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Description

This invention relates to a cladding construction for a roof or wall comprising an outer cladding, inner cladding, thermal insulating material between the outer and inner cladding, a purlin for a roof or rail for a wall and fastening means to fasten the cladding to the purlin or rail. Hereinafter the term "purlin-rail" will be used to refer to a purlin of a roof or to a rail of a wall as appropriate in the context in which the term is used.

Hitherto, such a cladding construction has usually comprised an inner cladding next to the purlin-rail, a spacer supported on the inner cladding, thermal insulating material next to the inner cladding and extending over the spacer, and the outer cladding being next to the insulating material and fastening means, such as a hook bolt, which may extend through the outer cladding and/or insulation and/or inner cladding to engage with either a lip on the purlin-rail to fix the cladding thereto or the spacer, where the spacer is secured to the purlin rail. Such a cladding construction is generally known as an "over purlin" type and examples are described in U.K. Specification 2,051,911A.

Whilst this prior construction permits of fixing from above, in the case of a roof, or from the outside in the case of a wall, without the need to make separate scaffolding or other working platform arrangements to allow access to the lower or inner surface, a problem is encountered with the increasing need for higher insulation properties in the external envelope of buildings. If efforts are made to increase the insulation value, with an "over purlin" cladding construction as described above, by simply increasing the gap between the inner and outer cladding, this can lead to instability of the construction both during erection and in service under applied loads.

It is accordingly an object of the invention to provide a cladding construction which permits of desired thermal insulation properties, together with adequate stability, ease of erection and economical use of material.

This aim is achieved according to the present invention by providing a cladding construction for a roof or wall comprising an outer cladding, an inner cladding, thermal insulating material between the outer and inner cladding, and a purlin-rail characterised in that the cladding construction comprises support members which support the inner cladding and the thermal insulation material inwardly of the outer cladding, and a plurality of brackets attached to the purlin-rail and carrying or integral with the support members, the brackets being received in apertures in the purlin rail.

The brackets may be attached to the purlin-rail intermediate the longitudinally extending sides thereof.

The purlin-rail may comprise a pair of spaced generally parallel flanges interconnected by a web.

The support members may be located so as to position the inner cladding at approximately the mid-point of the web. Alternatively, the support members may be located so as to position the inner cladding adjacent to one of the flanges of the purlin-rail.

In the first case the brackets may be attached to the web and in the second case the brackets may be attached to the flange.

The brackets may each comprise a clip member.

Each clip member may be attached to the purlin-rail by passing a hook portion of the clip member through an aperture in the purlin-rail with the clip member in a first orientation and then rotating the clip member about an axis generally normal to the part of the purlin-rail in which the aperture is formed through a predetermined angle to cause the hook portion to overlie an edge portion of said aperture.

Alternatively, the brackets may comprise a first, male set, and a second, female set, the brackets of each set carrying support members disposed on opposite sides of the purlin-rail and the brackets of the male set comprising a clip member having a hook portion which is passed through an aperture in part of the purlin-rail and an aperture formed in the corresponding bracket of the female set, with the clip member in a first orientation, and then rotated about an axis generally normal to the part of the female member in which the aperture is formed through a predetermined angle to cause the hook portion to overlie an edge portion of said aperture of the female member so that the brackets are clamped together with the part of the purlin-rail therebetween.

The aperture may be formed in the web or in one of the flanges.

Each bracket may carry two support members disposed on opposite sides of the purlin-rail, or alternatively, each bracket may carry a single support member only. With this arrangement, if it is desired to provide support members on both sides of the purlin-rail then two sets of brackets are provided, the brackets of one set being located on one side of the purlin-rail and supporting one support member and the brackets of the other set being located on the other side of the purlin-rail and carrying a second support member.

The support members may be provided to support the inner cladding on both sides of the web, or in an alternative arrangement, the brackets may be provided to support and locate the inner cladding on one side only of the purlin-rail, with the inner cladding on the other side of the purlin-rail being supported and located by a part of the purlin-rail, such as a part of the inner flange thereof, such as an upturned lip.

The web of the purlin-rail may comprise a median portion which extends perpendicularly to the flanges and connects the flanges through inclined portions. The inclined portions may themselves be connected to the flanges by edge portions of the web which are normal to the flanges.

With this configuration of purlin-rail, and where the support members support the inner cladding on only one side of the purlin-rail, adjacent to the inner flange, the brackets may be attached to an inner inclined portion of the web and project from the purlin-rail on the opposite side to the inner flange.

The brackets may each comprise a clip member having a hook portion which is engaged with the purlin-rail by passing the hook portion of the clip member through an aperture in the inclined portion with the clip member in a first orientation and then rotating the clip member about an axis generally parallel to the inclined portion of the purlin-rail in which the aperture is formed, and performing a translatory movement of the clip member to engage the hook portion with an edge portion of said aperture.

