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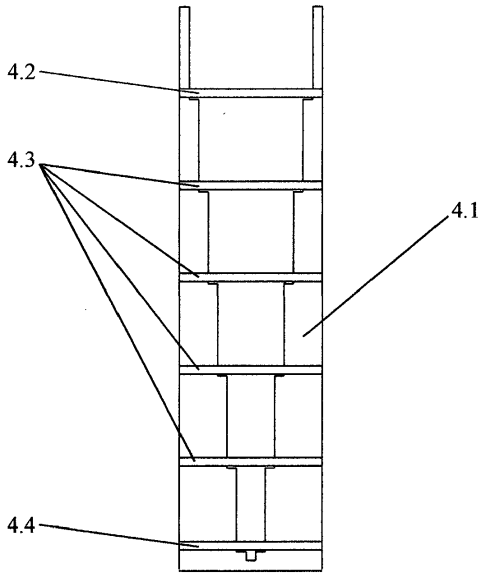
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(54) **Mountable furniture system**

(57) The invention concerned consists of a furniture mounting system which can be implemented to all types of furniture. The system consists of at least one horizontally positioned element and preferably a set of horizontally positioned elements, which are inserted along at least two outer vertically positioned elements, hence mounting a piece of furniture, which sustains itself by gravity, hence maximising mounting and demounting simplicity and avoiding the use of tools. Each horizontally positioned element features two outer opened cavities and one centre closed cavity at each of its ends. The system consists of inserting the horizontally positioned elements downwards along the outer vertically positioned elements until each horizontally positioned element arrives to its required height and is hence sustained by the outer vertically positioned elements. Then, an inner vertically positioned element is inserted inside the closed cavities of the horizontally positioned elements, hence maximising the structural stability and the finishing quality of the furniture concerned.

Figure 4:



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Description

Technical field:

[0001] The present invention relates to furniture systems.

Prior art:

[0002] Prior art elements comprise various furniture designs, but do not comprise a mounting systems which offers similar ease of use, mounting speed and flexibility to what is offered by the novel furniture mounting system concerned in this application.

[0003] Prior art elements comprise furniture mounting systems which comprise attachment arrangements on the furniture parts (EP2398353 A1), furniture mounting systems for wall mounting a cantilever piece of furniture (EP0342724 A2), pieces of furniture designed to hide electrical wires, hence making a customizable mounting system for furniture (US 2012/0145654 A1), mounting systems for RV furniture in which a mounting bracket for fold down furniture has a cushioning potion with upper and lower surfaces (US 2006/0265806 A1), reversible wall track systems for office furniture in which a wall track system is provided with overhead storage cabinets (US8128182 B2), and an upholstery mounting system and mechanism in which a plurality of mounting clips are fixed to one of the upholstery backing members (US7775589 B1).

Description of the invention:

[0004] The present invention concerns a furniture mounting system which can be implemented to all types of furniture. The system consists of at least one horizontally positioned element and preferably a set of horizontally positioned elements, which are inserted along at least two outer vertically positioned elements, hence mounting a piece of furniture, which sustains itself by gravity, hence maximising mounting and demounting simplicity and avoiding the use of tools. Each horizontally positioned element features two outer opened cavities and one centre closed cavity at each of its ends. The system consists of inserting the horizontally positioned elements downwards along the outer vertically positioned elements until each horizontally positioned element arrives to its required height and is hence sustained by the outer vertically positioned elements. Then, an inner vertically positioned element is inserted inside the closed cavities of the horizontally positioned elements, hence maximising the structural stability and the finishing quality of the furniture concerned.

[0005] All elements of the piece of furniture concerned should preferably be made of wood, MDF, plywood or plastic (preferably PVC). This is due to the high strength and rigidity of these materials.

[0006] The present furniture system comprises preferably at least one outer vertically positioned elements, at least one horizontally positioned element, and preferably at least one inner vertically positioned element.

Figure 1 shows a side view of the outer vertically positioned element.

Figure 2 shows a top view of one horizontally positioned element (in this case the last one to be inserted).

Figure 3 shows a side view of the inner vertically positioned element.

Figure 4 shows a side view of a piece of furniture (in this case a bookcase) featuring the horizontally positioned elements mounted onto the outer vertically positioned elements.

Figure 5 shows the piece of furniture as Figure 5, but with the inner vertically positioned elements mounted, hence featuring a fully mounted piece of furniture.

Figure 6 shows a top view of one of the last horizontally positioned elements to be inserted in the mounting process of a piece of furniture, which comprises outer cavities with closed profiles.

Figure 7 comprises a top view of one of the last horizontally positioned elements to be inserted in the mounting process of a piece of furniture, which comprises a set of inner and outer opened profiled cavities positioned along the element's length.

Figure 8 comprises a top view of one of the last horizontally positioned elements to be inserted in the mounting process of a piece of furniture, which comprises a set of inner and outer closed profiled cavities positioned along the element's length.

Figure 9 comprises a horizontal element as comprised on Figure 7 but with inner and outer opened profiled cavities positioned along and in parallel to one of the edges positioned along the element's length.

Figure 10 comprises a horizontal element as comprised on Figure 7 but with inner and outer closed profiled cavities positioned along and in parallel to one of the edges positioned along the element's length.

Figure 11 comprises the same features as Figure 7, but however comprising the inner and outer opened profiled cavities positioned along and in parallel to one of the edges positioned along the element's length.

Figure 12 comprises the same features as Figure 7, but however comprising the inner and outer closed profiled cavities positioned along and in parallel to one of the edges positioned along the element's length.

Figure 13 comprises the design shown on Figure 6 in which the vertically positioned elements are inserted.

Figure 14 comprises the design shown on Figure 7 in which the vertically positioned elements are inserted.

Figure 15 comprises the design shown on Figure 8 in which the vertically positioned elements are inserted.

Figure 16 comprises the design shown on Figure 9 in which the vertically positioned elements are inserted.

Figure 17 comprises the design shown on Figure 10 in which the vertically positioned elements are inserted.

Figure 18 comprises the design shown on Figure 11 in which the vertically positioned elements are inserted.

Figure 19 comprises the design shown on Figure 12 in which the vertically positioned elements are inserted.

Figure 20 comprises the design shown on Figure 13 in which the vertically positioned elements are inserted.

Figure 21 comprises an outer vertically positioned element design in which the vertical profile of the step profiled geometry comprises inclined lined profiles and vertical lined profiles at the points of contact with the horizontally positioned elements.

Figure 22 comprises an inner vertically positioned element design in which the vertical profile of the step profiled geometry comprises inclined lined profiles and vertical lined profiles at the points of contact with the horizontally positioned elements.

Figure 23 comprises an outer vertically positioned element design in which the vertical profile of the step profiled geometry comprises inclined lined profiles.

Figure 24 comprises an inner vertically positioned element design in which the vertical profile of the step profiled geometry comprises inclined lined profiles.

Figure 25 comprises the inner vertically positioned element comprised on Figure 22 being positioned inside the outer vertically positioned element comprised on Figure 21, and with the horizontally positioned elements inserted between these.

Figure 26 comprises inner and outer vertically positioned elements which comprise one step profiled geometry each.

Figure 27 comprises a piece of furniture in which the outer vertically positioned elements comprise a flexible attaching element positioned at the bottom of each inner stepped profiled geometry, which attaches these to the inner vertically positioned elements, which are housed in said vertically positioned elements.

Figure 28 comprises a piece of furniture in which the outer vertically positioned elements comprise a flexible attaching element positioned at the top of each inner stepped profiled geometry, which attaches these to the inner vertically positioned elements, which are housed in said vertically positioned elements.

Figure 29 comprises a piece of furniture in which the inner vertically positioned elements comprise a flexible attaching element positioned at the bottom of each outer stepped profiled geometry, which attaches these to the outer vertically positioned elements in which these are housed.

Figure 30 comprises a piece of furniture in which the inner vertically positioned elements comprise a flexible attaching element positioned at the top of each outer stepped profiled geometry, which attaches these to the outer vertically positioned elements in which these are housed.

Figure 31 comprises a piece of furniture in which the horizontally positioned elements project outwards from the two sides of the horizontally positioned elements.

Figure 32 comprises inner and outer vertically positioned elements which comprise four step profiled geometries each.

Figure 33 comprises a horizontal element in which a set of vertical elements positioned perpendicular to the element's length can be positioned at any position along an inner vertical element positioned in parallel to the element's length, along at least one of the two edges which are parallel to the element's length.

[0007] Each outer vertically positioned element [1.1] should preferably be identical, and features a stair-like geometry [1.2, 1.3] which is designed to use each step [1.2, 1.3] as the sustaining member of each of the horizontally positioned elements to be inserted. The vertically positioned elements [1.1] feature two members [1.6] each, featuring inner sets of steps [1.2, 1.3] featured towards the inside of the element [1.1], on each inner edge of the two vertically positioned members [1.6]. The two members [1.6] are connected together by the lower member [1.4] of the element [1.1]. The lower member [1.4] features a step [1.7] on top of it, which is featured to sustain the vertically positioned element (Figure 3). The lower two steps [1.3] are to be used to sustain the initial horizontally positioned element (Figure 2) to be inserted, while the top two steps [1.2] are to be used to sustain the last horizontally positioned (Figure 2) element to be inserted.

[0008] The length of cut of the outer cavities at the sides of the horizontally positioned elements [2.1] are each different. The longest lengths of cut of the outer cavities [2.2] are featured on the initial horizontally positioned element [2.1] to be inserted, while the shortest lengths of cut of the outer cavities [2.2] are featured on the last horizontally positioned element [2.1] to be inserted. However, in the case of the inner closed cavities [2.3], the trend is the opposite. In the case of the initial horizontally positioned element [2.1] to be inserted, the length of cut of the cavity [2.3] is the longest. However, in the case of the last horizontally positioned element [2.1] to be inserted, the length of cut of the cavity [2.3] is the shortest.

[0009] The inner vertically positioned elements [3.1] are inserted in order to maximise the stability of the structure and maximise finishing quality of the furniture. The vertically positioned elements [3.1] concerned feature a stair-like geometry [3.2, 3.3] which features a single member [3.1] featuring two outer sets of steps [3.2, 3.3] which are featured along each of the two outer sides of the elements [3.1] concerned. This element [3.1] is also inserted downwards and due to its weight, it [3.1] applies a downward force on the horizontally positioned elements (Figure 2) due to their position, and hence also on the outer vertically positioned elements (Figure 1), (which sustain the horizontally positioned elements). The inner vertically positioned elements (Figure 3) are inserted through the centre cavities [2.3] of the horizontally positioned elements (Figure 2). The upper steps [3.2] apply a force by gravity on the top horizontally positioned element (Figure 2), while the lowest steps [3.3] apply a force by gravity on the lower horizontally positioned element (Figure 2). The lower centre member [3.4] is featured in order to introduce the inner vertically positioned element (Figure 3) on the lower centre step [1.4] of the outer vertically positioned elements (Figure 1), hence sustaining all the elements of the piece of furniture concerned in their required positions fully efficiently and safely.

[0010] The mounting method using the present mounting system comprises the insertion of the horizontally positioned elements [4.2, 4.3, 4.4] along the outer vertically positioned elements [4.1] downwards until each horizontally positioned element [4.2, 4.3, 4.4] is positioned on its required height and is hence sustained by the outer vertically positioned elements [4.1].

[0011] The mounting procedure is initiated by introducing the lower horizontally positioned element [4.4] into the vertically positioned elements [4.1]. This procedure is then continued with the rest of the horizontally positioned elements [4.2, 4.3] until introducing the top horizontally positioned element [4.2] into the vertically positioned elements [4.1]. The upper steps sustain the top horizontally positioned element [4.2], while the lower steps sustain the lower horizontally positioned element [4.4].

[0012] Then, along each of the outer vertically positioned elements [5.1], an inner vertically positioned element [5.5] is inserted inside the closed cavities of the horizontally positioned elements [5.2, 5.3, 5.4] until reaching the lower member [1.4] of the outer vertically positioned elements [5.1]. This [5.5] hence maximises the structural stability of the piece of furniture, and can assist the outer vertically positioned elements [5.1] to keep the horizontally positioned elements [5.2, 5.3, 5.4] in their required position at all times. Furthermore, the inner vertically positioned elements [5.5] maximise finishing quality.

[0013] As a result, the outer vertically positioned elements [5.1] sustain the horizontally positioned elements [5.2, 5.3, 5.4] and the inner vertically positioned elements [5.5], as the inner vertically positioned elements [5.5] and the horizontally positioned elements [5.2, 5.3, 5.4] are all inserted and sustained in their required position by gravity. Therefore, the elements [5.1, 5.2, 5.3, 5.4, 5.5] of the furniture piece concerned are all sustained together naturally by gravity, hence minimising mounting and dismounting time and minimising product costs, as well as avoiding the use of screws, bolts and tools. The lower member [3.4] of the inner vertically positioned element [5.5] is sustained by the lower member [1.4] of the outer vertically positioned element [5.1]. However, the inner vertically positioned element [5.5] is mostly sustained by the horizontally positioned elements [5.2, 5.3, 5.4], which are also in turn sustained by the outer vertically positioned elements [5.1].

