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(54) **CLADDING SYSTEM WITH EXPRESSED JOINT**
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EP 2 373 854 B1

Description

TECHNICAL FIELD

5 [0001] The present invention relates to a cladding system, particularly of the kind including base sheets which are secured to an underlying structure such as a stud wall, with a thin finish coating being applied to the outer surface of the base sheets. In preferred forms the coating is a texture coating of a kind used to achieve a masonry look finish.

10 [0002] The invention has been developed primarily for use with base sheets made of fibre cement and will be described primarily with reference to this particular form. However, it will be appreciated that the cladding system of the invention is not limited to use with the fibre cement base sheets and could readily be adapted for use with base sheets made from other suitable materials.

BACKGROUND OF THE INVENTION

15 [0003] In response to trends for affordable "monolithic" look coated external wall styles, a number of coated wall cladding systems have been developed. The most popular of these systems all involve first applying planar base sheets or panels to fully clad the outer surfaces of a new or existing external wall or wall frame. After the cladding has been installed, it is then usually coated with a relatively high-build trowel-applied texture coating material which results in a monolithic solid textured stone like appearance

20 [0004] These systems have the advantage of providing the desired monolithic type masonry appearance at relatively low cost and with more design flexibility than an equivalent full masonry structure. However, the need to carefully set the joints between adjacent abutting base panels makes the installation of the base panels very time consuming. This results in unduly high labour costs compared to the component material costs and also slows the installation process. Furthermore, in order to adequately hide the set joints, a high build trowel applied texture coating needs to be used,

25 which can only be installed by highly trained, coating application specialists, again adding significantly to the overall system cost. In addition, if there is movement between the base sheets due to, for example, movement of the frame or poor installation, cracking of the coating may occur along the set joints and repairs are not practical without generally being noticeable.

30 [0005] DE20014309U1 discloses a cladding system and a method disclosing respectively the features of the preambles of claims 1 and 13. It is an object of the present invention to provide a coated or coatable cladding system that overcomes or ameliorates one or more of the above disadvantages of the prior art, or which at least provides a useful alternative

SUMMARY OF THE INVENTION

35 [0006] According to a first aspect of the invention, there is provided a panelised masonry look wall cladding system incorporating broad planar surfaces extending between vertical expressed joints, the wall cladding system including:

a plurality of broad rectangular base sheets secured in a side by side vertical orientation to an underlying structure; each of the base sheets having an inner surface and a planar generally smooth unfinished outer surface, each base sheet being profiled along at least one longitudinal edge to provide, on installation with an adjacent sheet, broad planar surfaces with an intermediate overlapping vertical ship lap expressed joint, a portion of the joint being clearly visible between the outer surfaces of the base sheets and including an interface line defined by an inner overlapping edge of one of the base sheets, the interface line thereby being set in from the outer surfaces of the base sheets; and a relatively low build brushable or rollable texture coating applied in situ to the exposed unfinished outer surfaces of the installed base sheets.

[0007] The term 'ship lap' joint is used herein to refer to any sheet jointing structure in which a rebate is formed below the outer surface of an edge of one sheet such that an overhang is formed which is adapted to sit on or over a similar or dissimilar rebate formed in the outer surface of an edge of an adjacent joining sheet, whereby there is an overlap region and the outer surfaces of the joined sheets remain in substantially the same plane. The term 'expressed' is used to refer to a joint finish and structure which is intended to be a clearly visible feature, as opposed to a minimal or incidental joint line.

[0008] It will be appreciated that the overlap provided by the ship lap joint, in conjunction with the expressed sizing of the joint with recessed interface line, obviates the need for joint setting as was required with the prior art. The visible portion of the joint defines a channel formation between the outer surfaces of adjacent base sheets, the channel having an outer width between the outer surfaces, and an inner width at a depth set in from the outer surfaces. Preferably, the interface line is set in at the maximum depth of the channel.

[0009] Preferably, the profiled edges of the base sheets include some form of straight or curved chamfer along the

edges immediately adjacent the outer surface of the base sheets such that the outer width of the channel is wider than the inner width of the channel. In some preferred forms the channel has a generally 'V' shaped or truncated 'V' shaped section. Desirably, some or all of the internal corners and edges are curved or chamfered. The outer width is from about 3 mm to about 9 mm. The inner width is from about 3 mm to about 9 mm, with the inner width, desirably, being less than the outer width. The maximum depth of the channel is up to about 6 mm. Preferably, the maximum depth of the channel is from about 3 mm to 4.5 mm.

[0010] In one particularly preferred form, the sheets are approximately 8.5mm thick and the channel is of a generally truncated 'V' shaped section having an outer width of approximately 7mm, a depth of around 4mm and an inner width of about 3mm.

[0011] There is also an overlap region of approximately 4 to 5 mm. It will be appreciated that this could be varied. For example, in order to increase weatherproofing capacity, it may be useful to increase the overlap region.

[0012] In preferred forms the base sheets are pre-coated with an appropriate sealer or primer to enable texture coating to commence in accordance with the manufacturer's recommendations. The cladding system is a texture coated cladding system. The method of the invention comprises using a relatively low build brushable or rollable coating for application to the outer surfaces of the installed base sheets.

[0013] Preferably, the relatively low-build brushable or rollable texture coating is a roll-on coating for application by a paint roller. Preferably, the relatively low-build brushable or rollable texture coating has a thickness of up to about 300 microns when applied.

[0014] Preferably, the system includes a back sealing tape adapted to span across the inner edge surfaces of adjacent base sheets. Preferably, the system also includes a sealant for application between the overlapping rebated surfaces of the ship lap joints between adjoining base sheets.

[0015] Preferably, each base sheet is profiled on a longitudinal edge. More preferably, each base sheet is profiled on two opposing longitudinal edges. Preferably, the longitudinal edges are installed vertically when used in walling applications.

[0016] According to a second aspect of the invention, there is provided a method of installing a panelised masonry look wall cladding system, the method including the steps of:

providing a plurality of broad rectangular base sheets, each of the base sheets having an inner surface and a planar generally smooth outer surface, each base sheet being profiled along at least one edge such that on installation with an adjacent sheet, an overlapping vertical ship lap expressed joint is formed, a portion of the joint being clearly visible between the outer surfaces of the base sheets and including an interface line defined by an inner overlapping edge of one of the base sheets which is thereby set in from the outer surfaces of the base sheets;
 securing the base sheets to an underlying structure in a side by side vertical orientation so as to form at least one vertical ship lap expressed joint as described above; and
 applying in situ a relatively low-build brushable or rollable texture coating to the exposed unfinished outer surfaces of the installed base sheets.

The base sheets are secured such that the visible portion of the joint defines a channel between the outer surfaces of adjacent base sheets, the channel having an outer width between the outer surfaces, and an inner width at a depth set in from the outer surfaces. The base sheets are secured such that the interface line is set in at the maximum depth of the channel.

[0017] Preferably, where the profiled edges of the base sheets include some form of straight or curved chamfer along the edges immediately adjacent the outer surface of the base sheets, the base sheets are secured such that the outer width of the channel is wider than the inner width of the channel. The outer width is from about 3 mm to about 9 mm. The inner width is from about 3 mm to about 9 mm, with the inner width, desirably, being less than the outer width. The base sheets are secured such that the maximum depth of the channel is up to about 6 mm. Preferably, the maximum depth of the channel is from about 3 mm to 4.5 mm.

[0018] In one particularly preferred form, the sheets are approximately 8.5mm thick and the channel is of a generally truncated 'V' shaped section having an outer width of approximately 7mm, a depth of around 4mm and an inner width of about 3mm.

[0019] There is also an overlap region of approximately 4 to 5 mm. It will be appreciated that this could be varied. For example, in order to increase weatherproofing capacity, it may be useful to increase the overlap region.