The invention will now be described in more detail by way of example, with reference to the accompanying drawings, wherein:—

FIGURE 1 is a cross-sectional view through a cladding construction embodying the invention;

FIGURE 2 is an exploded perspective view of the cladding construction of Figure 1;

FIGURE 3 is a perspective ciew of a clip member used in the construction of Figure 1;

FIGURE 4 is a diagrammatic view showing a modification of the embodiment shown in Figures 1 to 3;

FIGURE 5 is a cross-sectional view of an alternative embodiment of the invention;

FIGURE 6 is a diagrammatic view showing a modification of the embodiment shown in Figure 5;

FIGURE 7 is a fragmentary cross-sectional view through a further embodiment of the invention; and

FIGURE 8 shows various cross-sections of purlin-rail which may be used in the invention.

Referring now to Figures 1 to 3, a cladding construction comprises a purlin 10, an outer cladding 11, and an inner cladding 12. The purlin 10 is cold rolled in mild steel and may be galvanised or otherwise protected.

The outer cladding 11 may be made of asbestos cement, metal or plastics masterial, and may be of any desired configuration. The inner cladding may be of any suitable material such as metal, plasterboard, semi-rigid fibreglass or mineral wool with a suitable lower facing, polyurethane or polystyrene insulating boards or other materials which may require auxiliary support 'T' members at their edges such as shown at T in Figure 2.

The purlin 10 comprises a web 13 having at its ends parallel outer and inner flanges 14, 15 respectively, each having an inturned lip 16, 17 respectively. The flanges 14, 15 extend perpendicular to a median portions 18 of the web 13 which is connected by oppositely inclined web portions 19, 20 to end web portions 21, 22 which extend, respectively, perpendicular to the flanges 14, 15. In the example illustrated, the purlin 10 is of essentially sigma configuration.

The outer cladding 11 is secured by screws or bolts 23 to the outer flange 14 and, if desired, an insulation pack 24 of suitable material may be interposed to provide a "thermal break".

The inner cladding 12 carries thermal insulating material 25 such as glass fibre and is located in the position shown in Figure 1 adjacent the middle of the web 13 by a pair of support members 26 in the form of angle section strips upon which the inner cladding 12 rests. The support members 26 are attached to the purlin 10 by brackets comprising male and female clip members 27, 28.

The male clip member 27 is of angle section having a rolled over end 29 to its, in use, horizontally extending limb 30, whilst its vertically extending limb 31 is formed with two pushed-put hook portions 32 as best shown in Figure 3. The hook portions 32 are shown slightly extended in Figure 1 to provide sufficient displacement between the various parts that the construction can be clearly seen.

In practice, the parts would be closer together as determined by the extent of the hook portions 32. Further, the male clip member 27 is not shown in section in Figure 1, again for clarity of the drawing.

It will be seen from Figure 3 that the hook portions 32 are asymmetrically displaced from the remainder of the limb 31 so as to provide a narrower space 33 at one end thereof and a wider space 34 at the other end thereof, the wider end 34 of one hook part being adjacent the narrow space 33 of the other hook part.

The female clip member 28 is again of basically angle configuration having a rolled over end part 35 to its, in use, horizontally extending limb 36, whilst its vertically extending limb 37 is provided with an aperture 38. The median portion 18 of the web 13 is formed with a plurality of apertures 39 of similar configuration to the apertures 38.

In use, the male clip member 27 is offered up to the web part 18 so that the hook parts 32 project through the aperture 38 but with the clip member 27 rotated through 90° from the position shown in Figure 2 about the axis X—X. The female member 28 is likewise offered up to the web part 18 to receive the hook parts 32 and then the male member 27 is rotated through 90° so as to cause the hook parts 32 to engage with edge parts of the aperture 38 so as to clamp the clip members together with the web part 18 therebetween, as shown in Figure 1.

The support members 26 are then rested on the thus engaged clip members and the inner cladding 12 supported thereon.

A spring steel locking clip 45 is engaged over the vertically extending limbs 37, 31 of the clip members both to retain the cladding 12 in position and the support members 26 in the clip members.

Alternatively, as shown in the right hand side of Figure 1 and Figure 4, the clip members 27, 28 may be formed in a region 40 thereof with a bulge and the support member 26 formed as shown in the region 41 and with a rib 42 so as to snap into

and be retained in the clip member. In this case, the locking clip 45 serves only to retain the cladding panel 12 in position.

The brackets may be of other configuration and may, if desired, be secured to the purlin 10 by other means than that described above, for example by bolting. The brackets may also be formed integrally with the support members 26, if desired, depending on the mode of attachment. Obviously, they cannot be formed integrally with the support members 26 if a clip member is to be rotated to secure a bracket in position.

