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(54) FREESTANDING DISPLAY STRUCTURE FOR PACKAGING, TRANSPORTING AND DISPLAYING PRODUCTS AND METHOD FOR ASSEMBLING SAME

(57) Self-supporting display stand (1) structure for packing, transporting and displaying products that comprises four L-shaped corner posts (2) that define a square or rectangular shape, an upper frame (3) and a lower frame (4) for fastening them, at least one product supporting element and some first means of fastening the frames to the corner posts (2).

And the process of assembling said display stand (1) structure that comprises the assembly of the lower frame (4) and the upper frame (3), inserting the tabs (15) of the corner posts (2) into the slots (16) of the lower frame (4) and the fastening elements, placing the elements for supporting the products and the elements for fastening them, inserting the tabs (15) of the corner posts (2) into the slots (16) of the upper frame (3) and the fastening elements and placing the elements for containing the product.

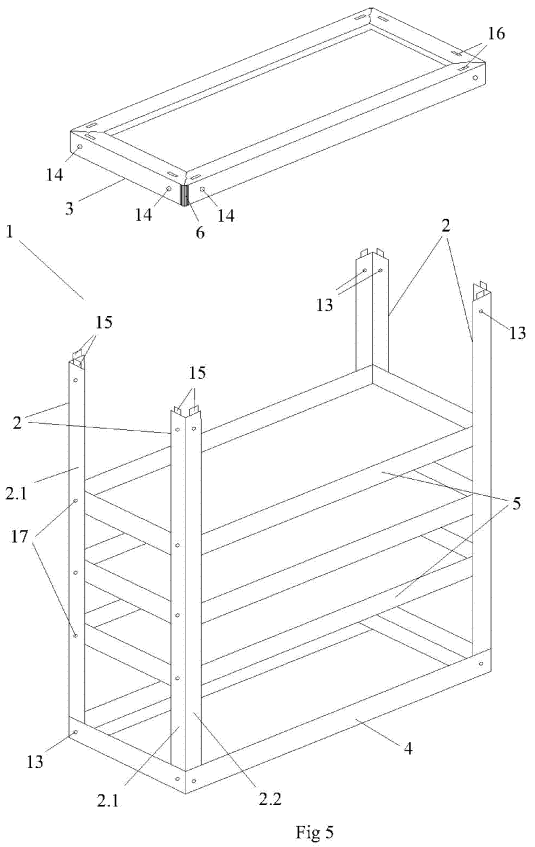

Fig 5

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Description

Technical field of the invention

[0001] This invention is in the technical field of packing and packaging, in particular a solidly constructed display stand by means of permanent joints, removable by means of tools, that enables the safe transport of products from the manufacturer to the point of sale, facilitating packing and transporting products such as liquid containers, product bags, tins, etc. to the point of sale.

Background of the invention

[0002] Currently, products that must be transported from the point of production to the point of sale for the consumer are individually packaged for the trip and arrival at the end consumer. This means that the distribution and marketing of these products requires the manufacturer firstly to pack large volumes of products for transport, either in boxes or by means of plastic wrappings, and secondly, once the products reach the point of sale, they must be individually taken out of the packing to be placed on display stands so that they are accessible to the end consumer.

[0003] The need to have secure and reliable packing, which enables protection of the transported and directed products to the end consumer, as well as the need to save in the materials used for this packing and in the time spent making the products arriving at the points of sale available to the consumer has generated the development of new packing types.

[0004] There are various packing methods for transporting and displaying products in the state of the art. As an example, the following documents of the state of the art can be mentioned: US5251753, US5161692 and US4638941.

[0005] The document referenced US5251753 describes a combined unit for transporting and displaying products that includes a number of trays or platters containing the product stacked vertically by means of vertical dividers that keep the product containers separated. It has posts to provide additional structural support during loading only.

[0006] This solution makes safe transport of products possible, being particularly directed at fluid products that must maintain their vertical position to avoid spills. For this, vertical dividers are used that divide the space of the platter into individual enclosures for each of the elements that make up the load. This generates an important drawback in that on reaching the point of sale, in addition to having to remove the posts, which only have their function during transport, the upper plate must be removed and placed vertically as a wall so that the products of the upper platter become accessible.

[0007] However, there is a further drawback, and this is because of this sectorisation of the space of the platters, firstly the products must be removed from the upper platter and when they have all been extracted by the consumers, the platter that supported them must be removed so that the products of the platter on the next level down become accessible.

[0008] Therefore, although this is a safe way for transporting, it is not simple and practical for displaying the product because the products are not freely accessible. Products must be removed in a particular order and a worker is required to control the stock on the upper platter at all times so that when they run out, the top platter can be removed to leave the products on the new platter accessible.

[0009] The document referenced US5161692 refers to a container of open sides, a lid that has an internal dividing wall forming cavities for receiving corner posts that have a lower external wall to grip and hold the corners of a household appliance.

[0010] It is, therefore, a container recipient directed at electronic equipment and especially at large consumer equipment such as refrigerators, offering protection and at the same time, the ability to see the contents of the container recipient.

[0011] Therefore, although it may be a practical packaging for large electronic devices, it is not suitable for products of smaller dimensions, which must be transported and displayed at the point of sale, all of them in the same display stand; in this case, there is no means of protection and holding for products with smaller dimensions.

[0012] The document referenced US4638941 refers to a container for loading and displaying with multiple product platters that are arranged vertically one on top of the other and are formed by cardboard recipients for shipping, which use the various parts thereof.

[0013] Thus, the recipient does not have a lid and the corners and walls extend above and below the base, which acts as a platter. The corners and the walls below the base of the container or recipient form a tight, rigid, relationship with the contents of a recipient arranged below. Likewise, the corners and walls above the base of a container arranged on the top thereof also form a tight, rigid, relationship, with the contents thereof.

[0014] There is also a rigid relationship between the base of the recipient and the contents of a recipient arranged below. In this way, the contents are partially surrounded and held, the containers are rigidly connected, and the stability and force are provided to a column of containers.

[0015] As can be seen, in this case, although a secure form of transport of product containers or recipients is proposed, these are rigidly bound to it and to the upper and lower containers in such a way as to ensure their stability, but this implies that to be able to later access the product at the point of sale, the containers rigidly bound to the product must be disassembled. This implies an inconvenience for the client and the need to have more staff to disassemble the containers and release the product, making it accessible.

[0016] There are, therefore, in the state of the art, containers and structures that are able to protect products during transport from the point of production to the point of sale, but to date there is none that additionally offers a proper and convenient display to the consumer at the point of sale in such a way as to use the same container or structure to serve as an effective product display stand at the point of sale, one that would allow the consumer to access any product in the same convenient and effective way, without needing to follow a pre-set order and without needing re-placement or disassembly of the entire container structure or in a successive way as the product is consumed.

Description of the invention

[0017] The structure of the self-supporting display stand for packing, transporting and displaying products that is presented here comprises four corner posts formed by two arms such that their cross section is an L-shape and arranged so that they define a square or rectangular shape, an upper frame and a lower frame for fastening the upper and lower ends of the four corner posts respectively, at least one product supporting element and some first means of fastening the upper and lower frames to the corner posts.

[0018] According to a preferred embodiment, both the upper frame and the lower frame comprise a folding body, divided by means of some first lines of folding into four areas, such that in a first unfolded position it presents a longitudinal form with the four areas aligned on the same line and in a second folded position, each area is arranged forming a right angle with at least one adjacent area, the first and the fourth areas being joined, such that they configure a closed perimeter that adopts the same square or rectangular form as that defined by the four corner posts.

[0019] Each of these four areas comprises a first edge section, each edge section of each of these areas being joined by means of the first lines of folding with the edge section of at least one adjacent area and a second surface section, each of them joined to a first edge section by means of a second line of folding, where in the second folded position of the frame the second surface section adopts a perpendicular position to the respective first edge section to which it is joined and where each second surface section presents some means of coupling to the second surface section of the adjacent areas in said second folded position.

[0020] In this case and in accordance with a preferred embodiment, each second surface section of said upper and lower frames comprises an end opposite to the second line of folding, of lesser length, both being joined by means of two inclined sides. In the second folded position, each inclined side of a second surface section is in contact over its whole length with the adjacent inclined side of the adjoining second surface section and the means of coupling of each second surface section to the second surface section of the adjoining areas in said second folded position is formed by a male-female coupling of the adjacent inclined sides in contact.

[0021] According to a preferred embodiment, the first means of fastening the upper and lower frames to the corner posts are formed by a hole in at least one of the arms of each one of the corner posts, both at the upper end and at the lower end thereof, at least one hole in the first edge section of each of the four areas of the upper frame and of the lower frame, located such that each hole of the corner posts is aligned with a hole in the corresponding frame and some first fastening elements located through each pair of aligned holes.

[0022] In accordance with a preferred embodiment, the corner posts present L-shaped cross sections orientated with the concave part towards the inside and comprise some first means of fastening the upper and lower frames to the corner posts formed by a tab located on each arm of the corner posts, both in the upper end and in the lower end of said arms and a coupling slot for each of the tabs. Said slots are located in the second surface sections of both upper and lower frames, next to the second line of folding and to an inclined side thereof, such that each slot is aligned with a tab of each of the arms of a corner post.

[0023] In accordance with another aspect, the product supporting elements are formed by at least one intermediate platter fixed to said corner posts and comprises some second means of fastening at least one platter to these corner posts, formed by a number of equidistant holes along at least one of the arms of each corner post and located at the same height in the four corner posts and a second fastening element respectively, located through said holes.

[0024] In this case and according to a preferred embodiment, at least one platter comprises a hole in at least one of the ends of each its sides and at a distance from it such that it is aligned with one of the holes of the corner posts and traversed by the second fastening element.

[0025] In accordance with another preferred embodiment, the product supporting elements are formed by at least one intermediate platter fastened to said corner posts and comprises some second means of fastening at least one platter formed by an adhesive.

[0026] In this case and according to a preferred embodiment, when the product supporting element is formed by at least one platter, this has a square or rectangular shape, of dimensions delimited by the corner posts.

[0027] In accordance with another preferred embodiment, at least one said platter comprises L-shaped slots on its surface for the passage of the corner posts, such that the plater presents a square, rectangular, rectangular with oval ends, rounded or circular shape, of larger dimensions to those delimited by the corner posts and where these platters present equal dimensions to each other or dimensions that decrease with the positional heights of the platters.

[0028] In this case in which at least one supporting element is formed by a platter, in a preferred embodiment, the structure of the self-supporting display stand comprises at least one reinforcement and distribution element, where said reinforcement and distribution elements are formed by intermediate angular posts and of length less than or equal to the length of the corner posts, that comprise some slots for engaging with one of its arms in the platters.

[0029] According to another aspect, in a preferred embodiment, the display stand structure comprises a structure in the form of a horizontal cross and formed by one flat crossbar fastened by the intermediate point and perpendicular to an angular crossbar, where this structure in the form of a cross is arranged over the upper frame, with this being joined to at least one intermediate post perpendicular to the plane of the cross or is arranged on a secondary upper frame joined to some intermediate posts perpendicular to the plane of the cross, these intermediate posts being fastened at the lower end by means of a secondary lower frame and where at least one product supporting element is formed by one upper platter located over the structure in the form of a cross.

[0030] In accordance with another aspect, at least one product supporting element is formed by a number of transversal crossbars for suspending of products, where said crossbars are fastened to the upper frame and to a longitudinal crossbar fastened to said frame and supported on some intermediary posts or by two vertical and parallel lower panels with a number of holes for insertion and support of fastening hooks for the product in each of said panels, where both panels are fastened at the top and bottom by a secondary upper frame and a secondary lower frame of the upper ends and the lower ends of both panels.

[0031] In accordance with a preferred embodiment, the self-supporting display stand for packing, transporting and displaying products is provided in a modular way.

[0032] According to a preferred embodiment, the structure of the self-supporting display stand comprises at least one element for containing the products in the inside of the structure during packing, transporting and/or storing the products, where said element for containing the products is formed by one or more diagonal tensors on each face of the display stand structure, formed by a cord, natural, polymer or metal wire thread and/or a plastic covering film over the structure with the products inside.

[0033] According to a preferred embodiment, the first fastening elements are formed by rivets, male-female fasteners, bolts, staples, a nut and bolt set, where the nut presents on its face oriented toward the head of the bolt at least two protrusions that enable penetrating into the material of the structure or plastic bolts with pressure nuts.

[0034] In accordance with another aspect, the second fastening elements are formed by a nut and bolt set, hooks in the form of a U, square U, a Z, horseshoe, square horseshoe, made in polymer, metal, wood or rigid material with strength suitable for supporting the product on the platters.

[0035] In accordance with a preferred embodiment, the lower frame comprises some means of rolling fastened on the second areas of its surface, located next to the inclined side of one of the areas in each coupling between second areas of adjacent surfaces.

[0036] According to another aspect, this self-supporting display stand structure is made by means of corrugated cardboard, wood, metal or rigid plastics, preferably being of compressed cardboard.

[0037] In a preferred embodiment, the display stand structure comprises posters, printed plastic films, jackets and/or advertising materials, at least on its external surface.

[0038] In accordance with a preferred embodiment, the components of this self-supporting display stand structure can be packaged compactly in a box, with open or closed sides or by means of plastic wrappings over the components of the compactly placed structure. This is very practical for its storage until use or for transporting it to the point of production in which it is unpackaged for assembly and use for packing, transporting and displaying products.

[0039] This report also presents a process for assembly of a self-supporting display stand structure for packing, transporting and displaying products, as defined above, that comprises the following phases.

[0040] The first phase of assembly of a lower frame and an upper frame for fastening, in its folded position, by means of folding along its first and the second lines of folding.

[0041] Then, the second phase consists of inserting the tabs located in the lower end of each arm of the corner posts into the corresponding slots of the lower frame, so that the hole in at least one of the arms of each corner post is aligned with the hole of the first edge section of each of the four areas of the lower frame.

[0042] Next, one fastening element is inserted into each pair of aligned holes.

[0043] The next phase is to place at least one product supporting element and the fastening elements of said elements to the corner posts and then, inserting the tabs located in the upper end of each arm of the corner posts into the corresponding slots of the upper frame so that the hole in at least one of the arms of each corner post is aligned with the hole of the first edge section of one of the four areas of the upper frame.

[0044] Next, one fastening element is inserted into each pair of aligned holes and, finally, the containing elements for products to be displayed are placed in the structure for packing, transporting and/or storing after placing the product inside the display structure.

[0045] In a preferred embodiment, the process of assembly additionally comprises the placement of at least one element of reinforcement and distribution either before and/or after the placement of the product supporting

elements and the elements for fastening thereof.

[0046] With the self-supporting display stand structure for packing, transporting and displaying products proposed here, a significant improvement over the state of the art is obtained.

[0047] This is because we have achieved a solid and strong display stand structure, which is also self-supporting, with which the conservation of the products displayed and stored therein is much greater than that of traditional structures in which it is the product itself that gives solidity to the structure.

[0048] Being a structure that additionally allows packing, transporting and displaying products at the point of sale, a very significant amount of time is saved in the tasks of packing each product individually in a protected way for transport and in unpacking and placing each of these products on the display stand.

[0049] As this structure allows the packing of the products in a safe way inside it, the transport to the point of sale of the assembly as well as the display of the product in the same structure in which it arrived packed, a significant reduction of time used in these tasks is saved, in addition to being much more convenient and also reducing the number of employees required for the distribution of the products and their placement at the point of sale.

[0050] Therefore, this translates into higher productivity for companies, which leads to a reduction of costs and time, higher convenience for the consumer and a saving of packing materials for individual products, so it is more environmentally friendly.

[0051] This is, therefore, a very effective, practical structure, easy to assemble and at the same time at the point of sale it is convenient and simple for the consumer, in addition to being attractive due to the many designs that may be adopted.

Brief description of the figures

[0052] In order to help gain a better understanding of the characteristics of this invention, in accordance with a preferred example of embodiment thereof, a series of figures is provided as an integral part of said description where, for illustrative and non-limiting purposes, the following is represented:

Figures 1.1 and 1.2. Respectively show a perspective view of a corner post and a front view of its arm for the first preferred embodiment of the invention.

Figure 2. Shows a perspective view of the folding body of the upper and lower frames in an unfolded position, for the first preferred embodiment of the invention.

