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(54) Furniture arrangement

(57) Furniture (particularly tables) include first and second edges extending in side by side relationship adjacent one another, the edges including respective longitudinal slots or grooves. A securing element is received in a slot or groove of one of the edges and extends across the divide to be received in a slot or groove of the other adjacently extending edge so as to hold the edges. The groves or slots are preferably provided in pairs for each edge, arranged in 'V' configuration.

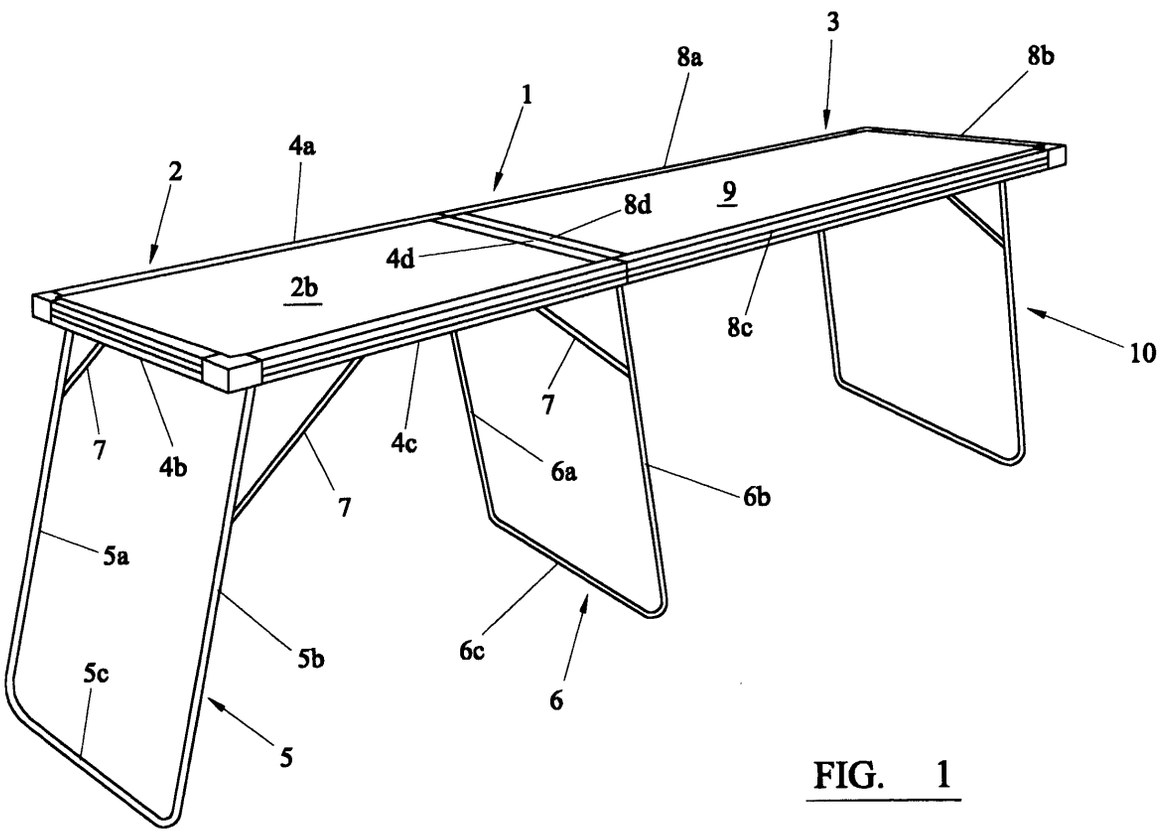

FIG. 1

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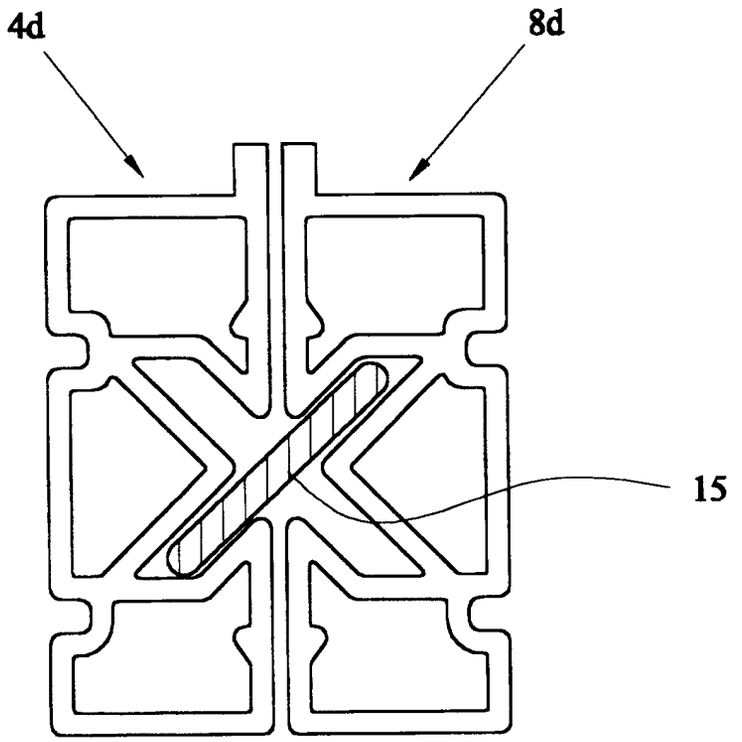

FIG. 3

Description

[0001] The present invention relates to a furniture arrangement, and in particular to a modular furniture arrangement in which adjacent furniture pieces or items may be connected to one another.

[0002] Modular furniture arrangements are known permitting adjacently arranged pieces or items to be connected together. An improved arrangement has been devised, particularly suitable for connecting adjacently arranged framed items (such as tables) or the like.

[0003] According to a first aspect, the invention provides a furniture arrangement including first and second elongate edge elements arranged to extend in side by side relationship adjacent one another, the edge elements including respective longitudinally extending slots or grooves, at least one securing element being received in a slot or groove of one of the edge elements and extending to be received in a slot or groove of the other adjacently extending edge element so as to hold the edge elements extending in side by side relationship adjacent one another.

[0004] In the description of preferred features of the invention which follow hereafter, reference to "slot" should be understood as a corresponding reference to "groove".

[0005] The slot in a respective elongate edge element desirably comprises a mouth portion and spaced substantially parallel sidewalls extending away from the mouth portion.

[0006] The mouth portion is preferably arranged to communicate with the interface between the adjacently arranged edge elements.

[0007] The mouth portion of a respective slot is preferably orientated substantially at or adjacent the midpoint of the width of the edge element. The slot is preferably inclined at an angle to the longitudinal axis of the respective elongate element.

