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• **HERMAN DANTUS, Mauricio**
54180 Tlalnepantla
Estado de Mexico (MX)

(71) Applicant: **POP ONTIME SUPPLY SERVICES, S.A.
DE C.V.**
53560 Naucalpan , Estado de México (MX)

(74) Representative: **Gallego Jiménez, José Fernando
et al**
Lagencia BGA
Av. Diagonal, 421,2°
08008 Bcelona (ES)

(72) Inventors:
• **CHAVEZ HERRERA, Roman de Jesús**
54180 Tlalne antla Estado de Mexico (MX)

(54) **PRODUCT EXHIBITION STRUCTURE AND ASSEMBLY AND DISASSEMBLY METHOD THEREOF**

(57) A collapsible and folding showcase for exhibiting products is disclosed. The showcase comprises a base with at least three sides, each side having two extremes, each extreme being jointed to another extreme of another side thereby forming corners between the extremes. The showcase also comprises a top with at least three sides, each side having two extremes, each extreme being jointed to another extreme of another side thereby forming

corners between the extremes. The showcase further comprises at least three posts, each post having a lower end and an upper extreme, wherein each post is coupled to a corner of the base through the lower extreme of the post and to a corner of the top through the upper extreme of the post, wherein the posts couple with another, forming a shelf base. The showcase further discloses a shelf which rests between the posts and upon the shelf base.

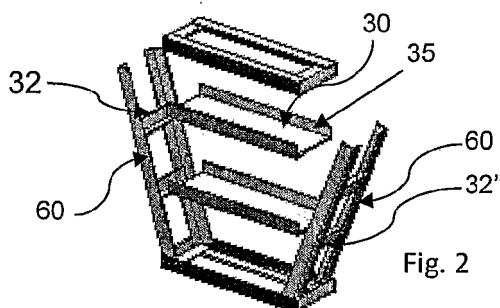


Fig. 2

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Description

Field of the Invention

[0001] The present invention refers to product exhibiting structures, and more specifically to showcases easy to assemble and disassemble for the exhibition of products in a point of sale, and even more specifically to showcases of products with at least one tray to bear and exhibit products at the point of sale, and an assembly and disassembly method of these showcases.

Background of the Invention

[0002] The constant population growth demands a production of large volumes of products to be purchased. In the points of sale, structures that make it possible to bear a large volume of products in reduced space is required, without missing the primary detail of exhibiting the product. The distributors of a consumable product have a problem when it comes to how to set up a product on a showcase rapidly and completely in the less time possible, and also dealing with the showcase having the adequate capacity to bear these consumable products that are being exhibited.

[0003] Producers try to solve these problems sending their products packed in a structure that is capable of transporting and exhibiting the products. While this is useful for certain products, there are other products that have to be set up *in situ* due to the kind of product or to the producer's preference.

[0004] These showcases are known in the art. For example, in the American Publication No. 2009/050589, reference is made to a product exhibiting system that can be assembled quickly and provides an efficient display of the product. One of the modalities of the exhibiting system includes a shelf, display or exhibition trays, clips used to put up the exhibition trays with the shelf and graphic components. The product is packed and transported inside the exhibition trays, what allows the display of the exhibition trays and the product without having to remove the product from the trays. The clips are fixed to the shelf and they are removable, what allows multiple configurations of the exhibition system (showcase). The part of shelf of the exhibition system can be set up quickly and it is collapsible when not in use. Additionally, the shelf is easily movable, what makes it possible to place the shelf in different positions. The graphic components provide space for advertising and are available in a variety of figures and sizes in order to improve the appearance of the exhibition system.

[0005] In the American Publication No. 2008/0190872 an assembly of modular platform that includes a plurality of pile-up shelves is released, each shelf has a plurality of supports and at least a divider that extends adjacent to the vertical supports, these adjacent vertical supports with space between them so they can receive the product to be displayed. The vertical supports include a plurality

of grooves and dividers that include a blocking hook in each opposite extreme, so that each blocking hook hitches a corresponding groove in the adjacent vertical supports, defining so the determined configuration of platform.

[0006] In the Mexican patent application No. PA/a/2005/011459, a packing structure is revealed, and it is used for the containment, transportation, exhibition and sale of the products in points of sale, it is a kind of structure consisting of a cubical three-dimensional frame composed of four angular posts in a rectangular or quadrangular arrangement, which are put together by their upper and lower extremes with angular crosspieces, generating empty windows on all its faces; these angular posts and crosspieces are made of compressed rigid cardboard and they have two identical arms that define an "L" shape, disposed with their vertex towards the interior of the structure; this structure is placed on the base or dais, characterized because the joint between the angular posts and crosspieces is given through structural angles that include a flat surface with the shape of an octagonal square with a rounded vertex on each side of the square projecting upwards and perpendicularly a fixing flap of a substantially trapezoidal section; these flaps and the flat section with a square shape include holes through which the fixing devices are lodged in order to fix the arms to the crosspieces posts; a rectangular tab is provided exactly at the outer corner of the octagonal square.

[0007] The American Publication No. 2007/0000857 reveals an adjustable exhibition platform and a method for the manufacture of these platforms. In certain modalities, the platforms have a platform base, corner columns and elements of expansion that can be adapted to hold up individual products or trays for products. Corner columns are attached to the platform base in the places or positions desired. The expansion elements are inserted by means of insertion elements into the corner columns. The insertion portions are formed to receive and secure the extremes of the elements of expansion. Tops for the extremes, rear panels and optional printed panels can be provided in the platform showcase in order to improve the visual aspects of the showcase, as well as to provide additional marketing space.

[0008] The utility Mexican model No. 1434 reveals a display-packing and self-standing supply showcase that allows the transportation of the product contained from the manufacturer to the points of sale; this self-standing pack has the peculiarity of containing and exhibiting the product, and also that it is the place from where the final customer can grab it at the moment of purchase. It is characterized because it has angular posts that result in a preferably quadrangular or rectangular configuration, with a plurality of angular crosspieces that are jointed at their extremes into the posts by means of fixing devices, generating a plurality of perimetrical supports at a same level, at multiple heights and a certain separation space; where panels for containment and exhibition of several products are displayed, these panels are superimposed

or fixed with different devices on the angular crosspieces that result from the perimetrical supports.

[0009] The American Patent No. 6,752,281 reveals an exhibition device used for the exhibition of goods, such as books and posters. The exhibition device has four structures with rectangular supports. Each support structure includes a base, a first lateral wall, a second lateral wall, a first door with hinges on the first lateral wall, a second door with hinges on the second lateral wall, a rear wall, and a cover with hinges on the rear wall. Each lateral wall has hinges with the lateral wall attached to one of the support structures. At least one wheel is connected to the base of each support structure. The exhibition device is mobile between an opened position where the rear walls of the support structure define an enclosed space and a closed position where the rear walls of each support face the rear wall of the attached support structure.

[0010] The American Patent No. 5,896,995 reveals a transportation container based on a platform and an exhibition shelf that is capable of sustaining itself and it usually has a square form. The container includes a platform base, a lower tray, a half-partition within the tray, and a plurality of piled boxes at each side of the partition on the tray. The partition has one or more packing containers that can sustain a package that can be used by consumers. In the loading configuration, the container is shackled and closed with a top. In the exhibition configuration, the top is removed and disposed of and an exhibition cardboard is put up on the partition. The method used for loading and exhibiting small products using the loading container based on a platform and an exhibition shelf is also revealed.

[0011] The American patent No. 5,251,753 reveals loading/exhibition units that include a number of container trays of products piled vertically supporting dividers upwards that maintain the separation between the product containers. When its condition is that of loading, the lower tray is received in a nestling position in the skirt of the platform that rests on a loading platform made of conventional wood. Each tray has an individual corner support element that stretches between the adjacent pair of the trays separated vertically. A corner post that stretches out to the unit's total height is positioned in each corner of the unit in order to provide additional structural support during the loading process. In order to improve the exhibition platform's aesthetical appearance, the platform's skirt can be bent reversibly so that it ends up against the vertical sides of the platform and it is positioned by means of auxiliary hooking latches and grooves formed on the lateral walls of the platform's skirt. An exhibition insert that has two opposite feet and a central latch can be positioned at the border of the upper tray/divider to make the unit have a better aesthetic appearance when the unit is in a display condition.

[0012] The American Patent No. 4,705,162 reveals a packing for the load and exhibition of multiple goods, as well as the assembly method. The pack consists of a

plurality of displays at the base of the tray to which a sheet with two flaps is attached. A section of cardboard in a T shape is placed upwards between the showcases and it hooks them together by means of a kind of wing looking cover so it can be handled free of damages. When the package arrives to its final location, the section T is removed and the individual showcases are transported to the point of sale.

[0013] The American Patent No. 2,941,772 reveals a support of tray for platform frames.

[0014] The Mexican industrial design No. 18192 reveals a showcase with a cubic form and with intermediate trays.

[0015] Equally, there is the application No. PCT/IB2009/ 007103 by the same applicant which reveals exhibition structures that can have any geometric configuration, and their assembly and packing method. A specific configuration for the posts is released, as well as for the bases, the top and their possible modalities. Essentially, the construction of the posts, the bases and the top are similar in the present invention, taking into account their modalities, reason for which a brief description will be given of how the parts of the present invention can be constructed without giving much detail of any of them, since it must be understood that the construction of the parts can be essentially the same in the present invention, therefore, everything mentioned in the application is transcribed, literally written as if in the original application.

[0016] None of the previous publications reveals a showcase that can be of an undetermined size and that can be capable of supporting the weight of the products that are being exhibited, and that at the same time can be assembled and packed easily and promptly, i.e. in a matter of seconds.

Brief Description of the Invention

[0017] The present invention reveals a showcase for products at a point of sale, which can adopt almost any kind of geometric figure, as long as the showcase is equipped with two faces substantially flat and more specifically with a base adjustable to the floor. These kind of geometric figures generally are polyhedrons of any kind, like for example: tetrahedrons, pentahedrons, hexahedrons, octahedrons, dodecahedrons, icosahedrons, icosidodecahedrons, rhombic triacontahedrons, enlarged pentagonal cupolas, octagonal prisms, deltahedrons, stelled polyhedrons, and zonohedrons, among others. The figure of the showcase and the showcase itself is comprised of a base, a top, a height, at least one tray, and at least four faces.

