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(54) **Title:** SURFACE COVERINGS INCLUDING DECORATIVE STRIPS

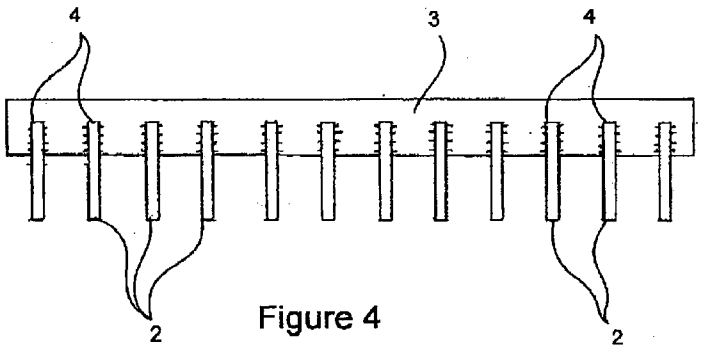

Figure 4

(57) **Abstract:** Panels include decorative strips and are suitable for wall or ceiling coverings, or for use as screens, shades or the like. The panels may be modular panels, for installation with a number of like panels to form a covering. The panels may be configured to disguise the joins between panels so as to approximate, or create the illusion of, a continuous covering. Each panel may include a number of decorative strips and a number of transverse supports supporting the decorative strips.

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SURFACE COVERINGS INCLUDING DECORATIVE STRIPS

Field of the invention

The invention relates to surface coverings, particularly to interior and exterior surface coverings and screens having a plurality of decorative strips.

Background to the invention

Linings for interior surfaces, such as walls and ceilings, in both residential and commercial buildings are well known in the art. These take many forms. One of the most common of these is to cover the walls and ceilings with gypsum-based wallboards, which typically have a flat, smooth, papered-covered surface and slightly bevelled edges. The bevelled edges are abutted together during installation and subsequently are typically filled with a gypsum based joint compound to produce a seamless looking finish which is then painted or wallpapered.

Historically those people who want a more decorative or individualistic finish to their walls may apply wainscoting. Wainscoting is typically installed over the top of wallboard on interior walls for decorative purposes. The material used for the wainscoting is most often wood, but can also be particleboard, pressed metal sheets, or gypsum-based mouldings.

Another type of decorative covering traditionally used has been wood panelling. Such panelling may, for example, have a sculptural design carved or otherwise cut into the panels.

A still further known variation comprises a plurality of parallel spaced apart strips of timber which are individually fixed over the top of the ceiling wall board. Finishes such as this have the added advantage of providing acoustic advantages.

Similar arrangements exist for interior and exterior screens and exterior wall and surface panelling.

Decorative screens and interior and exterior wall and ceiling finishes, however, generally suffer from one major disadvantage – they are very labour intensive to create, and consequently are expensive.

Further, in the commercial environment the use of suspended ceilings and modular plastic, metal, or gypsum based ceiling tiles or panels has become common-place. Such tiles or panels are generally all the same, are typically flat or provided with minimal relief texture, and rarely have a warm and natural appearance. They are also often heavy, fiddly to install, and have poor acoustic absorption properties.

It is an object of the present invention to provide an improved or more cost effective decorative panel system for use as a screen or interior or exterior surface finish that overcomes or at least addresses at least some of the above noted issues. Alternatively, it is an object of the invention to at least provide the public with a useful choice.

Summary of the invention

In a first broad aspect the invention provides a modular panel system including modular panels each having a plurality of decorative strips and one or more transverse supports supporting the decorative strips, said panels configured to mount to and disguise a supporting framework.

Preferably, when a panel is mounted on a framework, a facing edge of each decorative strip at least partially conceals the framework.

Preferably at least one end of each decorative strip is profiled such that, when a panel is mounted on a framework, a facing edge of each decorative strip extends

around a framework member to provide a gap between ends of strips on adjacent panels less than a width of the framework member.

Preferably the panels are configured to conceal joins between panels.

Preferably the decorative strips on installed panels form a substantially uniform covering of decorative strips.

Preferably the panels are configured to be supported by the framework without fixed attachment to the framework.

Preferably the panels are configured to be installed without fixed attachment to adjacent panels.

Preferably the decorative strips are arranged parallel to each other.

Preferably the position of a strip parallel to and adjacent an edge of the panel is such that the spacing between that strip and an adjacent strip in an adjacent installed panel is substantially the same as the spacing of any two adjacent strips on the same panel.

Preferably each panel includes a backing, wherein at least those parts of the supports and the backing visible in the assembled panel system are the same colour.

Preferably the modular panel system includes a framework for supporting the panels, wherein at least that part of the framework visible in an assembled panelled covering is the same colour as the supports and backing.

Preferably the framework, the supports and the backing are a dark colour, preferably black.

Preferably the backing is an acoustic material.

Preferably the framework and the transverse supports are coloured so as to disguise the framework and transverse supports.

Preferably at least those parts of the supports and the framework visible in the assembled panel system are the same colour.

Preferably the modular panel system is a modular ceiling panel system.

Preferably the supporting framework is a standard ceiling grid framework.

In a second broad aspect the invention provides a modular panel system including modular panels each having a plurality of decorative strips and one or more transverse supports supporting the decorative strips, said panels configured to mount to a supporting framework, the framework and the transverse supports being coloured so as to disguise the framework and transverse supports.

In a third broad aspect the invention provides a panel including one or more supports and a plurality of decorative strips, each support comprising an elongate member having a plurality of transverse notches arranged along its length for receiving and retaining the strips, each notch having one or more profiled edges.

Preferably the panel is an interior or exterior wall or ceiling covering panel.

Alternatively the panel is an interior or exterior screen panel.

Preferably the profiled edges are shaped for retention of the decorative strips.

Preferably the profile of each notch is a toothed profile.

Preferably the panel is configured to be installed with one or more like panels.

Preferably the edges of each panel are shaped to receive a support structure.

Preferably the decorative strips are formed from timber, metal or plastics material.

Preferably the supports are generally U-shaped supports.

Preferably the supports are formed from a metal.

Preferably the supports are extrusions.

Preferably the decorative strips are arranged in parallel spaced apart relationship.

Preferably the decorative strips are arranged with respect to the supports such that their width is substantially perpendicular to the supports and each of the decorative strips is substantially wider than it is thick.

In a fourth broad aspect the invention provides a panel including one or more supports and a plurality of decorative strips, each support comprising an elongate member having a plurality of transverse notches arranged along its length for receiving and retaining the strips, wherein each support is substantially U-shaped in cross-section.

In a fifth broad aspect the invention provides a panel including one or more elongate supports and a plurality of decorative strips each having a back surface with a plurality of notches formed therein, wherein each elongate support is received within notches in two or more of the decorative strips and has a cross-sectional shape matching the shape of the notches.

Preferably the panel is an interior or exterior wall or ceiling covering panel.

Alternatively the panel is an interior or exterior screen panel.

Preferably each notch has a shape which impedes movement of the elongate support perpendicular to the back surface and out of the notch.

Preferably each notch has a shape which is narrower at the back surface than at a widest point of the notch.

Preferably each notch is a dovetail shape.

Preferably each notch has one or more recesses configured to receive corresponding protrusions on the elongate supports.

Preferably the elongate supports are formed as extrusions.

Preferably each decorative strip is secured to the appropriate elongate supports using a fastener or adhesive.

Preferably the elongate supports are configured to engage with one or more joining members for joining the elongate supports and/or mounting the covering to an interior or exterior wall or ceiling.

Preferably the elongate supports engage with the joining members using a push-fit.

Preferably the joining members are formed as extrusions.

Preferably the joining members are substantially T-shaped extrusions.

Preferably the joining members are arranged to support a backing material.

Preferably the panel is modular, and is configured to be installed with one or more like panels.

Preferably each modular panel includes at least two elongate supports.

Preferably the elongate supports are arranged to protrude from one edge of a panel and to provide a recess at the opposite edge of the panel, so that when installed with like panels the elongate supports overlap the join between panels.

Preferably joining members engage with the elongate supports for joining the elongate supports and/or mounting the covering to a wall or ceiling, and these joining members span two or more panels.

Preferably the decorative strips are formed from timber, engineered wood, metal or plastics material.

Preferably the decorative stripes are arranged in parallel spaced apart relationship.

Preferably the decorative stripes are arranged with respect to the supports such that their width is substantially perpendicular to the supports and each of the decorative stripes is substantially wider than it is thick.

The invention may be used in coverings for wall linings, ceiling linings, privacy screens, garage door panels, sunshades, window furnishing, external cladding, screens and louvers for the joinery industry.

The invention enables long spans of timber such as louvers or slats to appear to be unsupported when viewed from the front.

It is acknowledged that the terms "comprise", "comprises" and "comprising" may, under varying jurisdictions, be attributed with either an exclusive or an inclusive meaning. For the purpose of this specification, and unless otherwise noted, these terms are intended to have an inclusive meaning – i.e. they will be taken to mean an inclusion of not only the listed components which the use directly references, but also to other non-specified components or elements.

Brief description of the drawings

The invention will now be described by way of example only, with reference to the accompanying drawings, in which:

Figure 1 is a back view of a modular panel according to one embodiment;

Figure 2 is a side view of the panel of Figure 1;

Figure 3 is a second side view of the panel of Figure 1;

Figure 4 is a side view of a wall or ceiling covering panel;

Figure 5 is a side view of two ceiling panels supported by a hanging ceiling support;

Figure 6 is an end view of a panel according to a further embodiment;

Figure 7 is a plan view of the panel of Figure 6;

Figure 8 shows a notch in a decorative strip and an elongate support engaged in the notch;

Figure 9 is a similar view to Figure 8, showing an elongate support and joining member;

Figure 10 is a similar view to Figure 9, showing a joining member for retaining a backing material;

Figure 11 is a similar view to Figure 10, showing the backing material;

Figure 12 shows an elongate support and decorative strip according to a further embodiment;

Figure 13 shows the joining member of Figure 12;

Figure 14 shows how two modular panels may be installed;

Figure 15 a further embodiment of a panel according to the invention mounted in a frame;

Figure 16 shows the mechanism for mounting the panel of Figure 15 in the frame;

Figure 17 shows an extrusion used in the mounting of the panel of Figure 15 into the frame;

Figure 18 is a side view of a further embodiment of a modular panel system;

Figure 19 is a side view perpendicular to the side view of Figure 18;

Figure 20 is a view from the front of the modular panel system of Figure 18;

Figure 21 is a plan view from the back of the modular panel system of Figure 18;

Figure 22 is a plan view from the front of the modular panel system of Figure 18;

Figure 23 is a side view of a further embodiment, including a services panel;

Figure 24 is a side view of a further embodiment, showing another type of services panel;

Figure 25 shows a further embodiment, for floating ceiling applications;

Figure 26 shows a mounting arrangement for mounting a modular panel system to a wall; and

Figure 27 shows a panel according to a further embodiment.

Detailed description

Figure 1 is a back view of a panel 1 according to a first embodiment, suitable for use as an interior or exterior wall or ceiling covering or a screen. The panel 1 includes a plurality of decorative strips 2 which are supported by a plurality of transverse supports 3. The supports 3 are generally elongate and span a number of strips 2.