[0020] In preferred forms the base sheets are pre-coated with an appropriate sealer or primer to better enable texture coating to commence in accordance with the manufacturer's recommendations.

[0021] In one example, the step of applying the relatively low-build brushable or rollable texture coating is carried out by rolling on the coating with a paint roller. Preferably, the relatively low-build brushable or rollable texture coating is applied in two coats. Preferably, the relatively low-build brushable or rollable texture coating is applied to a thickness of up to about 300 microns. In all cases, however, the coating must be applied strictly in accordance with the manufacturer's

directions.

[0022] Preferably, the method includes applying a back sealing tape between the underlying structure and the base sheets such that the back sealing tape spans across the inner edge surfaces of adjacent base sheets. Desirably, the method includes applying a sealant between the overlapping rebated surfaces of the ship lap joints between adjoining base sheets.

[0023] Preferably, in walling applications, the base sheets are secured such that the longitudinal edges of the base sheets run vertically.

BRIEF DESCRIPTION OF THE DRAWINGS

[0024] Preferred embodiments of the invention will now be described, by way of example only, with reference to the accompanying drawings in which:

Figure 1 is a front elevation of a texture coated cladding system in accordance with a preferred embodiment of the present invention, with a base sheet shown cut away to reveal the underlying timber stud wall structure;

Figure 2 is a cross-sectional view of the texture coated cladding system of Figure 1 taken along section line A-A in Figure 1;

Figure 3 is a cross-sectional view of a texture coated cladding system according to another preferred embodiment of the invention, wherein the underlying structure is a steel frame;

Figure 4a is a side elevation of two base sheets in an installed configuration, in accordance with a first preferred embodiment of the present invention;

Figure 4b is a magnified fragmentary side elevation of the ship lap joint between the two base sheets shown in Figure 4a;

Figure 5 is a side elevation of two base sheets in an installed configuration, in accordance with a second preferred embodiment of the present invention;

Figure 6 is a side elevation of two base sheets in an installed configuration, in accordance with a third preferred embodiment of the present invention;

Figure 7a is a perspective fragmentary view of a texture coated cladding system according to the present invention, showing a back sealing tape being applied over a vapour permeable membrane;

Figure 7b is a perspective fragmentary view of the texture coated cladding system of Figure 7a, showing the back sealing tape applied over the vapour permeable membrane and between base sheets and an underlying structure, and showing a sealant being applied to the rebated surface of one of the base sheets in preparation for the installation of a second base sheet; and

Figure 7c is a perspective fragmentary view of the texture coated cladding system of Figure 7a, showing the installation of the second base sheet.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0025] Referring to the drawings, each of the texture coated cladding systems shown include a plurality of base sheets 1 for securing to an underlying structure 2. In the embodiments shown in Figures 2 and 3, the underlying structures are a timber stud wall frame and a steel wall frame respectively. However, the underlying structures are not limited to these, and in other embodiments can be, for example, an existing wall structure with support battens, or a floor frame.

[0026] Each of the base sheets 1 have an inner surface 3 and a planar generally smooth outer surface 4, with each base sheet being profiled along at least one edge 5 to provide, on installation, a ship lap expressed joint 6 with an adjacent sheet. A portion 7 of the joint is clearly visible between the outer surfaces 4 of the base sheets and includes an interface line 8 defined by an inner overlapping edge 9 of one of the base sheets, the interface line thereby being set in from the outer surfaces of the base sheets.

[0027] In the present embodiments, each base sheet is profiled on two opposing longitudinal edges 5, with the longitudinal edges preferably being installed vertically to assist drainage along the joint, as best shown in Figure 1. In other embodiments, some base sheets may be profiled on only one edge, which suits situations where the sheets are installed at the edges of the underlying structure and are not required to join to other sheets in a direction beyond the edges of the underlying structure. In other embodiments, the base sheets may be profiled on more than two edges in installations, for example, where horizontal joints as well as vertical joints are desired. The longitudinal edges of the base sheets may also be installed horizontally.

[0028] In the preferred forms, the base sheets are pre-coated prior to installation with a suitable sealer or primer ready to receive a finish coating or coatings in accordance with the coating manufacturer's recommendations. If that is not the case, it may be necessary to seal or prime the sheets in situ. Choice of sealer will depend on the base sheet material - the type of texture coating to be applied and the coating manufacturer's requirements.

[0029] The texture coated cladding systems shown also include a relatively low-build brushable or rollable texture coating 10 for application to the outer surfaces 4 of the installed base sheets 1. Advantageously, these coatings include roll-on texture coatings that are readily available to end consumers and do not require the skills of specialist tradespeople to apply. The present embodiments include a coating of this type for application by a paint roller, which when applied has a preferred thickness of up to about 300 microns. Examples of suitable brushable or rollable texture coatings suitable for this application include Dulux® Fine Texture, Watty Granotex® Roll On, and Taubmans™ Armawall Ultrasand. In all cases, it is important that the coatings be applied strictly in accordance with the coating manufacturer's instructions.

[0030] As best shown in Figure 4b, the visible portion 6 of the joint defines a channel 11 between the outer surfaces 4 of adjacent base sheets 1, the channel having an outer width 12 between the outer surfaces, and an inner width 13 at a depth set in from the outer surfaces. The interface line is set in at the maximum depth 14 of the channel.

[0031] The profiled edges 5 of the base sheets 1 include some form of straight or curved chamfer along the edges 15 immediately adjacent the outer surface 4 of the base sheets 1 such that the outer width 12 of the channel is wider than the inner width 13 of the channel. The inner overlapping edge 9 of the one base sheet and the inside corner 16 of the rebate of the other base sheet are also curved. In the present embodiments, the various dimensions of these features are as follows:

Table 1. Approximate channel dimensions in preferred embodiments

Embodiment	Outer width	Inner width	Maximum depth
Figure 4	7.0 mm	3.0 mm	4.0 mm
Figure 5	14.0 mm	8.0 mm	4.3 mm
Figure 6	4.4 mm	1.0 mm	4.1 mm

[0032] In preferred embodiments, the outer width is up to about 15 mm. Preferably, the outer width is from about 3 mm to about 9 mm. It is preferred that the inner width is up to about 10 mm. Preferably, the inner width is from about 3 mm to about 9 mm, with the inner width, desirably, being less than the outer width. Further, it is preferred that the maximum depth of the channel is up to about 6 mm. Preferably, the maximum depth of the channel is from about 3 mm to 4.5 mm. It will be appreciated, however, that a variety of dimensions and combinations of dimensions can be achieved depending on the desired appearance of the installed system.

[0033] The presently preferred embodiment is that shown in Figure 4, preferably made from fibre cement, having a sheet thickness of around 8.5mm (although this could vary), the channel having an outer width of approximately 7mm, a depth of around 4mm and an inner width of about 3mm. Preferably all internal corners and edges are slightly curved as shown. There is also an overlap region of approximately 4 to 5 mm. It will be appreciated that this could be varied. For example, in order to increase weatherproofing capacity, it may be useful to increase the overlap region.

[0034] The base sheets can be made of any suitable material such as, but not limited to, fibre cement, oriented strandboard, engineered wood, plywood, and masonite. In preferred forms, the base sheets are made of a nailable cellulose fibre reinforced cement such as or similar to the products Hardiflex™, HardiTex®, Axon™, Matrix™, and Comtex®, as sold by the applicant. The currently preferred base sheet is a medium density fibre cement board designed for an exterior cladding application.

[0035] In preferred forms the base sheets are pre-coated with an appropriate sealant or primer ready to receive a finish coating or coatings in accordance with the manufacturer's instructions. For fibre cement sheets of the preferred kind mentioned above an acrylic sealer is suitable.

