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(54) **Modular furnishing element and assembly comprising a composition with such furnishing element**

(57) A modular furnishing element (1), extraordinarily capable of composite flexibility maintaining a strong aesthetic characterization, comprises a box-like structure (2) having six sides and internally forming a compartment (7), wherein:

- only four of said sides are formed by panels (3, 4, 5, 6), or portions of box-like structure;
- said four panels (3, 4, 5, 6) are arranged adjacent to

each other;

- said adjacent panels (3, 4, 5, 6) close said four sides and delimit two other sides (8, 9) adjacent to each other and open so as allow access to the inner compartment (7) and forming a first and second adjacent openings (8,9);
- preventing said open sides (8,9) of the box-like structure (2) from being interested by any structural element totally or partly also closing a common border thereof (13).

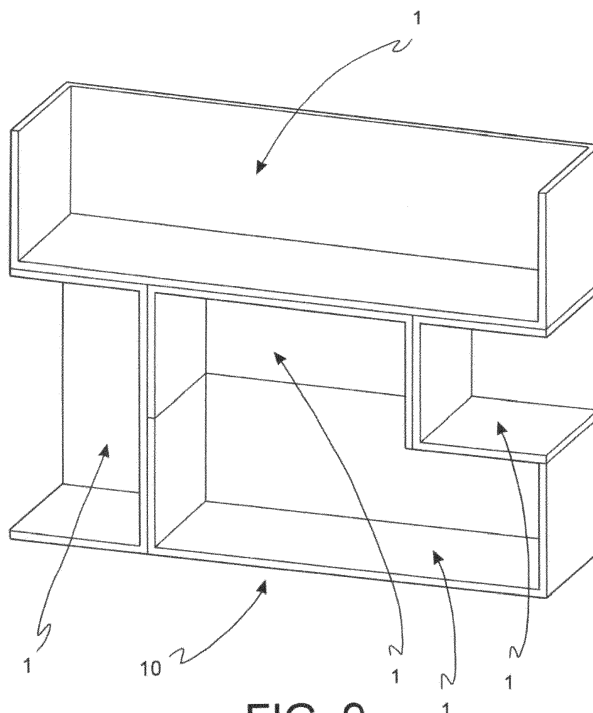


FIG. 9

Description

[0001] . The present invention refers to a furnishing element.

[0002] . In particular, the present invention refers to a modular furnishing element and to a composition comprising such furnishing element.

[0003] . As known, furnishing elements should meet various needs, at times in contrast with respect to each other, encountered by the users. For example, furnishing elements should be particularly comfortable and accessible in use thereof, but the user simultaneously desires that they be aesthetically appealing and innovative.

[0004] . Furthermore, furnishing elements should also be easy and inexpensive to make, so as to meet the aforementioned needs through financially accessible products.

[0005] . With reference to these needs and problems, over the years there have been proposed furnishing elements - even of the modular type - that allow the composition of such elements in structures having customizable shape and aesthetics.

[0006] . For example, documents US3529878, US3563624 EP0062711 and US4458961 disclose box-like furnishing elements in which one side of the box-like structure is left open to allow the use of the interior compartment.

[0007] . Though satisfactory from various points of view, this structure is poorly flexible in use, thus leading to compositions that, in order to allow an easy access to the interior compartment, require a superimposed coupling of the box-like structures, compositions which - in their limited variability - are substantially similar and repetitive with respect to each other. Furthermore, the interior compartment is fixed a priori in the capacity thereof, this limitation not being modifiable in any manner by varying the composition, but solely by varying the dimensions of the box-like element.

[0008] . Document US4095858 discloses an example of a modular furnishing element with a box-like structure in which, besides the opposite front wall, the bottom wall was opened in order to increase the accessibility of the interior compartment.

[0009] . However, even in this case, the same observations made previously shall apply.

[0010] . In addition, the art of providing non-box-like but open modular structures is known. For example documents US3780241 disclose the provision of a H-shaped structure and EP1982620 and FR1024597 reveal C-shaped structures.

[0011] . Though satisfactory due to their versatility, these structures are quite complex to use due to their composition in a furnishing element, leading to poorly self-bearing elements unless the composition is made repetitive.

[0012] . Document GB289824 also discloses the provision of furniture with a structure in which accessibility to the interior compartment from different directions is facilitated.

[0013] . However, though satisfactory from different points of view, this solution compulsorily requires the use of a bearing structure and it is not suitable for modular construction that leaves open the possibility of providing compositions with varying aesthetics.

[0014] . Documents EP0680711 and DE9402397 disclose the provision of furniture also capable of providing an easy accessibility to the interior compartment from different directions.

[0015] . However, also in these cases the structure is not suitable for modular use.

[0016] . Documents FR 2 229 556, FR 2 422 363 and US 3 401 993 disclose containers made of plastic or synthetic material or sheets that can be stacked due to the coupling devices provided for on the borders which delimit the openings, making these containers unsuitable for use as furnishing elements.

[0017] . Thus an extremely felt need is that of providing a modular furnishing element capable of allowing a vast versatility with respect to the solutions of the prior art and simultaneously capable of allowing a strong aesthetic characterisation.

[0018] . Likewise, the need of providing modular elements compositions capable of allowing providing interior compartments both accessible from different directions and communicating with respect to each other to form spaces and volumes considerably variable in terms of shape and capacity is particularly felt.

[0019] . Therefore, an object of the present invention is to provide a furnishing element having the structural and functional characteristics such to meet the aforementioned needs and simultaneously overcome the drawbacks mentioned with reference to the prior art.

[0020] . This problem is resolved through a modular furnishing element according to claim 1 and an assembly comprising a composition of modular furnishing elements according to claim 8.