Figures 3.1 and 3.2. Respectively show a front view of the first edge section and the second surface section of said upper and lower frames in an unfolded position, for the first preferred embodiment of the invention.

Figure 4. Shows a plan view of the upper and lower frames in a folded position, for the first preferred embodiment of the invention.

Figure 5. Shows an exploded perspective view of the self-supporting display structure, for the first preferred embodiment of the invention.

Figures 6.1 and 6.2. Respectively show an exploded perspective view and a perspective view of the self-supporting display structure, packed for transport or storage prior to its use, for the first preferred embodiment of the invention.

Figure 7.- Shows an exploded perspective view of the self-supporting display structure, for the second preferred embodiment of the invention.

Figures 8.1 and 8.2. Respectively show an exploded perspective view and a perspective view of the self-supporting display structure, packed for packed for transport or storage prior to its use, for the second preferred embodiment of the invention.

Figure 9. Shows an exploded perspective view of the self-supporting display structure, for the third preferred embodiment of the invention.

Figures 10.1 and 10.2. Respectively show an exploded perspective view and a perspective view of the self-supporting display structure, packed for transport or storage prior to its use, for the third preferred embodiment of the invention.

Figure 11. Shows a perspective view of the self-supporting display structure, for the fourth preferred embodiment of the invention.

Figures 12.1 and 12.2. Respectively show an exploded perspective view and a perspective view of the self-supporting display structure, packed for transport or storage prior to its use, for the fourth preferred embodiment of the invention.

Figures 13.1 and 13.2. Respectively show a perspective view and an exploded perspective view of the self-supporting display structure, for the fifth preferred embodiment of the invention.

Figure 14. Shows a perspective view of the self-supporting display structure, packed for its transport or storage prior to its use, for the fifth preferred embodiment of the invention.

Figure 15.- Shows a perspective view of the self-supporting display structure, for the sixth preferred

embodiment of the invention.

Figures 16.1 and 16.2. Respectively show an exploded perspective view and a perspective view of the various phases of packing the self-supporting display structure, for its transport or storage prior to its use, for the sixth preferred embodiment of the invention.

Figure 17. Shows a perspective view of the self-supporting display structure, for the seventh preferred embodiment of the invention.

Figures 18.1 and 18.2. Shows a pair of perspective views in various phases of packing of the self-supporting display structure, for its transport or storage prior to its use, for the seventh preferred embodiment of the invention.

Figure 19. Shows a perspective view of the self-supporting display structure, for the eighth preferred embodiment of the invention.

Figures 20.1, 20.2, 20.3, 20.4 and 20.5. Respectively show a perspective view of the various second fastening elements of the self-supporting display structure.

Detailed description of the preferred embodiment of the invention

[0053] The figures provided show how in a first preferred embodiment of the invention, the structure of the self-supported display stand 1 for packing, transporting and displaying products proposed here comprises four corner posts 2 formed by two arms 2.1, 2.2, such that their cross section is an L-shape and arranged so that they define a rectangular shape, an upper frame 3 and a lower frame 4 for fastening the upper and lower ends respectively of the four corner posts 2, at least one product supporting element and some first means of fastening the upper 3 and lower 4 frames to the corner posts 2.

[0054] In this first preferred embodiment of the invention, as shown in Figure 4, the product supporting elements are formed by platters 5 fixed to the corner posts 2.

[0055] In this first preferred embodiment of the invention, as shown in Figures 2, 3.1, 3.2 and 4, both the upper frame 3 and the lower frame 4 comprises a folding body. This folding body is divided by means of some first lines of folding 6 into four areas 7.1, 7.2, 7.3 and 7.4, such that in a first unfolded position that is shown in Figures 2, 3.1 and 3.2, it presents a longitudinal form with the four areas 7.1, 7.2, 7.3 and 7.4 aligned on the same straight line and in a second folded position, shown in Figure 4, each area is arranged forming a right angle with at least one adjacent area, the first area 7.1 and the fourth area 7.4 being joined, such that they configure a closed perimeter that adopts the same rectangular form as that defined in this first embodiment by the four corner posts 2.

[0056] As shown in Figures 2, 3.1 and 3.2, these four areas 7.1, 7.2, 7.3 and 7.4 of the upper frame 3 and of the lower frame 4 each comprise a first edge section 8 and a second surface section 9. Each first edge section 8 of each of these four areas 7.1, 7.2, 7.3 and 7.4 is joined by means of the first lines of folding 6 with the first edge section 8 of at least one adjoining area, whereas each second surface section 9 is joined to a first edge section 8 by means of a second line of folding 10.

[0057] As can be seen in Figure 4, in the second folded position of the frame, each second surface section 9 adopts a perpendicular position to the respective first edge section 8 to which it is joined and presents some means of coupling to the second surface section 9 of the adjoining areas in said second folded position.

[0058] In this first preferred embodiment of the invention, each second surface section 9 of said upper 3 and lower 4 frames comprises an end 11 opposed to the second line of folding 10, of lesser length that itself, both being joined by means of two inclined sides 12 so that on folding the folding body that forms both upper 3 and lower 4 frames by the four areas 7.1, 7.2, 7.3 and 7.4, in which each one is divided, each inclined side 12 of a second surface section 9 remains in contact over its whole length with the adjacent inclined side 12 of the adjoining second surface section 9. The means of coupling of each second surface section 9 to the second surface section 9 of the adjoining areas in said second folded position are formed by a male-female coupling of said adjacent inclined sides 12 in contact.

[0059] In this first preferred embodiment of the invention, the first means of fastening the upper 3 and lower 4 frames to the corner posts 2 are formed by a hole 13 in at least one of the arms 2.1 of each of the corner posts, as shown in Figures 1.1 and 1.2, both in the upper end and in the lower end thereof, to at least one hole in the first edge section 8 of each one of the four areas 7.1, 7.2, 7.3 and 7.4 of the upper frame 3 and of the lower frame 4, as shown in Figures 2 and 3.1, located such that each hole 13 of the corner posts 2 remains aligned with a hole 14 of the corresponding frame and some first fastening elements located through each pair of aligned holes 13 and 14, which in this first preferred embodiment of the invention are formed by a nut and bolt set.

[0060] Likewise, in this first preferred embodiment of the invention, as shown in Figure 5, the corner posts 2 present their L-shaped cross sections orientated in a concave way toward the inside, and comprise some first means of fastening the upper frame 3 and lower frame 4 to the corner posts 2 formed by a tab 15 located in each arm 2.1 and 2.2 of the corner posts 2 and a slot 16 for coupling of each of the tabs 15 respectively located in the second surface sections 9 of both upper 3 and lower 4 frames.

[0061] The tabs 15 are located both in the upper end and in the lower end of the arms 2.1 and 2.2 of each of the corner posts 2, whereas the slots 16 are located next

to the second line of folding 10 and to an inclined side 12 of the second surface sections 9, so that each slot 16 remains aligned with a tab 15 of one of the arms 2.1 and 2.2 of a corner post 2.

[0062] Likewise, the second means of fastening the corner posts 2 to the platters 5 in this first preferred embodiment of the invention are formed, as shown in Figures 1.1 and 1.2, by a number of equidistant holes 17 along one of the arms 2.1 of each corner post 2 and a second fastening element respectively located through these holes 17 and of a hole 18 in an end of each side of the platters 5, as shown in Figure 5. In this case, although the platters 5 present these holes 18 in both ends of each side thereof, only one of them will be used in fastening to the corner posts 2, because these present a number of equidistant holes 17 in only one of the arms 2.1.

[0063] The equidistant holes 17 in one of the arms 2.1 of each corner post 2 are located at the same height in the four corner posts 2 and the holes 18 in the ends of the sides of the platters 5 are located at a distance from said ends such that each one remains aligned with one of the holes 17 of the corner posts 2 so that a second fastening element can be located through both aligned holes 17 and 18.

[0064] In this first preferred embodiment of the invention, the second fastening element that is placed through said holes 17 and 18 is formed by a nut-bolt set, not shown in the Figures.

[0065] In this first preferred embodiment of the invention, as can be seen in Figure 5, the platters 5 present a rectangular form, of dimensions delimited by the corner posts 2.

[0066] The structure of the self-supporting display stand 1 of this first embodiment is made of corrugated cardboard and comprises a decorative and advertising printed plastic film, not shown, on its external surface. At the time of packing and transport of the stand and of the product inside together, it presents a plastic film for covering the structure with the products inside.

[0067] As shown in Figures 6.1 and 6.2, the components of the structure of this first preferred embodiment of the invention can be packaged by means of a plastic sheath over its components, placed in a compact way, which is very practical for the storage thereof when it is not in use for the transport thereof when it still does not contain the product inside, saving much space.

[0068] This report presents a second preferred embodiment of the invention, which is shown in Figures 7, 8.1 and 8.2, where different to the first preferred embodiment of the invention, the second means of fastening between the corner posts 2 and the trays 5 of the structure are formed by a number of equidistant holes 17, in this case, located in pairs along one of the arms 2.1 of each corner post 2 and located at the same height in the four corner posts 2 and a second fastening element respectively located through these holes 17.

[0069] In this case, the second fastening elements are formed by a U-shaped metal hook 20 as shown in Figure 20.1, although any of those shown in Figures 20.1 to 20.5 could be used, that are inserted into each pair of holes 17 at the same height of the arm 2.1 of each post 2 and therefore in this case the platters 5 do not present holes in the sides but are supported on the metal hooks 20 that form these fastening elements of the corner posts 2.

[0070] Figures 8.1 and 8.2 show that this display structure 1 can be packed by means of a plastic wrap over its compactly placed components, which can occupy a very small space.

[0071] This report proposes a third preferred embodiment of the invention, which is shown in Figures 9, 10.1 and 10.2 and which is different to the previous embodiments in that the platters 5 present L-shaped slots 21 on their surface for the passage of the corner posts 2. The platters 5 in this third preferred embodiment of the invention have a rounded shape of larger dimensions than those delimited by the corner posts 2 and in this case, all the platters 5 have the same size.

[0072] These platters 5 are fastened to the corner posts 2 by means of the second means of fastening that in this case, as in the second preferred embodiment of the invention, are formed by a number of equidistant holes 17 located in pairs along the length of one of the arms 2.1 of each corner post 2 and at the same height in the four corner posts 2, and a second fastening element located through these holes 17. In this case, this second fastening element is formed by a square U-shaped metal hook 22, as shown in Figure 20.2.

[0073] Figures 10.1 and 10.2 shows how this structure can be packed by means of a plastic wrap over its compactly placed components, thereby occupying a very small space for storage or transport without products inside to the place of its usage.

[0074] This report presents a fourth preferred embodiment of the invention that is shown in Figures 11, 12.1 and 12.2, where the difference to the previous embodiments is again in the second means of fastening of the platters 5 to the corner posts 2, which in this fourth embodiment are the same as in the case of the second and third embodiments, although the secondary fastening elements are formed in this case by a Z-shaped metal hook 23, as shown in Figure 20.3.

[0075] In this fourth preferred embodiment of the invention, as shown in Figure 11, the platters 5 present a rectangular form delimited by the corner posts 2 and the display stand 1 structure comprises reinforcement and distribution elements, formed by Y-shaped angular intermediate posts 24 and of equal length to that of the corner posts 2. These intermediate posts 24 present some slots 25 for engaging one of its arms 2.1 in the platters 5.

[0076] Figures 12.1 and 12.2 shows how this structure can be packed, with a plastic wrap over the compactly placed pieces, so occupying a very small space.

[0077] This report presents a fifth preferred embodiment of the invention, shown in Figures 13.1, 13.2 and 14, where the difference to the previously shown embod-

iments is that the product supporting elements are formed by a series of transversal crossbars 26 for hanging products, these transversal crossbars 26 being fastened to the upper frame 3 and to a longitudinal crossbar 27 fastened to this upper frame 3 and supported on some intermediate posts 24. Figures 13.1 and 13.2 show the elements that make up this structure, whereas Figure 14 shows, similarly to the previously proposed embodiments, how the structure of this fifth embodiment can be packed by means of a plastic wrap over its compactly placed components.

[0078] A sixth preferred embodiment of the invention is shown in Figures 15, 16.1 and 16.2, where the difference to the previously proposed embodiments is that the product supporting elements are formed by two vertical and parallel internal panels 28 with a number of holes for the insertion and support of fastening hooks 29 for the product in each of said panels 28. Figure 15 shows both panels 28 are fastened at the top and bottom by a secondary upper frame 30 and a secondary lower frame 31 at the upper and lower ends respectively of both panels 28.

[0079] Likewise, this structure further comprises an element for containing the product inside the structure during packing, transporting and/or storing products, this containing element being formed by diagonal tensors 32 in the form of a cross, made of metal wires.

[0080] Figures 16.1 and 16.2 shows the phases of compactly packing this structure into a box 35 with open sides.

[0081] This report presents a seventh preferred embodiment of the invention, which is shown in Figures 17, 18.1 and 18.2, in which the structure is different to the previous proposals in that it comprises a structure in the form of a cross 36 arranged horizontally and formed by a flat crossbar 33 fastened by the middle point and perpendicular to an angular crossbar 34. As shown in Figure 17, this structure in the form of a cross 19 is arranged over the upper frame 3 of the structure, where this upper frame 3 is joined to some intermediate posts 24 perpendicular to the plane of the cross, located both in the central point of the structure and in the central point of each of the sides thereof. Likewise, in this structure, the at least one product supporting element is formed by an upper platter 5.1 on the structure in the form of a cross 19.

[0082] Figures 18.1 and 18.2 show the possibility of packing the structure by means of a plastic wrap over its compactly placed components.

[0083] This report presents an eighth preferred embodiment of the invention in which, as shown in Figure 19, different to the previously proposed embodiments of this report, the display stand structure 1 comprises a structure in the form of a cross 19 arranged over a secondary upper frame 30 joined to some intermediate posts 24 perpendicular to the plane of the cross and fastened at the bottom by means of a secondary lower frame 31, with an upper platter 5.1 arranged over the structure in the form of a cross 19, on which are placed the elements for containing the products in order to support them.

[0084] In order to see the elements properly, the lower frame 4 of the structure has not been fully represented. The structure of this eighth preferred embodiment of the invention can also be compactly packed into a box.

[0085] All the embodiments proposed are made of compressed cardboard, the same as the first embodiment.

[0086] Likewise, this report proposes a process for assembling the self-supporting display stand 1 structure for packing, transporting and displaying products of the first preferred embodiment of the invention. The phases of this process are as follows:

Firstly, the lower frame 4 and the upper frame 3 for fastening are assembled, in their folded position, by means of folding along the first 6 and second lines of folding 10 thereof.

[0087] Next, the tabs 15 located in the lower end of each arm 2.1 and 2.2 of the corner posts 2 are inserted into the corresponding slots 16 of the lower frame 4, so that the holes 13, which in this case are presented by both arms 2.1 and 2.2 of the corner post 2, are aligned with each of the holes 14 respectively of the first edge section 8 of the four areas 7.1, 7.2, 7.3 and 7.4 of the lower frame 4.

[0088] Then a fastening element is inserted into each pair of aligned holes 13 and 14. Then at least one element of support is fitted, which in this case is formed by several intermediate platters 5 and the fastening elements of said elements to the corner posts 2.

[0089] The next step is to insert the tabs 15 located at the upper end of each arm 2.1 and 2.2 of the corner posts 2 into the corresponding slots 16 of the upper frame 3, so that the holes 13 which are presented by both arms 2.1 and 2.2 of each corner post 2 remain respectively aligned with one of the holes 14 of the first edge section 8 of the four areas 7.1, 7.2, 7.3 and 7.4 of the upper frame 3.

[0090] Next, a fastening element is inserted into each pair of aligned holes 13 and 14, and containing elements are placed for the products displayed in the structure, for their packing, transporting and/or storing after placing the product inside the display structure.

[0091] The self-supporting display stand structure presented here results in significant improvements with respect to the state of the art, both from the point of view of productivity in the production, distribution and display cycle of a product and from the point of view of convenience, both for the seller and for the consumer.

