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(54) **FURNITURE MODULE AND KIT FOR ASSEMBLING SAME**

(57) The present invention relates to a furniture module of essentially regular quadrangular prismatic shape, this module being open on only one of its faces, in which the height of the module is twice the width of the rectangular bases, and comprising module connection means on at least one of its long faces. The present invention also relates to a kit for assembly of a furniture module according to the present invention.

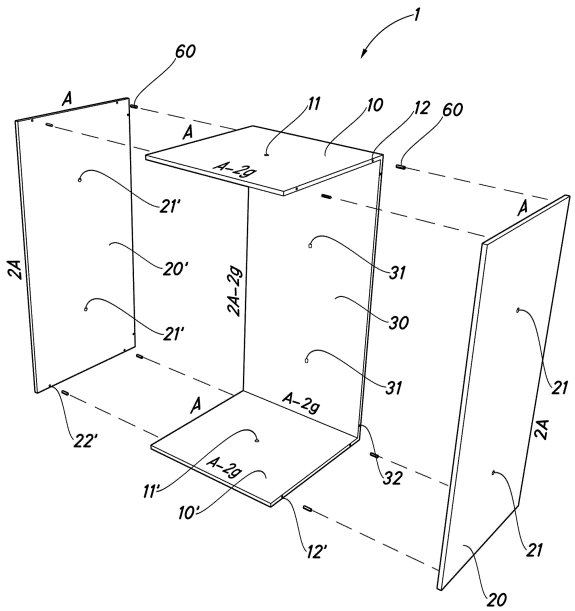

Fig.6

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Description

[0001] The present invention relates to a furniture module, which can be used to make up items of furniture three-dimensionally including one or more of said modules, and to a kit for assembly thereof.

[0002] The applicant is aware that these days most householders use self-assembly home/office furniture systems which can be put together domestically, seeking maximum convenience and ease of transport and versatility of use inside the home. The advantage of this type of furniture is that it is easy to transport as it is usually sold as a flat pack, thus taking up less space; and it is also usually less expensive than conventional furniture that is sold ready assembled or that has to be assembled by professionals. Moreover, this type of furniture which is sold with a view to being assembled by the user may offer a degree of modularity, in other words, may allow different configurations as desired and required by the user and can adapt to different situations. To enable such modularity, furniture based on various modules that the user puts together or assembles as desired, within certain constraints, is known.

[0003] Although it offers some advantages, furniture designed to be assembled by the user themself often has a number of drawbacks. One such drawback is that once the furniture has been assembled, if it is to be moved it has to be emptied and even dismantled into the component parts of the module. This is because the structure of this type of furniture is not strong enough to allow said furniture to be transported together with the objects contained inside and because the modules are not very versatile, being simply a component of the furniture for which they were designed, and in no case intended for transporting items during a house move.

[0004] It is an aim of the present invention to provide a furniture module that solves the abovementioned problems, disclosing a furniture module that is very versatile in terms of the options it offers for assembly. Another aim of the present invention is to disclose self-supporting furniture that can serve as a holder/shelving unit in the home and as a packing for transport without the need to empty the household furniture, saving a lot of time from the viewpoint of packing as well as sorting and unpacking at the new destination, both in the case of house moves and when moving from one location to another in the same property.

[0005] To this end, the present invention discloses a furniture module of essentially regular quadrangular prismatic shape, this module being open on only one of its faces, in which the height of the module is twice the width of the rectangular bases, and comprising module connection means on at least one of its long faces. Thus, the width and depth of the furniture module are the same, the height being twice the value of either the width or depth.

[0006] The particular shape of the module, together with the means for connection to other modules, makes it very versatile as regards the compositions that can be obtained. In some embodiments, the compositions that can be obtained are three-dimensional. Furthermore, in particularly preferred embodiments, it allows it to be used as a portable box for the storage and transport of objects during house moves.

[0007] Preferably, the furniture module according to the present invention further comprises module connection means on one of its bases. More preferably, said furniture module comprises module connection means on all of its faces. This increases the possible combinations that can be achieved with the modules and therefore increases the number of possible items of furniture that can be created using these modules. These combinations may be two-dimensional, i.e. constructed in a single plane or along two Cartesian axes, or may be three-dimensional, the various furniture modules may be put together or combined along three Cartesian axes.

[0008] Advantageously the module connection means comprise module connection holes.

[0009] Preferably, the furniture module according to the present invention comprises two module connection holes on its long faces, both holes being aligned with the longitudinal axis on its respective long face.

[0010] Advantageously, the distance from each module connection hole to the respective proximal ends of the face or base in which it is comprised is half the width of the bases of the module.

[0011] Preferably, the various modules are connected by inserting securing means through two holes for connecting two different modules, such that the two modules are firmly secured together. Said securing means may be, for example, a screw and a nut, or the like.

[0012] Preferably, the module connection hole in each base is located in the center thereof.

[0013] Advantageously, the furniture module according to the present invention is open on only one of its long faces. Alternatively, the furniture module according to the present invention is open on only one of its short faces or bases.

[0014] Advantageously, the faces of the furniture module according to the present invention are defined by boards of uniform thickness, whatever this thickness is. This means that the furniture module is self-supporting, since all of the boards forming the module play a structural role. This ensures that the module can be used to transport relatively heavy loads during house moves.

[0015] Preferably, the furniture module according to the present invention further comprises at least one shelf.

[0016] Advantageously, the furniture module according to the present invention comprises a door. Preferably, the door is hinged to one of the long faces of the item of furniture according to the present invention. Alternatively, the door is hinged to one of the bases of the item of furniture according to the present invention.

[0017] Regarding the location of the connection means, it should be understood that the expressions "on one of its faces", "on all of its faces", "on its long faces",

etc. do not include the open face of the furniture module according to the present invention.

[0018] Preferably, the side of the bases of the module measures between 35 and 39 cm, more preferably 36 cm. This allows the module to offer the following advantages:

- The dimensions mean that it can be transported, when empty, by a single person, or by two people when it is full (transport function).
- It allows the module to be used to make or create surfaces in the ergonomic plane corresponding to working when seated (700-780 mm from the floor) and also to the seat plane. Furthermore, it is also possible to create furniture that reaches the ergonomic plane corresponding to manual work while standing (for example kitchens) through the use of feet.

[0019] Thanks to these dimensions, the module has the ideal size and dimensions such that it does not have to be dismantled entirely and can be transported without the need to remove the contents. This feature drastically reduces the cost of packing when moving and, therefore, is environmentally friendly. The furniture module is a container for moving and also facilitates moves using smaller vehicles. Moreover, said furniture module may be assembled just once, in other words it is not necessary to completely dismantle and re-assemble it when it is to be moved.

[0020] The present invention also discloses an item of furniture comprising a plurality of modules according to the present invention. Preferably, in the item of furniture according to the present invention, the plurality of modules is connected together by means of respective module connection means. Advantageously, the plurality of modules is connected together by means of respective module connection holes.

[0021] In one embodiment, the modules are arranged to form a shelving unit. In another embodiment, the item of furniture according to the present invention comprises a board connected to at least two modules at opposite ends of the board, arranged such that they form a table.

[0022] Another aim of the present invention is to disclose a kit for assembly of a furniture module according to the present invention, which comprises:

- two boards of thickness g having a width A and a length 2A,
- two boards of thickness g having a width A-2g and a length A,
- one board of thickness g having a width A-2g and a length 2A-2g,

in which at least one of the boards having a width A and a length 2A or the board having a width A-2g and a length 2A-2g comprise module connection means.

[0023] Preferably, in the kit for assembly of a furniture module according to the present invention, each one of said boards comprises module connection means.

[0024] Advantageously, in the kit for assembly of a furniture module according to the present invention, the module connection means comprise module connection holes.

[0025] Preferably, the kit for assembly of a furniture module according to the present invention further comprises at least one board of thickness g having a width A-2g and a length A-g.

[0026] Advantageously, the kit for assembly of a furniture module according to the present invention further comprises at least one board of thickness g having a width A-2g and a length 2A-2g.

[0027] In particularly preferred embodiments, the kit according to the present invention is made up of seven assembled parts (two bases, three lateral faces and two parts, one corresponding to a transverse shelf and another which is longitudinal) for creating a self-supporting box (assembled vertically, horizontally and in all axial directions) that can be used to configure multiple items of furniture in the dwelling.

[0028] In the present document, the expressions "module" and "furniture module" are used as equivalents and interchangeably. In this document, a regular quadrangular prism is considered to be a specific case of a rectangular prism. In the present document, a square is considered to be a specific case of a quadrilateral. In this document, the directions: horizontal, vertical, above, below, etc. are understood with reference to the position of rest of the furniture or furniture module, in other words with reference to the position in which one of the faces is placed on the floor or parallel to the floor.