[0021] . Further characteristics and advantages of the furnishing element according to the invention shall be apparent from the following description of preferred embodiments thereof, provided by way of non-limiting example, with reference to the attached figures, wherein:

[0022] . - figure 1 represents - in perspective view - a modular furnishing element according to the invention;

[0023] . - figures 2 and 3 represent - in perspective view - three modular furnishing elements according to alternative embodiments;

[0024] . - figure 4 frontally represents- schematically with parts separated - an example of composition of two modular furnishing elements according to the invention;

[0025] . - figure 5 frontally represents - schematically with parts separated - a further example of composition which combines to the assembly of figure 4 a further modular furnishing element;

[0026] . - figure 6 frontally represents- schematically with parts separated - another example of composition which combines to the assembly of figure 5 further two modular furnishing elements;

[0027] . - figures 7, 8 and 9 represent - in perspective view - three assemblies obtained with the composition of modular furnishing elements according to the invention;

[0028] . - figure 10 represents - in axonometric view - with parts separated a modular furnishing element according to the invention;

[0029] . - figure 11 represents - in front and schematic view an assembly with a composition of different modular furnishing elements according to the invention;

[0030] . - figure 12 shows - in perspective view from the rear - a modular furnishing element with fastening means, for example for fastening to a wall or to other modular furnishing elements.

[0031] . With reference to the aforementioned figures, according to a general embodiment, a modular furnishing element 1 comprises a box-like structure 2 having six sides internally forming a compartment 7.

[0032] . According to an embodiment, only four of said sides are formed by panels 3, 4, 5, 6, or portions of a box-like structure. Preferably and according to an embodiment, said four panels 3, 4, 5, 6 are arranged adjacent to each other, for example approaching the edges of said panels to each other, for example preventing one of said panels from projecting outside cantilevered with a portion thereof.

[0033] . According to an embodiment, said panels 3, 4, 5, 6 are components separated from each other and couplable to each other, for example arranging them orthogonal to each other and approaching one edge to the other, to form said open box-like structure. According to an embodiment, it is avoided that said modular furnishing element 1 is made of a single piece such as for example a single casting or single moulding or single folded strip.

[0034] . According to an embodiment, said panels 3, 4, 5, 6 are four panels for each modular furnishing element 1.

[0035] . According to an embodiment, said panels 3, 4, 5, 6 have thicknesses equal to each other.

[0036] . According to an embodiment, said panels 3, 4, 5, 6 each form a substantially flat or quadrangular wall with 4 edges and two faces opposite to each other, in which said edges are of predefined thickness. According to an embodiment, said edges are orthogonal to each other.

[0037] . According to an embodiment, said adjacent panels 3, 4, 5, 6 close said four sides and delimit, for example the borders of two other sides 8, 9 adjacent to each other and open so as allow access to the interior compartment 7 of said box-like structure 2, forming a first and a second opening 8, 9 adjacent to each other.

[0038] . According to an embodiment, the borders of the panels which delimit said first and second adjacent opening 8, 9 are singularly flat borders.

[0039] . According to an embodiment, the borders of the panels which delimit said first and second adjacent opening 8, 9 are borders without projections and/or recesses and/or devices for connecting and/or coupling to an adjacent panel.

[0040] . According to an embodiment, the borders of the panels which delimit said first and second adjacent opening 8, 9 are borders without elements capable of obstructing - even only partly - even only one of said two adjacent openings 8, 9, for example as defined by the flat faces of each panel adjacent to said openings.

[0041] . According to an embodiment, the box-like structure 2 is provided so as prevent said open sides 8, 9 from being interested by any structural element totally or partially closing it, not even interesting a common border thereof 13.

[0042] . According to an embodiment, said four adjacent panels 3, 4, 5, 6 have an extension adapted to completely close said four adjacent sides of the box-like structure 2, however preventing said panels 3, 4, 5, 6 from extending beyond said sides. Providing a box-like structure not extending beyond the sides which delimit the interior compartment 7 thereof or in other words a structure having a body of each side not extending beyond the adjacent side of the structure, allows providing a modular furnishing element that can be made accessible for composition with other furnishing elements according to any of the sides thereof, making the use thereof particularly flexible and the aesthetic value of the assembly thus obtained extremely variable.

[0043] . For example and according to an embodiment, said structure is obtained by means of panels 3, 4, 5, 6 having an extension limited to the closure of only one side of the structure.

[0044] . According to an embodiment, the box-like structure 2 comprises a first bottom panel 3 joined to a second back panel or backrest 4. According to an embodiment, said box-like structure 2 further comprises a third right side panel 5 joined to said bottom 2 and said backrest 4, for example along the edges thereof. According to an embodiment, said box-like structure 2 further comprises a fourth left side panel 6 joined to said bottom 2 and said backrest 4, for example along the edges thereof.

[0045] . Advantageously, according to an embodiment, said box-like structure has walls having a thickness 16 predefined and variable from one module to another also for example, but not necessarily, in the same composition to form the desired assembly 10.

[0046] . Advantageously, according to an embodiment, said box-like structure has a longitudinal extension 17 predefined and variable from one module to another even for example, but not necessarily, in the same composition to form

the desired assembly 10.

[0047] . Advantageously, according to an embodiment, said box-like structure has an extension in depth 18 predefined and variable from one module to another for example, but not necessarily, in the same composition to form the desired assembly 10.

[0048] . Advantageously, according to an embodiment, said box-like structure has an extension in height 19 predefined and variable from one module to another for example, but not necessarily, in the same composition to form the desired assembly 10.

[0049] . According to an embodiment, said four adjacent panels 3, 4, 5, 6 are connected to each other to form a self-bearing structure so as prevent the use in said box-like structure of frameworks or auxiliary support structures, particularly preventing beams from hindering said adjacent openings 8, 9 or preventing the use of angular elements or angular devices for connection between the panels.

[0050] . According to an embodiment, connection areas between said adjacent panels 3, 4, 5, 6 are provided so as to substantially conceal the coupling joints between the panels.