[0008] A slot in one of the edge elements is preferably cooperatively aligned with a complementary slot in the adjacent edge element, such that one slot is substantially effectively a projection of the other across the interface between the adjacently extending edge portions.

[0009] Desirably the adjacently extending edge portions each include two slots, preferably inclined relative to one another and having a common mouth region (preferably such that, in section the slots are mutually reflected about an axis transverse to the longitudinal direction of the respective edge element).

[0010] In a preferred embodiment, the slots form a "V" configuration (such that with the edge portions arranged side by side adjacent one another four slots in an "X" shaped configuration exist).

[0011] The arrangement of slots described enables the adjacent edge elements to be formed from a preslotted standard section element. Preferably the edge elements are formed of plastics material. Desirably, the edge elements comprise extruded elements.

[0012] The securing elements advantageously comprise tab elements, preferably shaped and dimensioned to be a push or interference fit in the cooperatively aligned slots in the adjacent edge elements.

[0013] The securing elements preferably include one or more grip enhancement formations (preferably surface formations, such as ribs or other projections) arranged to enhance secure engagement in a respective slot.

[0014] Further securing means is preferably provided for enhancing the connection between the adjacently arranged edge elements. The further securing means may comprise a detent mounted to one edge element and engageable with the other edge element. The detent may be movably mounted to one of the edge portions such that it is movable from a stowed position (not engaging the adjacent edge element) to an operational position (engaging the adjacent edge element).

[0015] The adjacently extending edge elements preferably comprise respective edges of respective furniture pieces such as table structure edges. Respective furniture pieces preferably comprise a plurality of edges having slots or grooves permitting modular connection of complementary furniture pieces in a plurality of adjacent edge connected configurations.