[0029] To aid understanding of the invention, drawings showing an embodiment of a furniture module and an item of furniture according to the present invention are attached by way of illustrative but non-limiting example.

- Figure 1A shows a perspective view of a first embodiment of a furniture module according to the present invention.
- Figure 1B shows a perspective view of a second embodiment of a furniture module according to the present invention.
- Figure 1C shows a perspective view of a third embodiment of a furniture module according to the present invention.
- Figure 2A shows a perspective view of a fourth embodiment of a furniture module according to the present invention.
- Figure 2B shows a perspective view of a fifth embodiment of a furniture module according to the present invention.

- Figure 2C shows a perspective view of a sixth embodiment of a furniture module according to the present invention.

- Figure 3 shows a front elevation, rear elevation and plan view of a long board of an embodiment of a furniture module according to the present invention.

- Figure 4 shows a front elevation, rear elevation and plan view of a short board of an embodiment of a furniture module according to the present invention.

- Figure 5 shows a front elevation, rear elevation and plan view of a rear board of an embodiment of a furniture module according to the present invention.

- Figure 6 shows a partially exploded perspective view of an embodiment of a furniture module of figure 1A.

- Figure 7 shows a perspective view of a first embodiment of an item of furniture according to the present invention.

- Figure 8 shows a perspective view of a second embodiment of an item of furniture according to the present invention.

- Figure 9 shows a perspective view of a third embodiment of an item of furniture according to the present invention.

- Figure 10 shows a perspective view of a fourth embodiment of an item of furniture according to the present invention.

[0030] In the figures, the same or equivalent elements have been designated using the same numerals.

[0031] In the figures of the present document, the lengths, relative distances, etc. are defined on the basis of the parameters A and g, A being the width of the furniture module 1 and g the thickness of the boards of which it is composed. What matters is the ratios established between A and g, not the values that these parameters may have.

[0032] Figures 1A, 1B and 1C show three embodiments of a furniture module according to the present invention. In these three embodiments, the furniture module 1 is in a vertical or upright position, in other words with the long sides 20, 20', or lateral sides, perpendicular to the floor and with the short sides 10, 10', or top and bottom covers, parallel to the floor.

[0033] The three embodiments shown in figures 1A, 1B and 1C essentially differ in terms of the number of shelves 40 that they include. As can be seen, the first embodiment shown in figure 1A does not have any shelves, this being the most simple embodiment out of those shown here. The second embodiment shown in figure 1B includes a single shelf 40 placed halfway along the internal space of the furniture module 1. In the third embodiment shown in figure 1C, the module 1 includes two shelves 40 distributed such that the internal space of the module 1 is divided into three equal parts. However, in other embodiments the internal partitions defined by the shelves 40 may not be uniform, in other words each one of them may have a different volume.

[0034] Figures 2A, 2B and 2C show three different versions of an embodiment of a furniture module according to the present invention. In these three embodiments, the furniture module 1 is in a horizontal position or lying down, in other words with the long sides 20, 20' parallel to the floor and with the short sides 10, 10' perpendicular to the floor.

[0035] The three embodiments shown in figures 2A, 2B and 2C essentially differ in terms of the number of shelves 50 that they include. As can be seen, the third embodiment shown in figure 2A does not have any shelves, this being the most simple embodiment out of those shown here and similar to the embodiment of figure 1A. The fifth embodiment shown in figure 2B includes a single shelf 50 placed halfway along the internal space of the module 1. In the sixth embodiment shown in figure 2C, the furniture module 1 includes two shelves 50 distributed such that the internal space of the module 1 is divided into three equal parts. However, in other embodiments the internal partitions defined by the shelves 50 may not be uniform, in other words each one of them may have a different volume.

[0036] As can be seen in the embodiments shown in figures 1B, 1C, 2B and 2C, the shelves 40, 50 are perpendicular to the boards or walls with which they are in contact.

[0037] The shelves 40 in the embodiments shown in figures 1B and 1C may also be referred to as short shelves 40, while the shelves 50 in the embodiments shown in figures 2B and 2C may also be referred to as long shelves 50. In the examples shown, both types of shelves 40, 50 have a thickness g and a width A-2g, in which A is the width of the lateral boards 20, 20', which in the embodiments shown in figures 1 to 6 is the same as the width and depth of the furniture module 1. However, the short shelves 40 have a length A-2g, while the long shelves 50 have a length 2A-2g.

[0038] Although not visible in figures 1A, 1B, 1C, 2A, 2B and 2C, in said embodiments the furniture module 1 comprises module connection means like those that can be seen in figures 3 to 6. The connection means that are not used may be concealed, or at least disguised, using trims or covers that cover or conceal them.

[0039] Figures 1A, 1B, 1C, 2A, 2B and 2C do not show how the various parts or boards making up the furniture module 1 fit together.

[0040] In the six embodiments shown, the short boards 10, 10' are all the same. The long boards 20, 20' are also all the same in the embodiments shown in figures 1A, 1B, 1C, 2A, 2B and 2C. However, in other embodiments, the short board 10 may be different to the short board

10' and/or the long board 20 may be different to the long board 20'. Differences between the dimensions of the short boards 10, 10' and between the long boards 20, 20' may be due to the way in which the various boards making up the furniture module 1 fit together.

[0041] In the six embodiments shown, the furniture module has dimensions 2A × A × A and may be combined with other modules two-dimensionally or three-dimensionally.

[0042] Figure 3 shows in front elevation, rear elevation and plan view a long board 20 of an embodiment of a furniture module according to the present invention. As can be seen, in the embodiment shown the long panel 20 has a length 2A and a width A, a thickness g and comprises two holes 21 for connecting furniture modules. However, in other embodiments the long panel may have a different number of connection holes, for example one or three. In embodiments comprising more than two module connection holes, preferably the height of said module, and therefore the length of the long panels, may also be greater, for example in the case of three holes, the height of the module may preferably be 3A.

[0043] In the example shown, the two module connection holes 21 are at a distance A/2 from their respective longitudinal ends of the long panel 20. With respect to the width of the long panel 20, the two holes are on the longitudinal axis of the panel, in other words centered at a distance A/2 from the sides of the long panel 20.

[0044] The long board or panel 20 may also include a plurality of perimeter holes 23. This plurality of perimeter holes 23 may be used to secure one or more shelves 40, 50. The plurality of perimeter holes 23 makes it possible to select the position of the shelves 40, 50 that best suits the needs and/or taste of the user. To this end, a first end of a dowel may be inserted in one of said perimeter holes 23 and a second end of said dowel may be inserted in a hole in a shelf 40, 50. Said dowel may be made of wood, plastic or another suitable material. Preferably, use is made of several dowels housed in several holes to provide a strong, solid connection between the parts. More preferably, use is made of two dowels and two pairs of holes (one in each part to be connected), for connecting the various parts of the furniture module 1.

[0045] In addition to the perimeter holes 23, the long board 20 shown in figure 3 also has holes 22 for the insertion of a dowel for securing the long board 20 to the rear panel 30 and to the short boards 10, 10'. These holes 22 are in the areas of the long board 20 intended to receive the rear panel 30 and the short boards 10, 10'.

[0046] The means for connecting the various parts of the module 1 described above are just an example. Any other type of connection means that can be used to connect parts, more specifically to connect parts at 90 degrees, may be used such as an eccentric nut and bolt assembly, etc.

[0047] The plurality of perimeter holes 23 in the long board 20 also makes it possible to secure hinges, preferably two, for hinging a door. To this end, the hinges are configured to be secured, preferably, in two of said perimeter holes 23.

[0048] Since, in the examples shown here, the long panel 20 is identical to the long panel 20', the above explanation is also valid for the long panel 20'.

[0049] Figure 4 shows a front elevation, rear elevation and plan view of a short board or panel in an embodiment of a furniture module according to the present invention. As can be seen, in the example shown the base or short board 10 measures A by A-2g. These measurements mean that, once the module 1 has been assembled, the base of the prism defined by the module 1 is a square measuring A by A.

[0050] In the embodiment shown, the sides measuring A are those via which the long boards 20, 20' are secured, while the side measuring A-2g is the side via which the rear board 30 is secured.

[0051] As can be seen, the short board 10 shown has a module connection hole 11 located in the center of the board, in other words at a distance A/2 from the long ends and at a distance (A-2g)/2 from the short ends. These distances are such that, when the furniture module 1 is fully assembled, the module connection hole 11 is located in the center of the face or base of the prism defined by the module 1.

[0052] In the example shown, the short board 10 has a plurality of holes 12 for the insertion of a dowel for securing the short board 10 to the long panels 20, 20' and to the rear panel 30. Specifically, these holes are in the area intended to receive the long boards 20, 20' and the rear board 30, respectively. In the embodiment shown, this plurality of holes 12 for the insertion of a securing dowel comprises two holes 12.

[0053] Since, in the examples shown here, the short panel 10 is similar to the short panel 10', the above explanation is also valid for the short panel 10'.

