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(54) **Furnishing element such as a bookcase, shelves, shelving or suchlike**

(57) A furnishing element (10) comprises at least a peripheral bearing frame (12) formed by reciprocally connected peripheral bearing panels (13) which define the upper and lower bases and the lateral flanks thereof. The peripheral bearing panels (13) of at least one pair of said peripheral bearing panels (13) are connected consecutively with respect to each other in correspondence to respective connection ends by means of connection elements (14, 114, 214). Each of the connection elements (14, 114, 214) comprises at least an oblong rigid element (21) provided with faces (14a, 14b, 14c, 14d) suitable to

be positioned adjacent head-wise to corresponding edges (22a, 22b) of said connection ends of said peripheral bearing panels (13), in a position interposed between said corresponding edges (22a, 22b), said faces (14a, 14b, 14c, 14d) being provided with first connection means (25a, 25b, 25c, 25d) and said edges (22a, 22b) having mating second connection means (22) suitable to cooperate through same-shape coupling with said first connection means (25a, 25b, 25c, 25d) so as to determine the stable connection at least of said pair of peripheral bearing panels (13).

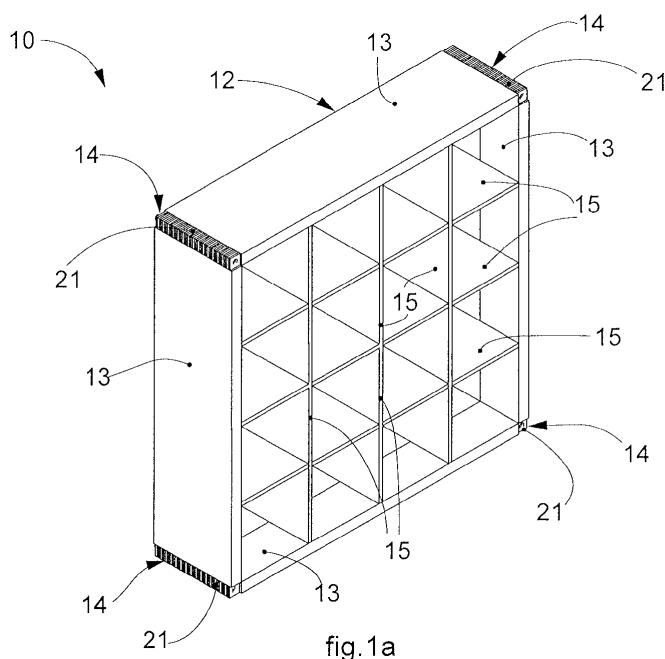


fig.1a

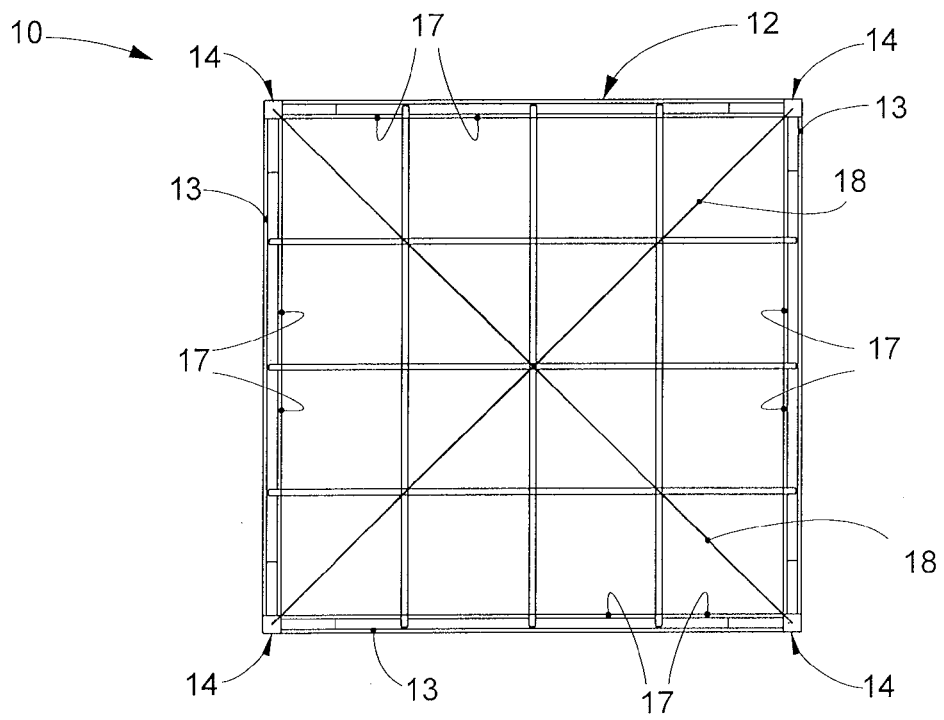


fig.1b

Description

FIELD OF THE INVENTION

[0001] The present invention concerns a furnishing element such as a bookcase, shelves, shelving or similar or comparable furnishing element. In particular, the furnishing element can be of the modular or knock-down type, and can assume different configurations depending on the particular applications or desired aesthetic needs to be obtained.

BACKGROUND OF THE INVENTION

[0002] Furnishing elements of the modular type to make bookcases, shelves or suchlike are known, which, by suitably assembling a plurality of components, that is, lower and upper base, lateral flanks and support shelves, can assume different configurations according to requirements.

[0003] In particular, known bookcases and/or shelves use a peripheral bearing frame to which are attached, by means of connection elements placed on the upright ends, a plurality of support elements and transverse shelves made with common material like wood, chipboard or plywood, MDF, or plastic materials, metal materials or other. Possible intermediate uprights can also be provided which act as dividing panels.

[0004] Shelves and uprights are mutually constrained by means of conventional attachment means such as screws, wooden pegs, pins, nails or other similar elements which cooperate with corresponding housing seatings made in the components in question.

[0005] One disadvantage is that the attachment means used require the use of dedicated tools to assemble and possibly disassemble them. These operations, moreover, are not always easy to carry out and therefore may require specialized personnel. Moreover, most times the attachment means remain visible, giving the furnishing element an anti-aesthetic appearance.

[0006] Furnishing elements are also known in which the different components of which they are made are directly connected to each other by gluing, or the attachment means, such as pegs or blocks, are in their turn glued to corresponding components of the furnishing element.

[0007] However, this solution has the disadvantage that, once assembled, the furnishing element cannot be disassembled without damaging it. Moreover, in this case, the assembly times can be longer compared to those using attachment means such as screws or suchlike.

[0008] Another disadvantage is the weight of the different panels and shelves that make up the furnishing element and this slows down, complicates and in some circumstances prevents the necessary assembly and disassembly operations and the movement thereof.

[0009] Another disadvantage is that it is difficult and

complicated to manage the elimination of the furnishing element in that, as the different panels and shelves are made of wood, plastic or metal materials, for the purposes of disposal they must be taken to dedicated structures to process them: this makes the disposal more difficult.