Although it is preferred that a continuous support member 26 is provided to support the inner cladding 12, depending upon the nature of the inner cladding 12 a separate support members may be dispensed with and the inner cladding 12 supported directly upon brackets which themselves double as clip members and support members.

Brackets may be provided on either or both sides of the purlin 10 and at a desired position between the upper and lower ends thereof.

Where a bracket is to be provided on only one side of the purlin 10, then only a male clip 27 as described above would be used and the hook parts 32 would interengage with portions of the web 13 surrounding the apertures 38.

If desired, two sets of male clips 27 as described above may be provided, one set carrying a support member on one side of the purlin 10 and the other set carrying a support member 26 on the other side.

Referring now to Figure 5, an alternative configuration of bracket is shown for use where it is desired to position inner cladding 112 lower than is shown in Figures 1 to 3. In this embodiment, a single clip member 127 is provided on one side only of the purlin 110, the inner cladding panel 112*a* on the other side of the purlin 110 being supported directly by a lower upturned lip 117 of the purlin 110. In this embodiment, an aperture 139 is formed in the lower of the inclined web portions 120 and has a generally S-shaped hook part 132 which is manipulated through the aperture 139 and then clipped over the edge of the aperture 139 by translation and rotation about an axis parallel to the inclined portion 120. An angle support member 126 is supported by the plurality of clips 132 and engages and locates the lower cladding panel 112 thereon.

In a modification shown diagrammatically in Figure 6, the angle support member 126*a* and clip member 127*a* may each be provided with a respective region 140 and 141 and 142 to enable the angled shape support member 126*a* to be snapped into the clip 127*a* and thereby retained in position. A locking clip (not shown) similar to the locking clip 45 of Figure 1 may be provided to retain the inner cladding 112 in position in both the embodiment shown in Figure 5 and the modification shown in Figure 6.

Referring now to Figure 7, further embodiment is shown for use when it is desired to secure a lower cladding panel 212 at a position at or below a lower flange 215 of a purlin 210. In this embodiment, brackets comprising a male clip member 227, are provided having hook portions 232 similar to the portions 32 shown in Figures 1 to 3, which are similarly engaged with the walls of an aperture 239 formed, in this embodiment, in the lower flange 215. That is by passing the hook portions 232 through the aperture 239 with the clip member in one orientation then rotating the clip member through 90° to cause the hook portions 232 to overlie the edges of the aperture 239. The clip member 227 is not of angle configuration in this case, but has stepped cladding supporting portions 230 which are preferably formed with a configuration similar to that shown at 40—42 in Figures 1 to 3 and as illustrated at 240—242 in Figure 7. The clip shown in Figure 7 has two cladding supporting portions 230 and supports cladding 212 on both sides of the purlin 210.

In all the embodiments described, an inner cladding panel may be provided with integrally formed thermal insulation rather than separate insulation material as illustrated.

Since the support members carry only the weight of the panel and insulation, they may be made in relatively thin gauge material compared with any construction in which supports for the lower cladding are provided as an integral part of the purlin which must carry significant structural loads. The cladding construction according to the present invention has material economies over other known systems and can be quickly and easily laid from above the roof or outside the walls. There is no risk of purlin or rail instability.

The sequence of operations in erection of the construction is to fit the brackets to the purlin, then to fit the support members to the brackets then to fit the inner cladding, or lining panels (and integral thermal insulation where applicable) and secure them, if desired, with the locking clips 45. A vapour barrier in the form of a vapour impervious membrane, as shown at 43 in Figure 1 and 143 in Figure 5, may be fitted as desired and then insulation material 25, if it is separate from the inner cladding panel. The roof structure is then completed by positioning the thermal breaks 24 and the outer cladding and securing the cladding in position with the bolts 23. All this can be easily accomplished from above the roof or outside the wall thus avoiding working from below or inside and the need to provide work access platforms for such work.

Although in the examples illustrated, the cladding construction is a roof construction, exactly similar components may be utilised to provide a wall construction in which case the component, which has been referred to as a purlin in the above examples, would become a rail.

The present invention may be applied to other sections of purlin-rail such as those illustrated in Figure 8.

Claims

1. A cladding construction for a roof or wall comprising an outer cladding (11), an inner cladding (12; 112; 212), thermal insulating material (25) between the outer and inner cladding, and a purlin-rail (10; 110; 210) characterised in that the cladding construction comprises support members (26; 126; 230) which support the inner cladding (12, 112, 212) and the thermal insulation material inwardly of the outer cladding (11), and a plurality of brackets (27, 28; 127; 227) attached to the purlin-rail (10; 110; 210) and carrying or integral with the support members (26; 126; 230), the brackets (27, 127, 227) being received in apertures (39, 139, 239) in the purlin-rail (10, 110, 210).

