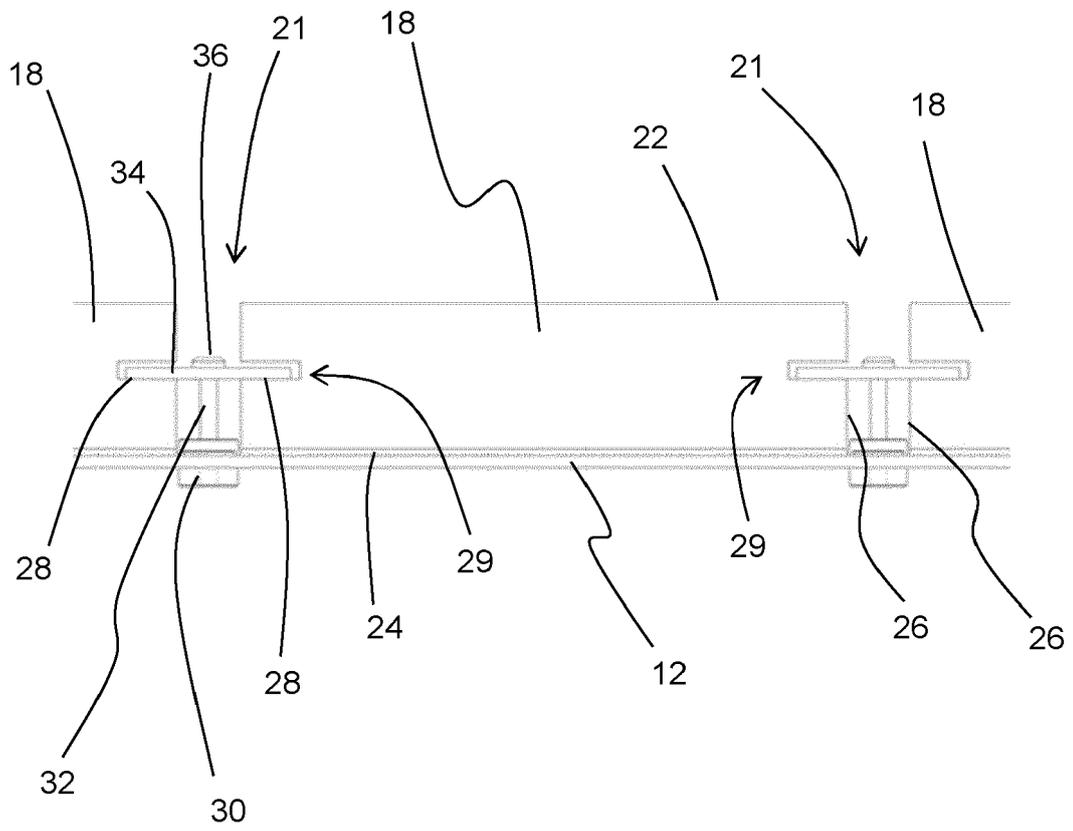


FIG. 3

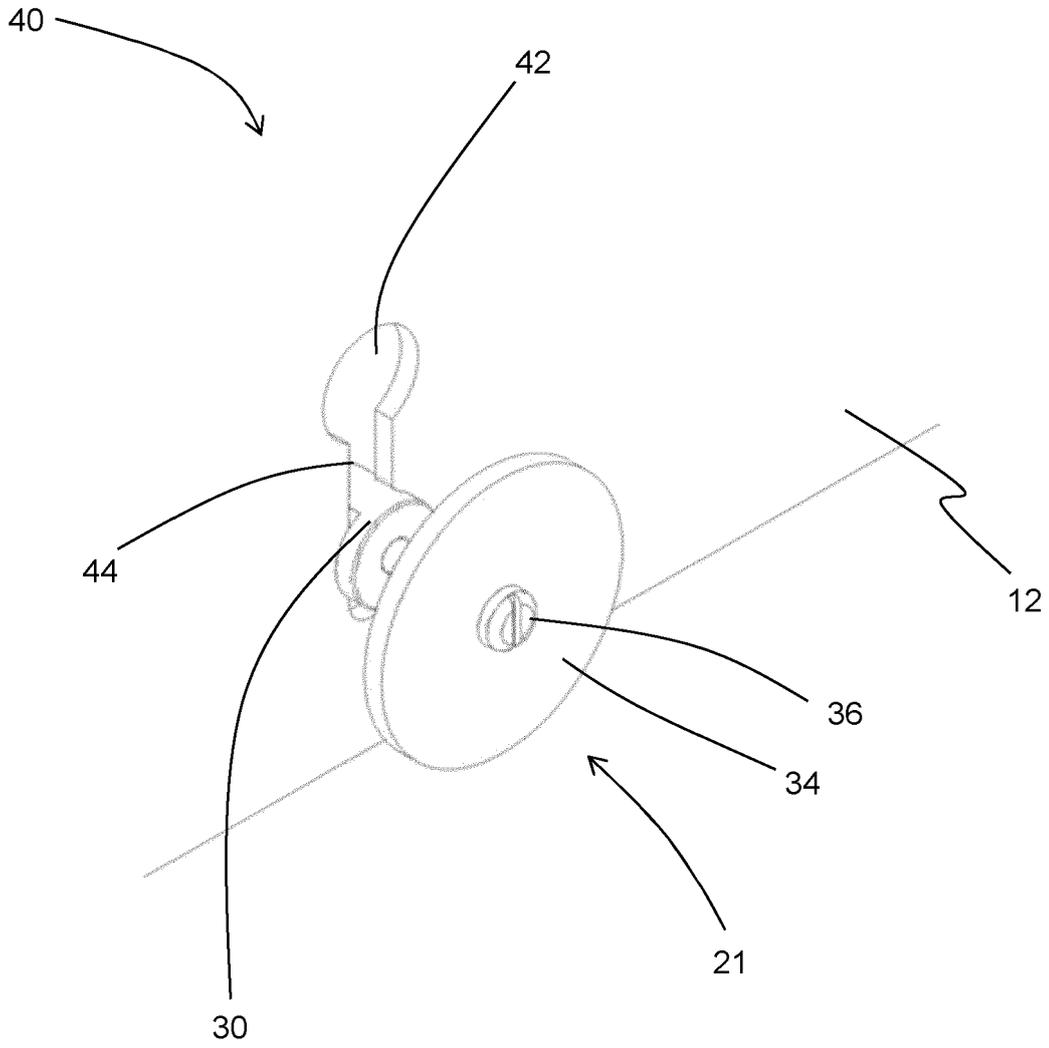


FIG. 4

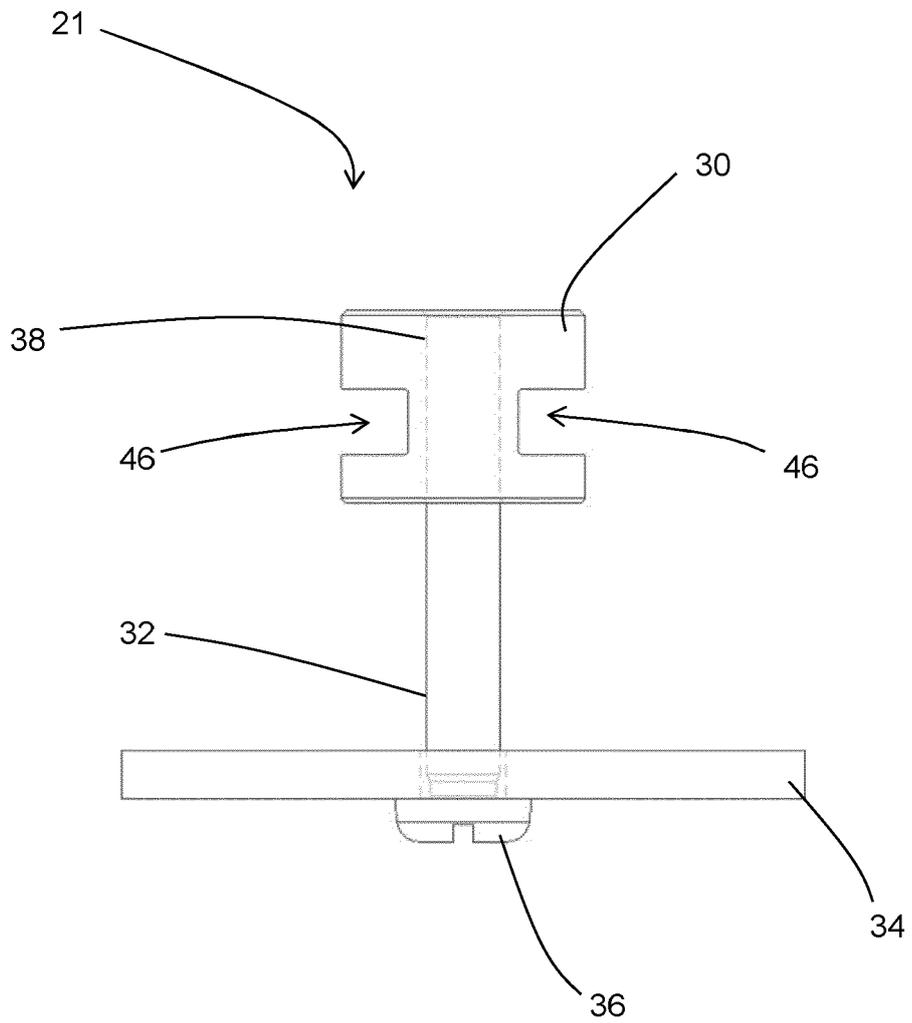


FIG. 5

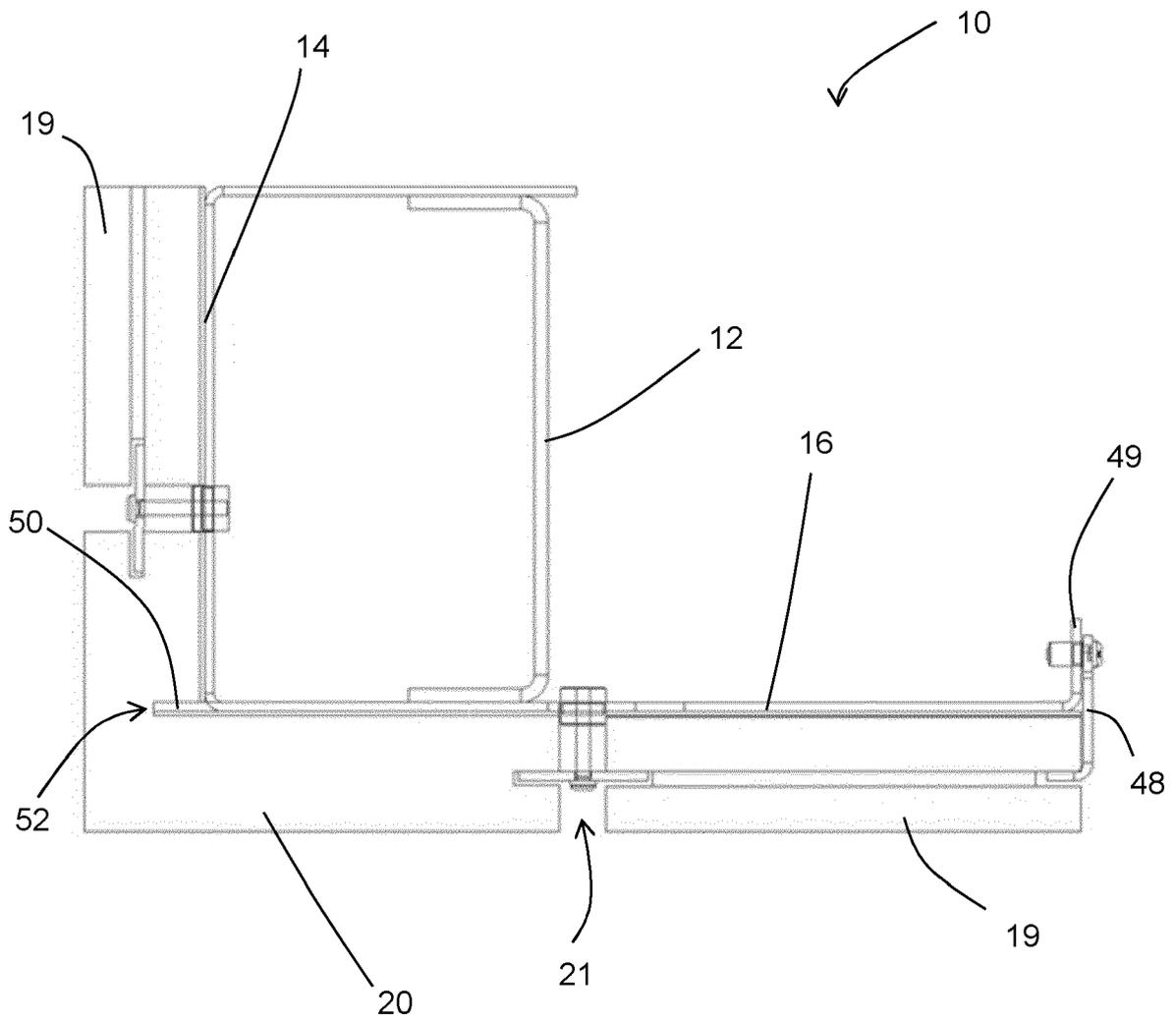


FIG. 6

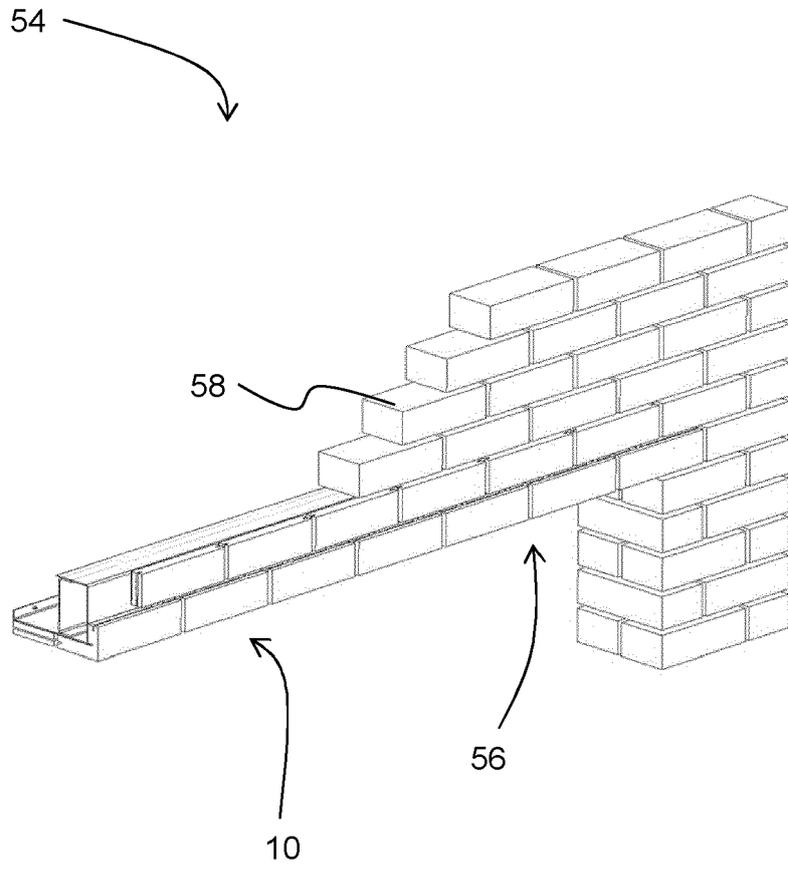


FIG. 7



EUROPEAN SEARCH REPORT

Application Number

EP 21 18 9929

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Y	* figures 1-4, 6, 8, 15 * * page 12, line 9 - line 27 * * page 14, line 10 - line 30 *	6-9, 11-13	
Y	EP 3 676 465 A1 (LEONARDO SRL [IT]) 8 July 2020 (2020-07-08) * figures 2-3 * * paragraph [0020] *	6, 7, 9	
Y	DE 20 2013 004626 U1 (ISOPAN S P A [IT]) 6 August 2013 (2013-08-06) * figures 9A-9C * * paragraph [0042] *	8	TECHNICAL FIELDS SEARCHED (IPC) E04F
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1 The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 3 December 2021	Examiner Estorgues, Marlène
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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The members are as contained in the European Patent Office EDP file on
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03-12-2021

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