The panel 1 may be installed on site, but is preferably formed in a number of modular panels, each including a plurality of strips 2 and supports 3 and capable of installation so as to provide a substantially uniform covering.

Figure 2 is a side view of the panel of Figure 1. The supports 3 may be generally U-shaped channels as shown in Figure 2 and may be formed from a suitable metal, such as aluminium or steel, or from a suitable rigid plastic. The supports 3 may be formed by stamping and roll forming, or any other suitable method.

Figure 3 is a detailed side view perpendicular to the view of Figure 2. This shows the strips 2 supported in notches 4 in the support 3. The notches 4 each have edges

which are profiled so as to retain the strips 2 more effectively. In Figure 3, each notch has a profile consisting of a series of teeth 5 cut into its edges.

To assemble the wall or ceiling covering, the decorative strips may be held in a suitable jig while the supports 3 are knocked into place with a mallet or hammer, or pressed into place by a suitable machine.

The decorative strips 2 may be formed from timber, engineered wood (such as medium density fibreboard), plastic or other suitable material.

Figure 4 is a side view of a modular panel, showing a series of strips 2, each held in a toothed notch 4 in a support 3.

The profiled notches 4 provide for more secure retention of the decorative strips 2, without the need for labour-intensive fixing of each strip. Instead of fastening each strip to a support using screws or the like, each strip is simply set into place in a toothed notch, which effectively retains the strip. Thus, the strips and supports are easily assembled.

Figure 5 shows two modular ceiling covering panels 7, each formed as described above. The edge of each panel 7 is formed with a recess 8 for receiving a hanging ceiling support 9 or similar support structure. A different profile may be used in place of the recess 8 for different types of support structure.

Thus, at least one end of each decorative strip is profiled so that a facing edge 8a of the strip extends beyond the edge of the hanging ceiling support 9. The gap 8b is therefore less than the width of the bottom section 9a of the hanging ceiling support 9. This not only partly conceals the hanging ceiling support 9 but provides a smaller gap between the ends of decorative strips on adjacent panels. This contributes towards an illusion of a continuous covering or continuous decorative strips.

In the embodiment shown in Figure 5, each strip may also be supported in part by the hanging ceiling support 9, since the top part of the profile 8 provides a surface which can sit on the hanging ceiling support 9.

Figure 6 is an end view of a panel 10 according to a further embodiment. The panel 10 includes a plurality of decorative strips 11, which are supported by a plurality of transverse supports 12. The supports 12 are generally elongate and span a number of strips 11.

The panel 10 may be installed on site, but is preferably combined with a number of like panels 10, each including a plurality of strips 11 and supports 12 and capable of installation so as to provide a substantially uniform covering.

The decorative strips 11 may be formed from timber, engineered wood (such as medium density fibreboard), metal, plastic or other suitable material.

Figure 7 is a back, plan view of a screen or wall or ceiling covering panel, showing the decorative strips 11 and elongate supports 12.

Figure 8 is a detailed cross-section along the length of one strip 11. Each strip includes one or more notches 13 formed in its back surface 14. The notch is preferably narrower at the back surface than at its widest point, and may have a dovetail shape, as shown. The support 12 is shaped so as to fit within the notch 13 and the shape of the notch prevents the support 12 from being pulled out of the notch 13 in the direction indicated by arrow 15.

The support 12 is also secured to the decorative strip 11 using a fastener 16, such as a nail, screw or the like, in order to hold the decorative strip in the appropriate position with respect to the support. Alternatively a suitable adhesive could be used. As a further alternative, a crimping arrangement could be used to form a connection between the support 12 and decorative strip 11. This arrangement could use material formed integrally with the support 12 or decorative strip 11 to form the

crimp, or a separate element could be crimped to connect the support and decorative strip.

To assemble the panel, the supports 12 are slid into position in the notches 13, while the strips 11 are held steady in a suitable jig. Fasteners 16 are then used to secure the supports 12 to the strips 11.

Figure 9 is a similar view to that of Figure 8. However, in this embodiment the support 12 engages with a joining member 20 for joining to a similar support 12 and/or mounting of the covering to a wall or ceiling. The support 12 is formed with a pair of protrusions 21 which engage with corresponding protrusions 22 on the joining member 20, simply using a push-fit. The joining member 20 may be formed as an elongate T-shaped member, as shown. This provides good rigidity to the installed covering. Alternatively, the joining member could be formed from timber or other suitable material, with any suitable cross-section.

The joining member 20 conceals not only the joins between panels but also the nails or other fasteners 16, which is important where the surface covering can be seen from the back.

The elongate support 12 and joining member 20 may both be formed as extrusions, for ease of manufacture.

Figure 10 is a similar view to those of Figures 8 and 9. However, in this embodiment joining member 20 is arranged to support a backing material. The joining member 20 is formed with clips 25 protruding from its back surface. The clips 25 receive a backing material 26, as shown in figure 11. When the covering is installed, the backing material 26 will be visible between the decorative strips 11. The backing material may be an acrylic or colourbond material, or other suitable material. Use of a backing material may be particularly desirable when the covering is used for garage doors, for example. Backing materials may also be used for lighting effects in ceilings or walls.

Figures 12 and 13 show a further type of elongate support 12. The elongate support 12 is generally similar to the elongate support of Figures 9 to 11 but has a generally rectangular cross-section instead of a dovetail shape. In order to prevent the elongate support from moving out of the notch, two protrusions 27 are provided, with the notch having a corresponding pair of recesses.

Figure 14 illustrates the modular nature of wall or ceiling coverings according to one embodiment. Two like panels 10 are to be installed side by side. The elongate support 12 in a first panel is arranged to provide a slight recess 30 at one edge, while the support 12 of the other panel protrudes slightly 31 so as to sit within the recess 30. The spacing of the decorative strips 32, 33 adjacent to the joint will then be substantially the same as the spacing between any other two adjacent decorative strips 11. The join in the elongate supports 12 is concealed behind the decorative strip 32. This provides an invisible join between modular panels, allowing a substantially uniform covering to be achieved using such panels.

Figures 15 to 17 show a structure for fitting the covering to a frame member 35. The frame member may be a door frame or any other framework and may be an existing framework to which the covering is retrofitted or a purpose-built framework.

A joiner 36, shown in detail in Figure 17, includes a sleeve section 37 configured to lie over the top of the decorative strips 11. The joiner 36 may be secured to those decorative strips using fasteners 38. The joiner 36 also includes a protrusion 40 configured to sit in a recess in the frame member 35. The recess can be closed after installation of the joiner 36 using a small piece 41 preferably formed from the same material as the rest of the frame member, as shown in the finished join of Figure 15. The joiner 35 may be formed as an extrusion.

Figure 18 shows a further embodiment in which a number of modular panels 50 are supported by a framework 51 which may be a standard T-grid hanging ceiling framework. Each modular panel includes a number of decorative strips 52

supported by transverse supports 53 (of which only one is shown in Figure 18). The transverse supports may sit on the T-grid.

The modular panel system may also include a backing 55. The backing 55 may be an acoustic material, such as a polyester acoustic bat, preferably with a suitable facing layer, such as a Lantor fabric layer. The backing 55 is visible between the decorative strips 52.

The supports 53 and the framework members 51, or at least those parts of the framework visible from below, may be the same colour. Preferably the supports 53 and the framework members are a dark colour, such as black. In many settings these members will then fade into the background, or be camouflaged, creating the illusion of the decorative strips floating in mid-air, unsupported. The backing 55 may be the same colour as the supports 53 and the framework members 51, further contributing to this illusion.

Preferably, for ease of installation and for allowing easy access to the space behind the panels, the panels are not fixed to the framework or to adjacent panels.

In one embodiment the T-grid defines a standard framework size. For example, the T-grid may form a number of 1200 by 600mm rectangles, each supporting a single panel module. This has the advantage that the backing material can also be a standard size, so can easily be installed. The backing material 55 sits naturally within the space defined by the vertical parts 56 of the T-grid members 51.

The decorative strips 57, 58 which are adjacent the join between panels are spaced by a distance 59 which is identical to the distance between any two other adjacent decorative strips 52. This helps to hide the join, so that a covering formed from a number of modular panels appears uniform from below.

Especially if combined with the 'camouflaged' colour-matched supports 53, framework 51 and backing 55, this contributes to the illusion of a continuous, uniform covering of floating decorative slats. This colour matching and/or the spacing of the

strips around a join between panels can also be applied to any of the panel structures shown in Figures 1 to 17.

Figure 19 is a view of the modular panel system of Figure 18, from the side, again showing how the backing 55 fits into the spaces formed by the vertical part 56 of the T-grid member 51.

Figure 20 is a partially cut away view of the modular panel system from below. This view shows the framework (i.e. the T-grid members 51) and decorative strips 52. The strips are not shown in one corner of the central panel, such that the backing 55 can be seen. The backing 55 is formed as a rectangular bat which sits in a rectangular cell formed by the vertical parts (not shown in Figure 20) of the T-grid members 51a, 51b, 51c, 51d.

Figure 21 is a plan view of the modular panel system from above, without the backing 55. This shows the decorative strips 52, supports 53 and T-grid members 51a, 51b, 51c and 51d. The rectangular cell for the backing 55 can be clearly seen. The gaps between the strips are also clearly visible, illustrating how the backing material, when installed, can be seen from below the panel.

Figure 22 is a plan view of the modular panel system from below, again showing the T-grid members 51a – 51d and the decorative strips 52.

As the modular panels are preferably not fixed to the framework or to adjacent panels, panels can easily be lifted from the framework if it is necessary to access the space behind the installed covering. However, in some settings it may be advantageous to provide a dedicated services panel to allow access to the space behind the installed covering.

Figure 23 shows an installed covering including a number of panels 50, supported by T-grid members 51. In order to maintain the modular nature of the covering and its installation in a standard framework, an extra T-grid member 64 may be installed

between two standard T-grid members 51. A panel 65 of less than standard width is installed between one standard T-grid member 51 and the extra T-grid member 64. Between the other standard T-grid member 51 and the extra T-grid member 64 a services panel 66 is installed. Again, this is preferably not fixed to the framework, so that it can easily be lifted to access the space behind the covering.

Figure 24 shows an alternative services panel 67, shaped such that its bottom surface is level with the bottom edges of the decorative strips 52.

Figure 25 shows how the modular panel system can be adapted for floating ceiling applications. A standard T-grid member 70 can be fixed to a floating ceiling edge section 71, supporting a modular panel 50 as described above.

Figure 26 shows an embodiment in which an offset wall mounting 73 is used for mounting a T-grid member. The offset mounting 73 is affixed to a wall 74 above the T-grid, at a distance above a wall angle fitting 75. The ends 77 of the decorative strips 52 in panel 76 sit in the wall angle. This provides a tidy appearance at the junction of the installed covering and the wall 74 and covers the ends of the strips 52. Where the wall angle fitting 75 is coloured black, this may also give the appearance of a shadow gap.

Figure 27 shows a further panel system 80 in which a number of panels 81, 82 are configured to fit to a number of parallel framework members 83, 84, 85. The framework members may again be standard T-grid members.

However, in this embodiment the panels 81, 82 supply the transverse structure to the framework. There are no transverse members in the framework, but the cross-members 86, 87, 88 in each panel are configured to engage with the framework members 83, 84, 85. This is preferably achieved using a hook 90 or similar element at each end of the cross-member 86, 87, 88 which sits over the top of the framework member 83, 84, 85. Thus, the panel provides a transverse rigidity to the panel system.

