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(54) **SPACE PARTING WALL STRUCTURE**

RAUMTEILENDE WANDKONSTRUKTION

STRUCTURE DE PAROI DE SÉPARATION D'UN ESPACE

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EP 2 113 046 B1

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Description

Technical field of the invention

[0001] The present invention relates, in general, to a wall structure for the separation of spaces or work, domestic, tradeshows and other similar environments and in particular, to a wall structure for delimiting a shower space.

Background of the invention

[0002] In the field of interior design, or even when setting up tradeshow stands, there often arises the need to separate the environments, in such a manner to rationalise the internal spaces available adapting them to all the possible requirements of the end user.

[0003] Currently available in the market are various types of separating walls made up of a plurality of panels, of various shapes and suitable materials, for example wood, plastics and glass, fixed onto a metal framework, usually made of aluminium. The presence of the framework considerably limits the versatility of use and the arrangement of the known separation walls. Furthermore, such walls require, in order to be installed, the intervention of skilled personnel and often long periods of time for mounting, consequently increasing the costs.

[0004] In addition, with special reference to a shower space, the latter is traditionally made of a shower tray of the standard form, usually squared or rectangular, which is provided with a drain hole and an edge rising from which is a plurality of separation panels for a closed space.

[0005] During the step of setting up a shower space, the shower tray is usually laid on the floor, arranged with at least one of its edges against the wall of a bathroom and closed on two or three sides by the relative panels, one of which serves as door. The panel serving as a door, or all the panels, can be replaced by a waterproof curtain. Preferably, the shower tray is arranged at a corner of the room, in such a manner, to exploit the pre-existing walls.

[0006] The standardised shape of the shower tray limits the shape of the shower space to a certain degree, and hence freedom to design a bathroom. Consequently, the user intending to set up, inside his bathroom, a shower space having a specific shape and overall size, shall, where possible and practicable, have a shower tray manufactured ad hoc, with the ensuing increase of production and installation costs of the shower space.

[0007] Available in the market are wet floor shower areas, obtained by rendering a portion of the floor converging towards a drain hole waterproof and possibly enclose the shower space thus delimited by with a waterproof curtain.

[0008] The technical drawback yet to be overcome is that of setting up structures for delimiting spaces, in particular shower spaces, free of shape and/or dimension constraints.

[0009] WO 01/39647A, US 3538660A and JP 08/109690A disclose methods and devices of prior art for forming enclosure.

[0010] The main object of the present invention is to overcome the abovementioned drawback eliminating, or at least reducing, the abovementioned drawbacks, hence providing a wall structure for the separation of spaces of high arrangement versatility, such structure being of a wide range of shapes.

[0011] Another object of the present invention is to provide a wall structure for the separation of spaces, which is easy and quick to mount even by an end user and constructible at competitive costs.

[0012] Still, another object of the present invention is to provide a wall structure for the separation of a shower space.

[0013] These and other objects, described better hereinafter, are attained by means of a wall structure for the separation of spaces according to claim 1. In particular, it shall be observed how, through the wall structure for the separation of spaces of the invention, it is possible to delimit a space, in particular a shower space, neither fixed nor of an exclusively rectilinear shape, allowing to combine both the functionality of the separation walls of the known type and aesthetic features otherwise not obtainable.

Detailed description of the drawings

[0014] Characteristics and advantages of the present invention shall be clearer from the following detailed description of its currently preferred embodiments, solely provided for exemplifying and non-limiting purposes, with reference to the accompanying drawings, wherein;

Figure 1 is a perspective view of a wall structure for the separation of spaces;

Figure 2 is an exploded perspective view of three different types of base supports, with respective panels, combinable with each other in order to obtain a wall structure for the separation of spaces of any arrangement;

Figure 3 is a perspective view of a base support according to the prior art;

Figure 4 is a side view of an embodiment of a base support of the structure of Figure 1;

Figure 5 is a side view of the upper component of the base support of Figure 4;

Figure 6 is side view of the lower component of the base support of Figure 4;

Figure 7 is a perspective view of a possible arrangement of the upper component of Figure 5;

Figures 8-18 illustrate the steps of anchoring a base support of desired arrangement onto the floor;

Figure 19 is an exploded perspective view of a lower joint for connection between two adjacent panels of a separation wall structure according to the invention;

Figure 20 is a perspective view of the joint of Figure 19 as assembled;

Figure 21 is a substantially front view of the parts of the joint of Figure 19 fixed against the lower edges of respective adjacent panels;

Figure 22 is a perspective view of the joint of Figure 19 in an operating position;

Figure 23 is a perspective view of an upper joint for connection between two adjacent panels associated to a support arm of said panels;

Figure 24 is a perspective view of the parts of the joint of Figure 23 fixed against the upper edges of respective adjacent panels;

Figure 25 is a perspective view of a wall attachment component;

Figure 26 is an exploded perspective view and with parts cut-out, of an extendable arm for supporting a wall structure for the separation of spaces according to the invention;

Figures 27a and 27b are, respectively, a side view and a plan view of the arm of Figure 26 at maximum closure or retraction position;

Figures 28a and 28b are, respectively, a side view and a plan view of the arm of Figure 26 at maximum open or extension position;

Figure 29 is a perspective view of pivot means associable to a moveable panel;

Figure 30 is an exploded perspective view of the pivot means of Figure 29;

Figure 31 is a section view, with parts cut-out, of another embodiment of the pivot means for the rotational coupling between a moveable panel and a support section;

Figure 32 is plan view of the pivot means of Figure 31; Figures 33-35 are side views, with parts cut-out, of a base support for sliding panels;

Figure 36 is a side view of a third embodiment of a base support for a wall structure designed to delimit a shower space;

Figure 37 is a section view of the base support of Figure 37 in a possible use position;

Figure 38 is a plan view of a possible arrangement of a shower space, obtainable by using a separation wall structure of invention; and

Figure 39 is another possible arrangement of a shower space obtainable by using a separation wall structure of the invention.

[0015] In the accompanying drawings, identical or similar parts and components are indicated by the same reference numbers.

Detailed description of the invention

[0016] Referring to Figures 1 and 2, a wall structure for the separation of spaces, or separation wall, generally indicated with reference number 10, is made up of means for anchoring onto the floor, in particular a base support

12, and by at least a panel 14, which can be associated to such means. The base support 12 can be anchored onto the floor by means of an adhesive means or by means of suitable mechanical anchoring means, such as screws, nails and other similar means. Each panel 14 may vary in terms of dimensions and be made of any suitable material, for example wood, plastics, glass, crystal and other similar material.

[0017] Represented in Figure 2 are different possible types of base supports, 12a, 12b, 12c, which can be head joined (for example in the manner illustrated in Figure 1), and the relative panels 14a, 14b, 14c.

[0018] More specifically, the supports can be: (i) of the rectilinear type 12a; (ii) or the curved type with a curvature angle variable between 15° and 90°, and submultiples; and (iii) of a broken line type 12c, also comprising a curved portion. Relative panels 14a, 4b, 14c correspond to the three types of supports mentioned above 12a, 12b, 12c. Preferably, the supports of the curved type 12b are elements with a curvature angle of 15° approximately, head joined to each other in a manner such to obtain a curved pattern subtended by an overall angle variable between 15° and 90°, while the panel associable to them is usually a single curved panel 14b subtended by an angle equivalent to the sum of the angles subtended by the supports 12b joined to each other. Same case applies to the curved side of the supports of the broken line type 12c.

[0019] In a simple embodiment according to the prior art, illustrated in Figure 3, the support 12 is formed by at least one section, which comprises a bottom 11 and a seat 18 delimited by two side edges 13 and 15. Accommodated in the seat 18 is a panel 14a, 14b, 14c of the abovementioned types.

[0020] The bottom 11 of the section 12 is made of any suitable rigid material, for example plastic material, such as an acrylic resin easy to maintain, while the two side edges 13 and 15 are made of elastically deformable material. Being the side edges 13 and 15 elastically deformable, the seat 18 delimited by them is capable of accommodating the panel in a watertight manner, advantageously avoiding the use of gaskets. Furthermore, the particular structure of the side edges 13 and 15 allows to compensate for possible construction defects of the panel, alongside any possible "out of plumb" and absorb any possible impacts against the panel.

[0021] In the particular case where the section 12 serves to delimit a wet floor shower tray, or a stepping area of a shower space, as it shall be described in details hereinafter, the side edge 15, also referred to as an internal edge due to the fact that it faces inwards the shower space, can be provided with a bevel 17. The bevel 17 facilitates the drainage of water towards the stepping area, and thus towards the drain hole, preventing water from stagnating on the edge 15.

[0022] With reference to Figures 4-7, illustrated on them is a base support according to an embodiment of the invention. This base support, generally indicated with

reference number 20, is a composite section made up of an upper or external component 30 and a lower or internal component 40. The upper component 30 can be snap-engaged with the lower component 40, which is intended, in use, to be fixed, for example glued or fixed by means of screws, onto the floor.

[0023] More in particular, as better illustrated in Figure 5, the upper component 30 is a section, made of elastically yielding material, for example flexible PVC, with a substantially rectangular section body. Formed in the body of the section 30 is a first upper seat 32 with the opening facing to the upper surface of the section and having a function analogous to seat 18 formed in the section 12 according to the prior art. The seat 32 is delimited by two shoulders 34. Furthermore, formed in the body of the section 30 is a second seat 36 open towards the lower surface of the section. Present in said second seat 36, preferably at the shoulders 34, is at least one engagement means, in the example a pair of notches 31, for anchoring the corresponding lower component 40 of the base support 20. The lower seat 36 is delimited by two flaps 38, from which first coupling means project inward, i.e. two mushroom-shaped elements 33 for snap-coupling with the lower component 40. In the example illustrated in Figure 5, the two notches 31 and the two mushroom-shaped elements 33 are arranged on opposite parts and symmetrically with respect to an x-x axis of the upper component 30.

[0024] The lower component 40, illustrated more in detail in Figure 6, is formed by one or more sections 40a, 40b, ...40g (Figures 13-15) made of rigid material, for example rigid PVC. Each section 40a, 40b, ...40g has a lower flat surface 42 for anchoring onto the floor and an upper face 44 projecting from which is at least second engagement means, in the example a pair of protrusions 41 provided with such shape to match with a respective notch 31 of the upper component 30. Furthermore, provided in the body of each section 40a, 40b, ...40g are second coupling means i.e. two cavities 48, symmetrically opposite, having a shape substantially complementary with the one of the mushroom-shaped elements 33 and provided with a narrow mouth 43 into which forcefully fitted is the head 35 of a respective mushroom-shaped element 33 of the upper component 30. Between the two cavities 48 there is a slot 45, intended to receive within it connection means between the two lower adjacent components 40 and between the lower component 40 and a wall P, as better described hereinafter.

[0025] Due to the special arrangement of the upper 30 and the lower 40 components, when the upper component 30 is coupled with at least one respective lower component 40 inadvertent separation of such components can no longer occur, while, by forcing the two mushroom-shaped elements 33 towards the external of the relative cavities 48, the upper component 30 can be detached from the lower component 40.

[0026] Advantageously, the upper component 30 is a continuous section of a preset extension, corresponding,

preferably, with the extension of one or more of the supports of types 12a, 12b 12c shown in Figure 2. On the other hand, the lower component 40 can be made in a single piece of an extension equivalent to the extension of the corresponding upper element 30, usually in case of a support of the rectilinear type 12a, or it can be made up of a plurality of section elements 40a, 40b, ...40g, usually in case of a support of the curved and/or broken line type 12b, 12c, which can be anchored onto the floor head joined or suitably spaced from each other according to the line of extension of the relative base support 20.

[0027] Now, referring to Figures 8-18, therein illustrated are the various laying steps of a base support 20. Preferably, selected as a starting point is a wall P of a room, preliminarily arranged against which is a template D (Figure 8), usually made of cardboard, having a profile similar to the one of the desired final base support 20 and whose purpose is to facilitate the subsequent laying steps of the support itself. Subsequently fixed against the wall P is an insert 50 (Figure 9), for example made of steel, made up of a plate 51 from which a plate 52 projects cantilevered.