[0036] The preferred fibre cement sheets have the edges formed during manufacture by continuous milling, cutting, machining, pressing, extrusion, embossing, or any other suitable processes. The simple rebated profiles contemplated by the present invention are well suited to continuous manufacturing processes, especially where longitudinal edges are profiled. Hence, base sheets with these profiled edges can be manufactured relatively easily and cost effectively. The presently preferred method of forming the edges is cutting.

[0037] As best shown in Figures 7a to 7c, the texture coated cladding systems of the present embodiments include a back sealing tape 17 adapted to span across the edges of the inner surfaces 3 of adjacent base sheets 1. The back sealing tape is a 50 mm EPDM foam tape fixed between the studs 18 of the underlying timber frame structure and the ship lap joints 6 that coincide with the studs. The systems also include a sealant 19 for application between the overlapping rebated surfaces 20 of the ship lap joints 6 between adjoining base sheets 1. The sealant in these embodiments is preferably a continuous 3 mm diameter bead of fluid joint sealant that sets to form a seal between the rebated surfaces 20.

[0038] The present embodiments also include a vapour permeable membrane 21 between the base sheets 1 and the underlying structure 2, as best shown in Figures 7a to 7c. In embodiments such as these, where a back sealing tape 17 is included, the vapour permeable membrane is between the underlying structure 2 and the back sealing tape 17.

The vapour permeable membrane is pliable and serves to prevent moisture ingress, by acting as a drainage plane, whilst allowing water vapour build up from the underlying structure to escape.

[0039] The present invention also provides a method of installing texture coated cladding. A preferred embodiment of the method involves installing the texture coated cladding systems described above.

5 **[0040]** This preferred method includes the steps of: providing the plurality of base sheets 1 described above; securing the base sheets 1 to the underlying structure 2 such that each or at least one base sheet forms a ship lap joint 6 with an adjoining sheet, whereby, on installation, the portion 7 of the joint is visible between the outer surfaces 4 of the base sheets and includes the interface line 8 defined by the inner overlapping edge 9 of one of the base sheets, the interface line thereby being set in from the outer surfaces of the base sheets; and then applying the relatively low-build brushable or rollable texture coating 10 to the outer surfaces 4 of the installed base sheets 1.

10 **[0041]** The base sheets 1 are secured such that the visible portion 7 of the joint 6 defines the channel 11 between the outer surfaces 4 of adjacent base sheets, the channel having the outer width 12 between the outer surfaces, and the inner width 13 at a depth set in from the outer surfaces. The base sheets are also secured such that the interface line 8 is set in at the maximum depth 14 of the channel. Further, the base sheets 1 are configured and secured whereby the outer width 12 of the channel is wider than the inner width 13 of the channel.

15 **[0042]** Furthermore, the base sheets 1 are preferably secured such that the longitudinal edges 5 of the base sheets run vertically. In other embodiments, the base sheets are secured whereby the longitudinal edges run horizontally, or any other orientation depending on the requirements of the installation. For example, the base sheets may be installed with edges running at oblique angles, especially where the sheets meet wall penetrations such as windows, or terminations such as rooflines.

20 **[0043]** In all cases, it will be important to also ensure that installation complies with locally applicable building codes and regulations which may dictate certain spacings from ground surfaces and eaves and/or frame fixing requirements etc.

25 **[0044]** In the present embodiments, the base sheets are configured and secured to achieve the dimensions detailed in Table 1 above. In other preferred embodiments, the base sheets are secured to achieve the preferred dimensions described above. In most cases the configuration of the ship lap expressed joint is such that adjacent sheets can be fixed with the edge most surfaces in a generally abutting relationship.

30 **[0045]** The step in preferred form of the invention of applying the relatively low-build brushable or rollable texture coating 10 is preferably carried out by rolling on the coating with a paint roller. The relatively low-build brushable or rollable texture coating must be applied in accordance with the coating manufacturer's recommendations. In one form, the coating may be applied in two coats to a thickness of about 300 microns, but may also be applied in any number of coats to a variety of recommendations of the coating manufacturer. If appropriately pre-sealed or primed base sheets are used, then, subject to the coating manufacturer's requirements, no other under coating may be required before the texture coating is applied.

35 **[0046]** Rolling on or brush applying low-build texture coatings that are readily available to end consumers has the particular advantage of dispensing with the need for specialist relatively high-build trowel-applied texture coatings that require specialist tradespeople to install.

[0047] It will also be appreciated that the cladding structure also enables a wider range of coatings to be applied, which of course do not need to be textured.

40 **[0048]** The present embodiment of the method includes the step of applying the back sealing tape 17 between the underlying structure 2 and the base sheets 1 such that the back sealing tape spans across the inner edge surfaces 3 of adjacent base sheets. The present embodiment also includes the step of applying the sealant 19 between the overlapping rebated surfaces 20 of the ship lap joints 6 between adjoining base sheets 1, as best shown in Figure 7b.

[0049] The present embodiment also includes the step of installing the vapour permeable membrane 21 to the underlying structure 2 before installing the back sealing tape 17, and then installing the base sheets 1 over the back sealing tape.

45 **[0050]** In one preferred form, the vapour permeable membrane 21 is fixed to the underlying structure 2 first, by means such as nailing, stapling, or gluing. The back sealing tape 17 is then positioned over the vapour permeable membrane 21 along the studs 18. The sealing tape 17 can be glued into place or can have an adhesive coating on the back surface that adheres the sealing tape to the vapour permeable membrane 21, as shown in Figure 7a. The next step is to secure the base sheets 1 to the underlying structure 1.

50 **[0051]** At the studs 18, the base sheets 1 are positioned such that suitable fasteners 22, such as galvanised fibre cement nails, stainless steel brad nails, or screws, can be driven through the base sheets inboard of the profiled edges 5, through the back sealing tape 17 and into the stud 18 to secure the base sheets to the underlying structure 2. The fasteners 22 are driven through until the fastener heads are flush with the outer surfaces 4 of the sheets. Thus, the fasteners 22 pass through the full thickness of the base sheets, and not through the reduced thickness rebated edge 5.

55 **[0052]** As shown in Figure 7b, a bead of the fluid joint sealant 19 is then applied to the outwardly facing rebated surfaces 20 of the profiled edges 5 of the base sheets already secured onto the stud 18. Next, further base sheets 1 are positioned onto the underlying structure 2 such that the inwardly facing rebated surface 20 of the profiled edges 5 of the further base sheets sit over the outwardly facing rebated surface 20 of the base sheets already secured onto the

stud 18, with the edge most surfaces of each sheet in, or close to, abutment with each other. Thus, the sealant 19 is sandwiched between the rebated surfaces 20 of the adjoining sheets, sealing the ship lap joint 6 formed between the sheets.

[0053] The newly positioned base sheets 1 are then secured to the underlying structure 2 by means of fasteners 22 driven through the sheets at positions inboard of the profiled edges 5, through the back sealing tape 17, and into the stud 18, until the fastener heads are flush with the outer surfaces 4 of the sheets, similar to the previously secured base sheets, and as shown in Figure 7c. Excess sealant 19 is then wiped away from the visible portions 7 of the ship lap joints 6. The relatively low-build brushable or rollable texture coating 10 is then applied as described above.

[0054] The described embodiments exemplify the various advantages of the present invention. Having a portion of the joints between base sheets that are deliberately designed to be clearly visible, and in particular, having a recessed interface line between the sheets, eliminates or ameliorates the prior art problems of needing to hide joints effectively prior to coating, at the same time enabling a wider range of coating types to be used.

[0055] The configuration of the ship lap joints contemplated by the present invention, and in particular, the configuration of the rebates in the profiled longitudinal edges, are well suited to large scale continuous manufacturing processes. This results in cost-effective manufacture of the base sheets, decreasing the material costs. Relatively low-build brushable or rollable texture coatings are readily available to end consumers. These are typically rolled-on in a convention manner dispensing with the need for specialist tradespeople applying specialist relatively high-build trowel-applied texture coatings. This results in significantly decreased installation costs and time, particularly decreased specialist labour costs and further savings in material costs.