[0014] Each horizontally positioned element [5.2, 5.3, 5.4] is inserted on its required position by the means of a set of two steps [1.2] featured along the inner edges of each outer vertically positioned element [5.1]. So, the inner vertically positioned elements [5.5] are then inserted on their required position by fitting their outer stepped profiles [3.2, 3.3] onto the inner stepped profiles [1.2, 1.3] of the outer vertically positioned elements [5.1].

[0015] Both outer [5.1] and inner [5.5] vertically positioned elements feature two stepped profiles [1.2, 1.3, 3.2, 3.3] featured opposite the one to the other. The outer vertically positioned elements [5.1] feature two inner sets of oppositely positioned stepped profiles [1.2, 1.3], while

the inner vertically positioned elements [5.5] feature two outer sets of oppositely positioned stepped profiles [3.2, 3.3]. Hence, both elements [5.1, 5.5] offer various sets of two evenly levelled steps [1.2, 3.2] each, hence offering a position at each required level [1.2, 3.2] for each level's corresponding horizontal elements [5.2, 5.3, 5.4]. The positions for each of the horizontally positioned elements [5.2, 5.3, 5.4] result to be the same, without matter if the piece of furniture is mounted by initially inserting the horizontally positioned elements [5.2, 5.3, 5.4] onto the inner vertically positioned elements [5.5] or onto the outer vertically positioned elements [5.1].

[0016] All elements [5.1, 5.2, 5.3, 5.4, 5.5] should preferably be cut geometries of sheets of material, hence minimising manufacturing costs and material costs. Elements [5.1, 5.2, 5.3, 5.4, 5.5] can also be manufactured by plastic injection processes. All elements should be manufactured by the machining (preferably cutting) sheets of material to the required profiles or by plastic injection processes.

[0017] The result is a super simple piece of furniture which can be mounted and dismounted very easily and very cheaply in a matter of seconds.

[0018] The system allows the mounting procedure of the furniture piece to be exerted in the opposite way. This means that the mounting procedure is initiated by mounting the horizontally positioned elements (Figure 2) initially onto the inner vertically positioned elements (Figure 3), which is then finalised by inserting the outer vertically positioned elements (Figure 1) onto the edges of the inner vertically positioned elements (Figure 3) and the outer cavities of the horizontally positioned elements (Figure 2).

[0019] This means that the horizontally positioned elements [5.2, 5.3, 5.4] are inserted into the inner vertically positioned elements [5.5] by inserting the inner cavities [2.3] of the horizontally positioned elements [5.2, 5.3, 5.4] along the outer stepped edges [3.2, 3.3] of the inner vertically positioned elements [5.5]. The mounting procedure can then can be finalised by inserting the inner stepped edges [1.2, 1.3] of the outer vertically positioned elements [5.1] onto the outer cavities [2.2] of the horizontally positioned elements [5.2, 5.3, 5.4] and along the outer stepped edges [3.2, 3.3] of the inner vertically positioned elements [5.5], hence resulting in the desired mounted piece of furniture. In this case, the lower horizontally positioned element [5.2], which features the longest inner cavities [2.3], is initially inserted. Then, the other horizontally positioned elements [5.3] follow, starting with those which have the longest inner cavities [2.3] and finishing with those which have the shortest inner cavities [2.3]. This procedure is continued until inserting the upper horizontal element [5.4], which is the last horizontally positioned element [5.4] to be inserted into its required position and is hence the one which features the shortest inner cavities [2.3]. So, in this case, the horizontally positioned elements [5.2, 5.3, 5.4] are mounted such that the ones with the longest inner cavities [2.3] come first and those with the shortest inner cavities [2.3] come last.

[0020] Similarly to the inverse procedure, each horizontally positioned element [5.2, 5.3, 5.4] is inserted on its required position by the means of a set of two steps [3.2] featured along the outer edges of each inner vertically positioned element [5.5]. So, similarly to the inverse procedure, the outer vertically positioned elements [5.1] are then inserted on their required positions by fitting their inner stepped profiles [1.2, 1.3] onto the outer stepped profiles [3.2, 3.3] of the inner vertically positioned elements [5.5].

[0021] The horizontally positioned elements [6.1] can also comprise closed profiled outer cavities which comprise closed profiles [6.2] on the element's surface [6.1]. These [6.2] are always positioned adjacent to the inner cavities [6.3] in order to guarantee that the outer and vertically positioned elements are housed in each other. Closed profiled outer cavities [6.2] comprise the advantage that the horizontally positioned elements [6.1] are kept more stable in their required positions, as these [6.1] will have four lateral areas of contact with the outer vertically positioned elements in this case, compared to two lateral areas of contact if the outer cavities comprise opened profiles.

[0022] The horizontally positioned elements [7.3] can also comprise one or more sets of cavities positioned along their length, comprising outer opened profiled cavities [7.4] and inner cavities [7.5]. These are positioned between the outer opened cavities [7.1] and inner cavities [7.2] positioned at the extremes of said element [7.3]. This design allows the insertion of vertical elements acting as brackets along the length of said horizontal elements [7.3]. The fact that the outer cavities are opened profiled [7.1, 7.4] offers a piece of furniture with an even frontal surface.

[0023] Alternatively, in order to maximise the stability of the structure of the piece of furniture, the horizontal elements [8.3] can also comprise closed profiled outer cavities [8.4], which are to be positioned along the horizontal element's length, themselves being positioned beside the inner cavities [8.5]. The inner cavities [8.2] at the extremes of the horizontal elements [8.3] can hence also be positioned between the outer closed profiled cavities [8.1].

[0024] In order for the piece of furniture to comprise vertical elements being positioned along one of the edges which are parallel to the horizontal elements' [9.6] length, the horizontal elements [9.6] can comprise inner cavities [9.3] which are positioned parallel to and along one of the edges which is parallel to the element's [9.6] length. In this design, the outer cavities [9.1, 9.4] comprise opened profiles [9.4], similar to the element comprised on Figure 7. Therefore, the outer cavities [9.1] are positioned beside the inner cavities [9.3], hence forming half T-shaped opened profiles [9.1] with the outer cavities [9.1] of the outer vertically positioned elements which are positioned perpendicular to the horizontal element's

length at the extremities of the element [9.6]. Additionally, the outer cavities [9.4] along the element's length form T-shaped opened profiles [9.4] with the outer cavities [9.4] of the vertically positioned elements positioned perpendicular to the horizontal element's [9.6] length, and hence between the two sets of vertically positioned elements which are positioned at the extremities of the horizontal elements [9.6]. Along the outer edge which is parallel to the element's length on other side of the element [9.6], the outer cavities [9.7, 9.8] are comprised as featured on Figure 7.

[0025] At the extremities of the horizontal element's length [9.6], the inner cavities [9.2] are positioned beside the outer opened profiled cavities [9.7]. Similarly, along the length of the horizontal element [9.6], the inner cavities [9.5] are positioned beside the outer opened profiled cavities [9.8].

[0026] In order for the piece of furniture to comprise vertical elements being positioned along one of the edges which are parallel to the horizontal elements' [10.6] length, the horizontal elements [10.6] can comprise inner cavities [10.3] which are positioned parallel to and along one of the edges which is parallel to the element's [10.6] length. In this design, the outer cavities [10.1, 10.4] comprise closed profiles [10.4], similar to the element comprised on Figure 8. Therefore, the outer cavities [10.1] are positioned beside the inner cavities [10.3], hence forming half T-shaped closed profiles [10.1] with the outer cavities [10.1] of the outer vertically positioned elements which are positioned perpendicular to the horizontal element's length at the extremities of the element [10.6]. Additionally, the outer cavities [10.4] along the element's length form T-shaped closed profiles [10.4] with the outer cavities [10.4] of the vertically positioned elements positioned perpendicular to the horizontal element's [10.6] length, and hence between the two sets of vertically positioned elements which are positioned at the extremities of the horizontal elements [10.6]. Along the outer edge which is parallel to the element's [10.6] length on the other side of the element [10.6], the outer cavities [10.7, 10.8] are closed profiled, as comprised on Figure 8.

[0027] At the extremities of the horizontal element's length [10.6], the inner cavities [10.2] are positioned beside the outer opened profiled cavities [10.7]. Similarly, along the length of the horizontal element [10.6], the inner cavities [10.5] are positioned beside the outer opened profiled cavities [10.8].

[0028] Therefore, the pieces of furniture comprising horizontal elements [9.6, 10.6] as comprised on Figures 9 and 10 offer the advantage of comprising vertically positioned elements which act as wall brackets.

[0029] However, the outer cavities along the length of the horizontal elements [9.4, 10.4] can also form T-shaped profiles with the inner cavities [9.3, 10.3] if the inner vertically positioned element to be inserted has a diameter which is equal to the entire length of the peace of furniture concerned.

[0030] The horizontal elements [11.6] can also comprise opened T-shaped profiles [11.4], as on Figure 9, at the sides and opened half T-shaped profiles [11.1] at the corners along both edges which are parallel to the element's [11.6] length. Therefore, along both sides, the inner cavities [11.3] are positioned parallel to the element's length [11.6] and the inner cavities are positioned perpendicularly to the element's length at the extremities [11.2], and between the extremities [11.5], such that the design can offer maximum functional and application flexibility.

[0031] The horizontal elements [12.6] can also comprise closed T-shaped profiles [12.4], as on Figure 10, at the sides and closed half T-shaped profiles [12.1] at the corners along both edges which are parallel to the element's [12.6] length. Therefore, along both sides, inner cavities [12.3] are positioned parallel to the element's length [12.6] and inner cavities are positioned perpendicularly to the element's length at the extremities [12.2], and between the extremities [12.5], such that the design can offer maximum functional and application flexibility.

[0032] On the horizontal element design [13.1] comprised on Figure 6, the outer vertical elements [13.2] are housed inside the outer cavities while the inner vertical elements [13.3] are housed inside the inner cavities.

[0033] On the horizontal element design [14.1] comprised on Figure 7, the outer vertical elements [14.2] are housed inside the outer cavities while the inner vertical elements [14.3] are housed inside the inner cavities.

[0034] On the horizontal element design [15.3] comprised on Figure 8, at the element's extremities, the outer vertical elements [15.1] are housed inside the outer cavities while the inner vertical elements [15.2] are housed inside the inner cavities. Along the horizontal element's length [15.3], the outer vertical elements [15.4] are housed inside the central outer cavities while the inner vertical elements [15.5] are housed inside the central inner cavities.

[0035] On the horizontal element design [16.3] comprised on Figure 9, at the element's extremities, the outer vertical elements [16.1] are housed inside the outer cavities while the inner vertical elements [16.2] are housed inside the inner cavities. Along the horizontal element's length [16.3], the outer vertical elements [16.4] are housed inside the central outer cavities while the inner vertical elements [16.5] are housed inside the central inner cavities.

[0036] On the horizontal element design [17.6] comprised on Figure 10, at the element's extremities, the outer vertical elements [17.1] are housed inside the outer cavities while the inner vertical elements [17.2] are housed inside the inner cavities. Along the horizontal element's length [17.6], the outer vertical elements [17.4] are housed inside the central outer cavities while the inner vertical elements [17.5] are housed inside the central inner cavities. The outer vertical elements positioned parallel to the horizontal element's length [17.3] and the inner vertical elements positioned parallel to the horizontal elements' length [17.7], are inserted in their respective cav-

ities.

[0037] The outer vertical elements [17.3] which are positioned in parallel to the horizontal elements' [17.6] length are inserted such that the edges of these [17.3] will be facing the lateral surfaces of the outer vertically positioned elements which are positioned perpendicular to the element's length [17.4]. However, using the same T-shaped profiled cavities, the length of the outer vertical elements positioned in parallel to the element's length [17.3] can be slightly longer such that the edges of the outer vertical elements positioned perpendicular to the element's length [17.4] will be facing the lateral surfaces of the outer vertical elements which are positioned in parallel to the element's length [17.3]. Those previously mentioned features can also be incorporated in the outer vertical elements [17.1, 17.3] positioned at the extremities of the element [17.6], which are inserted in half T-shaped profiled cavities.

[0038] On the horizontal element design [18.7] comprised on Figure 11, at the element's extremities, the outer vertical elements [18.1] are housed inside the outer cavities while the inner vertical elements [18.2] are housed inside the inner cavities. Along the horizontal element's length [18.7], the outer vertical elements [18.5] are housed inside the central outer cavities while the inner vertical elements [18.6] are housed inside the central inner cavities. The outer vertical elements positioned parallel to the horizontal element's length [18.4] and the inner vertical elements positioned parallel to the horizontal elements' length [18.3], are inserted in their respective cavities.

[0039] The outer vertical elements [18.4] which are positioned in parallel to the horizontal elements' [18.7] length are inserted such that the edges of these [18.4] will be facing the lateral surfaces of the outer vertically positioned elements which are positioned perpendicular to the element's length [18.5]. However, using the same T-shaped profiled cavities, the length of the outer vertical elements positioned in parallel to the element's length [18.4] can be slightly longer such that the edges of the outer vertical elements positioned perpendicular to the element's length [18.5] will be facing the lateral surfaces of the outer vertical elements which are positioned in parallel to the element's length [18.4]. Those previously mentioned features can also be incorporated in the outer vertical elements [18.1, 18.4] positioned at the extremities of the element [18.7], which are inserted in half T-shaped profiled cavities.