[0054] Figure 5 shows a front elevation, rear elevation and plan view of a rear board in an embodiment of a furniture module according to the present invention. In the embodiment shown, the rear board 30 has a length 2A-2g. This is because the mentioned rear board 30 is connected to the short board 10' via the upper or internal face thereof, while it is connected to the short board 10 via the lower or internal face thereof, such that the height of the module 1 shown is 2A.

[0055] In this embodiment, the rear board 30 has a width A-2g since this rear board 30 is connected to the long boards 20, 20' via its sides, such that when the module 1 has been assembled it has a width A. Since, as explained above, in the embodiment shown the long boards have a width A, the assembled furniture module 1 also has a depth A.

[0056] In the example shown, the rear board 30 has two module connection holes 31. The two holes 31 are aligned with the longitudinal axis of the rear board 30, in other words they are at a distance (A-2g)/2 from the sides of this board, such that when the module 1 has been assembled, the holes 31 are in the middle of the rear face

of the module 1. In addition to the above, the two holes 31 are located at a distance (A/2)-g from the proximal ends of the board 30, such that when the module 1 has been assembled, the hole 31 is at a distance A/2 from the upper face and lower face, respectively.

[0057] Also in the example shown, it comprises on both sides, and on the upper and lower face, a plurality of holes 32 for receiving a securing dowel, for securing the rear board 30 to the long boards 20, 20' and to the short boards 10, 10'. Said plurality of holes 32 is in the middle of the sides of the rear board 30, in other words at a distance g/2 from the front and rear face of the latter.

[0058] Figure 6 shows a partially exploded perspective view of an embodiment of a furniture module according to the present invention. In this exploded view it can be seen that the long boards 20, 20' are connected to the assembly formed by the short covers 10, 10' together with the rear board 30. As can be seen, in the example shown the long boards 20, 20' are connected to the assembly formed by the rear board 30 and the short covers 10, 10' via the sides of the various parts forming this assembly.

[0059] As explained above, in the embodiment shown the various parts or pieces forming the furniture module 1 are connected by means of dowels 60 that are inserted in respective holes 12, 22, 32 in two parts 10, 10', 20, 20', 30 to be connected, such that by dimensional interference between the dowel 60 and the holes 12, 22, 32 in which it is housed, the respective parts 10, 10', 20, 20', 30 are secured. These dowels 60 may be made of wood or of any other material suitable for this use.

[0060] The holes 12, 22, 32 for receiving securing dowels 60, and the perimeter holes 23 in the long boards 20, 20', have been shown in figures 3 to 5 using crosses marking their center to simplify the illustration thereof. However, it should be understood that these crosses are actually circular holes, preferably not through holes, although they may be through holes as well.

[0061] Although the description above relates to securing of the parts using dowels, other types of securing means may be used, such as for example adhesive, nails, eccentric nut and bolt systems, etc.

[0062] Although, as explained above, in the furniture module according to the present invention what matters is the ratios between the various faces, connection holes, etc. of the module, the dimensions of an embodiment of a module according to the present invention will be described in detail below, by way of illustrative and non-limiting example. Preferably, the value of A corresponding to the width of the base of the module is 36 cm. Therefore, the height of the furniture module is 72 cm. This height means that said module is suitable for creating items of furniture in table form, since this height allows the table top to be at an ergonomically optimal height (see figure 10). On the basis of the above, and bearing in mind that the bases of the furniture module 1 are a square, the dimensions of said module are 36 × 36 × 72 cm. Preferably, the thickness of the various boards included in the furniture module 1 is 1.6 cm. The other dimensions of the furniture module 1 shown in figures 1 to 6 may be deduced from these parameters together with the geometric ratios described above.

[0063] The abovementioned dimensions are intended purely for illustrative purposes and it must be understood that the furniture module according to the present invention may have any type of measurements as long as they comply with the geometric ratios described above.

[0064] Figure 7 shows a perspective view of a first embodiment of an item of furniture according to the present invention. The item of furniture 1000 shown in figure 7 is made up of eight furniture modules 100, 110, 120, 130, 140, 150, 160, 170 similar to those shown in figures 1 to 6, connected together using respective module connection means in such a way that they form a shelving unit, although in the perspective view used the modules 110, 150 are hidden and cannot be seen. Each of the modules 100, 110, 120, 130, 140, 150, 160, 170 forming the item of furniture 1000 in this embodiment include a short shelf 40, such that the internal space of each module is divided into two substantially equal parts.

[0065] In the embodiment shown in figure 7, the modules 100, 110, 120, 130 in the lower level of the item of furniture are connected to the modules 140, 150, 160, 170 in the upper level by means of module connection holes present in the upper short board of the modules 100, 110, 120, 130 in the lower level and in the lower short board of the modules 140, 150, 160, 170 in the upper level. Furthermore, the modules 100, 110, 120, 130, 140, 150, 160, 170 in each level are connected together by means of connection holes made in one of the long boards and in the rear board.

[0066] Figure 8 shows a perspective view of a second embodiment of an item of furniture according to the present invention. This figure illustrates the great flexibility permitted by the modules according to the present invention when creating different types of furniture with all kinds of configurations. The item of furniture 2000 in the second embodiment is also a shelving unit, but unlike the item of furniture 1000 in the first embodiment, the item of furniture 2000 only includes three furniture modules 200, 210, 220. In the item of furniture 2000, the modules 200, 220 are positioned horizontally or lying down, in other words with the long faces parallel to the floor and the bases or short faces perpendicular to the floor. The module 200 includes a long shelf 50 positioned such that its internal space is divided in two. The module 210 is arranged vertically or erect, in other words with the bases or short faces parallel to the floor, and connected to the modules 200, 220 in such a way as to form two recesses of cubic shape (in the images only one of the two is visible, the other being hidden due to the perspective view used). The module 210 includes a short shelf 40.

[0067] Regarding the connections between modules 200, 210, 220, the module 200 is connected to the module 210 via the rear panel of the module 200 and via a long panel of the module 210. In turn, this module 210 is con-

nected via its rear panel to the rear panel of the module 220, the lower long panel of which is connected to the upper long panel of the module 200.

[0068] Figure 9 shows a front perspective view of a third embodiment of an item of furniture according to the present invention. The item of furniture 3000 shown in figure 9 is a shelving unit for a living room having a space or cavity intended to house, preferably, a television set. This item of furniture 3000 includes six furniture modules 300, 310, 320, 330, 340, 350 arranged in such a way that there is an empty space with dimensions equivalent to two modules in which a television set, etc. can be placed.

[0069] In the item of furniture 3000, the modules 300, 320, 330, 350 are arranged horizontally, in other words with the long sides parallel to the floor, while the modules 310, 340 are arranged vertically, in other words with the long sides perpendicular to the floor, between the modules 300, 320 and 350, 330 respectively. The modules 300, 320, 330, 350 include a long shelf 50 while the modules 310, 340 include a short shelf 40.

[0070] The item of furniture 3000 shown in figure 9 may be considered a two-dimensional combination of the various furniture modules 300, 310, 320, 330, 340, 350 of which it is formed, since all of the modules 300, 310, 320, 330, 340, 350 are arranged in the same plane. By contrast, the items of furniture 1000, 2000 shown in figures 7 and 8 may be considered a three-dimensional combination of the various furniture modules 100, 110, 120, 130, 140, 150, 160, 170 and 200, 210, 220, respectively, of which they are formed.

[0071] In the two-dimensional combinations the various furniture modules are combined or connected placing one beside the other and/or one on top of the other. In the three-dimensional combinations, the modules may also be arranged in front of or behind the other modules.

[0072] Figure 10 shows a perspective view of a fourth embodiment of an item of furniture according to the present invention. As can be seen, in this embodiment the item of furniture 4000 is a table including a table top or board 440 and four furniture modules 400, 410, 420, 430 serving as legs for the table. In this case, the table top 440 is connected to the modules 400, 410, 420, 430 via the module connection means present in the upper short board of each module 400, 410, 420, 430. These furniture modules 400, 410, 420, 430 may also include one or more short shelves 40.

[0073] The item of furniture 4000 may also be considered a three-dimensional combination of several furniture modules.

[0074] In Figures 1 to 10, the embodiments of a furniture module shown essentially have the shape of a regular quadrangular prism, in other words a prism of which the bases are two squares and of which the long faces, or lateral faces, are equal rectangles.

[0075] All of the furniture modules shown in the above figures have the advantage that they are self-supporting and retain their structural integrity irrespective of whether they are connected to other modules or not. This means, for example, that in the event of a house move, it is not necessary to dismantle the item of furniture entirely, but it is simply necessary to disconnect the various modules of which it is formed, and the modules may be moved from one location to another without even the need to empty them of the objects contained inside. This greatly facilitates house moves or moving an item of furniture from one room to another in the same dwelling, office, etc.