[0051] . According to an embodiment, said adjacent openings 8, 9 in said box-like structure 2 allow access to said compartment 7 from directions orthogonal to each other X, Y.

[0052] . According to an embodiment, said box-like structure is made of panels for furniture, for example panels made of faced chipboard and/or veneered wood, for example coated, for example but not necessarily laminated, or veneered.

[0053] . According to an embodiment, said box-like structure is made of panels for furniture, for example made of hardwood.

[0054] . According to an embodiment, said box-like structure 2 is made of a single piece, for example but not necessarily made of synthetic material, for example but not necessarily, made of polypropylene for example, but not necessarily transparent or translucent.

[0055] . According to an embodiment, at least one among said four adjacent panels 3, 4, 5, 6 have fastening means 14, for example means 14 for fastening to a wall for hanging said modular furnishing element 1 to said wall.

[0056] . According to an embodiment, an assembly 10 comprises at least one modular furnishing element 1 according to any one of the embodiments described above.

[0057] . According to an embodiment, at least one among said four adjacent panels 3, 4, 5, 6 have coupling means for connecting said modular furnishing element 1 to an adjacent modular furnishing element 1, by providing an assembly 10 or a composition.

[0058] . According to an embodiment, there are comprised at least two modular furnishing elements 1 arranged so as to face at least one of said adjacent openings 8, 9.

[0059] . According to an embodiment, said modular furnishing elements 1 in said assembly have a longitudinal extension 17 different from each other.

[0060] . According to an embodiment, said modular furnishing elements 1 form with a respective first front opening 8 thereof a single common front opening 11.

[0061] . According to an embodiment, said modular furnishing elements 1 form with second upper openings 9, arranged facing each other, interior compartments 7 communicating with respect to each other to form a single volume 12, for example, but not necessarily, with portions having height H1, H2 predefined and different from each other and for example, but not necessarily with at least two portions having two longitudinal extensions d1 and d2 predefined and different from each other.

[0062] . According to an embodiment, there are comprised at least two modular furnishing elements 1 arranged so as to mutually face at least one of said panels 3, 4, 5, 6.

[0063] . According to an embodiment, there are comprised at least two modular furnishing elements 1 arranged so as to arrange one of said openings 8 of the two modular furnishing elements 1 faced according to the same direction and a second of said openings 9 of the two modular furnishing elements 1 opposite to each other, in other words faced according to directions opposite to each other.

[0064] . The embodiments described above allow obtaining a modular furnishing element which allows a more vast composition versatility and it simultaneously allows a strong aesthetic characterisation.

[0065] . Furthermore, it is possible to provide modular elements capable of allowing providing interior compartments both accessible from different directions and communicating with respect to each other to form spaces and volumes considerably variable in terms of shapes and capacity.

[0066] . Obviously, the furnishing element according to the invention may be subjected - by a man skilled in the art with the aim of meeting contingent and specific requirements - to numerous modifications and variants, all falling within the scope of protection of the invention as defined by the claims that follow.

REFERENCES

1

Modular furnishing element

(continued)

REFERENCES	
2	box-like structure
3	bottom panel
4	back panel or backrest
5	right side panel
6	left side panel
7	inner compartment
8	first front opening
9	second upper opening
10	composition
11	single front opening
12	single common volume
13	common border of the openings
14	wall fastening means
15	means for coupling to another element
16	panel thickness
17	a longitudinal extension element
18	depth extension element
19	height extension element
X	first direction of access to the compartment
Y	second direction of access to the compartment orthogonal to the previous one
H1	first common compartment volume height
H2	second common compartment volume height

Claims

1. Modular furnishing element (1) comprising a box-like structure (2) having six sides and internally forming a compartment (7), wherein:

- only four of said sides are formed by panels (3, 4, 5, 6), or portions of box-like structure;
- each panel of said four panels (3, 4, 5, 6) having a quadrangular-shaped body having four edges of predefined thickness and flat faces opposite to each other;
- said four panels (3, 4, 5, 6) are arranged adjacent to each other;
- said adjacent panels (3, 4, 5, 6) close said four sides and delimit two other sides (8, 9) adjacent to each other and open so as to allow access to the inner compartment (7) and forming a first and second adjacent opening (8, 9);
- preventing said open sides (8, 9) of the box-like structure (2) from being intersected by any structural element totally or partly also closing a common border thereof (13) and wherein
- the borders of the four panels (3, 4, 5, 6) which are visible and are not connected to the adjacent panel are substantially flat and without projections or recesses or coupling elements.

2. Modular furnishing element (1) according to claim 1, wherein said four adjacent panels (3, 4, 5, 6) have an extension adapted to completely close said four adjacent sides of the box-like structure (2) preventing said panels (3, 4, 5, 6) from extending beyond said sides and/or wherein preventing said panels (3, 4, 5, 6) from project with portions thereof outside said box-like structure substantially cantilevered with respect to said box-like structure, and/or wherein each panel of said four panels (3, 4, 5, 6) have

said four edges orthogonal to each other.