This embodiment remains a modular system, since preformed panels are fitted to the pre-existing or pre-installed framework. The panels are attached to the framework solely by the weight of the panels and the configuration of the ends of the cross-members 86, 87, 88. The framework 83, 84, 85 and cross-members 86, 87, 88 may be disguised by the spacing of the decorative strips 89 around the join and by any of the colour arrangements described above.

However, most pre-existing frameworks include a complete T-grid with transverse framework members already in place. Therefore, for retrofitting applications one of the embodiments shown in Figures 1 to 26 may be preferred.

The invention provides a modular panel system which creates coverings with an appearance approximating that provided by continuous strips, but with the practicality of modular systems.

The panels may use easily fabricated components, such as wooden strips and extruded components. The components are easily connected to form the panels.

Although the invention has been described with reference to wall or ceiling coverings, the invention may also find applications in cladding, doors, including garage doors, sunshades, window coverings, screens (such as privacy screens) and the like.

Acoustic blankets or other acoustic elements may be installed behind the decorative strips. Other backings may be provided for other effects, e.g. visual or lighting effects.

Although the drawings show the decorative strips lying perpendicular to their supports, the strips could also be slanted. This has the benefit of hiding the underlying structure when viewed from the front.

While the present invention has been illustrated by the description of the embodiments thereof, and while the embodiments have been described in detail, it is not the intention of the Applicant to restrict or in any way limit the scope of the invention to such detail. Additional advantages and modifications will readily appear to those skilled in the art. Therefore, the invention in its broader aspects is not limited to the specific details, representative apparatus and methods, and illustrative examples shown and described. Accordingly, departures may be made from such details without departure from the spirit or scope of the Applicant's general inventive concept.

CLAIMS:

1. A modular panel system including modular panels each having a plurality of decorative strips and one or more transverse supports supporting the decorative strips, said panels configured to mount to and disguise a supporting framework.

2. A modular panel system as claimed in claim 1 wherein, when a panel is mounted on a framework, a facing edge of each decorative strip at least partially conceals the framework.

3. A modular panel system as claimed in claim 1 or 2 wherein at least one end of each decorative strip is profiled such that, when a panel is mounted on a framework, a facing edge of each decorative strip extends around a framework member to provide a gap between ends of strips on adjacent panels less than a width of the framework member.

4. A modular panel system as claimed in any preceding claim wherein the panels are configured to conceal joins between panels.

5. A modular panel system as claimed in any preceding claim wherein the decorative strips on installed panels form a substantially uniform covering of decorative strips.

6. A modular panel system as claimed in any preceding claim wherein the panels are configured to be supported by the framework without fixed attachment to the framework.

7. A modular panel system as claimed in any preceding claim wherein the panels are configured to be installed without fixed attachment to adjacent panels.

8. A modular panel system as claimed in any preceding claim wherein the decorative strips are arranged parallel to each other.

9. A modular panel system as claimed in any preceding claim wherein the position of a strip parallel to and adjacent an edge of the panel is such that the spacing between that strip and an adjacent strip in an adjacent installed panel is substantially the same as the spacing of any two adjacent strips on the same panel.

10. A modular panel system as claimed in any preceding claim wherein each panel includes a backing, wherein at least those parts of the supports and the backing visible in the assembled panel system are the same colour.

11. A modular panel system as claimed in claim 10 including a framework for supporting the panels, wherein at least that part of the framework visible in an assembled panelled covering is the same colour as the supports and backing.

12. A modular panel system as claimed in claim 11 wherein the framework, the supports and the backing are a dark colour, preferably black.

13. A modular panel system as claimed in any one of claims 10 to 12 wherein the backing is an acoustic material.

14. A modular panel system as claimed in any preceding claim wherein the framework and the transverse supports are coloured so as to disguise the framework and transverse supports.

15. A modular panel system as claimed in claim 14 wherein at least those parts of the supports and the framework visible in the assembled panel system are the same colour.

16. A modular panel system as claimed in nay preceding claim, being a modular ceiling panel system.

17. A modular panel system as claimed in claim 16, wherein the supporting framework is a standard ceiling grid framework.

18. A modular panel system including modular panels each having a plurality of decorative strips and one or more transverse supports supporting the decorative strips, said panels configured to mount to a supporting framework, the framework and the transverse supports being coloured so as to disguise the framework and transverse supports.

19. A panel including one or more supports and a plurality of decorative strips, each support comprising an elongate member having a plurality of transverse notches arranged along its length for receiving and retaining the strips, each notch having one or more profiled edges.

20. A panel as claimed in claim 19 being an interior or exterior wall or ceiling covering panel.

21. A panel as claimed in claim 19 being an interior or exterior screen panel.

22. A panel as claimed in any one of claims 19 to 21 wherein the profiled edges are shaped for retention of the decorative strips.

23. A panel as claimed in claim 22 wherein the profile of each notch is a toothed profile.

24. A panel as claimed in any one of claims 19 to 23 being a modular panel, configured to be installed with one or more like panels.

25. A panel as claimed in claim 24 wherein the edges of each panel are shaped to receive a support structure.

26. A panel as claimed in any one of claims 19 to 25 wherein the decorative strips are formed from timber, metal or plastics material.

27. A panel as claimed in any one of claims 19 to 26 wherein the supports are generally U-shaped supports.

28. A panel as claimed in any one of claims 19 to 27 wherein the supports are formed from a metal.

29. A panel as claimed in any one of claims 19 to 28 wherein the supports are extrusions.

30. A panel as claimed in any one of claims 19 to 29 wherein the decorative strips are arranged in parallel spaced apart relationship.

31. A panel as claimed in any one of claims 19 to 30 wherein the decorative stripes are arranged with respect to the supports such that their width is substantially perpendicular to the supports and each of the decorative strips is substantially wider than it is thick.

32. A panel including one or more supports and a plurality of decorative strips, each support comprising an elongate member having a plurality of transverse notches arranged along its length for receiving and retaining the strips, wherein each support is substantially U-shaped in cross-section.

33. A panel including one or more elongate supports and a plurality of decorative strips each having a back surface with a plurality of notches formed therein, wherein each elongate support is received within notches in two or more of the decorative strips and has a cross-sectional shape matching the shape of the notches.

34. A panel as claimed in claim 33 being an interior or exterior wall or ceiling covering panel.

35. A panel as claimed in claim 33 being an interior or exterior screen panel.

36. A panel as claimed in claim 33 wherein each notch has a shape which impedes movement of the elongate support perpendicular to the back surface and out of the notch.

37. A panel as claimed in claim 34 wherein each notch has a shape which is narrower at the back surface than at a widest point of the notch.

38. A panel as claimed in claim 35 wherein each notch is a dovetail shape.

39. A panel as claimed in claim 34 wherein each notch has one or more recesses configured to receive corresponding protrusions on the elongate supports.

40. A panel as claimed in claim 34 wherein the elongate supports are formed as extrusions.

41. A panel as claimed in claim 33 wherein each decorative strip is secured to the appropriate elongate supports using a fastener or adhesive.

42. A panel as claimed in claim 33 wherein the elongate supports are configured to engage with one or more joining members for joining the elongate supports and/or mounting the covering to an interior or exterior wall or ceiling.

43. A panel as claimed in claim 42 wherein the elongate supports engage with the joining members using a push-fit.

44. A panel as claimed in claim 42 wherein the joining members are formed as extrusions.

45. A panel as claimed in claim 44 wherein the joining members are substantially T-shaped extrusions.

46. A panel as claimed in claim 42 wherein the joining members are arranged to support a backing material.

47. A panel as claimed in claim 33 wherein the panel is modular, and is configured to be installed with one or more like panels.

48. A panel as claimed in claim 33 wherein each modular panel includes at least two elongate supports.

49. A panel as claimed in claim 33 wherein the elongate supports are arranged to protrude from one edge of a panel and to provide a recess at the opposite edge of the panel, so that when installed with like panels the elongate supports overlap the join between panels.

50. A panel as claimed in claim 33 wherein joining members engage with the elongate supports for joining the elongate supports and/or mounting the covering to a wall or ceiling, and these joining members span two or more panels.

51. A panel as claimed in claim 33 wherein the decorative strips are formed from timber, engineered wood, metal or plastics material.

52. A panel as claimed in claim 33 wherein the decorative stripes are arranged in parallel spaced apart relationship.

53. A panel as claimed in any one of claims 33 to 52 wherein the decorative stripes are arranged with respect to the supports such that their width is substantially perpendicular to the supports and each of the decorative stripes is substantially wider than it is thick.