[0040] The horizontal elements [19.7] can comprise the same features as comprised on Figure 17 but along both of its sides which are parallel to the elements' [19.7] length, such that the piece of furniture's application functionality and flexibility is maximised. This hence means that at the element's extremities, the outer vertical elements [19.1] are housed inside the outer cavities while the inner vertical elements [19.2] are housed inside the inner cavities. Along the horizontal element's length [19.7], the outer vertical elements [19.5] are housed inside the central outer cavities while the inner vertical elements [19.6] are housed inside the central inner cavities. These features are comprised along both sides of the element [19.7] which are parallel to the element's length [19.7]. The outer vertical elements positioned parallel to the horizontal element's length [19.4] and the inner vertical elements positioned parallel to the horizontal elements' length [19.3], are inserted in their respective cavities, which are positioned along both sides of the element [19.7] which are parallel to its [19.7] length.

[0041] The horizontal elements [20.7] can comprise the same features as comprised on Figure 18 but along both of its sides which are parallel to the elements' [20.7] length, such that the piece of furniture's application functionality and flexibility is maximised. This hence means that at the element's extremities, the outer vertical elements [20.1] are housed inside the outer cavities while the inner vertical elements [20.2] are housed inside the inner cavities. Along the horizontal element's length [20.7], the outer vertical elements [20.5] are housed inside the central outer cavities while the inner vertical elements [20.6] are housed inside the central inner cavities. These features are comprised along both sides of the element [20.7] which are parallel to the element's length [20.7]. The outer vertical elements positioned parallel to the horizontal element's length [20.4] and the inner vertical elements positioned parallel to the horizontal elements' length [20.3], are inserted in their respective cavities, which are positioned along both sides of the element [20.7] which are parallel to its [20.7] length.

[0042] In order for the customer to mount the piece of furniture as easily and quickly as possible, the outer vertically positioned elements can comprise inclined lined profiles [21.1] along the vertical profiles [21.1] of its inner stepped geometries, such that the inner vertically positioned elements will be much easier to inserted into the stepped geometry [21.2] of the vertically positioned elements. The vertical areas of contact of the outer vertically positioned elements with the horizontally positioned elements [21.2] maintain their right angled geometry, as this will increase the vertical area of contact between the horizontal and outer vertical [21.2] elements, and hence keep the horizontally positioned elements more stable. After laying the horizontally positioned elements on their respective horizontal areas of contact [21.3], the inner vertical elements are inserted respectively. The geometry profile at the bottom of the outer vertical element also comprises a vertical profile at each side [21.4] and a horizontal profile [21.5]. The inner inclined lined profiles [21.1] are profiled such that the distance between the two inclined profiles [21.1] decreases as the further is the position of the profile concerned [21.1] into the outer vertical elements.

[0043] The inner vertically positioned elements are to be inserted along the vertically positioned elements [21.1] and both elements will fully fit together due to the inclined lined profiles [22.1] of the vertical profiles along the outer stepped geometries [22.2] of the inner vertically

positioned elements. The horizontal points of contact of the inner vertical elements [22.2] will sustain the element [22.2] while the vertical points of contact [22.3] will keep it in its required position. At the bottom of the inner vertical elements, the horizontal points of contact [22.4] sustain the element on the bottom horizontal element, while the geometry comprising the vertical points of contact [22.5] and the bottom horizontal profile [22.6], inserts into the inner cavities of the bottom horizontal element. The outer inclined lined profiles [22.1] are profiled such that the distance between the two inclined profiles [22.1] decreases as the further is the position of the profile concerned [22.1] into the inner vertical elements.

[0044] The result is a robust piece of furniture in which the horizontal elements [25.2] are inserted inside the outer vertical elements [25.1], with the inner vertical elements [25.3] inserted in the outer vertical elements [25.1] and hence positioned on the horizontal elements [25.2].

[0045] The outer vertically positioned elements can comprise an inclined lined profile [23.1] along their entire vertical profiles [23.1] at the inner stepped geometries, but however a horizontal profile will always be comprised at the sustaining points of contact with the horizontal elements [23.2], as well as at the bottom sustaining point of contact [23.3]. These geometric profiles will further increase the ease and speed of insertion of the horizontal elements into the outer vertical elements [23.1], while minimising the contact pressure between the outer vertical elements [23.1] and the horizontal elements. The inner inclined lined profiles [23.1] are profiled such that the distance between the two inclined profiles [23.1] decreases as the further is the position of the profile concerned [23.1] into the outer vertical elements.

[0046] The inner vertical elements also can share the same advantages, by respectively comprising inclined lined profiles [24.1] along their entire vertical profiles [24.1], hence fitting perfectly with the geometry of the outer vertical elements [23.1]. The points of contact with the horizontal elements remain horizontally profiled [24.2] as this would reduce contact pressure. The bottom vertical profiles comprise and inclined lined profile [24.2] in order to facilitate the insertion of the inner vertical element and the bottom points of contact with the bottom horizontal element [24.3] and the outer vertical element [24.5]. The outer inclined lined profiles [24.1] are profiled such that the distance between the two inclined profiles [24.1] decreases as the further is the position of the profile concerned [24.1] into the inner vertical elements.

[0047] The result is a robust piece of furniture in which the horizontal elements [25.2] are inserted inside the outer vertical elements [25.1], with the inner vertical elements [25.3] inserted in the outer vertical elements [25.1] and hence positioned on the horizontal elements [25.2].

[0048] In all described design cases in this application, the outer [26.4] and inner [26.1] vertically positioned elements can also be comprised in two separate elements [26.1, 26.4] each, such that each element [26.1, 26.4] will comprise one single set of stair-like geometry profiles [26.2, 26.3] each. The bottom profile [26.5] of the outer [26.4] and inner [26.1] vertical element will hence comprise half of its required length per element. This design provides the advantage of suing more compact furniture packaging when packaging the elements, hence minimising the volume required per complete furniture unit.

[0049] In order for the vertically positioned elements [27.1, 27.3] to be kept in their required position even in the case that the piece of furniture falls or that it is changed from one position to the other, the vertical elements [27.1, 27.3] can comprise a clamping system at the top and/or the bottom of the furniture piece.

[0050] The outer vertical elements [27.3] can comprise a set of flexible elements [27.6] which clamp into the bottom geometry [27.4] of the inner vertical elements [27.1]. One flexible element [27.6] is comprised at each side of the inner step-like geometries of the outer vertical elements [27.3]. The flexible elements [27.6] are clamping elements [27.6] which comprise a clamping geometry [27.5] at their ends which projects towards the inside of the piece of furniture, such that when the inner vertical element [27.1] is inserted into the outer vertical element [27.3], the ends of the clamping elements [27.5] are pushed outwards by the bottom geometry of the inner vertical element [27.4] and are then inserted inwards into a pocket profiled geometry [27.4] comprised in the bottom geometry of the inner vertical elements [27.1] due to the elastic force of the clamps' [27.6] material. This hence closes the clamps [27.5] and hence attaches the inner vertical element [27.1] to the outer vertical element [27.3]. When the clamps [27.6] are at their unstressed position, these [27.6] are positioned totally vertically, hence keeping the two elements [27.1, 27.3] clamped together. In order to take the inner vertical element [27.1] out, the user has just to move the two clamp ends [27.5] outwards, hence submitting the clamps [27.6] to a stress and opening the clamping system [27.6]. The clamps [27.6] should preferably be orientated upwards, but can however also be orientated downwards. The clamping operation should always be performed after inserting the horizontal elements [27.2], which hold most of the weight of the inner vertical elements [27.1]. The clamps [27.6] should preferably be made in the same machining or cutting operation as that to make the outer vertical element [27.3] to which these [27.6] are attached to. The clamps [27.6] should hence preferably make a single piece element with the outer vertical element [27.3] to which it is attached to. The manufacturing method should preferably be laser cutting methods. The material to be used to make the clamps [27.6] should preferably be a plastic, preferably PVC or a polyolefin.

[0051] The outer vertical elements [28.5] can also comprise a set of flexible elements [28.3] which clamp into the top geometry [28.1] of the inner vertical elements [28.6]. One flexible element [28.3] is comprised at each side of the inner step-like geometries of the outer vertical elements [28.5]. The flexible elements [28.3] are clamping elements [28.3] which comprise a clamping geometry

[28.2] at their ends which projects towards the inside of the piece of furniture, such that when the inner vertical element [28.6] is inserted into the outer vertical element [28.5], the ends of the clamping elements [28.2] are pushed outwards by the bottom geometry of the inner vertical element [28.6] and are then inserted inwards into a pocket profiled geometry [28.1] comprised in the top geometry of the inner vertical elements [28.6] due to the elastic force of the clamps' [28.3] material. This hence closes the clamps [28.2] and hence attaches the inner vertical element [28.6] to the outer vertical element [28.5]. When the clamps [28.3] are at their unstressed position, these [28.3] are positioned totally vertically, hence keeping the two elements [28.5, 28.6] clamped together. In order to take the inner vertical element [28.6] out, the user has just to move the two clamp ends [28.2] outwards, hence submitting the clamps [28.3] to a stress and opening the clamping system [28.3]. The clamps [28.3] should preferably be orientated upwards, but can however also be orientated downwards. The clamping operation should always be performed after inserting the horizontal elements [28.4], which hold most of the weight of the inner vertical elements [28.6]. The clamps [28.3] should preferably be made in the same machining or cutting operation as that to make the outer vertical element [28.5] to which these [28.3] are attached to. The clamps [28.3] should hence preferably make a single piece element with the outer vertical element [28.5] to which it is attached to. The manufacturing method should preferably be laser cutting methods. The material to be used to make the clamps [28.3] should preferably be a plastic, preferably PVC or a polyolefin.

[0052] The inner vertical elements [29.1] can comprise a set of flexible elements [29.5] which clamp into the bottom geometry [29.4] of the outer vertical elements [27.1]. One flexible element [29.5] is comprised at each side of the outer step-like geometries of the inner vertical elements [29.1]. The flexible elements [29.5] are clamping elements [29.5] which comprise a clamping geometry [29.6] at their ends which projects towards the outside of the piece of furniture, such that when the inner vertical element [29.1] is inserted into the outer vertical element [29.3], the ends of the clamping elements [29.6] are pushed inwards by the bottom geometry of the outer vertical element [29.3] and are then inserted outwards into a pocket profiled geometry [29.4] comprised in the bottom geometry of the outer vertical elements [29.3] due to the elastic force of the clamps' [29.5] material. This hence closes the clamps [29.6] and hence attaches the inner vertical element [29.1] to the outer vertical element [29.3]. When the clamps [29.5] are at their unstressed position, these [29.5] are positioned totally vertically, hence keeping the two elements [29.1, 29.3] clamped together. In order to take the inner vertical element [29.1] out, the user has just to move the two clamp ends [29.6] inwards, hence submitting the clamps [29.5] to a stress and opening the clamping system [29.5]. The clamps [29.5] should preferably be orientated downwards, but can however also be orientated upwards. The clamping operation should always be performed after inserting the horizontal elements [29.2], which hold most of the weight of the inner vertical elements [29.1]. The clamps [29.5] should preferably be made in the same machining or cutting operation as that to make the inner vertical element [29.1] to which these [29.5] are attached to. The clamps [29.5] should hence preferably make a single piece element with the inner vertical element [29.1] to which it is attached to. The manufacturing method should preferably be laser cutting methods. The material to be used to make the clamps [29.5] should preferably be a plastic, preferably PVC or a polyolefin.

[0053] The inner vertical elements [30.6] can comprise a set of flexible elements [30.1] which clamp into the top geometry [30.3] of the outer vertical elements [30.5]. One flexible element [30.1] is comprised at each side of the outer step-like geometries of the inner vertical elements [30.6]. The flexible elements [30.1] are clamping elements [30.1] which comprise a clamping geometry [30.2] at their ends which projects towards the outside of the piece of furniture, such that when the inner vertical element [30.6] is inserted into the outer vertical element [30.5], the ends of the clamping elements [30.2] are pushed inwards by the top geometry of the outer vertical element [30.5] and are then inserted outwards into a pocket profiled geometry [30.3] comprised in the top geometry of the outer vertical elements [30.5] due to the elastic force of the clamps' [30.1] material. This hence closes the clamps [30.2] and hence attaches the inner vertical element [30.6] to the outer vertical element [30.5]. When the clamps [30.1] are at their unstressed position, these [30.1] are positioned totally vertically, hence keeping the two elements [30.6, 30.5] clamped together. In order to take the inner vertical element [30.6] out, the user has just to move the two clamp ends [30.2] inwards, hence submitting the clamps [30.1] to a stress and opening the clamping system [30.1]. The clamps [30.1] should preferably be orientated downwards, but can however also be orientated upwards. The clamping operation should always be performed after inserting the horizontal elements [30.4], which hold most of the weight of the inner vertical elements [30.6]. The clamps [30.1] should preferably be made in the same machining or cutting operation as that to make the inner vertical element [30.6] to which these [30.1] are attached to. The clamps [30.1] should hence preferably make a single piece element with the inner vertical element [30.6] to which it is attached to. The manufacturing method should preferably be laser cutting methods. The material to be used to make the clamps [30.1] should preferably be a plastic, preferably PVC or a polyolefin.