3. Modular furnishing element (1) according to any one of the preceding claims, wherein said four adjacent panels (3, 4, 5, 6) are connected to each other to form a self-bearing structure so as prevent the use of frameworks or auxiliary support structures, particularly preventing beams from hindering said adjacent openings (8,9) and/or angular support elements of the panels and/or wherein connection areas between said adjacent panels (3, 4, 5, 6) are provided so as to make the coupling joints between the panels and/or the modular furnishing elements not visible, and/or wherein said panels (3, 4, 5, 6) are components separated from each other and couplable to each other, for example arranging them orthogonal to each other and approaching the edge of a first panel to the adjacent portion at the edge of a second panel, to form said open box-like structure and/or wherein it is avoided that said modular furnishing element (1) be made of a single piece such as for example a single casting or single moulding or single folded strip, and/or wherein said panels (3, 4, 5, 6) are four panels for each modular furnishing element (1), and/or wherein said panels (3, 4, 5, 6) have thicknesses equal to each other, and/or wherein said panels (3, 4, 5, 6) each form a substantially flat or quadrangular wall with four edges and two faces opposite to each other, wherein said edges are of predefined thickness, and/or wherein said edges are orthogonal to each other, and/or wherein the borders of the panels which delimit said first and second adjacent opening (8, 9) are singularly flat borders, and/or wherein the borders of the panels which delimit said first and second adjacent opening (8, 9) are borders without projections and/or recesses and/or devices for connecting and/or coupling to the adjacent panel or adjacent modular furnishing element, and/or wherein the borders of the panels which delimit said first and second adjacent opening (8, 9) are borders without elements which obstruct - even only partly - even only one of said two adjacent openings (8, 9), for example openings as defined by the flat faces of each adjacent panel.
4. Modular furnishing element (1) according to any one of the preceding claims, wherein said adjacent openings (8, 9) allow access to said compartment (7) from directions orthogonal to each other (X, Y).
5. Modular furnishing element (1) according to any one of the preceding claims, wherein said box-like structure is made of panels for furniture, for example panels made of faced chipboard, and/or coated or veneered or made of hardwood
6. Modular furnishing element (1) according to any one of the preceding claims, wherein said box-like structure (2) is made of a single piece, for example but not necessarily made of synthetic material, for example but not necessarily made of polypropylene.
7. Modular furnishing element (1) according to any one of the preceding claims, wherein at least one among said four adjacent panels (3, 4, 5, 6) have fastening means (14) for example for fastening to a wall for hanging said modular furnishing element (1) to said wall, and/or wherein at least one among said four adjacent panels (3, 4, 5, 6) have coupling means for connecting said modular furnishing element (1) to an adjacent modular furnishing element (1) which remains concealed when the modular furnishing elements are coupled to each other.
8. Assembly (10) comprising at least one modular furnishing element (1) according to any one of the preceding claims.
9. Assembly (10) according to claim 7, wherein at least two modular furnishing elements (1) are comprised, arranged so as to face at least one of said adjacent openings (8, 9) and/or wherein said modular furnishing elements (1) have a longitudinal extension different from each other and/or wherein said modular furnishing elements (1) form with respective first front opening (8) thereof a single common front opening (11) and with second upper openings (9) arranged facing each other they form interior compartments (7) communicating to form a single volume (12), for example, but not necessarily, with portions of different height (H1, H2), and/or wherein said assembly exposes only panels with flat faces and flat panel borders and/or without devices for connecting and/or coupling to other panels or modular elements.
10. Assembly (10) according to claim 7, wherein at least two modular furnishing elements (1) are comprised, arranged so as to mutually face at least one of said panels (3, 4, 5, 6) and arrange one of said openings (8) of the two modular furnishing elements (1) faced according to the same direction and a second of said openings (9) of the two modular furnishing elements (1) faced according to directions opposite to each other.