[0092] Thus, a structure is proposed that can adopt multiple forms and designs to offer a distinctive and attractive sales aesthetic for each product and furthermore enormously facilitates the work of not having to pack each product separately for its transport to the point of sale, nor having to unpack them and place them on shelves or displays once they reach the point of sale. This, therefore, allows packing, transporting and displaying products inside the structure, from the time they are placed

inside it at the point of production right up to the point of sale itself.

[0093] Furthermore, it enables easy and direct access by the consumer to any of the products in the structure, whichever level it may be on because, by the way in which it is made, all levels thereof are accessible without it being necessary to modify or remove any part of a higher level.

[0094] Likewise, as the structure is self-supporting and the products do not affect the stability thereof, the consumer can first remove the products from a platter at a lower level without this affecting the stability of the structure in any way.

[0095] This is, therefore, a simple, versatile and very effective self-supporting display stand structure, in addition to being convenient and good looking.

Claims

1. Self-supporting display stand (1) structure for packing, transporting and displaying products, **characterised in that** it comprises four corner posts (2) formed by two arms (2.1, 2.2) such that their cross section is L-shaped and arranged so that they define a square or rectangular shape, an upper frame (3) and a lower frame (4), for fastening the upper and lower ends of the four corner posts (2) respectively, at least one product supporting element and some first means of fastening the upper frame (3) and the lower frame (4) to the corner posts (2).

2. Self-supporting display stand (1) structure for packing, transport and display of products of claim 1 **wherein** both the upper frame (3) and the lower frame (4) comprise a folding body, divided by means of some first lines of folding (6) into four areas (7.1, 7.2, 7.3, 7.4), such that in a first unfolded position it presents a longitudinal form with the four areas aligned along the same straight line and in a second folded position each area is arranged forming a right angle with at least one adjacent area, with the first and the fourth areas (7.1, 7.4) being joined, such that they configure a closed perimeter that adopts the same square or rectangular form that is defined by the four corner posts (2), where each of these four areas (7.1, 7.2, 7.3, 7.4) comprises a first edge section (8), each edge section (8) of each of these areas being joined by means of the first lines of folding (6) with the edge section (8) of at least one adjoining area and a second surface section (9), each of them joined to a first edge section (8) by means of a second line of folding (10), where in the second folded position of the frame, the second surface section (9) adopts a perpendicular position to the respective first edge section (8) to which it is joined and where each second surface section (9) presents some means of coupling to the second surface section (9) of the adjoining areas in this second folded position.

3. Self-supporting display stand (1) structure for packing, transporting and displaying products of claim 2, **wherein** each second surface section (9) comprises one end (11) opposite to the second line of folding (10), of a lesser length than the second line of folding, both being joined by means of two inclined sides (12), where in the second folded position each inclined side (12) of the second surface section (9) is in contact over all its length with the adjacent inclined side (12) of the adjoining second surface section (9) and where the means of coupling of each second surface section (9) to the second surface section (9) of the adjoining areas in the second folded position is formed by a male-female coupling of the adjacent inclined sides (12) in contact.

4. Self-supporting display stand (1) structure for packing, transporting and displaying products of any of the claims 2 and 3 **wherein** the first means of fastening of the upper and lower frames (3, 4) to the corner posts (2) are formed by a hole (13) in at least one of the arms (2.1, 2.2) of each of the corner posts (2), both in the upper end and in the lower end thereof, at least one hole (14) in the first edge section (8) of each of the four areas (7.1, 7.2, 7.3, 7.4) of the upper frame (3) and of the lower frame (4), located such that each hole (13) of the corner posts (2) is aligned with a hole (14) of the corresponding frame (3, 4) and some first fastening elements located through each pair of aligned holes (13, 14).

5. Self-supporting display stand (1) structure for packing, transporting and displaying products of any of the claims 2 to 4 **wherein** the corner posts (2) present their L-shaped cross section with the concave side facing toward the inside and comprise some first means of fastening of the upper and lower frames (3, 4) to the corner posts (2) formed by a tab (15) located in each arm (2.1, 2.2) of the corner posts (2), both in the upper end and in the lower end of said arms and a slot (16) for coupling each of the tabs (15) respectively, where said slots (16) are located in the second surface sections (9) of both upper and lower frames (3, 4), next to the second line of folding (10) and to an inclined side (12) thereof, such that each slot (16) is aligned with a tab (15) of one of the arms (2.1, 2.2) of a corner post (2).

6. Self-supporting display stand (1) structure for packing, transporting and displaying products of any of the previous claims **wherein** the product supporting elements are formed by at least one intermediate platter (5) fastened to said corner posts (2) and comprises some second means of fastening of at least one said platter (5) to said corner posts (2) formed by a number of equidistant holes (17) along at least one of the arms (2.1) of each corner post (2) and located at the same height on the four corner posts

(2) and a second fastening element respectively located through these holes (17).

7. Self-supporting display stand (1) structure for packing, transporting and displaying products of claim 6 **wherein** at least one platter (5) comprises a hole (18) in at least one of the ends of each side thereof and at a distance thereof such that it is aligned with a hole (17) of the corner posts (2) and traversed by the second fastening element.

8. Self-supporting display stand (1) structure for packing, transporting and displaying products of any of the claims 1 to 5 **wherein** the product supporting elements are formed by at least one intermediate platter (5) fastened to said corner posts (2) and comprises some secondary fastening means of at least one platter (5) formed by an adhesive.

9. Self-supporting display stand (1) structure for packing, transporting and displaying products of any of the claims 6, 7 or 8 **wherein** at least one platter (5) has a square or rectangular form of dimensions delimited by the corner posts (2).

10. Self-supporting display stand (1) structure for packing, transporting and displaying products of any of the claims 6, 7 or 8 **wherein** at least one platter (5) comprises L-shaped slots (21) on its surface for the passage of the corner posts (2) such that the platter (5) presents a square, rectangular, rectangular with rounded opposing ends, oval or circular form, of dimensions greater than those delimited by the corner posts (2) and where these platters (5) present the same or decreasing dimensions with their height positions.

11. Self-supporting display stand (1) structure for packing, transporting and displaying products of any of the claims 6, 7 or 8 **wherein** it comprises at least one reinforcement and distribution element, where said reinforcement and distribution elements are formed by angular-shaped intermediate posts (24) of length less than or equal to the length of the corner posts (2), that comprises some slots (25) in one of the arms (2.1) for engaging in the platters (5).

12. Self-supporting display stand (1) structure for packing, transporting and displaying products of any of the claims 1 to 5 **wherein** it comprises a structure in the form of a cross (19) arranged horizontally and formed by a flat crossbar (33) fastened to the intermediate point and perpendicular to an angular crossbar (34), where this structure in the form of a cross (19) is arranged over the upper frame (3) this being joined to at least one intermediate post (24) perpendicular to the plane of the cross, or is arranged over a secondary upper frame (30) joined to some intermediate posts (24) perpendicular to the plane of the cross, these intermediate posts (24) being fastened at the bottom by means of a secondary lower frame (31) and where at least one product supporting element is formed by an upper platter (5.1) located over the structure in the form of a cross (19).

13. Self-supporting display stand (1) structure for packing, transporting and displaying products of any of the claims 1 to 5 **wherein** it comprises a number of transversal crossbars (26) for hanging products, where said transversal crossbars (26) are fastened to the upper frame (3) and to a longitudinal crossbar (27) fastened to said upper frame (3) and supported on some intermediate posts (24) or by two vertical and parallel internal panels (28) with a number of holes for inserting and supporting fastening hooks (29) for the product on each of said panels (28), where both panels (28) are fastened at the top and bottom to a secondary upper frame (30) and a secondary lower frame (31) respectively at the upper ends and lower ends of both panels (28).

14. Self-supporting display stand (1) structure for packing, transporting and displaying products of any of the previous claims **wherein** it is supplied in modular form.

15. Self-supporting display stand (1) structure for packing, transporting and displaying products of any of the previous claims **wherein** it comprises at least one element for containing products inside the structure during packing, transporting and/or storing products, where said containing element is formed by one or more diagonal tensors (32) on each face of the display structure, formed by a cord, natural, polymeric or metal wire thread and/or plastic film for wrapping the structure with the products inside.

16. Self-supporting display stand (1) structure for packing, transporting and displaying products of claim 4 **wherein** the first fastening elements are formed by rivets, male-female fasteners, bolts, staples and nut-and-bolt set, where the nut presents on its face at least two protrusions orientated toward the head of the bolt that allows it to penetrate into the material of the structure or plastic bolts with pressure nuts.

17. Self-supporting display stand (1) structure for packing, transporting and displaying products of claims 6, 7 or 8 **wherein** the second fastening elements are formed by a nut-bolt set, U-shaped hooks (20), squared U-shaped hooks (22), Z-shaped hooks (23), horseshoe hooks, squared horseshoe hooks, made in polymer, metal, wood or a rigid material with strength suitable for supporting the product on the platters.

18. Self-supporting display stand (1) structure for packing, transporting and displaying products of any of the previous claims **wherein** the lower frame (4) comprises some means of rolling, fastened on some second sections of the surface (9) thereof, located next to the inclined side (12) of one of the areas in each coupling between adjacent second surface sections (9).

19. Self-supporting display stand (1) structure for packing, transporting and displaying products of any of the previous claims **wherein** it is made of compressed cardboard, corrugated cardboard, wood, metal or rigid plastics.

20. Self-supporting display stand (1) structure for packing, transporting and displaying products of any of the previous claims **wherein** it comprises posters, printed plastic films, jackets and/or advertising materials over at least its external surface.

21. Self-supporting display stand (1) structure for packing, transporting and displaying products of any of the previous claims **wherein** its components can be packed compactly into a box (35), with open or closed sides or by means of plastic wrapping over said compactly placed components.

22. Process of assembling a self-supporting display stand (1) structure for packing, transporting and displaying products as defined in claims 1 to 21 **characterised in that** it comprises the following phases:

- assembling a lower frame (4) and an upper frame (3) for fastening, in its folded position, by means of folding of the first and the second lines of folding (6, 10) thereof;
- inserting the tabs (15) located at the lower end of each arm (2.1, 2.2) of the corner posts (2) into the corresponding slots (16) of the lower frame (4), so that the hole (13) in at least one of the arms (2.1, 2.2) of each corner post (2) is aligned with the hole (14) of the first edge section (8) of one of the four areas (7.1, 7.2, 7.3, 7.4) of the lower frame (4);
- inserting a fastening element in each pair of aligned holes (13, 14);
- placing at least one product supporting element and the fastening elements of said elements to the corner posts (2);
- inserting the tabs (15) located at the upper end of each arm (2.1, 2.2) of the corner posts (2) into the corresponding slots (16) of the upper frame (3) so that the hole (13) in at least one of the arms (2.1, 2.2) of each corner post (2) is aligned with the hole (14) of the first edge section (8) of one of the four areas (7.1, 7.2, 7.3, 7.4) of the upper frame (3);
- inserting a fastening element in each pair of aligned holes (13, 14);
- placing the elements for containing the product displayed for packing, transporting and/or storing after placing the product inside the display stand structure.

23. Process for assembling a self-supporting display stand (1) structure for packing transporting and displaying products of claim 22 **wherein** it comprises the placement of at least one reinforcement and distribution element prior to or after the placement of the product supporting elements and the elements for fastening thereof.

Amended claims under Art. 19.1 PCT

1. Self-supporting display stand (1) structure for packing, transporting and displaying products, **characterised in that** it comprises four corner posts (2) formed by two arms (2.1, 2.2), such that their cross-section is L-shaped and arranged so that they define a square or rectangular shape, an upper frame (3) and a lower frame (4) for fastening the upper and lower ends respectively of the four corner posts (2), at least one product supporting element, some first means of fastening the upper (3) and lower (4) frames to the corner posts (2) formed by a first hole (13) in both ends of at least one of the arms (2.1, 2.2) of each corner post (2), at least one second hole (14) in the upper (3) and lower (4) frame, located such that each first hole (13) of each post is aligned with a second hole (14) of the corresponding frame (3, 4) and some first means of fastening located through each pair of aligned holes (13, 14) and some first means of fixing of said upper (3) and lower (4) frames to the corner posts (2) formed by a tab (15) located in each arm (2.1, 2.2) of the corner posts (2), in both the upper end and the lower end of said arms and a slot (16) for coupling each of the tabs (15) respectively, arranged in the upper (3) and lower (4) frames so that each slot (16) is aligned with a tab (15) of one of the arms (2.1, 2.2) of the corner posts (2).

2. Self-supporting display stand (1) structure for packing, transport and display of products of claim 1 **wherein** both the upper frame (3) and the lower frame (4) comprise a folding body, divided by means of some first lines of folding (6) into four areas (7.1, 7.2, 7.3, 7.4), such that in a first unfolded position it presents a longitudinal form with the four areas aligned along the same straight line and in a second folded position each area is arranged forming a right angle with at least one adjacent area, with the first and the fourth areas (7.1, 7.4) being joined, such that they configure a closed perimeter that adopts the

same square or rectangular form that is defined by the four corner posts (2), where each of these four areas (7.1, 7.2, 7.3, 7.4) comprises a first edge section (8), each edge section (8) of each of these areas being joined by means of the first lines of folding (6) with the edge section (8) of at least one adjoining area and a second surface section (9), each of them joined to a first edge section (8) by means of a second line of folding (10), where in the second folded position of the frame the second surface section (9) adopts a perpendicular position to the respective first edge section (8) to which it is joined and where each second surface section (9) presents some means of coupling to the second surface section (9) of the adjoining areas in said second folded position.

3. Self-supporting display stand (1) structure for packing, transporting and displaying products of claim 2, **wherein** each second surface section (9) comprises an opposing end (11) to the second line of folding (10), of lesser length than the second line of folding, both being joined by two inclined sides (12), where in the second folded position each inclined side (12) of a second surface section (9) is in contact over its whole length with the adjacent inclined side (12) to the adjoining second surface section (9) and where the means of coupling of each second surface section (9) to the second surface section (9) of the adjoining areas in the second folded position are formed by a male-female coupling of the adjacent inclined sides (12) in contact.

4. Self-supporting display stand (1) structure for packing, transporting and displaying products of any of the previous claims **wherein** the product supporting elements are formed by at least one intermediate platter (5) fastened to said corner posts (2) and comprises some second means of fastening of at least one said platter (5) to said corner posts (2) formed by a number of equidistant holes (17) along at least one of the arms (2.1) of each corner post (2) and located at the same height on the four corner posts (2) and a second fastening element respectively located through these holes (17).

5. Self-supporting display stand (1) structure for packing, transporting and displaying products of claim 4, **wherein** at least one platter (5) comprises a hole (18) in at least one of the ends of each side thereof and at a distance thereof such that it is aligned with a hole (17) of the corner posts (2) and traversed by the second fastening element.

6. Self-supporting display stand (1) structure for packing, transporting and displaying products of any of the claims 1 to 3 **wherein** the product supporting elements are formed by at least one intermediate platter (5) fastened to said corner posts (2) and comprises some secondary means of fastening of at least one platter (5) formed by an adhesive.

7. Self-supporting display stand (1) structure for packing, transporting and displaying products of any of the claims 4 and 5 or 6 **wherein** at least one platter (5) has a square or rectangular shape of dimensions delimited by the corner posts (2).

8. Self-supporting display stand (1) structure for packing transporting and displaying products of any of the claims 4 and 5 or 6 **wherein** at least one platter (5) comprises L-shaped slots (21) on its surface for the passage of the corner posts (2), such that the platter (5) presents a square, rectangular, rectangular with rounded opposing ends, oval or circular shape, of dimensions greater than those delimited by the corner posts (2) and where these platters (5) present the same or decreasing dimensions with their height positions.

9. Self-supporting display stand (1) structure for packing, transporting and displaying products of any of the claims 4 and 5 or 6 **wherein** it comprises at least one reinforcement and distribution element, where said reinforcement and distribution elements are formed by angular-shaped intermediate posts (24) of length less than or equal to the length of the corner posts (2), that comprise some slots (25) in one of the arms (2.1) for engaging in the platters (5).

10. Self-supporting display stand (1) structure for packing, transporting and displaying products of any of the claims 1 to 3 **wherein** it comprises a structure in the form of a cross (19) arranged horizontally and formed by a flat crossbar (33) fastened to the intermediate point and perpendicular to an angular crossbar (34), where this structure in the form of a cross (19) is arranged on the upper frame (3) and is joined to at least one intermediate post (24) perpendicular to the plane of the cross.