[0028] Advantageously, associated to the insert 50 is a vertical wall section 56 passed through along its entire height by a seat 57 intended to accommodate, in use, a panel 14 with the relative gasket, thus guaranteeing an ideal waterproofing and allowing compensation of any possible irregularities of the wall P at the same time.

[0029] The plate 51 of the insert 50 and the grooved vertical section 56 are fixed onto the wall P, preferably by means of gluing, while the plate 52 is intended to be accommodated in the slot 45 of a first lower component 40a, in the example of the rectilinear type, of the base support 20 (Figure 11). This first component 40a is anchored onto the floor according to one of the abovementioned methods.

[0030] The first component 40a is followed by a second lower component 40b, in the example of the curved type, which is head joined to the first component 40a through connection means, in the example a fitting 54, also preferably made of steel, intended to be inserted partially into the slot 45 of the first component 40a and partially into the slot 45 of the adjacent component 40b (Figure 13). Also the second component 40b is anchored onto the floor.

[0031] In the specific case of anchoring onto the floor through one or more screws, said screws are screwed at the upper surface 44 of the lower component at a preset distance from each other, they pass through the slot 45, lastly, to provide anchorage onto the floor.

[0032] A plurality of lower components 40a, 40b...40g can be connected in series and glued and/or fixed with screws onto the floor until a desired arrangement is obtained (Figures 13-16). At this point the upper flexible component is then fitted, on the series of lower components 40a, 40b...40g, according to the method outlined previously, hence obtaining the desired base support section 20 (Figure 17). The end 22 of the section 20 is

closed by means of another insert 50 (Figure 18).

[0033] In particular, as shown in detail in figure 18, the plate 52 of the insert 50 is fitted into the slot 45 of the last lower component 40g of the series until the plate 52 abuts against the end 22 of the base support 20. At this point, the plate 51 is glued onto the end 22.

[0034] The installation by means of gluing onto the floor is advantageous given that, exerting a greater or lesser load of the adhesive layer, and consequently modifying its thickness, allows a perfectly flat laying of the base support 20 even in the presence of floor not perfectly flat.

[0035] Furthermore, though in the examples illustrated in figures 8-18 the various lower components 40a, 40b... 40g are connected to each other in such a manner to form a continuous final section, it is possible to provide for a plurality of smaller lower components 40a, 40b... 40g glued or fixed by means of screws onto the floor at a suitable distance from each other, thus entailing obvious advantages in terms of saving the material. Still, being the upper section 30 elastically yielding, gaskets are not required in the seat 32 for the accommodation of the panel. Furthermore, likewise to the section 12, the particular shape of the upper section 30 allows to compensate for possible construction defects of the panel, alongside possible "out of plumb", and to absorb any possible impacts against the panel.

[0036] As mentioned beforehand, the seat 18 of the section 12 or the seat 32 formed in the upper component 30 of the composite section 20 is designed to accommodate and support, in use, a respective panel 14. In particular, the panels can be fixed, 14f, or moveable, 14m, the latter usually being provided with handles and being capable of rotating towards the external or the internal of the space delimited by the wall structure 10, therefore serving as an access door.

[0037] Referring, in detail, to Figures 19-25, provided for between the two adjacent fixed panels 14f and also between a fixed panel 14f and a wall P of the room, are joining means 60, 70, 80. More in particular, the joining means comprise a lower joint 60 (Figure 19-22), an upper joint 70 (Figures 23 and 24) and a wall attachment 80 (Figure 25).

[0038] The upper joint 60 is made up of a block 62 and a pair of brackets 64 whose height is equivalent to the height of the block 62 and L-shaped thus having a short length 66 and a long length 68. Provided on each short length 66 is a hole 61 intended to be aligned, in use, with a respective blind hole 63 formed on each side wall 65 of the block 62.

[0039] During the step of mounting the wall structure 10, the long lengths 68 of the brackets 64 are fixed, for example glued by means of adhesive means, at the opposite corners of a lower edge 19a of two adjacent fixed panels 14f. The block 62 is subsequently arranged between them, making sure that its rear wall 67 abuts against the long lengths 68 of the brackets 64 and that the side wall 65 comes into contact with the short lengths

66 with the respective holes 61 and 63 being aligned. Lastly, the block 62 is fasted into position by means of screws 69 screwed in the respective holes 61 and 63. Advantageously, the head of each screw 69 can be covered with a relative plug PL.

[0040] The upper joint 70 is analogous, both in terms of arrangement and method of mounting, to the lower joint 60, except for the additional possibility of providing for the connection of an arm 90 for supporting a respective panel 14. Hence, also the upper joint 70 is formed by a block 72 fastened by means of screws between L-shaped brackets thus having a short length 76 and a long length 78. The upper joint 70 is fixed at the opposite corners of an upper part 19b of two adjacent fixed panels 14f in a manner analogous to the description outlined above referring to the lower joint 60.

[0041] The block 72 can include connection means of an arm 90 for supporting a respective panel 14, for example an externally threaded flange (not shown in the drawings) into which an internally threaded end 91 of the arm 90 is screwed. Alternatively, a threaded blind hole can be formed in the block 72, into which an externally threaded end 91 of the arm 90 can be screwed.

[0042] The other end 92 of the arm 90 is fixed onto a wall P according to the known methods. Alternatively, the arm 90 can be directly fixed onto a panel, for example by gluing. Usually, the arm 90 is a metal tubular element, but it can be of any desired configuration. Furthermore, provided for can be articulated and/or adjustable extension arms, whose embodiment shall be described hereinafter referring to Figures 26-28b.

[0043] The wall attachment 80 is made up of a block 82 and a L-shaped bracket 84 thus having a short length 86 and a long length 88. Provided on each short length 86 is a threaded hole 81 designed to be aligned, in use, with a respective threaded through hole provided on the block 82. The block 82 and bracket 84 are connected by means of a screw 89, and fixed at a corner, facing to a wall P, of the upper part 19b of a fixed panel 14f. The end portion 89a of the screw 89 protrudes from the threaded hole 81 to be accommodated in a respective anchoring hole provided in the wall P.

[0044] As better illustrated in Figures 23-25, between two adjacent panels 14f, or between a panel 14f and a wall P, gaskets 94 and 95 respectively are provided. In particular, gasket 94 comprises a vertical section 96a, arranged in use between the two adjacent panels and two horizontal sections 96b, oppositely arranged with respect to the vertical section 96a, and intended, in use, to enclose the respective vertical edges of the panel between each other. On the contrary, gasket 95 is U-shaped with a projecting section 95a and it is intended to be accommodated, in use, into the groove 57 provided in the vertical wall section 56 (Figure 9). Both the gaskets 94 and 95 have the purpose of closing possible clefts present between the panels 14f and between a panel 14f and a wall P in a watertight manner.

[0045] Figures 26-28b show an embodiment of an ex-

tendable articulated arm 120 for supporting a panel 14 of the wall structure 10 according to the invention.

[0046] The arm 120 is made up of a central elongated body 121, preferably of a triangular section, and by a pair of end elements 122 sliding in mutual displacement on the central body 121 and fixable in a rotational manner to respective articulated anchoring means 123. More in particular, each end element 122 is made up of an extended hollow portion 124, passed through longitudinally by a seat 125 for accommodating the fixing means to the central body 121 (not shown), and by a rounded part 126 provided with a central through hole 131 and on which a slot 127 is provided.

[0047] Each of the articulated anchoring means 123 is made up of a substantially parallelepiped body 128 provided with shoulders 129, projecting from which is a rounded plate-shaped element 130 having a central hole 132 and intended to be fitted, in use, into the slot 127 of the respective end element 122 in such a manner that the holes 131, 132 are aligned to accommodate a fastening screw 133.

[0048] The body 128 abuts, in use, against the brackets 74 of an upper joint 70 and it is tightened between them by means of screws as previously described with reference to Figures 23 and 24. Depending on the construction requirements, the joint 70 can be fixed onto a wall P, for example by means of screws, or glued onto a wall P or onto a panel 14m, 14f according to the known methods.

[0049] As better illustrated in Figures 27a-28b, due to the arrangement described above, the arm 120 can be arranged according to a plurality of positions variable between a completely closed or retracted position (Figures 27a, 27b) in which the end elements 122 are abutted to each other, completely covering the central body 121, and a completely open or extended position, in which the end elements 122 are at a mutual maximum distance and central body 121 is uncovered. Furthermore, due to the presence of articulated anchoring means 123, the arm 120 can be oriented according to the desired angle depending on the position of the separation wall to be supported.

[0050] As illustrated in Figures 29 and 30, pivot means are associated to the moveable panels 14m. Such pivot means, generally indicated with reference number 130, are made up of a first component 131 intended, in use, to be fixed to a wall P, and of a second component 132, intended to be fixed to a respective moveable panel 14m and snap-pivoted into the first component 131.

[0051] More in particular, the first component 131 comprises an L-shaped portion 133 projecting from which is a hollow cylindrical portion 134 for accommodating the second component 132. The second component 132 is made up of a portion 135, substantially parallelepiped-shaped, for fixing to a moveable panel 14m and by a cylindrical portion 136 provided with a preferably bevelled protrusion 137, also cylindrical and with a smaller diameter with respect to the diameter of the cylindrical portion

136.

[0052] In use, the protrusion 137 is fitted into the hollow cylindrical portion 134 of the first component, a hollow portion preferably into which a sleeve 138 made of nylon had been previously fitted.

[0053] Advantageously, provided on the protrusion 137 is a groove intended to cooperate with a corresponding projection (not shown in the drawings) provided on the inner wall of the sleeve 138 which serves to generate a 90° snap-movement of the moveable panel 14m.

[0054] The length of the L-shaped portion different from the one from which the hollow cylindrical portion 134 projects has a seat 140 for accommodating a joint 141 and an eyelet-shaped opening 142 at the upper wall 143. The joint 141 has two pins 144 for fixing against a wall P, but it could also be glued onto the wall, and a through hole 145 on an upper surface 146 opposite, in use, to the eyelet-shaped opening 142.

[0055] In use, the joint 141 slides inside the seat 140 of the component 131 and it is locked at the desired position by means of a screw 147 passing through the opening 142 and screwed into the through hole 145. The screwing depth of the joint 141 into the seat 140 is selected in such a manner to compensate any possible misalignment of the pivot means 130.

[0056] Now, referring to figures 31 and 32, illustrated are pivot means according to another embodiment. Such pivot means, generally indicated with reference number 100, have the function of associating in a rotating manner a moveable panel 14m to a respective base support 12, in the illustrated example a support of the single section type 16 illustrated in Figure 3 according to the prior art. It is understood that the same applies in case of a composite section 20 of Figure 4 according to the invention.

[0057] The pivot means 100 are formed by a body 102 rising from which is a fork element 104 rotatable with respect to the body 102 around a pin 106. The body 102 can be fitted recessed into cavity 18 of the section 16 and blocked at a preset position. At a portion of the body 102 facing the inner side 15 of the section 12, there is a plurality of threaded holes 103 for a lock pin 108, usually made of steel. The different positioning of the pin 108 into one of the holes 103 determines an opening angle of the rotating panel 14m.

[0058] The fork element 104 has an opening 105 facing upwards and intended to accommodate the lower edge 19a of the moveable panel 14m and it has, preferably at one branch 107 facing inwards the space delimited by the wall structure, a plurality of threaded holes 109 for pressure screws (not shown) adapted to block the panel 14m into position in the opening 105.

[0059] Though in the embodiments illustrated in the figures the moveable panels 14m are shaped to form doors with one or more wings rotating inwards or outwards the space delimited by the wall structure 10, men skilled in the art can easily observe that it is also possible to construct wall structures for the separation of spaces provided with sliding moveable panels.