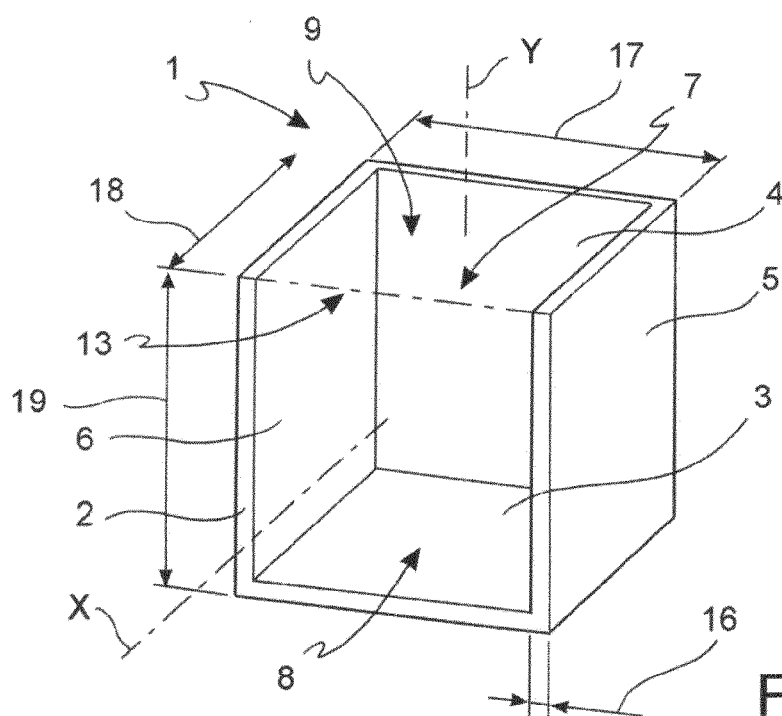


FIG. 1

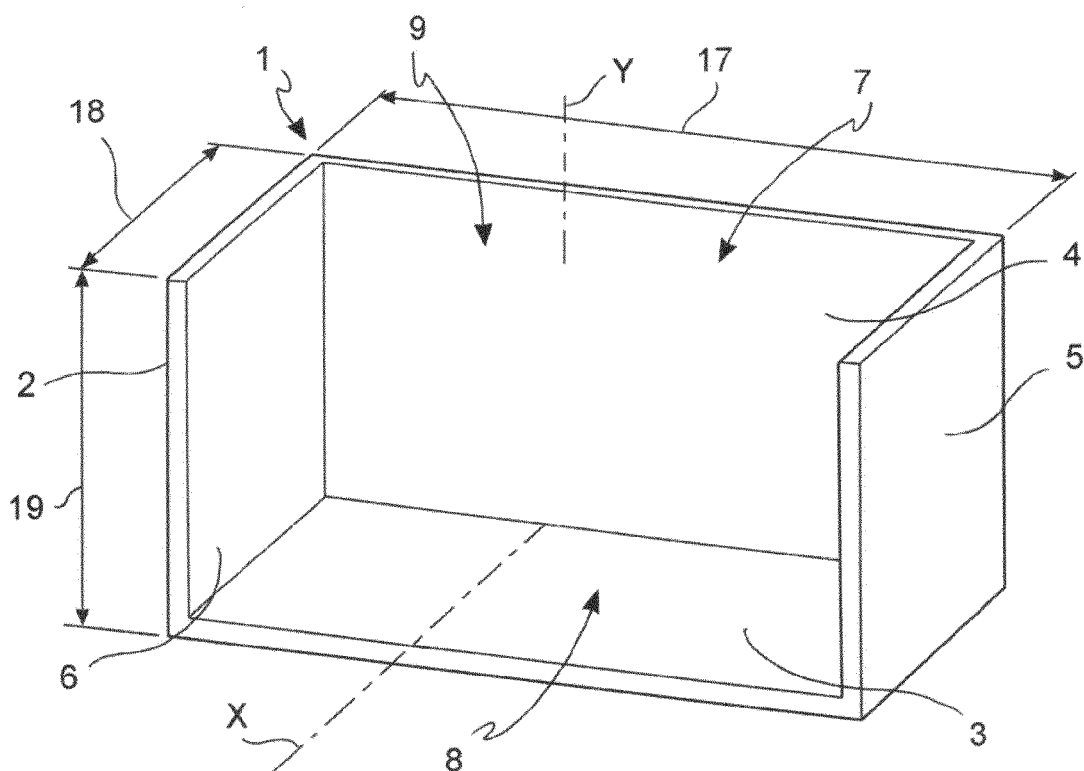
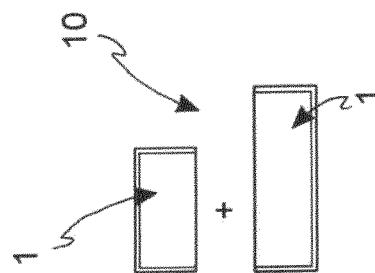
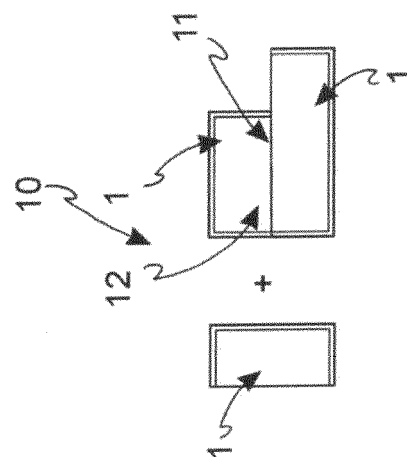
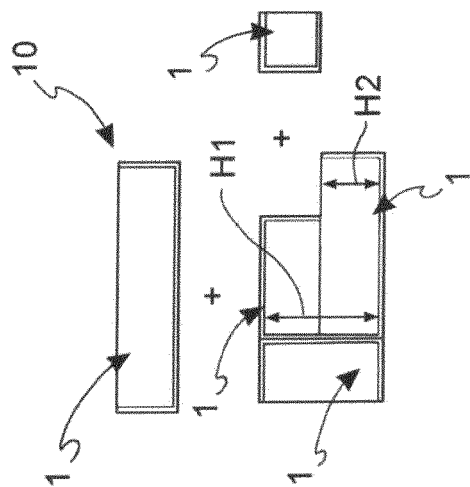
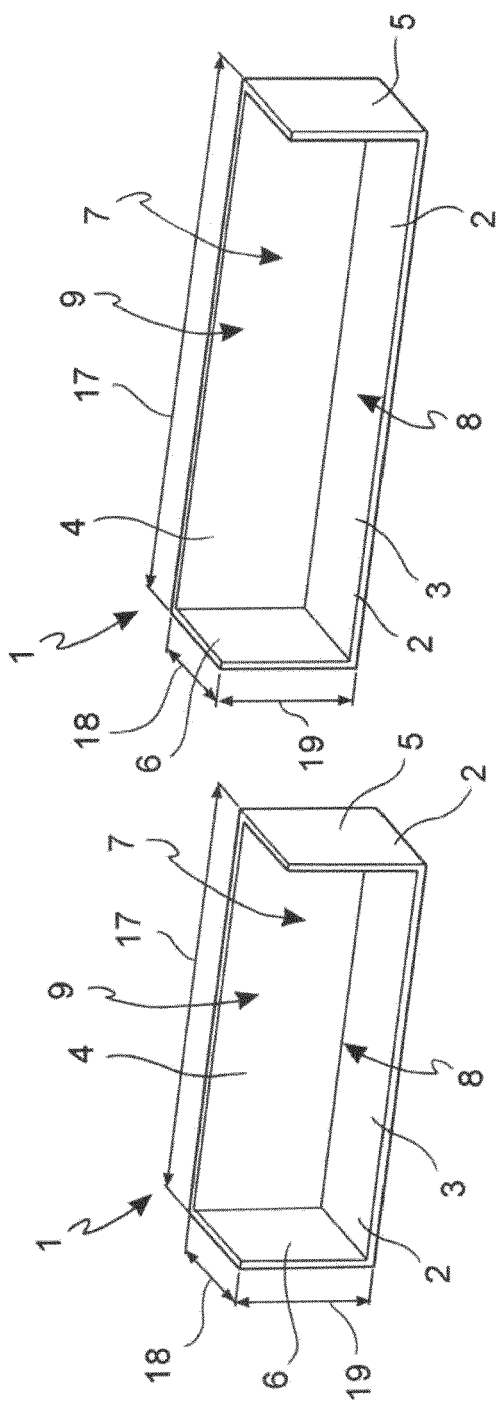