2. A cladding construction according to Claim 1 characterised in that the purlin-rail (10; 110; 210) comprises a pair of spaced generally parallel flanges (14, 15; 215) interconnected by a web (13).

3. A cladding construction according to Claim 2 characterised in that the brackets (27, 28; 127) are attached to the web (13).

4. A cladding construction according to Claim 2 characterized in that the brackets (227) are attached to one of the flanges (215).

5. A cladding construction according to any one of Claims 1 to 4 characterised in that the brackets comprise clip members (127; 227), each clip member being attached to the purlin-rail (110; 210) by passing a hook portion (132; 232) of the clip member through the aperture (139; 239) in a part (120; 215) of the purlin-rail (110; 210) with the clip member in a first orientation, and then rotating the clip member about an axis generally normal to the part of the purlin-rail in which the aperture is formed through a predetermined angle to cause the hook portion (132; 232) to overlie an edge portion of said aperture (139; 239).

6. A cladding construction according to any one of Claims 1 to 4 characterised in that the brackets comprise a first male set of clip members (27) and a second female set of clip members (28), the brackets of each set carrying support members (26) disposed on opposite sides of the purlin-rail (10) and each male clip member (27) comprising a hook portion (32) which, with the clip member (27) in a first orientation, is passed through the aperture (39) in part (13) of the purlin-rail (10) and an aperture (38) formed in a corresponding female clip member, the male clip member then being rotated back about an axis (XX) generally normal to the part of the female clip member (28) in which the aperture (39) therein is formed through a predetermined angle to cause the hook portion (32) to overlie an edge portion of the aperture in the female clip member (28) so that the brackets are clamped together with the part (13) of the purlin-rail (10) therebetween.

7. A cladding construction according to any one of Claims 1 to 6 characterised in that the brackets (127) are provided to support and locate the inner cladding (112) on one side of the purlin-rail (110), with the inner cladding (112*a*) on the other side of the purlin-rail (110) being supported and located by a part (17) of the purlin-rail (110).

8. A cladding construction according to any one of Claims 2 to 7 where appendant to Claim 2 characterised in that the web (13) of the purlin-rail (10; 110; 210) comprises a median portion (18) which extends perpendicularly to the flanges (14, 15; 215) and connects the flanges (14, 15; 215) through inclined portions (19, 20; 120).

9. A cladding construction according to Claim 8 characterised in that the brackets (127) are attached to one of the inclined portions (120) of the web and project from the purlin-rail (110) on the opposite side to the flanges.

Revendications

1. Ensemble d'habillage pour une toiture ou une paroi, comprenant un revêtement externe (11), un revêtement interne (12; 112; 212), un matériau d'isolation thermique (25) entre les revêtements externe et interne, ainsi qu'un rail profilé (10; 110; 210), caractérisé par le fait que cet ensemble d'habillage comporte des éléments de support (26; 126; 230) qui supportent le revêtement interne (12, 112, 212) et le matériau d'isolation thermique à l'intérieur du revêtement externe (11), ainsi que plusieurs consoles (27, 28; 127; 227) assujetties au rail profilé (10; 110; 210) et portant les éléments de support (26; 126; 230) ou formant corps avec ces derniers, lesdites consoles (27, 127, 227) étant logées dans des orifices (39, 139, 239) ménagés dans le rail profilé (10, 110, 210).

2. Ensemble d'habillage selon la revendication 1, caractérisé par le fait que le rail profilé (10; 110; 210) présente une paire d'ailes espacées (14, 15; 215) sensiblement parallèles et solidarisées mutuellement par une âme (13).

3. Ensemble d'habillage selon la revendication 2, caractérisé par le fait que les consoles (27, 28; 127) sont fixées à l'âme (13).

4. Ensemble d'habillage selon la revendication 2, caractérisé par le fait que les consoles (227) sont fixées à l'une des ailes (215).

5. Ensemble d'habillage selon l'une quelconque des revendications 1 à 4, caractérisé par le fait que les consoles consistent en des pièces encliquetables (127; 227), chaque pièce encliquetable étant assujettie au rail profilé (110; 210) en engageant une région crochue (132; 232) de la pièce encliquetable dans l'orifice (139; 239) ménagé dans une partie (120; 215) du rail profilé (110; 210) alors que ladite pièce encliquetable se trouve dans une première orientation, puis en imprimant à la pièce encliquetable une rotation d'un angle prédéterminé autour d'un axe sensiblement perpendiculaire à la partie du rail profilé dans laquelle l'orifice est ménagé, de telle sorte que la région crochue (132; 232) vienne coiffer une zone marginale dudit orifice (139; 239).