[0018] The base is comprised of a number of sides. The sides of the base are composed of at least one face, where the first face is situated in a substantially horizontal plane; a second optional face is substantially perpendicular to the first face, reason for which the second face is situated in a substantially vertical plane; optionally the

sides of the base can have a substantially tubular shape, where one or several grooves or slots at the front part of the base are made, as well as at the upper part of the base, where the mentioned grooves or slots have a certain dimension that allow keeping the qualities of the base as a product that supports freight and strain. Optionally, the sides of the base can have an enlarged hexahedral shape and it is possible to make slots lengthwise the base with a certain dimension so that the base does not loose its capacity to support freight and strain. If there are two faces of the base present, these can have their vertex formed towards the interior of the showcase. If there are two faces of the base, the possibility of these faces having their vertex formed towards the exterior of the showcase is not to be ruled out. The number of sides of the base will depend directly on the number of faces contained in the showcase. For example, if the showcase has four faces, the base will have three sides; if the showcase has five faces; the base will have at least three sides; if the showcase has six or more faces, the base will have at least four sides. The joint of each of the sides of the base makes up a corner. The sides of the base can be put together permanently; however, in certain modalities not all sides of the base are put together. Specifically, it is required that at least two sides of the base are jointed. In the cases where at least two sides of the base are put together, a detachable joint means is required, and it must be flexible enough so that it allows mobility of one side of the base in regard to the other side of the base, this device could be a rivet or a snap, so that the sides can rotate simultaneously in opposite direction in a common axis in positions from 0 to 360°.

[0019] The top is composed of a number of sides of the top. The sides of the top have at least one face, where the first face is in a substantially horizontal plane; a second optional face is substantially perpendicular to the first face, reason for which the second face is in a substantially vertical plane; optionally the sides of the top can have a substantially tubular shape, where one or several grooves or slots are made at the lower part of the top, where these grooves or slots must be of a certain dimension so that the top does not loose its tensile qualities. Optionally, the sides of the top can have an enlarged hexahedral shape and it is possible to make grooves or slots at the lower part of the top, with a certain dimension so that the top does not loose its tensioning capacity. If both faces of the top are present, these can have their vertex formed towards the interior of the showcase. If there are two faces of the top present, the possibility of them having their vertex formed towards the exterior of the showcase is not to be ruled out. The number of sides of the top will depend directly on the number of faces that the showcase has. For example, if the showcase has four faces, the top will have three sides; if the showcase has five faces, the top will have at least three sides; if the showcase has six or more faces, the top will have at least four sides. The joint of each of the sides of the top forms a corner. The sides of the top can be put together per-

manently; however, in certain modalities not all sides of the base are jointed. Specifically, it is required that at least two sides of the top are put together. In the joints of the at least two sides of the top that are put together, a detachable joint means is required, and it must be flexible enough so that it allows mobility of one side of the top in regard to the other side of the top, such means could be a rivet or a snap so that the sides can rotate simultaneously in opposite direction in a common axis in positions from 0 to 360°. Optionally, the top can be substituted by at least two turnbuckles forming a cross, or at least two turnbuckles parallel to each other.

[0020] The height is composed of at least three posts. The number of posts is directly computable given the number of corners of the base. That is, if the base has three corners, three posts are required; if the base has four or more corners, the number of posts required is of at least four posts. The posts consist of two faces on a Z and W plane, considering that the face of the sides of the base is on an X plane, where a first face of the post is substantially perpendicular to a second face of the post; optionally, the post can have a substantially tubular or enlarged hexahedral shape, where it is required that this substantially tubular or enlarged hexahedral shape has at least one slot or groove lengthwise the post, where the at least one slot or groove must be facing towards the interior of the showcase, where the at least one of the mentioned slots or grooves has a certain dimension so that the post does not loose its tensile qualities. In the embodiment of the faces, both faces of the posts must have their vertex formed towards the interior of the showcase. The angle created between the faces of the posts must be substantially similar to the angle created by the corners of the sides of the base. The post is comprised of two extremes; a first extreme of the post can be fastened onto or jointed with the base somehow described in the art. A second extreme of the post can be fastened onto or jointed with the top or the turnbuckles somehow described in the art.

[0021] Between the first extreme of the post and a second extreme of the post, there is at least a base of tray. The number of bases of tray can or cannot depend on the height of the posts. The number of bases of tray can or cannot depend on the number of trays to be set up on the showcase. The bases of tray are coupled with the posts by any detachable means of joint.

[0022] The base of the tray has a determined number of sides, where this number of sides of the base of the tray can or cannot depend directly on the number of faces that the showcase has. For example, if the showcase has four faces, the base of tray will have at least three sides, if the showcase has five faces, the base of the tray will have at least three sides; if the showcase has six or more faces, the base of the tray will have at least four sides. However, it is possible that if the showcase has six faces, the number of sides of the base of tray can be larger. For example, if the showcase has six faces, the base of the tray can have at least twelve faces, then form-

ing a dodecahedron. The sides of the base of the tray have at least one face, where the face is in a substantially horizontal plane; a second optional face is substantially perpendicular to the first face, reason for which the second face is in a substantially vertical plane; optionally, the sides of the base of the tray can have a substantially tubular shape, where a groove or slot is made in the interior part of the base of the tray, where these grooves or slots have a certain dimension that allow to maintain the qualities of the base of the tray as a loading product. Optionally, the base of the tray can have an enlarged hexahedral shape concerning all its sides, and slots can be made longwise the base of the tray with a certain dimension so that this base does not loose its loading capacity. The joint of each of the sides of the bases of the tray forms a corner. The sides of the bases of the trays can be put together permanently; however, in certain modalities not all sides of the bases of the trays are jointed. Specifically, it is required that at least two sides of the bases of the trays are put together. For the joints of at least two sides of the tray bases that are put together, a detachable joint means is required, it must be flexible enough in order to allow mobility of one side of the base of the tray with regard to the other side of the base of the tray, such could be a rivet or a snap, so that the sides can rotate simultaneously in opposite direction in a common axis in positions from 0 to 360°.

[0023] The shelves have a substantially similar shape as that of the base of the trays when the bases of the trays are in an assembled position. The number of sides of the shelf will depend directly on number of sides of the base of the tray. The shelf is preferably made of only one piece of material which is preferably uniform and smooth. The size of the shelf (area) is given by the size of the base and of the top indirectly, and by the size of the base of the tray, directly. It is required that the size of the shelf is such that it can rest on or nestle against the base of the tray and it is also required that the size of the shelf is demarcated, possibly when in contact with the base of the tray.

[0024] Depending on the shape of the showcase, the showcase can have at least three faces. These faces can be substantially hollow or substantially solid. If the faces are substantially solid, one can make use of this substantially solid face to put up advertising on the showcase, what means that the showcase has a kind of clothing or casing advertising some product. If the faces are substantially solid, this solidity can be achieved by an element positioned vertically, that can be put together to the exterior part of the post. The element can be rigid, semi-rigid or flexible. The element can be coupled with the posts by any existing means of joint. Preferably, a means of permanent joint is not required or recommended, but rather a removable joint, because a subsequent uncoupling will be required between the joint element and the posts.

[0025] And so, with this configuration, the tray may have a substantial size, as well a substantial load at the

same time, being it stable and self-standing enough to load the products regardless of the size (area) covered by the tray and also having enough flexibility to be assembled and packed quickly.

[0026] This way, an objective of the present invention can be to provide a showcase that can be substantially big in size compared to other showcases and that can support the load of the product in spite of the tray's surface, and at the same time provide a showcase that can be easily assembled and packed just like a showcase of a smaller size.

[0027] Another object of the present invention is to provide a showcase that can contain a substantially heavy load of products and bear the load of the product despite the surface of the tray, and at the same time that can be easily assembled and packed.

[0028] Also, another object of the invention is to provide a showcase that is structurally sturdy and at the same time is easy to assemble and pack.

[0029] Another object of the present invention is to provide a showcase substantially flexible as for its assembly and its usefulness.

[0030] And yet another object of the present invention is the assembly method for the showcase mentioned above.

[0031] And still one more object of the present invention is a packing method for the showcase.

Brief Description of Figures

[0032] The particular characteristics and advantages of the invention, as well as other objects of the invention, will be apparent in the following description, given together with the attached figures, which are:

Figure 1 is a conventional exploded perspective view of a first embodiment.

Figure 2 is a conventional perspective view of the assembly of the showcase, in a first step of the first embodiment.

Figure 3 is a conventional perspective view of the assembly, in a second step of a first embodiment.

Figure 4 is a conventional perspective view of the first embodiment of the invention.

Figure 5 is a conventional perspective view of three showcases of the first embodiment, while being put together or assembled.

Figure 6 is a conventional perspective view of three showcases of the first embodiment once put together.

Figure 7 is a conventional perspective view of the top and the base in a second embodiment of the invention.

Figure 8 is a conventional exploded perspective view in the second embodiment of the invention.

Figure 9 is a conventional perspective view of a first step of assembly in the second embodiment of the invention.

Figure 10 is a conventional perspective view of the second embodiment of the invention.

Figure 11 is an upper view of the first step of assembly in the second embodiment of the invention

Figure 12 is an upper view of the second step of assembly in the second embodiment of the invention.

Figure 13 is a conventional perspective view of a third embodiment of the invention.

Figure 14 is a conventional perspective view of the packing process in the third embodiment of the invention.

Figure 15 is a view in detail of figure 14.

Figure 16 is a conventional perspective view of the third embodiment of the invention in packed position.

Figure 17 is a conventional perspective view of a fourth embodiment of the invention.

Figure 17a is an upper view of the fourth embodiment of the invention.

Figure 18 is a conventional perspective view of a first step of packing in the fourth embodiment of the invention.

Figure 18a is a view in detail of figure 18.

Figure 18b is an upper view of the first packing step in the fourth embodiment of the invention.

Figure 19 is a conventional perspective view of a second step of the packing process in the fourth embodiment of the invention.

Figure 19a is an upper view of the second step of the packing process in the fourth embodiment of the invention.

Figure 20 is a conventional perspective view of the fourth embodiment of the invention in a packed position.

Figure 20a is an upper view of the fourth embodiment of the invention in a packed position.

Figure 21 is a conventional perspective view of a sub-embodiment in the fourth embodiment of the invention in a first step of the unpacking process.

Figure 22 is a conventional perspective view of a sub-embodiment in the fourth embodiment of the invention in a second step of the unpacking process.