[0054] The horizontal elements [31.2] of all the above described embodiments should preferably project from both sides of the vertically positioned elements [31.1] situated at the extremities of the horizontally positioned elements [31.2]. Therefore, the horizontal elements [31.2] of all the above described embodiments should prefera-

bly also project from the outward-facing sides of the vertically positioned elements [31.1], which are inserted into the cavities positioned at the extremities of these [31.2]. This design feature will further increase the surface area provided by the horizontal elements [31.2].

[0055] In all the above described embodiments, the horizontally positioned elements [31.2] can also be positioned vertically [31.1] while hence positioning the vertically positioned elements [31.1] horizontally [31.2]. This means that the design features comprised in the vertically positioned elements [31.1] can be comprised in the horizontal elements [31.2], while the design features comprised in the horizontally positioned elements [31.2] can be comprised in the vertical elements [31.1], hence maximising furniture design flexibility and multifunctional flexibility.

[0056] In all the above described embodiments, the mounting process can also be such that the horizontally positioned elements [25.2, 31.2] are initially inserted into the inner vertically positioned elements [25.3, 31.1], and the outer vertically positioned elements [25.1,31.1] are finally inserted as the final mounting operation of the piece of furniture concerned. This hence means that the vertically positioned elements [25.1, 25.3, 31.1] are positioned upside down compared to the previously described configuration.

[0057] The outer [32.2] and inner [32.4] vertically positioned elements can comprise four step-like profiled geometries [32.1, 32.5] each, such that the inner vertical element [32.4] attaches two outer sets of stepped fields [32.5] to the other by an attaching member [32.3] and is hence inserted into the four inner stepped geometry sets [32.1] of the outer vertically positioned elements.

[0058] The horizontal elements [33.4], notably the designs comprised on Figures 10 and 12, can comprise a different design such that outer cavities which are perpendicular to the element's [33.4] length [33.2] are positioned at any point along the inner cavity of an inner vertically positioned element positioned in parallel to the element's [33.4] length [33.1]. This can be comprised along at least one of the sides of the element [33.4]. Therefore this design offers the advantage that any set of inner [33.3] and outer [33.2] cavities can be positioned perpendicularly to any inner cavity [33.1] which is parallel to the element's [33.4] length, and at any position along it [33.1]. This feature is to be comprised on at least one of the element's [33.4] two sides which are parallel to its [33.4] length. As a result, this design allows a set of vertical elements to be positioned perpendicular to the element's [33.4] length such that these can be positioned at any position along an inner vertical element positioned in parallel to the element's [33.4] length, along at least one of the two edges which are parallel to the element's [33.4] length, hence maximising design and application flexibility, as well as the multifunctional flexibility of the piece of furniture concerned.

[0059] This furniture mounting systems concerned in this invention can be used in all types of furniture and furnishings. It should be preferably used for bookcases and tables.

[0060] The present invention concerns a mountable furniture system comprising at least one horizontally positioned element having at least one outer cavity at each corner and/or along each of the element's sides, which comprises an opened profile and/or a closed profile on the element's surface, which inserts into at least an inner step profiled part of at least one vertically positioned element.

[0061] The preferred embodiments are thereof the following.

[0062] A mountable furniture system according to the above in which an inner vertically positioned element having a stair-like geometry on each of its two outer edges, is inserted into the central cavities of the horizontally positioned elements, such that the lateral cavities of the outer vertically positioned elements are fully covered.

[0063] A mountable furniture system according to the above which comprises at least one horizontally positioned element comprising at least one inner cavity at each side, which is preferably positioned parallel to at least one of the horizontal elements' edges or perpendicular to at least one of the horizontal elements' edges, and which inserts into at least an outer step profiled part of at least one vertically positioned element.

[0064] A mountable furniture system according to the above in which an outer vertically positioned element having a stair-like geometry on each of its two inner edges, is inserted into the outer cavities of the horizontally positioned elements, such that the stability of the horizontal elements is maximised.

[0065] A mountable furniture system according to the above comprising horizontally positioned elements which have different inner and outer cavity lengths each, according to the distance between each of the two steps featured at each level of the vertically positioned elements.

[0066] A mountable furniture system according to the above which comprises horizontally positioned elements having inner cavity lengths which correspond to the distance between each outer step at each level of the inner vertically positioned elements.

[0067] A mountable furniture system according to the above which comprises horizontally positioned elements having outer cavity lengths which correspond to the distance between each inner step at each level of the outer vertically positioned elements.

[0068] A mountable furniture system according to the above wherein the horizontally positioned elements comprise at least one outer cavity which comprises a T-shaped opened or closed profile joining together outer cavity profiles only or a combination of inner and outer cavity profiles, and/or at least one half T-shaped opened or closed profile at each corner, and which are sustained by at least 3 inner vertically positioned elements housed in at least three outer vertically positioned elements.

[0069] A mountable furniture system according to the

above which comprises said elements of claim 8 in which the outer vertically positioned elements which are positioned perpendicular to the horizontal elements' length, are positioned perpendicularly against the edge of the outer vertically positioned elements which are positioned in parallel to the horizontal elements' length, or vice-versa, and wherein the horizontal elements project from both sides of at least one set of vertically positioned elements along the horizontal elements' length.

[0070] A mountable furniture system according to the above wherein the vertical profiles of the inner stepped geometries of the outer vertically positioned elements and the vertical profiles of the outer stepped geometries of the inner vertically positioned elements are profiled as inclined lined profiles which preferably become vertically lined profiles at the areas of contact with the horizontally positioned elements.

[0071] A mountable furniture system according to the above wherein the inner and vertically positioned elements comprise only one stepped profile each such that each of these are inserted in two pieces in their respective corresponding horizontal cavities, or wherein these comprise four stepped geometries each such that each of these is instead as a single piece component housed inside the other.

[0072] A mountable furniture system according to the above which comprise a flexible attaching element, preferably a clamp system, on at least one side, preferably two sides, of the bottom or top ends of one of the vertically positioned elements which preferably forms a single piece component with it, and inserts into a cavity profile on at least one side, preferably two sides, of the bottom or top ends of the other vertically positioned element in which it is housed.

[0073] A mountable furniture system according to the above wherein said inner and outer vertically positioned elements are positioned horizontally and said horizontally positioned elements are positioned vertically, and wherein the number of horizontally positioned steps on each of the stepped edges of the vertically positioned elements range from 2 to 30, preferably from 3 to 12, and more preferably from 4 to 7.

[0074] A mountable furniture system according to the above which is made of materials such as wood, MDF, plywood and/or plastic, preferably PVC or a polyolefin.

[0075] A mountable furniture system according to the above in which elements are manufactured by machining, preferably cutting, of sheets of material to the required profiles, such as laser cutting and/or profiling, or by plastic injection moulding processes.

[0076] A mountable furniture system according to the above comprised in shelves, shelving elements, bookcases, closets, cupboards, curio cabinets, hutches, pantries, chests, chests of drawers, hope chests, dressers, coat racks, filing cabinets, nightstands, ottomans, sideboards, buffets, safes, umbrella stands, wardrobes, armoires, wine racks, chairs, fauteuils, recliners, chaise longue, stools, benches, sofas, divans, love seats, beds, daybeds, futons, headboards, infant beds, sofa beds, tables, billiard tables, chess tables, dining tables, night tables, coffee tables, drop-leaf tables, end tables, folding tables, gateleg tables, poker tables, trestle tables, TV tray tables, wine tables, entertainment centres, changing tables, desks, davenport desks, drawing boards, computer desks, writing desks, monks benches, workbenches, bedroom sets, dinettes, dining sets, vanity sets, built-in furniture, campaign furniture, folding screens, work furniture, garden furniture, partitions, furnished lamps, clothes valets, tatami mats used for seating, drapes, aquarium furniture, doors, door furniture, windows, hutches, park furniture, picnic tables, stadium seating, street furniture, sword furniture, furniture finishings.

Preferred embodiments:

[0077] Shelves, shelving elements, bookcases, closets, cupboards, curio cabinets, hutches, pantries, chests, chests of drawers, hope chests, dressers, coat racks, filing cabinets, nightstands, ottomans, sideboards, buffets, safes, umbrella stands, wardrobes, armoires, wine racks, chairs, fauteuils, recliners, chaise longue, stools, benches, sofas, divans, love seats, beds, daybeds, futons, headboards, infant beds, sofa beds, tables, billiard tables, chess tables, dining tables, night tables, coffee tables, drop-leaf tables, end tables, folding tables, gateleg tables, poker tables, trestle tables, TV tray tables, wine tables, entertainment centres, changing tables, desks, davenport desks, drawing boards, computer desks, writing desks, monks benches, workbenches, bedroom sets, dinettes, dining sets, vanity sets, built-in furniture, campaign furniture, folding screens, work furniture, garden furniture, partitions, furnished lamps, clothes valets, tatami mats used for seating, drapes, aquarium furniture, doors, door furniture, windows, hutches, park furniture, picnic tables, stadium seating, street furniture, sword furniture, furniture finishings.

Claims

1. A mountable furniture system comprising at least one horizontally positioned element having at least one outer cavity at each corner and/or along each of the element's sides, which comprises an opened profile and/or a closed profile on the element's surface, which inserts into at least an inner step profiled part of at least one vertically positioned element.

2. A mountable furniture system according to claim 1 in which an inner vertically positioned element having a stair-like geometry on each of its two outer edges, is inserted into the central cavities of the horizontally positioned elements, such that the lateral cavities of the outer vertically positioned elements are fully covered.

3. A mountable furniture system according to claims 1 to 2 which comprises at least one horizontally positioned element comprising at least one inner cavity at each side, which is preferably positioned parallel to at least one of the horizontal elements' edges or perpendicular to at least one of the horizontal elements' edges, and which inserts into at least an outer step profiled part of at least one vertically positioned element.

4. A mountable furniture system according to claims 1 to 3 in which an outer vertically positioned element having a stair-like geometry on each of its two inner edges, is inserted into the outer cavities of the horizontally positioned elements, such that the stability of the horizontal elements is maximised.

5. A mountable furniture system according to claims 1 to 4 comprising horizontally positioned elements which have different inner and outer cavity lengths each, according to the distance between each of the two steps featured at each level of the vertically positioned elements.

6. A mountable furniture system according to claims 1 to 5 which comprises horizontally positioned elements having inner cavity lengths which correspond to the distance between each outer step at each level of the inner vertically positioned elements.

7. A mountable furniture system according to claims 1 to 6 which comprises horizontally positioned elements having outer cavity lengths which correspond to the distance between each inner step at each level of the outer vertically positioned elements.

8. A mountable furniture system according to claims 1 to 7 wherein the horizontally positioned elements comprise at least one outer cavity which comprises a T-shaped opened or closed profile joining together outer cavity profiles only or a combination of inner and outer cavity profiles, and/or at least one half T-shaped opened or closed profile at each corner, and which are sustained by at least 3 inner vertically positioned elements housed in at least three outer vertically positioned elements.

9. A mountable furniture system according to claims 1 to 8 which comprises said elements of claim 8 in which the outer vertically positioned elements which are positioned perpendicular to the horizontal elements' length, are positioned perpendicularly against the edge of the outer vertically positioned elements which are positioned in parallel to the horizontal elements' length, or vice-versa, and wherein the horizontal elements project from both sides of at least one set of vertically positioned elements along the horizontal elements' length.

10. A mountable furniture system according to claims 1 to 9 wherein the vertical profiles of the inner stepped geometries of the outer vertically positioned elements and the vertical profiles of the outer stepped geometries of the inner vertically positioned elements are profiled as inclined lined profiles which preferably become vertically lined profiles at the areas of contact with the horizontally positioned elements.

11. A mountable furniture system according to claims 1 to 10 wherein the inner and vertically positioned elements comprise only one stepped profile each such that each of these are inserted in two pieces in their respective corresponding horizontal cavities, or wherein these comprise four stepped geometries each such that each of these is instead as a single piece component housed inside the other.

12. A mountable furniture system according to claims 1 to 11 which comprise a flexible attaching element, preferably a clamp system, on at least one side, preferably two sides, of the bottom or top ends of one of the vertically positioned elements which preferably forms a single piece component with it, and inserts into a cavity profile on at least one side, preferably two sides, of the bottom or top ends of the other vertically positioned element in which it is housed.

13. A mountable furniture system according to claims 1 to 12 wherein said inner and outer vertically positioned elements are positioned horizontally and said horizontally positioned elements are positioned vertically, and wherein the number of horizontally positioned steps on each of the stepped edges of the vertically positioned elements range from 2 to 30, preferably from 3 to 12, and more preferably from 4 to 7.

14. A mountable furniture system according to claims 1 to 13 which is made of materials such as wood, MDF, plywood and/or plastic, preferably PVC or a polyolefin.

15. A mountable furniture system according to claims 1 to 14 in which elements are manufactured by machining, preferably cutting, of sheets of material to the required profiles, such as laser cutting and/or profiling, or by plastic injection processes.