[0060] In this particular embodiment, illustrated in Figures 33-35, the base support 20 is similar the one illustrated in Figures 4-7 with the addition of an extension 39 at the flap 38 of the upper component 30 of the base support 20 facing outwards the space delimited by the structure. The purpose of such extension is that of closing the space delimited by the structure in a watertight manner, usually avoiding water leakage when delimiting a shower space. As illustrated in the figures, the sliding panel 14m is supported by retaining means 150a, 150b, 150c constructed in suitable forms and made of elastically deformable material, preferably provided with retaining teeth 151.

[0061] The separation wall structure which carried out the present invention is particularly useful for delimiting a shower space.

[0062] In this specific case, the base support with a composite section 20, like in the case of Figure 4, serves as a wet floor shower tray, delimiting a stepping area S of the shower space. The stepping area S has a water drain hole (not shown) on its inner side, and it is, advantageously, slightly inclined in such a manner to allow normal outflow of water towards the drain hole.

[0063] Shown in Figure 36 is a particular embodiment of a base support with a composite section 200. Such support 200 is analogous to the composite section 20 described previously, possibly of slightly greater dimensions, but it has, advantageously a transverse slit 310 and, preferably a second upper seat 332a, arranged at a suitable distance from the first seat 332. The transverse slit 310 is intended to accommodate and withhold within it the peripheral edge of a sheet T made of synthetic material, preferably polyethylene, which serves to waterproof the stepping area S.

[0064] As better illustrated in Figure 37, the composite section 200 is, for example, embedded into the floor 58, by using the second seat 332a as a seat for accommodating and setting up the concrete 59. The waterproofing sheet T, withheld in the transverse slit 310, preferably by means of a locking screw 312, is laid in such a manner to cover the entire stepping area S and a platform possibly provided with appropriate covering is suitably fixed onto it.

[0065] Figures 38 and 39 show two possible different embodiments of a shower space obtained using the separation wall structure 10 of the invention. The most noticeable aspect regards the extreme versatility of arrangement, alongside the positioning of the shower space within a bathroom, which is an indisputable advantage in terms of designing the same.

[0066] Though the invention has been described referring to one of its preferred embodiments, men skilled in the art can observe that the invention is subject to various modifications and variations, which fall within the scope of protection defined by the accompanying claims.

Claims

1. Wall structure (10) for the separation of spaces comprising at least one panel (14, 14a, 14b, 14c) and one base support (20), said base support having a lower portion (40) which can be anchored to a floor and an upper portion (30) which delimits at least one seat (32) for coupling of said at least one panel (14, 14a, 14b, 14c), the upper portion (30) being made of elastically deformable material, said base support (20) being made up of a composite section (20, 200) comprising a lower component (40) and an upper component (30) which can be coupled to the lower component (40), said lower component (40) having a lower face (42) for anchorage onto the floor and said upper component (30) having said at least one seat (32) for accommodating the corresponding panel (14, 14a, 14b, 14c) of the wall structure (10), **characterized in that** said lower component (40) is a section having second engagement means (41) and second coupling means (48) for coupling with first engagement means (31) and first coupling means (33) of said upper component (30), and said upper component (30) is a section in whose body at least one said seat (32) is provided, delimited by two shoulders (34), and a second seat (36) in which said first engagement means (31) and said first coupling means (33) are provided, the second seat housing the lower component (40), said second engagement means comprising at least one protrusion (41) and said first engagement means comprising at least one slot (31), formed at each shoulder (34) and designed to accommodate a respective protrusion (41), said second coupling means comprising a pair of cavities (48) provided with a narrow mouth (43) and said first coupling means comprising a pair of mushroom-shaped elements (33, 35) intended to be snap-coupled into said cavities (48).
2. Wall Structure (10) according to claim 1, wherein said base support (20) can be anchored onto the floor by means of an adhesive means or by means of mechanical anchoring elements.
3. Wall Structure (10) according to any one of the preceding claims, wherein said base support (20) is a support selected from a rectilinear type (12a), a curved type (12b) having a curvature corresponding to an angle of 15° approximately or multiple thereof and a broken line type (12c).
4. Wall Structure (10) according to claim 3, wherein said base support with a broken line pattern (12c) includes curved portions.
5. Wall Structure (10) according to claim 3, wherein said types of base support (12a, 12b, 12c) can be head to head connected to each other.

6. Wall Structure (10) according to any one of preceding claims, wherein said lower component (40) is made of rigid material.
7. Wall Structure (10) according to claim 1, wherein said upper and lower components (30, 40) have the same length. 5
8. Wall Structure (10) according to claim 1, wherein said lower component (40) is shorter than said upper component (30). 10
9. Wall Structure (10) according to any one of the preceding claims, wherein said at least one panel is selected between a fixed panel (14f) and a moveable panel (14m). 15
10. Wall Structure (10) according to any one of the preceding claims, further comprising lower and/or upper joining means (60, 70, 80) between two adjacent fixed panels (14f) and between a fixed panel (14f) and a wall (P). 20
11. Wall Structure (10) according to claim 10, wherein a support arm (90) of a respective panel (14) can be associated to said upper joining means (70). 25
12. Wall Structure (10) according to claim 11, wherein said arm is an articulated and extendable arm (120). 30
13. Wall Structure (10) according to claim 12, wherein said articulated and extendable arm (120) comprises a central body (121) and a pair of end elements (122) sliding on said central body (120) between a closed or retracted position and an open or extended position and fixable in a rotating manner onto respective articulated anchoring means (123). 35
14. Wall Structure (10) according to any one of the preceding claims, further comprising pivot means (130) between a wall (P) and a moveable panel (14m). 40
15. Wall Structure (10) according to claim 14, wherein said pivot means (130) comprise a first component (131) for fixing onto a wall (P) and a second component (132) for fixing onto said moveable panel (14m) and intended to be snap-pivoted into said first component (131). 45
16. Wall Structure (10) according to any one of the preceding claims wherein said base support (20) comprises an extension (39) intended to support a sliding panel (14m). 50
17. Shower space **characterised in that** it comprises a wall structure (10) for delimiting space according to any one of claims 1 to 16. 55

18. Shower space according to claim 17, wherein said delimiting wall structure (10) encloses a stepping area (S) provided with a drain hole, and said base support section (20) comprises a slit (310) designed to accommodate a sheet (T) for waterproofing said stepping area.

Patentansprüche

1. Wandstruktur (10) zur Raumteilung aufweisend zumindest ein Paneel (14, 14a, 14b, 14c) und eine Sockelstütze (20), wobei die Sockelstütze einen unteren Bereich (40), welcher an einem Boden anbringbar ist, und einen oberen Bereich (30), welcher zumindest eine Aufnahme zum Aufnehmen des zumindest einen Paneels (14, 14a, 14b, 14c) begrenzt, wobei der obere Bereich (30) aus einem elastisch deformierbaren Material ausgebildet ist, wobei die Sockelstütze (20) aus einer zusammengesetzten Sektion (20, 200) aufweisend eine untere Komponente (40) und eine obere Komponente (30), welche koppelbar mit der unteren Komponente (40) ist, ausgebildet ist, wobei die untere Komponente (40) eine untere Anlagefläche (42) zum Verankern mit dem Boden aufweist und wobei die obere Komponente (30) zumindest eine Aufnahme (32), zum Aufnehmen des zugehörigen Paneels (14, 14a, 14b, 14c) der Wandstruktur (10) aufweist, **dadurch gekennzeichnet, dass** die untere Komponente (40) als eine Sektion ausgebildet ist, aufweisend zweite Eingriffsmittel (41) und zweite Kopplungsmittel (48) zum Kopplein mit den ersten Eingriffsmitteln (31) und den ersten Kopplungsmitteln (33) der oberen Komponente (30) und wobei die obere Komponente (30) als eine Sektion ausgebildet ist, in welchem Körper die zumindest eine Aufnahme (32) bereitgestellt ist, begrenzt durch zwei Leisten (34) und eine zweite Aufnahme (36), in welcher die ersten Eingriffsmittel (31) und die ersten Kopplungsmittel (33) bereitgestellt sind, wobei die zweite Aufnahme die untere Komponente (40) aufnimmt, wobei die zweiten Eingriffsmittel zumindest einen Vorsprung (41) aufweisen und die ersten Eingriffsmittel zumindest einen ersten Schlitz (31) aufweisen, ausgebildet an jeder Leiste (34) und eingerichtet zur Aufnahme eines jeweiligen Vorsprungs (41), wobei die zweiten Kopplungsmittel ein Aussparungspaar (48) mit einer schmalen Öffnung (43) aufweisen und wobei die ersten Kopplungsmittel ein pilzförmiges Elementepaar (33, 35) zur Schnappkupplung mit den Aussparungen (48) aufweisen.
2. Wandstruktur (10) gemäß Anspruch 1, wobei die Sockelstütze (20) am Boden unter Verwendung eines Klebemittels oder eines mechanischen Anbringungselementes verankerbar ist.

3. Wandstruktur (10) gemäß einem der vorhergehenden Ansprüche, wobei die Sockelstütze (20) eine Stütze ist, ausgewählt aus der Gruppe bestehend aus geradliniger Bauform (12a), gebogener Bauform (12b) mit einer Bogenform entsprechend einem Winkel von etwa 15° oder vielfachen davon und einer abschnittsweisen geradlinigen Bauform (12c).
4. Wandstruktur (10) gemäß Anspruch 3, wobei die Sockelstütze mit einem abschnittsweise geradlinigen Muster (12c) gebogene Bereiche aufweist.
5. Wandstruktur (10) gemäß Anspruch 3, wobei die Bauformen der Sockelstütze (12a, 12b, 12c) an ihren Stirnflächen miteinander verbindbar sind.
6. Wandstruktur (10) gemäß einem der vorhergehenden Ansprüche, wobei die untere Komponente (40) aus einem biegesteifen Material ausgebildet ist.
7. Wandstruktur (10) gemäß Anspruch 1, wobei die untere Komponente und die obere Komponente (30, 40) dieselbe Länge aufweisen.
8. Wandstruktur (10) gemäß Anspruch 1, wobei die untere Komponente 40 kürzer als die obere Komponente (30) ausgebildet ist.
9. Wandstruktur (10) gemäß einem der vorhergehenden Ansprüche, wobei das zumindest eine Paneel ausgewählt ist aus einem festgelegten Paneel (14f) und einem bewegbaren Paneel (14m).
10. Wandstruktur (10) gemäß einem der vorhergehenden Ansprüche, weiterhin aufweisend untere und/oder obere Verbindungsmittel (60, 70, 80) zwischen zwei benachbarten festgelegten Paneelen (14f) und zwischen einem festgelegten Paneel (14f) und einer Wand (P).
11. Wandstruktur (10) gemäß Anspruch 10, wobei ein Stützarm (90) eines jeweiligen Paneels (14) mit den oberen Verbindungsmitteln (70) verbindbar ist.
12. Wandstruktur (10) gemäß Anspruch 11, wobei der Arm ein bewegbarer und ausziehbarer Arm (120) ist.
13. Wandstruktur (10) gemäß Anspruch 12, wobei der bewegbare und ausziehbare Arm (120) einen zentralen Körper (121) und ein Endelementpaar (122) aufweist, welche auf dem zentralen Körper (120) zwischen einer geschlossenen oder eingezogenen Position und einer offenen oder ausgezogenen Position verschiebbar sind und in rotierender Art und Weise mit beweglichen Ankermitteln (123) festlegbar sind.
14. Wandstruktur (10) gemäß einem der vorhergehenden