54. A panel substantially as herein described with reference to any embodiment shown in the accompanying drawings.

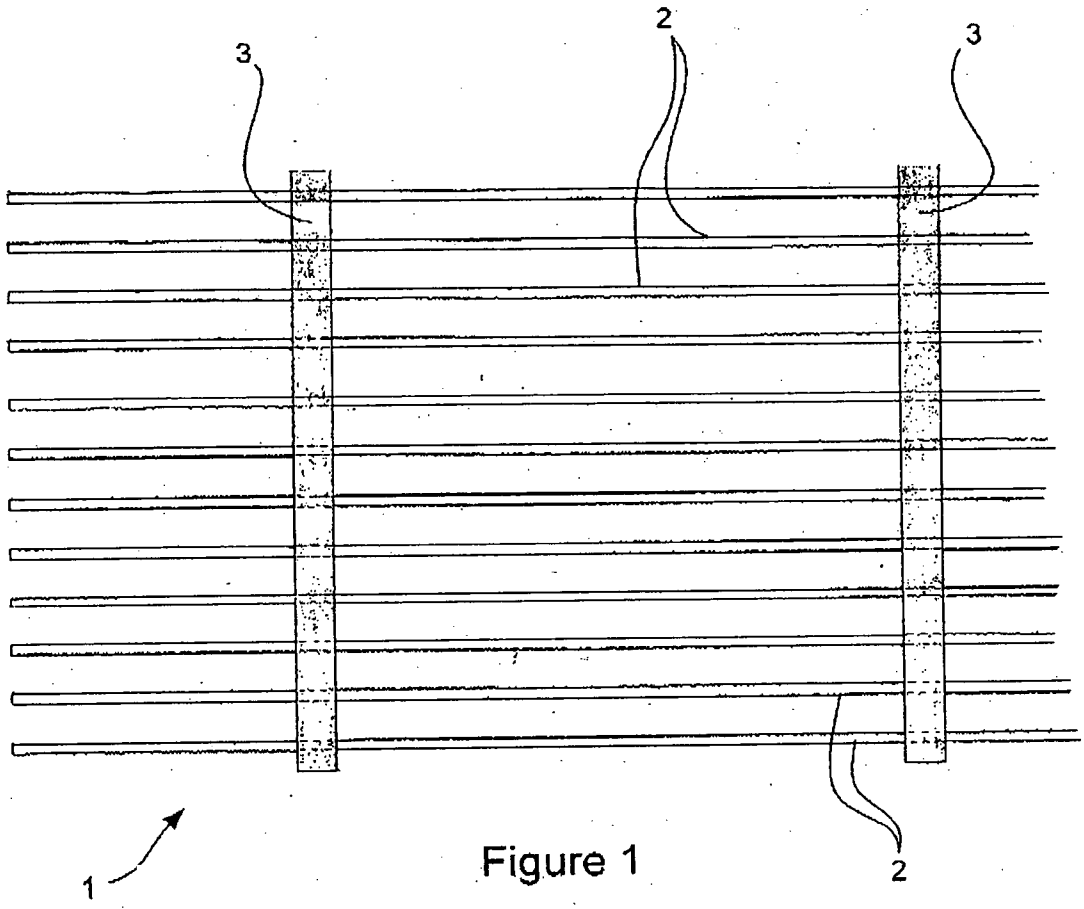


Figure 1

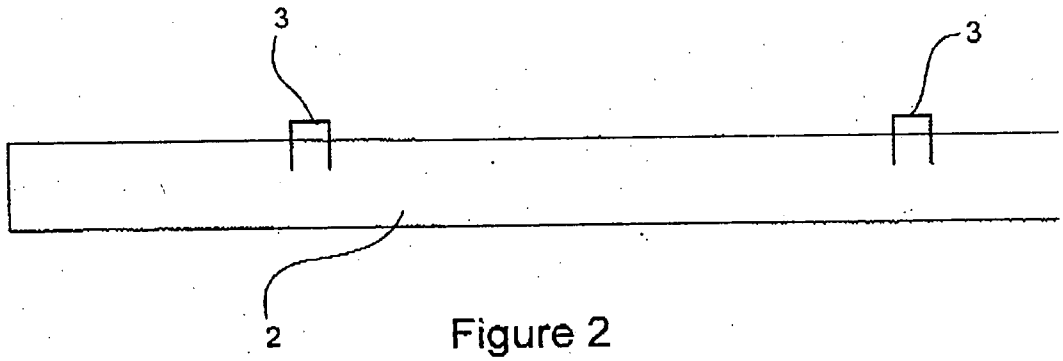


Figure 2

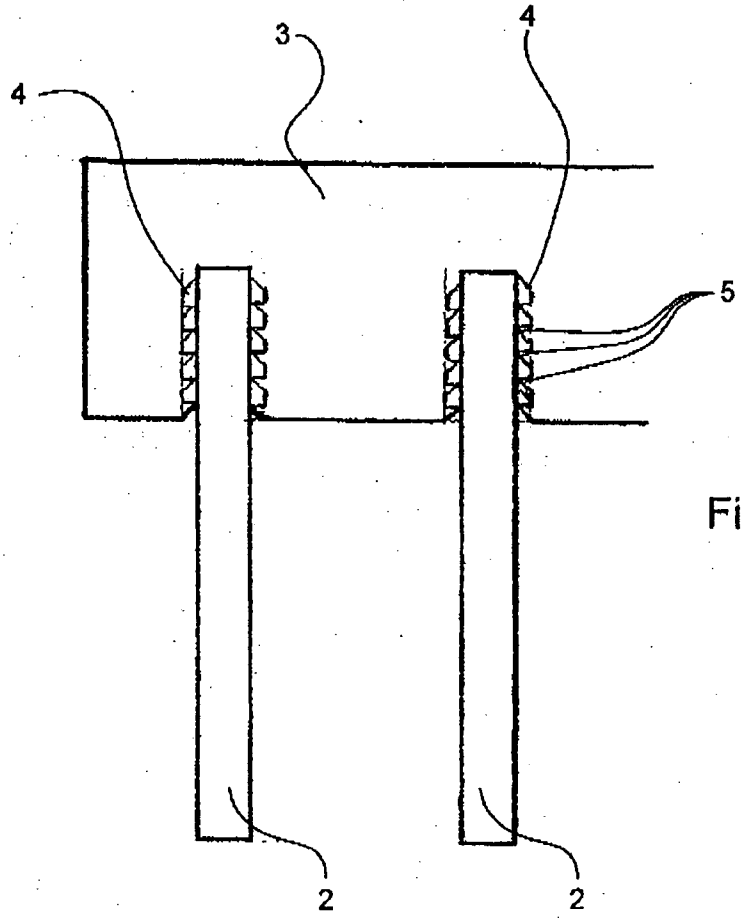


Figure 3

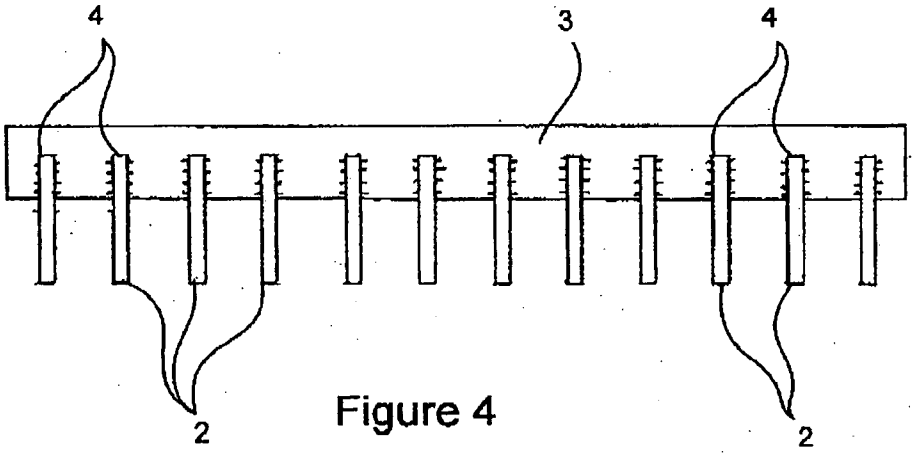


Figure 4

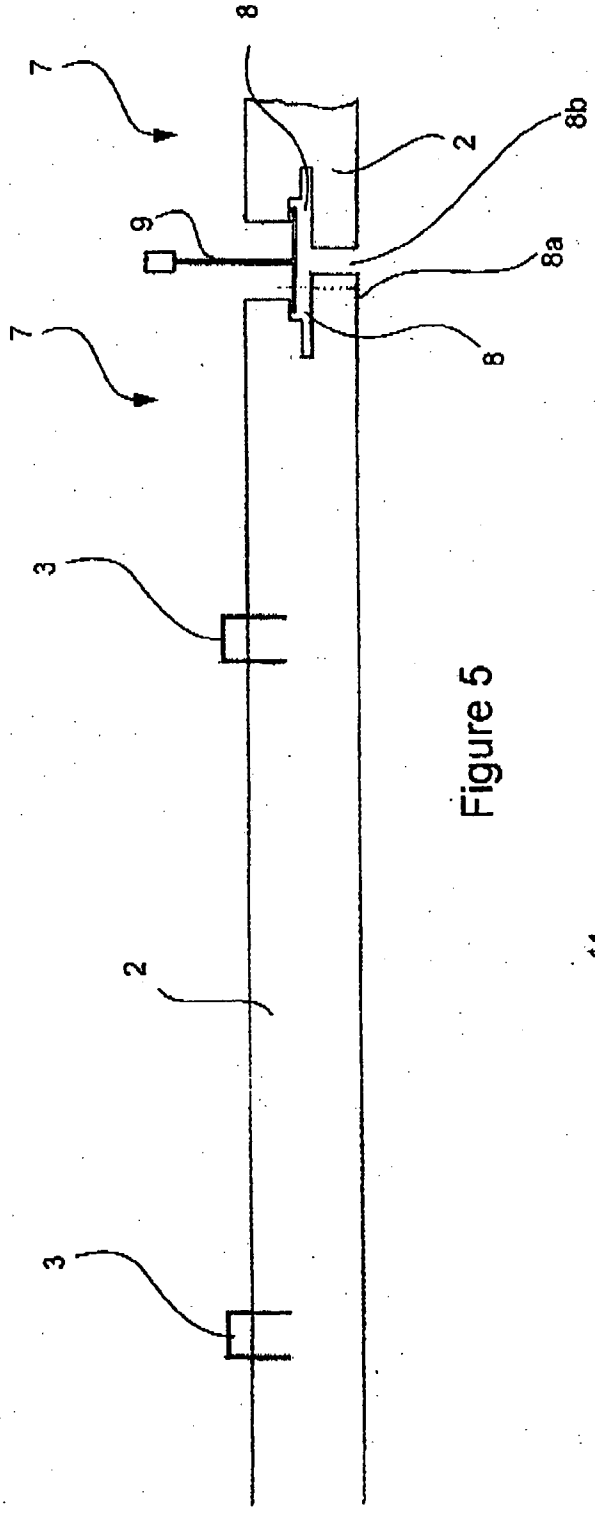


Figure 5