[0076] The transport of modules from one location to another is facilitated in the embodiments that include a door as this door makes it difficult or even impossible for the objects contained in the item of furniture to fall out during transport. However, the modules in embodiments without doors are also suitable for being moved without removing the objects contained inside. These embodiments simply require a little more attention and care when moving.

[0077] Although the invention has been described and illustrated with reference to a number of representative examples, it will be appreciated that these exemplary embodiments are in no way limiting on the present invention and therefore any of the variants included, directly or as equivalents, within the content of the attached claims must be considered to be included within the scope of the present invention.

Claims

1. Furniture module of essentially regular quadrangular prismatic shape, this module being open on only one of its faces, **characterized in that** the height of the module is twice the width of the rectangular bases, and **in that** it comprises module connection means on at least one of its long faces.

2. Module according to claim 1, **characterized in that** it further comprises module connection means on one of its bases.

3. Module according to claim 2, **characterized in that** it comprises module connection means on all of its faces.

4. Module according to any one of the preceding claims, **characterized in that** the module connection means comprise module connection holes.

5. Module according to claim 4, **characterized in that** it comprises two module connection holes on its long faces, both holes being aligned with the longitudinal axis on its respective long face.

6. Module according to claim 5, **characterized in that** the distance from each module connection hole to the respective proximal ends of the face in which they are comprised is half the width of the bases of the module.

7. Module according to any one of claims 4 to 6, **characterized in that** the module connection hole in each base is located in the center thereof.

8. Module according to any one of the preceding claims, **characterized in that** said module is open on only one of its long faces.

9. Module according to any one of claims 1 to 7, **characterized in that** said module is open on only one of its short faces.

10. Module according to any one of the preceding claims, **characterized in that** its faces are defined by boards of uniform thickness.

11. Module according to any one of the preceding claims, **characterized in that** it further comprises at least one shelf.

12. Kit for assembly of a furniture module as claimed in any one of claims 1 to 11, which comprises:

- two boards of thickness g having a width A and a length 2A,
- two boards of thickness g having a width A-2g and a length A,
- one board of thickness g having a width A-2g and a length 2A-2g,

in which at least one of the boards having a width A and a length 2A or the board having a width A-2g and a length 2A-2g comprise module connection means.

13. Kit according to claim 12, **characterized in that** each one of said boards comprises module connection means.

14. Kit according to claim 12 or 13, **characterized in that** the module connection means comprise module connection holes.

15. Kit according to any one of claims 12 to 14, **characterized in that** it further comprises at least one board of thickness g having a width A-2g and a length A-g.

16. Kit according to any one of claims 12 to 15, **characterized in that** it further comprises at least one board of thickness g having a width A-2g and a length 2A-2g.