[0016] In a particularly preferred embodiment, the invention provides two or more modular table structures, each structure having:

i) support leg means;

ii) a table surface; and,

iii) an elongate edge element defining a peripheral portion of the table, the elongate edge element arranged to extend in side by side relationship adjacent a complementary elongate edge element of the another table structure, the edge elements including respective longitudinally extending slots or grooves, at least one securing element being received in a slot or groove of one of the edge elements and extending to be received in a slot or groove of the other adjacently extending edge element so as to hold the edge elements extending in side by side relationship adjacent one another.

[0017] The respective elongate edge elements including the slots or grooves as defined may be provided around the entire periphery where for example table structures comprise square, rectangular, hexagonal or other geometric shapes. This permits for a variety of connected modular arrangements.

[0018] According to a further aspect, the invention provides a modular furniture arrangement comprising:

i) a first furniture piece comprising first leg support means, an elongate connection edge element and

second leg support means spaced from the first leg support means;

ii) a second furniture piece comprising a proximal elongate edge without leg support means and a distal edge, leg support means being provided for the second furniture piece at a position nearer the distal edge than the proximal edge;

Wherein the proximal elongate edge of the second furniture piece is connected to the elongate connection edge element of the first furniture piece.

[0019] For example where the furniture pieces connected comprise modular table elements, a first table including a pair of spaced leg structures can be connected (edge to edge) with a second table including a single leg structure, the single leg structure being positioned toward a distal edge of the second table, and the second table being connected, at a proximal edge to the first table.

[0020] The edge element to edge element connection preferably corresponds to that described in relation to the first aspect of the invention. Other preferred features correspond to preferred features described in relation to the first aspect of the invention.

[0021] The invention will now be further described in a specific embodiment, by way of example only and with reference to the accompanying drawings, in which:

Figure 1, is a schematic perspective view of a furniture arrangement according to the invention;

Figure 2, is a transverse sectional view of an elongate edge element comprising the furniture arrangement of figure 1;

Figure 3 is a transverse sectional view of side by side connected elongate edge elements comprising the furniture arrangement of figure 1;

Figure 4 is a perspective side view of the connection; and

Figure 4a is a sectional view along Y-Y through bracket 20 in Figure 4.

[0022] Referring to the drawings, there is shown a furniture arrangement in the form of a modular table arrangement (generally designated 1) comprising a first table structure 2 and a second table structure 3. The first table structure includes a rectangular frame 4 including elongate plastics extruded frame elements 4a, 4b, 4c, 4d (of the transverse section configuration shown in Figure 2).

[0023] A table top 25 is secured to the frame 4, in order to provide a working surface. A pair of spaced leg structures 5, 6 are pivotally connected to the frame 4 at longitudinally opposed ends thereof. Leg structures 5, 6 fold flat to the table surface 5 for storage and are held in position by stay 7, when fully extended. Each leg structure 5, 6 includes downwardly depending struts 5a, 5b and 6a, 6b and respective transverse elements 5c, 6c upon which the table is supported on the ground surface.

[0024] Table structure 3 is generally similar in construction to table 2 (including substantially identical elongate frame edge elements 8a, 8b, 8c and 8d supporting a table surface 9). Table structure 3 is however provided with only one leg structure 10 at a distal end of the table from edge frame element 8d. Edge frame elements 8d and 4d engage and connect with one another such that the proximal edge of table 3 (adjacent frame edge 8d) is effectively supported by leg structure 6 of table 2.

[0025] The arrangement as described provides a convenient modular table construction enabling tables, provided with only one leg structure, to be supported by other table structures in the modular arrangement. This reduces the overall cost and complexity of the modular arrangement.

[0026] Referring to figures 2 and 3, there is shown (in section) in detail the configuration of the plastics extruded edge element making up frames 4 and 8. Each edge section 4, 8 comprises an external face 11 provided with a pair of angled slots 12, 13 converging at a mouth 14 approximately on the mid point of the depth between the upper and lower limits of the respective edge elements 4, 8. The slots 12,13 and mouth 14 run along substantially the entire length of the extruded edge element 4,8.