Figure 23 is a conventional perspective of a sub-embodiment in the fourth embodiment of the invention in a third step of the unpacking process.

Figure 24 is a conventional perspective view of a sub-embodiment in the fourth embodiment of the invention in a fourth step of the unpacking process.

Figure 25 is a conventional perspective of a sub-embodiment in a fourth embodiment already assembled.

Figure 26 is a conventional perspective view of the base of the sub-embodiment in the third and fourth modalities.

Figure 27 is a conventional perspective view of the showcase in a sub-embodiment of a third embodiment in a first step of the assembly process.

Figure 28 is a conventional perspective view of the

showcase in a sub-embodiment of the fourth embodiment in a first step of the assembly process.

Figure 29 is a conventional perspective view of the showcase in a sub-embodiment of the third or fourth embodiment in a second step of the assembly process.

Figure 30 is a conventional perspective view of the showcase in a sub-embodiment of the third or fourth modalities already assembled.

Figure 31 is a conventional perspective view of the fourth embodiment of the invention being packed.

Figure 32 is a conventional perspective view of the third embodiment of the invention being packed.

Figure 33 is a view in detail of the fasteners in the third embodiment of the invention.

Detailed Description of the Invention

[0033] The present invention reveals a showcase 1 for products in a point of sale, which can adopt almost any kind of geometric figure, provided that the showcase has two substantially smooth faces and more specifically it is required that the base may be coupled to the floor. This kind of geometric figures are in general polyhedrons of any kind, for example: tetrahedrons, pentahedrons, hexahedrons, octahedrons, dodecahedrons, icosahedrons, icosidodecahedrons, rhombic triacontahedrons, elongated pentagonal cupolas, octagonal prisms, deltahedrons, stelled polyhedrons and zonohedrons, among others, where the tetrahedrons, pentahedrons, hexahedrons and octahedrons are often preferred.

[0034] The showcase 1 usually consists of a base 10, a top 20, a height, at least one tray 30 and at least four faces, including the face of the base 10 and of the top 20.

[0035] The materials used to make the showcase 1 can vary, however, strong materials are preferred, materials that do not bend easily but have certain flexibility. A few examples are plastics like polystyrenes, PVC, high density polyethylenes, polypropylenes, PET, etc., wood, metals that tend to have certain flexibility, cardboard, corrugated cardboard, etc.

First Embodiment

[0036] In this first embodiment of the present invention reference will be made to figures from 1 to 6.

[0037] The base 10 is comprised of a number of sides 11. The sides 11 of the base 10 have at least one face 12, where the face 12 is situated in a substantially horizontal plane; a second optional face 13 is substantially perpendicular to the face 12, reason why the second face 13 is situated in a substantially vertical plane; optionally, the sides 11 of the base 10 can have a substantially tubular shape, where several grooves or slots are made at the front part of the base 10 as well as at the upper part of the base 10, where such grooves or slots have a certain dimension that makes it possible to maintain the qualities of the base 10 as a product that supports freight and

strain. Optionally, the sides 11 of the base 10 can have an elongated hexahedral shape and slots can be made lengthwise the base with a certain dimension so that the base 10 does not lose its capacity to support freight and strain. If there are two faces 12, 13 of the base 10, these can have their vertex formed towards the interior of the showcase 1. When having both faces 12, 13 of the present base 10, the possibility of them having their vertex formed towards the exterior of the showcase 1 is not to be ruled out. The number of sides 11 of the base 10 will depend directly on the number of faces 40 that the showcase 1 has. For example, if the showcase 1 has four faces 40, the base 10 will have three sides 11; if the showcase 1 has five faces 40, the base 10 will have at least three sides 11; if the showcase 1 has six or more faces 40, the base 10 will have at least four sides 11. The joint of each of the sides 11 of the base makes up a corner 14. The corners 14 of the base 10 are permanently jointed. In the joints of the corners 14 of the base 10, a detachable means of joint is required, it has to be flexible enough in order to allow mobility of one side 11 of the base 10 with regard to the other side 11' of the base 10, so that the sides 11, 11' can be rotated simultaneously in opposite direction in a common axis in positions from 0 to 360°. Specifically, fasteners are placed, such as rivets or snaps, in the corners 14 on the face 12. The fasteners must be placed in such way that they allow the rotation of one side 11 with regard to the other side 11'. It is required that a first pair of fasteners 65 that are crossed, that is, a first pair of fasteners 65 that are not adjacent to each other, have to be at a same point on the corners 14, 14', while a second pair of crossed fasteners 65' is situated at a second point on the corners 14', 14". This means that the first pair of fasteners 65 must not be collinear with the second pair of fasteners 65'.

[0038] The first pair of fasteners 65 is off center with respect to the center of the face 12, consequently with respect to the center of the side 11 and with respect to the center of the base 10. The position of the first pair of fasteners 65 is off center at the interior part of the corners 14, 14", while the position of the second pair of fasteners 65 is at the exterior part of the corners 14', 14", and is also off center. This lack of collinearity between the first pair and the second pair of fasteners 65 allows the rotation of the base 10, specifically of the side 11 in regard to the side 11" and of the side 11' in regard to the side 11".

[0039] The top 20 consists of a number of sides 21. The sides 21 of the top 20 are comprised of at least one face 22, where the face 22 is situated in a substantially horizontal plane; an optional second face 23 is substantially perpendicular to the face 22, and this is why the second face 23 is situated in a substantially vertical plane; optionally, the sides 21 of the top 20 can have a substantially tubular shape, where several grooves or slots are made at the lower part of the top 20, where these grooves or slots must be of a certain dimension so that the top 20 does not lose its tensile qualities. Optionally, the sides 21 of the top 20 can adopt an elongated hexahedral

shape and grooves and slots can be made at the lower part of the top 20, with a certain dimension so that the top 20 does not lose its tightening capacity. If there are two faces 22, 23 present at the top 20, these can have their vertex formed towards the interior of the showcase 1. The number of sides 21 of the top 20 will depend directly on the number of faces 40 that the showcase 1 has. For example, if the showcase 1 has four faces 40, the top 20 will have three sides 21; if the showcase 1 has five faces 40, the top 20 will have at least three sides 21; if the showcase 1 has six or more faces 40, the top 20 will have at least four sides 21. The joint of each of the sides 21 of the top 20 forms a corner 24. The corners 24 of the top 20 are permanently jointed, and it is required to have a detachable means of joint that is flexible enough in order to allow mobility of one side 21 of the top 20 with regard to the other side 21' of the top 20, so that the sides 21, 21' can be rotated simultaneously in opposite direction in a common axis in positions from 0 to 360°. Specifically, fasteners are placed and these can be rivets or snaps in the corners 24 on the face 22. The fasteners must be placed in a way that they allow the rotation of one side 21 with regard to the other side 21'. It is required that a first pair of fasteners 65 are crossed, that is, a first pair of fasteners 65 that are not adjacent to each other and that are positioned at the same point on the corners 24, 24", while a second pair of crossed fasteners 65' is positioned at a second point on the corners 24', 24". This means that the first pair of fasteners 65 must not be collinear with the second pair of fasteners 65'.

[0040] The first pair of fasteners 65 are off center in regard to the center of the face 22, and consequently in regard to the center of the side 21 and in regard to the center of the top 20. The position of the first pair of fasteners 65 is off center, located at the interior part of the corners the 24, 24", while the position of the second pair of fasteners 65' is located at the exterior part of the corners 24', 24", and is also off center. This lack of collinearity between the first pair and second pair of fasteners 65 allows the rotation of the top 20, specifically the rotation of the side 21 with respect to the side 21'" and of the side 21' with respect to the side 21".

[0041] Optionally, the top 20 can be substituted with at least two turnbuckles forming a cross, or at least two turnbuckles parallel to each other.

[0042] Optionally, neither the base 10 nor the top 20 or at least one of them are capable of rotating. This is because the joints between the sides are permanent, but the fasteners 65 are such that they do not allow the rotation between the parts.

[0043] The height is conformed by at least three posts 50. The number of posts is directly calculable by the number of corners 14 of the base 10. That is, if the base 10 has three corners 14, three posts 50 are required; if the base 10 has four or more corners 14, at least four posts 50 are required. The posts 50 are composed of two faces 51, 52 in a Z and W plane, taking into consideration that the face 12 of the sides of the base 10 is in an X

plane, where a first face 51 of the post 50 is substantially perpendicular to a second face 52 of the post 50; optionally, the post 50 can have a substantially tubular shape or an elongated hexahedral shape, where it is required that this substantially tubular or elongated hexahedral shape has at least one slot or groove lengthwise the mentioned post 50, where this at least one slot or groove must be facing towards the interior of the showcase 1, and where this at least one slot or groove has a certain dimension so that the post does not lose its loading capacity. In the embodiment of faces 51, 52, both faces of the posts must have their vertex formed towards the interior of the showcase 1. The angle created between the faces 51, 52 of the posts 50 must be substantially similar to the angle created by the corners of the sides 11 of the base 10. The post 50 consists of two extremes 53, 54, a first extreme 53 of the post 50 that can be gripped onto or jointed with the base 10 some way described in the art. A second extreme 54 of the post 50 can be gripped onto or jointed with the top 20 or the turnbuckles some way described in the art.

[0044] Between the first extreme 53 of the post 50 and a second extreme 54 of the post 50, there is at least a base 31 of tray 30. The number of bases 31 of tray can or cannot depend on the height of the posts 50. The number of bases 31 of tray can or cannot depend of the number of trays 30 that will be put up on the showcase 1. The base 31 of the tray consists of a certain number of sides 32, where this number of sides 32 of the base 31 depends directly on the number of posts 50 that the showcase 1 has. For example, if the showcase 1 has three or four posts 50, the base 31 of the tray will have at least two sides 32; if the showcase 1 has five or six posts 50, the base 31 of the tray will have at least three sides 32; if the showcase 1 has seven or eight posts 50, the base 31 of the tray will have at least four sides 32. The extremes of the sides 32 of the bases 31 of tray are coupled with the posts 50 by any means of detachable joint. Specifically, the joint of at least one side 32 of the base 31 of tray with two posts 50 close to each other is required. The sides 32 of the base 31 of the tray are comprised of at least one face 33 in a substantially horizontal plane; an optional second face 34 is substantially perpendicular to the first face 33, reason why the second face 34 is in a substantially vertical plane. Optionally the sides 32 of the base 31 of the tray may have a substantially tubular or elongated hexahedral shape, where a groove or slot is made in the interior part of the sides 32 of the base 31 of the tray, where these grooves or slots have a certain dimension that allows the qualities of the base 31 of the tray to remain as that of a loading product. The joint of each of the extremes of the sides 32 of the base 31 of the tray with the adjacent posts 50 forms a shelf 60. The sides 32 of the bases 31 of the trays are permanently jointed with the posts 50. Specifically, it is required that the extremes of at least one first side 32 of the base 31 of the tray is jointed with a pair of posts 50 that are adjacent to each other, while the extremes of at

least a second side 32' of the base of the tray is jointed with a second pair of posts 50 that are adjacent to each other, where the first pair and the second pair of posts 50 can be sharing a post 50. The joint of the side 32 with the posts 50 must be a detachable joint without mobility.