6. Ensemble d'habillage selon l'une quelconque des revendications 1 à 4, caractérisé par le fait que les consoles comprennent un premier jeu de

pièces encliquetables mâles (27) et un second jeu de pièces encliquetables femelles (28), les consoles de chaque jeu portant des éléments de suport (26) sur des côtes opposés du rail profilé (10), et chaque pièce encliquetable mâle (27) présentant une région crochue (32) qui, lorsque cette pièce encliquetable (27) se trouve dans une première orientation, franchit l'orifice (39) dans la partie (13) du rail profilé (10) et un orifice (38) ménagé dans dune pièce encliquetable femelle correspondante, après quoi l'on imprime à la pièce encliquetable mâle une rotation rétrograde d'un angle prédéterminé, autour d'un axe (XX) sensiblement perpendiculaire à la partie de la pièce encliquetable femelle (28) dans laquelle l'orifice (39) est ménagé, de telle sorte que la région crochue (32) vienne coiffer une zone marginale de l'orifice pratiqué dans la pièce encliquetable femelle (28), si bien que les consoles sont solidarisées par coincement en emprisonnant entre elles la partie (13) du rail profilé (10).

7. Ensemble d'habillage selon l'une quelconque des revendications 1 à 6, caractérisé par le fait que les consoles (127) sont prévues pour supporter et positionner le revêtement interne (112) d'un côté du rail profilé (110), le revêtement interne (112*a*) situé de l'autre côté de ce rail profilé (110) étant supporté en positionné par une partie (17) de ce rail profilé (110).

8. Ensemble d'habillage selon l'une quelconque des revendications 2 à 7 dépendant de la revendication 2, caractérisé par le fait que l'âme (13) du rail profilé (10; 110; 210) présente une zone médiane (18) qui s'étend perpendiculairement aux ailes (14, 15, 215) et raccorde ces ailes (14, 15; 215) par l'intermédiaire de zones inclinées (19, 20; 120).

9. Ensemble d'habillage selon la revendication 8, caractérisé par le fait que les consoles (127) sont fixées à l'une des zones inclinées (120) de l'âme, et font saillie au-delà du rail profilé (110) du côté opposé aux ailes.

Patentansprüche

1. Eine Überzugkonstruktion für ein Dach oder eine Wand, aufweisen einen äußeren Überzug (11), einen inneren Überzug (12, 112, 212), thermisches Isolationsmaterial (25) zwischen dem äußeren und dem inneren Überzug, und eine Rahmenschiene (10, 110, 210) dadurch gekennzeichnet, daß die Überzugkonstruktion Stützelemente (26, 126, 230) aufweist, die den inneren Überzug (12, 112, 212) und das thermische Isolationsmaterial innen bezüglich des äußeren Überzugs (11) abstützen, und eine Mehrzahl von Armen (27, 28, 127, 227), die an den Rahmenschienen (10, 110, 210) angebracht sind und die Stützelemente (26, 126, 230) führen oder integral mit diesen ausgebildet sind, wobei die Arme (27, 127, 227) in Öffnungen (39, 139, 239) in den Rahmenschienen (10, 110, 210) aufgenommen sind.

2. Überzugkonstruktion nach Anspruch 1, dadurch gekennzeichnet, daß die Rahmenschienen (10, 110, 210) ein Paar von beabstandeten, im wesentlichen parallelen Flanschen (14, 15, 215) aufweisen, die durch eine Aussteifung (13) miteinander verbunden sind.

3. Überzugkonstruktion nach Anspruch 2, dadurch gekennzeichnet, daß die Arme (27, 28, 127) an der Aussteifung (13) angebracht sind.

4. Überzugkonstruktion nach Anspruch 2, dadurch gekennzeichnet, daß die Arme (227) an einem der Flansche (215) angebracht sind.

5. Überzugkonstruktion nach einem der Ansprüche 1 bis 4, dadurch gekennzeichnet, daß die Arme Verbindungselemente (127, 227) aufweisen, wobei jedes Verbindungselement an den Rahmenschienen (110, 210) angebracht ist, indem ein Hakenbereich (132, 232) des Verbindungselementes durch eine Öffnung (139, 239) auf einen Teil (120, 215) der Rahmenschiene (110, 210) aufgeschoben ist, mit dem Verbindungselement in einer ersten Ausrichtung, und wobei das Verbindungselement dann um eine Achse im wesentlichen senkrecht zu dem Teil der Rahmenschiene, in welchem die Öffnung ausgebildet ist, gedreht, wird, um einen vorbestimmten Winkel, um zu bewirken, daß der Hakenbereich (132, 232) über einem Eckbereich der Öffnung (139, 239) liegt.