16. A mountable furniture system according to claims 1 to 15 comprised in shelves, shelving elements, bookcases, closets, cupboards, curio cabinets, hutches, pantries, chests, chests of drawers, hope chests, dressers, coat racks, filing cabinets, nightstands, ottomans, sideboards, buffets, safes, umbrella stands, wardrobes, armoires, wine racks, chairs, fauteuils, recliners, chaise longue, stools, benches, sofas, di-

vans, love seats, beds, daybeds, futons, headboards, infant beds, sofa beds, tables, billiard tables, chess tables, dining tables, night tables, coffee tables, drop-leaf tables, end tables, folding tables, gateleg tables, poker tables, trestle tables, TV tray tables, wine tables, entertainment centres, changing tables, desks, davenport desks, drawing boards, computer desks, writing desks, monks benches, workbenches, bedroom sets, dinettes, dining sets, vanity sets, built-in furniture, campaign furniture, folding screens, work furniture, garden furniture, partitions, furnished lamps, clothes valets, tatami mats used for seating, drapes, aquarium furniture, doors, door furniture, windows, hutches, park furniture, picnic tables, stadium seating, street furniture, sword furniture, furniture finishings.

Figure 1:

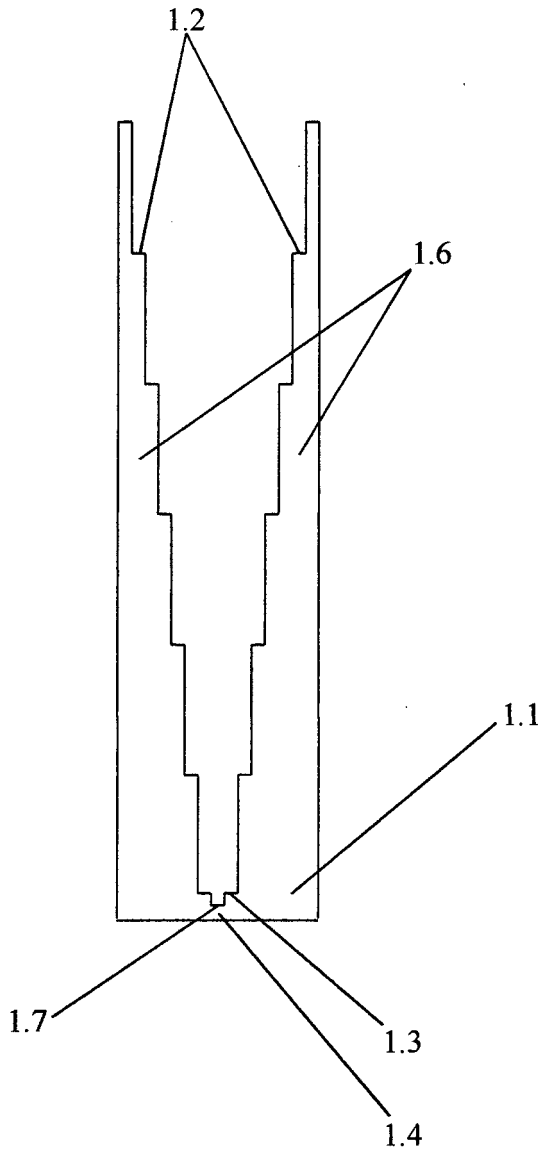


Figure 2:

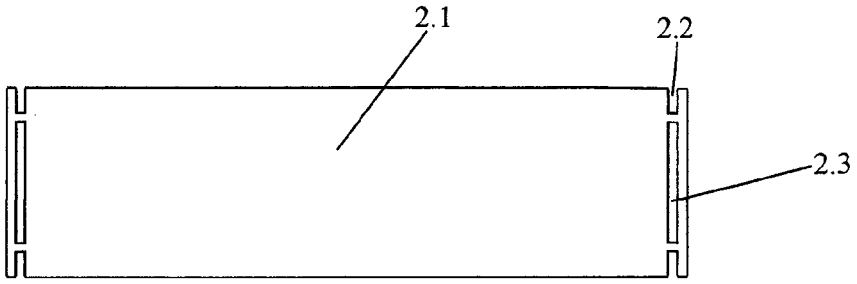


Figure 3:

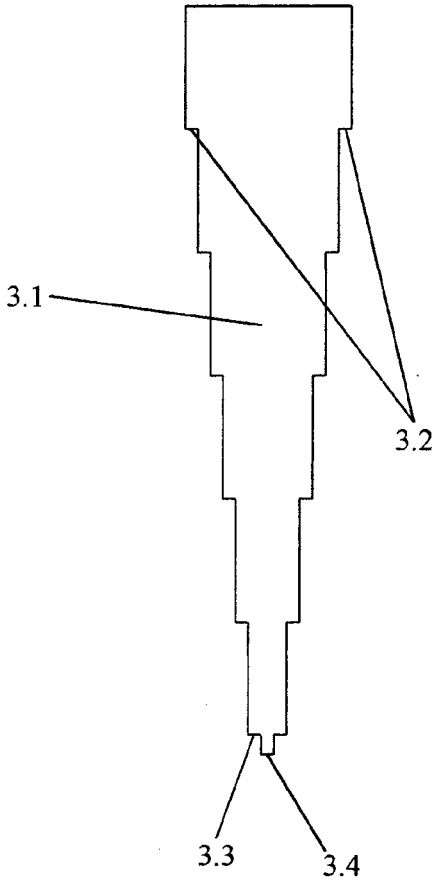


Figure 4:

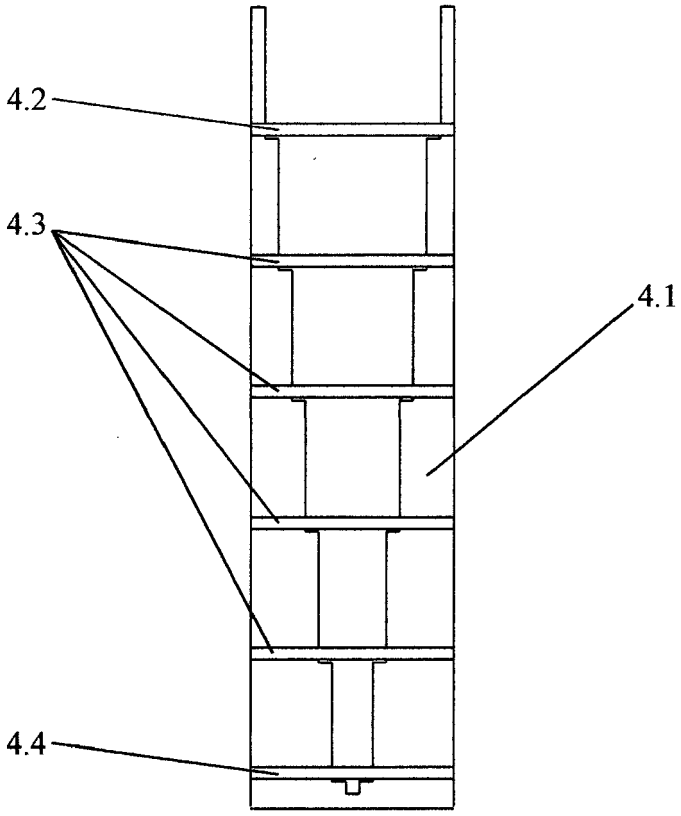


Figure 5:

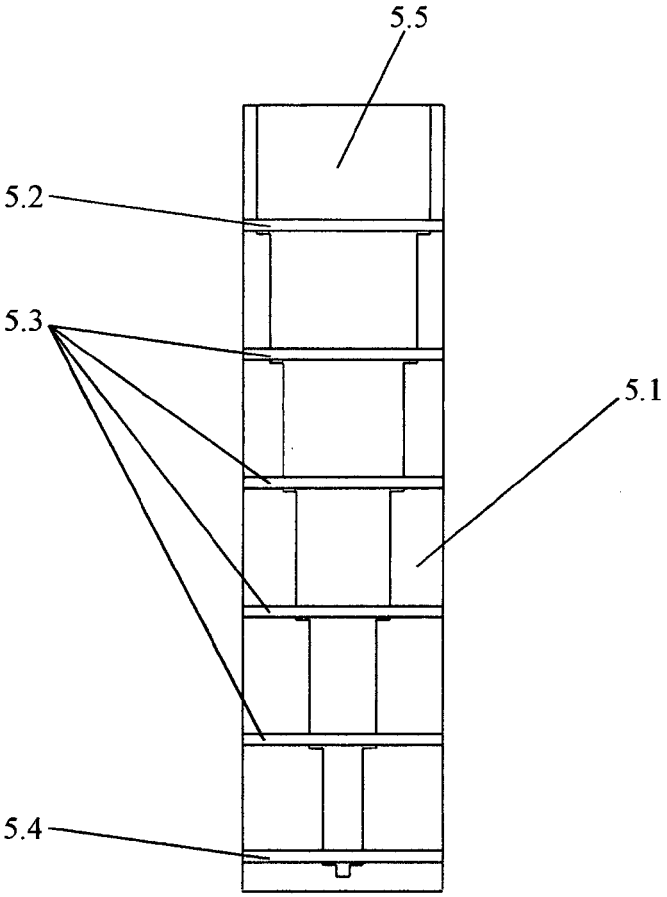


Figure 6:

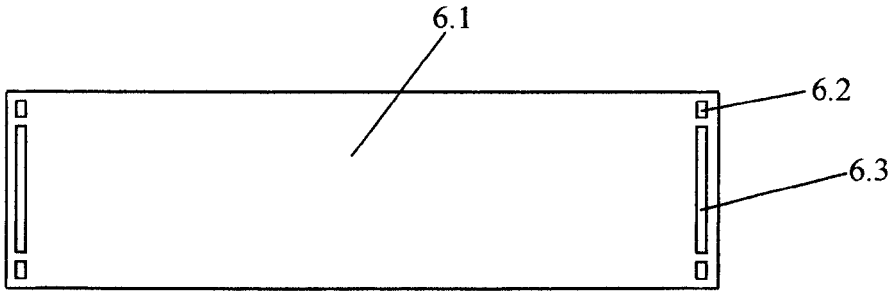


Figure 7:

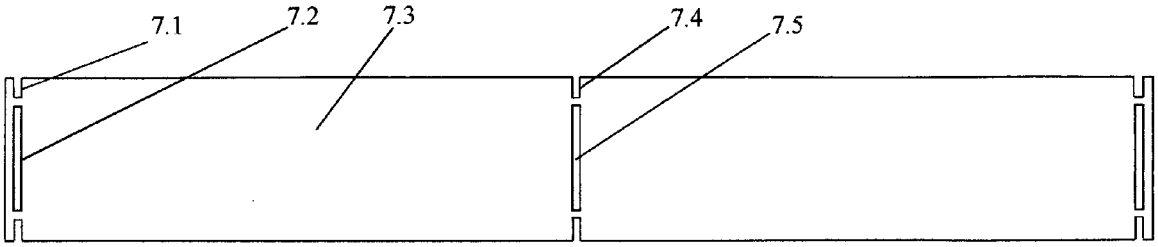


Figure 8:

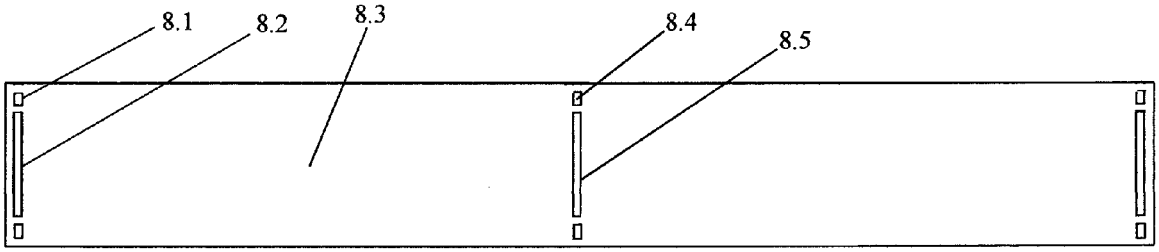


Figure 9:

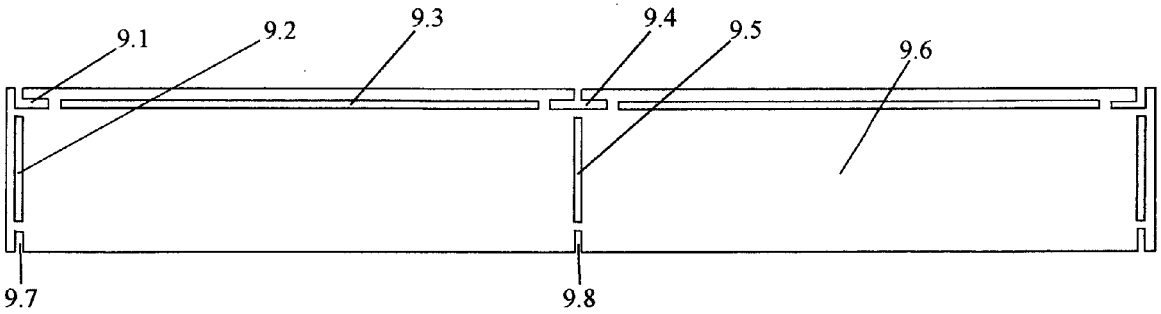


Figure 10:

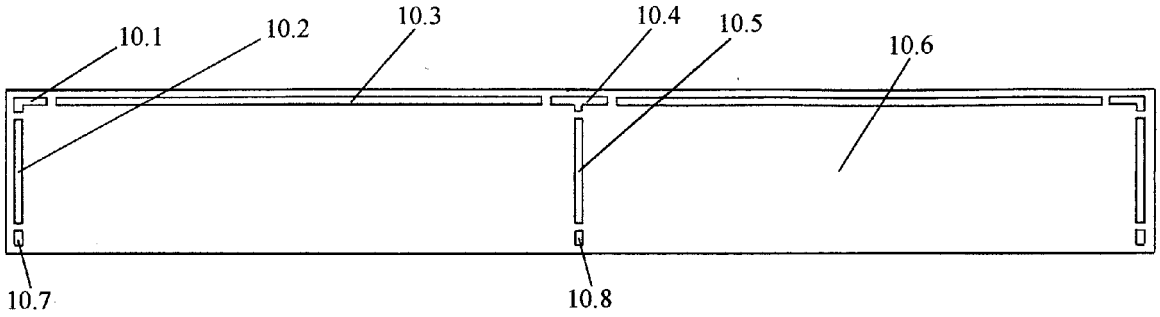


Figure 11:

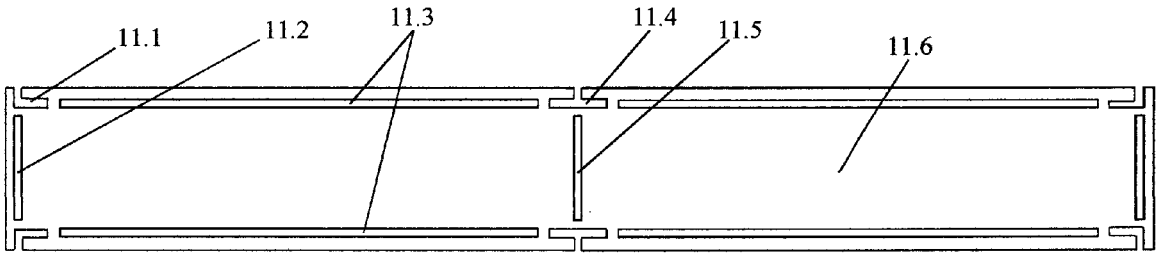


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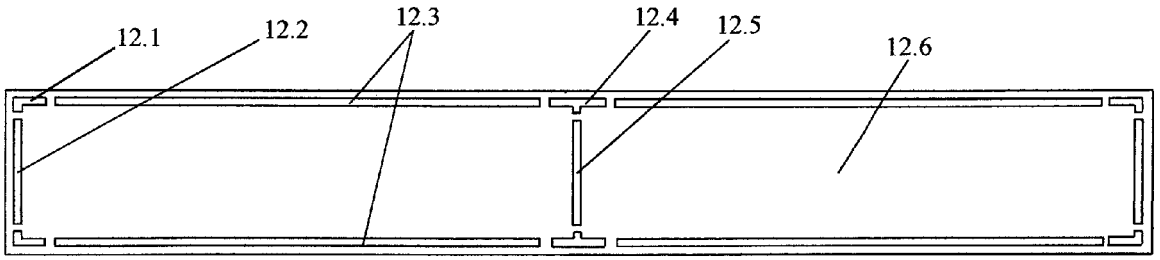


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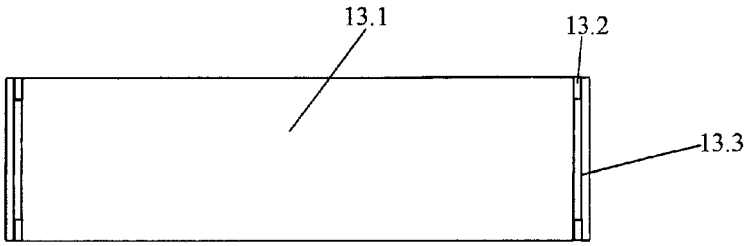


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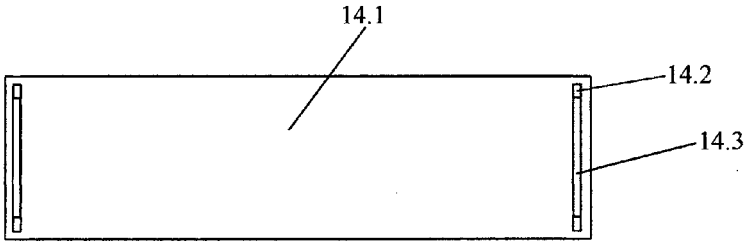


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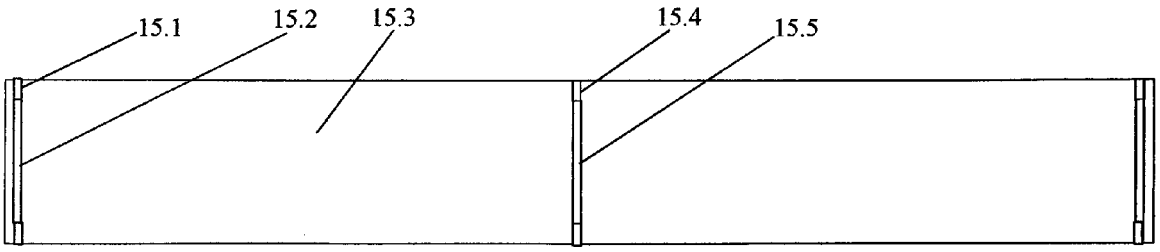


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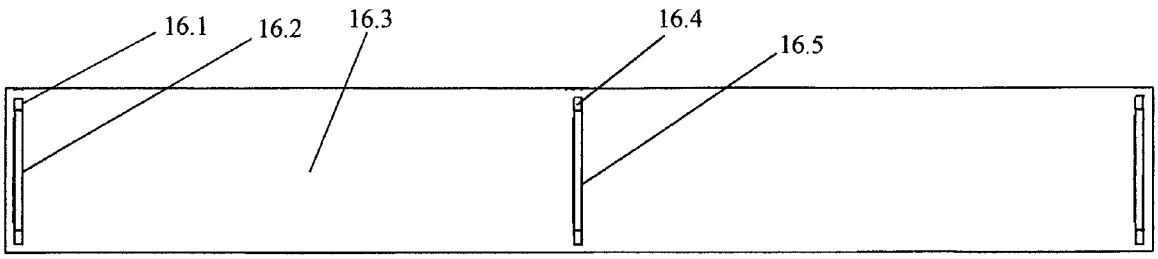


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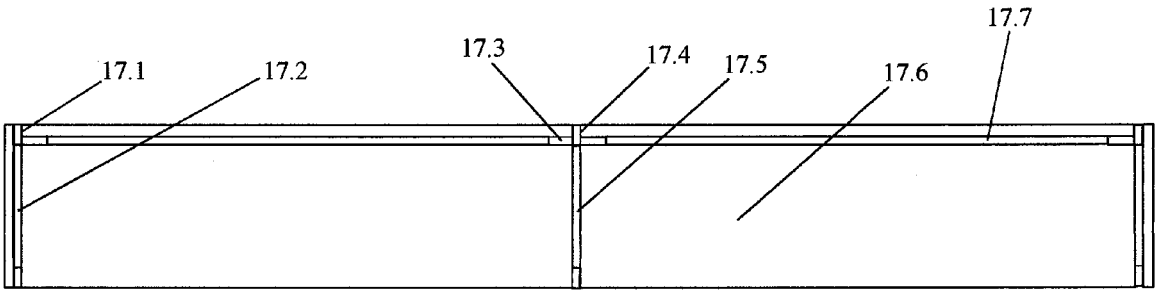


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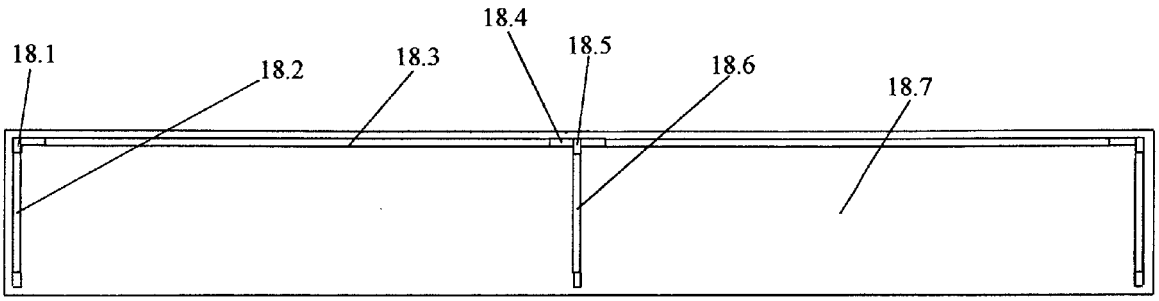


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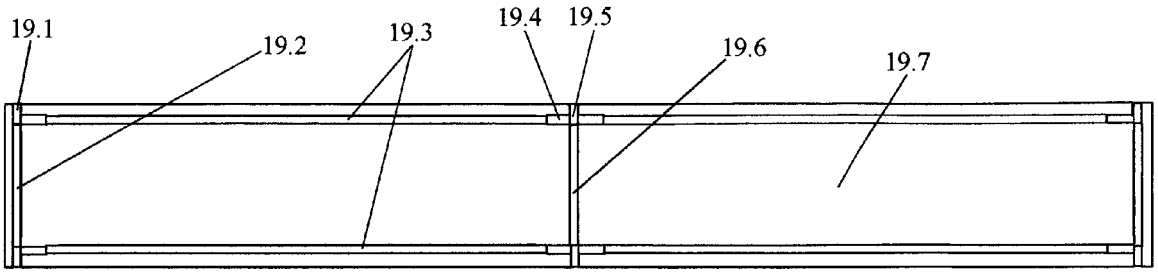


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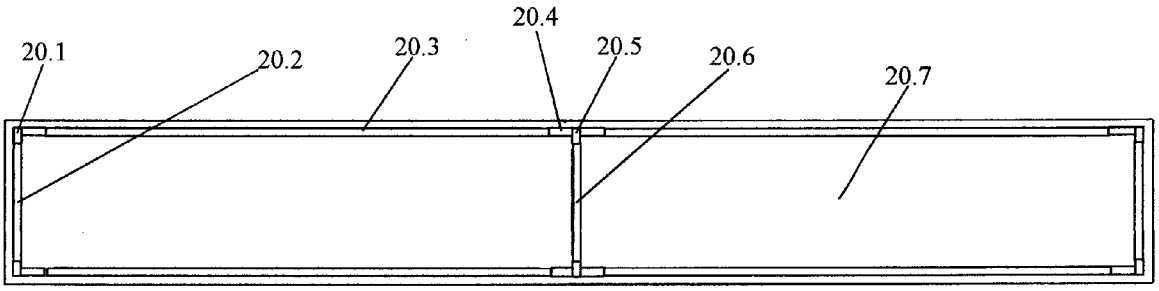


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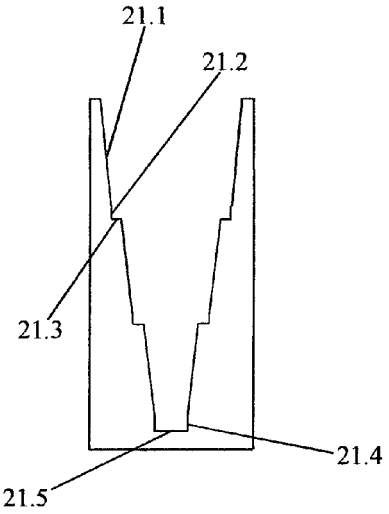


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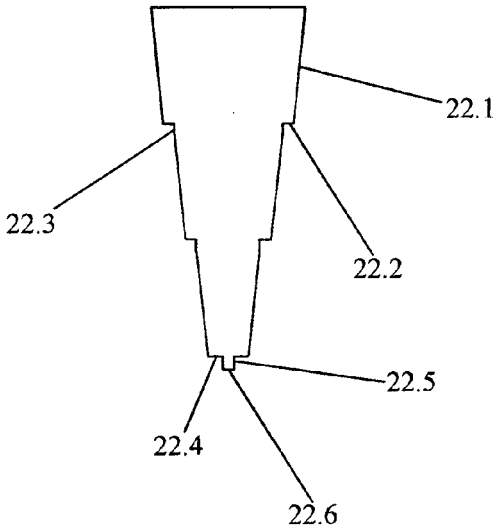


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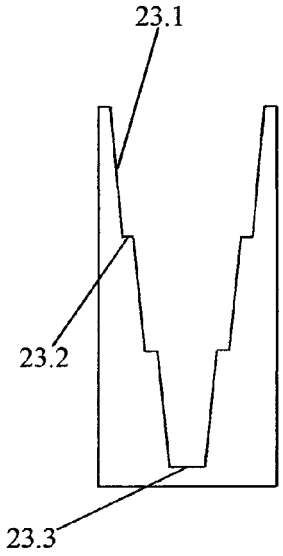


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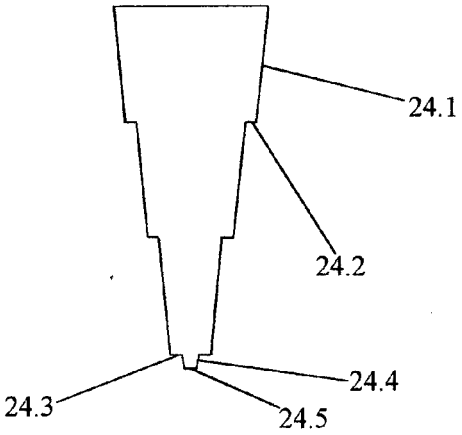