[0045] The number of sides of a tray 30 will depend directly on the sides of the base 31 of the tray. The tray 30 is preferably made of only one piece of material, which is preferably smooth and uniform. The size of the tray (area) 30 is given by the size of the base 10 and the top 20 indirectly, and by the distance between the sides of the base 31 of the tray, directly. It is required that the size of the tray 30 is such that it can rest on or nestle against the base 31 of the tray and that the size of the tray 30 is demarcated, possibly in contact with the base 31 of the tray. The tray 30 can have some wings 35, in such way that these wings 35 have the same function as the second face 34 of the sides 32 of the base 31 of the tray, in the spaces where there is no second face 34 of the sides 32 of the base 31 of the tray.

[0046] To assemble the showcase, if it has a base with three sides 11, one corner 14 of the base 10 has to be rotated with respect to the other corner 14, in such manner that a triangle is formed. If the base has four sides 11, a first pair of corners 14, 14" of the base 10 is rotated with respect to a second pair of corners 14', 14"', in such way that they form a rectangle or a quadrangle approximately. If the base has five or more sides 11, a first pair of corners 14 of the base 10 are rotated with respect to a second pair of corners 14, in such manner that a pentagon, a hexagon or something similar and approximate is formed.

[0047] The same operation is carried out with the top 20, if the top 20 is not substituted with crossed turnbuckles or parallel turnbuckles.

[0048] Once the base is assembled, the first extremes 53 of a first pair of adjacent posts 50 is inserted, jointed by the base 31 of the tray 30, this is, the first extremes 53 of a first shelf 60 in a first and a second corner of the face 12 of two sides 11 of the base 10. This joint can be given by a means described in the art. For example, in the PCT/IB2009/007103, some squares that could be used in this present invention are released. In the same way, grooves and slots are revealed that are similar to those of the extreme of the post 50 so that the extreme 53 of the post 50 can be coupled with the face 12. If it concerns a base 10 with three sides 11, the first extreme 53 of another post 50 is inserted in a third corner of the face 12 of the free side 11 of the base 10, or it is also possible to think of a shelf 60 with three posts. If it concerns a base 10 with four sides 11, the first extremes 53 of a second shelf 60 are inserted into a third and fourth corner of the face 12 of the sides 11 of the base 10. If it concerns a base 10 of more than four sides 11, depending on if the number of sides 11 is an even or an odd number, the shelves 60 or posts 50 are inserted respectively, until all the corners 14 of the base 10 are held together with a post.

[0049] The shelves 60 and the posts 50 are held by some means, placed accordingly with the base 10 in vertical position.

[0050] The tray 30 is placed in a way that the shelf rests on or nestles against the face 33 of the sides 32 of the base 31 of tray the 30. Due to the fact that the tray 30 has a triangular, rectangular, quadrangular, pentagonal, hexagonal, etc. shape, and because the tray is made of only one piece of rigid material, when placing the tray 30 in order for it to rest on or nestles against the face 33, the tray 30 will force the base 10 to take shape accordingly with the shape of the tray 30.

[0051] Finally, the top 20 or the turnbuckles are placed, with the object of tightening the showcase. The second extremes 54 of a first shelf 60 are jointed with the face 22 of the top 20. This joint can be given by a means described in the art, as is the case in PCT/IB2009/007103.

[0052] As we can observe in figures 5 and 6, the showcases 1 can be placed close to each other so that they give the illusion of a showcase with the desired measures.

Second Embodiment

[0053] In this second embodiment of the present invention we will make reference to figures from 7 to 12.

[0054] The construction of the parts in this second embodiment is essentially similar to the construction of the parts in the first embodiment. Specifically, the construction of the base 10, of the top 20, of the bases 31 of trays and of the posts 50 is essentially the same. The construction of the joint between a base 31 of the tray and two adjacent posts 50, this is, the construction of the shelves 60, is similar.

[0055] Specifically, with the shelves 60, a second side 32' of tray is put together, in a way that the joint between this second side 32' with respect to the first side 32 of the tray and with respect to the post 50 is made by a detachable means of joint, however, it has to be flexible enough in order to allow mobility of the second side 32' with regard to the first side 32 and with regard to the post 50, so that the sides 32, 32' can be rotated simultaneously in opposite direction in a common axis in positions from approximately 0° to 90°, in the case in which the posts 50 have two faces 51, 52; however, if the posts 50 have a tubular shape of an elongated hexahedral shape, the grooves or slots provided in these posts 50 may allow the rotation of the second side 32' in relation with the first side 32 in positions of approximately from 0° to more than 90°. This way, a same shelf 60 can have two sides 32 of the base 31 of the tray. This joint between the first side 32 and the second side 32' can be achieved with a fastener, such as a rivet or snap.

[0056] The tray 30 may have some wings 35, in a manner that the wings 35 have the same function as that of the second face 34 of the sides 32 of the base 31 of the tray, in the spaces where there is not a second face 34

of the sides 32 of the base 31 of the tray. However, if the base 31 of the tray has two faces 33, 34, the wings are not necessary.

[0057] The assembly method is essentially the same as the one used in the first embodiment. Specifically, the way to assemble the base and the top, this last one being replaceable by turnbuckles, is the same.

[0058] Once the base is assembled, the first extremes 53 of a first pair of adjacent posts 50 are inserted; they are jointed through the base 31 of the tray 30, that is, the first extremes 53 of a first shelf 60 in a first and second corner of the face 12 of the sides 11 of the base 10. This joint can be given by a means described in the art. For example, in the PCT/IB2009/007103, some squares are revealed that could be used in the present invention. In the same way, grooves or slots are revealed in a similar form as that of the extreme of the post 50 so that the extreme 53 of the post 50 may be coupled with the face 12. If it concerns a base 10 with three sides 11, the first extreme 53 of another post 50 is inserted into a third corner of the face 12 of the free side 11 of the base 10, or else it is possible to think of a shelf with three posts 50. If it concerns a base 10 with four sides 11, the first extremes 53 of a second shelf 60 are inserted into a third and fourth corner of the face 12 of the sides 11 of the base 10. If the base 10 has more than four sides 11, depending on whether the number of sides is an even or an odd number, shelves 60 or posts 50 are inserted respectively, until all the corners 14 of the base 10 are put together with a post 50.

[0059] The second side 32' is rotated with respect to the first side 32 and with respect with to the post 50, until the second base 32 of tray bumps into the adjacent post 50 of the opposite shelf 60. Optionally, the second side 32' can be rotated some degrees depending on the quantity of posts 50 to be placed, hence the quantity of corners 14 of the base 10. In any of both cases, the second side 32' is rotated to a point where the second side 32' can bump into the adjacent post 50 of the opposite shelf 60 once the shelves are assembled. The same operation is carried out with the opposite shelf 60.

[0060] The shelves 60 and the posts 50 placed with respect to the base 10 in vertical position are held up by some means.

[0061] The tray 30 is placed so that the shelf rests on or nestles against the face 33 of the sides 32 of the base 31 of tray 30. Due to the fact that the tray 30 has triangular, rectangular, quadrangular, pentagonal, hexagonal, etc. shape, and because the tray is made of only one rigid piece, when placing the tray 30 in order for it to rest on or nestle against the face 33, the tray 30 will force the base 10 to take shape accordingly with the shape of the tray 30.

[0062] Finally, the top 20 or the turnbuckles are placed with the finality of tightening the showcase. The second extremes 54 of a first shelf 60 are put together with the face 22 of the top 20. This joint can be achieved by a means described in the art, as is the case in patent

PCT/IB2009/007103.

[0063] The rotation point between the second side 32' with respect to the first side 32 and with respect to the post 50 can be substantially centered or off center. These rotation points can meet in a collinear manner with the rotation point of the base, if there were such.

[0064] In this embodiment it is preferable that the base 31 of tray that rotates is the base 31 with lesser length. This means, in the case that the showcase were a hexahedron, and more specifically for example, if it had a shape similar to a cuboid, it is preferable that the bases 31 of the trays that are jointed with the two posts 50 forming a shelf 60 are the bases 31 of the trays that have greater length, while the bases 31 of the trays that can rotate in relation with the bases 31 between the posts 50 should be those that have lesser length. In the case of cubes or truncated pyramids for example, given that the length of the bases 31 is substantially the same, it is not relevant which base 31 can rotate or not and which base 31 is between the two posts 50 forming a shelf 60.

Third Embodiment

[0065] Another embodiment of the present invention is referred to in figures from 13 to 16, 32 and 33.

[0066] As in the first modalities, the construction of the showcase 1 is substantially similar. The base 10, the top 20 and the posts 50 are substantially the same concerning their construction and their number, as in the first and second modalities.

[0067] However, unlike the first and second modalities, all the sides 32 of the bases 31 of the trays are directly coupled with the posts 50. The number of sides 32 of the bases 31 of tray is similar to that in the second embodiment, except that, due to the fact that all the sides 32 are coupled with a post, the sides 32 do not have any mobility with respect to the adjacent sides 32', 32" and with respect to the first pair of posts 55, but instead, they have mobility with respect to the opposite side 32"', with respect to the second pair of posts 56, as well as with the base 31 that is located at the upper or lower part.

[0068] This is, the coupling between the bases 31 of the trays and the posts 50, is made by means of a fastener 65 that allows the rotation of the base 31 with respect to the posts 50. As we can observe in figure 15, it is required that a first pair 66 of adjacent fasteners 65 are placed collinearly with one another, while a second pair 67 of adjacent fasteners 65, which are collinear with one another, should not be collinear with the first pair 66 of fasteners 65.