6. Überzugkonstruktion nach einem der Ansprüche 1 bis 4, dadurch gekennzeichnet, daß die Arme eine erste Außengruppe von Verbindungselementen (27) und eine zweite Innengruppe von Verbindungselementen (28) aufweisen, wobei die Arme von jeder Gruppe Stützelemente (26) tragen, die an gegenüberliegenden Seiten der Rahmen-Schienen (10) angeordnet sind und jedes Außengruppenelement (27) einen Hakenbereich (32) aufweist, der, wenn das Verbindungselement (27) in einer ersten Ausrichtung ist, durch die Öffnung (39) in dem Teil 13 der Rahmen-Schiene (10) hindurchgebracht wird und eine Öffnung (38) ausgebildet in einem zugeordneten Innengruppenverbindungselement, wobei das Außengruppenverbindungselement dann zurückgedreht wird um eine Achse (XX) die im wesentlichen senkrecht zu dem Teil des Außengruppenverbindungselementes (28) ist, in dem die Öffnung (39) durch einen vorbestimmten Winkel ausgeformt ist, um zu bewirken, daß der Hakenbereich (32) einem Eckbereich der Öffnung in dem Innengruppenverbindungselement (28) überliegt, so daß die Arme zusammengehalten sind mit dem Teil (13) der Rahmen-Schiene (10) dazwischen.

7. Überzugkonstruktion nach einem der Ansprüche 1 bis 6, dadurch gekennzeichnet, daß die Arme (127) vorgesehen sind, um den inneren Überzug (112) an einer Seite der Rahmen-Schiene (110) abzustützen und anzuordnen, wobei der innere Überzüg (112a) an der anderen Seite der Rahmen-Schiene (110) abgestützt ist und durch einen Teil (17) der Rahmen-Schiene (110) angeordnet ist.

8. Überzugkonstruktion nach einem der Ansprüche 2 bis 7, soweit sie auf Anspruch 2 zurückbezogen sind, dadurch gekennzeichnet, daß die Aussteifung (13) der Rahmen-Schiene (10, 110,

210) einen mittleren Bereich (18) aufweist, der sich rechtwinklig zu den Flanschen (14, 15, 215) erstreckt und die Flansche (14, 15, 215) durch geneigte Bereiche (19, 20, 120) verbindet.

9. Überzugkonstruktion nach Anspruch 8, dadurch gekennzeichnet, daß die Arme (127) an einem der geneigten Bereiche (120) der Ausstreifung angebracht sind und von der Rahmen-Schiene (110) vorstehen, an der gegenüberliegenden Seite der Flansche.