11. Self-supporting display stand (1) structure for packing, transporting and displaying products of any of the claims 1 to 3 **wherein** it comprises a structure in the form of a cross (19) arranged horizontally and formed by a flat crossbar (33) fastened to the intermediate point and perpendicular to an angular crossbar (34), where this structure in the form of a cross (19) is arranged on a secondary upper frame (30) joined to some intermediate posts (24) perpendicular to the plane of the cross and these intermediate posts (24) being fastened at the lower end by a secondary lower frame (31) and where at least one product supporting element is formed by an upper platter (5.1) located on the structure in the form of a cross (19).

12. Self-supporting display stand (1) structure for pack-

ing, transporting and displaying products of any of the claims 1 to 3 **wherein** it comprises a number of crossbars (26) for hanging products, where said crossbars (26) are fastened to the upper frame (3) and to a longitudinal crossbar (27) fastened to said upper frame (3) and supported on some intermediate posts (24).

13. Self-supporting display stand (1) structure for packing, transporting and displaying products of any of the claims 1 to 3 **wherein** it comprises two vertical and parallel internal panels (28) and a number of holes for inserting and supporting fastening hooks (29) for the product on each of said panels (28), where both panels (28) are fastened at the top and at the bottom by a secondary upper frame (30) and a secondary lower frame (31) respectively for fastening the upper and lower ends of both panels (28).

14. Self-supporting display stand (1) structure for packing, transporting and displaying products of any of the previous claims **wherein** it is supplied in modular form.

15. Self-supporting display stand (1) structure for packing, transporting and displaying products of any of the previous claims **wherein** it comprises at least one element for containing products inside the structure during packing, transporting and/or storing of products, where said product containing element is formed by one or more diagonal tensors (32) on each face of the display structure, formed by a cord, natural, polymeric or metal wire and/or a plastic film for wrapping the structure with the products inside.

16. Self-supporting display stand (1) structure for packing, transporting and displaying products of claim 1 **wherein** the first fastening elements are formed by rivets, male-female fasteners, bolts, staples, a nut-and-bolt set, where the nut presents on its face at least two protrusions orientated toward the head of the bolt that allow it to penetrate into the material of the structure or plastic bolts with pressure nuts.

17. Self-supporting display stand (1) structure for packing, transporting and displaying products of claims 4 and 5 or 6 **wherein** the second fastening elements are formed by a nut-bolt set, U-shaped hooks (20), squared U-shaped hooks (22), Z-shaped hooks (23), horseshoe hooks, squared horseshoe hooks, made in polymer, metal, wood or a rigid material with strength suitable for supporting the product on the platters.

18. Self-supporting display stand (1) structure for packing, transporting and displaying products of any of the previous claims **wherein** the lower frame (4) comprises some means of rolling, fastened on the second surface sections (9) thereof, located next to the inclined side (12) of one of the areas in each coupling between adjacent second surface sections (9).

19. Self-supporting display stand (1) structure for packing, transporting and displaying products of any of the previous claims **wherein** it is made of compressed cardboard, corrugated cardboard, wood, metal or rigid plastics.

20. Self-supporting display stand (1) structure for packing, transporting and displaying products of any of the previous claims **wherein** it comprises posters, printed plastic films, jackets and/or advertising materials over at least its external surface.

21. Self-supporting display stand (1) structure for packing, transporting and displaying products of any of the previous claims **wherein** its components can be packed compactly into a box (35), with open or closed sides or by means of plastic wrapping over said compactly placed components.

22. Process of assembling a self-supporting display stand (1) structure for packing, transporting and displaying products as defined in claims 1 to 21 **characterised in that** it comprises the following phases:

- assembling a lower frame (4) and an upper frame (3) for fastening, in its folded position, by means of folding of the first and the second lines of folding (6, 10) thereof;
- inserting the tabs (15) located at the lower end of each arm (2.1, 2.2) of the corner posts (2) into the corresponding slots (16) of the lower frame (4), so that the hole (13) in at least one of the arms (2.1, 2.2) of each corner post (2) is aligned with the hole (14) of the first edge section (8) of one of the four areas (7.1, 7.2, 7.3, 7.4) of the lower frame (4);
- introducing a fastening element in each pair of aligned holes (13, 14);
- fitting at least one product supporting element and the fastening elements of said elements to the corner posts (2);
- inserting the tabs (15) located at the upper end of each arm (2.1, 2.2) of the corner posts (2) into the corresponding slots (16) of the upper frame (3) so that the hole (13) in at least one of the arms (2.1, 2.2) of each corner post (2) is aligned with the hole (14) of the first edge section (8) of one of the four areas (7.1, 7.2, 7.3, 7.4) of the upper frame (3);
- introducing a fastening element in each pair of aligned holes (13, 14);
- fitting the elements for containing the product displayed for packing, transporting and/or stor-

age after placing the product inside the display stand structure.

23. Process for assembling a self-supporting display stand (1) structure for packing transporting and displaying products of claim 22 **wherein** it comprises the fitting of at least one reinforcement and distribution element prior to or after the fitting of the product supporting elements and the elements for fastening thereof.