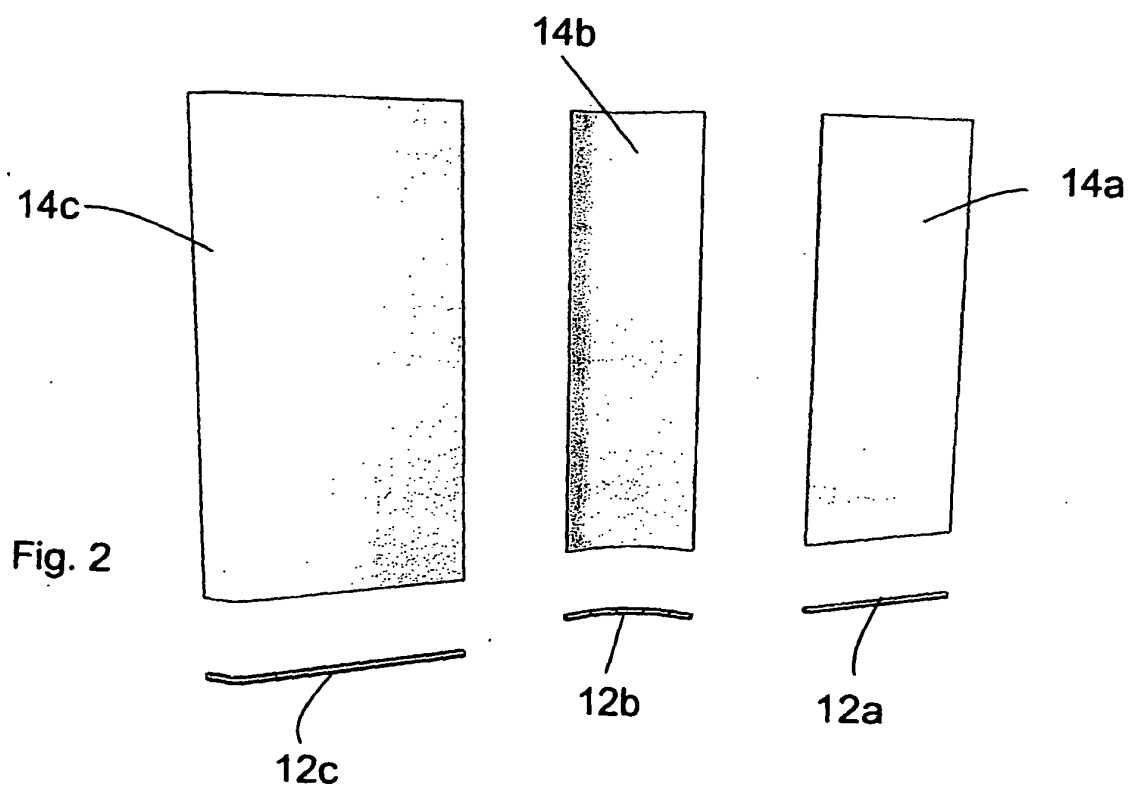
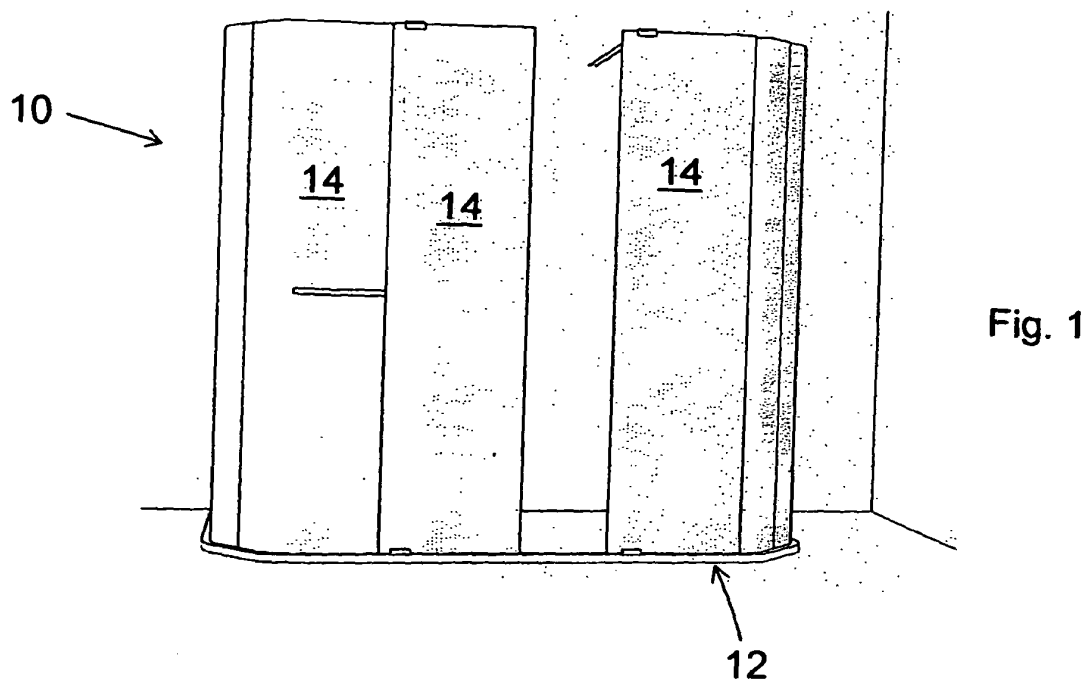
den Ansprüche, weiterhin aufweisend Drehmittel (130) zwischen einer Wand (P) und einem bewegbaren Paneel (14m).

15. Wandstruktur (10) gemäß Anspruch 14, wobei die Drehmittel (130) eine erste Komponente (131) zum Anbringen an einer Wand (P) und eine zweite Komponente (132) zum Anbringen am bewegbaren Paneel (14m) aufweisen, welche zum Schnappdrehen in der ersten Komponente (131) vorgesehen sind.
16. Wandstruktur (10) gemäß einem der vorhergehenden Ansprüche, wobei die Sockelstütze (20) eine Verlängerung (39) aufweist, welche zum Stützen eines verschiebbaren Paneels (14m) vorgesehen ist.
17. Duschbereich, **dadurch gekennzeichnet, dass** der Duschbereich eine Wandstruktur (10) zum Begrenzen eines Bereichs gemäß einem der Ansprüche 1 bis 16 aufweist.
18. Duschbereich gemäß Anspruch 17, wobei die begrenzende Wandstruktur (10) einen Trittbereich (S) einschließt, aufweisend eine Abflussöffnung und wobei die Sockelstützensektion (20) einen Schlitz (310) aufweist, ausgebildet zur Aufnahme einer Folie (T) zum Abdichten des Trittbereichs.

Revendications

1. Structure de paroi (10) pour la séparation des espaces, comprenant au moins un panneau (14, 14a, 14b, 14c) et un support de base (20), ledit support de base ayant une partie inférieure (40) qui peut être ancrée à un sol et une partie supérieure (30) qui délimite au moins un siège (32) pour le couplage audit au moins un panneau (14, 14a, 14b, 14c), la partie supérieure (30) étant réalisée avec un matériau élastiquement déformable, ledit support de base (20) étant composé d'une section composite (20, 200) comprenant un composant inférieur (40) et un composant supérieur (30) qui peut être couplé au composant inférieur (40), ledit composant inférieur (40) ayant une face inférieure (42) pour l'ancrage sur le sol et ledit composant supérieur (30) ayant ledit au moins un siège (32) pour loger le panneau correspondant (14, 14a, 14b, 14c) de la structure de paroi (10), **caractérisée en ce que** ledit composant inférieur (40) est une section ayant des seconds moyens de mise en prise (41) et des seconds moyens de couplage (48) pour se coupler avec lesdits premiers moyens de mise en prise (31) et les premiers moyens de couplage (33) dudit composant supérieur (30), et ledit composant supérieur (30) est une section dans le corps de laquelle on prévoit au moins ledit siège (32), délimité par deux épaulements (34), et un second siège (36) dans lequel les-

- dits premiers moyens de mise en prise (31) et lesdits premiers moyens de couplage (33) sont prévus, le second siège logeant le composant inférieur (40), lesdits seconds moyens de mise en prise comprenant au moins une saillie (41) et lesdits premiers moyens de mise en prise comprenant au moins une fente (31), formée au niveau de chaque épaulement (34) et conçue pour loger une saillie respective (41), lesdits seconds moyens de couplage comprenant une paire de cavités (48) prévues avec une embouchure étroite (43) et lesdits premiers moyens de couplage comprenant une paire d'éléments en forme de champignon (33, 35) prévus pour être couplés par emboîtement dans lesdites cavités (48).
2. Structure de paroi (10) selon la revendication 1, dans laquelle ledit support de base (20) peut être ancré sur le sol au moyen de moyens adhésifs ou au moyen d'éléments d'ancrage mécaniques.
 3. Structure de paroi (10) selon l'une quelconque des revendications précédentes, dans laquelle ledit support de base (20) est un support sélectionné parmi un type rectiligne (12a), un type incurvé (12b) ayant une courbure correspondant à un angle de 15° approximativement ou son multiple et un type à ligne cassée (12c).
 4. Structure de paroi (10) selon la revendication 3, dans laquelle ledit support de base avec un modèle de ligne cassée (12c) comprend des parties incurvées.
 5. Structure de paroi (10) selon la revendication 3, dans laquelle lesdits types de support de base (12a, 12b, 12c) peuvent être raccordés tête à tête entre eux.
 6. Structure de paroi (10) selon l'une quelconque des revendications précédentes, dans laquelle ledit composant inférieur (40) est réalisé avec un matériau rigide.
 7. Structure de paroi (10) selon la revendication 1, dans laquelle lesdits composants supérieur et inférieur (30, 40) ont la même longueur.
 8. Structure de paroi (10) selon la revendication 1, dans laquelle ledit composant inférieur (40) est plus court que ledit composant supérieur (30).
 9. Structure de paroi (10) selon l'une quelconque des revendications précédentes, dans laquelle ledit au moins un panneau est sélectionné entre un panneau fixe (14f) et un panneau mobile (14m).
 10. Structure de paroi (10) selon l'une quelconque des revendications précédentes, comprenant en outre des moyens d'assemblage inférieurs et/ou supérieurs (60, 70, 80) entre deux panneaux fixes (14f) adjacents et entre un panneau fixe (14f) et une paroi (P).
 11. Structure de paroi (10) selon la revendication 10, dans laquelle un bras de support (90) d'un panneau (14) respectif peut être associé auxdits moyens d'assemblage supérieurs (70).
 12. Structure de paroi (10) selon la revendication 11, dans laquelle ledit bras est un bras articulé et extensible (120).
 13. Structure de paroi (10) selon la revendication 12, dans laquelle ledit bras articulé et extensible (120) comprend un corps central (121) et une paire d'éléments d'extrémité (122) coulissant sur ledit corps central (120) entre une position fermée ou rétractée et une position ouverte ou étendue et pouvant être fixé d'une manière rotative sur des moyens d'ancrage articulés (123) respectifs.
 14. Structure de paroi (10) selon l'une quelconque des revendications précédentes, comprenant en outre des moyens de pivot (130) entre une paroi (P) et un panneau mobile (14m).
 15. Structure de paroi (10) selon la revendication 14, dans laquelle lesdits moyens de pivot (130) comprennent un premier composant (131) pour la fixation sur une paroi (P) et un second composant (132) pour la fixation sur ledit panneau mobile (14m) et prévu pour être pivoté par emboîtement dans ledit premier composant (131).
 16. Structure de paroi (10) selon l'une quelconque des revendications précédentes, dans laquelle ledit support de base (20) comprend une extension (39) prévue pour supporter un panneau coulissant (14m).
 17. Espace de douche **caractérisé en ce qu'il** comprend une structure de paroi (10) pour délimiter l'espace selon l'une quelconque des revendications 1 à 16.
 18. Espace de douche selon la revendication 17, dans lequel ladite structure de paroi de délimitation (10) enferme une zone de marche (S) prévue avec un trou d'évacuation, ladite section de support de base (20) comprend une fente (310) conçue pour loger une feuille (T) pour permettre à ladite zone de marche de résister à l'eau.