[0069] Specifically, the first pair 66 of fasteners 65 is centered with respect to the base 31 and with respect to the post 50. The position of the first pair 66 of fasteners 65 is at the lower part of the base 31 of the trays and in the most internal part of the post 50, specifically in the most internal part of the second face 52 of the post or the tube or the elongated hexahedron. The position of the second pair 67 of fasteners 65 is at the upper part of

the base 31 of tray and in the most internal part of the post 50, specifically in the most internal part of the second face 52 of the post 50 or the tube or the elongated hexahedron. This lack of collinearity between the first pair 66 and the second pair 67 of fasteners 65 allows the rotation in order to fold down the base 31 of the tray in relation with the other bases 31, i.e. the bases 31 that are positioned at the upper or lower part, and accordingly with the post 50.

[0070] In this embodiment, the provided props 37 are also collapsible. Specifically, a prop 37 is fixed on the sides 32, 32'" and a second prop 37' is fixed on the sides 32, 32" of the base 31 of the tray. In the center of the prop there is a fastener 65 that allows the rotation of both parts of the prop 37, 37'. Consequently, when the showcase 1 is rotated towards a folded position, the prop 37, 37' is also rotated into a folded position. Equally, when the showcase is rotated towards an unfolded position, the prop 37, 37' is rotated into an unfolded position.

[0071] The assembly method is essentially similar to that of the first and second modalities. Specifically, the way to assemble the base and the top, which can be substituted with turnbuckles, is the same.

[0072] Once the base is assembled, the first extremes 53 of a first pair 55 of posts 50 is inserted in a first and second corner of the face 12 of the sides 11 of the base 10. This joint can be achieved by means described in the art. For example, in patent PCT/IB2009/007103, squares that could be used in the present invention are revealed. In the same way, grooves and slots are also released; they have a similar shape to those of the extreme post 50 so that the extreme 53 of the post 50 can be coupled with the face 12. If it concerns a base 10 with three sides 11, it is rotated in order to fold down the opposite post 50, as well as the base 31 of the tray with respect to the first pair 55 of posts 50, and the first extreme 53 of the post 50 is inserted in a third corner of the face 12 of the free side 11 of the base 10. If we have a base 10 with four sides 11, it is rotated in order to fold down the second pair of posts 56, as well as the base 31 of the tray with respect to the first pair 55 of the post 50, and the first extremes 53 of a second pair 56 of posts 50 are inserted in a third and fourth corner of the face 12 of the sides 11 of the base 10. If it concerns a base 10 with more than four sides 11, depending on whether the number of sides is an even or an odd number, they are rotated so that they fold down and the posts 50 are inserted until all the corners of the base 10 are put together with a post.

[0073] The tray 30 is placed in a way that the shelf rests on or nestles against the face 33 of the sides 32 of the base 31 of the tray 30. Due to the fact that the tray 30 has a triangular, rectangular, quadrangular, pentagonal, hexagonal, etc., shape, and because the tray is made of only one rigid piece, when placing the tray 30 in order for it to rest on or nestle against the face 33, the tray 30 will force the base 10 to take shape accordingly with the shape of the tray 30.

[0074] Finally, the top 20 or the turnbuckles are placed,

with the object of tightening the showcase. The second extremes 54 of a first shelf 60 are jointed with the face 22 of the top 20. This joint can be achieved by means described in the art, as is the case in patent PCT/IB2009/007103.

[0075] This embodiment allows the packing of the showcase 1 in vertical positions with respect to its assembly state. This means, the packing position reduces the volume of the showcase 1; however, it increases the height of the showcase 1 because a shelf 60 has greater height with respect to a second shelf 60.

[0076] This embodiment is easy to pack for its skillful and quick transportation, and showcases occupy not much space and can be piled one on top of the other.

Fourth Embodiment

[0077] Another embodiment of the present invention is shown in figures from 17 to 20, and 31.

[0078] Just as in the first two modalities, the construction of the showcase 1 is substantially similar. The base 10, the top 20 and the posts 50 are substantially the same concerning construction and number as in the first and second modalities.

[0079] The construction of the bases 31 of the trays with respect to the posts 50 is substantially the same as in the third embodiment of the invention. However, instead of having mobility with respect to the upper and lower bases 31, there is mobility with respect to the sides 32 of the bases 31. The side 32 has a certain mobility with respect to the adjacent and opposite sides 32', 32'', 32''' as well as with respect to the first pair 55 of posts 50.

[0080] This means, the fasteners 65 are off center in a way that they allow the rotation of the sides 32', 32'', 32''' and of a first pair 55 of posts 50 with respect to the other side 32 and with respect to the second pair 56 of posts 50.

[0081] As observed in figure 17a, it is required that a first pair 66 of crossed fasteners 65, that is, fasteners 65 that are not positioned adjacently, are at a same first point on the face 33, while a second pair 67 of adjacent fasteners 65, that are also crossed, are at a second point on the face 33, a second point that is not similar to the first point.

[0082] Specifically, the first pair 66 of fasteners 65 is off center with respect to the base 31 and with respect to the face 33. The location of the first pair 66 of fasteners 65 is proximate to the center of the intersection or corner 36 created between the sides 32, 32', as well as in the center of the intersection or corner 36' created between the sides 32'', 32'''. The location of the second pair 66 of fasteners 65 is located proximate to the external corner of the intersection or corner 36'' created between the sides 32', 32'', and is also proximate to the external corner of the intersection or corner 36''' created between the sides 32, 32'''. The off centre position of the second pair 67 of fasteners 65 allows the free rotation of the sides 32'-32''' with respect to the side 32. Additionally, it is pos-

sible that at least two corners 36, 36', for example, the corners that have the first pair 66 of fasteners 65, are truncated, that is, that the side 32 is not conformed by exact angles of 90°, but that at least one of these angles is divided in two parts so that two angles are obtained and the addition of these two angles results in 90°. It is possible to consider that all the corners 36-36''' are truncated, so that the showcase 1 can be collapsed horizontally towards any side.

[0083] The method of assembly is essentially similar to that of the first and second modalities. Specifically, the way of assembly of the base and the top, same that can be substituted with turnbuckles, is the same.

[0084] Once the base is assembled, a first pair 55 of posts 50 rotates with respect to the second pair 56 of posts 50 until the desired figure is obtained, this shape can be a hexahedron. The first extremes 53 of a first pair 55 of posts 50 is inserted in a first and second corner of the face 12 of two sides 11 of the base 10. This joint can be achieved by any means described in the art. For example, in patent PCT/IB2009/007103 some squares are revealed, and these could be used in the present invention. In the same way, grooves or slots are revealed, similar to those of the extreme of the post 50, so that the extreme 53 of the post 50 may be coupled with the face 12. If it concerns a base 10 with three sides 11, the first extreme 53 of the third post 50 is inserted in a third corner of the face 12 of the free side 11 of the base 10. If it is a base with four sides 11, the first extremes 53 of a second pair 56 of the posts 50 are inserted in a third and fourth corner of the face 12 of the sides 11 of the base 10. If we consider a base with more than four sides, depending on whether the number of sides is an even or an odd number, posts 50 are inserted, until all the corners of the base 10 are put together with a post.

[0085] The tray 30 is placed, in a way that the shelf can rest on or nestle against the face 33 of the sides 32 of the base 31 of the tray 30. Due to the fact that the tray 30 has a triangular, rectangular, quadrangular, pentagonal, hexagonal, etc. shape, and because the tray is made of only one rigid piece, when placing the tray 30 so that it rests on or nestles against the face 33, the tray 30 will force the base 10 to take the shape accordingly with the shape of the tray 30.

[0086] Finally, the top 20 or turnbuckles are placed, with the object of tightening the showcase. The second extremes 54 of a first shelf 60 are jointed with the face 22 of the top 20. This joint can be achieved by means described in the art, as is the case in patent PCT/IB2009/007103.

[0087] This embodiment allows the packing of the showcase in horizontal positions with respect to its assembly state. This means that the packing position reduces the volume of the showcase 1; however it enlarges the width of the showcase.

[0088] A sub-embodiment of the fourth embodiment is referred to in figures from 21 to 25.

[0089] As in the first two modalities, the construction

of the showcase 1 is substantially similar. The base 10, the top 20 and the posts 50 are substantially equal concerning construction and number as in the first and second modalities.

[0090] The construction of the bases 31 of the trays with respect to the posts 50 is substantially the same as in the third embodiment of the invention. However, instead of having mobility with regard to the upper and lower bases 31, there is mobility with regard to the sides 32 of the bases 31. The side 32 has mobility with respect to the adjacent sides 32', 32'', as well as with respect to the first pair 55 of posts 50 and with the second pair 56 of posts 50.

[0091] This means that at least one fastener 65 is centered in such way that it allows the rotation of at least one of the sides 32 and of a first pair 55 of posts 50, with respect to the other sides 32', 32'' and with respect to the second pair 56 of posts 50.

[0092] Specifically, the fasteners 65 are centered with respect to the base 31 and with respect to the face 33. The location of at least one fastener 65 is proximate to the center of the side 32. In the same way, there are fasteners 65 in the extremes of the sides 32, specifically in a certain point of intersection between a first side 32 and a second side 32', as well as the first side 32 and a third side 32'', and between a second side 32' and a third side 32''.

[0093] This way, at least one side 32, 11 is capable of rotating on its own axis, providing at the same time the rotation of both sides 32', 32'' with respect to the rotated side 32.

[0094] An advantage of the way of rotating in the present sub-embodiment is that at least one side 32 can be lodged within the two sides 32', 32'' when the showcase is folded.

[0095] This embodiment is easy to pack for a skillful and quick transportation where the showcases occupy not much space and can be piled one on top of the other.

Other Embodiments

[0096] A embodiment that is possible with a third and fourth embodiment is shown in figures from 26 to 30. Specifically, the base 10 and the top 20 are substituted with an additional base 31 of tray. In order to provide the structure with rigidity, a skirt 2 is provided, preferably a collapsible skirt that has same shape as the showcase 1.

[0097] The skirt 2 is slightly greater in width than the showcase 1, so that the skirt 2 can slide around the showcase 1, forming a kind of ring of the showcase 1. Specifically, it is preferable that the skirt 2 surrounds the lower part of the showcase 1. Once the tray 30 is set up, the showcase 1 is provided with rigidity thanks to the skirt 2 and the tray 30.