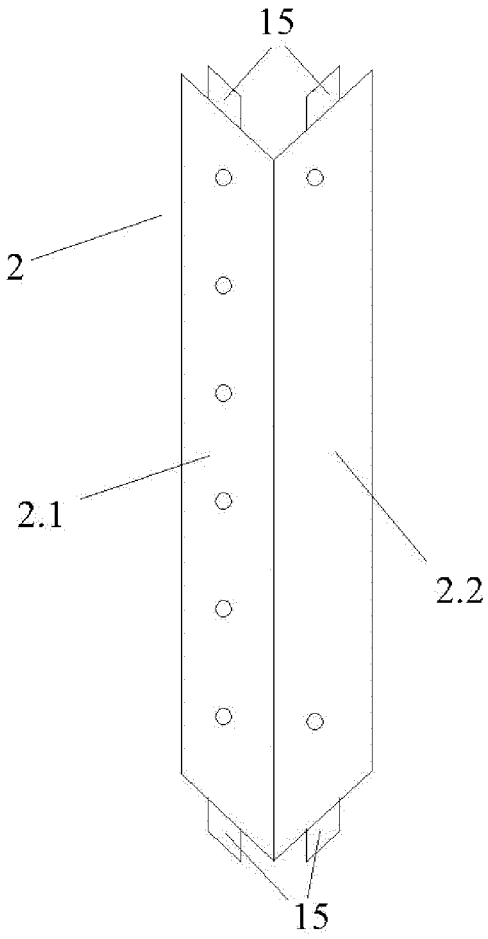


Fig 1.1

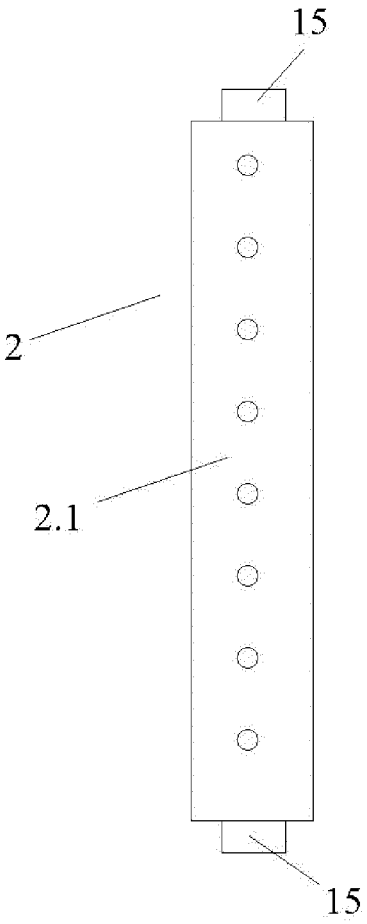


Fig 1.2

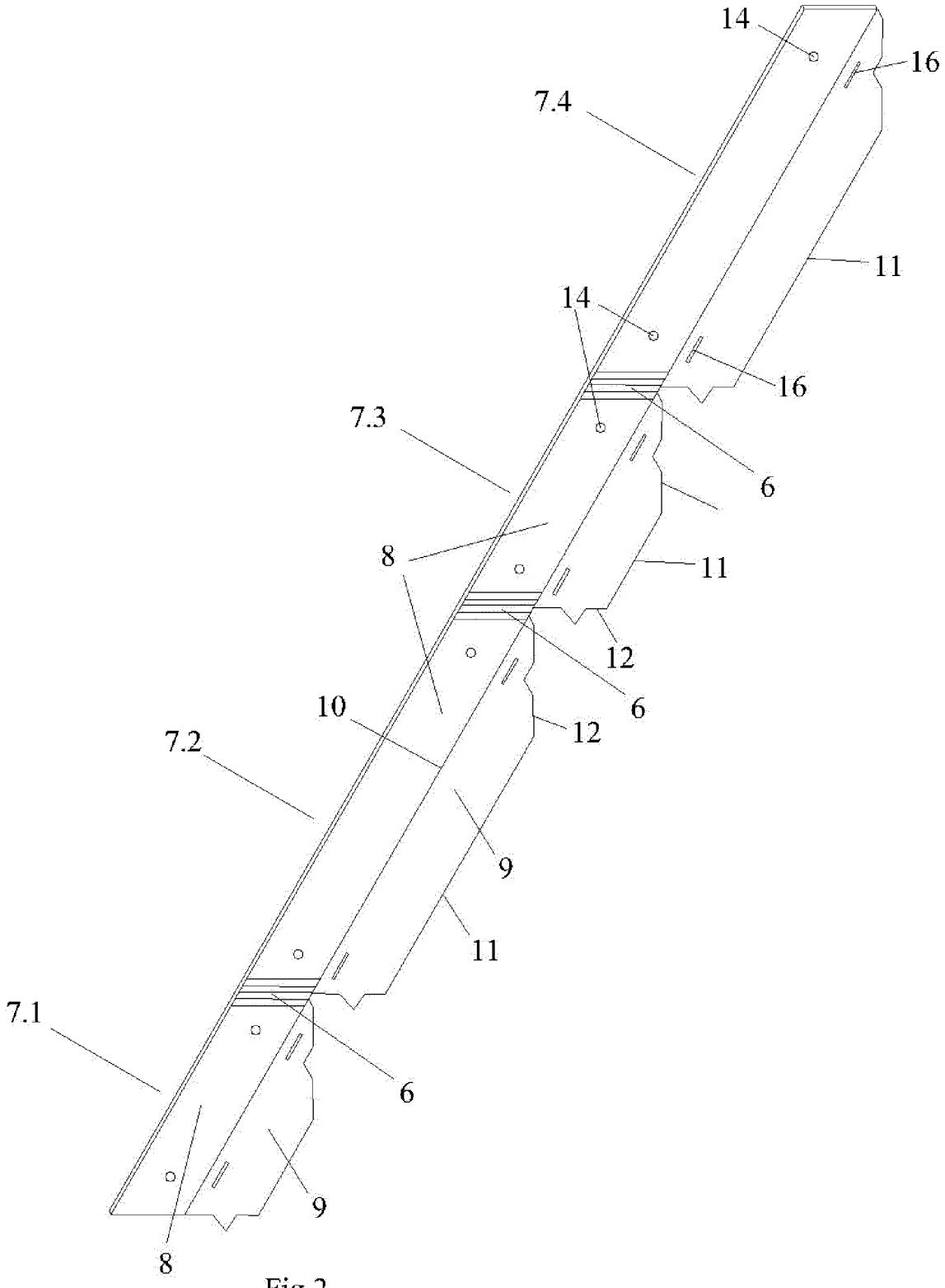


Fig 2

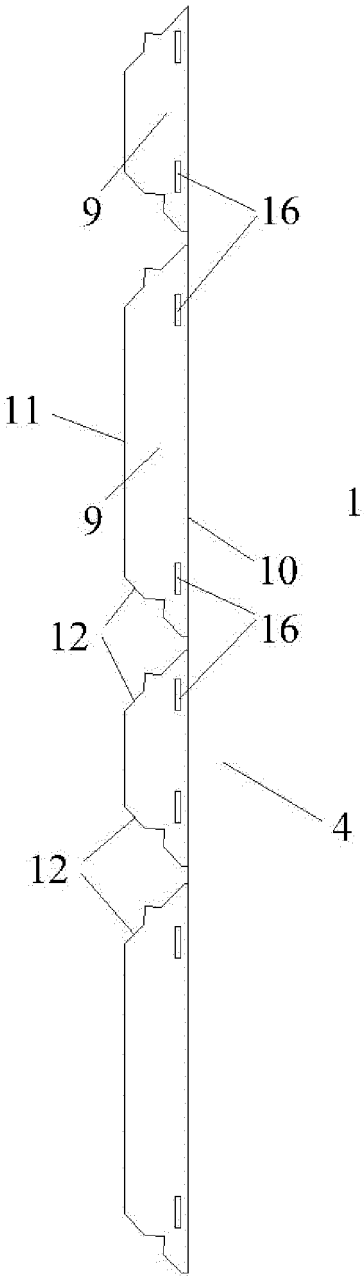


Fig 3.2

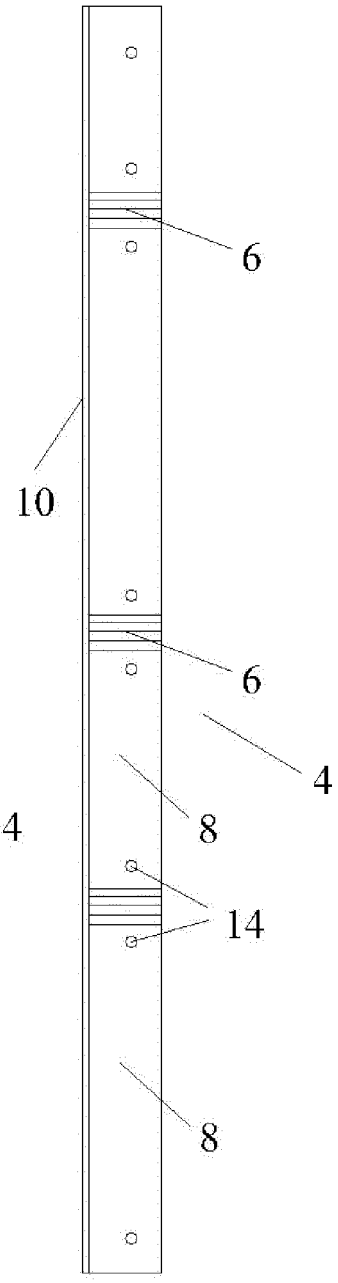


Fig 3.1

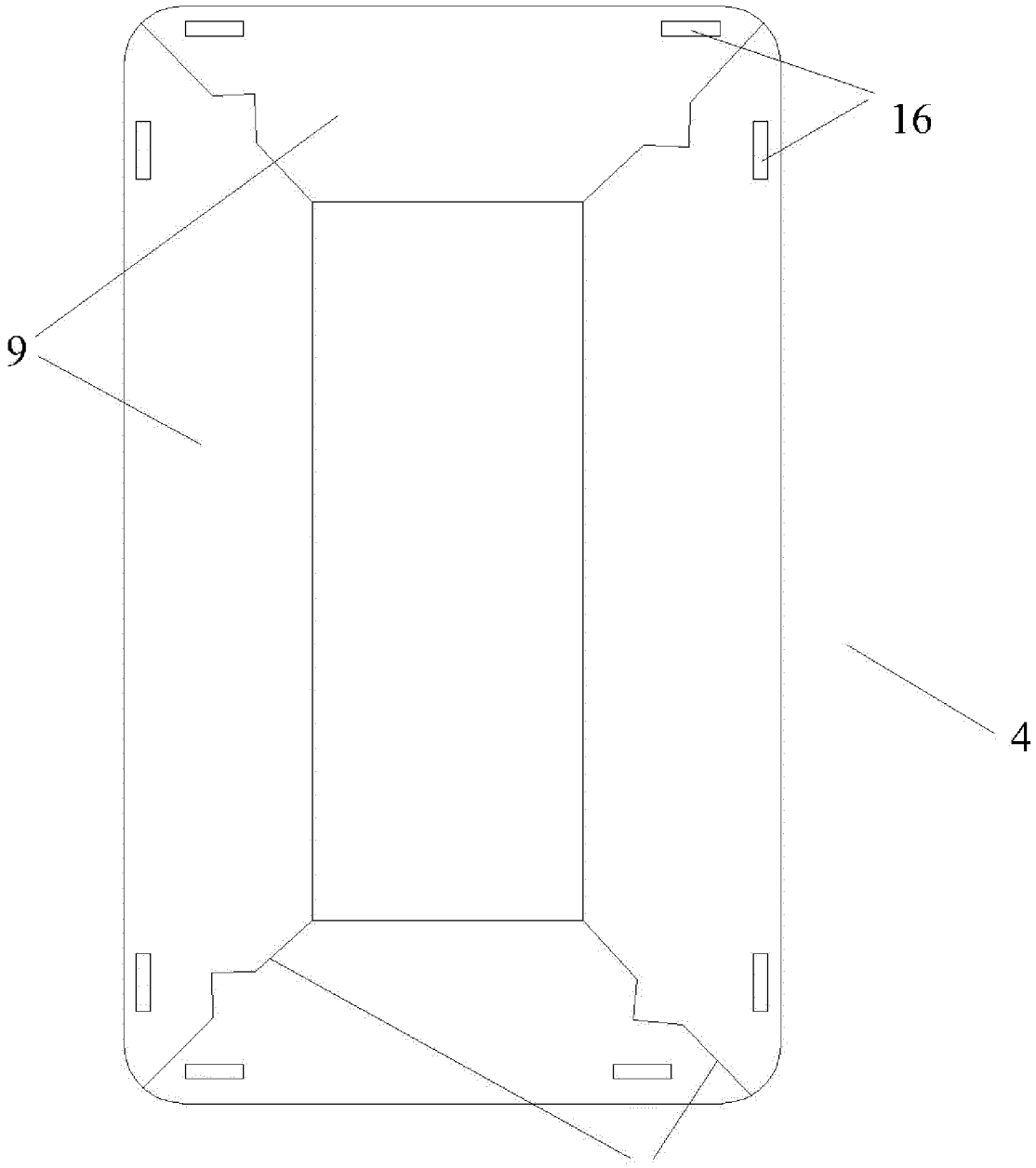


Fig 4

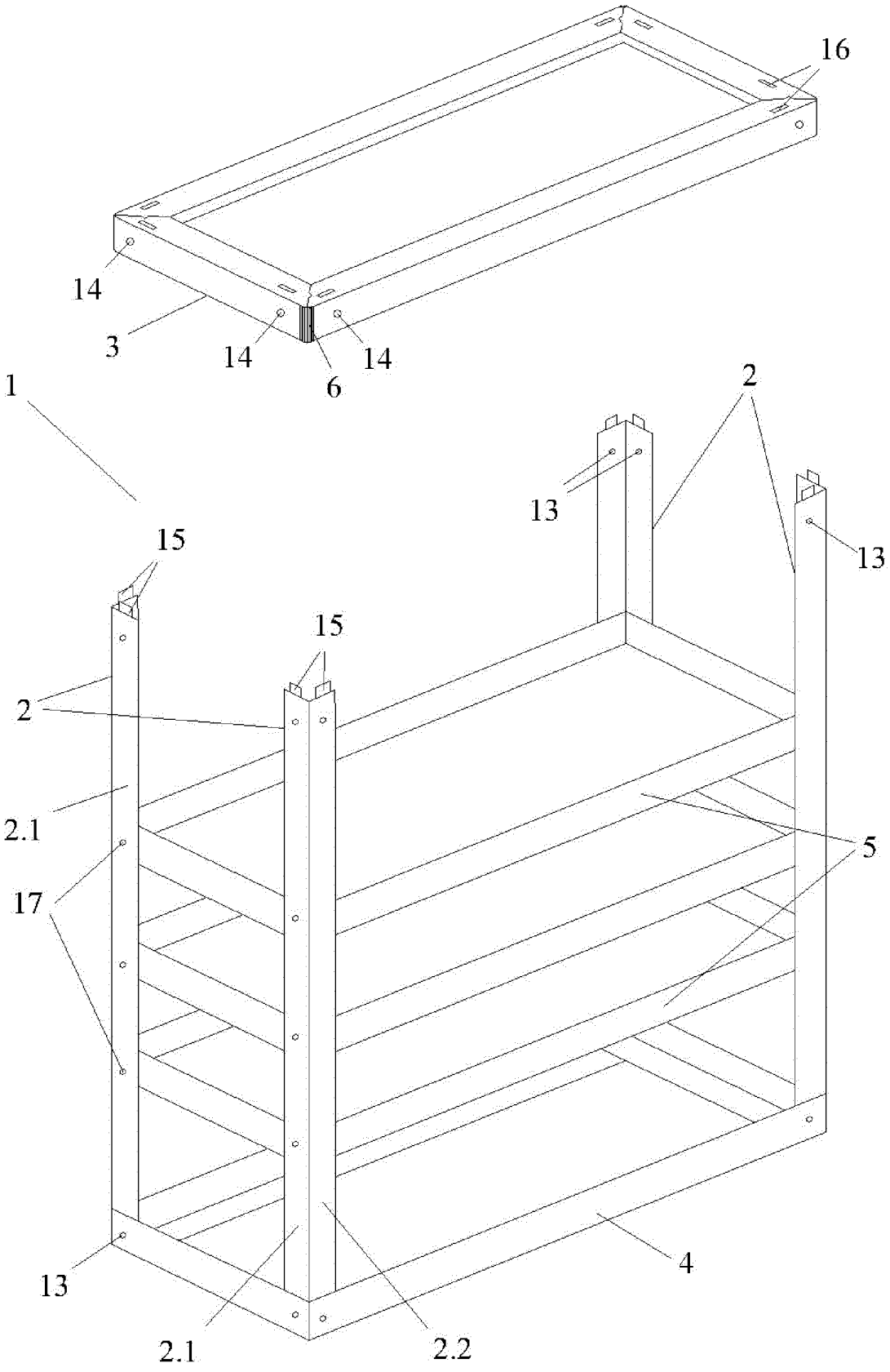


Fig 5

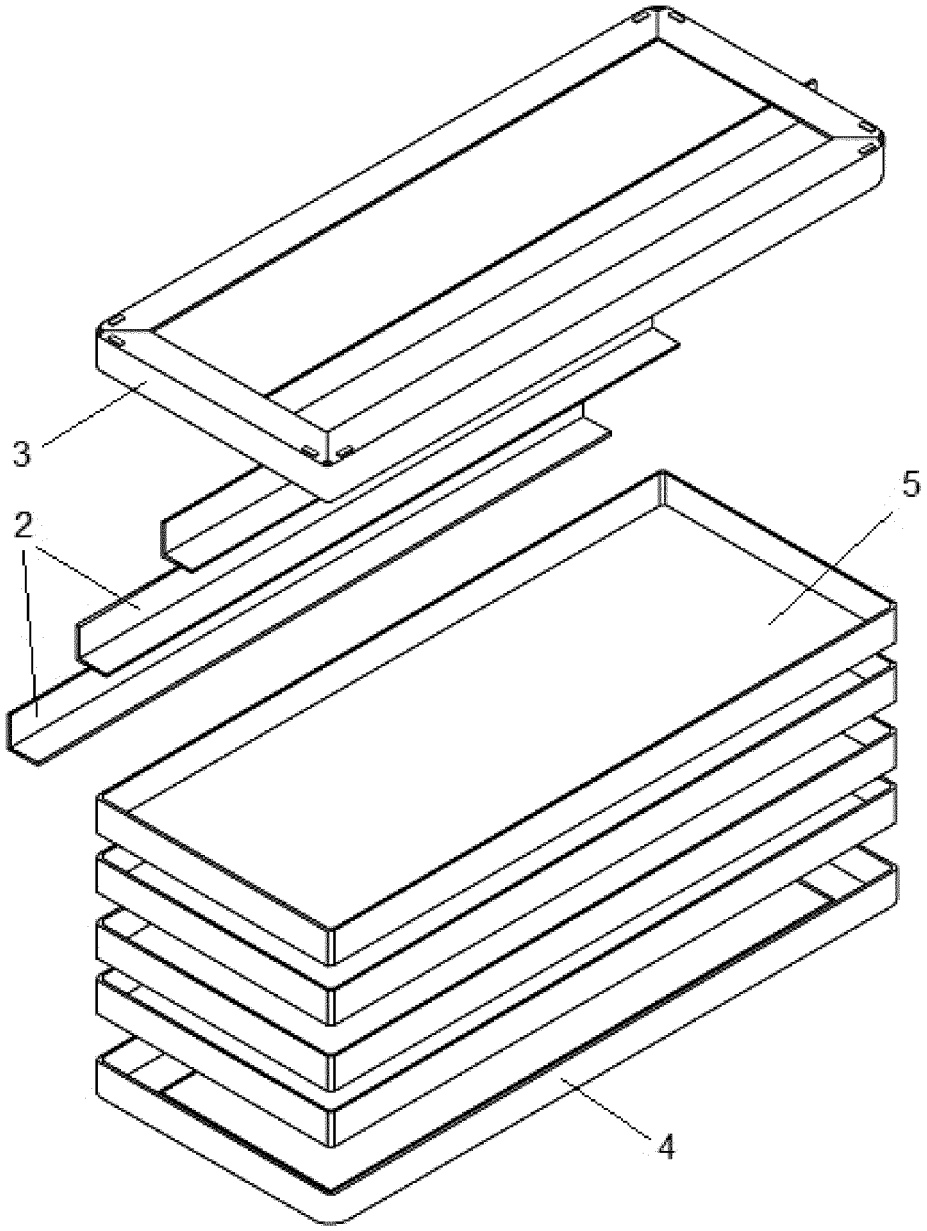
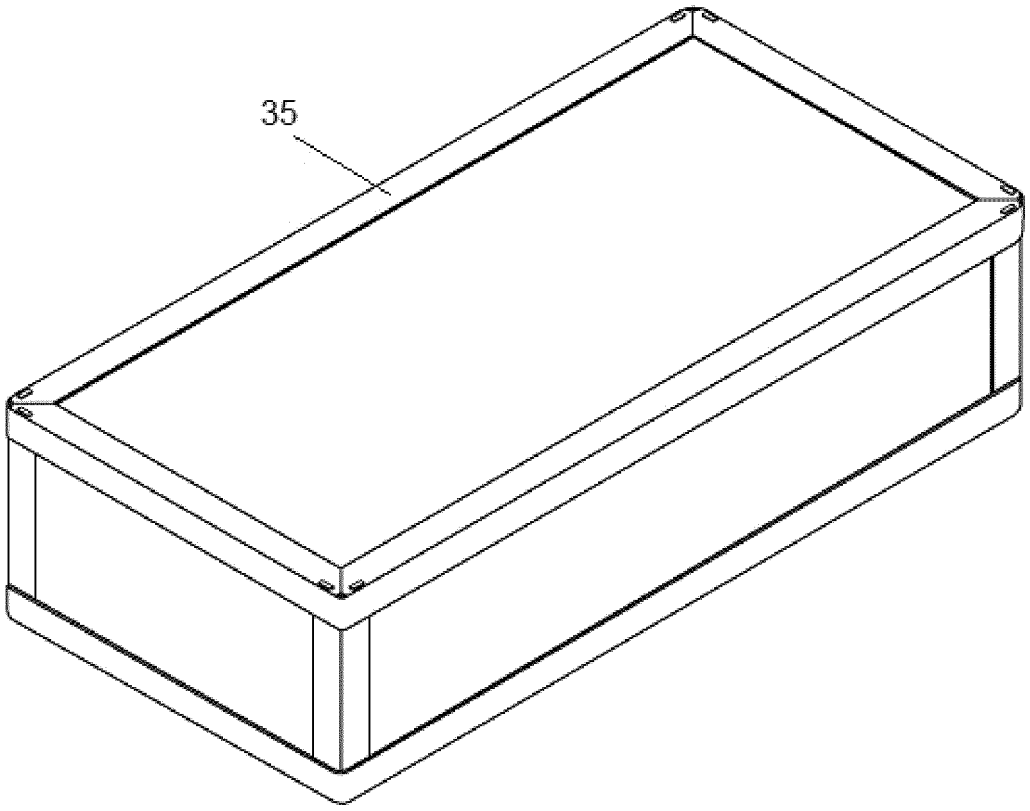


Fig. 6.1



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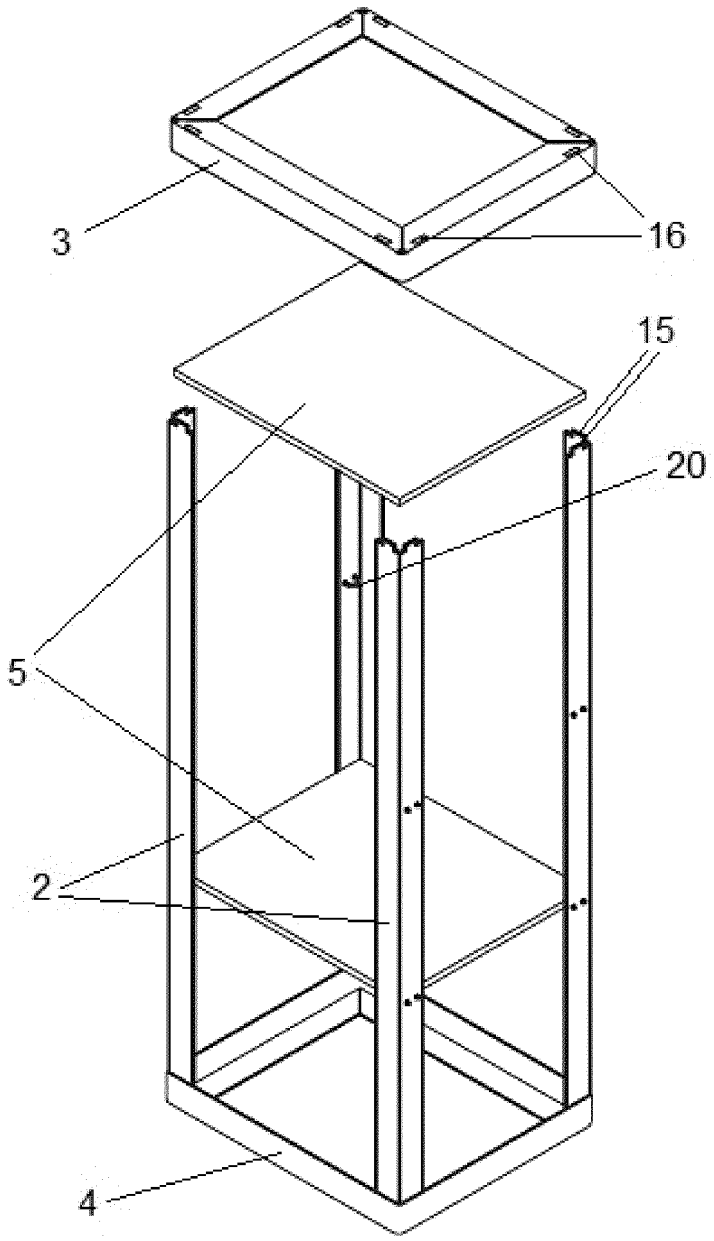
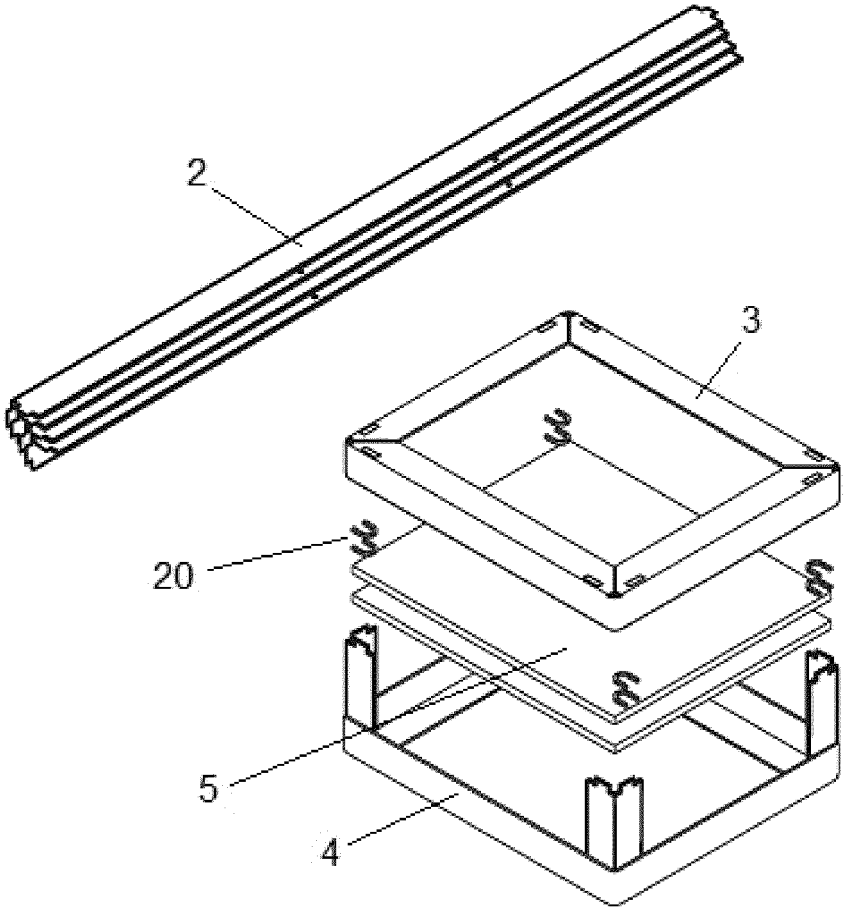