[0056] Finally, it will be appreciated that further variations are possible without departing from the scope of the invention as described in the claims.

Claims

1. A panelised masonry look wall cladding system incorporating broad planar surfaces extending between vertical expressed joints, the wall cladding system comprising:

a plurality of broad rectangular base sheets (1) secured in a side by side vertical orientation to an underlying structure; each of the base sheets (1) having an inner surface (3) and a planar generally smooth unfinished outer surface (4), each base sheet being profiled along at least one longitudinal edge (5) to provide, on installation with an adjacent sheet, broad planar surfaces with an intermediate overlapping vertical ship lap expressed joint (6), a portion (7) of the joint (6) being clearly visible between the outer surfaces (4) of the base sheets, including an interface line (8) defined by an inner overlapping edge (9) of one of the base sheets, the interface line (8) thereby being set in from the outer surfaces (4) of the base sheets,

wherein the visible portion (7) of the expressed joint is defined by a channel formation between the outer surfaces of adjacent base sheets, the channel (11) having an outer width (12) between the outer surfaces, and an inner width (13) at a depth set in from the outer surfaces,

characterised in that

the outer width (12) is from 3mm to 9mm, the inner width (13) is from 3mm to 9mm and wherein the maximum depth of the channel (14) is no more than 6mm and wherein the interface line (8) is set in at the maximum depth of the channel (14); and

a relatively low build brushable or rollable texture coating applied in situ to the exposed unfinished outer surfaces (4) of the installed base sheets(1).

2. A cladding system according to Claim 1, wherein the profiled edges of the base sheets includes some form of straight or curved chamfer along the edges immediately adjacent the outer surface of the base sheets, such that the outer width of the channel is wider than the inner width of the channel.

3. A cladding system according to Claim 2, wherein the channel has a generally 'V' shaped or truncated 'V' shaped section.

4. A cladding system according to Claim 1, wherein the outer width is approximately 7mm.

5. A cladding system according to Claim 1, wherein the inner width is about 3mm.

6. A cladding system according to Claim 1, wherein the maximum depth of the channel is from about 3mm to 4.5mm.

EP 2 373 854 B1

7. A cladding system according to any one of the preceding claims wherein some or all of the internal corners and edges are curved or chamfered.
- 5 8. A cladding system according to any one of the preceding claims wherein the base sheets are pre-coated with an appropriate sealer.
9. A cladding system according to any one of the preceding claims wherein the relatively low-build brushable or rollable texture coating has a thickness of up to about 300 microns when applied.
- 10 10. A cladding system according to any one of the preceding claims including a back sealing tape adapted to span across the edges of the inner surfaces of adjacent base sheets across the joint.
11. A cladding system according to any one of the preceding claims wherein the system also includes a sealant for application between the overlapping surfaces of the ship lap joint between adjoining base sheets.
- 15 12. A cladding system according to any one of the preceding claims wherein each base sheet is profiled on two opposing longitudinal edges.
- 20 13. A method of installing a panelised masonry look wall cladding system, the method comprising the steps of:
providing a plurality of broad rectangular base sheets (1), each of the base sheets (1) having an inner surface (3) and a planar generally smooth outer surface (4), each base sheet (1) being profiled along at least one edge (5) such that on installation with an adjacent sheet (1), an overlapping vertical ship lap expressed joint (6) is formed, a portion of the joint (6) being clearly visible between the outer surfaces (4) of the base sheets (1) and including an interface line (8) defined by an inner overlapping edge (9) of one of the base sheets (1) which is thereby set in from the outer surfaces (4) of the base sheets;
25 providing a plurality of broad rectangular base sheets (1), each of the base sheets (1) having an inner surface (3) and a planar generally smooth outer surface (4), each base sheet (1) being profiled along at least one edge (5) such that on installation with an adjacent sheet (1), an overlapping vertical ship lap expressed joint (6) is formed, a portion of the joint (6) being clearly visible between the outer surfaces (4) of the base sheets (1) and including an interface line (8) defined by an inner overlapping edge (9) of one of the base sheets (1) which is thereby set in from the outer surfaces (4) of the base sheets;
securing the base sheets (1) to an underlying structure in a side by side vertical orientation so as to form at least one vertical ship lap expressed joint (6) as described above;
wherein the visible portion (7) of the expressed joint is defined by a channel formation between the outer surfaces (4) of adjacent base sheets (1), the channel (11) having an outer width (12) between the outer surfaces (4),
30 and an inner width (13) at a depth set in from the outer surfaces(4),
characterised in that
the outer width (12) is from 3mm to 9mm, the inner width (13) is from 3mm to 9mm and wherein the maximum depth of the channel (14) is no more than 6mm, and wherein the interface line (8) is set in at the maximum depth of the channel (14); and
35 applying in situ a relatively low-build brushable or rollable texture coating to the exposed unfinished outer surfaces (4) of the installed base sheets (1).
- 40 14. A method of installing a cladding system according to Claim 13, wherein the base sheets are secured such that the visible portion of the joint defines a channel between the outer surfaces of adjacent base sheets, the channel having an outer width between the outer surfaces, and an inner width at a depth set in from the outer surfaces.
15. A method of installing a cladding system according to Claim 14, wherein the base sheets are secured such that the interface line is set in at the maximum depth of the channel.
- 45 16. A method of installing a cladding system according to Claim 14 or Claim 15, wherein the sheets are configured and selected such that on installation, the cladding system defines a joint including a channel having the features of any one of Claim 1, Claim 4, Claim 5 or Claim 6.
- 50 17. A method of installing a cladding system according to any one of Claims 13 to Claim 16, wherein the method includes the step of applying a back sealing tape between the underlying structure and the base sheets, such that the back sealing tape spans across the inner edge surfaces of adjacent base sheets.
18. A method of installing a cladding system according to any one of Claims 13 to Claim 17, wherein the method includes the step of applying a sealant between the overlapping surfaces of the ship lap joints between adjoining base sheets.
- 55 19. A method of installing a cladding system according to any one of Claims 13 to Claim 18 wherein the relatively low-build brushable or rollable texture coating is applied in two coats.

20. A method of installing a cladding system according to any one of Claims 13 to Claim 19, wherein the relatively low-build brushable or rollable texture coating is applied to a thickness of up to about 300 microns.
21. A cladding system according to any one of Claims 1 to 12 wherein the base sheets are made from fibre cement.
22. A method of installing a cladding system according to any one of Claims 13 to 20 wherein the base sheets are made from fibre cement.

Patentansprüche

1. Platten-Wandverkleidungssystem mit Mauerwerk-Optik, welches breite, ebene Flächen enthält, die sich zwischen vertikalen, markierten Fugen erstrecken, wobei das Wandverkleidungssystem aufweist:

eine Vielzahl von breiten, rechteckigen Grundplatten (1), welche in einer vertikalen, nebeneinander liegenden Anordnung an einer unterliegenden Struktur befestigt sind, wobei jede der Grundplatten (1) eine innere Fläche (3) und eine ebene, im Allgemeinen glatte, unbearbeitete äußere Fläche (4) aufweist, wobei jede Grundplatte entlang mindestens einer longitudinalen Kante (5) profiliert ist, um bei Montage mit einer benachbarten Platte breite, ebene Flächen mit einer dazwischenliegenden, überlappenden, vertikalen durch Stülpchalung markierte Fuge (6) bereitzustellen,

wobei ein Abschnitt (7) der Fuge (6) zwischen den äußeren Flächen (4) der Grundplatten deutlich sichtbar ist, welcher eine von einer inneren überlappenden Kante (9) von einer der Grundplatten definierte Grenzlinie (8) umfasst, wobei die Grenzlinie (8) dadurch von den äußeren Flächen (4) der Grundplatten nach innen versetzt ist, wobei der sichtbare Abschnitt (7) der markierten Fuge von einer Kanalbildung zwischen den äußeren Flächen von benachbarten Grundplatten definiert wird, wobei der Kanal (11) eine äußere Breite (12) zwischen den äußeren Flächen und eine innere Breite (13) in einer Tiefe,

welche von den äußeren Flächen nach innen versetzt ist, aufweist,

dadurch gekennzeichnet, dass

die äußere Breite (12) 3mm bis 9mm beträgt, die innere Breite (13) 3mm bis 9mm beträgt und wobei die maximale Tiefe des Kanals (14) nicht mehr als 6mm beträgt, und wobei die Grenzlinie (8) in der maximalen Tiefe des Kanals (14) nach innen versetzt ist; und

eine streichbare oder rollbare Strukturbeschichtung von relativ niedriger Bauart an Ort und Stelle auf die exponierten, unbearbeiteten, äußeren Flächen (4) der montierten Grundplatten (1) aufgebracht wird.