[0010] Document DE-U-2006003227 describes modular/knock-down shelving which includes a containing body formed by walls and shelves connected by shaped connection members and which provides base support elements. The walls of the body, the shelves, the connection members and the base support are made of rigid plastic or light metal elements, which however have all the problems connected to disposal as above.

[0011] Document US-A-5,893,617 describes the assembly of a frame of a wooden wardrobe, formed by walls and shelves connected by means of shaped connection members. The shaped connection members are formed in turn by modular elements, through same-shape coupling of the tenons and dove-tailed mortises; however, this increases the assembly times and poses risks of possible unwanted uncoupling, both during the assembly step and during use. Moreover, the use of wood poses the difficulties of disposal already discussed. Document DE-U-20211847 describes modular shelving which includes a containing body formed by walls angularly connected to each other along lateral edges by means of holed tubular elements which cooperate with connection pegs disposed along said lateral edges. The tubular elements are in their turn connected by means of rigid crossed metal elements, provided on the back of the shelving. This solution, providing the use of pegs, does not make the disassembly of the shelving easy, with the risk of damaging the components thereof.

[0012] One purpose of the present invention is to make a furnishing element, such as a modular bookcase or shelving which can be easily personalized according to the user's own needs and requirements, which has a bearing frame to which the different dividers and shelves can be connected in an easy, robust and solid way.

[0013] Another purpose of the present invention is to make a furnishing element in which all its constituent elements, that is, panels, shelves and dividers, are easily transportable and maneuverable by anybody, without precluding overall solidness and robustness once the furnishing element is assembled.

[0014] Another purpose of the present invention is to make a furnishing element which can be easily assembled and disassembled, and once disassembled and no longer used, does not require particular responsibilities from the point of view of moving it and disposing of it.

[0015] The Applicant has devised, tested and embodied the present invention to overcome the shortcomings of the state of the art and to obtain these and other purposes and advantages.

SUMMARY OF THE INVENTION

[0016] The present invention is set forth and charac-

terized in the independent claims, while the dependent claims describe other characteristics of the invention or variants to the main inventive idea.

[0017] In accordance with the above purposes, a furnishing element according to the present invention comprises at least a peripheral bearing frame formed by peripheral bearing panels made of multi-layered corrugated cardboard and reciprocally connected which define the upper and lower bases and the lateral flanks thereof. The peripheral bearing panels of at least one pair of said peripheral bearing panels are connected consecutively to each other in correspondence to respective connection ends by means of connection elements or joints.

[0018] According to one feature of the present invention, each of the connection elements or joints is made in a single body, by means of multi-layered corrugated cardboard and comprises at least an oblong rigid element provided with faces suitable to be positioned adjacent head-wise to corresponding edges of the connection ends of the peripheral bearing panels, in a position interposed between the corresponding edges. The faces are provided with first connection means and the edges have mating second connection means suitable to cooperate through same-shape coupling with the first connection means so as to determine the stable connection at least of the pair of peripheral bearing panels.

[0019] The furnishing element of the present invention is thus easily personalized according to the user's own needs and requirements, as it is equipped with a bearing frame to which the different components which form the furnishing element are connected in a simple, robust and solid manner.

[0020] Moreover, with the present invention all the elements that make up the furnishing element can be easily transported and maneuvered without precluding an overall solidity and robustness to the furnishing element once assembled,

[0021] The use of multi-layered corrugated cardboard gives a very reduced weight of the furnishing element, at the same time guaranteeing stability and robustness thanks to the coupling with the connection elements or joints provided.

[0022] Moreover, the material can be easily treated and handled, it is not bulky, it is light, recyclable and advantageously biodegradable, so that, once its components have been disassembled and are no longer used, from the point of view of moving it and the point of view of disposing of it, it does not require particular responsibilities because it can be easily removed, transported and possibly reduced in volume and disposed of, without further additional costs.

[0023] In accordance with one form of embodiment, the peripheral bearing frame supports and positions inside itself a plurality of longitudinal and transverse dividing panels, so as to define a plurality of containing compartments, and each peripheral bearing panel has a plurality of apertures made on the surface of the peripheral bearing panel that faces, during use, toward the inside

of the peripheral bearing frame in order to cooperate in coupling with mating shaped ends of the dividing panels inserted inside them.

[0024] Advantageously, the dividing panels are also made of multi-layered corrugated cardboard.

[0025] In accordance with another form of embodiment, each connection element is formed by the repetition, along a desired direction of axial development, of a plurality of single connection profiles having a planar shape, each of which has a central body having a quadrangular shape in plan, mating with that of the oblong rigid element to be obtained, so as to define overall the oblong rigid element inclusive of the faces, and a plurality of peripheral sides which extend from corresponding sides of the central body toward the outside, so as to define overall the first connection means.

[0026] In accordance with some forms of embodiment of the present invention, depending on the use which is made of it, the first connection means are disposed on at least two consecutive faces of the oblong rigid element to define an "L" conformation, or on at least three consecutive faces of the oblong rigid element to define an upside down "T" conformation, or again on four consecutive faces of the oblong rigid element to define a cross-like conformation.

[0027] In some variant embodiments, the first connection means are connection blocks which extend transversely from the faces of the oblong rigid elements and the second connection means are mating open cavities made inside the peripheral bearing panels. This solution, as well as improving the robustness of the coupling, also contributes to further lightening the weight of the peripheral bearing panels.

[0028] According to one form of embodiment, the furnishing element comprises tie rods which connect corresponding pairs of connection elements or joints, disposed at opposite corners of the peripheral bearing frame. In variants of this form of embodiment, each connection element has axially a longitudinal through hole, in which an anchoring element for the connection to a corresponding one of the tie rods is stably housed.

[0029] In a variant embodiment, the furnishing element also comprises a central bearing panel, advantageously made of multi-layered corrugated cardboard, connected, above and below, by a pair of connection elements or joints, to two pairs of peripheral bearing panels, upper and lower, which lie on respective common parallel lying planes, so as to define a central bearing structure conformed substantially as an "H" turned on its side, being able in this way to easily increase the useful containing volume.

[0030] The present invention also concerns a method to make a furnishing element, advantageously in multi-layered corrugated cardboard, comprising at least a peripheral bearing frame formed by reciprocally connected peripheral bearing panels which define the upper and lower bases and the lateral flanks thereof. The method provides to connect consecutively to each other at least

one pair of the peripheral bearing panels in correspondence to respective connection ends by means of connection elements or joints.

[0031] According to one feature of the present invention, the method provides to use an oblong rigid element provided with faces, which defines each of the connection elements or joints.

[0032] Moreover, the method provides to position the faces adjacent head-wise to corresponding edges of the connection ends of the peripheral bearing panels, in a position interposed between the corresponding edges.

[0033] Furthermore, the method provides to place in cooperation through same-shape coupling first connection means provided on the faces with mating second connection means of the edges, so as to determine the stable connection at least of the pair of peripheral bearing panels.