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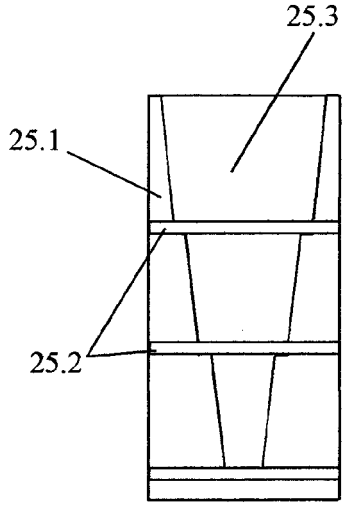


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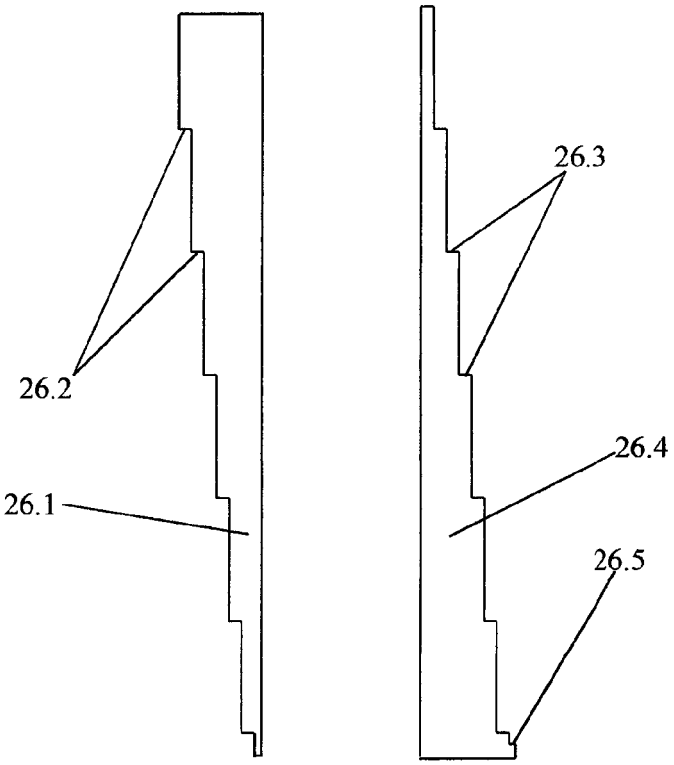


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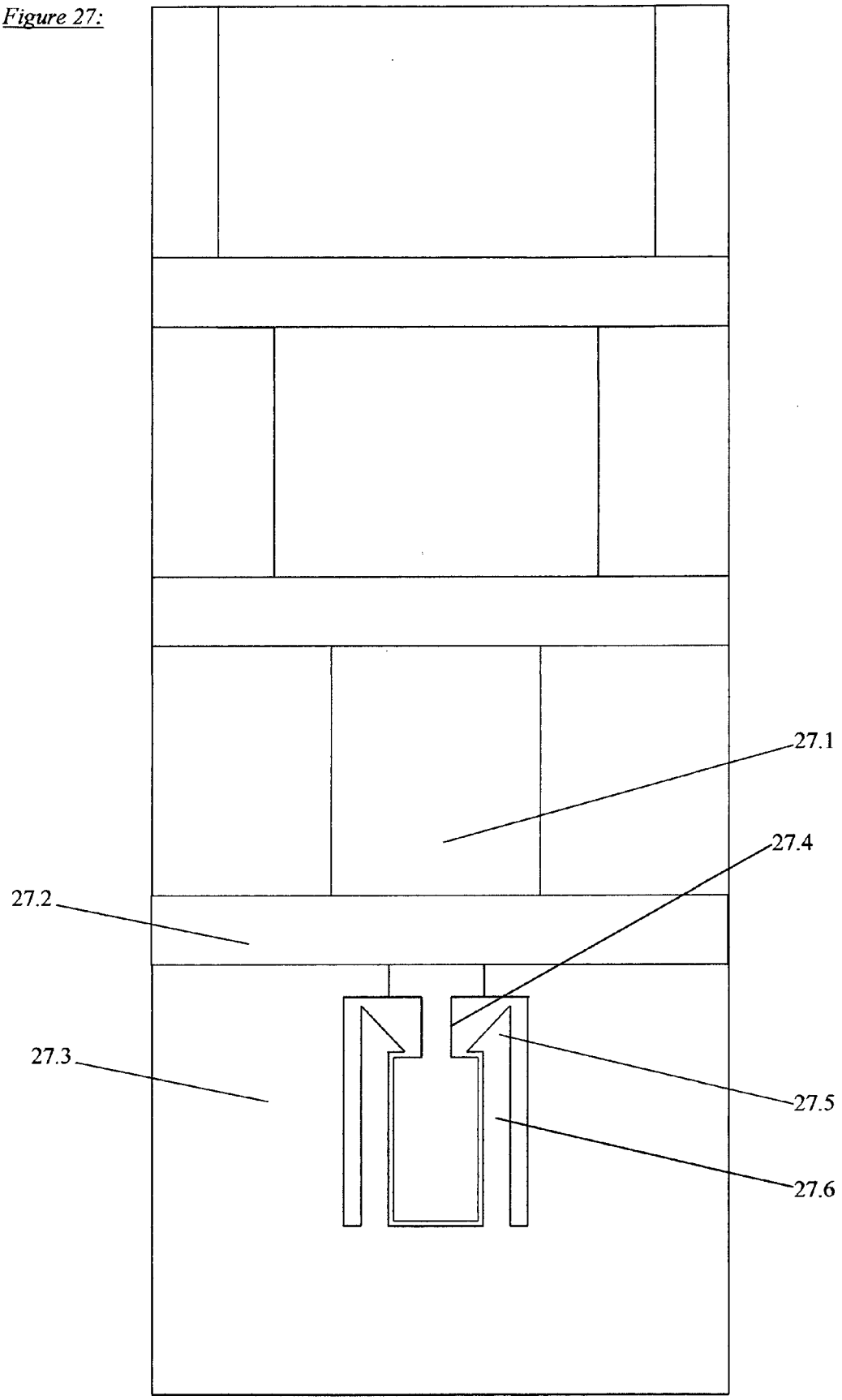


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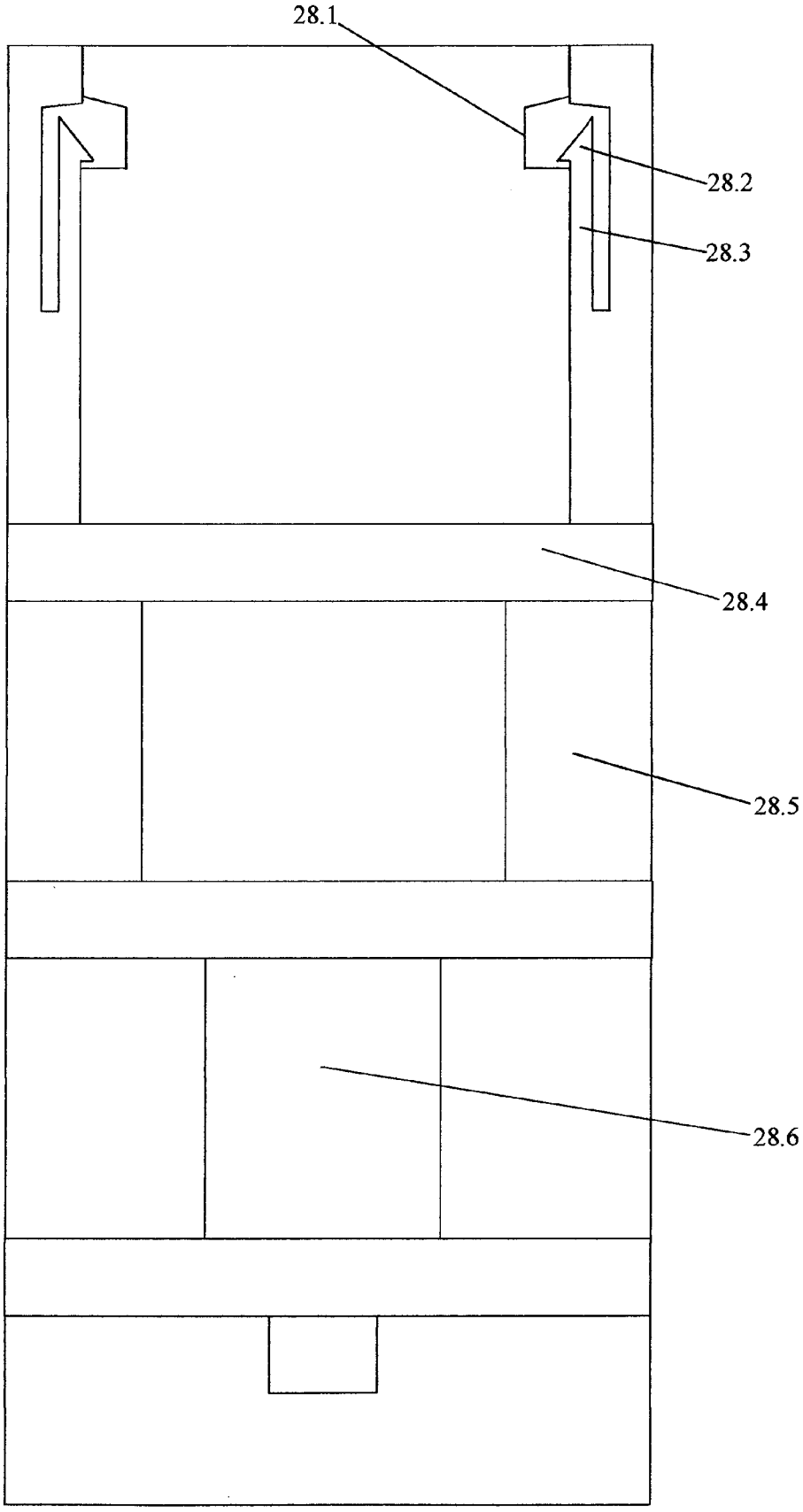


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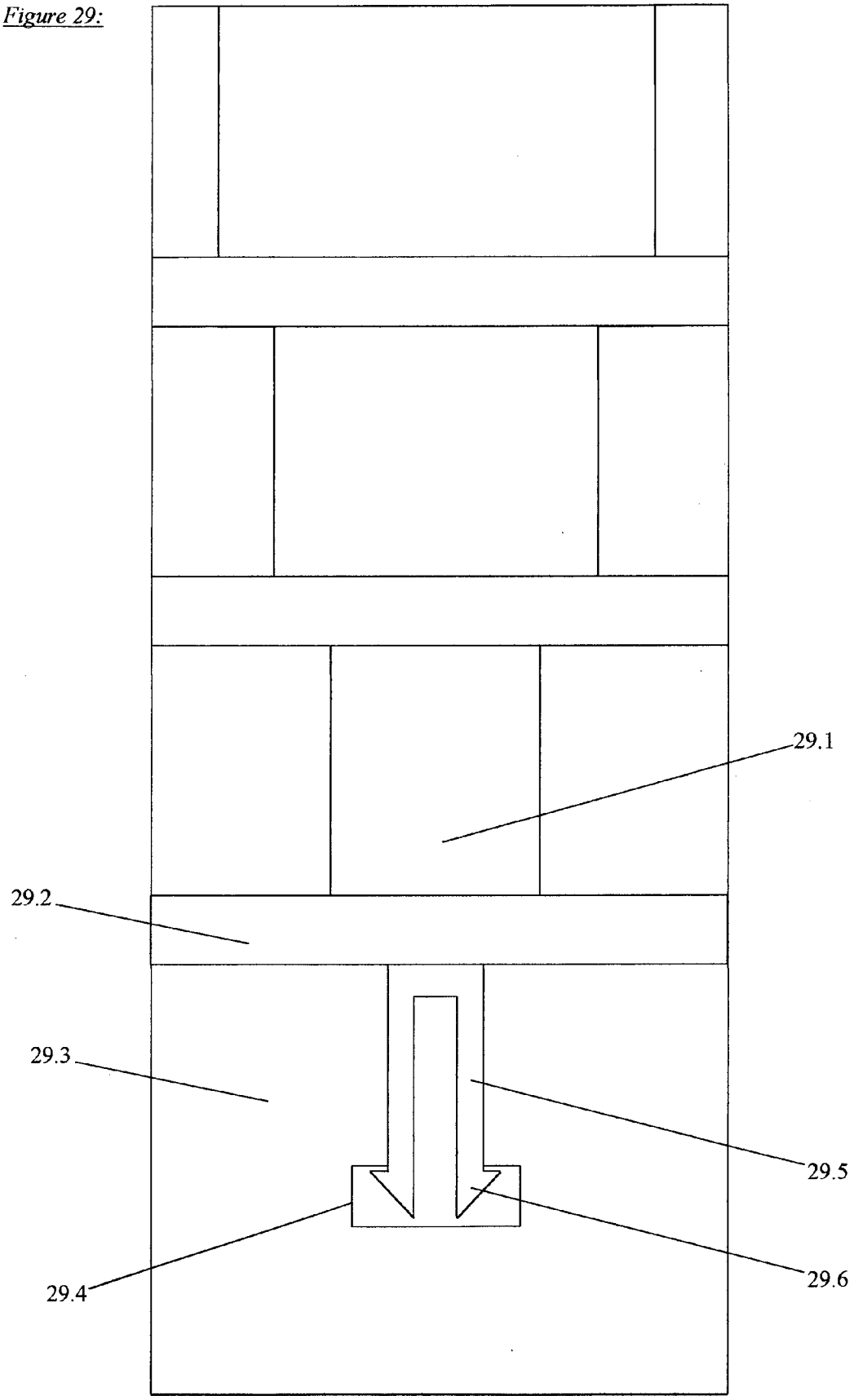