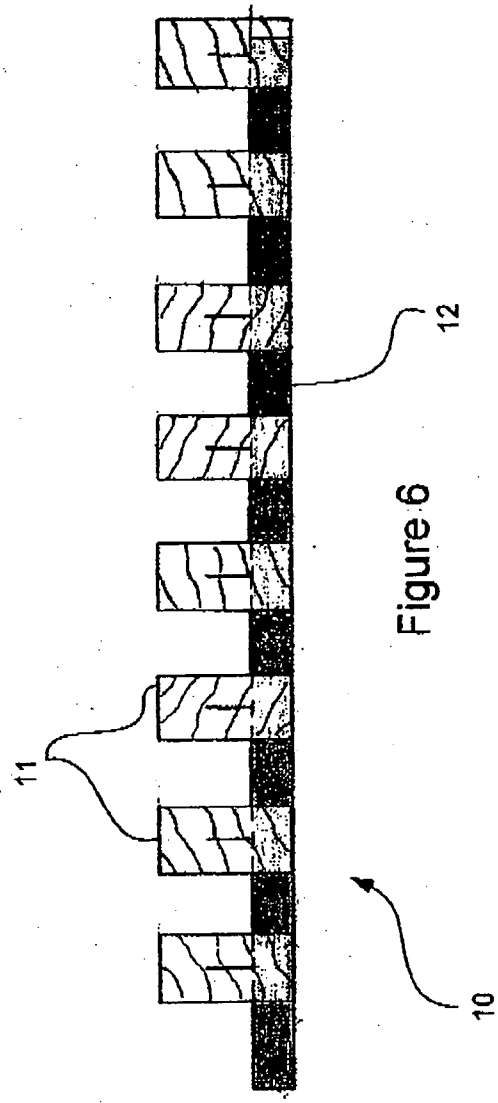


Figure 6

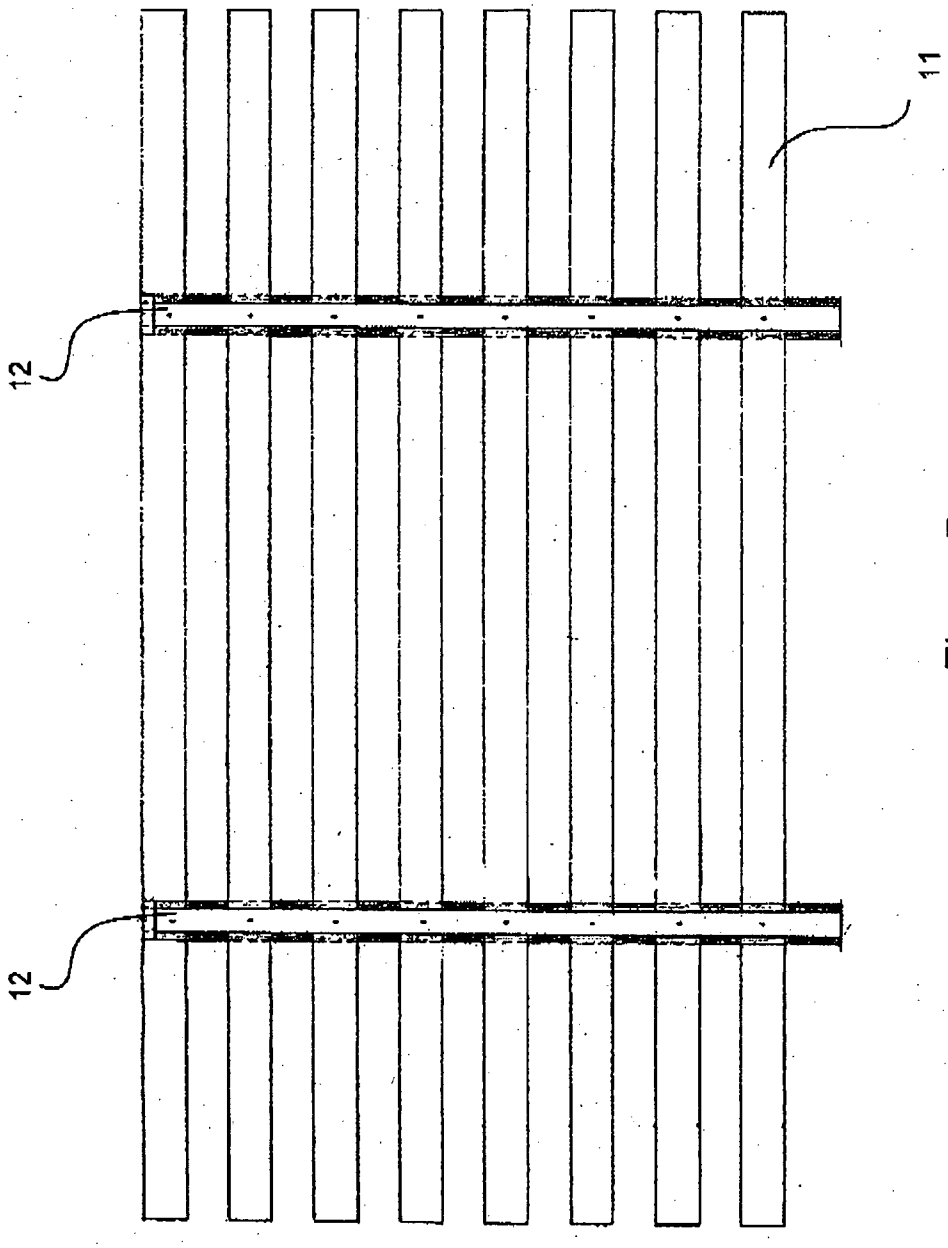


Figure 7

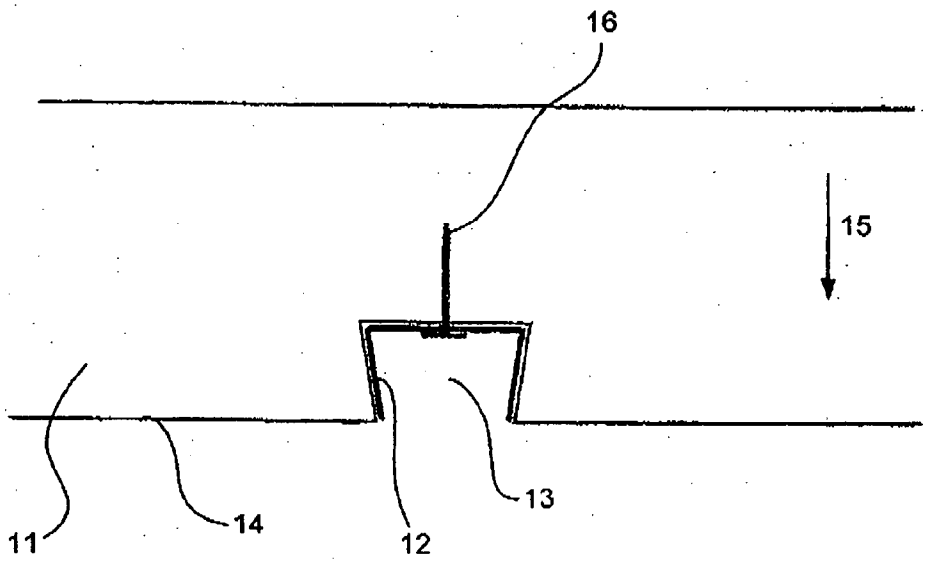


Figure 8

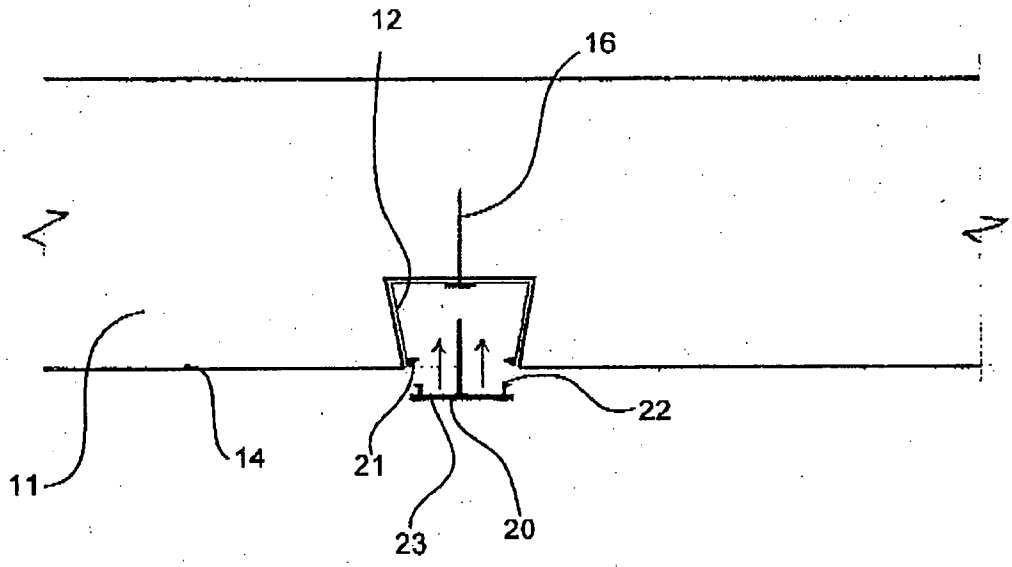


Figure 9

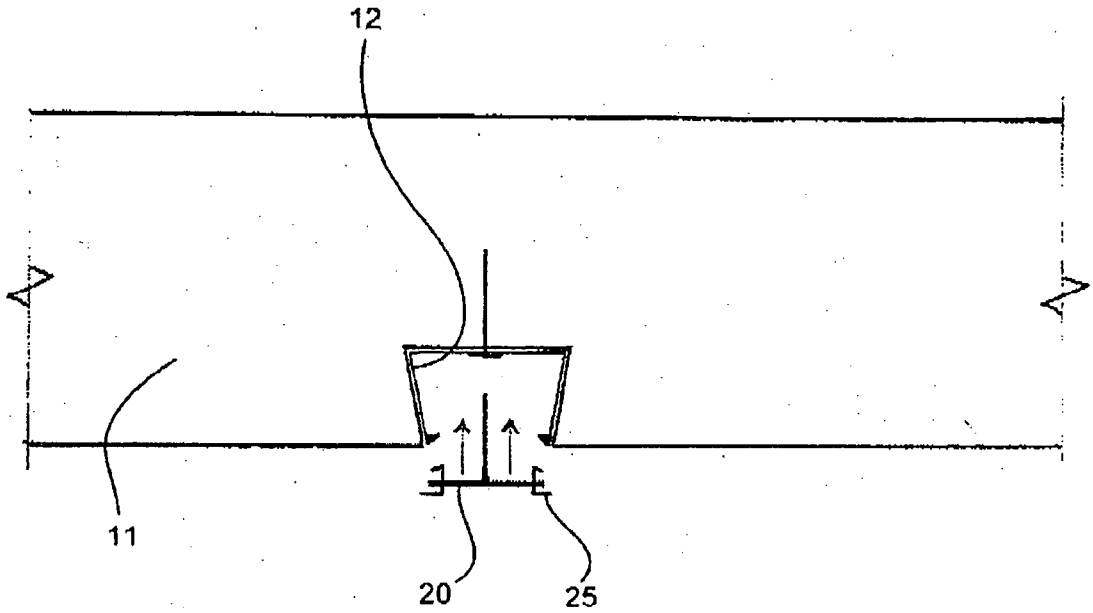


Figure 10

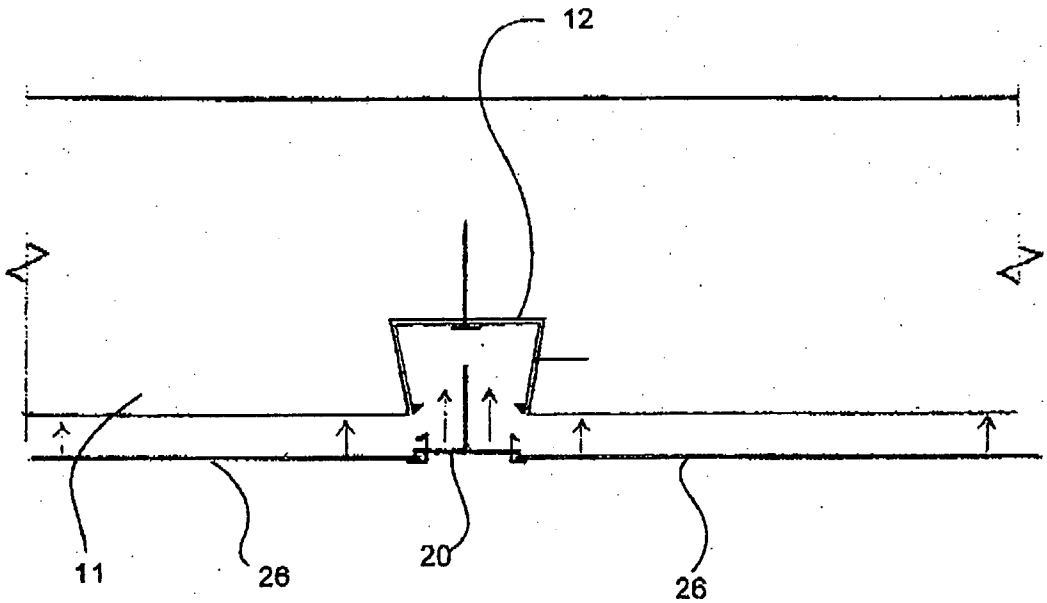


Figure 11

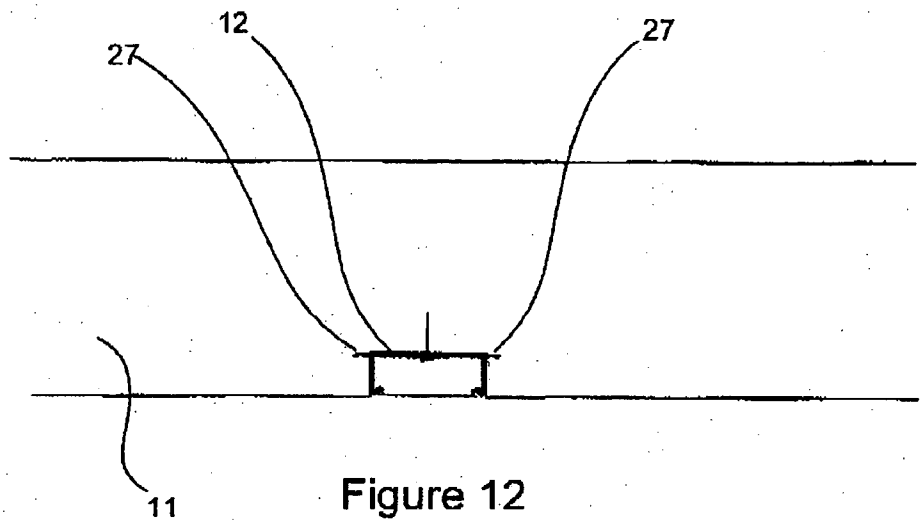
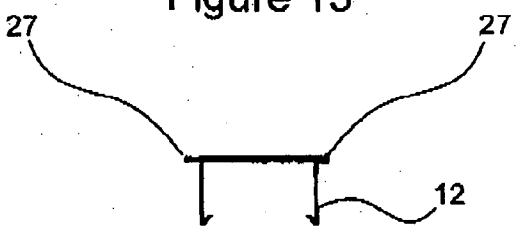