BRIEF DESCRIPTION OF THE DRAWINGS

[0034] These and other characteristics of the present invention will become apparent from the following description of a preferential form of embodiment, given as a non-restrictive example with reference to the attached drawings wherein:

- fig. 1a is a perspective view of a furnishing element according to the present invention;
- fig. 1b is a back view of the furnishing element in fig. 1a;
- fig. 2 is a perspective view of a part of the furnishing element in fig. 1a;
- fig. 3 is a perspective view of another part of the furnishing element in fig. 1a;
- fig. 4a is a perspective view of another part of the furnishing element in fig. 1a;
- fig. 4b is a plan view of a component of the part in fig. 4a;
- fig. 5a is a perspective view of a variant of the part in fig. 4a;
- fig. 5b is a plan view of a component of the part in fig. 5a;
- fig. 6a is a perspective view of another variant of the part in fig. 4a;
- fig. 6b is a plan view of a component of the part in fig. 6a;
- fig. 7 is a partly sectioned perspective view of the part in fig. 4a associated to another component of the furnishing element in fig. 1a;
- fig. 8 is a perspective view of another form of embodiment of the furnishing element in fig. 1a.

DESCRIPTION OF SOME FORMS OF EMBODIMENT

[0035] With reference to figs. 1a - 7 a furnishing element according to the present invention is shown, indicated by the reference number 10 in a first basic form of embodiment, made of multi-layered corrugated card-

board. The furnishing element 10 advantageously shows a module which, repeated, is also usable to make modular elements 110, as shown in fig. 8.

[0036] The furnishing element 10 in its basic configuration comprises a peripheral bearing frame 12, of a quadrangular shape, in this case, square, even if it could also be rectangular, which comprises a plurality of peripheral bearing panels 13 angularly connected to each other, in correspondence to respective connection ends, or lateral edges, orthogonally along a closed frame travel in which the various peripheral bearing panels 13 define lower and upper bases and flanks of the peripheral bearing frame 12, providing connection elements or joints 14, 114, 214 in correspondence to the angular connection corners between the lateral edges of the peripheral bearing panels 13.

[0037] The peripheral bearing frame 12 also supports and positions, inside the corresponding frame defined by the peripheral bearing panels 13, a plurality of dividing panels 15, longitudinal and transverse, positioned orthogonally to each other and disposed inside it and anchored thereto, defining respectively vertical dividing walls and horizontal support shelves which thus delimit a plurality of containing compartments 17.

[0038] The furnishing element 10 is also provided with tie rods 18 which connect in pairs to each other the reciprocal connection elements or joints 14, 114, 214, located in correspondence to opposite corners of the peripheral bearing frame 12. The tie rods 18, of which more will be said later, put in traction, acting in a diagonal direction toward the center, the connection elements 14, 114, 214 located at the corners of the peripheral bearing frame 12 so as to confer greater rigidity and robustness to the furnishing element 10 itself:

[0039] Each of the connection elements 14, 114, 214 is formed by a single body which includes an oblong rigid element 21, in this case shaped like an elongated parallelepiped, provided with consecutive faces 14a, 14b, 14c, 14d which are able to be positioned adjacent head-wise to corresponding edges 22a, 22b of the connection ends of the peripheral bearing panels 13. In this way, making the connection elements 14, 114, 214 in a single body, it is not necessary during the assembly step to put together the connection elements, thus reducing the assembly times. Moreover, there is no risk of accidental uncoupling.

[0040] The above-mentioned faces 14a, 14b, 14c, 14d are provided with connection blocks, fins or inserts or other equivalent first connection means of the male type, 25a, 25b, 25c, 25d which extend toward the outside, while the edges 22a, 22b have mating cavities, seatings or grooves, or other equivalent second connection means of the female type, 22 suitable to cooperate by same-shape coupling with the connection blocks 25a, 25b, 25c, 25d so as to determine the stable connection of the peripheral bearing panels 13.

[0041] In the solution shown as an example embodiment, the connection blocks 25a, 25b, 25c, 25d are made

of multi-layered corrugated cardboard and overall have a parallelepiped shape with a rectangular base, flat in shape, and the cavities 22 are shaped mating to the parallelepiped shape, so as to accommodate and hold the connection blocks 25a, 25b, 25c, 25d inside them. This embodiment determines a considerable stability and overall robustness of the coupling between the peripheral bearing panels 13 and therefore the furnishing element 10.

[0042] Each peripheral bearing panel 13, as shown in fig. 2, has a plurality of apertures or slits 19 made, in this case, only on the surface 20 of the peripheral bearing panel 13 which during use faces toward the inside of the peripheral bearing frame 12 and having the same shape and length as each other and disposed at the same distance from each other along the longitudinal axis of the peripheral bearing panel 13. The apertures or slits 19 are used to insert the dividing panels 15 at the desired heights.

[0043] In some solutions the peripheral bearing panel 13 is made by shaping and gluing sheets of multi-layered corrugated cardboard and has the above-mentioned open cavities 22 inside it, in correspondence to both the edges 22a, 22b of the connection ends, made in the thickness of the peripheral bearing panel 13, for cooperation with the connection elements 14, so that the furnishing element 10 can be assembled.

[0044] Each dividing panel 15 (fig. 3) is advantageously made by shaping and gluing sheets of multi-layered corrugated cardboard. However, in some variants the dividing panels 15 may be made of wood, metal, plastic, glass or a combination of such materials, while the peripheral bearing frame 12 and the connection elements 14, 114, 214 are in any case made of multi-layered corrugated cardboard.

[0045] Each dividing panel 15 has at both ends shaped protuberances 23 of a shape and size mating with the apertures 19 made in the peripheral bearing panel 13, so that they can be inserted inside them to make up the furnishing element 10.

[0046] On one of the two bigger sides of the dividing panel 15 transverse cuts 24 are made, having a width substantially equal to the thickness of the dividing panel 15, a length substantially equal to half the width of the dividing panel 15, and disposed at the same distance from each other. The transverse cuts 24 are made to allow the connection of the corresponding dividing panel 15 with the other analogous dividing panels 15, advantageously by means of a comb type joint, so as to define the compartments 17.

[0047] Each connection element 14, 114, 214 used to reciprocally connect the peripheral bearing panels 13 which, once connected, will make up the peripheral bearing frame 12 of the furnishing element 10 of fig. 1a, 1b, is a single body formed by the repetition, along a desired direction of axial development, of a plurality of single connection profiles 25, 125, 225 of a planar shape, for example L-shaped (figs. 4a, 4b), T-shaped (figs. 5a, 5b),

cross shaped (figs. 6a, 6b) according to the needs and applications, and obtained from a sheet of multi-layered corrugated cardboard. The connection profiles 25, 125, 225 made of multi-layered corrugated cardboard are repeated longitudinally in the space, put adjacent, pressed and glued to define overall the rigid and robust structure, in a single body, of the connection elements 14, 114, 214, including in particular the connection blocks 25a, 25b, 25c, 25d.