2. Verkleidungssystem nach Anspruch 1, wobei die profilierten Kanten der Grundplatten irgendeine Form von gerader oder gekrümmter Abschrägung entlang der direkt an die äußere Fläche angrenzenden Kanten der Grundplatten umfassen, so dass die äußere Breite des Kanals breiter als die innere Breite des Kanals ist.
3. Verkleidungssystem nach Anspruch 2, wobei der Kanal einen allgemein V-förmigen oder kegelstumpfförmigen Querschnitt aufweist.
4. Verkleidungssystem nach Anspruch 1, wobei die äußere Breite ungefähr 7mm beträgt.
5. Verkleidungssystem nach Anspruch 1, wobei die innere Breite ungefähr 3mm beträgt.
6. Verkleidungssystem nach Anspruch 1, wobei die maximale Tiefe des Kanals ungefähr 3mm bis 4,5mm beträgt.
7. Verkleidungssystem nach einem der vorhergehenden Ansprüche, wobei einige oder sämtliche interne Ecken und Kanten abgerundet oder abgeschrägt sind.
8. Verkleidungssystem nach einem der vorhergehenden Ansprüche, wobei die Grundplatten mit einem geeigneten Dichtungsmittel vorbeschichtet sind.
9. Verkleidungssystem nach einem der vorhergehenden Ansprüche, wobei die streichbare oder rollbare Strukturbeschichtung von relativ niedriger Bauart eine Dicke von bis zu ungefähr 300 Mikrometer aufweist, wenn sie aufgebracht ist.
10. Verkleidungssystem nach einem der vorhergehenden Ansprüche, umfassend ein rückseitiges Dichtband, welches

angepasst ist, um sich über die Kanten der inneren Flächen von benachbarten Grundplatten quer über die Fuge zu erstrecken.

- 5 11. Verkleidungssystem nach einem der vorhergehenden Ansprüche, wobei das System auch ein Dichtungsmittel zur Aufbringung zwischen den überlappenden Flächen der Stülpschalungsfuge zwischen benachbarten Grundplatten umfasst.
- 10 12. Verkleidungssystem nach einem der vorhergehenden Ansprüche, wobei jede Grundplatte an zwei gegenüberliegenden longitudinalen Kanten profiliert ist.
13. Verfahren zum Montieren eines Platten-Wandverkleidungssystems mit Mauerwerk-Optik, wobei das Verfahren die Schritte aufweist:
- 15 Bereitstellen einer Vielzahl von breiten, rechteckigen Grundplatten (1), wobei jede der Grundplatten (1) eine innere Fläche (3) und eine ebene, im Allgemeinen glatte, äußere Fläche (4) aufweist, wobei jede Grundplatte (1) entlang mindestens einer Kante (5) profiliert ist, so dass bei Montage mit einer benachbarten Platte (1) eine überlappende, vertikale durch Stülpschalung markierte Fuge (6) gebildet wird, wobei ein Abschnitt der Fuge (6) zwischen den äußeren Flächen (4) der Grundplatten (1) deutlich sichtbar ist und eine von einer inneren überlappenden Kante (9) von einer der Grundplatten (1) definierte Grenzlinie umfasst, welche dadurch von den
- 20 äußeren Flächen (4) der Grundplatten nach innen versetzt ist;
 Befestigen der Grundplatten (1) in einer vertikalen, nebeneinander liegenden Anordnung an einer unterliegenden Struktur, um mindestens eine, wie oben beschriebene, vertikale durch Stülpschalung markierte Fuge (6) zu bilden; wobei der sichtbare Abschnitt (7) der markierten Fuge von einer Kanalbildung zwischen den äußeren Flächen (4) von benachbarten Grundplatten (1) definiert wird, wobei der Kanal (11) eine äußere Breite (12) zwischen den äußeren Flächen (4) und eine innere Breite (13) in einer Tiefe, welche von den äußeren Flächen (4) nach innen versetzt ist, aufweist,
- 25 **dadurch gekennzeichnet, dass**
 die äußere Breite (12) 3mm bis 9mm beträgt, die innere Breite (13) 3mm bis 9mm beträgt und wobei die maximale Tiefe des Kanals (14) nicht mehr als 6mm beträgt, und wobei die Grenzlinie (8) in der maximalen Tiefe des Kanals (14) nach innen versetzt ist; und
- 30 Aufbringen einer streichbaren oder rollbaren Strukturbeschichtung von relativ niedriger Bauart an Ort und Stelle auf die exponierten, unbearbeiteten, äußeren Flächen (4) der montierten Grundplatten (1).
- 35 14. Verfahren zum Montieren eines Verkleidungssystems nach Anspruch 13, wobei die Grundplatten derartig befestigt sind, dass der sichtbare Abschnitt der Fuge einen Kanal zwischen den äußeren Flächen von benachbarten Grundplatten definiert, wobei der Kanal eine äußere Breite zwischen den äußeren Flächen aufweist und eine innere Breite in einer Tiefe, welche von den äußeren Flächen nach innen versetzt ist, aufweist.
- 40 15. Verfahren zum Montieren eines Verkleidungssystems nach Anspruch 14, wobei die Grundplatten derartig befestigt sind, dass die Grenzlinie in der maximalen Tiefe des Kanals nach innen versetzt ist.
- 45 16. Verfahren zum Montieren eines Verkleidungssystems nach Anspruch 14 oder Anspruch 15, wobei die Platten derartig ausgelegt und ausgewählt werden, dass bei Montage das Verkleidungssystem eine Fuge definiert, welche einen Kanal nach den Merkmalen von einem von Anspruch 1, Anspruch 4, Anspruch 5 oder Anspruch 6 umfasst.
- 50 17. Verfahren zum Montieren eines Verkleidungssystems nach einem der Ansprüche 13 bis 16, wobei das Verfahren den Schritt des Aufbringens eines rückseitigen Dichtbands zwischen der unterliegenden Struktur und den Grundplatten derartig umfasst, dass sich das rückseitige Dichtband über die inneren Kantenflächen von benachbarten Grundplatten erstreckt.
- 55 18. Verfahren zum Montieren eines Verkleidungssystems nach einem der Ansprüche 13 bis 17, wobei das Verfahren den Schritt des Aufbringens eines Dichtungsmittels zwischen den überlappenden Flächen der Stülpschalungsfugen zwischen benachbarten Grundplatten umfasst.
19. Verfahren zum Montieren eines Verkleidungssystems nach einem der Ansprüche 13 bis 18, wobei die streichbare oder rollbare Strukturbeschichtung von relativ niedriger Bauart in zwei Beschichtungen aufgebracht wird.
20. Verfahren zum Montieren eines Verkleidungssystems nach einem der Ansprüche 13 bis 19, wobei die streichbare

oder rollbare Strukturbeschichtung von relativ niedriger Bauart mit einer Dicke von bis zu ungefähr 300 Mikrometer aufgebracht wird.