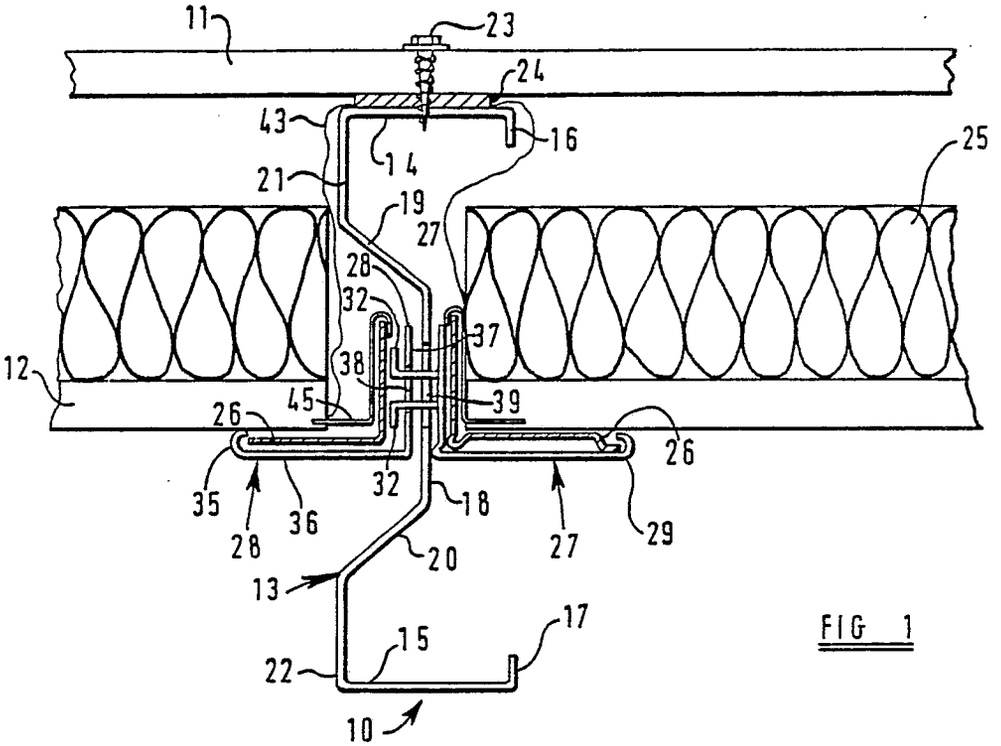
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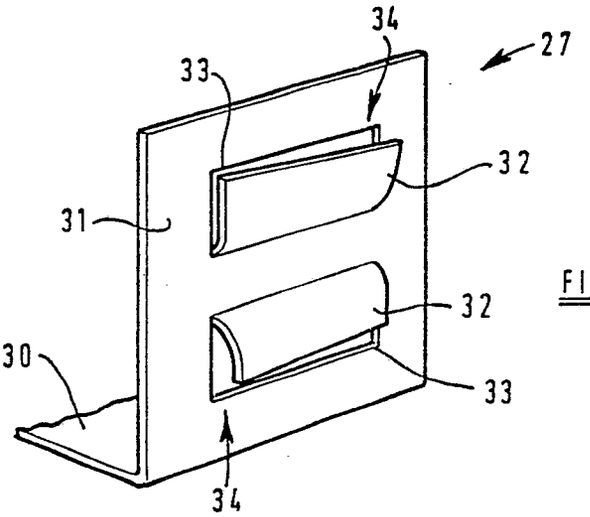
FIG 1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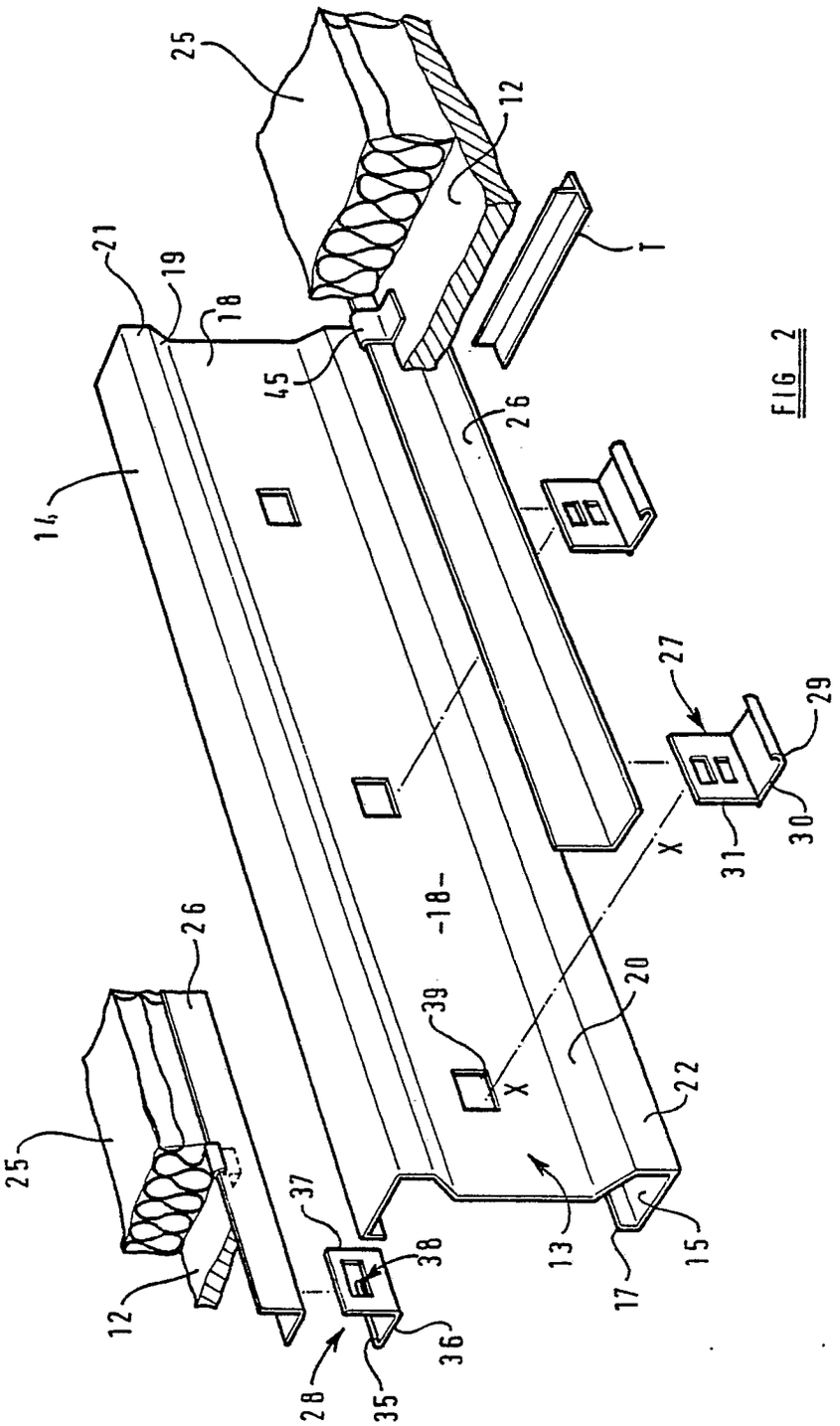
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FIG 2