[0048] Each connection profile 25, 125, 225 comprises in this case a central body 28 having a quadrangular shape in plan, mating to that of the oblong rigid element 21 to be obtained, so as to define overall the faces 14a, 14b, 14c, 14d, advantageously a central hole 29a and a plurality of peripheral sides 27 which extend from corresponding sides of the central body 28 toward the outside so as to define overall the connection blocks 25a, 25b, 25c, 25d. The shaping of the connection profiles 25, 125, 225, comprising central body 28, central hole 29a and peripheral sides 27, can be advantageously made by means of computer-assisted precision cutting, for example by means of a precision plotter.

[0049] The repetition of the connection profiles 25, 125, 225 is carried out so that the corrugations of the multi-layered corrugated cardboard of two consecutive connection profiles 25, 125, 225 are oriented disposed orthogonally to each other, thus allowing to increase the robustness and the solidity of the entire connection element 14, 114, 214. Moreover, the alignment of the central holes 29a determines, overall, an axial through hole 29 through the oblong rigid element 21 of the final connection element 14, 114, 214, of which more will be said hereafter in the description.

[0050] In figs. 4a and 4b a first variant embodiment is shown, indicated by the reference number 14, of the connection elements, in which the connection profile 25 comprises two peripheral sides 27 which extend, substantially at 90° with respect to each other, from two consecutive sides of the central body 28, to define a substantially L-shaped configuration. In this way, the connection element 14 is formed by two blocks 25a, 25b substantially at 90° which extend from two consecutive faces 14a, 14b of the oblong rigid element 21. This first variant embodiment is useful to connect two peripheral bearing panels 13 lying on lying planes orthogonal to each other, in order to make a furnishing element as in fig. 1.

[0051] In figs. 5a and 5b a second variant embodiment is shown, indicated by the reference number 114, of the connection elements, in which the connection profile 125 comprises three peripheral sides 27 which extend substantially at 90° with respect to each other, from three consecutive sides of the central body 28, to define a substantially upended T-shaped configuration. In this way, the connection element 114 is formed by three blocks 25a, 25b, 25c substantially at 90° with respect to each other, which extend from three consecutive faces 14a, 14b, 14c of the oblong rigid element 21. This second variant embodiment is useful to connect three peripheral

bearing panels 13 of which two lying on a common lying plane and a third disposed central in an orthogonal position, for example in order to make furnishing elements defined by the repetition of two furnishing elements similar to fig. 1, as will be explained better in relation to fig. 8.

[0052] In figs. 6a and 6b a third variant embodiment is shown, indicated by the reference number 214, of the connection elements, in which the connection profile 225 comprises four peripheral sides 27 which extend substantially at 90° with respect to each other, from four consecutive sides of the central body 28, to define a substantially cross-like configuration. In this way, the connection element 214 is formed by four blocks 25a, 25b, 25c, 25d substantially at 90° with respect to each other, which extend from four consecutive faces 14a, 14b, 14c, 14d of the oblong rigid element 21. The third variant embodiment is useful to connect four peripheral bearing panels 13 of which two lying on a first common lying plane and another two lying on a second common lying plane in an orthogonal position to the first lying plane, for example to make furnishing elements defined by the substantial repetition of four furnishing elements similar to fig. 1, of which two lower and two upper.

[0053] Each connection element 14, 114, 214 defined by the repetition of the connection profiles 25, 125, 225, has a size and conformation such that the oblong rigid elements 21 and blocks 25a, 25b, 25c, 25d thus obtained are mating in shape, respectively in longitudinal extension and in depth, to the open cavities 22 of each peripheral bearing panel 13 which makes up the peripheral bearing frame 12 of the furnishing element 10, 110.

[0054] As seen in figs. 4a, 5a, 6a, each connection element 14, 114, 214 provides that the oblong rigid element 21 is provided, at head and tail, with a leveling element 28a, of a shape substantially equal or comparable to the shape in plan of the central body 28 of the connection profile 25, 125, 225, including a similar central hole 29a.

[0055] The leveling element 28a, which is applied by gluing in the same gluing operation as the plurality of connection profiles 25, 125, 225, has a thickness substantially equal to the thickness of the walls which delimit the open cavities 22 of the peripheral bearing panel 13 in which a corresponding block 25a, 25b, 25c, 25d of a corresponding connection element 14, 114, 214 is inserted by same shape coupling. In this way, the leveling element 28a defines a conformation of the connection element 14, 114, 214 substantially flush with the walls of the open cavities 22, determining a substantial continuity of surfaces in the interconnection zone of the peripheral bearing panels 13, so as to improve the overall aesthetic effect.

[0056] In some variant embodiments, each connection element 14, 114, 214 has axially a through axial hole 29, from side to side along the oblong rigid element 21, obtained in the case in point by aligning the central holes 29a thanks to a gluing operation of the connection profiles 25, 125, 225 and of the head and tail leveling elements

28a, into which through hole 29 an anchoring element 30 (fig. 7) is inserted and stably housed, in this case of a cylindrical or tubular shape, which acts as a structural mean to which a corresponding one of the cited tie rods 18 can be connected, so as to be able to dispose them crossed under traction to give rigidity and structure to the peripheral bearing frame 12. The anchoring element 30 preferably has an extension in length comparable to that of the connection element 14, 114, 214 into which it is inserted, so that it is able to face at least one of the two ends of the connection element 14, 114, 214, for cooperation with the tie rod 18.

[0057] In the case of fig. 7, the anchoring element 30 is sized with greater length than the connection element 14, 114, 214 and has at one end 32 protruding from it an attachment hole 33 transverse to the axis of the anchoring element 30, in this case made through, for the connection of a mating attachment element, such as a block, pin or peg 34 placed at one end of the associated tie rod 18. The tie rod 18 is typically made as a flexible and positionable element, resistant to traction, such as a steel cable, or other similar or comparable material, and is sized in length in a manner correlated to the sizes from corner to corner of the peripheral bearing frame 12 and suitable cross section so that, when the tie rod 18 is attached to the anchoring element 30, it is put under the desired traction needed to stress the peripheral bearing panels 13 and thus give stability and rigidity to the peripheral bearing frame 12.

[0058] In fig. 8 a variant embodiment of the present invention is shown, identified by the reference number 110, which shows a furnishing element of double containing volume with respect to that shown in fig. 1, advantageously made of multi-layered corrugated cardboard. The furnishing element 110 is achieved substantially by placing adjacent and joining laterally two modules of furnishing elements similar to that shown in fig. 1, with the provision that, at the interface between the two modules, there is a single and common central bearing panel 113 connected above and below, together with another two pairs of parallel peripheral bearing panels 13, upper and lower, of one and the other module, to corresponding T-shaped connection elements 114 as shown in fig. 5a, so as to define a central structure substantially like an "H" turned on its side, while the connections between the remaining peripheral bearing panels 13 are of the same type, using the L-shaped connection elements 14, as already described with reference to figs. 1a - 7. For example to make a modular furnishing element formed by the repetition of four modules, each consisting of a furnishing element 10 as described above, disposed two by two and superimposed, it will be possible to use the cross-shaped connection element 214 for the central connection, two T-shaped connection elements 114 for the upper and lower central connection and the L-shaped connection elements 14 for the peripheral connections.