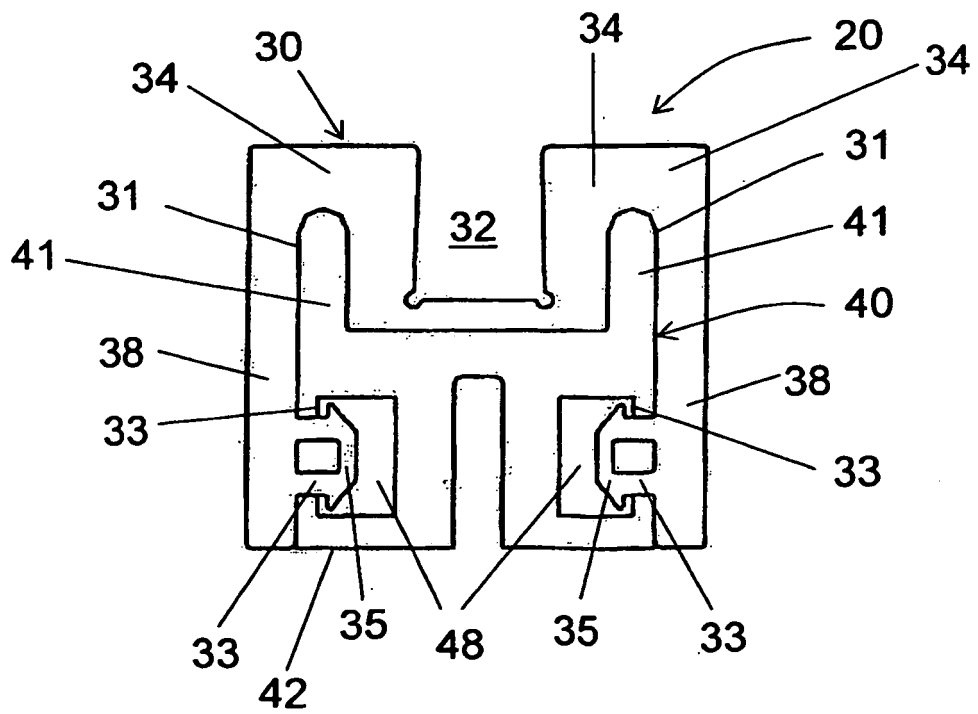
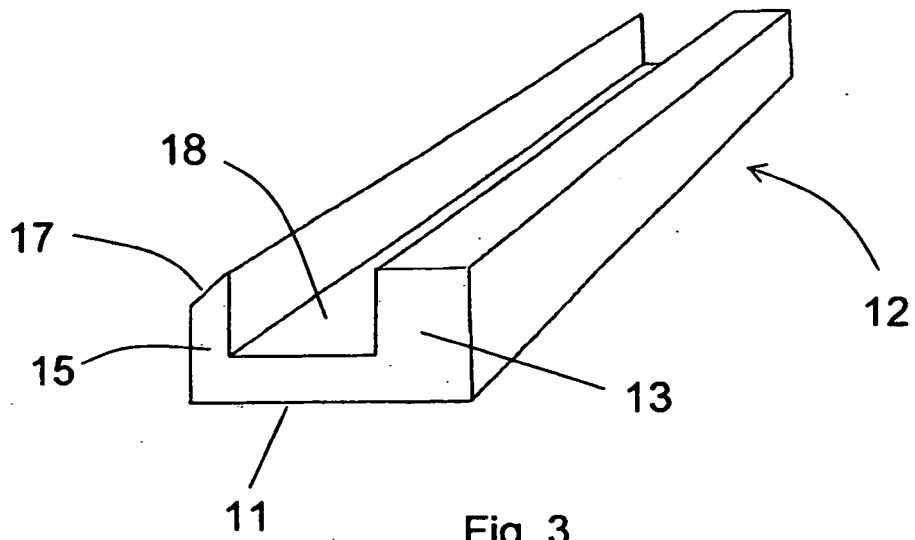


Fig. 5

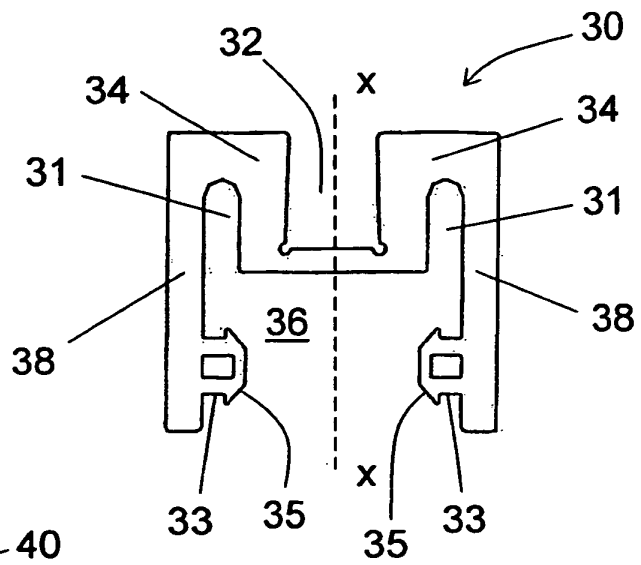


Fig. 6

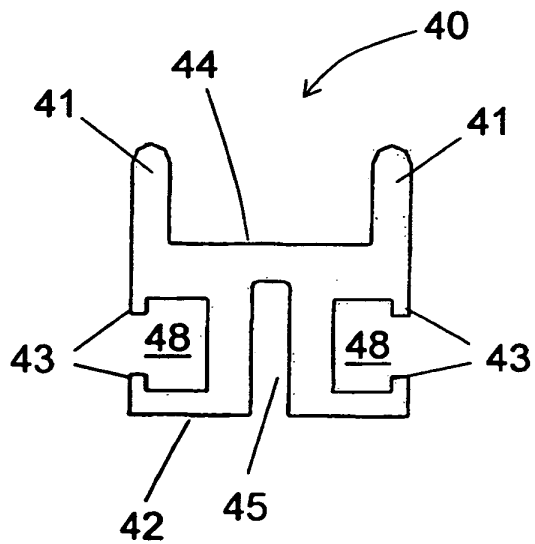
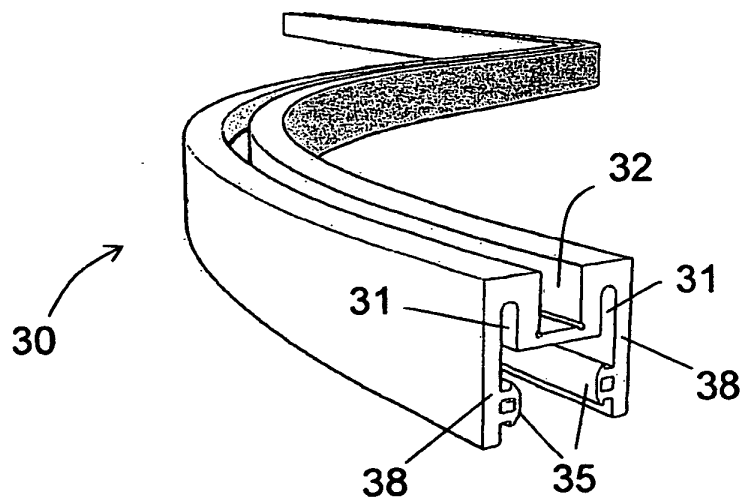