Fig. 7



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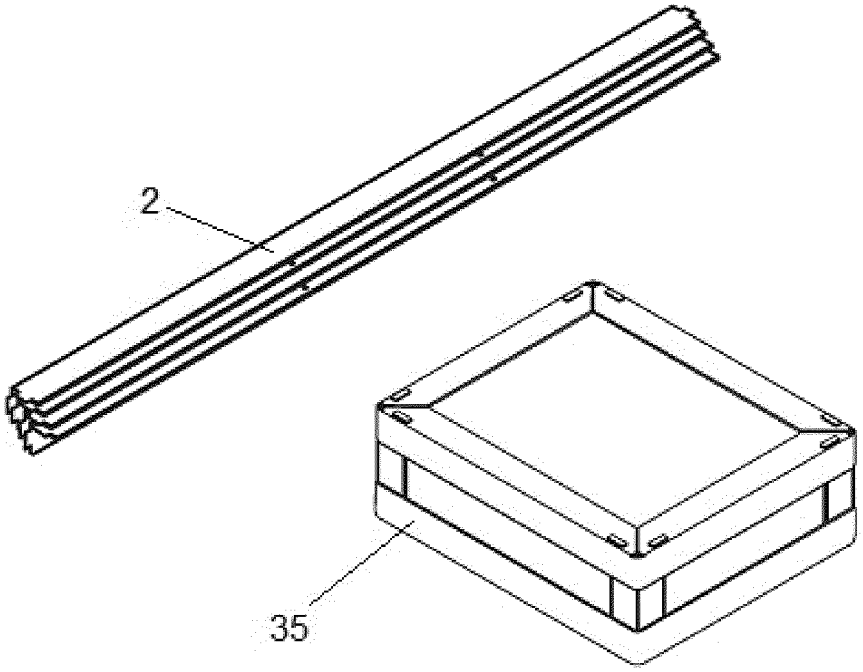

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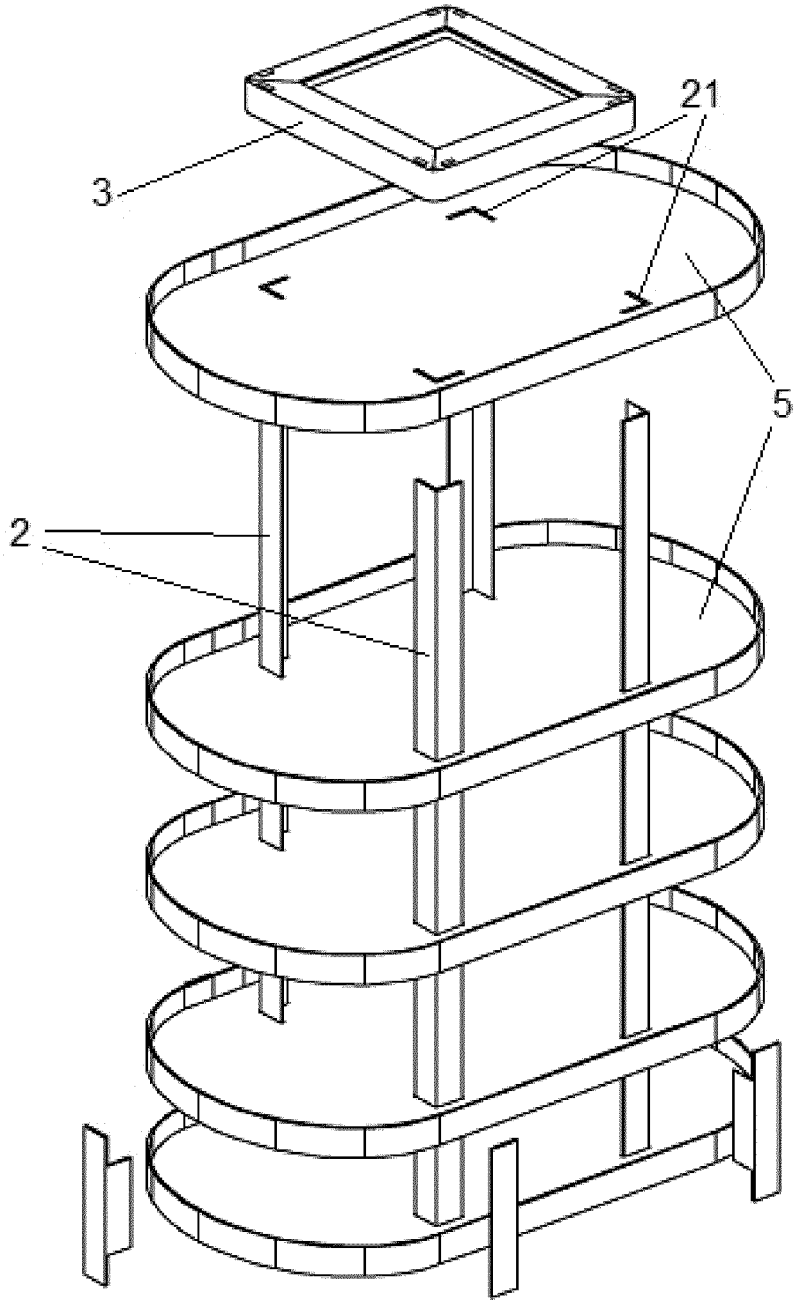

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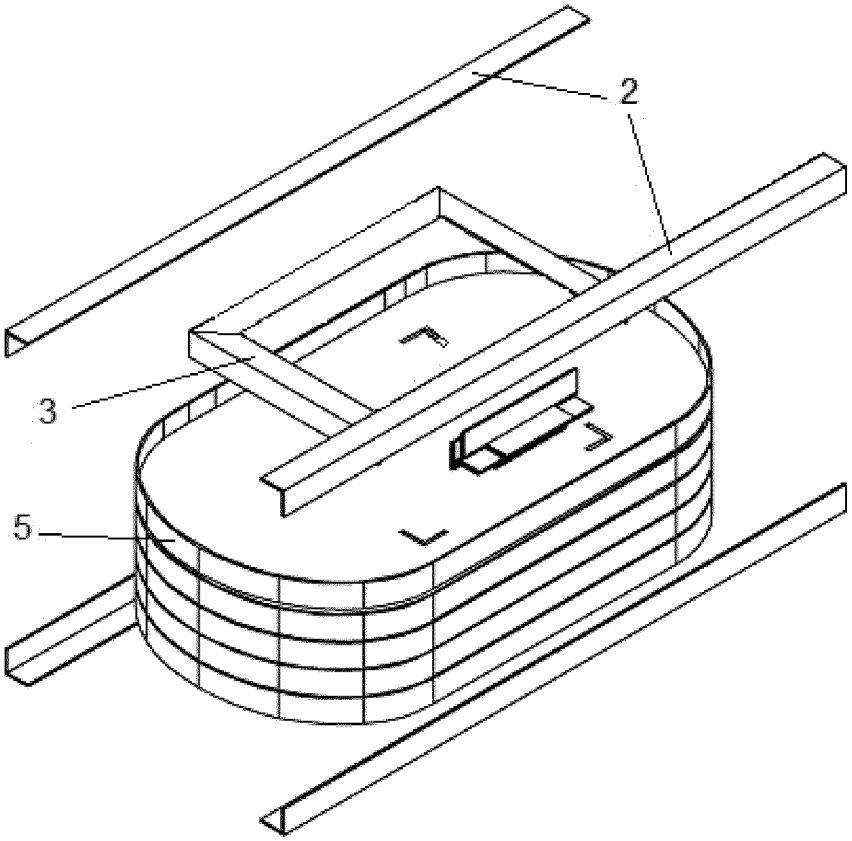

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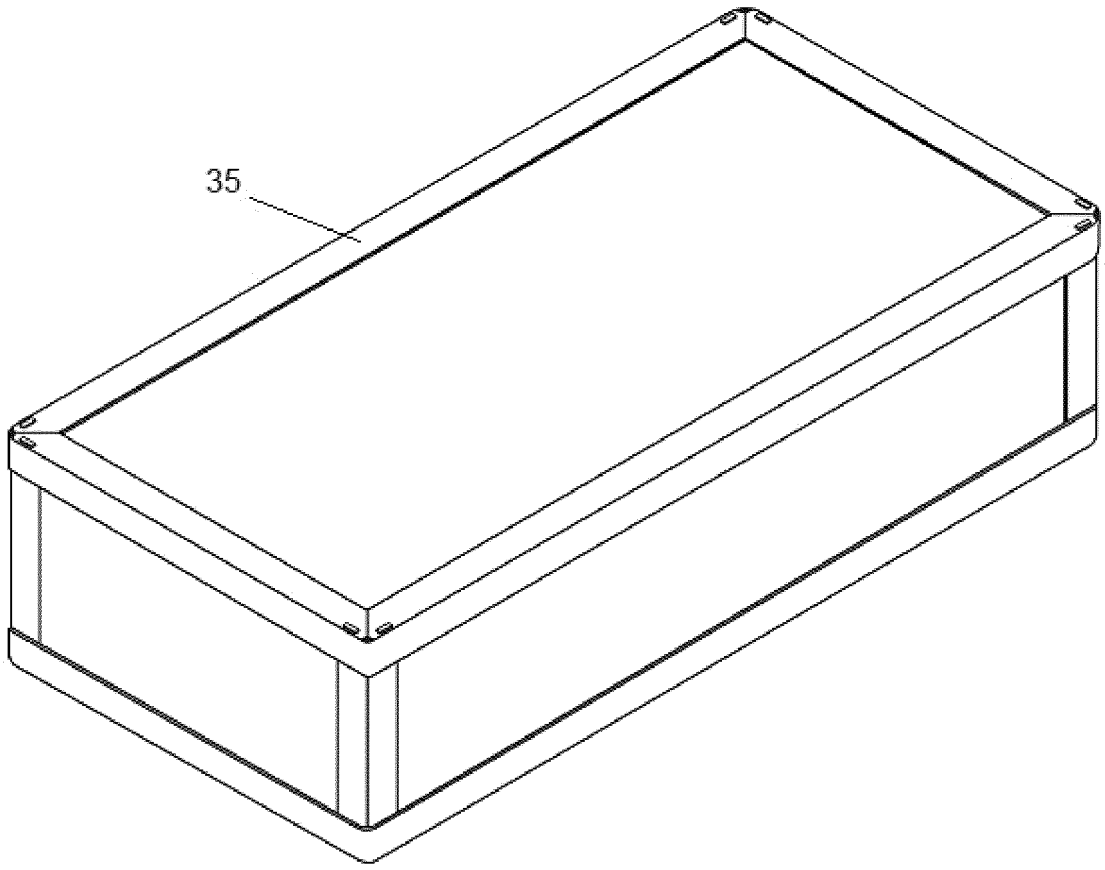

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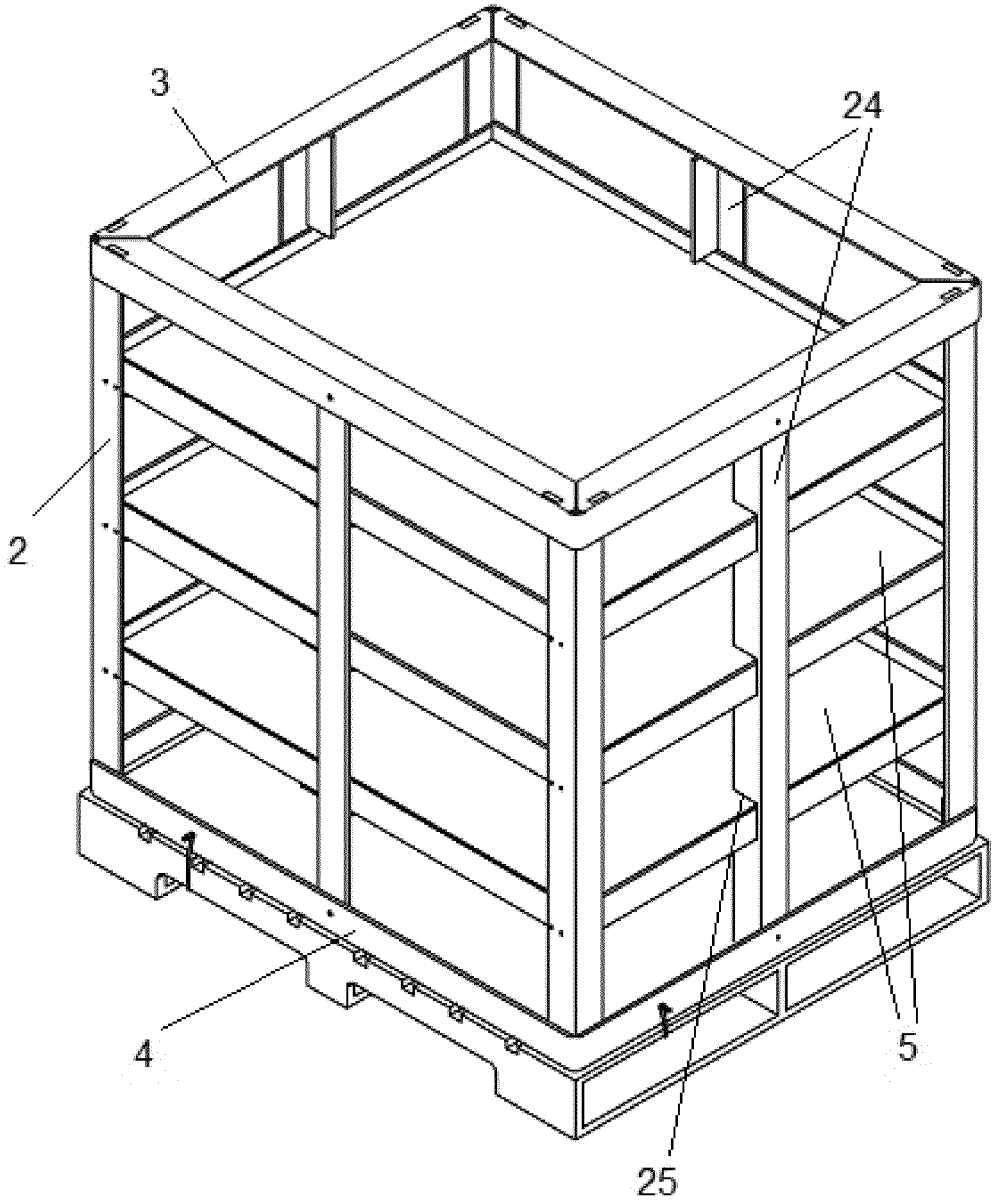