FIG. 2



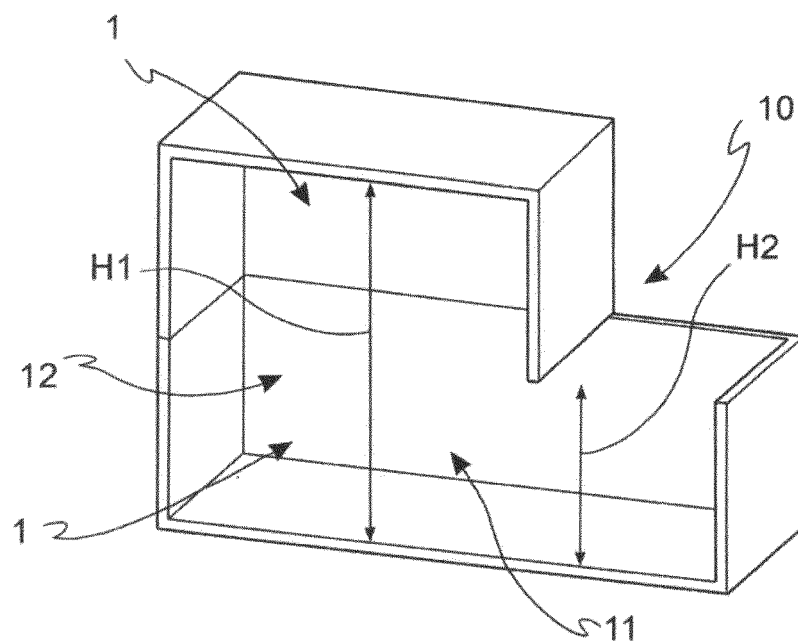


FIG. 7

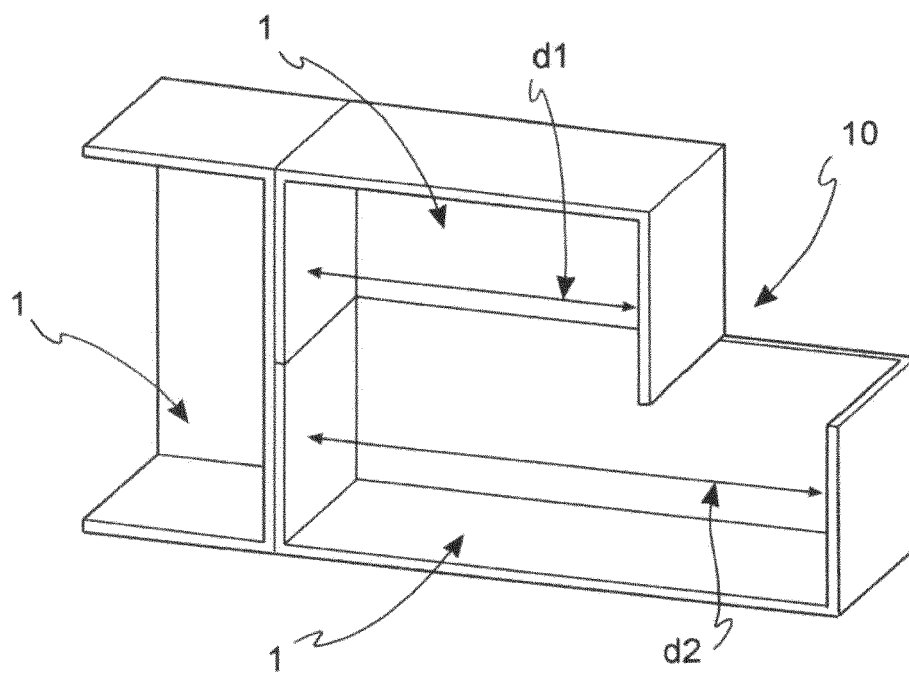


FIG. 8

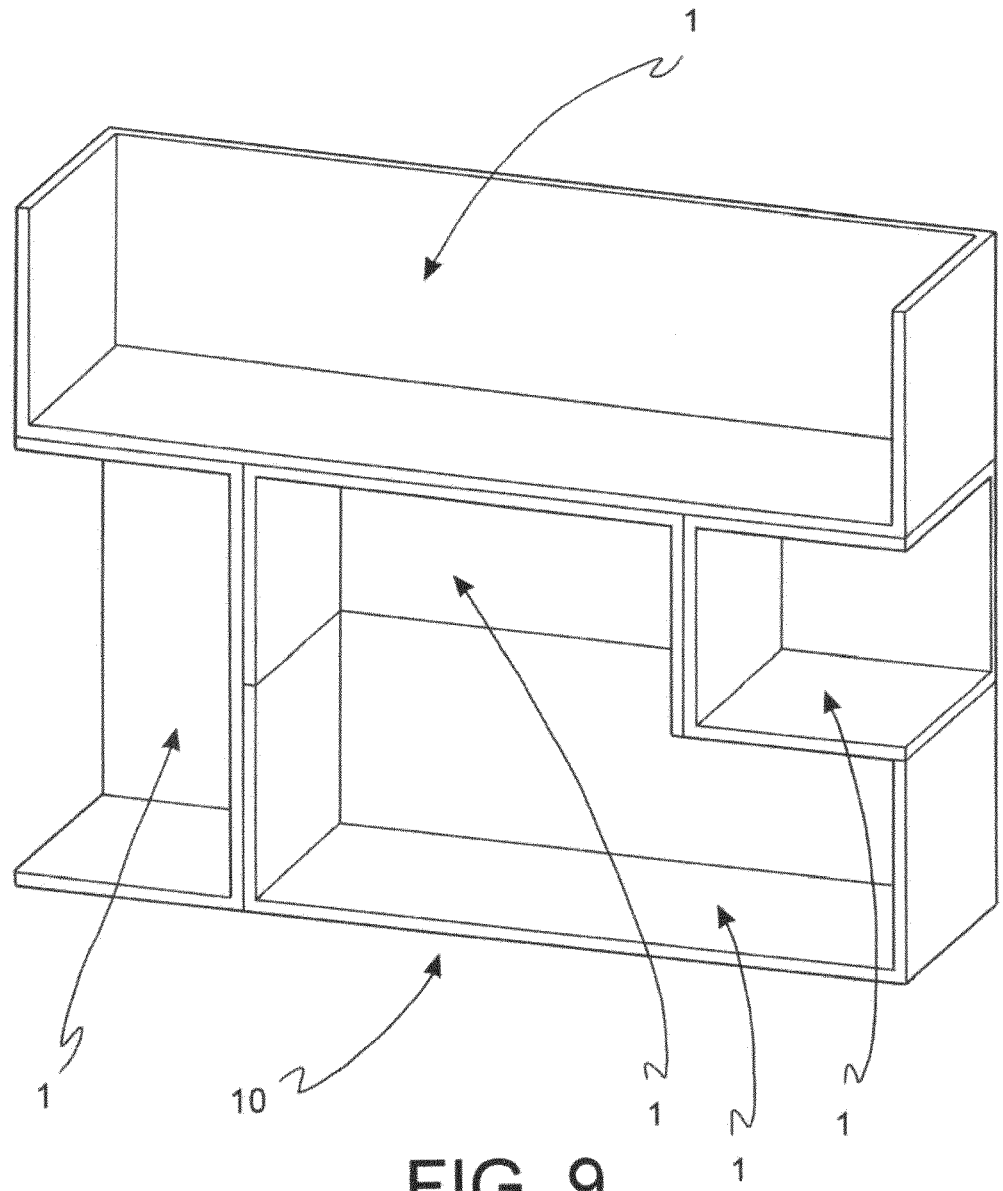


FIG. 9

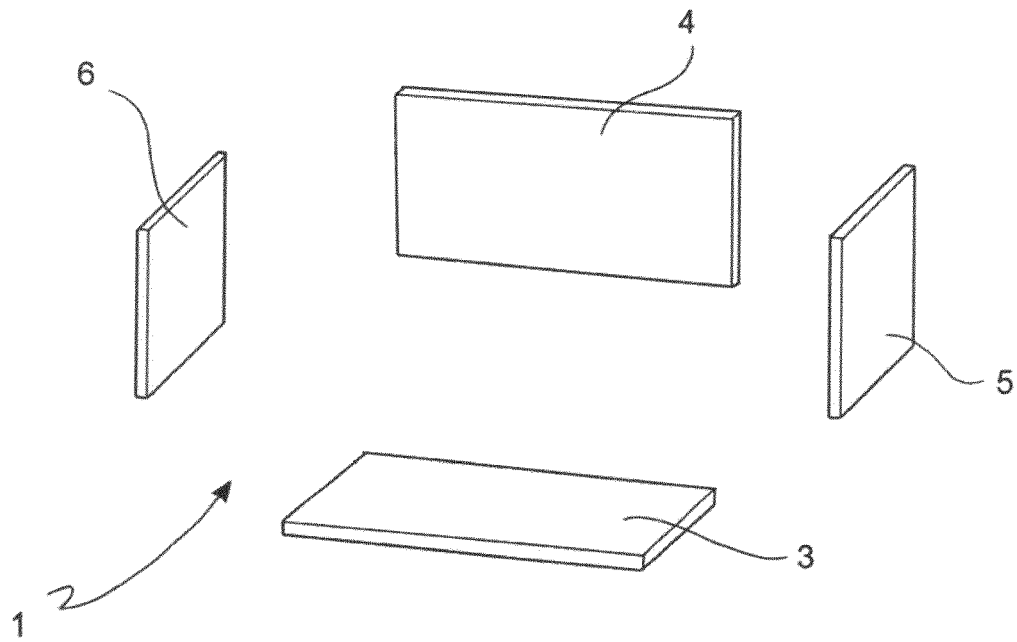


FIG. 10

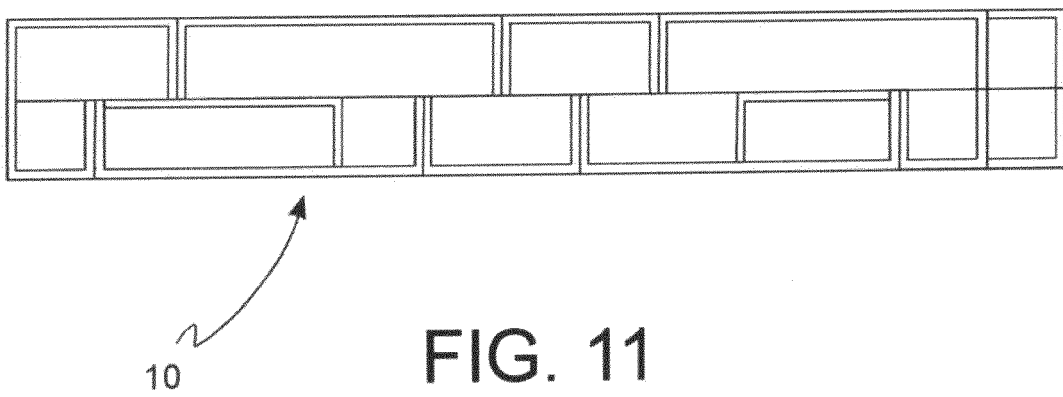


FIG. 11

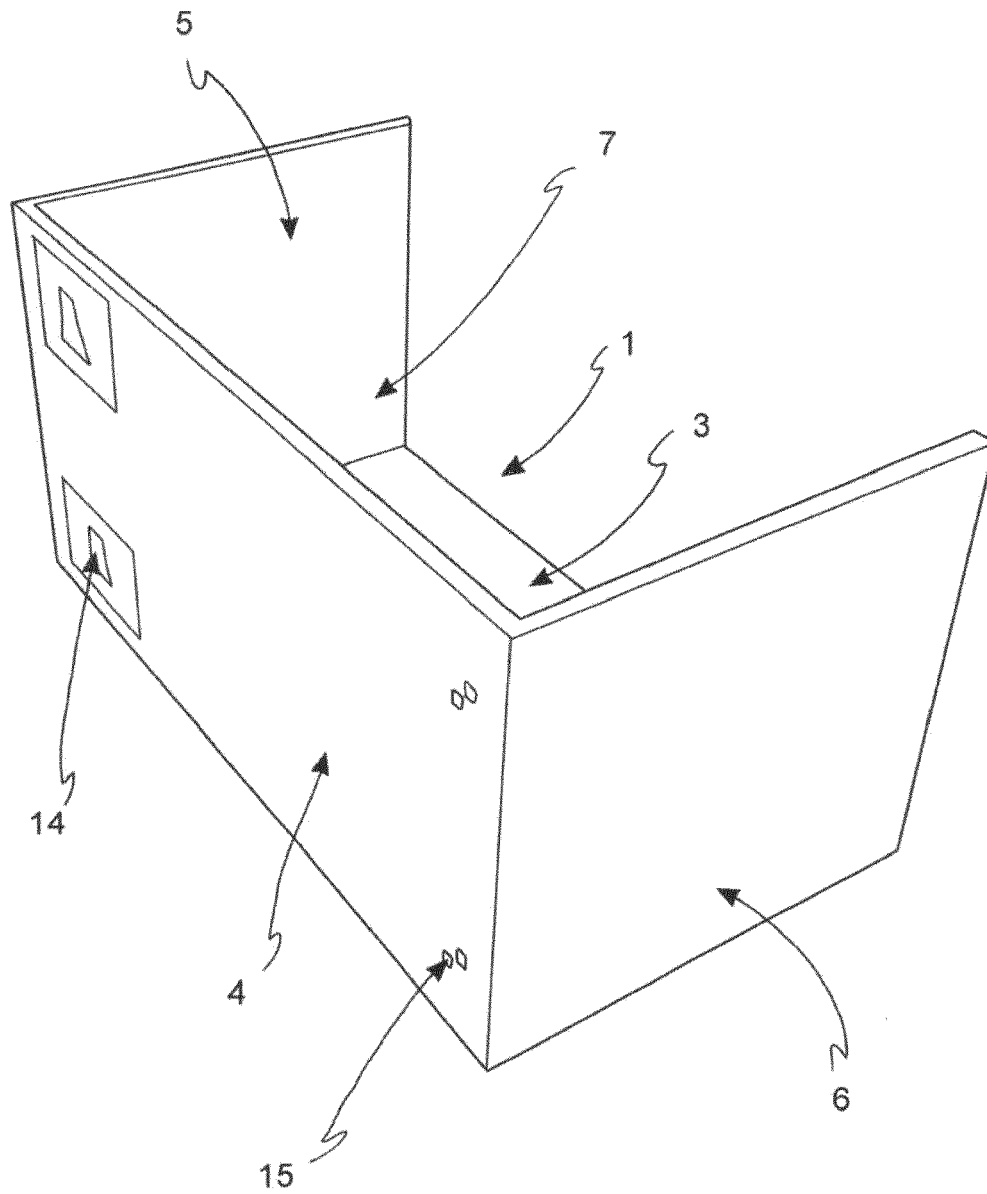


FIG. 12

**PARTIAL EUROPEAN SEARCH REPORT**

Application Number

under Rule 62a and/or 63 of the European Patent Convention.
This report shall be considered, for the purposes of
subsequent proceedings, as the European search report

EP 12 16 1813

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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Y	* the whole document *	10	
X	US 3 648 849 A (HARRIS ET AL) 14 March 1972 (1972-03-14) * column 2, line 25 - line 52; figures 1,2,4,5,6 *	1,2,4-9	
Y	FR 2 229 556 A1 (NEHER AG) 13 December 1974 (1974-12-13) * page 1, line 1 - line 6 * * page 2, line 1 - line 31 * * page 3, line 1 - line 38 * * page 5, line 1 - line 4; figures 1-3 *	10	