[0027] Referring to Figures 3 and 1, when edge elements 4d, 8d are brought together such that their respective faces 11 are contiguous, slot 12 in edge element 8d aligns with slot 13 in edge element 4d and, correspondingly, slot 12 in edge element 4d aligns with slot 13 in edge element 8d.

[0028] Prior to bringing edge elements 4d, 8d into abutment, a securing tab element 15 is inserted into one of the slots 12, 13 (slot 12 in Figures 2 and 3). Securing element 15 is shaped and dimensioned to be a secure push fit in the respective slot 12/13 (and typically provided with surface ribs to enhance the push fitting engagement in the respective slot). When received in one of the slots, the edge elements 4d, 8d are brought into abutment and the "free" edge of securing tab 15 enters and is received in push fitting engagement with the respective co-aligned slot (13 in Figure 3) in edge element 4d. In this way, edge elements 4d and 8d are effectively securely held (connected) relative to one or another. Typically, a plurality of tabs 15, are utilised spaced along the respective lengths of edge elements 4d, 8d to ensure good connection.

[0029] A particular advantage of the invention is that all the edge elements 4, 8, can be manufactured from the same extrusion section and, when placed in side by side abutment with one another, respective slots 12, 13 are effectively co-aligned. This minimises manufactur-

ing costs and aids in ease of assembly. The `V' shaped configuration of the slot arrangement of the extrusion is also particularly versatile, permitting the introduction and sliding along the slot of an inverted 'Y' shaped connection for a handle carry or support strap or the like. Such a `V' shaped slot with inverted 'Y' connection is particularly suitable for load bearing connection.

[0030] The modular arrangement of tables with edge connections at edge elements 4d, 8d can be simply disassembled, when required, by forcing apart the edge elements 4d, 8d causing disengagement of the securing tab 15 from one, or both, of the respective slots.

[0031] In a preferred embodiment, in order to enhance and secure the connection between table structures 2, 3, a securing bracket 20 may be provided having a pair of upstanding walls 21, arranged one either side of an edge element (4c in Figure 4) and having an integral spanning arm 22 extending across the interface between tables 2 and 3 and secured to an edge element of the other table (8c in Figure 4) by, for example, a screw 23. If not required for use, the brackets 20 can be pivoted to a stowed orientation about the axis of screw 23. The bracket 20 is typically of plastics material, including arm 22 which thereby is resiliently deformable to 'snap' between stowed and in-use positions. In the in-use position, the edge element 4c is supported on spanning portion 26 of bracket 20, between upstanding walls 21.

[0032] The invention as described provides a convenient, lightweight construction for connecting furniture structures in a modular arrangement. It is believed that the invention is particularly suited for use in creating a modular table arrangement which is easily assemblable, and disassemblable and stowable.

Claims

1. A furniture arrangement including first and second elongate edge elements arranged to extend in side by side relationship adjacent one another, the edge elements including respective longitudinally extending slots or grooves, at least one securing element being received in a slot or groove of one of the edge elements and extending to be received in a slot or groove of the other adjacently extending edge element so as to hold the edge elements extending in side by side relationship adjacent one another.

2. An arrangement according to claim 1, wherein the slot in a respective elongate edge element includes a mouth portion and spaced substantially parallel sidewalls extending away from the mouth portion, preferably wherein:

   i) the mouth portion is arranged to communicate with the interface between the adjacently arranged edge elements; and/or

   ii) the mouth portion of a respective slot is orientated substantially at or adjacent the midpoint of the width of the edge element.

3. An arrangement according to any preceding claim, wherein:

   i) the slot is inclined at an angle to the longitudinal axis of the respective elongate element; and/or

   ii) a slot in one of the edge elements is cooperatively aligned with a complementary slot in the adjacent edge element, such that one slot is substantially effectively a projection of the other across the interface between the adjacently extending edge elements.

4. An arrangement according to any preceding claim, wherein the adjacently extending edge elements each include two slots inclined relative to one another and having a common mouth region, preferably wherein in section the slots are mutually reflected about an axis transverse to the longitudinal direction of the respective edge element; and/or wherein the slots in a respective edge element form a "V" configuration, such that with the edge elements arranged side by side adjacent one another four slots in an "X" shaped configuration are provided.

5. An arrangement according to any preceding claim, wherein further securing means is provided for enhancing the connection between the adjacently arranged edge elements.