Fig. 7



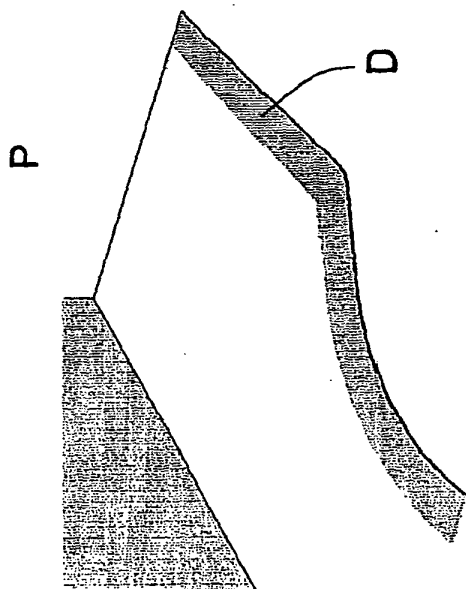


Fig. 8

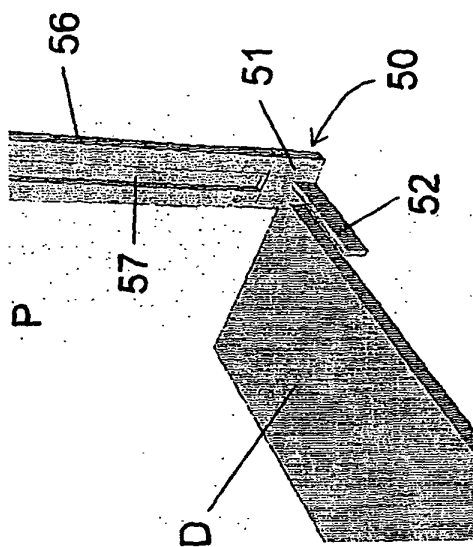


Fig. 9

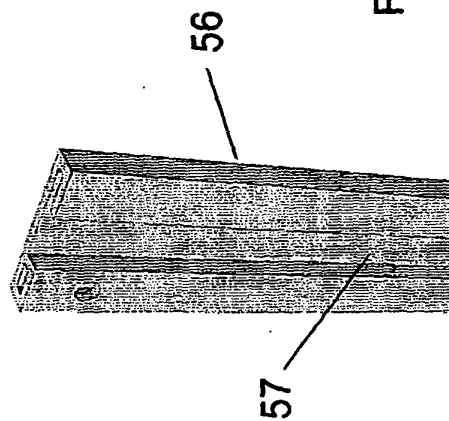


Fig. 10

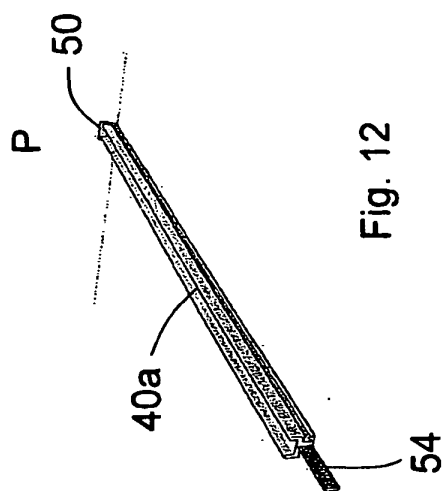
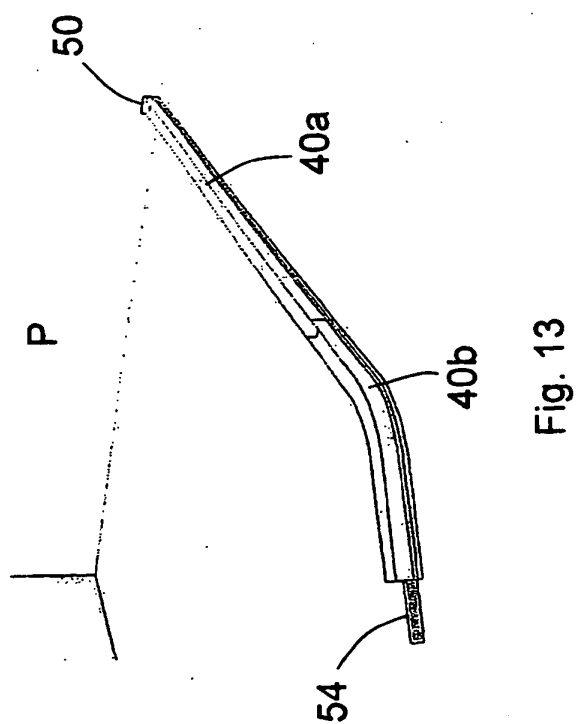
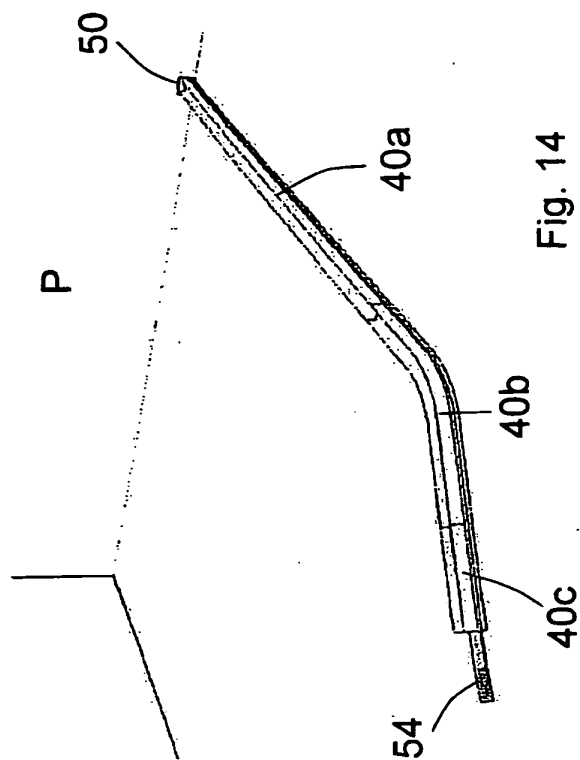
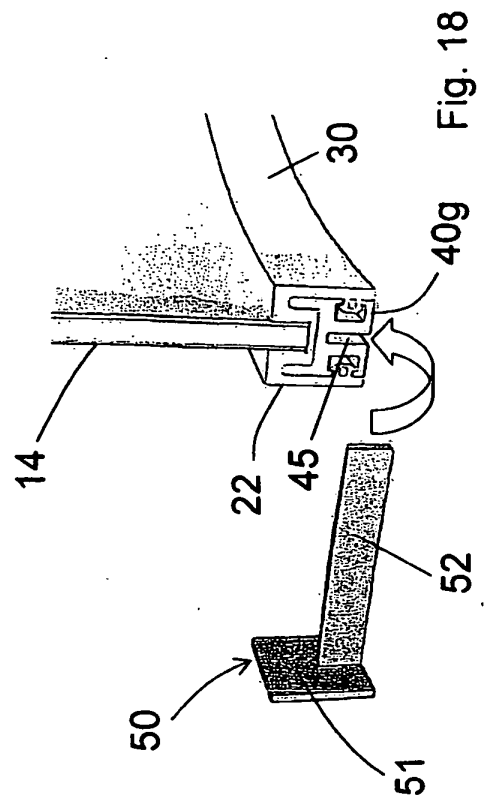
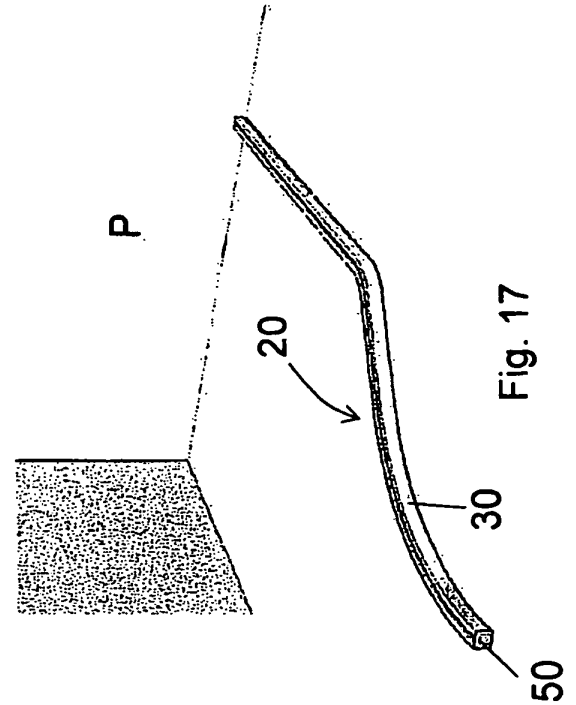
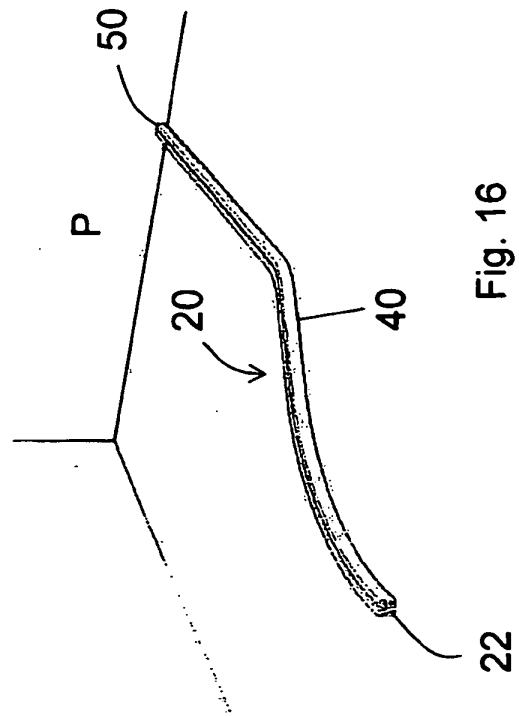
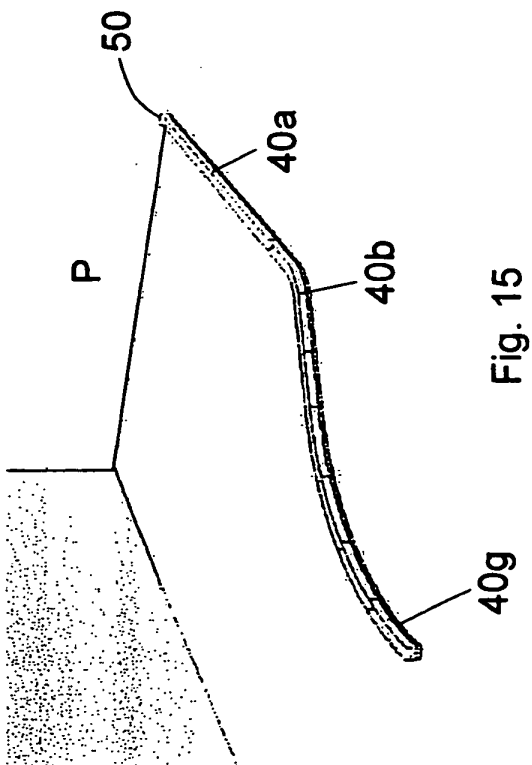
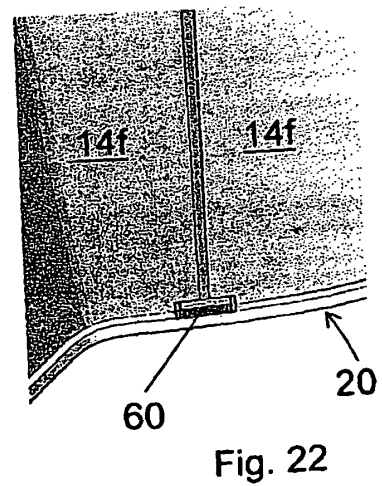
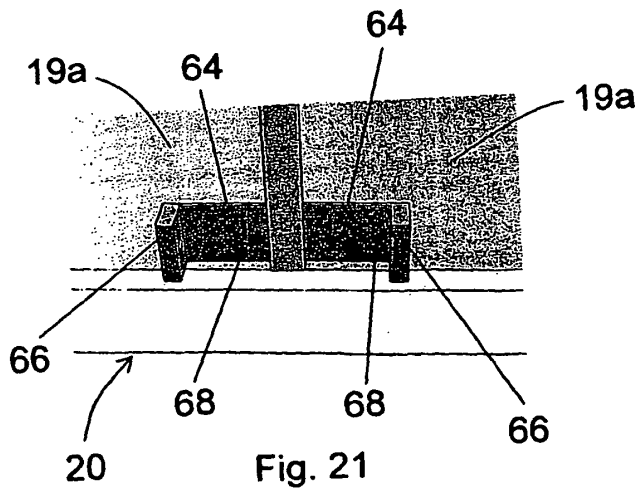
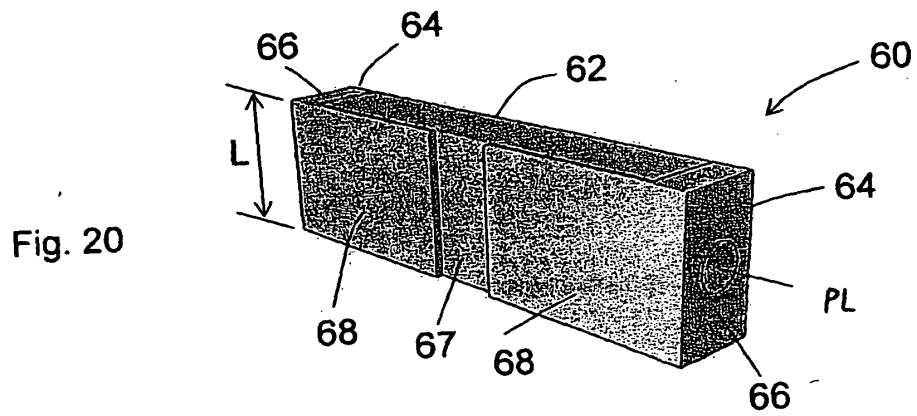
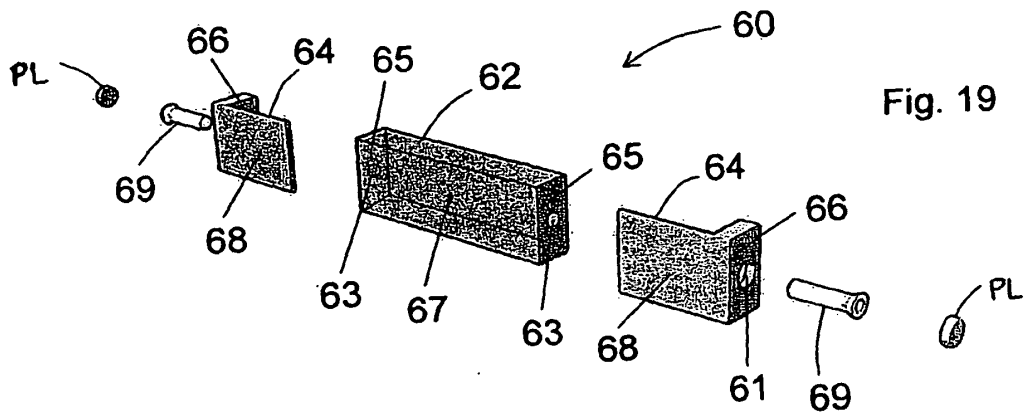