Claims

1. Furnishing element comprising at least a peripheral bearing frame (12) formed by peripheral bearing panels (13) made of multi-layered corrugated cardboard and reciprocally connected which define the upper and lower bases and the lateral flanks thereof, the peripheral bearing panels (13) of at least one pair of said peripheral bearing panels (13) being connected consecutively with respect to each other in correspondence to respective connection ends by means of connection elements (14, 114, 214), **characterized in that** each of said connection elements (14, 114, 214) is made in a single body, by means of multi-layered corrugated cardboard and comprises at least an oblong rigid element (21) provided with faces (14a, 14b, 14c, 14d) suitable to be positioned adjacent head-wise to corresponding edges (22a, 22b) of said connection ends of said peripheral bearing panels (13), in a position interposed between said corresponding edges (22a, 22b), said faces (14a, 14b, 14c, 14d) being provided with first connection means (25a, 25b, 25c, 25d) and said edges (22a, 22b) having mating second connection means (22) suitable to cooperate through same-shape coupling with said first connection means (25a, 25b, 25c, 25d) so as to determine the stable connection at least of said pair of peripheral bearing panels (13).
2. Furnishing element as in claim 1, **characterized in that** the peripheral bearing frame (12) supports and positions inside itself a plurality of longitudinal and transverse dividing panels (15), so as to define a plurality of containing compartments (17), each peripheral bearing panel (13) having a plurality of apertures (19) made on the surface (20) of the peripheral bearing panel (13) that faces, during use, toward the inside of the peripheral bearing frame (12) in order to cooperate in coupling with mating shaped ends (23) of said dividing panels (15) inserted inside them.
3. Furnishing element as in claim 2, **characterized in that** said dividing panels (15) are made of multi-layered corrugated cardboard.
4. Furnishing element as in any claim hereinbefore, **characterized in that** each connection element (14, 114, 214) is a single body formed by the repetition, along a desired direction of axial development, of a plurality of single connection profiles (25, 125, 225) having a planar shape each of which has a central body (28) having a quadrangular shape in plan, mating with that of the oblong rigid element (21) to be obtained, so as to define overall said oblong rigid element (21) inclusive of said faces (14a, 14b, 14c, 14d), and a plurality of peripheral sides (27) which extend from corresponding sides of the central body (28) toward the outside, so as to define overall said first connection means (25a, 25b, 25c, 25d).
5. Furnishing element as in claim 4, **characterized in that** the connection profiles (25, 125, 225) are made of multi-layered corrugated cardboard, repeated longitudinally in the space, adjacent, pressed and glued as a whole in a rigid and robust structure, in a single body, which defines the connection elements (14, 114, 214), including said first connection means (25a, 25b, 25c, 25d).
6. Furnishing element as in claim 4 or 5, **characterized in that** the connection profiles (25, 125, 225) are reciprocally disposed in such a way so as to orient, orthogonally with respect to each other, the corrugations of the multi-layered corrugated cardboard of two consecutive connection profiles (25, 125, 225).
7. Furnishing element as in any claim hereinbefore, **characterized in that** said first connection means (25a, 25b, 25c, 25d) are disposed on at least two consecutive faces (14a, 14b) of said oblong rigid element (21) so as to define an "L" conformation, or on at least three consecutive faces (14a, 14b, 14c) of said oblong rigid element (21) so as to define an upside down 'T' conformation, or again on four consecutive faces (14a, 14b, 14c, 14d) of said oblong rigid element (21) so as to define a cross-like conformation.
8. Furnishing element as in any claim hereinbefore, **characterized in that** said first connection means are connection blocks (25a, 25b, 25c, 25d) which extend transversely from the faces (14a, 14b, 14c, 14d) of said oblong rigid elements (21) and said second connection means are mating open cavities (22) made inside said peripheral bearing panels (13).
9. Furnishing element as in any claim hereinbefore, **characterized in that** it comprises tie rods (18) which connect corresponding pairs of connection elements (14, 114, 214) disposed at opposite corners of the peripheral bearing panel (12), each connection element (14, 114, 214) axially having a through hole (29), in which an anchorage element (30) is stably housed for connection to a corresponding one of said tie rods (18).
10. Furnishing element as in any claim hereinbefore, **characterized in that** it also comprises a central bearing panel (113) connected, above and below, by means of a pair of connection elements (114), to two pairs of peripheral bearing panels (13), upper and lower, which lie on respective common parallel lying planes, so as to define a central bearing structure conformed substantially as an 'H' turned on its side.

11. Method to make a furnishing element comprising at least a peripheral bearing frame (12) formed by peripheral bearing panels (13) made of multi-layered corrugated cardboard and reciprocally connected, which define the upper and lower bases and the lateral flanks thereof, which provides to connect consecutively with respect to each other at least one pair of said peripheral bearing panels (13) in correspondence to respective connection ends by means of connection elements (14, 114, 214), **characterized in that** each of said connection elements (14, 114, 214) is made in a single body, using multi-layered corrugated cardboard and provides to use an oblong rigid element (21) provided with faces (14a, 14b, 14c, 14d) which defines each of said connection elements (14, 114, 214), to position said faces (14a, 14b, 14c, 14d) adjacent head-wise to corresponding edges (22a, 22b) of said connection ends of said peripheral bearing panels (13), in a position interposed between said corresponding edges (22a, 22b), and to place in cooperation through same-shape coupling first connection means (25a, 25b, 25c, 25d) provided on said faces (14a, 14b, 14c, 14d) with mating second connection means (22) of said edges (22a, 22b) so as to determine the stable connection at least of said pair of peripheral bearing panels (13).