6. An arrangement according to claim 14, wherein the further securing means comprises a detent mounted to one edge element and connecting with the respective adjacent edge element at a position spaced from the respective slots, preferably supporting the underside of the respective adjacent edge element, preferably wherein the detent is mounted to one of the edge portions to be movable from a stowed position not connecting the adjacent edge element to an operational position connecting the adjacent edge element.

7. A furniture arrangement according to any preceding claim, comprising respective furniture pieces each comprise a plurality of edges having slots or grooves permitting modular connection of complementary furniture pieces in a plurality of adjacent edge connected configurations.

8. A furniture arrangement according to any preceding

claim, the arrangement comprising two or more modular table structures, each structure having:

i) support leg means;

ii) a table surface; and,

iii) an elongate edge element defining a peripheral portion of the table, the elongate edge element arranged to extend in side by side relationship adjacent a complementary elongate edge element of another table structure, the edge elements including respective longitudinally extending slots or grooves, at least one securing element being received in a slot or groove of one of the edge elements and extending to be received in a slot or groove of the other adjacently extending edge element so as to hold the edge elements extending in side by side relationship adjacent one another.

9. An elongate extruded plastics structural member having a section comprising a mouth portion defining an opening in a side wall and, communicating with the mouth portion, first and second slots or channels defined by respective pairs of substantially parallel side walls, said first and second slots or channels being inclined relative to one another in `V' shaped configuration.

10. A modular furniture arrangement comprising:

i) a first furniture piece comprising first leg support means, an elongate connection edge element and second leg support means spaced from the first leg support means;

ii) a second furniture piece comprising a proximal elongate edge without leg support means and a distal edge, leg support means being provided for the second furniture piece at a position nearer the distal edge than the proximal edge;

wherein the proximal elongate edge of the second furniture piece is connected to the elongate connection edge element of the first furniture piece.