Figure 12

Figure 13



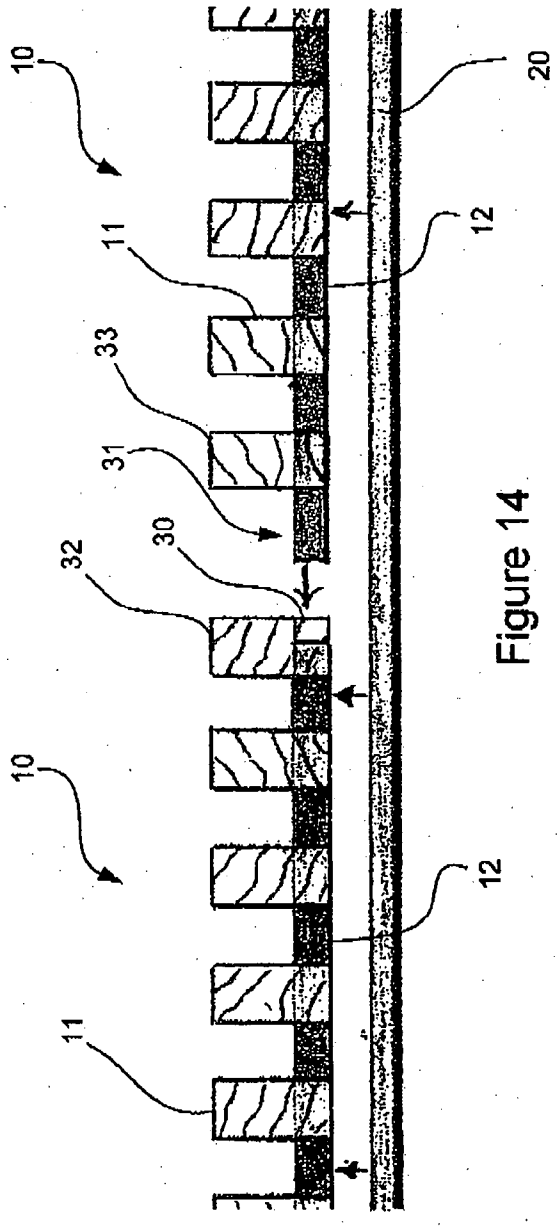


Figure 14

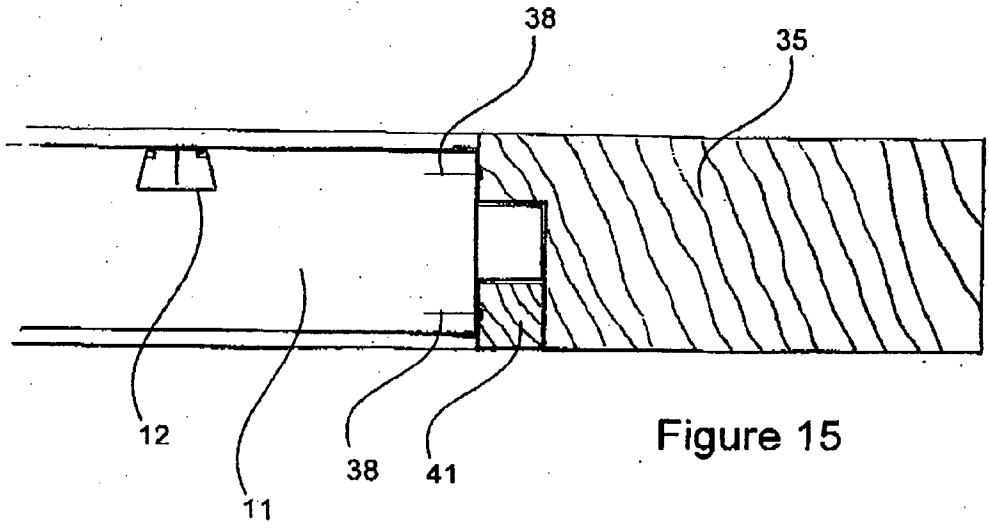


Figure 15

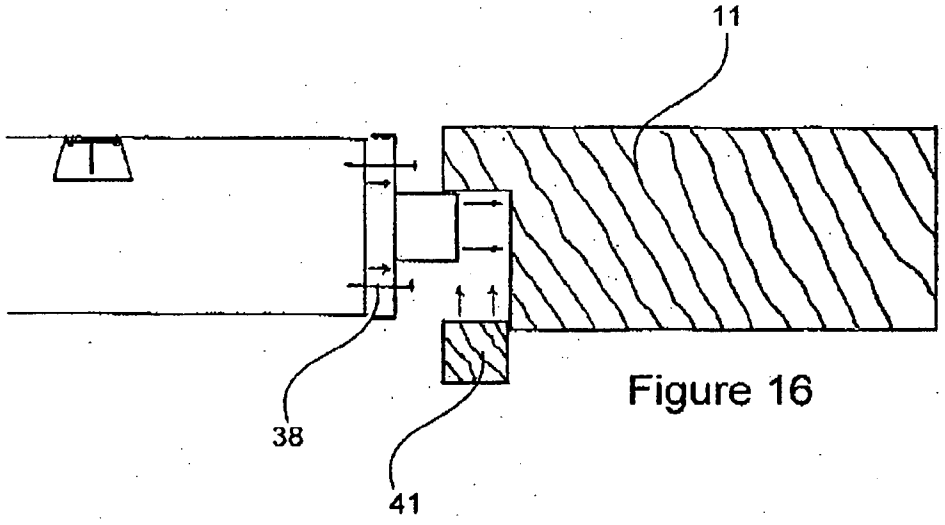


Figure 16

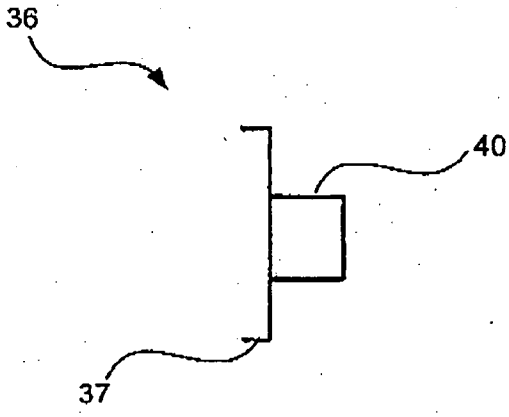


Figure 17

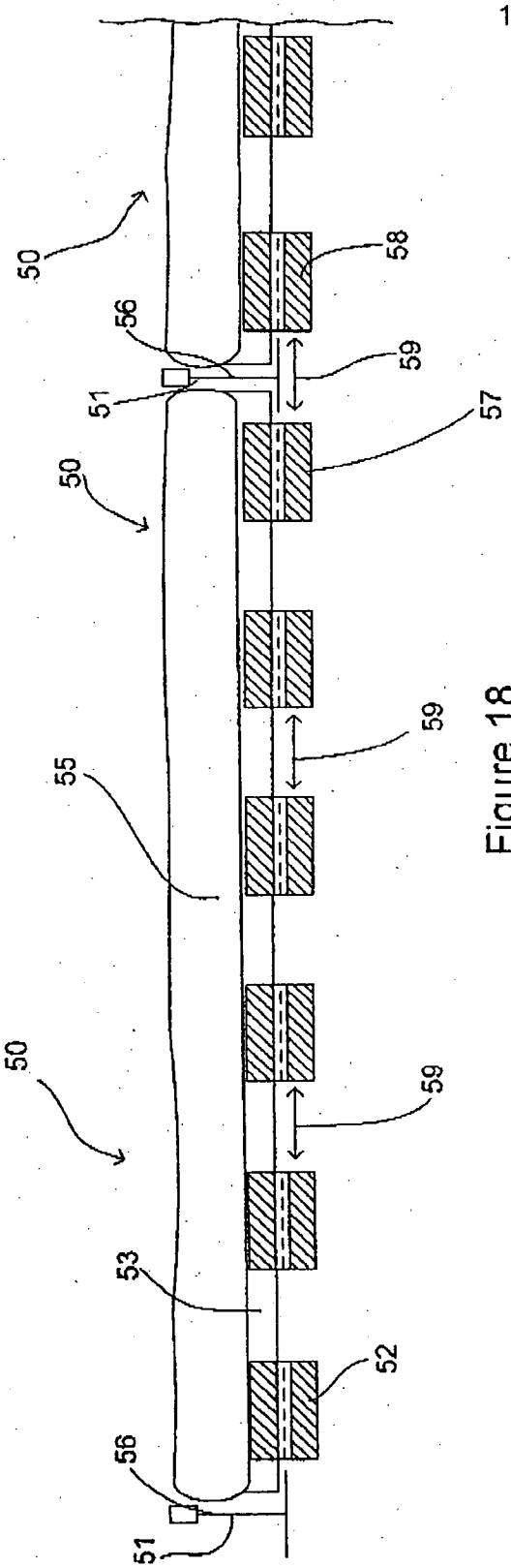


Figure 18

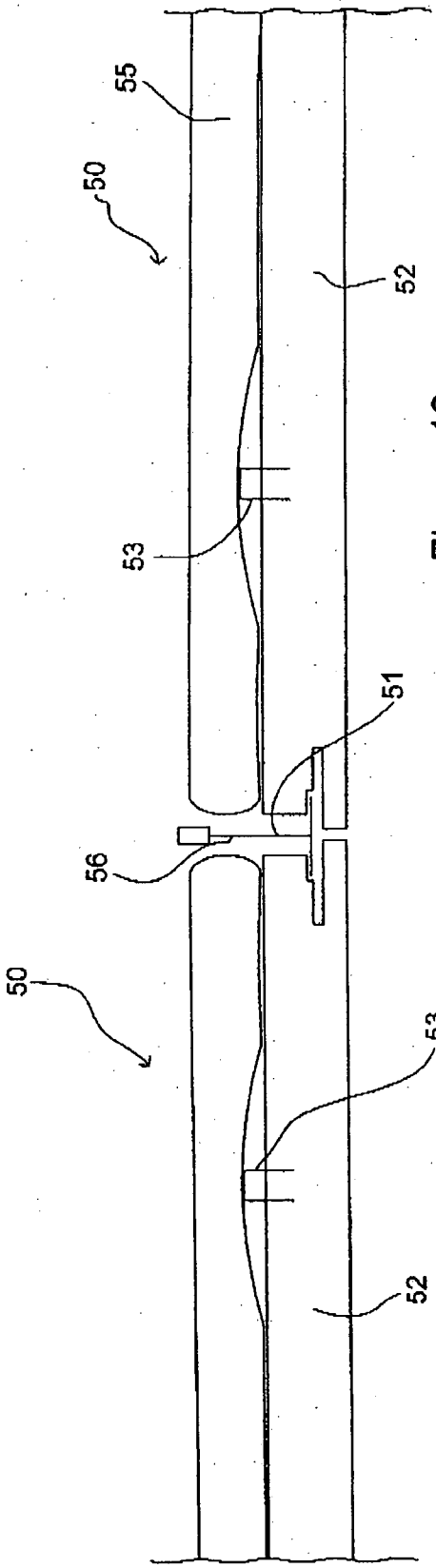


Figure 19

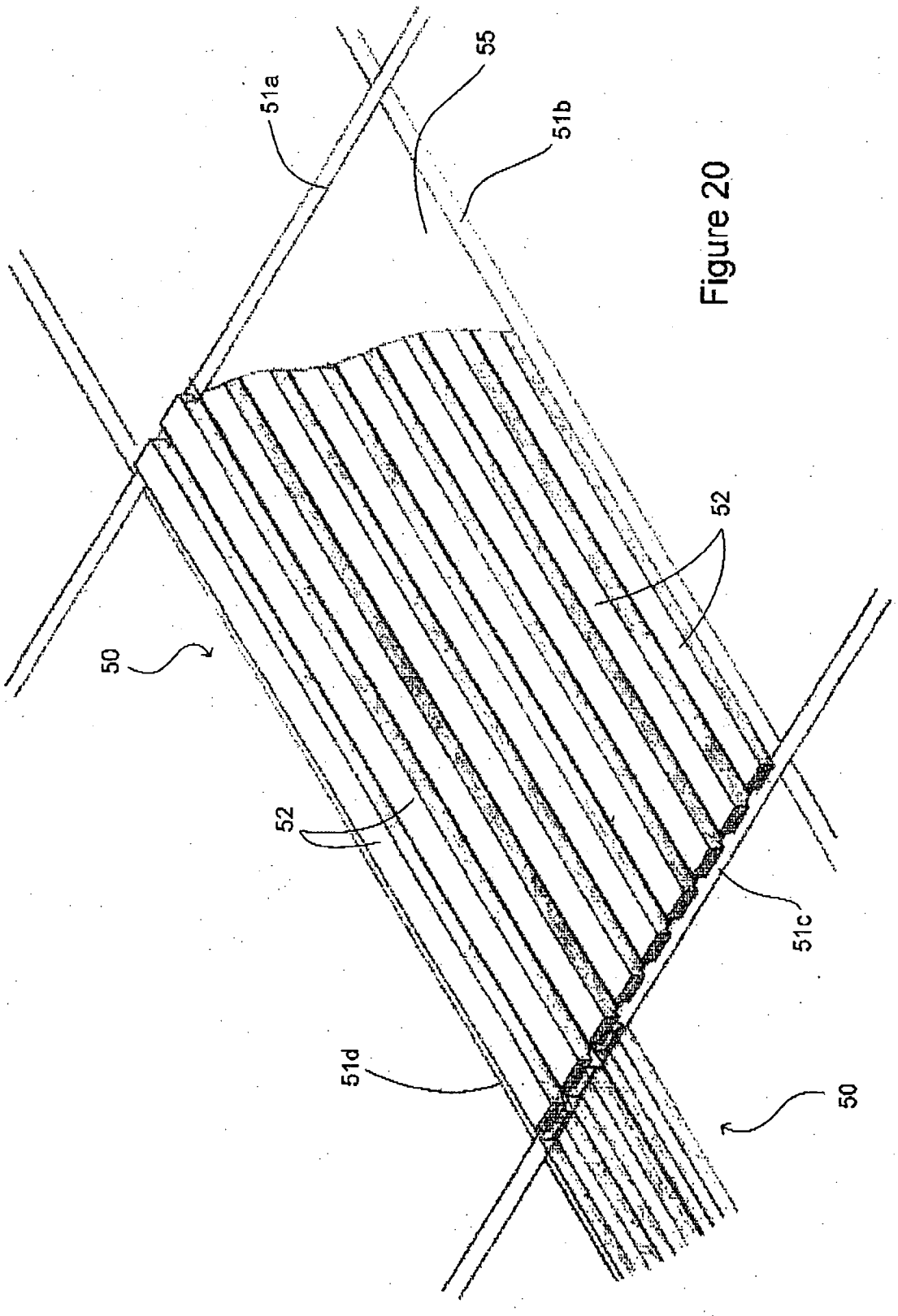


Figure 20

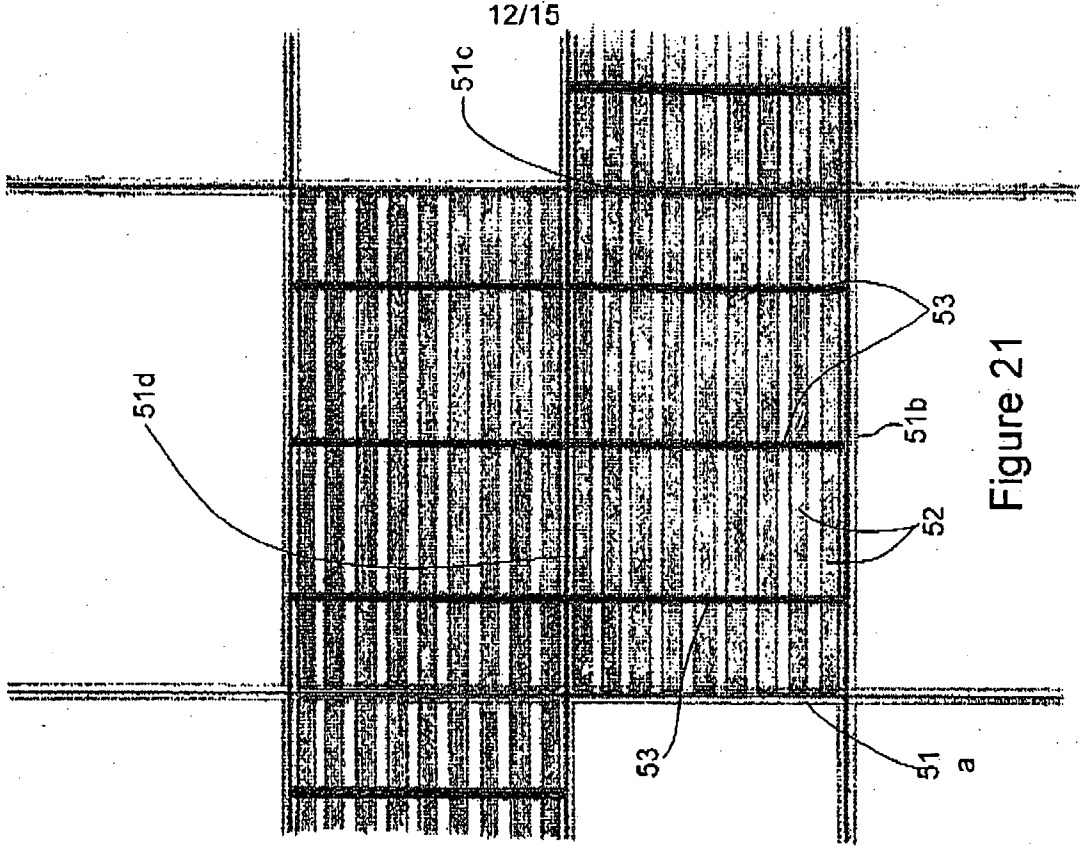


Figure 21

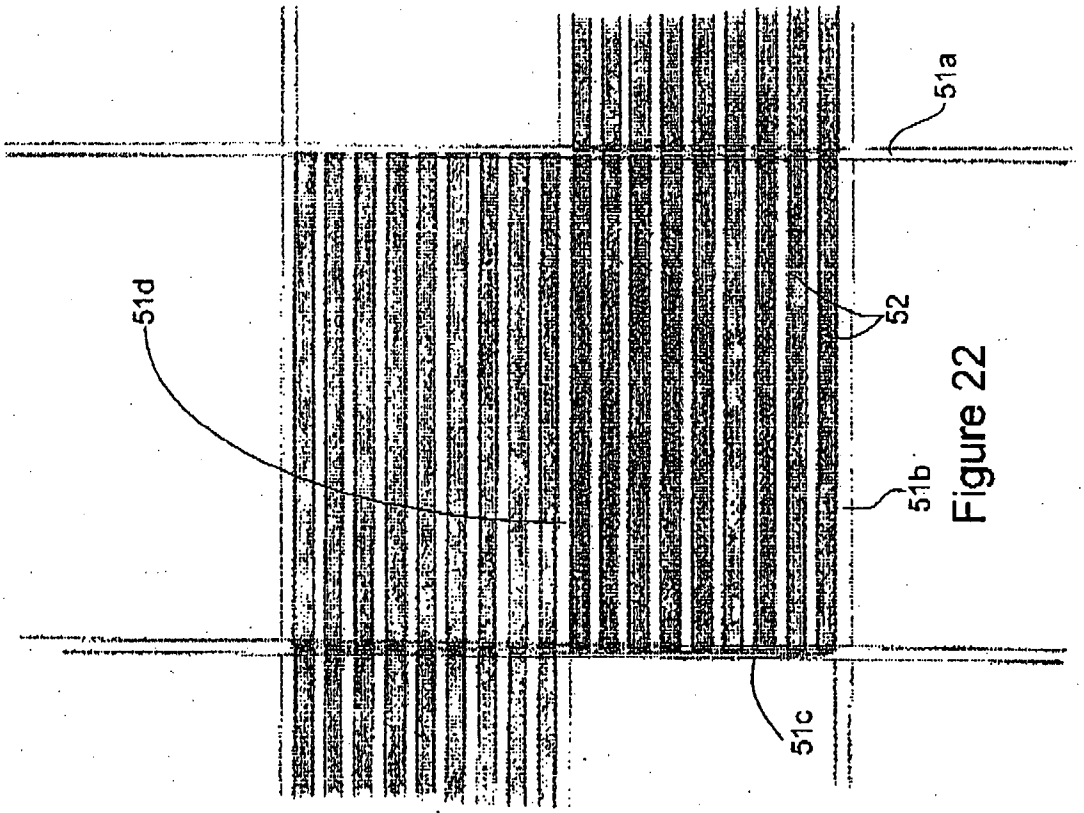


Figure 22

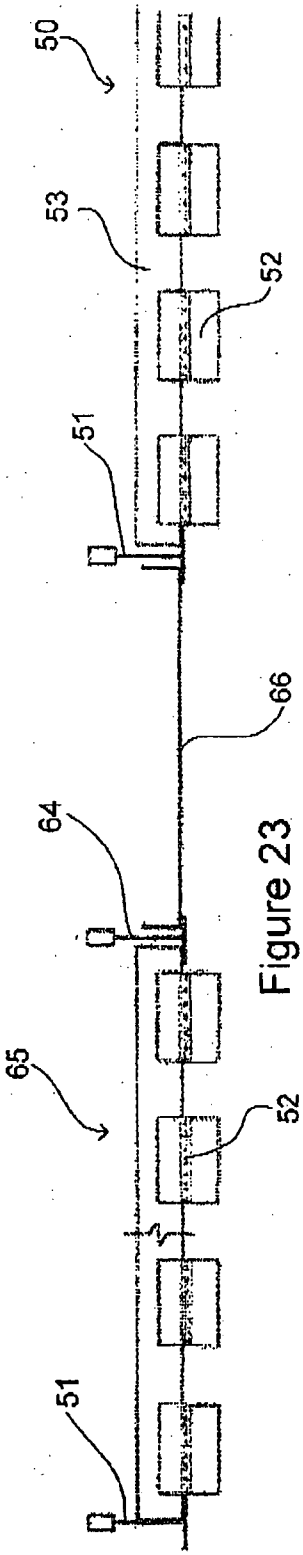


Figure 23

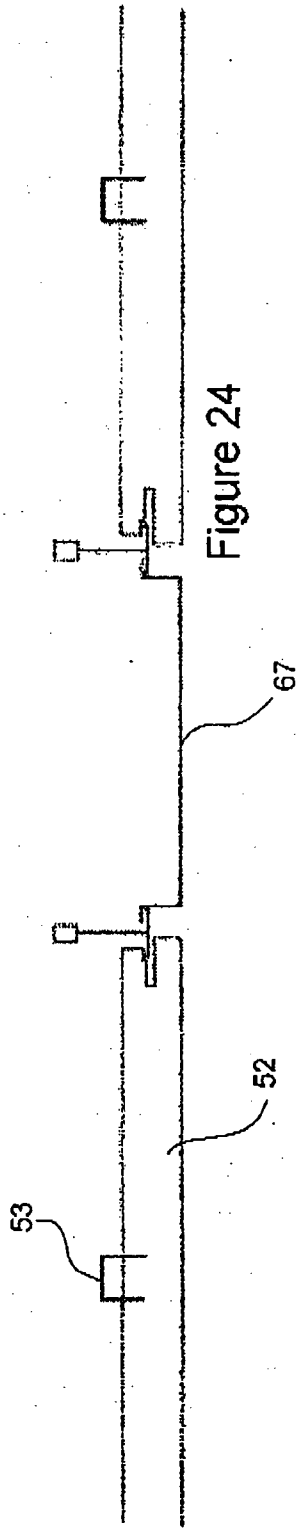


Figure 24

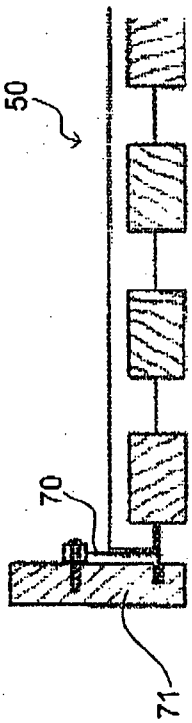


Figure 25

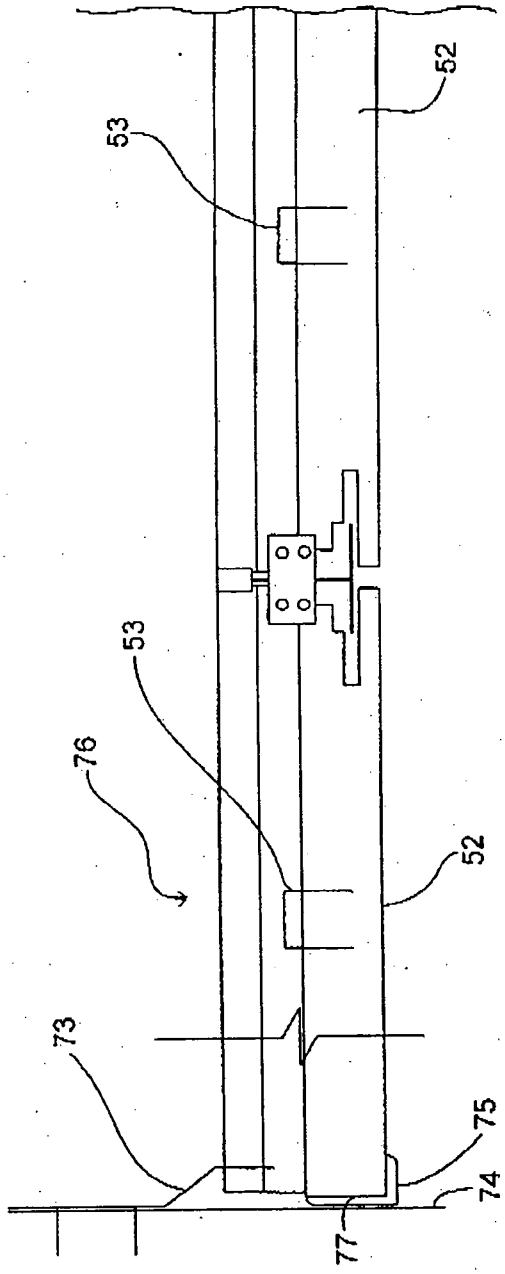


Figure 26

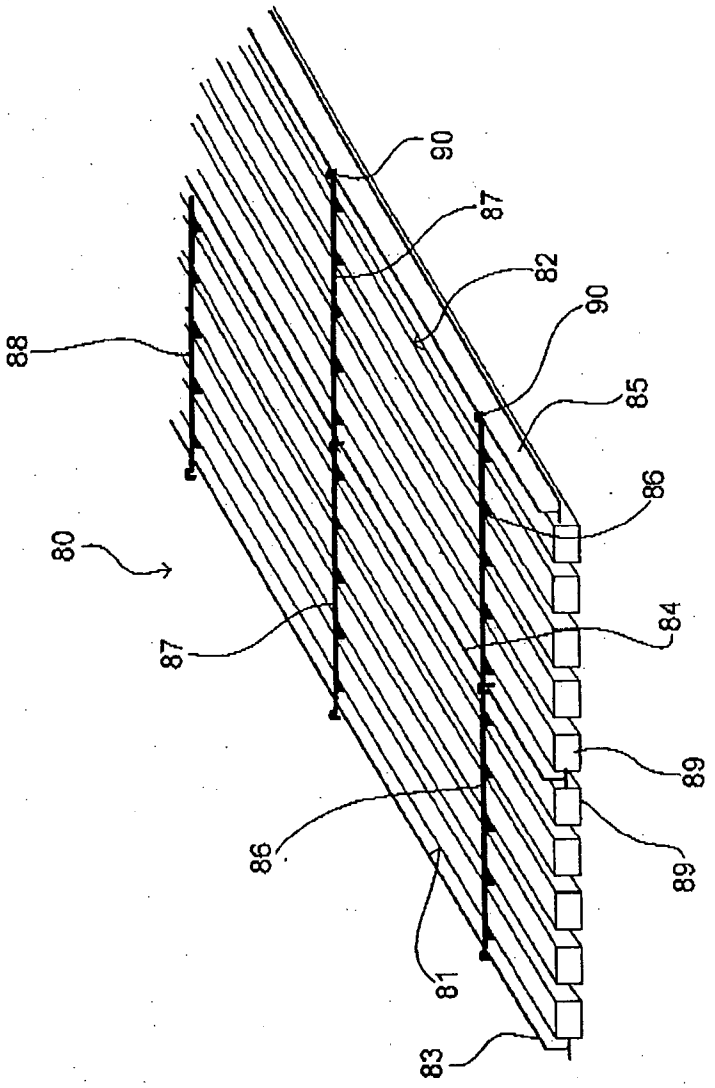


Figure 27

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU2008/001179

A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl.

E04B 9/36 (2006.01) ***E04B 9/28*** (2006.01) ***E04F 13/08*** (2006.01)

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

DWPI, EPODOC: /EC/IC OR E04F10, E04F13, E04H17, E04B1, E04B2, E04B9, E06B5, E06B7, E06B9 and keywords: panel, strip, disguis, support, ceil

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	US 4738066 A (REED) 19 April 1988 Figures and column 2 line 59 to column 3 line 58	1, 5-18 2-4
X Y	FR 2762630 A (DECORAL SA) 30 October 1998 Figure 1	1, 5, 7-9, 16 2-4
Y	US 3903671 A (CUIN et al) 9 September 1975 Figure 1	2-4

☐ Further documents are listed in the continuation of Box C ☒ See patent family annex

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
20 October 2008	04 NOV 2008