			TECHNICAL FIELDS SEARCHED (IPC)
			A47B
INCOMPLETE SEARCH			
<p>The Search Division considers that the present application, or one or more of its claims, does/do not comply with the EPC so that only a partial search (R.62a, 63) has been carried out.</p> <p>Claims searched completely :</p> <p>Claims searched incompletely :</p> <p>Claims not searched :</p> <p>Reason for the limitation of the search:</p> <p>see sheet C</p>			
Place of search		Date of completion of the search	Examiner
The Hague		21 May 2012	Jacquemin, Martin
CATEGORY OF CITED DOCUMENTS		<p>T : theory or principle underlying the invention</p> <p>E : earlier patent document, but published on, or after the filing date</p> <p>D : document cited in the application</p> <p>L : document cited for other reasons</p> <p>& : member of the same patent family, corresponding document</p>	
<p>X : particularly relevant if taken alone</p> <p>Y : particularly relevant if combined with another document of the same category</p> <p>A : technological background</p> <p>O : non-written disclosure</p> <p>P : intermediate document</p>			



**INCOMPLETE SEARCH
SHEET C**

Application Number
EP 12 16 1813

Claim(s) completely searchable:
1, 2, 4-10

Claim(s) not searched:
3

Reason for the limitation of the search:

1 The present claim 3 relates to an extremely large number of possible products.
Non-compliance with the substantive provisions is such that a meaningful search of the whole claimed subject-matter of the claim could not be carried out (Rule 63 EPC and Guidelines B-VIII, 3).

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 12 16 1813

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

21-05-2012

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