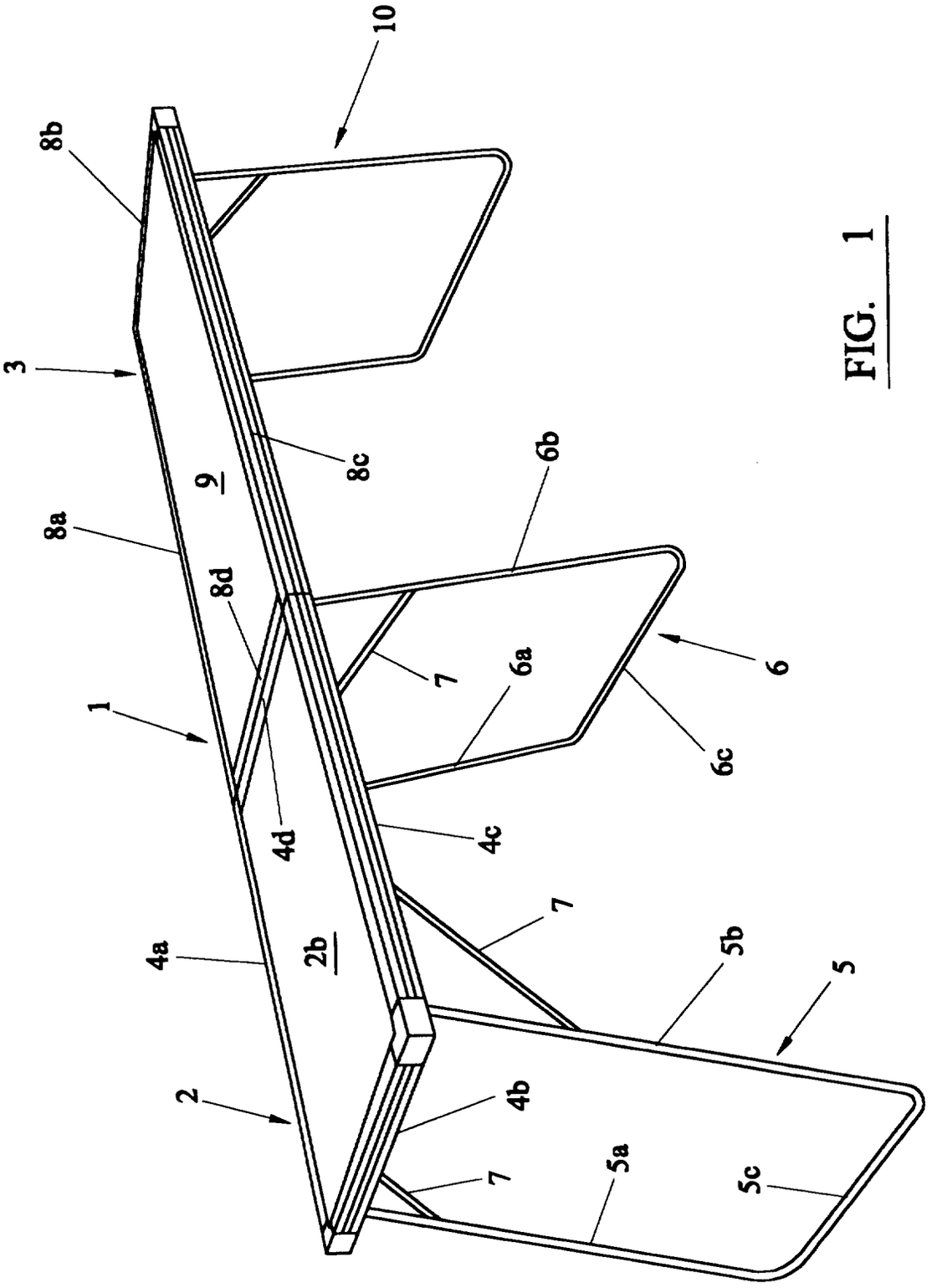

FIG. 1

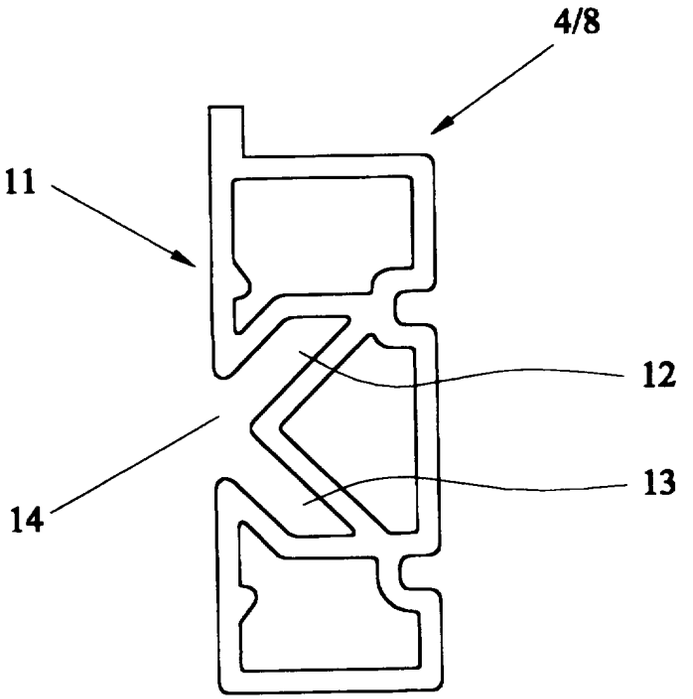

FIG. 2

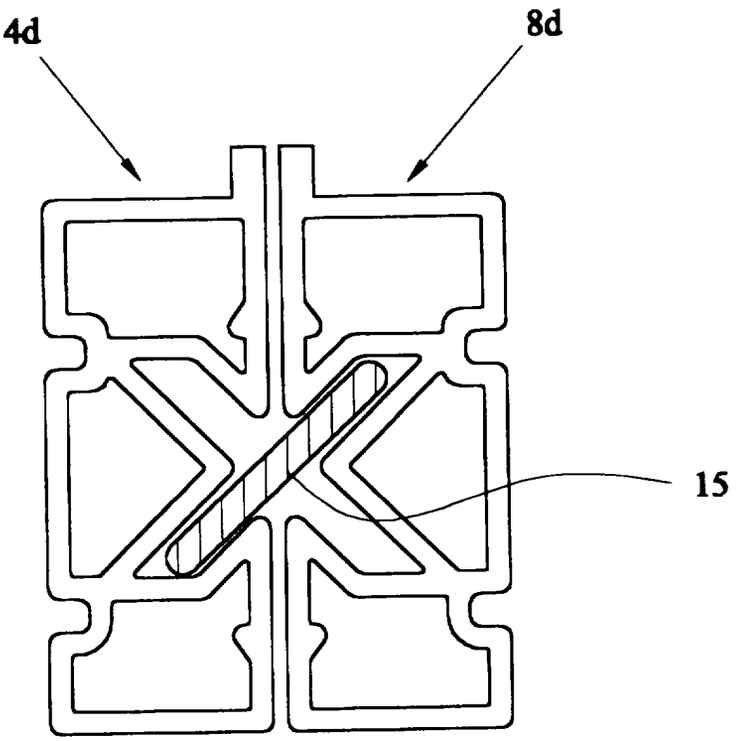