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustralia.gov.au Facsimile No. +61 2 6283 7999	Authorized officer **M. BREMERS** AUSTRALIAN PATENT OFFICE (ISO 9001 Quality Certified Service) Telephone No : +61 2 6283 2052

INTERNATIONAL SEARCH REPORT.

International application No.
PCT/AU2008/001179

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a)

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

See Extra Sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.: 1-18

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.

Supplemental Box
(To be used when the space in any of Boxes I to IV is not sufficient)

Continuation of Box No: III

This International Application does not comply with the requirements of unity of invention because it does not relate to one invention or to a group of inventions so linked as to form a single general inventive concept.

In assessing whether there is more than one invention claimed, I have given consideration to those features which can be considered to potentially distinguish the claimed combination of features from the prior art. Where different claims have different distinguishing features they define different inventions.

This International Searching Authority has found that there are different inventions as follows:

- Claims 1-18 are directed to a modular panel system having transverse supports, decorative strips and a framework wherein the panels disguise the framework. It is considered that the disguise of the framework comprises a first distinguishing feature.

- Claims 19-54 are directed to a panel having a support and decorative strips attached thereto by notches in the support or strip. It is considered that attachment by notches comprises a second distinguishing feature.

PCT Rule 13.2, first sentence, states that unity of invention is only fulfilled when there is a technical relationship among the claimed inventions involving one or more of the same or corresponding special technical features. PCT Rule 13.2, second sentence, defines a special technical feature as a feature which makes a contribution over the prior art.

The only feature common to all of the claims is a panel having a support and decorative strips. However this concept is not novel in the light of:

GB 1316265 A (ENVIROMENTAL TECHNOLOGY LTD) 9 May 1973, Figure 3
DE 2559077 A (DORNIER GMBH) 7 July 1977, Figure 1
FR 2762630 A (DECORAL) 30 October 1998, Figure 1
US 5475962 A (HORSTEN et al) 19 December 1995, Figures 5 and 6

This means that the common feature can not constitute a special technical feature within the meaning of PCT Rule 13.2, second sentence, since it makes no contribution over the prior art.

Because the common feature does not satisfy the requirement for being a special technical feature it follows that it cannot provide the necessary technical relationship between the identified inventions. Therefore the claims do not satisfy the requirement of unity of invention *a posteriori*.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.
PCT/AU2008/001179

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member					
US	4738066	NONE					
FR	2762630	NONE					
US	3903671	BE	807015	CA	994976	DE	2355314
		FR	2205611	GB	1455556	LU	68748
		NL	7315259	ZA	7308501		

Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.

END OF ANNEX