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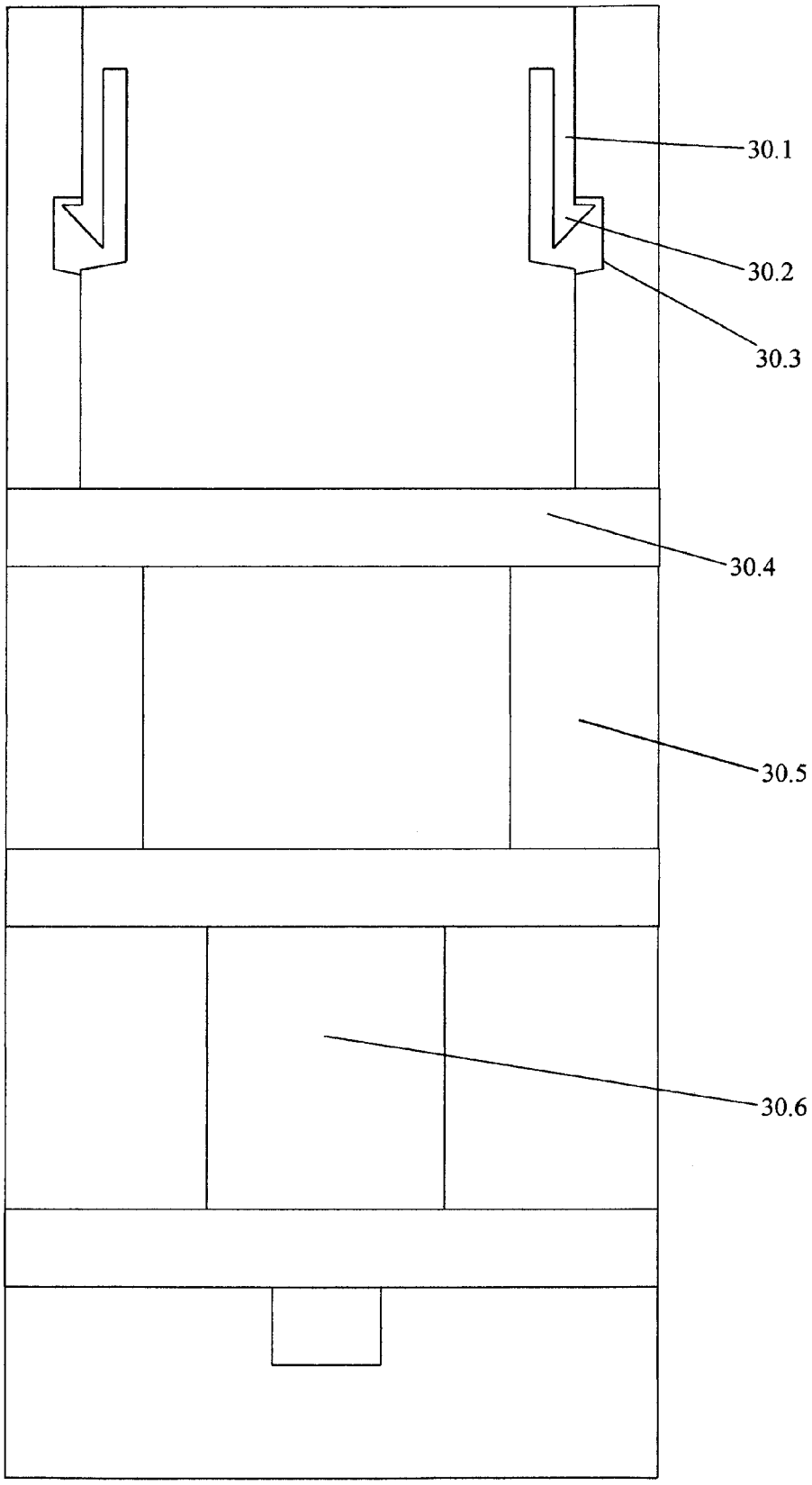


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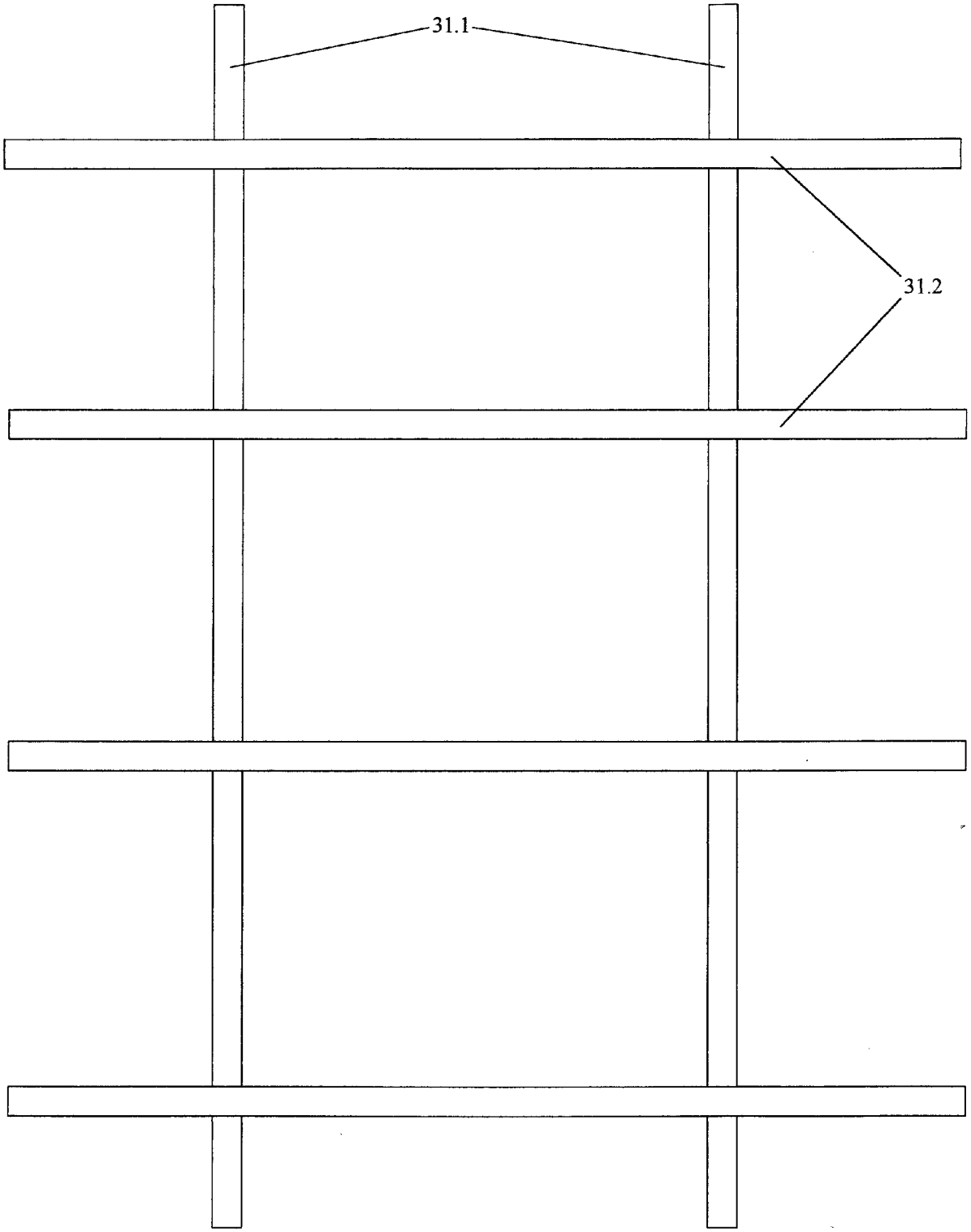


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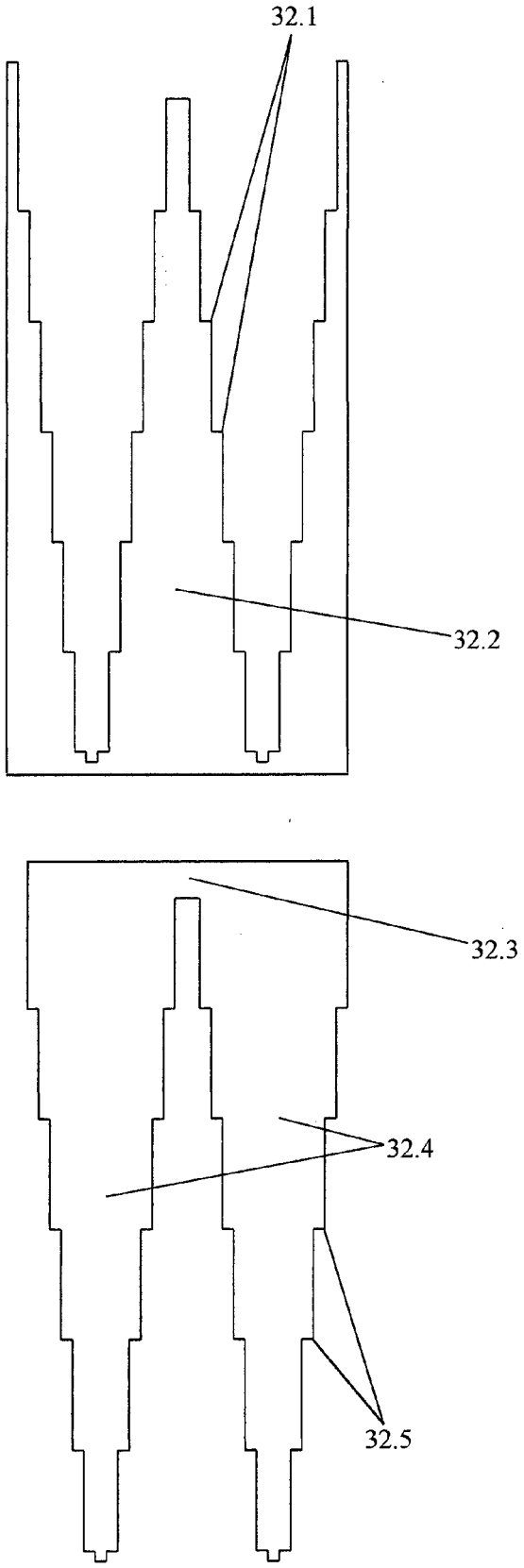
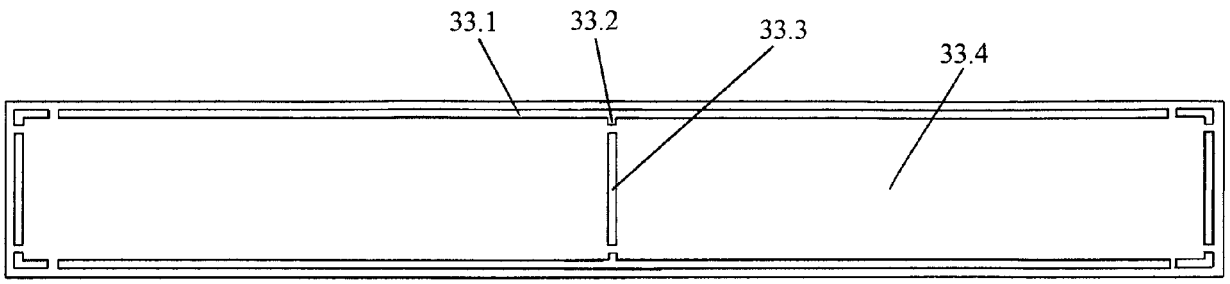


Figure 33:



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EUROPEAN SEARCH REPORT

Application Number
EP 14 00 0154

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	DE 44 10 397 C1 (JAHN HOLGER [DE]) 4 May 1995 (1995-05-04) * column 3, line 12 - line 24 * * column 4, line 39 - line 51 * * figures 1,3 *	1,7, 14-16	INV. A47B47/02 ADD. A47B96/14
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A	FR 2 333 994 A1 (GAYAUD ANDRE [FR]) 1 July 1977 (1977-07-01) * page 1, line 25 - line 28 * * figure 2 *	1	
A	FR 2 352 977 A2 (GAYAUD ANDRE [FR]) 23 December 1977 (1977-12-23) * figures 1-2 *	1	
A	WO 98/40633 A1 (ARGUINCHONA GONDRA JOSE ANGEL [ES]) 17 September 1998 (1998-09-17) * figures 2-24 *	1	

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	22 May 2014	Bitton, Alexandre

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EUROPEAN SEARCH REPORT

Application Number
EP 14 00 0154

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