FIG. 3

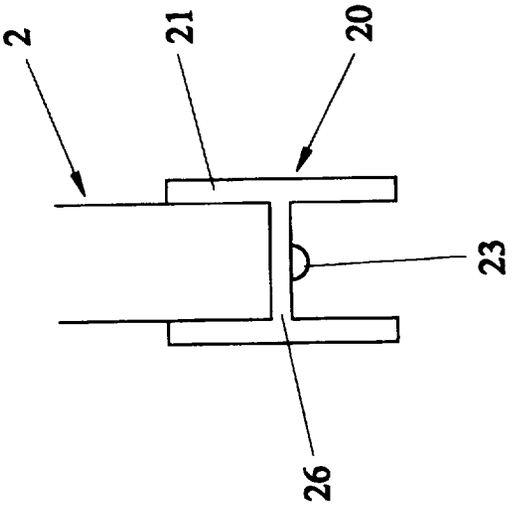

FIG. 4a

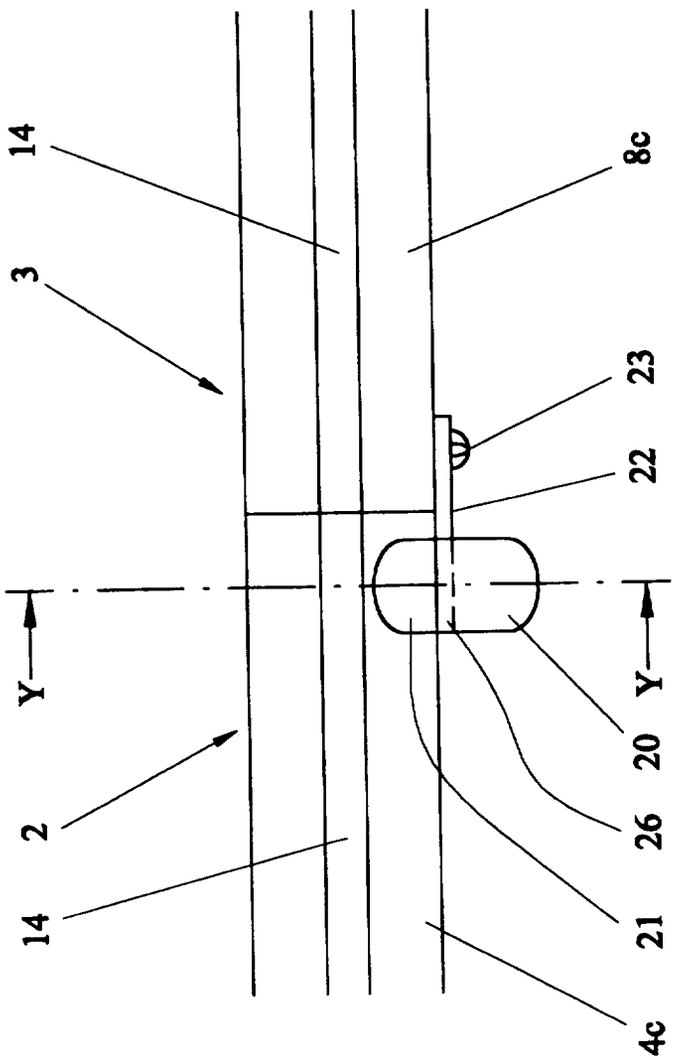

FIG. 4