[0098] It is preferable that the skirt 2 fills a space equivalent to approximately a third of the total of the height of the showcase in order to provide the necessary rigidity.

[0099] Alterations in the structure just describe in the

present invention can be made beforehand by those with skills and art in the matter. However, it must be understood that the present description is related to the preferred modalities of the invention, which is for illustrative purposes only, and that it must not be constructed as a limitation of the invention. All the modifications that do not deviate from the spirit of the invention are included in the body of the attached claims.

Claims

1. A collapsible showcase with at least four faces to load and exhibit of products, comprising:

a base with at least three sides, each side with two extremes, each extreme of a side is jointed with another extreme of another side then forming corners between the extremes;

a top with at least three sides, each side with two extremes, each extreme of a side is jointed with another extreme of the other side then forming corners between the extremes;

at least three posts, each post with a lower extreme and an upper extreme, each post can be set up in a corner of the base through the lower extreme of the post, each post can be coupled through the upper extreme of the post with a corner of the top, each pair of posts proximate to one another having coupled between them at least one base of tray, then forming, between the pair of posts proximate to each other and the at least one base of the tray, a shelf, the at least one base of tray which is located between the lower extreme and the upper extreme of the post;

at least one tray for each base of tray, the tray is capable of resting on the base of the tray.

2. The showcase of claim 1, where the joint of the corners of the base is flexible, allowing mobility of one side of the base in relation to the other side of the base, in a way that the sides of the base may be rotated in relation to one another and where the joints of the corners of the top are flexible, allowing mobility of one side of the top with respect to another side of the top in a way that the sides of the top can be rotated in relation to one another.

3. The showcase of claim 2, where each corner has a fastener that allows rotation and where the showcase has an even number of faces and has at least six faces, where a first pair of fasteners in the base that are not located at adjacent corners are not collinear with a second pair of fasteners in the base that are not located at adjacent corners, where a first pair of fasteners at the top that are not located at adjacent corners are not collinear with a second pair of fas-

teners at the top that are not located at adjacent corners, where the first pair of fasteners of the base and of the top are off center with respect to the center of the side of the base and of the top respectively, and towards the interior of the non adjacent corners and where the second pair of fasteners of the base and of the top are off center with respect to the center of the side of the base and of the top respectively, and towards the exterior of the non adjacent corners.

4. The showcase of claim 1, where the tray has some wings towards the upper part of the showcase.
5. The showcase in accordance with any of the previous claims, where each shelf has at least a second base of tray, each second base of tray being coupled with the shelf by means of a fastener, where this fastening device allows the rotation of the second base of tray with respect to the shelf, in such manner that the second base of the tray can be positioned substantially parallel or substantially perpendicular to the shelf.
6. A collapsible showcase with at least four faces to load and exhibit products, comprising:

a base with at least three sides, each side with two extremes, each extreme of a side is jointed with another extreme of another side, then forming corners between the extremes;

a top with at least three sides, each side with two extremes, each extreme of a side is jointed with another extreme of another side, then forming corners between the extremes;

at least three posts, each post with a lower extreme and an upper extreme, each post can be set up in a corner of the base through the lower extreme of the post, each post can be coupled through the upper extreme of the post with a corner of the top,

at least one base of tray coupled with the posts, the at least one base of tray positioned between the lower extreme and the upper extreme of the post, one tray for each base of tray, the tray being capable of resting on the base of the tray; where the at least one base of tray is coupled with the posts by means of a first pair and a second pair of fasteners that allow the rotation of the base of the tray with respect to the posts, where the first pair of fasteners are adjacent and collinear to each other, where the first pair of fasteners is positioned at a lower part of the at least one base of tray and in an internal part of the post; and

where the second pair of fasteners are adjacent and collinear to each other, where the second pair of fasteners is positioned at the upper part of the at least one base of tray and in the internal

part of the post.

7. The showcase of claim 6, where the top is coupled with the upper extreme of the posts and where the base is coupled with the lower extreme of the posts by means of a first pair and a second pair of fasteners that allow the rotation of the base and of the top respectively, with respect to the posts, where the first pair of fasteners are positioned adjacently and collinearly with each other, where the first pair of fasteners is located at a lower part of the base and of the top and at an internal part of the post; and where the second pair of fasteners are positioned adjacently and collinearly with each other, where the second pair of fasteners is located at the upper part of the base and of the top and in an internal part of the post.

8. The showcase in accordance with claim 7, where the showcase additionally includes a skirt that has a width slightly bigger than the width of the showcase, in a way that the skirt can slide around the showcase and that it surrounds the lower part of the showcase.

9. A collapsible showcase with at least four faces to load and exhibit products, comprising:

at least three posts, each post with a lower extreme and an upper extreme, each post can be set up in a corner of the base through the lower extreme of the post, each post can be coupled through the upper extreme of the post with a corner of the top,

at least one base of tray with at least three sides, each side with two extremes, each extreme of a side is jointed with another extreme of the other side, then forming corners between the extremes of the sides of the base of the tray, each corner of the base of the tray is coupled with the posts, each corner has an interior part and an exterior part, where the interior part is close to the center of the showcase and where the exterior part is distant from the center of the showcase, the at least one base of tray is positioned between the lower extreme and the upper extreme of the post, one tray for each base of tray, the tray is capable of resting on the base of the tray;

where the joint between each of the corners of the at least one base of tray is by means of a first pair and a second pair of fasteners that allow the rotation of one side of the base of the tray with respect to the other sides of the base of the tray,

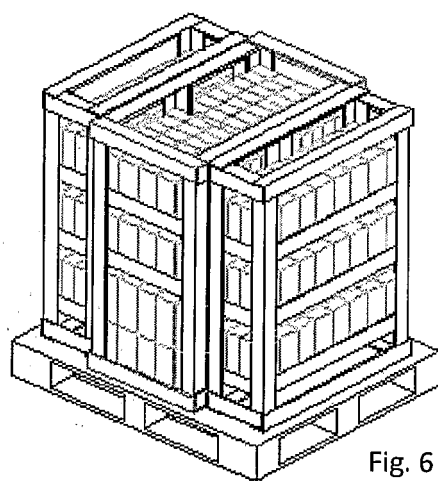
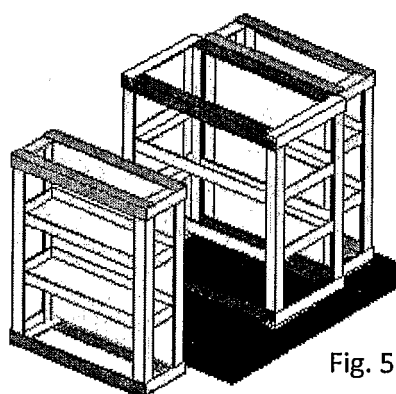
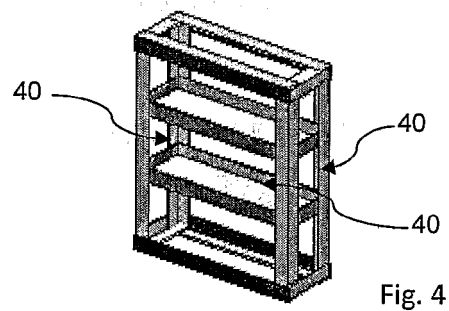
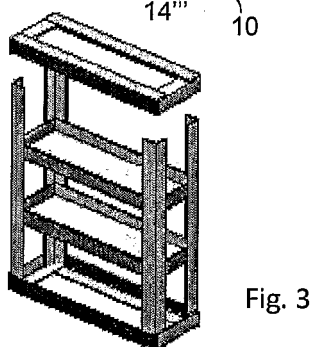
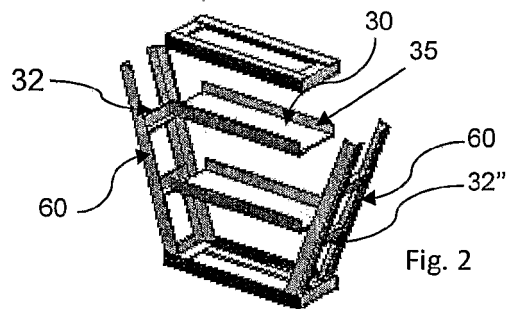
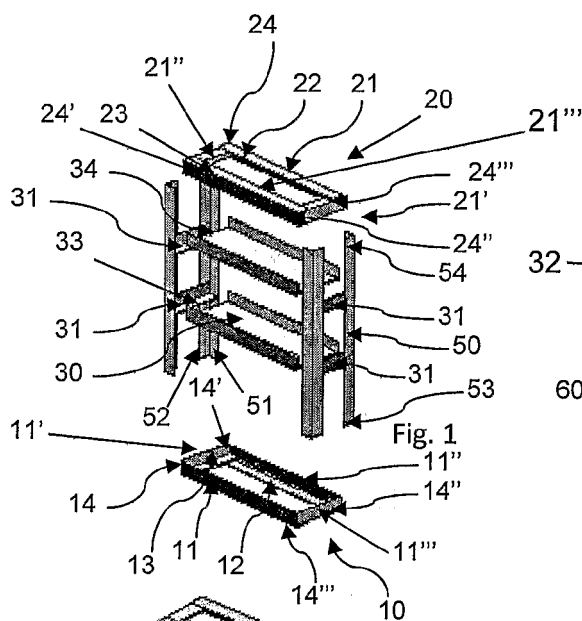
where the first pair of fasteners that are not adjacent to one another, are proximate to the center of the corners created between the adjacent sides; and

where the second pair of fasteners that are not

adjacent to one another, are proximate to the exterior part of the corner between the adjacent sides.