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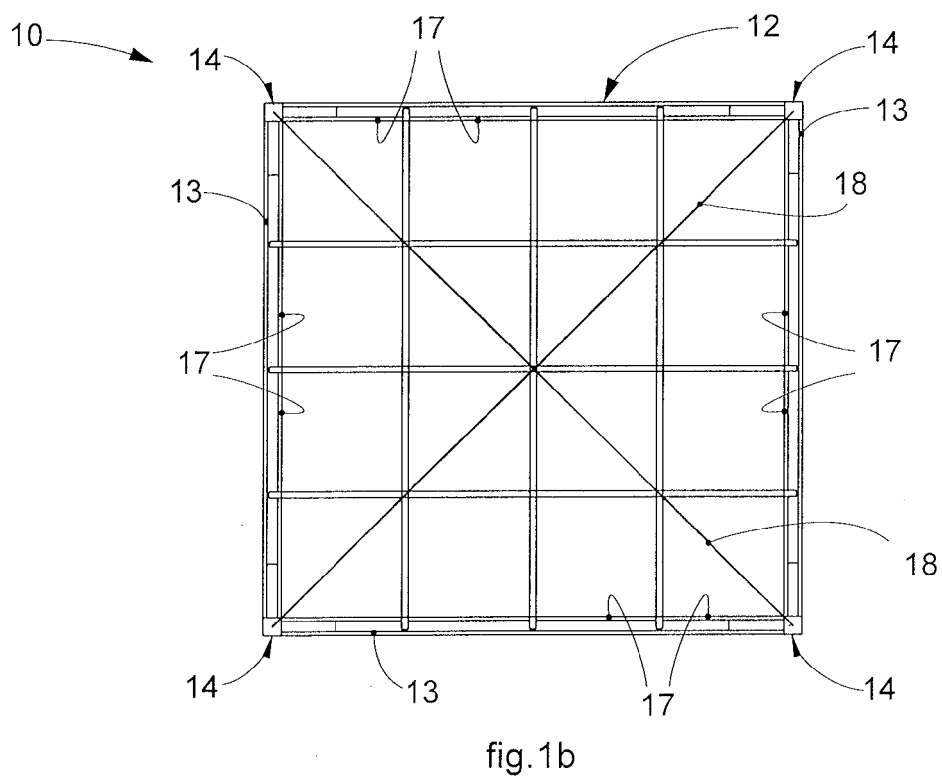
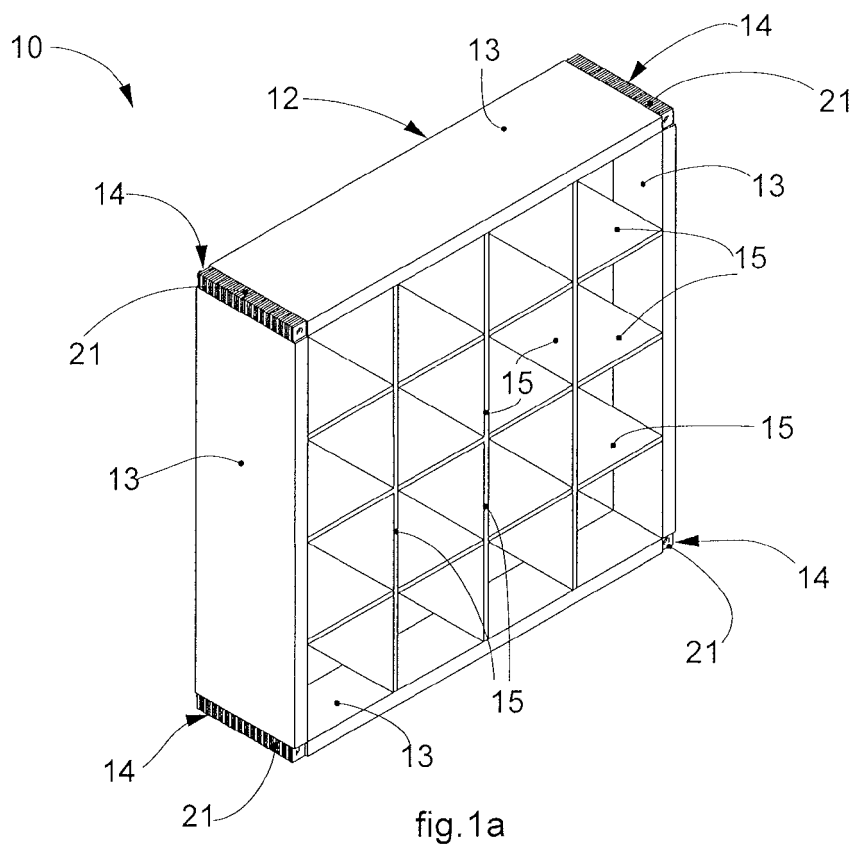
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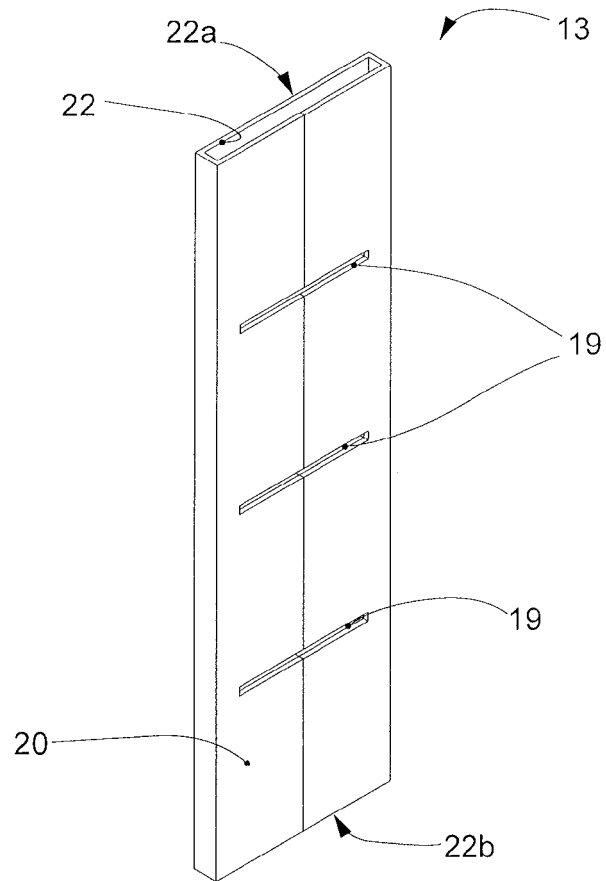