21. Verkleidungssystem nach einem der Ansprüche 1 bis 12, wobei die Grundplatten aus Faserzement hergestellt sind.

22. Verfahren zum Montieren eines Verkleidungssystems nach einem der der Ansprüche 13 bis 20, wobei die Grundplatten aus Faserzement hergestellt sind.

Revendications

1. Système de parement mural sous forme de panneaux ayant un aspect de type maçonnerie, comprenant des surfaces planes larges qui s'étendent entre des joints marqués verticaux, le système de parement mural comprenant :

une pluralité de plaques de base larges rectangulaires (1) fixées dans une orientation verticale côte à côte à une structure sous-jacente ; chacune des plaques de base (1) comportant une surface intérieure (3) et une surface extérieure non finie plane, généralement lisse (4), chaque plaque de base étant profilée le long d'au moins un bord longitudinal (5) pour produire, lors de la pose avec une plaque adjacente, des surfaces planes larges avec un joint marqué à mi-bois vertical à chevauchement intermédiaire (6), une partie (7) du joint (6) étant clairement visible entre les surfaces extérieures (4) des plaques de base, avec une ligne d'interface (8) délimitée par un bord de chevauchement intérieur (9) d'une des plaques de base, la ligne d'interface (8) étant ainsi décalée vers l'intérieur par rapport aux surfaces extérieures (4) des plaques de base, dans lequel la partie visible (7) du joint marqué est délimitée par la formation d'un canal entre les surfaces extérieures de plaques de base adjacentes, le canal (11) ayant une largeur extérieure (12) entre les surfaces extérieures, et une largeur intérieure (13) à une profondeur décalée vers l'intérieur par rapport aux surfaces extérieures, **caractérisé en ce que** la largeur extérieure (12) est de 3 mm à 9 mm, la largeur intérieure (13) est de 3 mm à 9 mm, et dans lequel la profondeur maximum du canal (14) ne dépasse pas 6 mm, et dans lequel la ligne d'interface (8) est disposée à la profondeur maximum du canal (14) ; et un revêtement texture relativement peu épais, pouvant être appliqué au pinceau ou au rouleau, appliqué in situ sur les surfaces extérieures non finies exposées (4) des plaques de base posées (1) .

2. Système de parement selon la revendication 1, dans lequel les bords profilés des plaques de base comprennent une forme de chanfrein rectiligne ou incurvé le long des bords immédiatement adjacents à la surface extérieure des plaques de base, de telle sorte que la largeur extérieure du canal soit plus large que la largeur intérieure du canal.

3. Système de parement selon la revendication 2, dans lequel le canal a une section généralement en forme de V ou en forme de V tronqué.

4. Système de parement selon la revendication 1, dans lequel la largeur extérieure est d'environ 7 mm.

5. Système de parement selon la revendication 1, dans lequel la largeur intérieure est d'environ 3 mm.

6. Système de parement selon la revendication 1, dans lequel la profondeur maximum du canal est d'environ 3 mm à 4,5 mm.

7. Système de parement selon l'une quelconque des revendications précédentes, dans lequel certains ou la totalité des coins et des bords intérieurs sont courbes ou chanfreinés.

8. Système de parement selon l'une quelconque des revendications précédentes, dans lequel les plaques de base sont prérevêtues d'un produit d'étanchéité approprié.

9. Système de parement selon l'une quelconque des revendications précédentes, dans lequel le revêtement texture relativement peu épais, pouvant être appliqué au pinceau ou au rouleau, a une épaisseur de jusqu'à environ 300 microns lorsqu'il est appliqué.

10. Système de parement selon l'une quelconque des revendications précédentes, comprenant un ruban d'étanchéité postérieur conçu pour s'étendre à travers les bords des surfaces intérieures de plaques de base adjacentes à travers le joint.

EP 2 373 854 B1

11. Système de parement selon l'une quelconque des revendications précédentes, le système comprenant également un produit d'étanchéité destiné à une application entre les surfaces de chevauchement du joint à mi-bois entre des plaques de base adjacentes.
- 5 12. Système de parement selon l'une quelconque des revendications précédentes, dans lequel chaque plaque de base est profilée sur deux bords longitudinaux opposés.
- 10 13. Procédé de pose d'un système de parement mural sous forme de panneaux ayant un aspect de type maçonnerie, le procédé comprenant les étapes qui consistent à :
- fournir une pluralité de plaques de base larges rectangulaires (1), chacune des plaques de base (1) comportant une surface intérieure (3) et une surface extérieure plane, généralement lisse (4), chaque plaque de base (1) étant profilée le long d'au moins un bord (5) de telle sorte que, lors de la pose avec une plaque adjacente (1), un joint marqué à mi-bois vertical à chevauchement (6) soit formé, une partie du joint (6) étant clairement visible entre les surfaces extérieures (4) des plaques de base (1) et comprenant une ligne d'interface (8) délimitée par un bord de chevauchement intérieur (9) d'une des plaques de base (1), qui est ainsi décalée vers l'intérieur par rapport aux surfaces extérieures (4) des plaques de base ;
- 15 fixer les plaques de base (1) à une structure sous-jacente dans une orientation verticale côte à côte de façon à former au moins un joint (6) marqué à mi-bois vertical, tel que décrit ci-dessus ;
- 20 dans lequel la partie visible (7) du joint marqué est délimitée par la formation d'un canal entre les surfaces extérieures (4) de plaques de base adjacentes (1), le canal (11) ayant une largeur extérieure (12) entre les surfaces extérieures (4), et une largeur intérieure (13) à une profondeur décalée vers l'intérieur par rapport aux surfaces extérieures (4), **caractérisé en ce que** la largeur extérieure (12) est de 3 mm à 9 mm, la largeur intérieure (13) est de 3 mm à 9 mm et dans lequel la profondeur maximum du canal (14) ne dépasse pas 6 mm, et
- 25 dans lequel la ligne d'interface (8) est disposée à la profondeur maximum du canal (14) ; et
- appliquer in situ un revêtement texturé relativement peu épais, pouvant être appliqué au pinceau ou au rouleau, sur les surfaces extérieures non finies exposées (4) des plaques de base posées (1).
- 30 14. Procédé de pose d'un système de parement selon la revendication 13, dans lequel les plaques de base sont fixées de telle sorte que la partie visible du joint délimite un canal entre les surfaces extérieures de plaques de base adjacentes, le canal ayant une largeur extérieure entre les surfaces extérieures, et une largeur intérieure à une profondeur décalée vers l'intérieur par rapport aux surfaces extérieures.
- 35 15. Procédé de pose d'un système de parement selon la revendication 14, dans lequel les plaques de base sont fixées de telle sorte que la ligne d'interface soit disposée à la profondeur maximum du canal.
- 40 16. Procédé de pose d'un système de parement selon la revendication 14 ou la revendication 15, dans lequel les plaques sont configurées et sélectionnées de telle sorte que lors de la pose, le système de parement délimite un joint comprenant un canal ayant les caractéristiques selon l'une quelconque de la revendication 1, de la revendication 4, de la revendication 5 ou de la revendication 6.
- 45 17. Procédé de pose d'un système de parement selon l'une quelconque des revendications 13 à 16, le procédé comprenant l'étape qui consiste à appliquer un ruban d'étanchéité postérieur entre la structure sous-jacente et les plaques de base, de telle sorte que le ruban d'étanchéité postérieur s'étende à travers les surfaces des bords intérieurs de plaques de base adjacentes.
- 50 18. Procédé de pose d'un système de parement selon l'une quelconque des revendications 13 à 17, le procédé comprenant l'étape qui consiste à appliquer un produit d'étanchéité entre les surfaces de chevauchement des joints à mi-bois entre des plaques de base adjacentes.
- 55 19. Procédé de pose d'un système de parement selon l'une quelconque des revendications 13 à 18, dans lequel le revêtement texture relativement peu épais, pouvant être appliqué au pinceau ou au rouleau, est appliqué en deux couches.
20. Procédé de pose d'un système de parement selon l'une quelconque des revendications 13 à 19, dans lequel le revêtement texture relativement peu épais, pouvant être appliqué au pinceau ou au rouleau, est appliqué sur une épaisseur de jusqu'à environ 300 microns.