Fig.1A

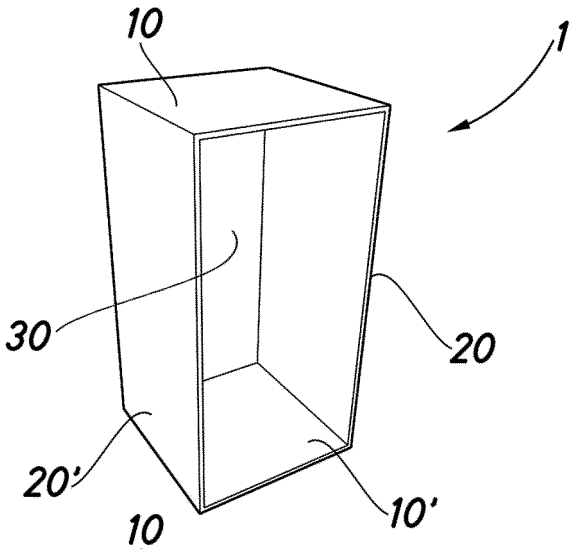


Fig.1B

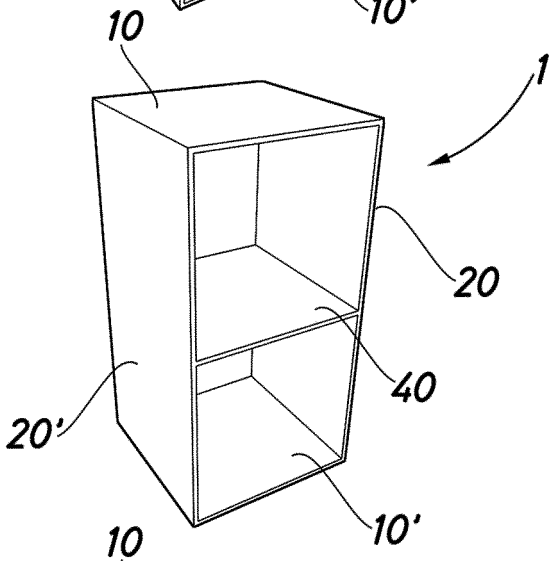


Fig.1C

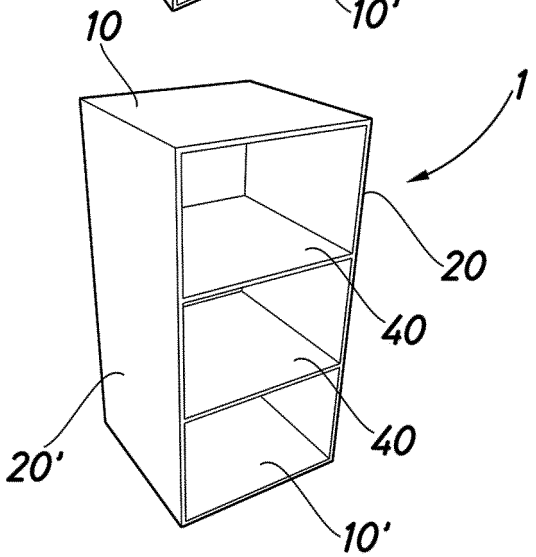


Fig.2A

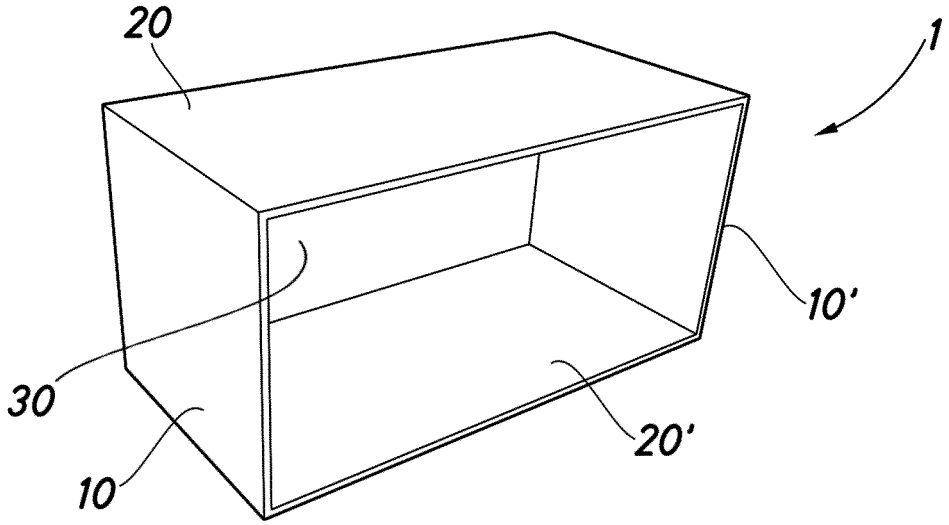


Fig.2B

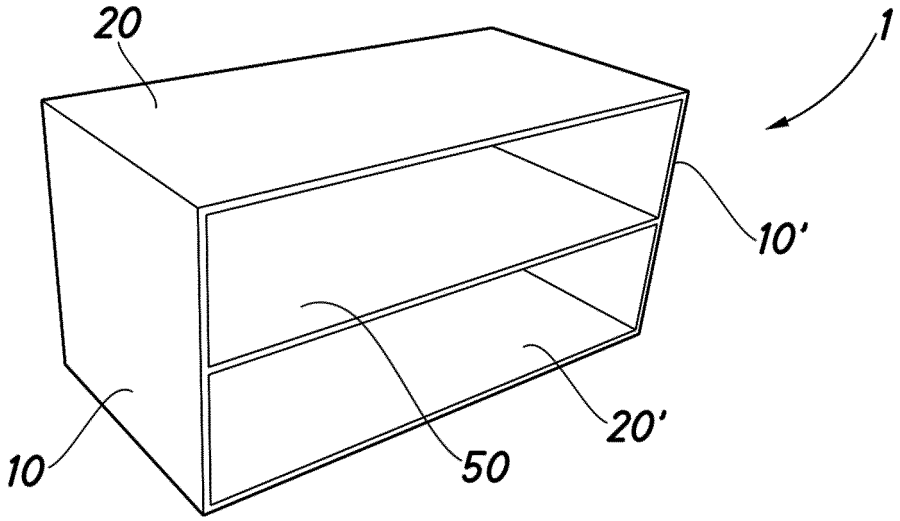
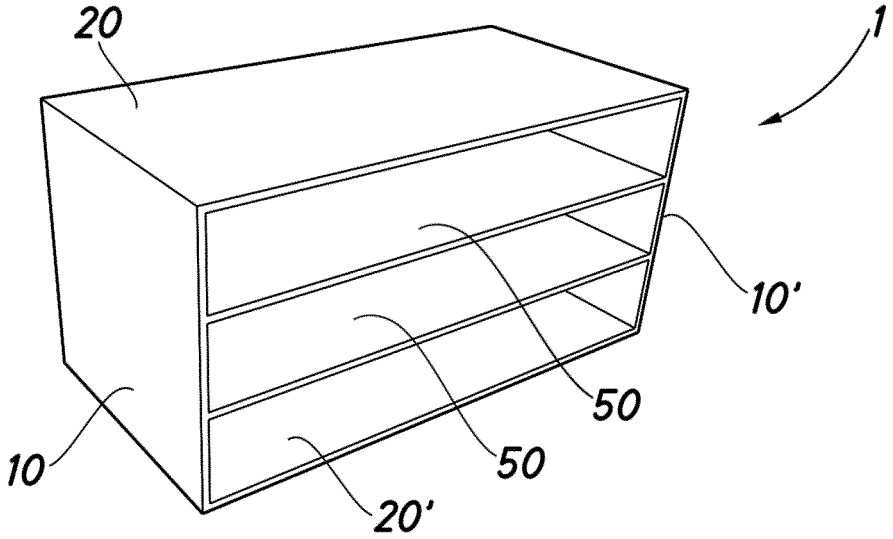