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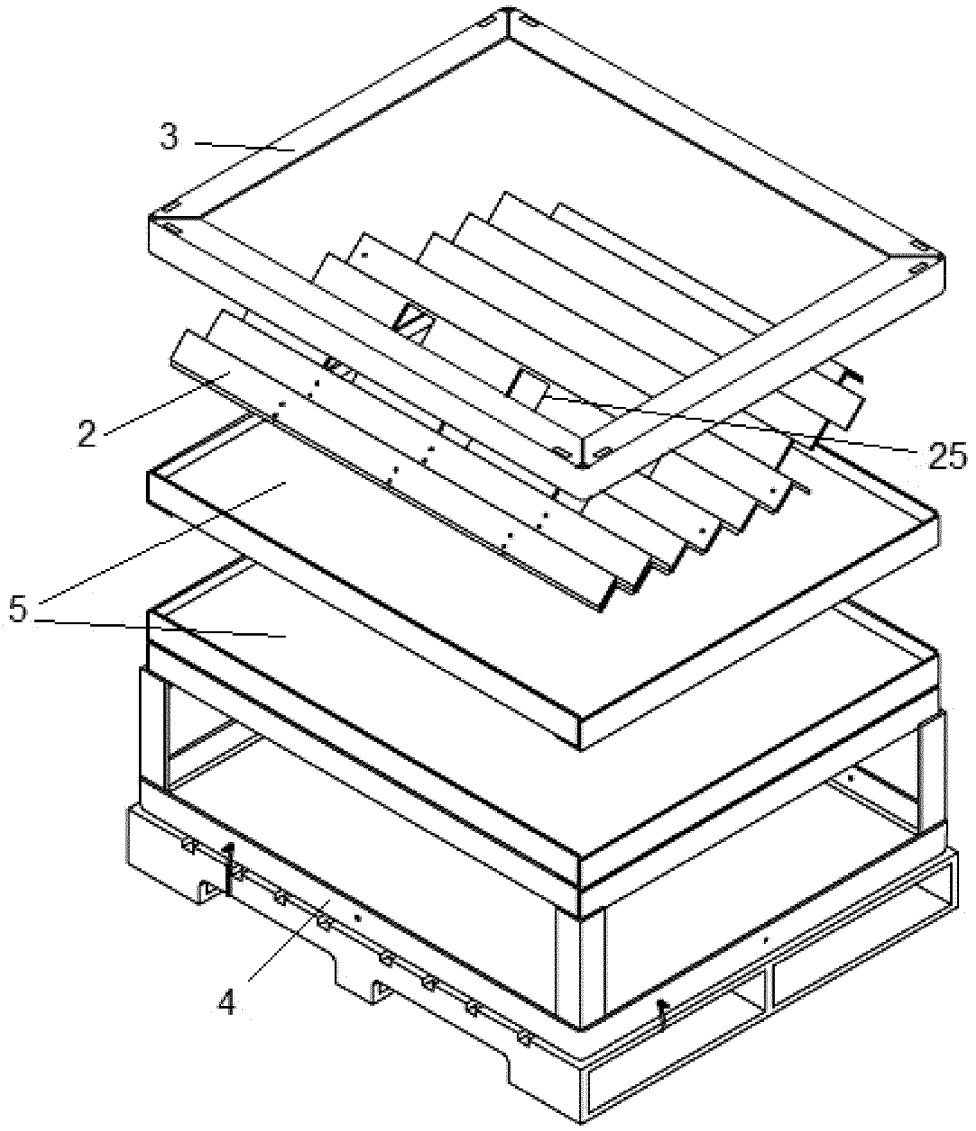

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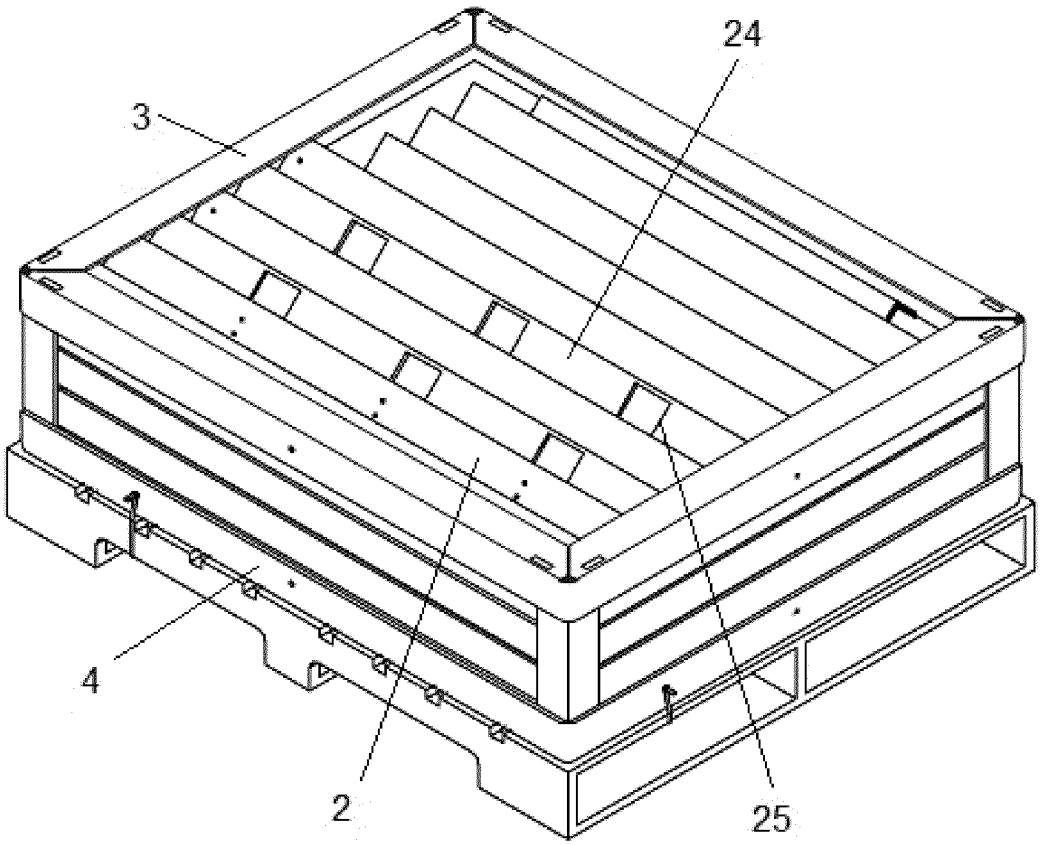

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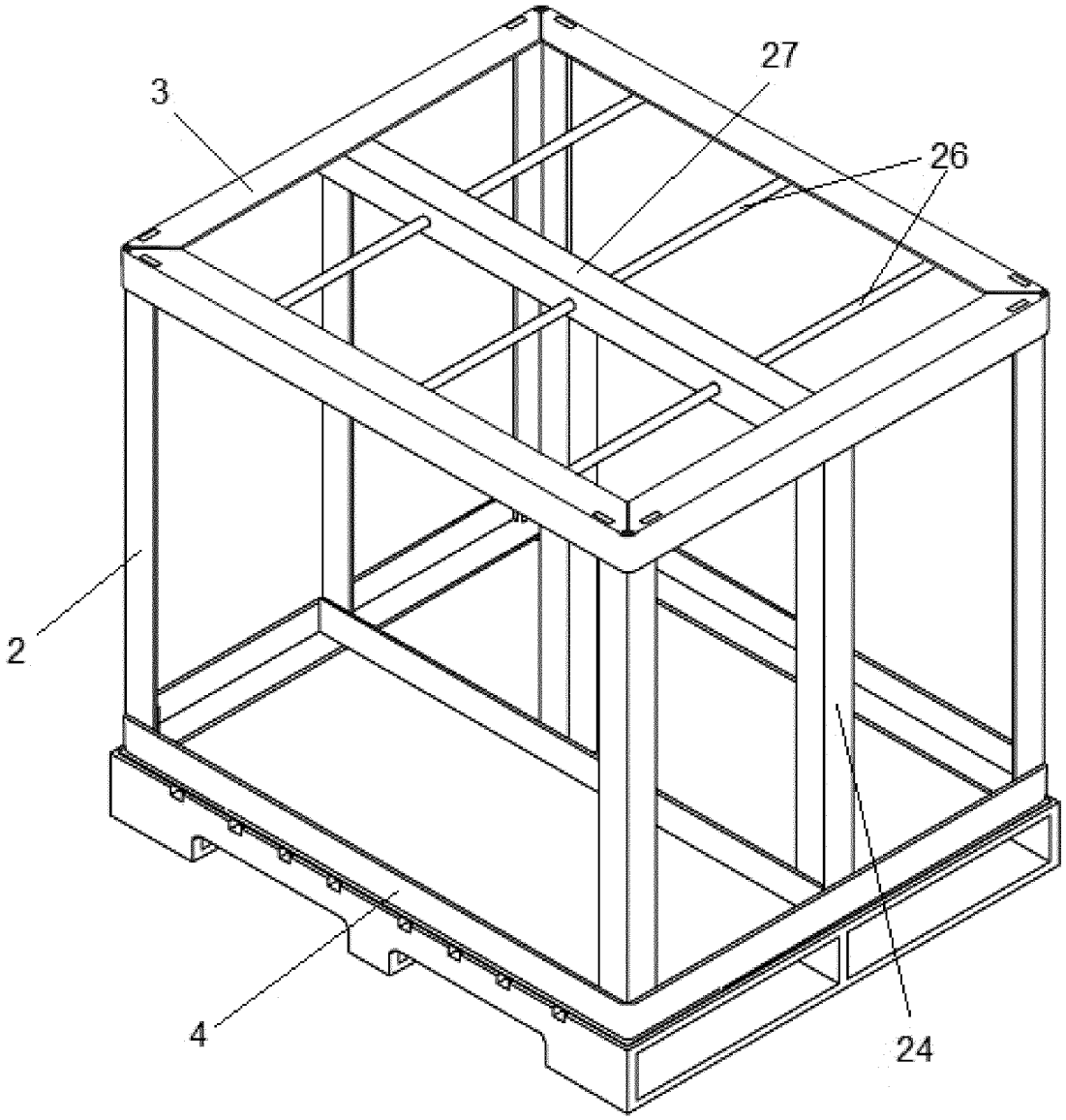

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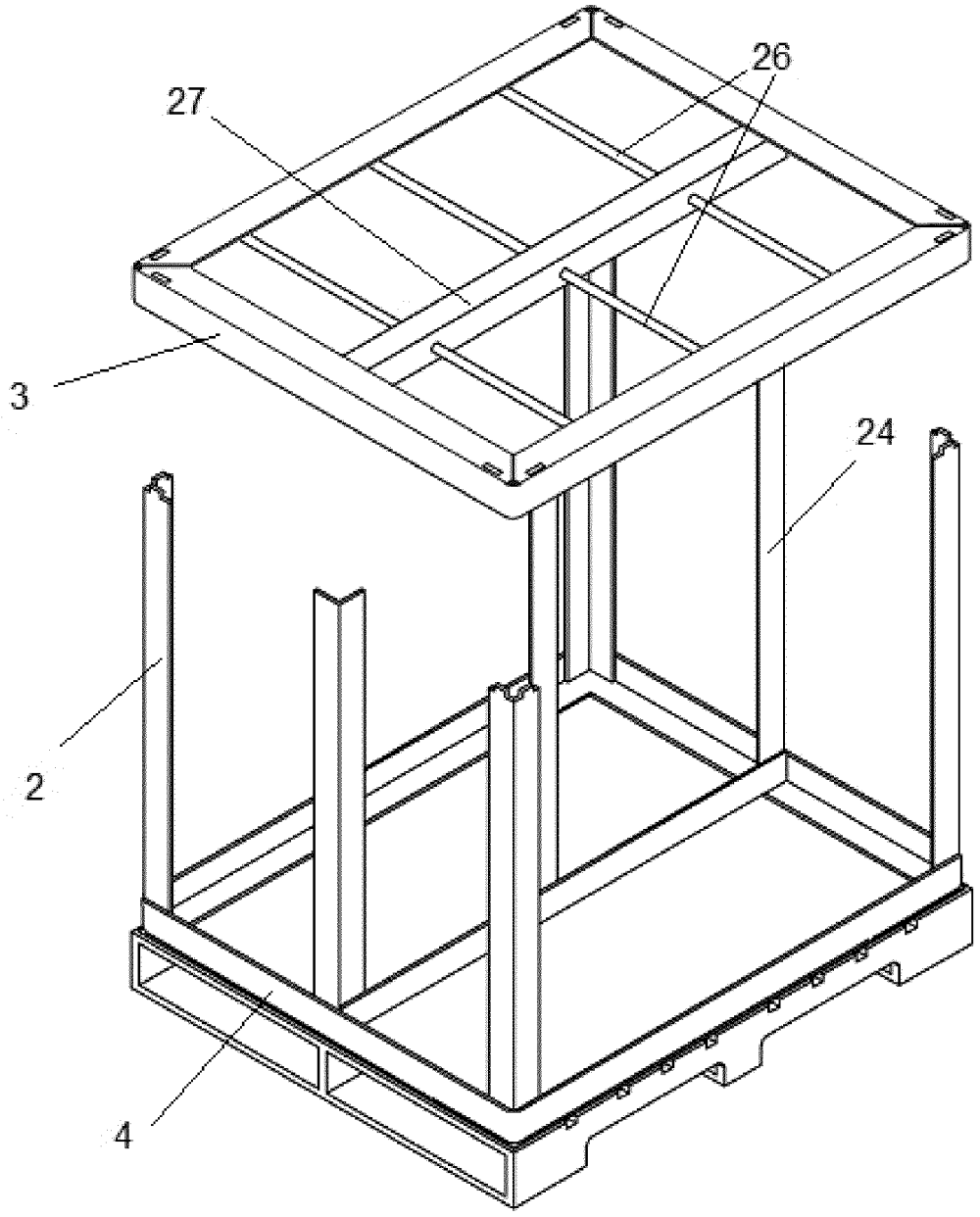

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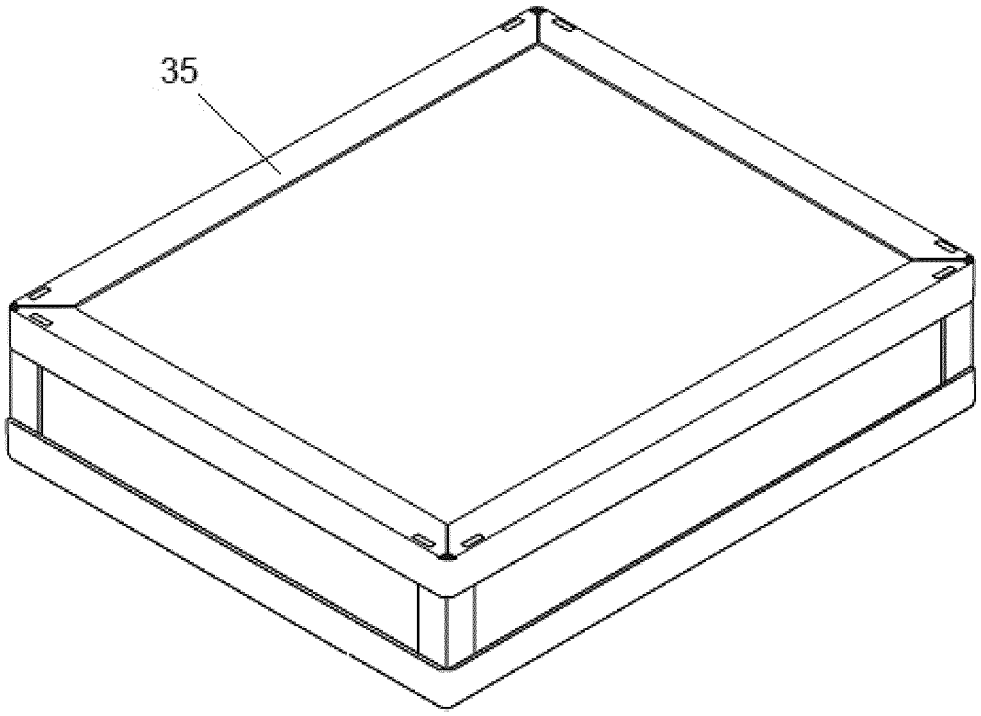