10. The showcase of claim 9, where the showcase additionally includes a base with at least three sides, each side with two extremes, each extreme of a side is jointed with another extreme of another side then forming corners between the extremes and a top with at least three sides, each side with two extremes, each extreme of a side is jointed with another extreme of the other side and so forming corners between the extremes. 5 10
11. The showcase of claim 9, where the showcase includes a skirt capable of sliding around the showcase in order to form a ring at the lower part of the showcase. 15
12. The showcase of claim 11, where the skirt occupies a third of the height of the whole showcase. 20
13. A collapsible showcase with five faces to load and exhibit products, comprising: 25
 - a base with three sides, each side with a first extreme and a second extreme, each extreme of one side is jointed with another extreme of another side, then forming corners between the extremes; 30
 - a top with three sides, each side with a first extreme and a second extreme, each extreme of a side is jointed with another extreme of another side, then forming corners between the extremes; 35
 - three posts, each post with a lower extreme and an upper extreme, each post can be set up in a corner of the base through the lower extreme of the post, each post can be coupled through of the upper extreme of the post with a corner of the top, 40
 - at least one base of tray with three sides, each side with a first and second extreme, each extreme of one side is jointed with another extreme of the another side, then forming corners between the extremes of the sides of the base of the tray, each corner of the base of the tray coupled with the posts, the at least one base of tray positioned between the lower extreme and the upper extreme of the post, a tray for each base of tray, the tray is capable of resting on the base of the tray; 45
 - where the joint between each of the corners of the at least one base of tray is achieved by means of fasteners that allow the rotation from one side of the base of the tray with respect to the other sides of the base of the tray; and 50
 - where a first side of the top, a first side of the 55

base of the tray collinear with the first side of the top and a first side of the base collinear with the first side of the top, have a fastener between the first and second extremes of the top, base of the tray and base, respectively, what allows the rotation of the first side of the top, of the first side of the base of the tray and of the first side of the base towards the interior of the showcase.



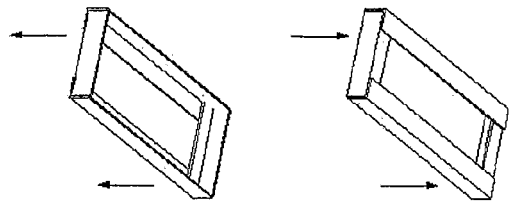


Fig. 7

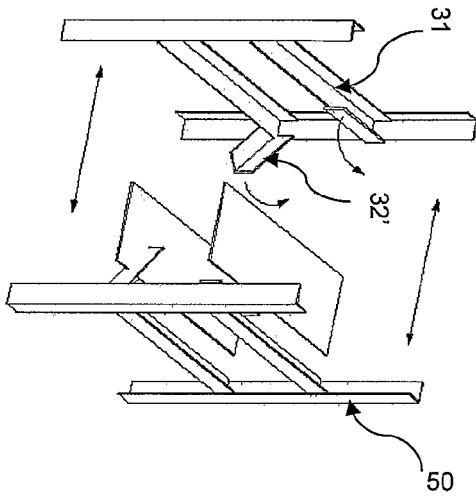


Fig. 8

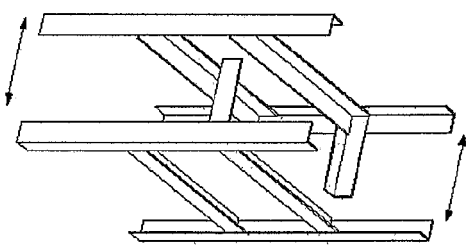


Fig. 9

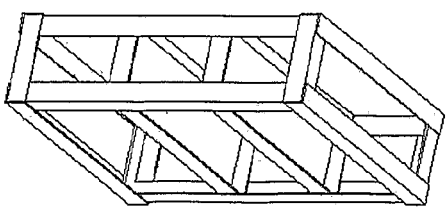


Fig. 10

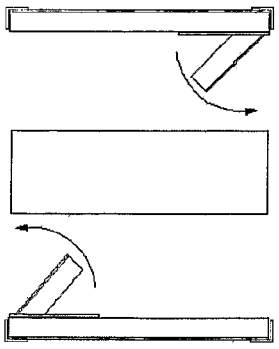


Fig. 11

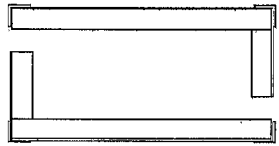


Fig. 12

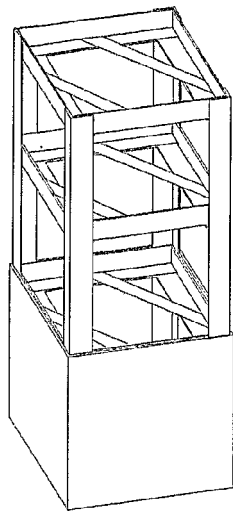


Fig. 13

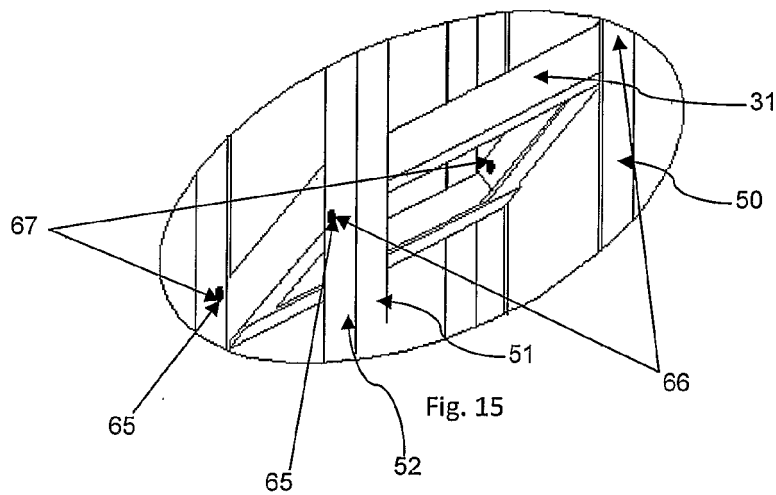
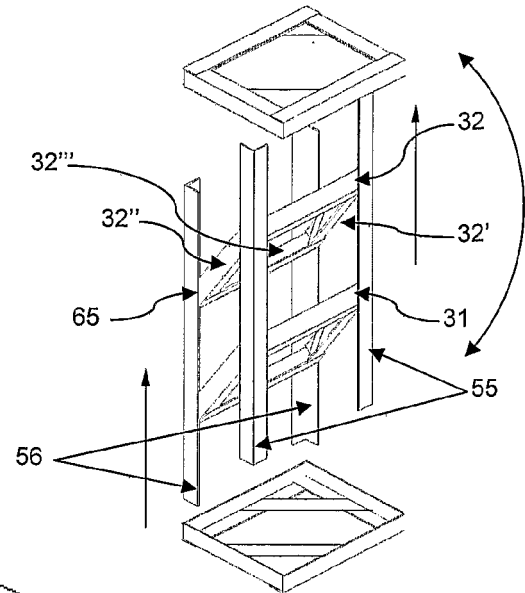