Fig.2C



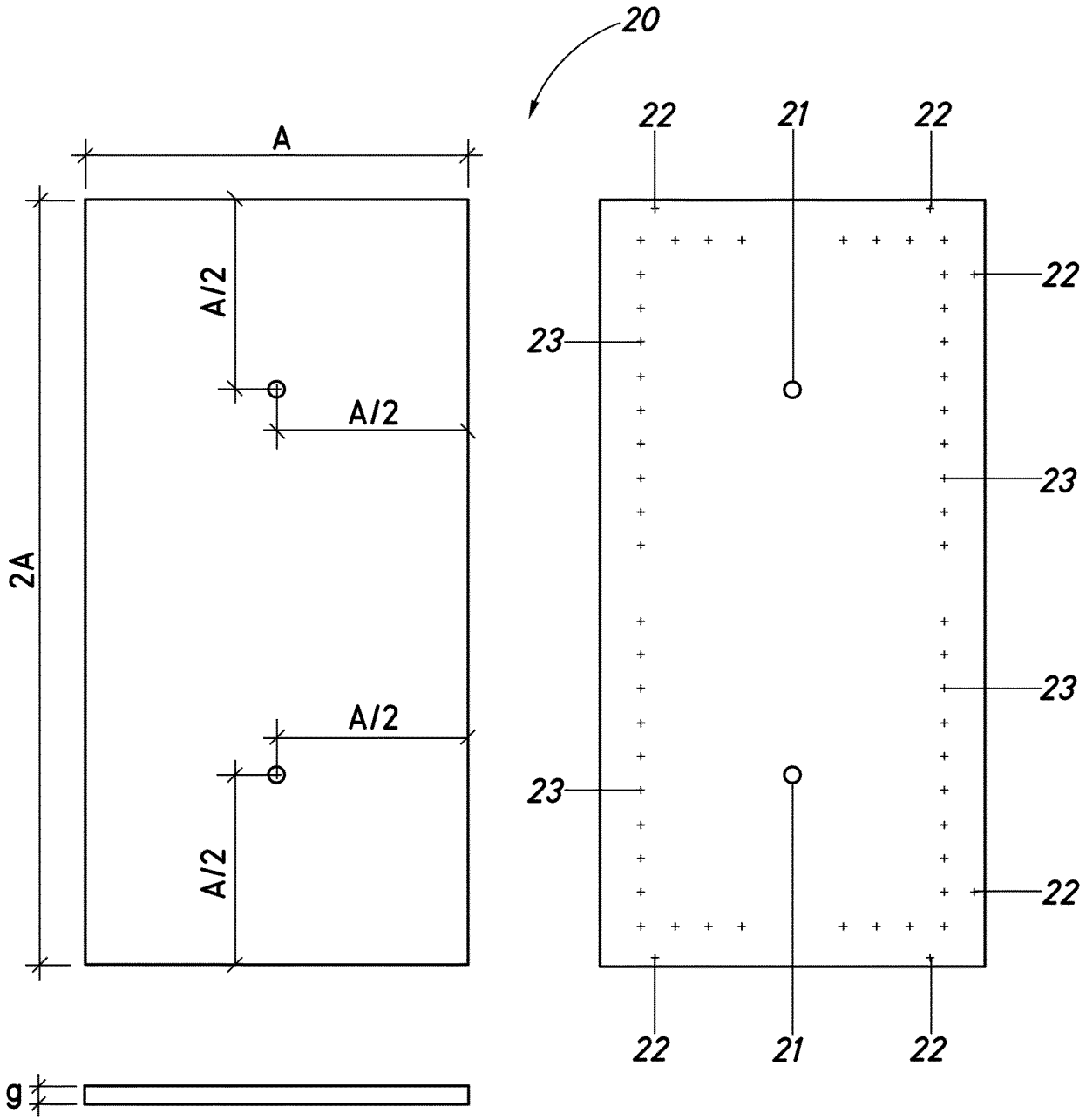


Fig.3

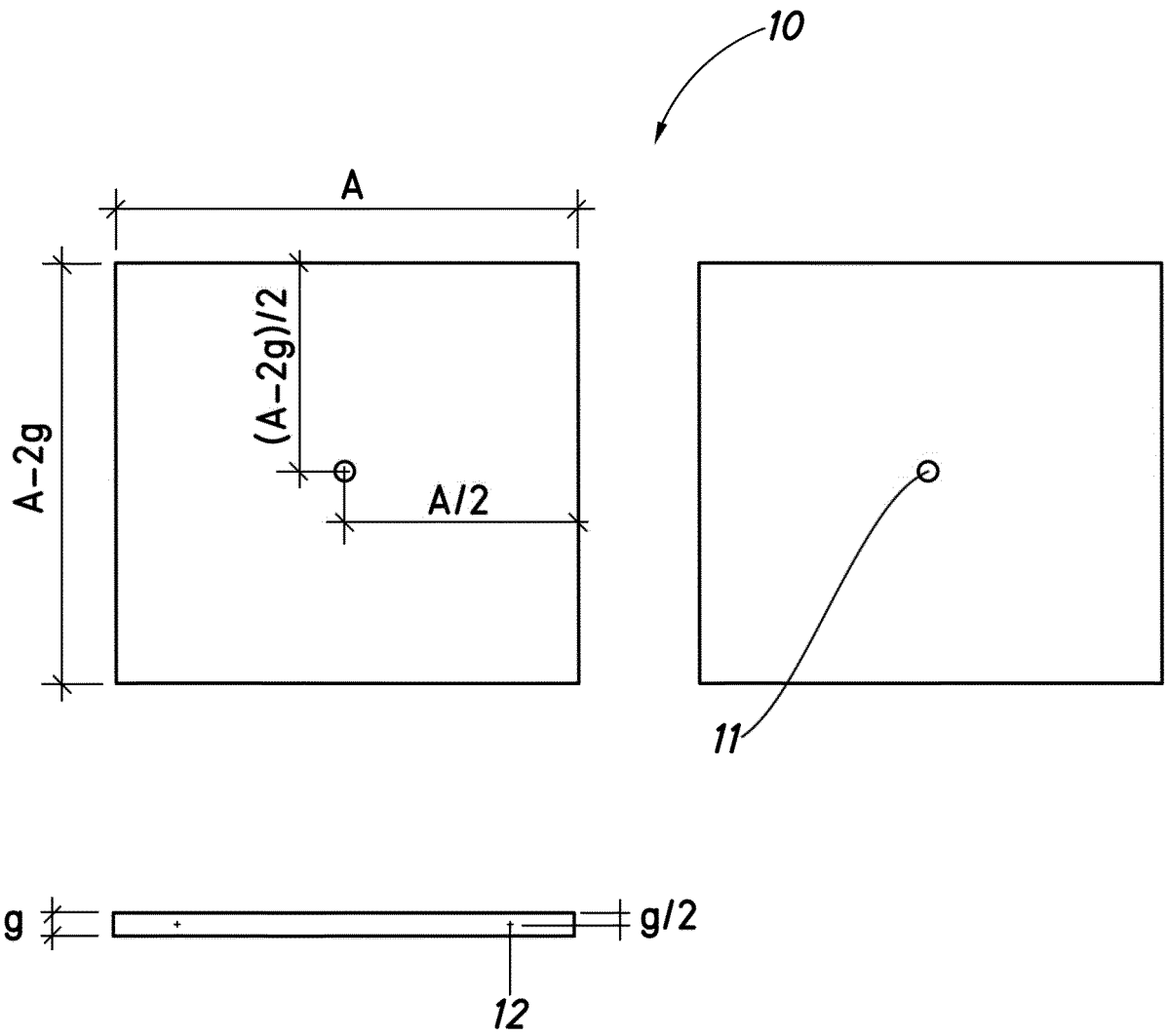


Fig.4

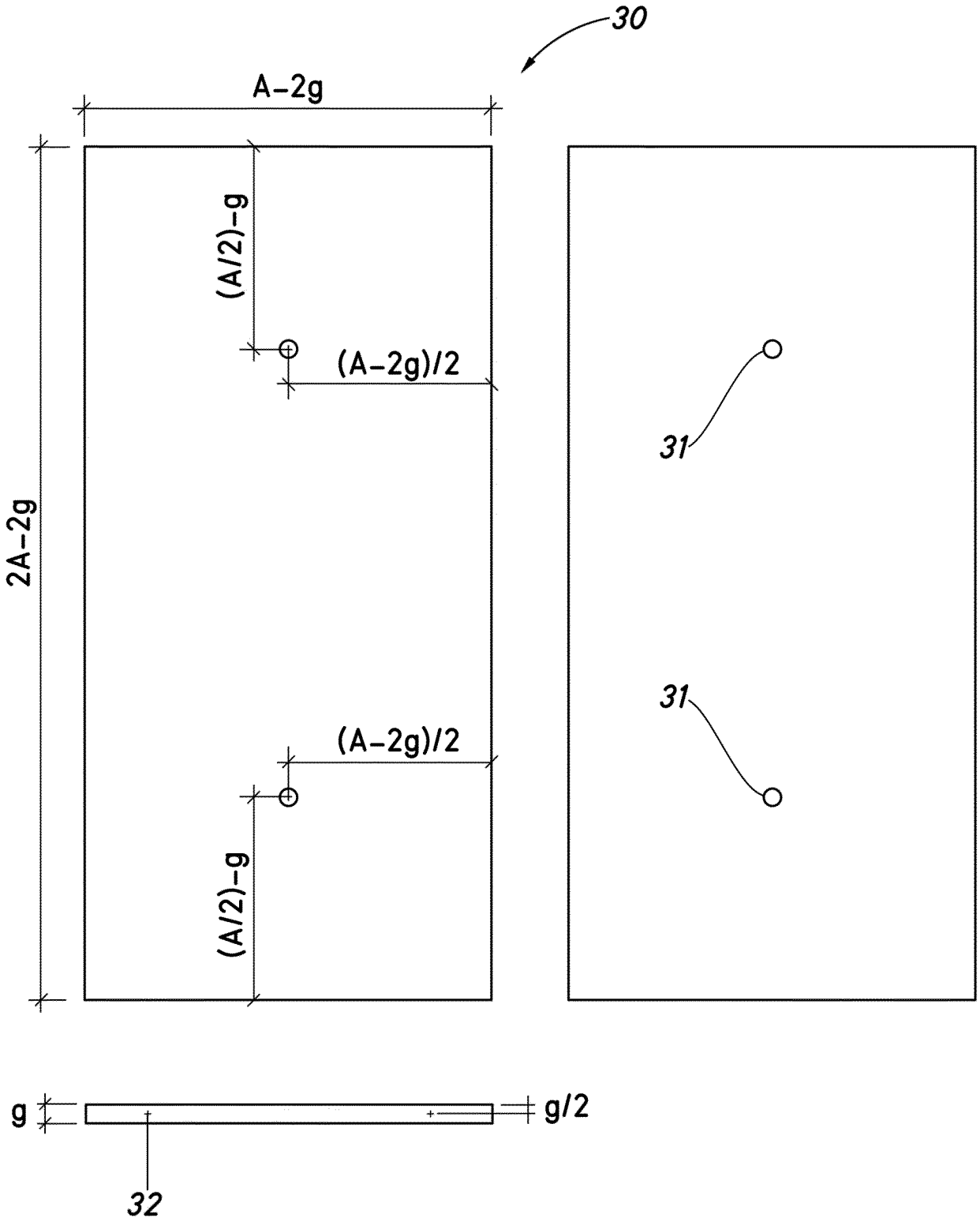


Fig.5

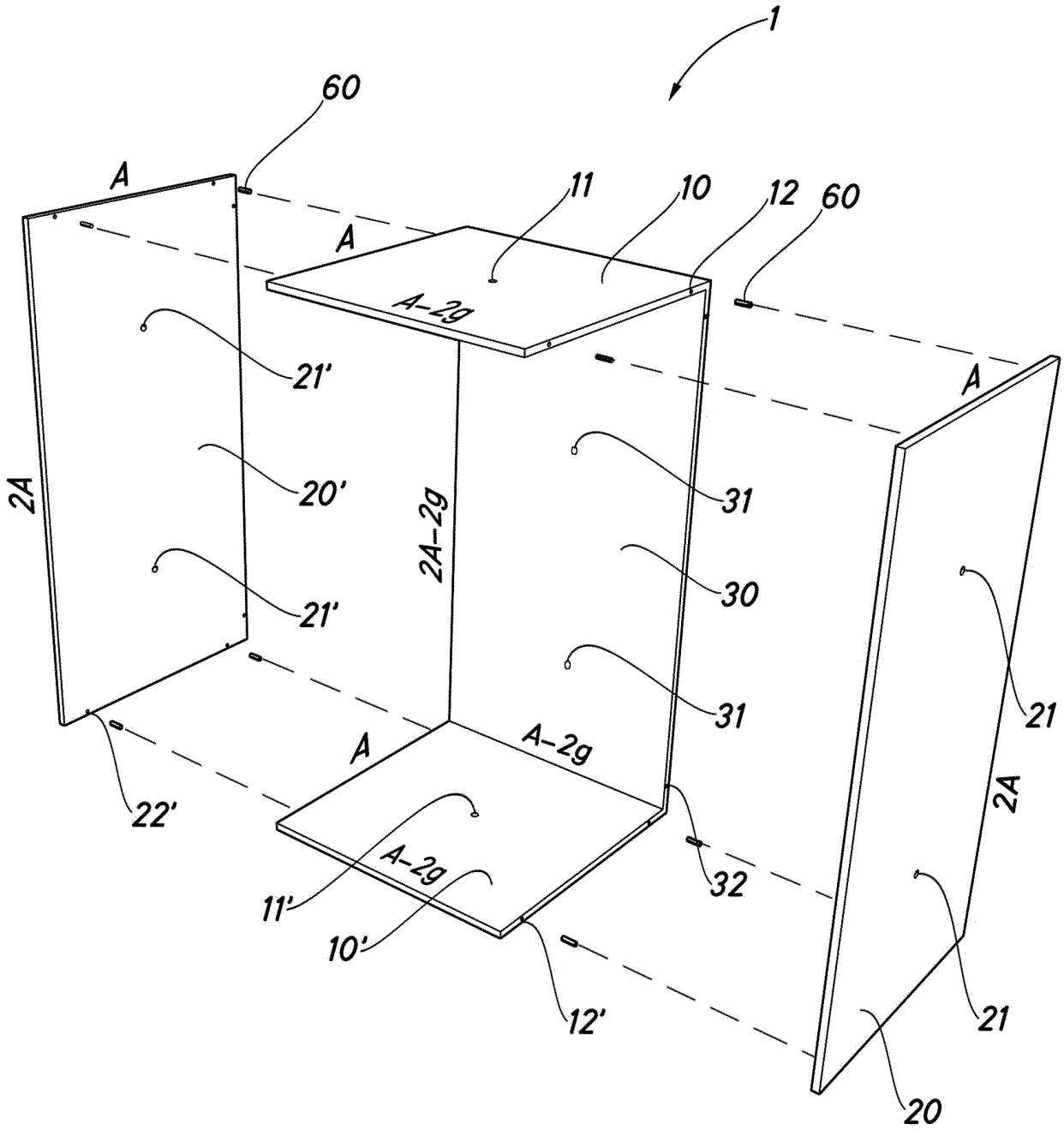

1
60
A
11
10
12
60
A
A-2g
21'
A
2A
20'
2A-2g
31
30
21'
31
21
A
A-2g
2A
22'
A-2g
32
11'
10'
12'
21
20