EP 2 373 854 B1

21. Système de parement selon l'une quelconque des revendications 1 à 12, dans lequel les plaques de base sont en fibrociment.
22. Procédé de pose d'un système de parement selon l'une quelconque des revendications 13 à 20, dans lequel les plaques de base sont en fibrociment.

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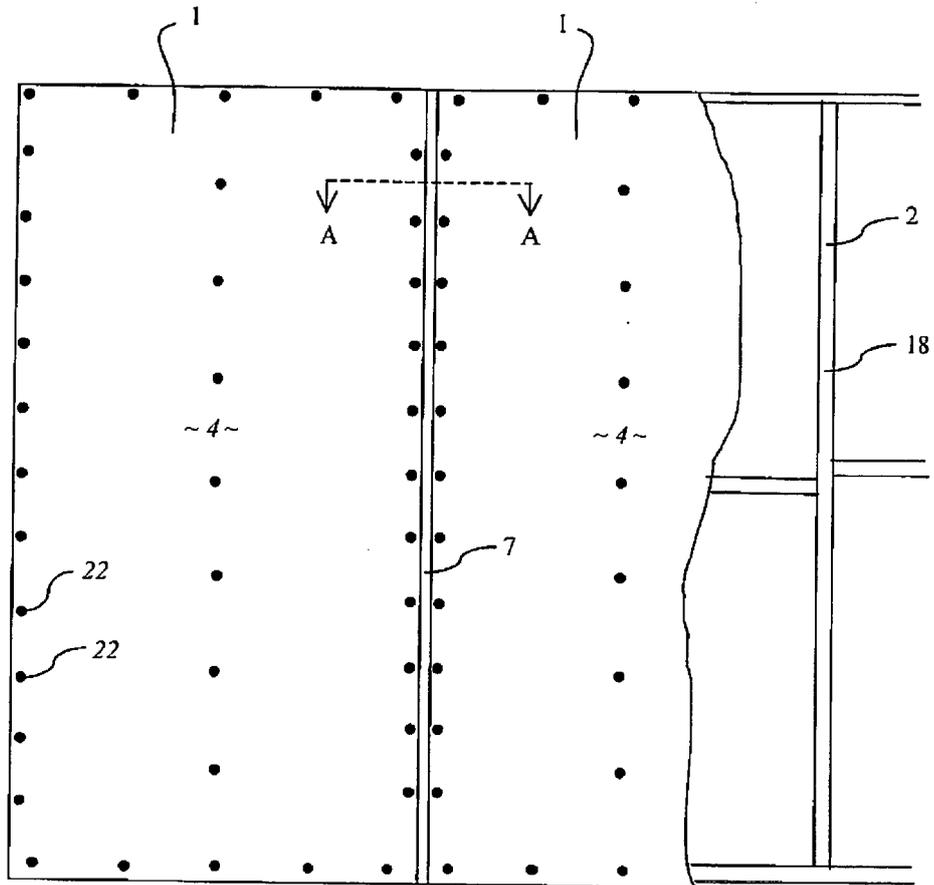