Fig. 12







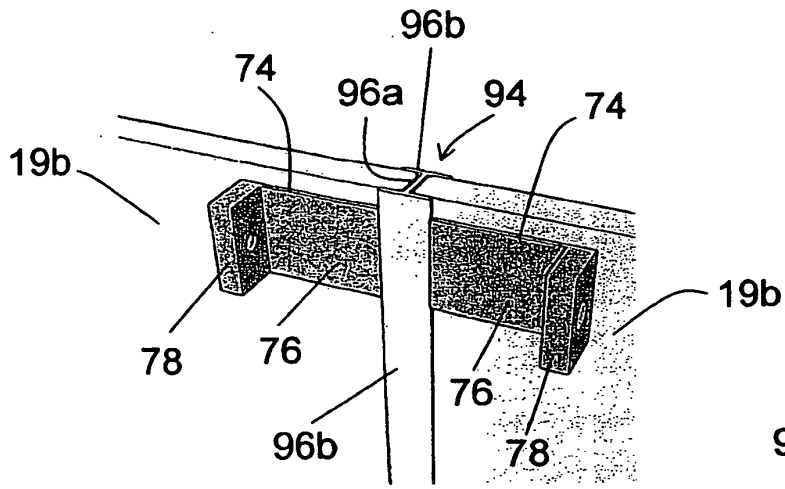


Fig. 24

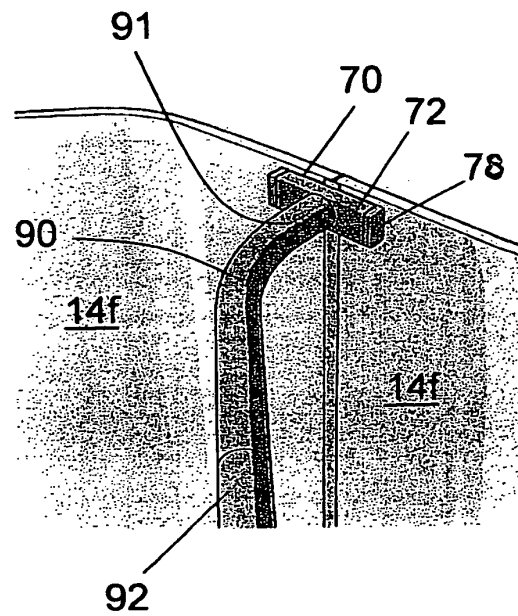


Fig. 23

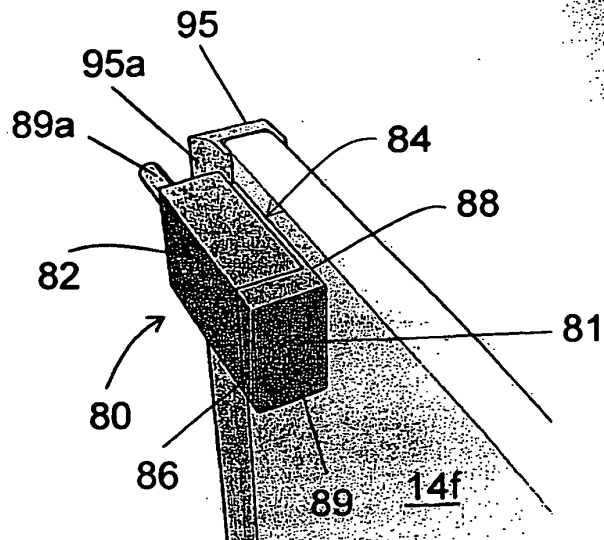


Fig. 25

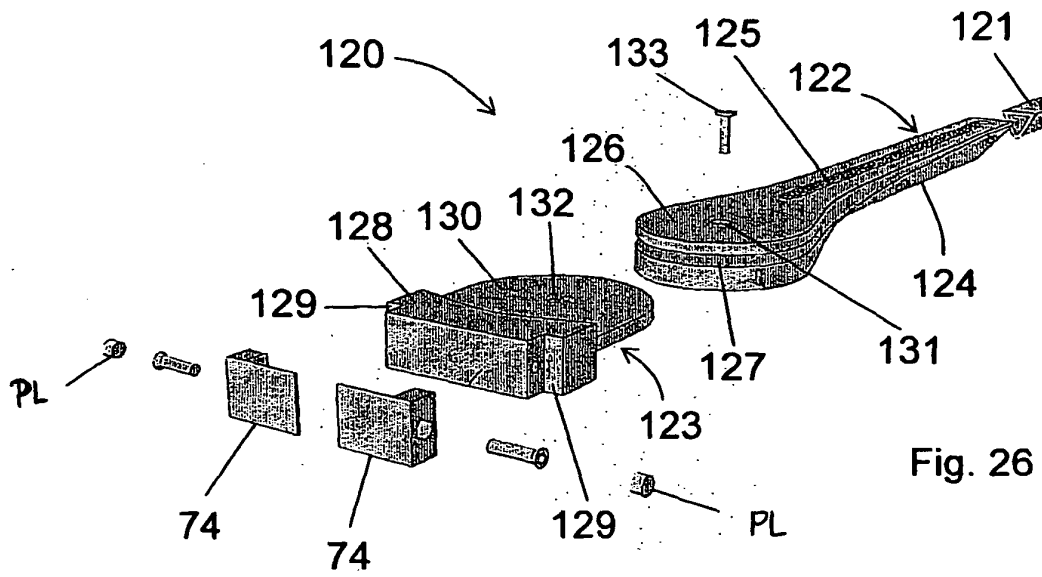


Fig. 26

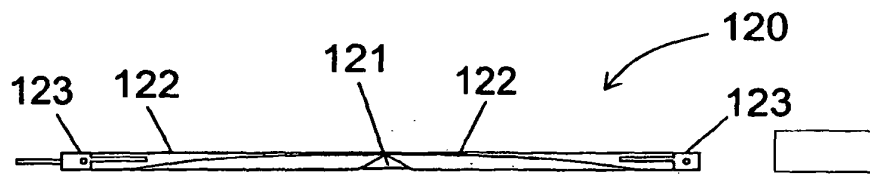


Fig. 27a

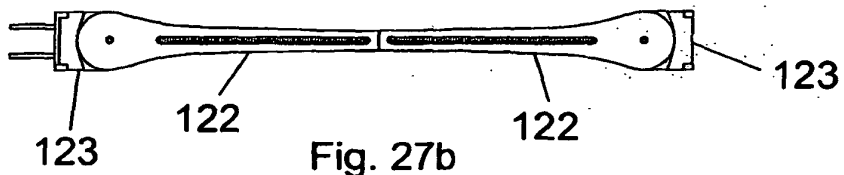


Fig. 27b

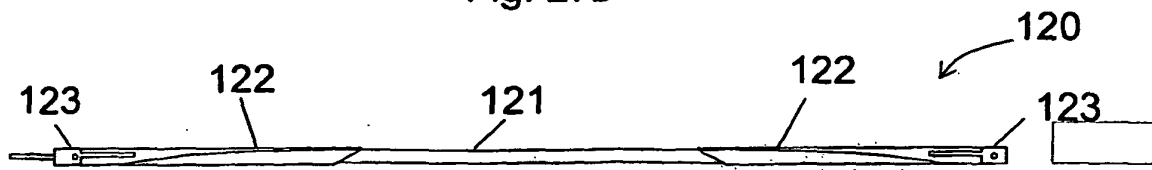


Fig. 28a

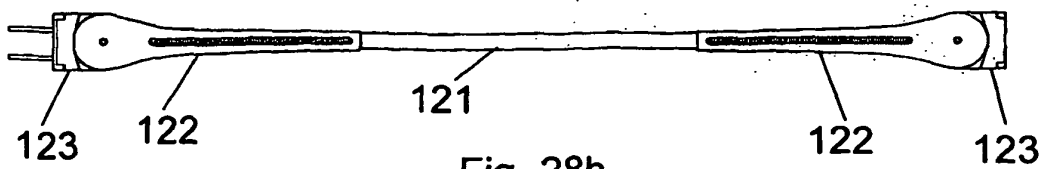


Fig. 28b

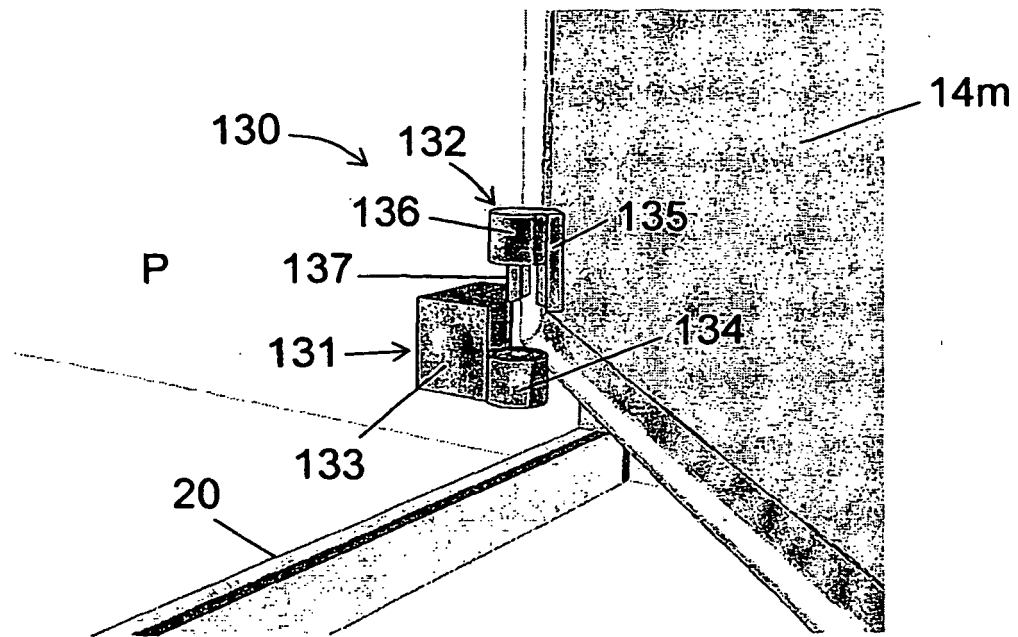


Fig. 29

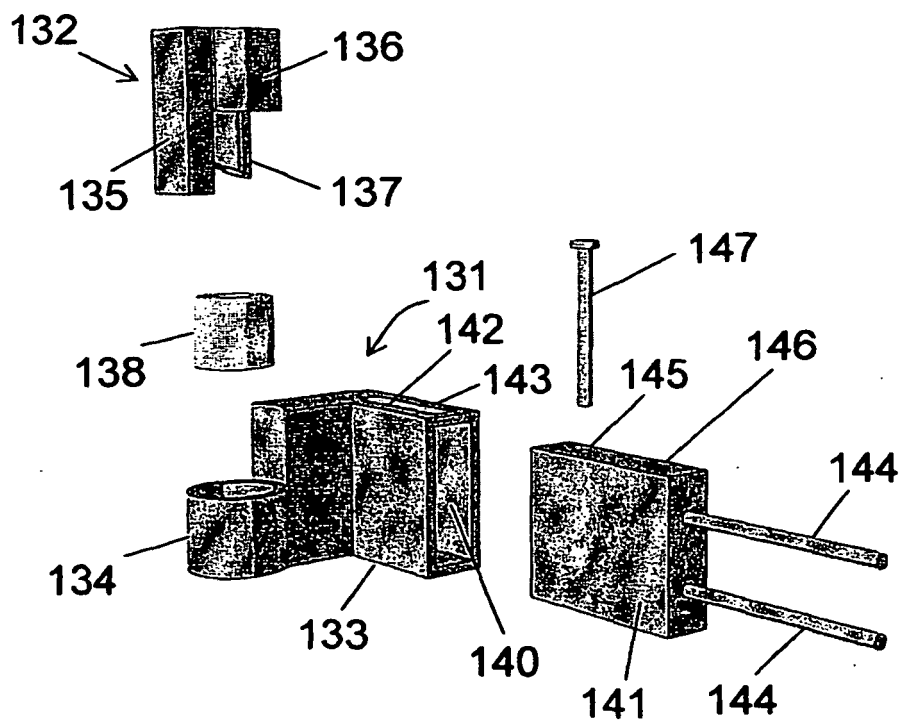