Fig.6

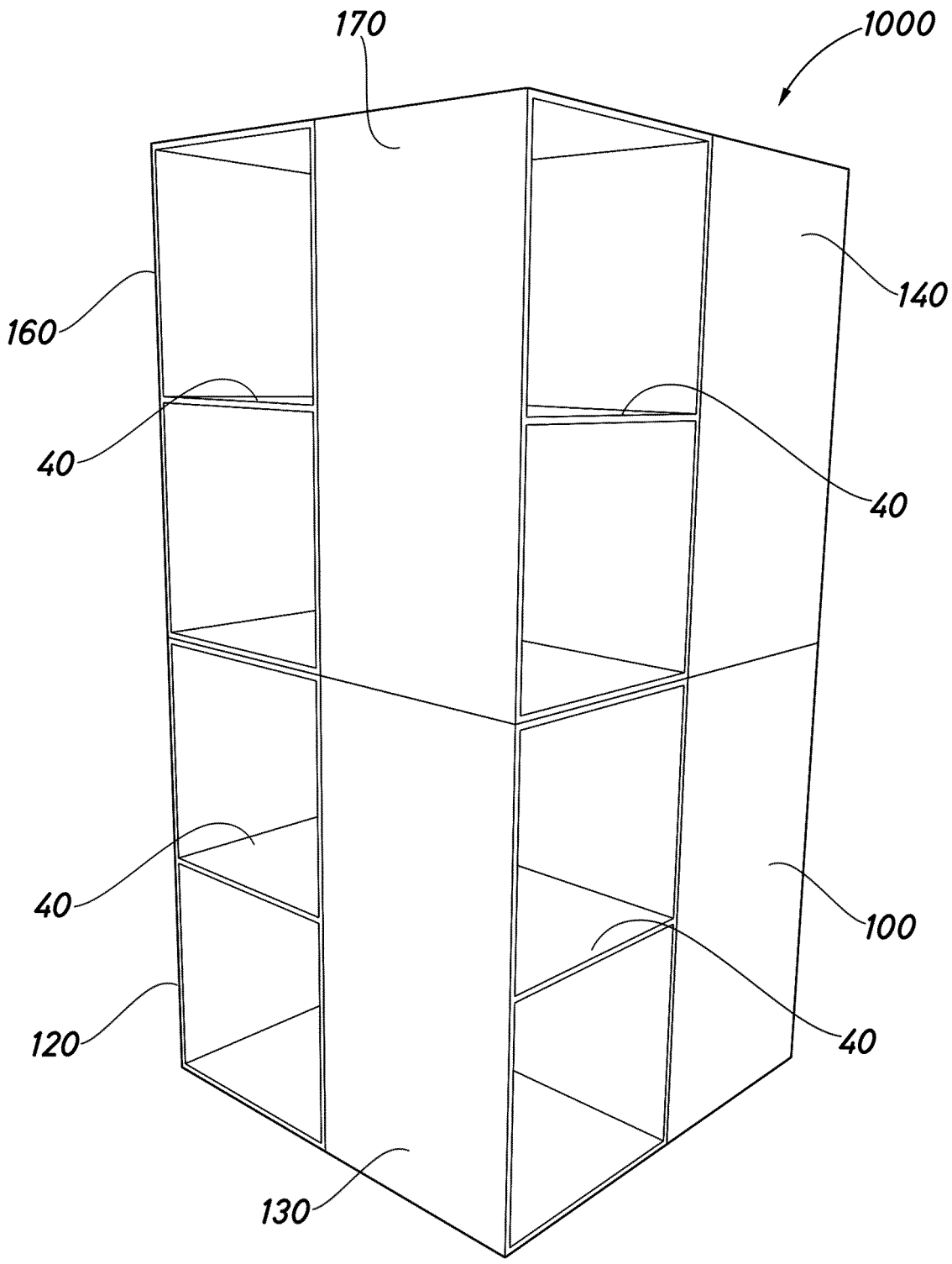


Fig.7

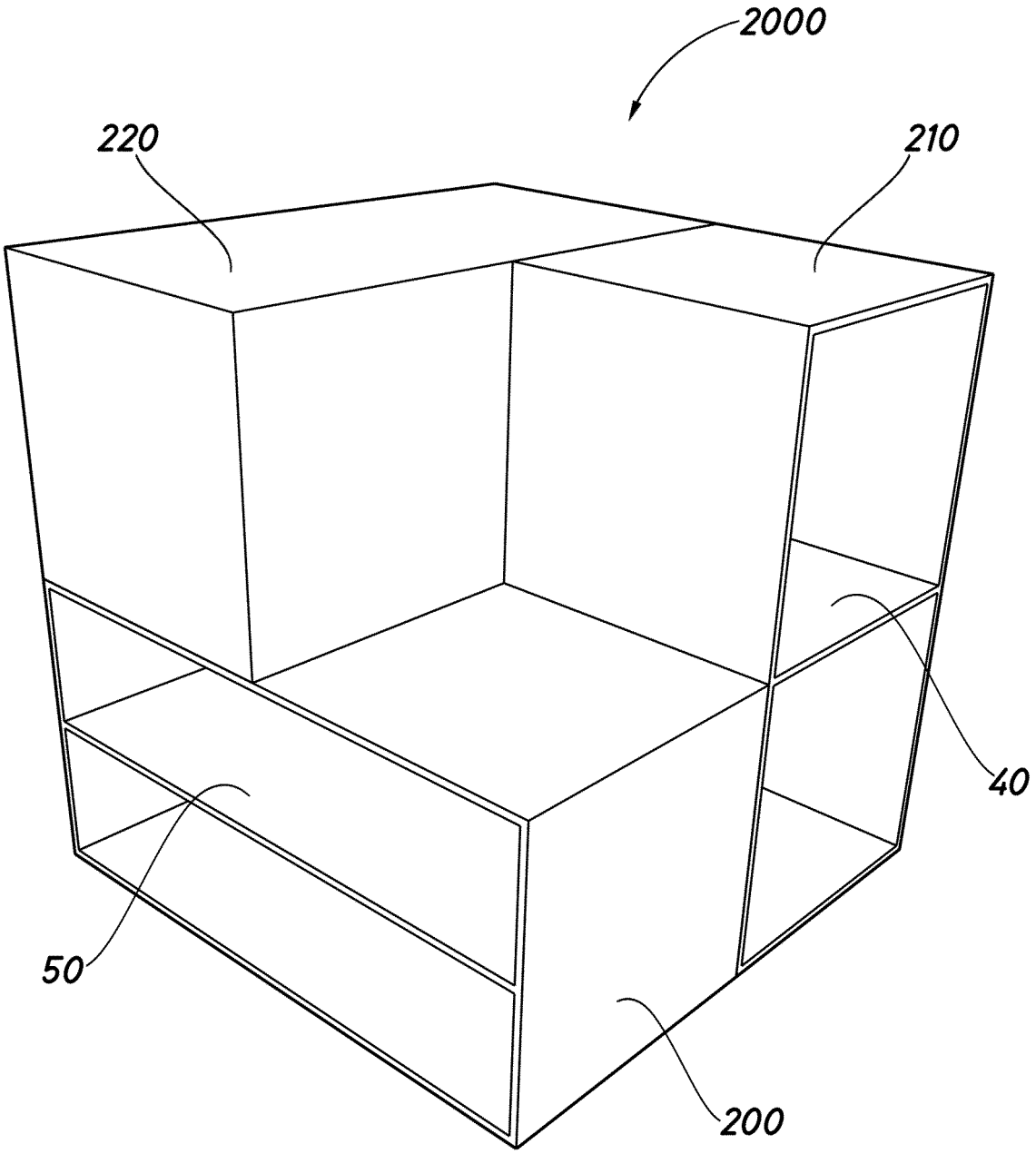


Fig.8

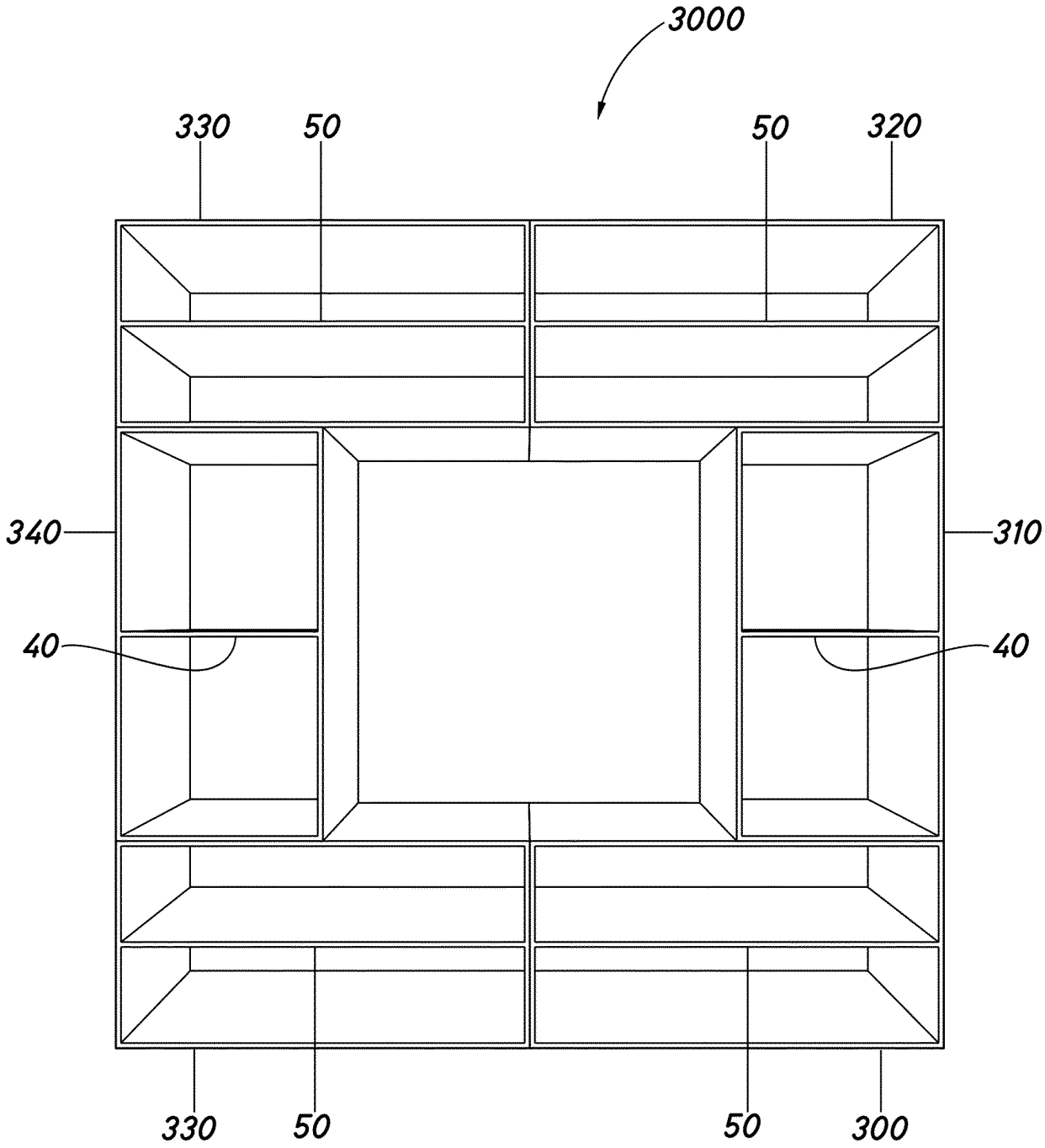


Fig.9

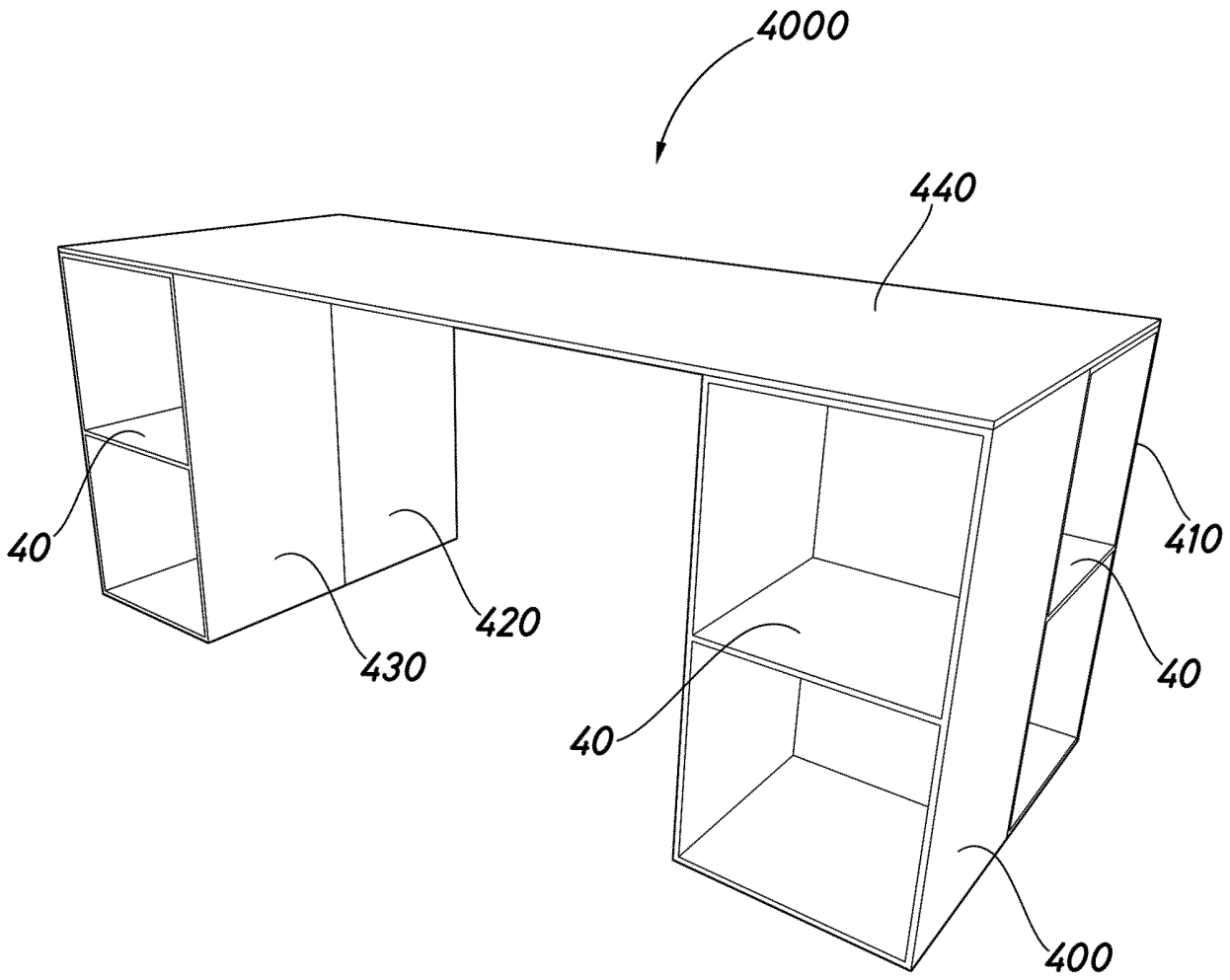


Fig.10

INTERNATIONAL SEARCH REPORT

International application No.
PCT/ES2021/070200

A. CLASSIFICATION OF SUBJECT MATTER

A47B87/02 (2006.01)
A47B47/04 (2006.01)
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
A47B

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

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

EPODOC, INVENES

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2012242200 A1 (KERAGALA RUKSHAN) 27/09/2012, paragraph [0089]; figures.	1-11
X	WO 2006035742 A1 (HIC CO LTD ET AL.) 06/04/2006, abstract; figures.	1-11
X	JP S6125507 A (NIPPON SYST FUANICHIYAA KK) 04/02/1986, figures.	1-11
X	ES 2733879 A2 (JESUS BASTOS PAULO ALEXANDRE) 03/12/2019, figures.	12-16
X	US 2012133253 A1 (BERGEVIN LOUIS ET AL.) 31/05/2012, figures.	12-16

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance.
"E" earlier document but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure use, exhibition, or other means.