Fig. 1

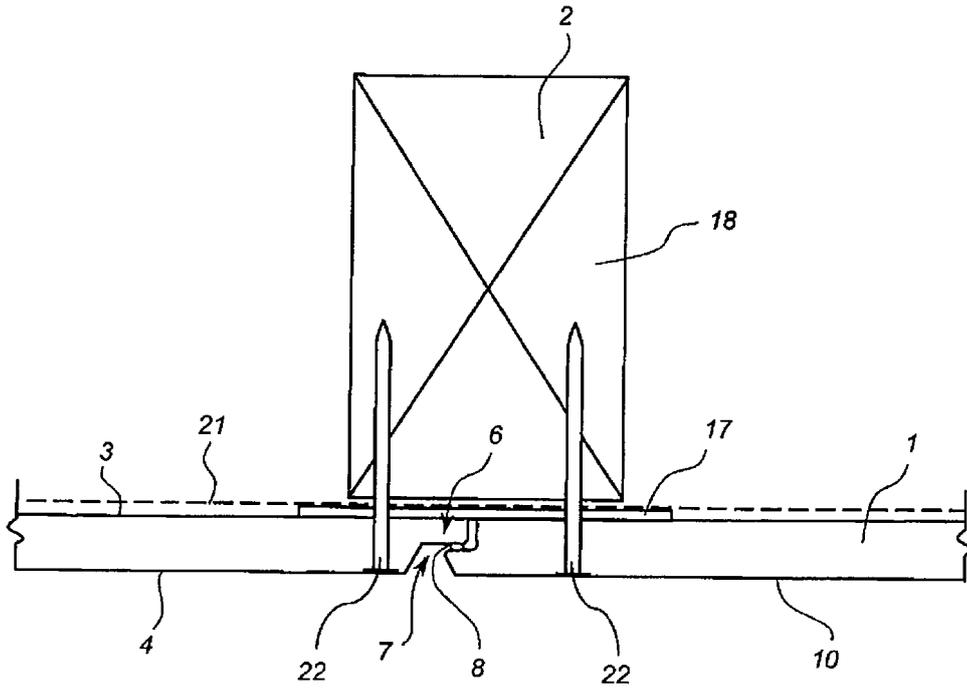


Fig. 2

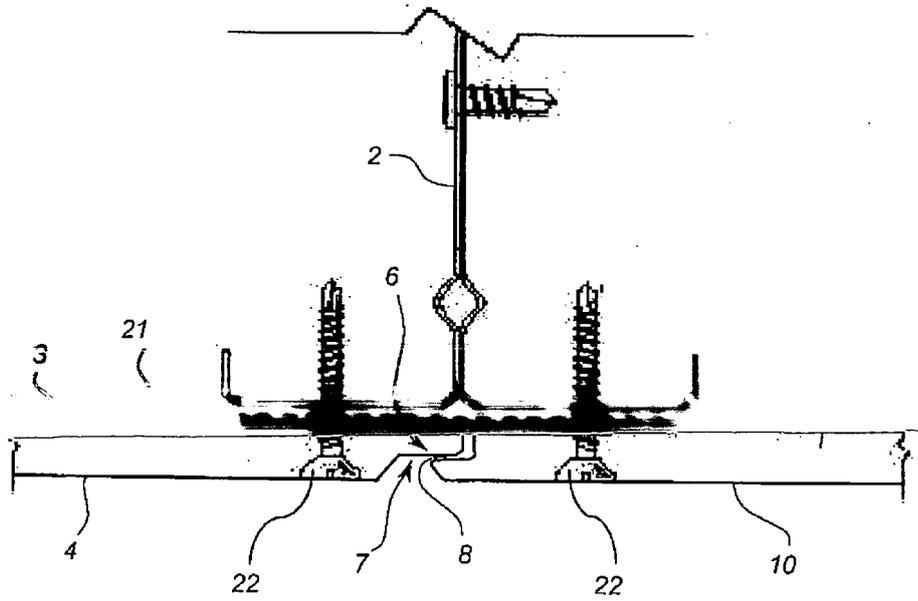


Fig. 3

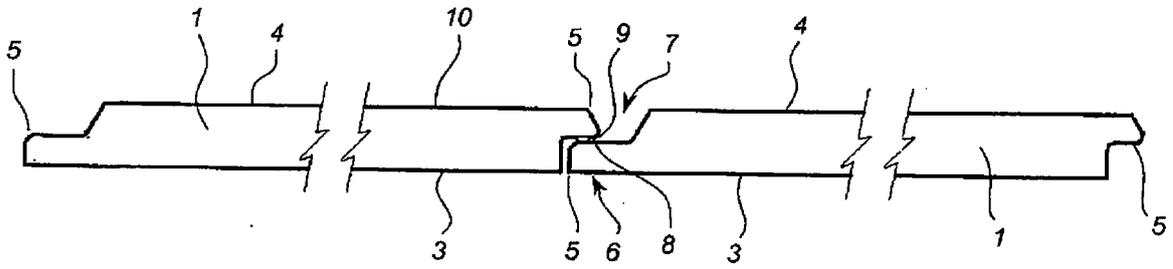


Fig. 4a

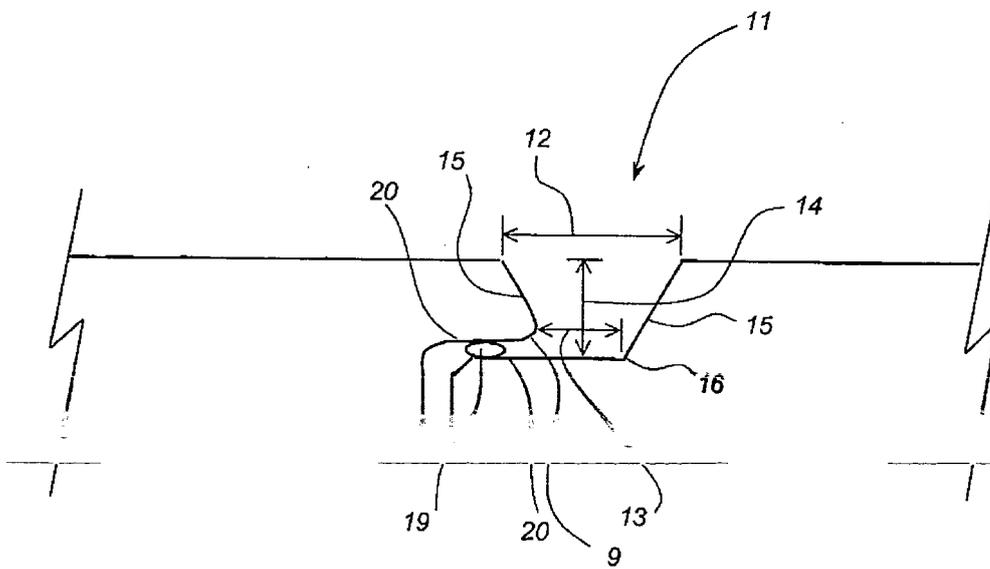


Fig. 4b

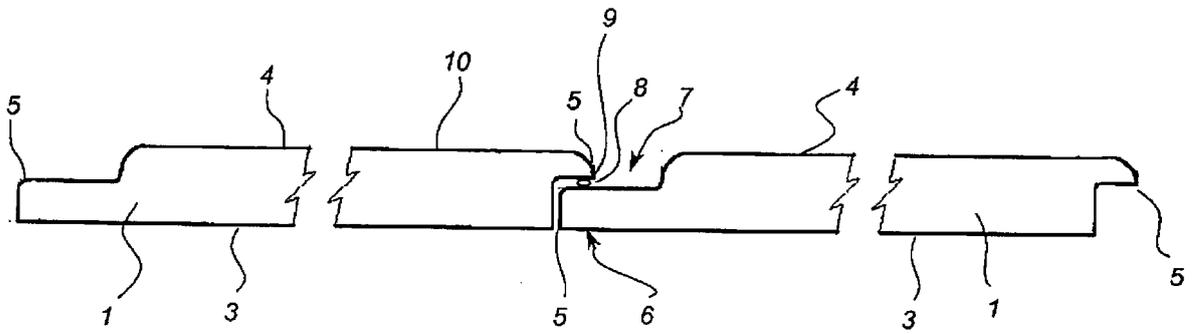


Fig. 5

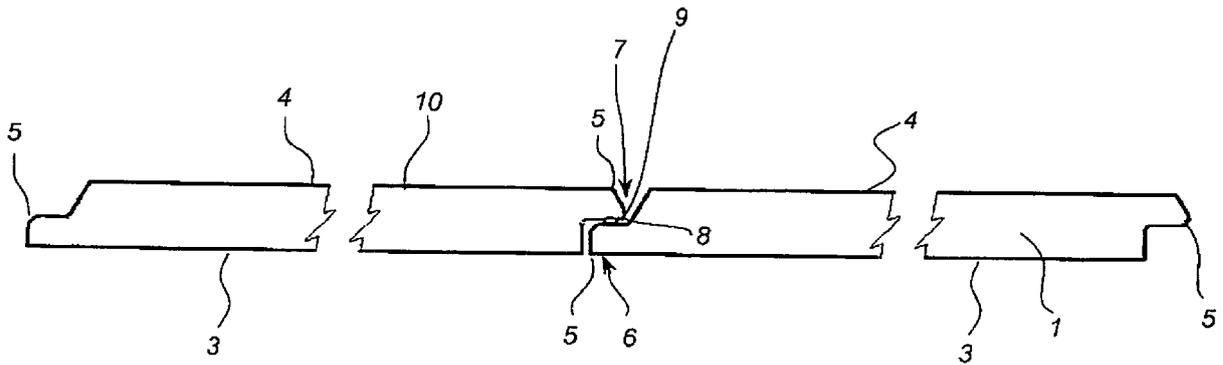


Fig. 6

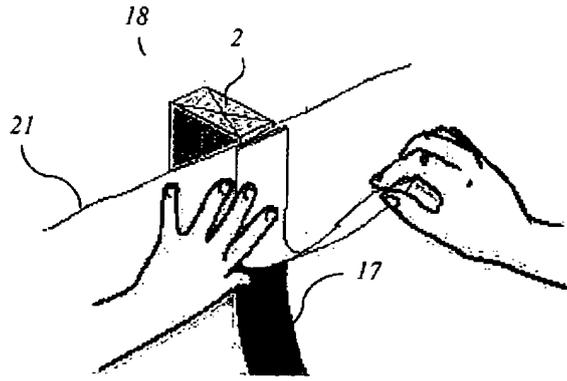


Fig. 7a

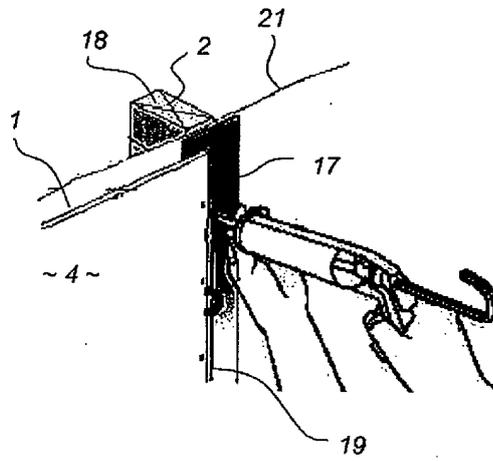


Fig. 7b

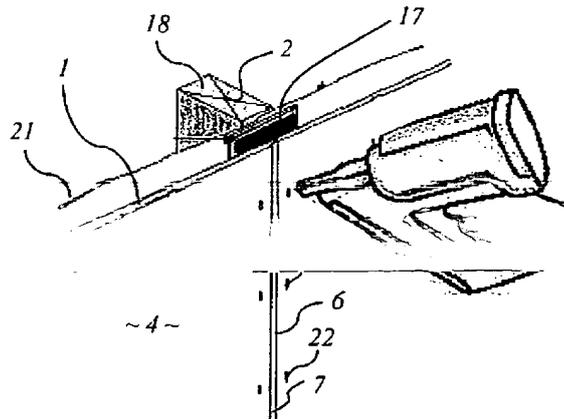


Fig. 7c

REFERENCES CITED IN THE DESCRIPTION

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