fig.2

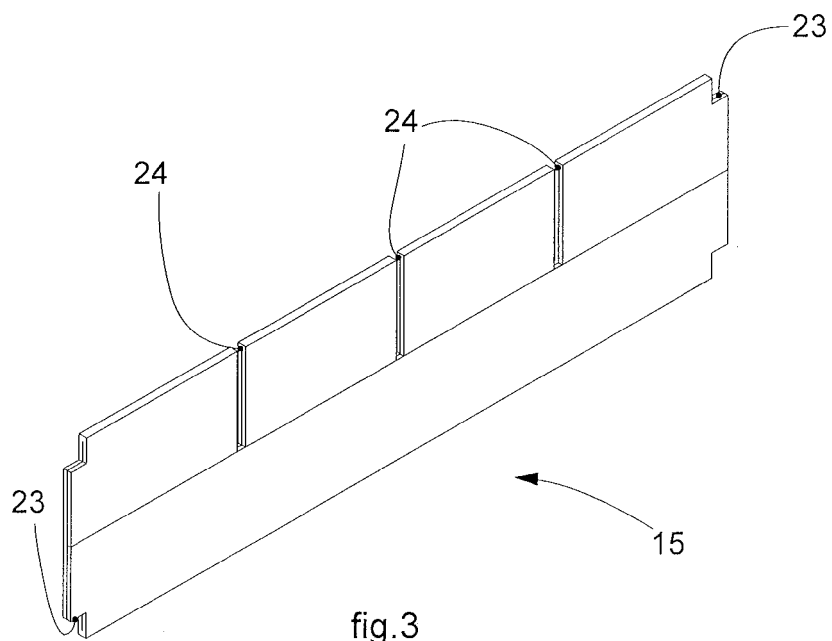
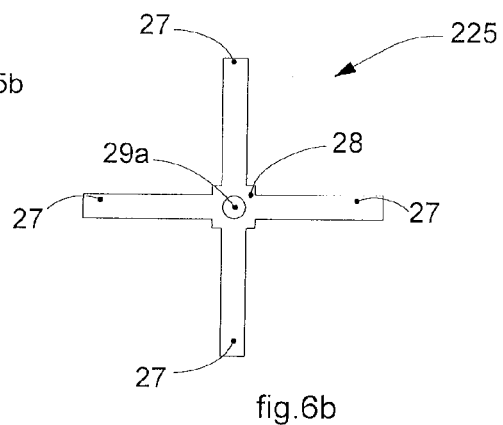
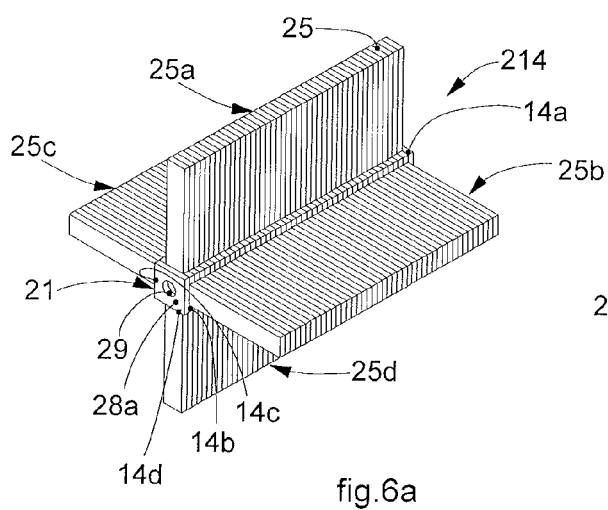
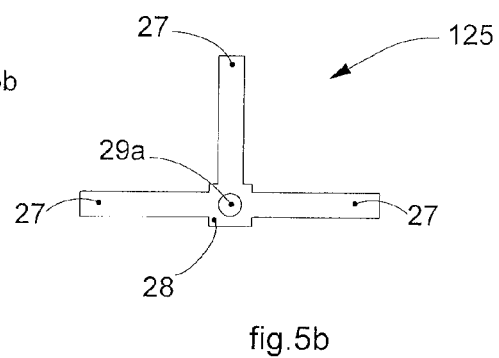
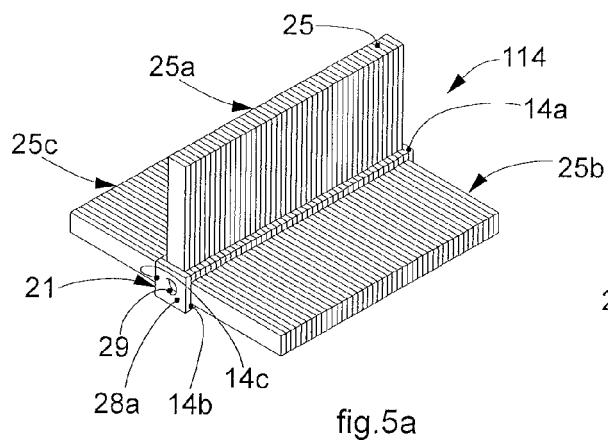
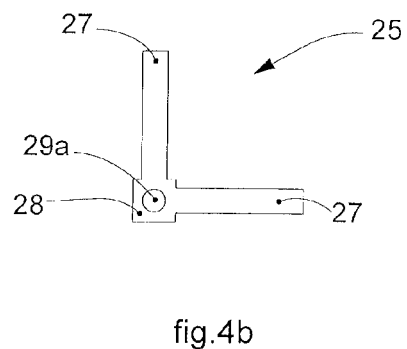
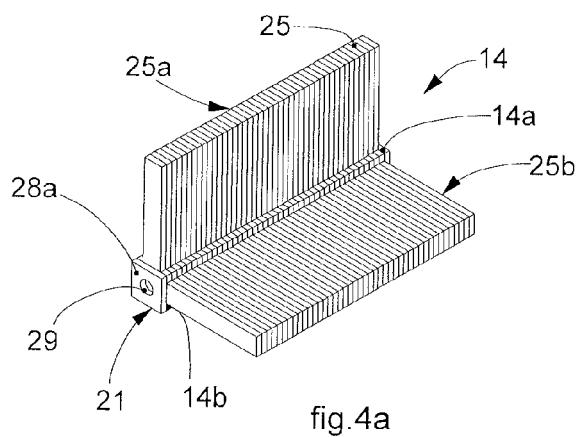