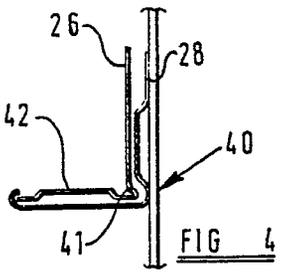

FIG 4

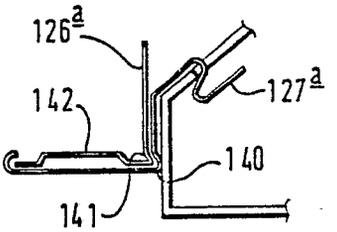

FIG 6

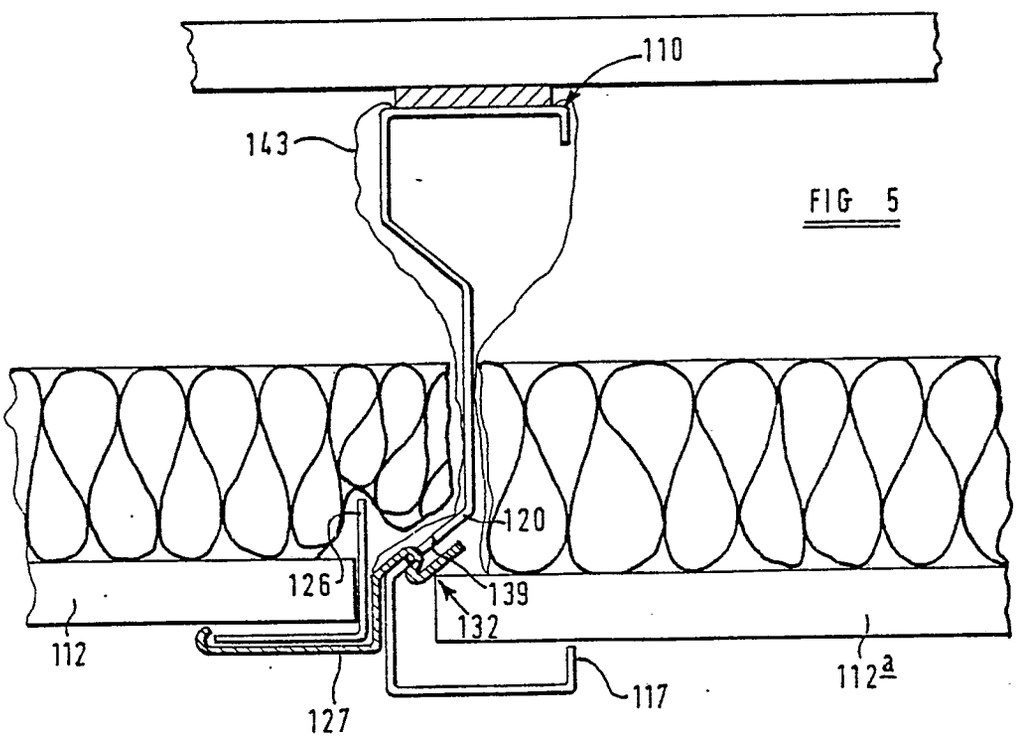

FIG 5

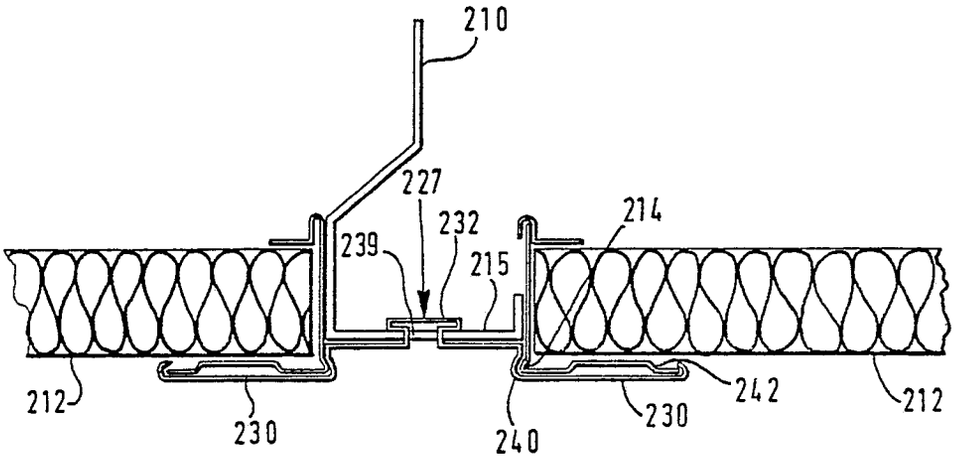

FIG 7

FIG 8