Fig. 15

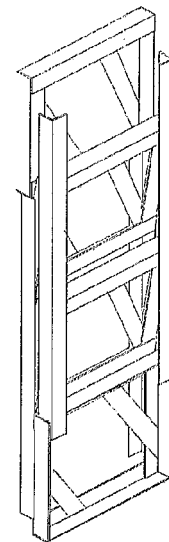
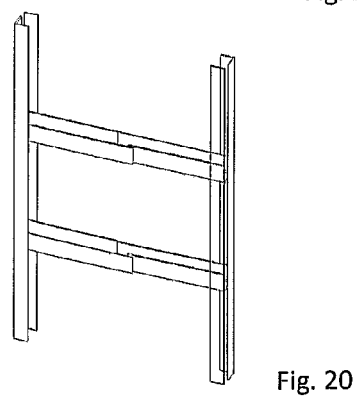
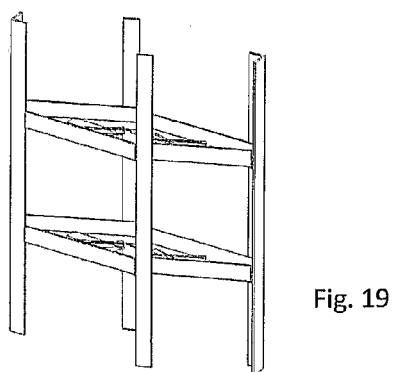
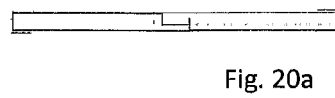
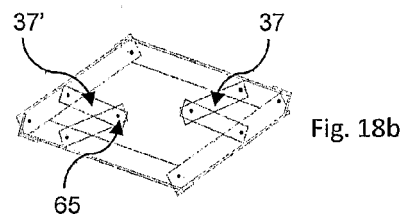
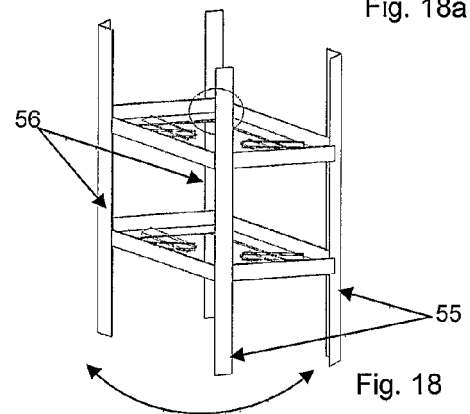
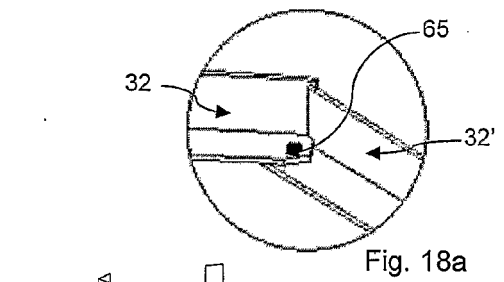
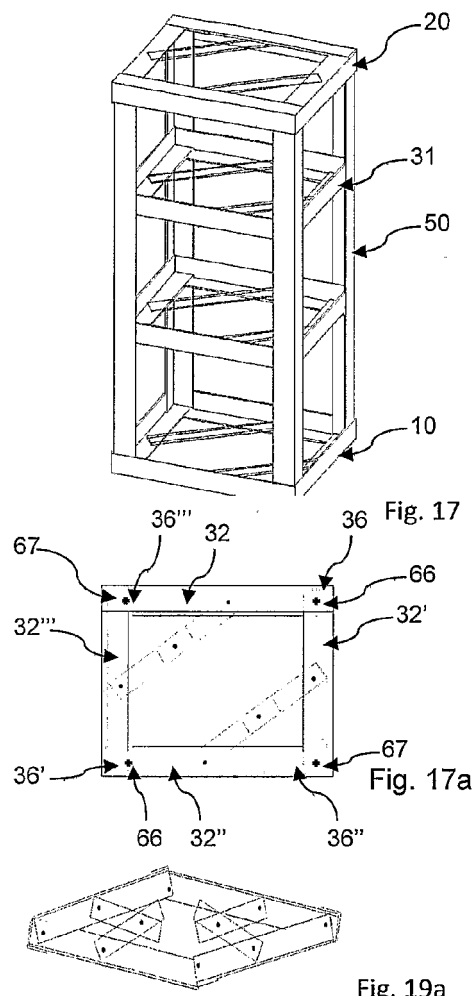
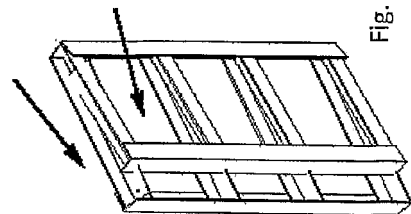
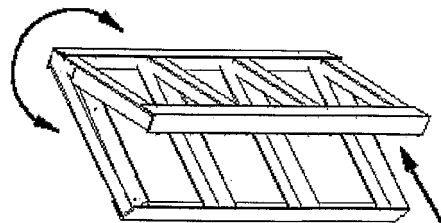
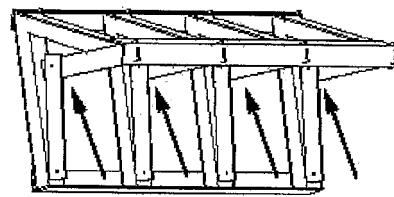
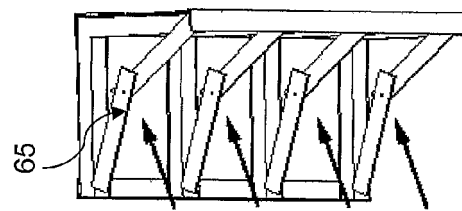
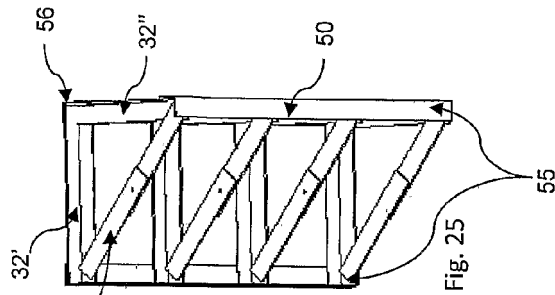
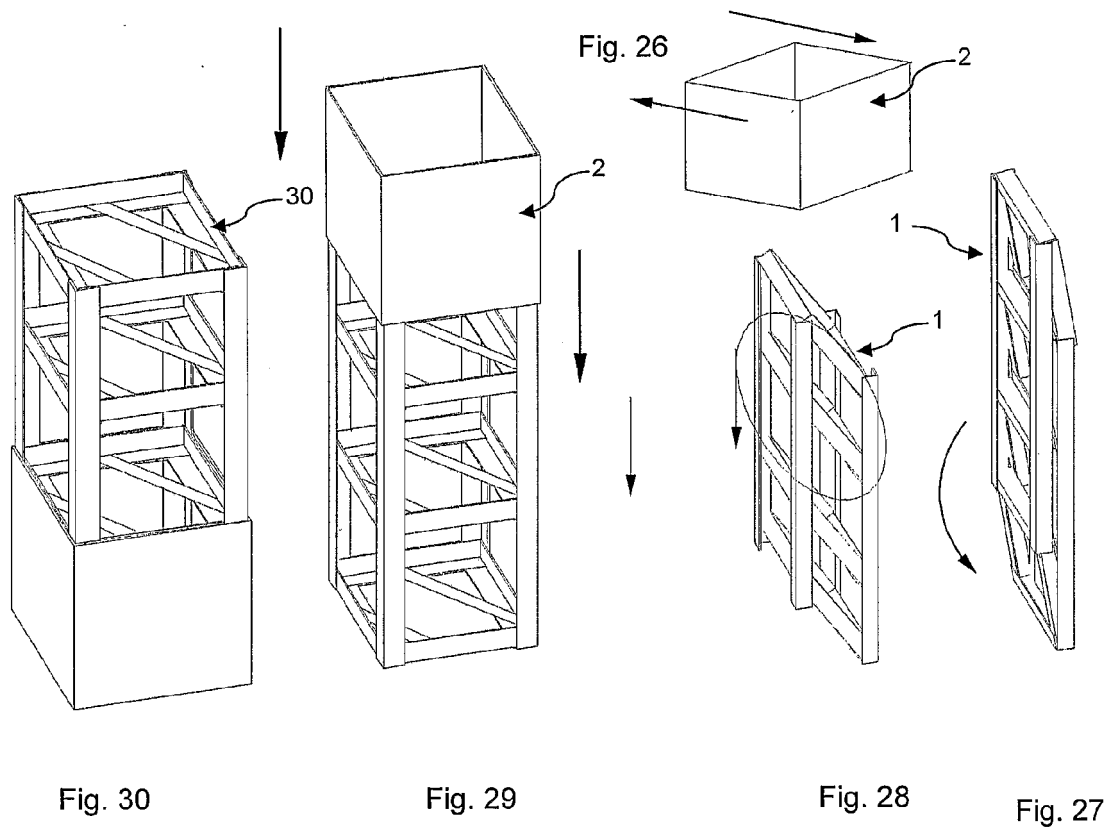


Fig. 16







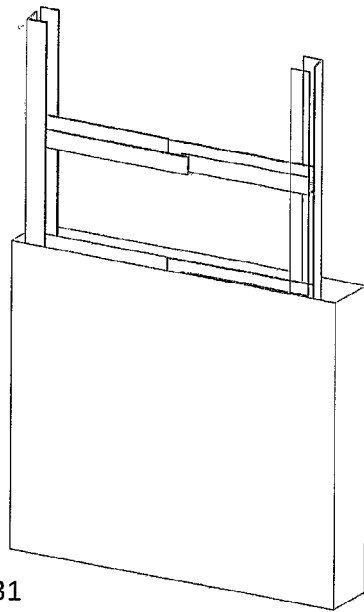


Fig. 31

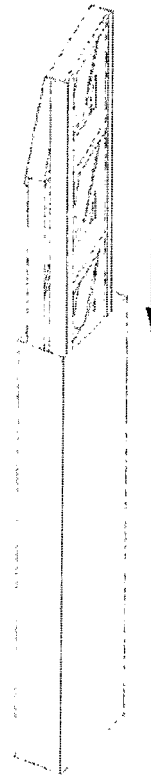


Fig. 32

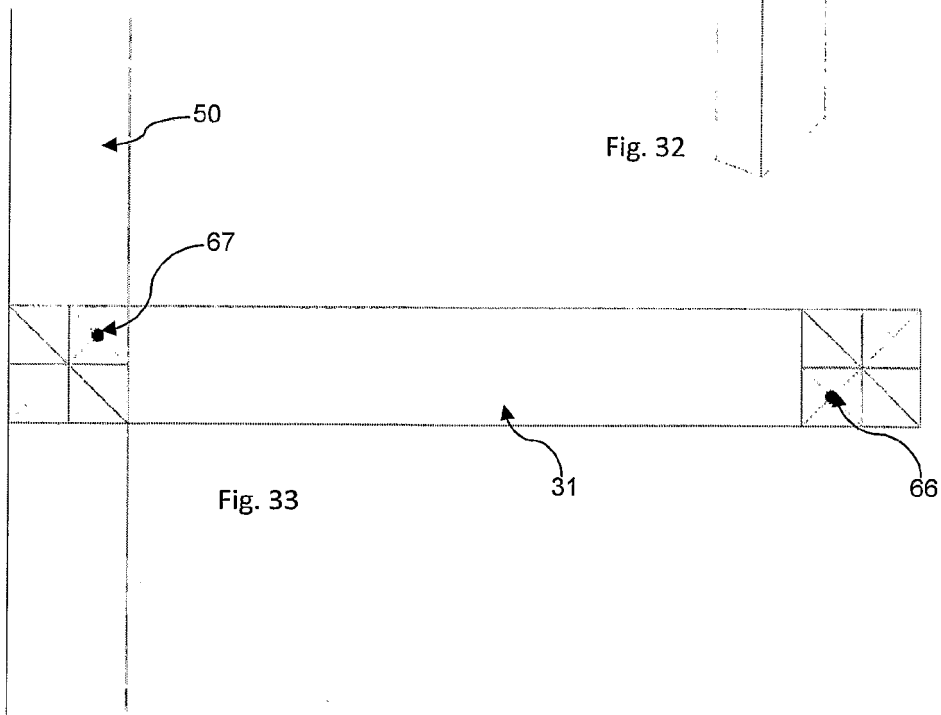


Fig. 33

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB 09/07702

A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - A47F 7/00 (2010.01) USPC - 211/85.8 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) IPC(8): A47F 7/00 (2010.01) USPC: 211/85.8 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched additional USPC: 211/13.1; 211/126.1; 211/195; 29/428; 40/584 Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) PubWEST(USPT,PGPB,EPAB,JPAB); Google Patents, Google		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,238,128 A (Stoddard) 24 August 1993 (24.08.1993) Fig 1; Fig 2; col 1, ln 23-25; col 2, ln 56-64; col 4, ln 3-10, ln 29-34; col 5, ln 1-7, ln 18-26, ln 40-45	1-13
Y	US 739,085 A (Kamerer) 15 September 1903 (15.09.1903) Fig 1; col 1, ln 12-13; col 2, ln 81-101	1-3, 4-8, 13
Y	US 5,555,975 A (Smith) 17 September 1996 (17.09.1996) col 3, ln 27-30; col 4, ln 65-col 5, ln 1-10; col 8, ln 10-14	1-13
Y	US 2007/0131633 A1 (Ferm) 14 June 2007 (14.06.2007) Fig 1; para [0011]; para [0031]	9-12
Y	US 5,896,995 A (Murray et al.) 27 April 1999 (27.04.1999) Fig 6; col 1, ln 54-59; col 3, ln 46-50	8 and 11-12
Y	US 4,986,016 A (Wichman) 22 January 1991 (22.01.1991) col 2, ln 51-59	3
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Date of the actual completion of the international search 29 May 2010 (29.05.2010)		Date of mailing of the international search report 15 JUN 2010
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201		Authorized officer: Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

REFERENCES CITED IN THE DESCRIPTION

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