fig.3



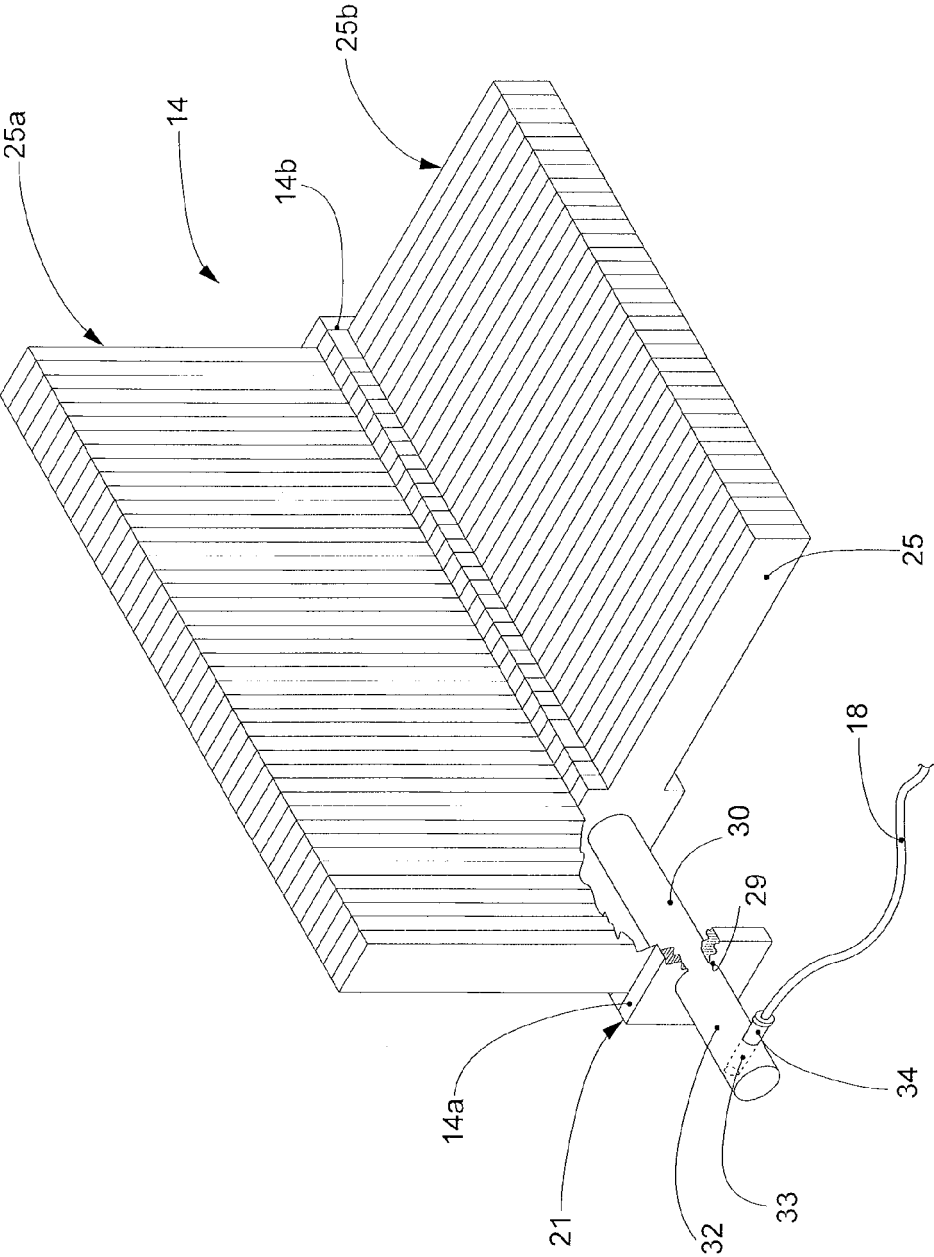
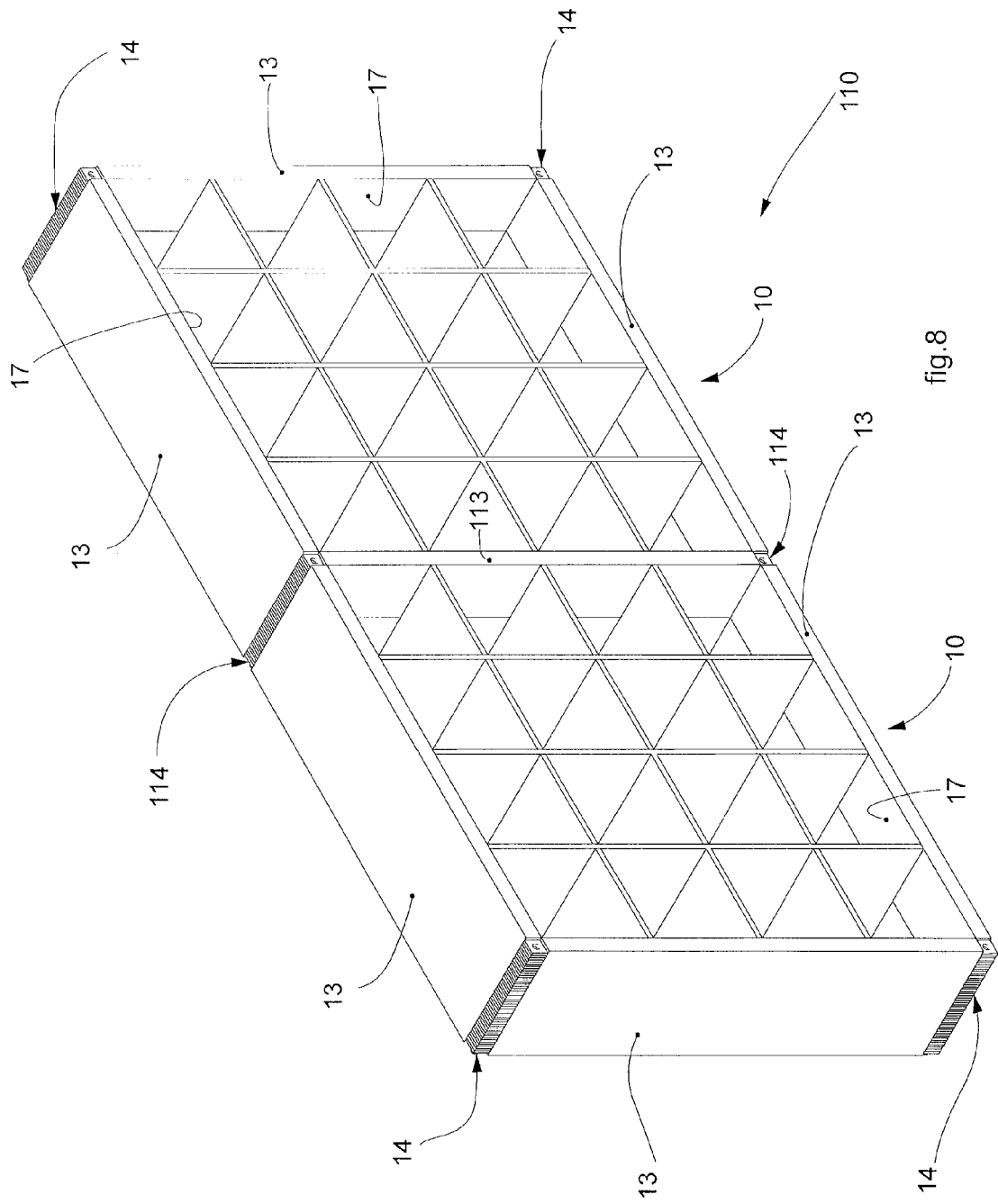


fig.7





EUROPEAN SEARCH REPORT

Application Number
EP 12 17 3082

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	DE 20 2008 000742 U1 (STANGE) 20 March 2008 (2008-03-20)	1-8,10,11	INV. A47B47/00
Y	* paragraphs [0005], [0011], [0032], [0033], [0036], [0041], [0042], [0050]; claims 3,4; figures 5,9,10 *	9	A47B47/06
Y	DE 202 11 847 U1 (FUCHS) 14 November 2002 (2002-11-14) * the whole document *	9	
A	FR 2 178 448 A5 (DE SOUSA NORONHA) 9 November 1973 (1973-11-09) * the whole document *	1,6-8,11	
			TECHNICAL FIELDS SEARCHED (IPC)
			A47B F16B A47F
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 10 September 2012	Examiner Jacquemin, Martin
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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ON EUROPEAN PATENT APPLICATION NO.**

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The members are as contained in the European Patent Office EDP file on
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10-09-2012

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

REFERENCES CITED IN THE DESCRIPTION

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