"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other documents , such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
04/05/2021	**(04/05/2021)**
Name and mailing address of the ISA/ OFICINA ESPAÑOLA DE PATENTES Y MARCAS Paseo de la Castellana, 75 - 28071 Madrid (España) Facsimile No.: 91 349 53 04	Authorized officer R. Peñaranda Sanzo Telephone No. 91 3493051

Form PCT/ISA/210 (second sheet) (January 2015)

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.
PCT/ES2021/070200

Patent document cited in the search report	Publication date	Patent family member(s)	Publication date
US2012242200 A1	27.09.2012	BR112013023707 A2	13.12.2016
		HK1196148 A1	05.12.2014
		CN103717918 A	09.04.2014
		CN103717918B B	06.04.2016
		CA2828627 A1	27.09.2012
		AU2012231009 A1	03.10.2013
		AU2012231009B B2	02.02.2017
		EP2688443 A2	29.01.2014
		EP2688443 A4	01.04.2015
		WO2012129261 A2	27.09.2012
		WO2012129261 A3	27.12.2013
		US9078515 B2	14.07.2015
WO2006035742 A1	06.04.2006	JP2006095094 A	13.04.2006
JPS6125507 A	04.02.1986	NONE	
ES2733879 A2	03.12.2019	PT110735 A	15.11.2019
		ES2733879R R1	07.02.2020
US2012133253 A1	31.05.2012	NONE	

Form PCT/ISA/210 (patent family annex) (January 2015)