Fig. 30

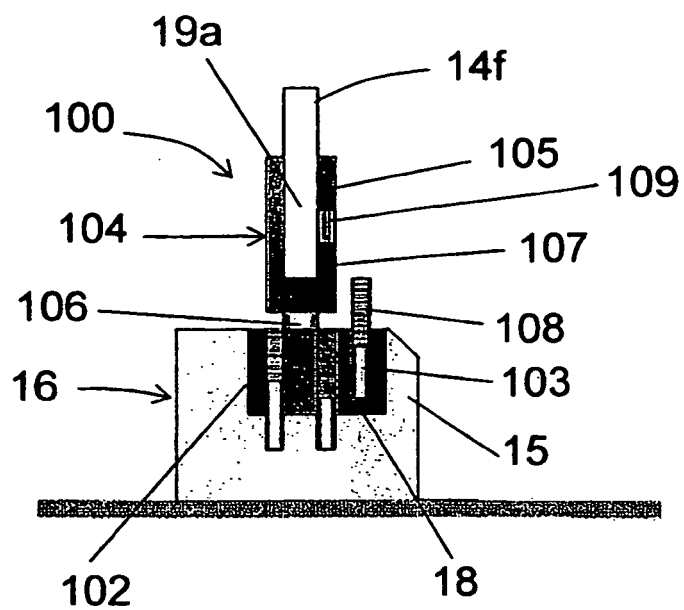


Fig. 31

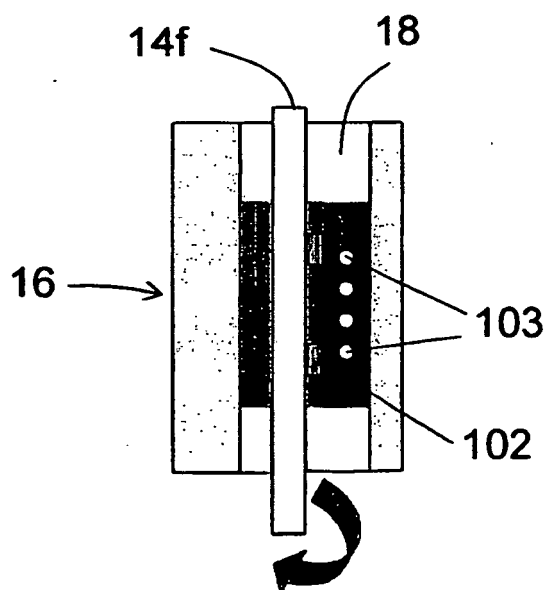
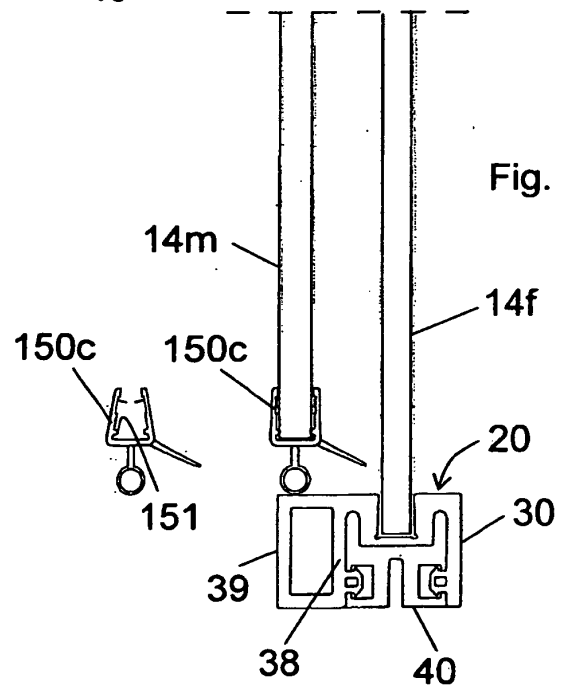
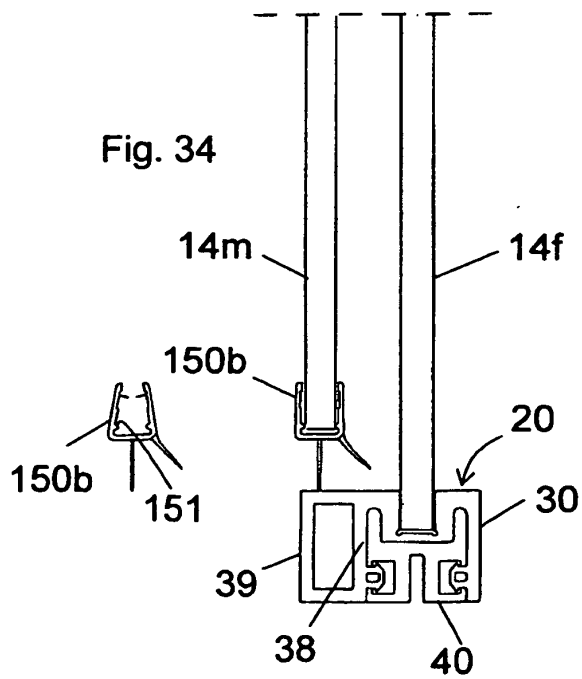
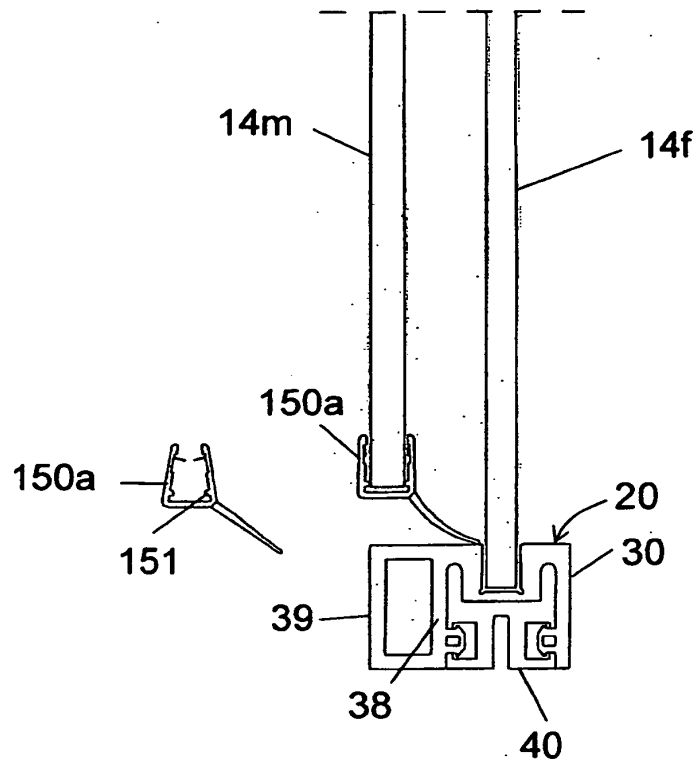


Fig. 32



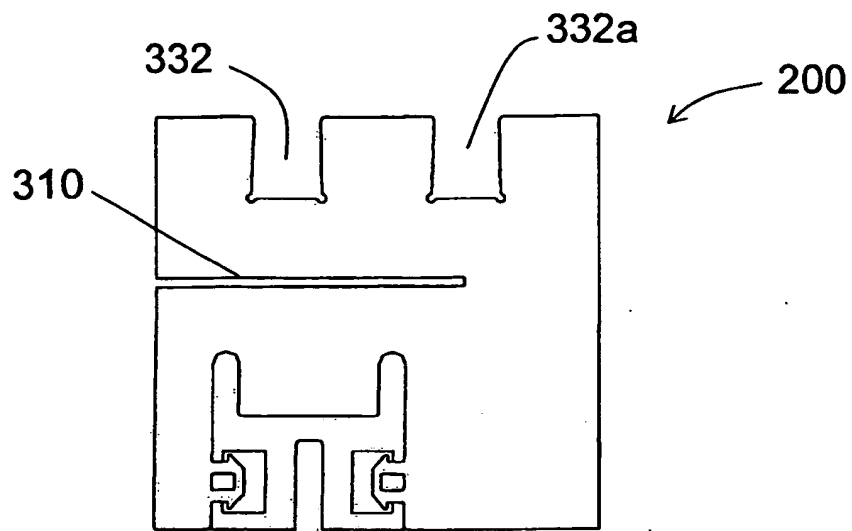


Fig. 36

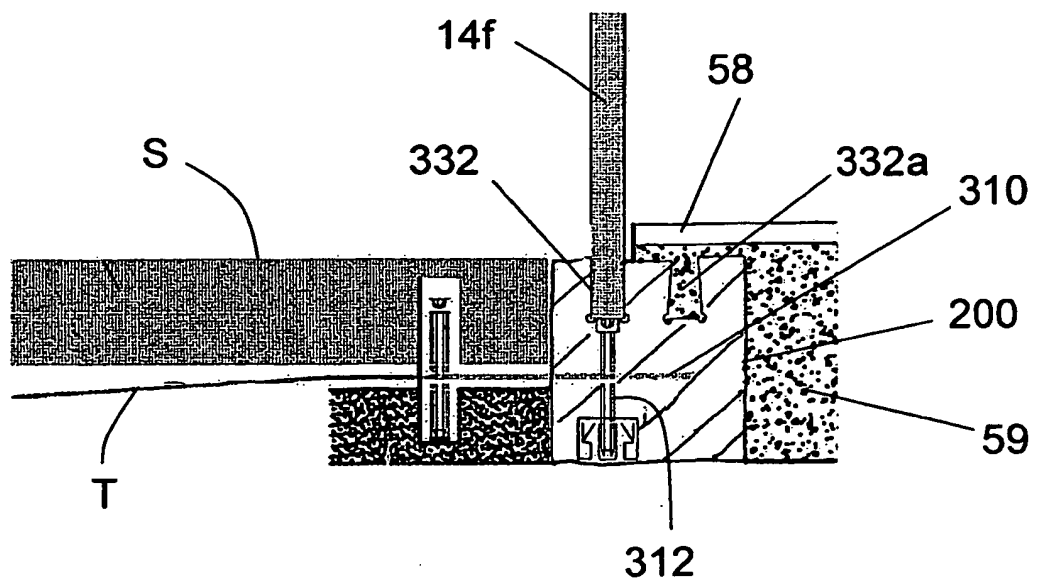


Fig. 37

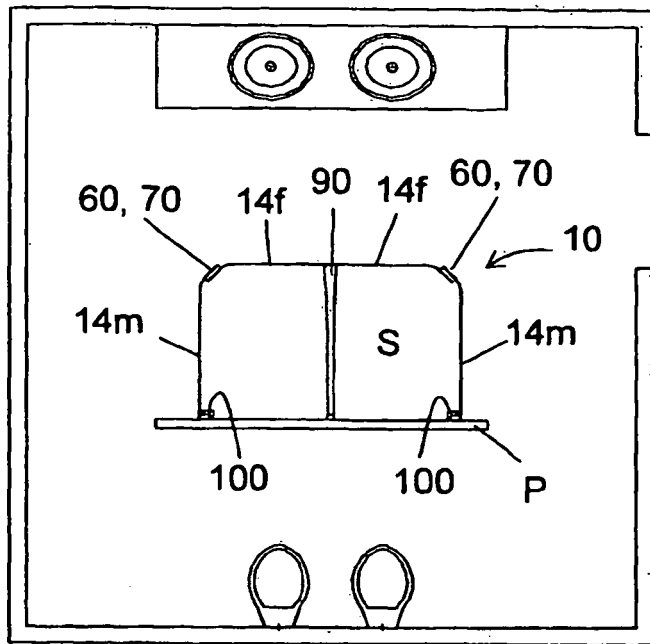
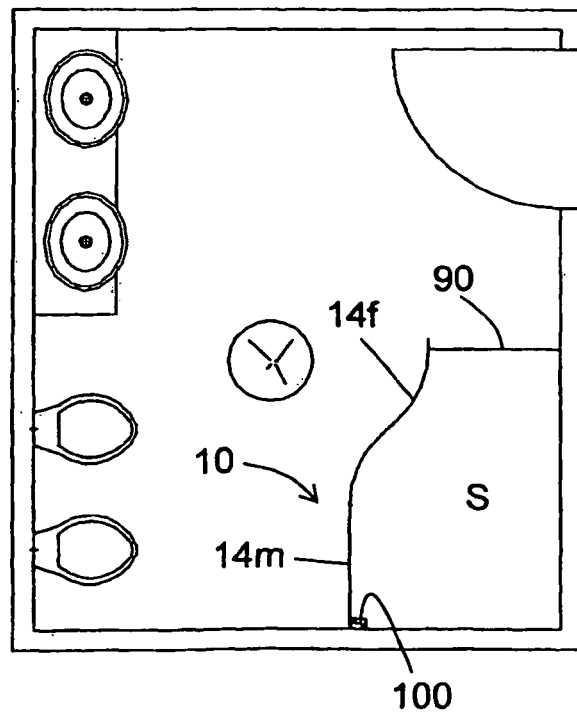


Fig. 38

Fig. 39



REFERENCES CITED IN THE DESCRIPTION

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