Fig. 14

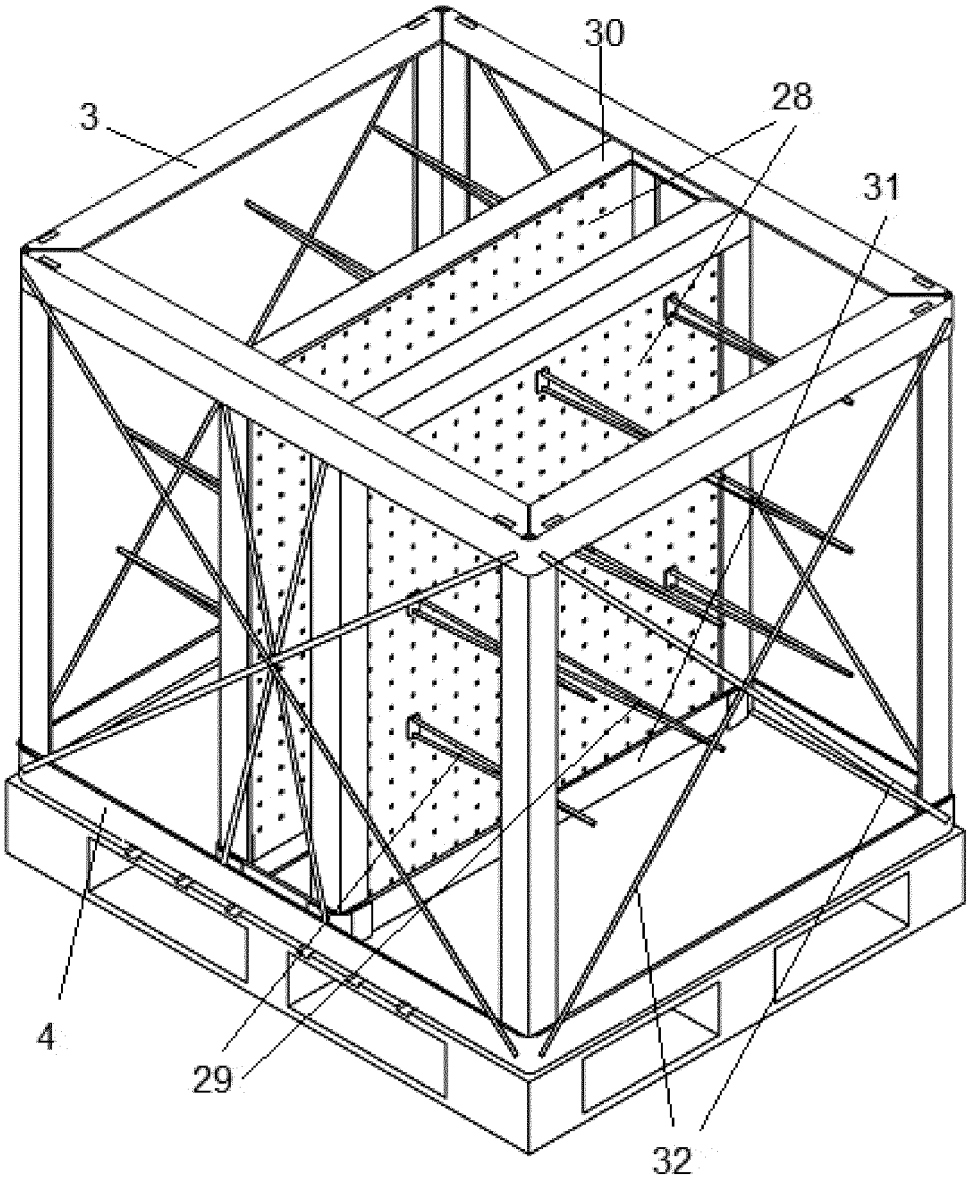
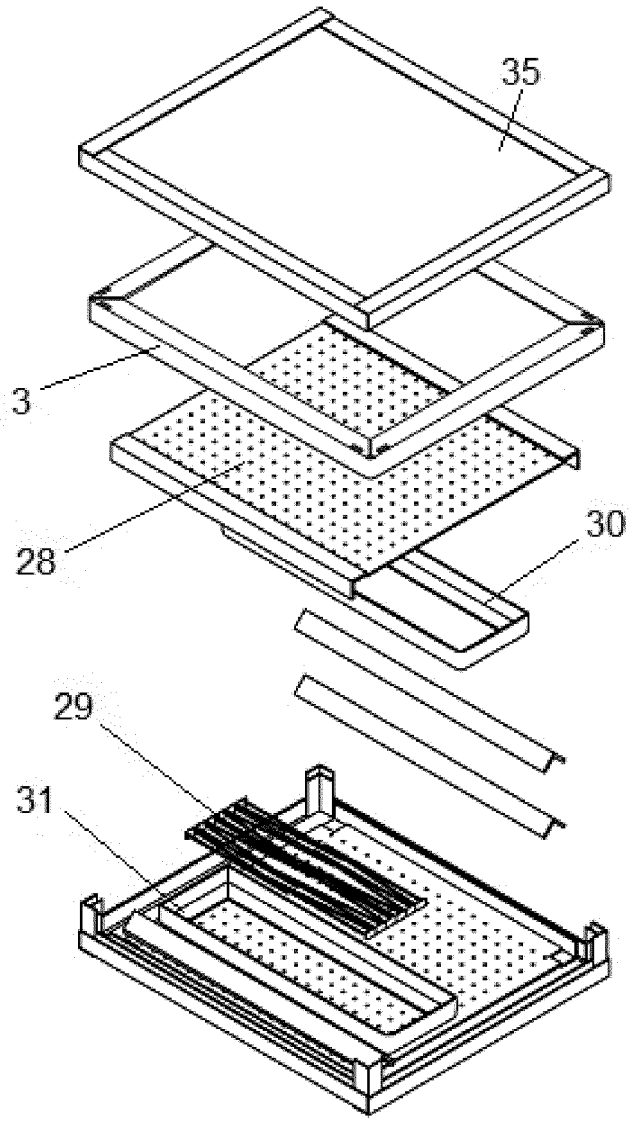


Fig. 15



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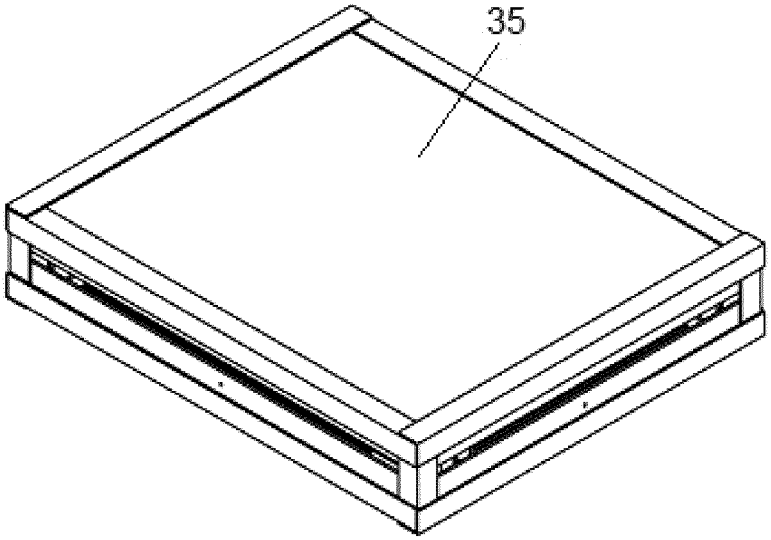


Fig. 16.2

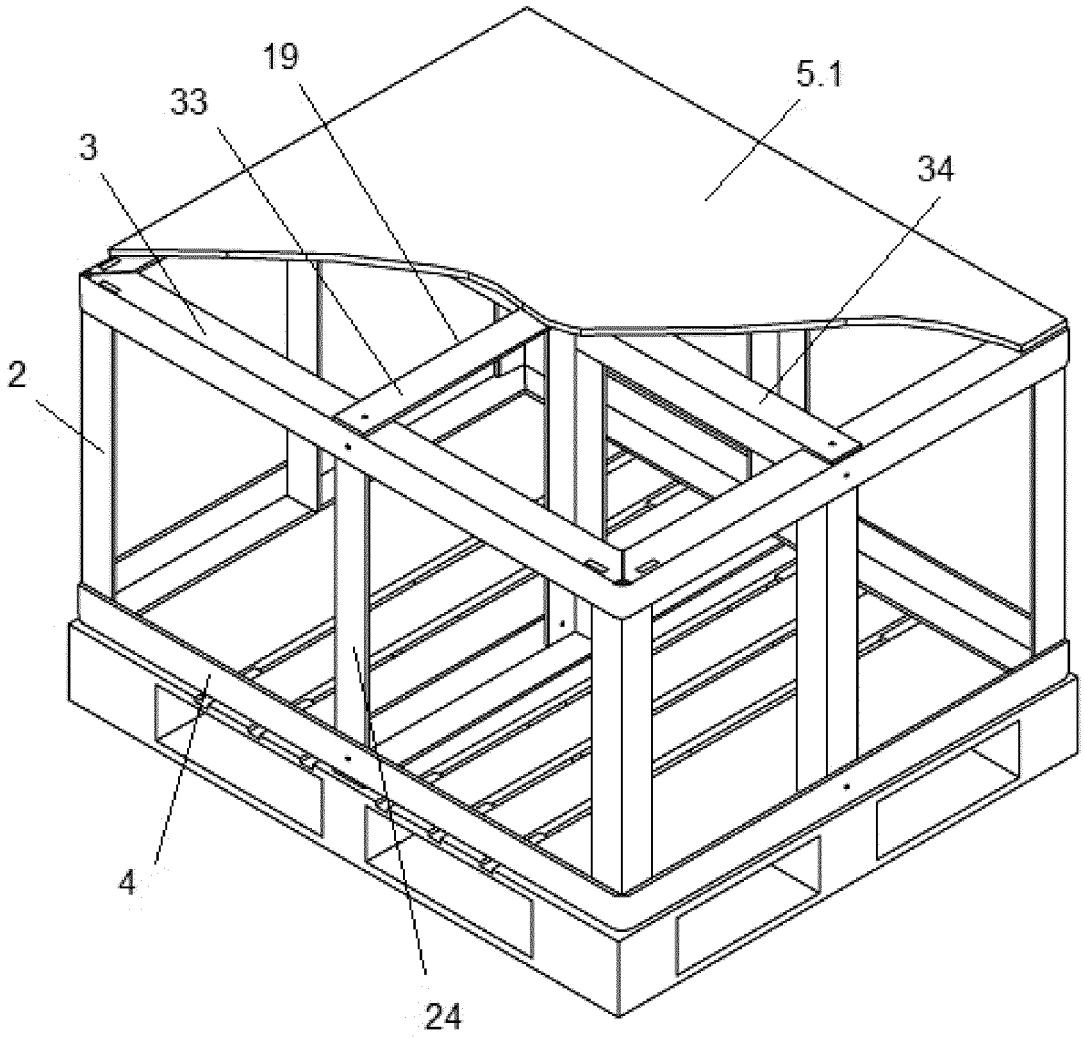
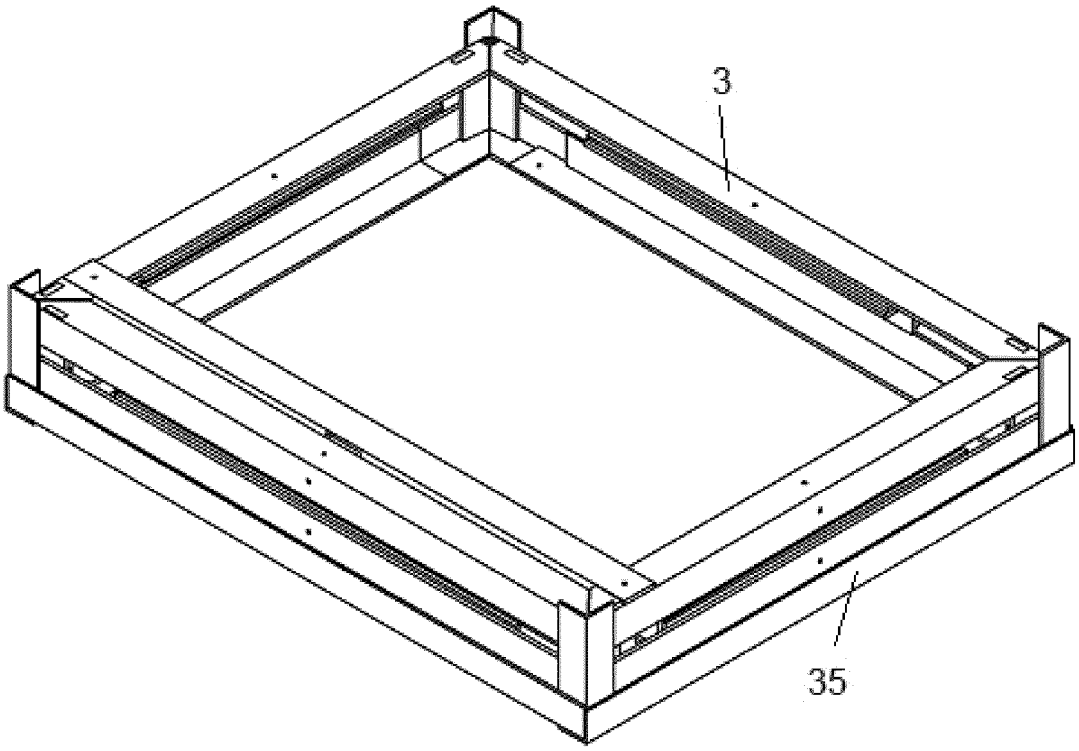


Fig. 17



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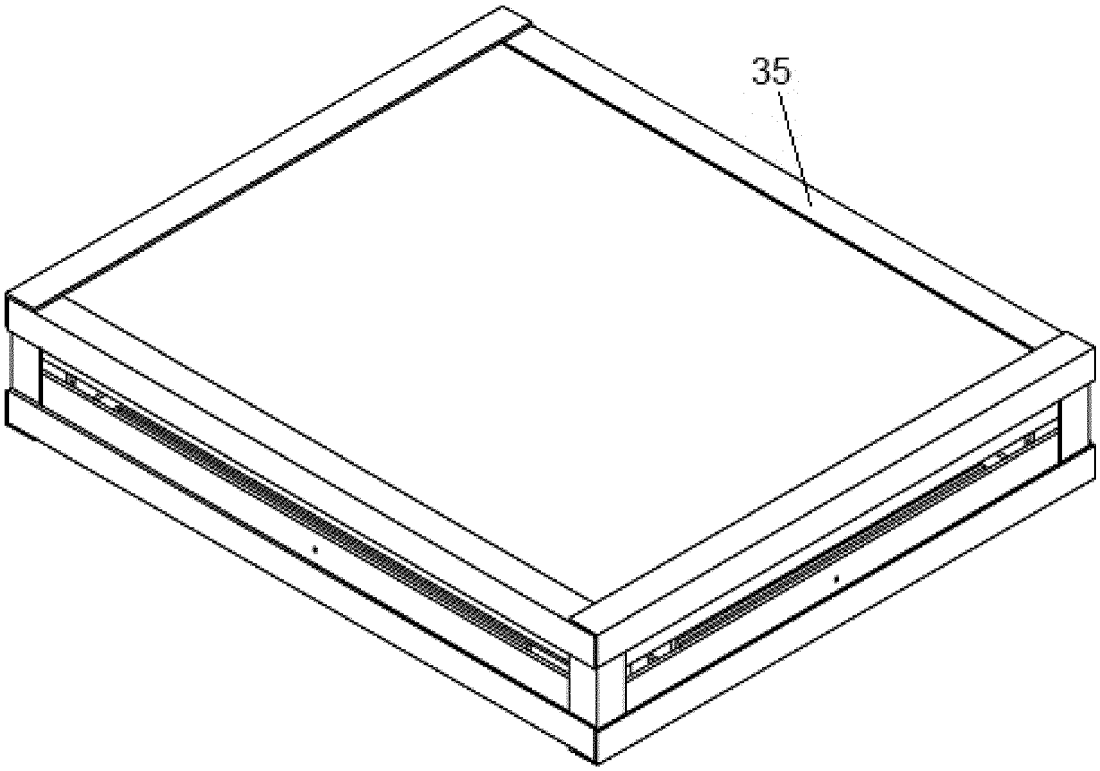

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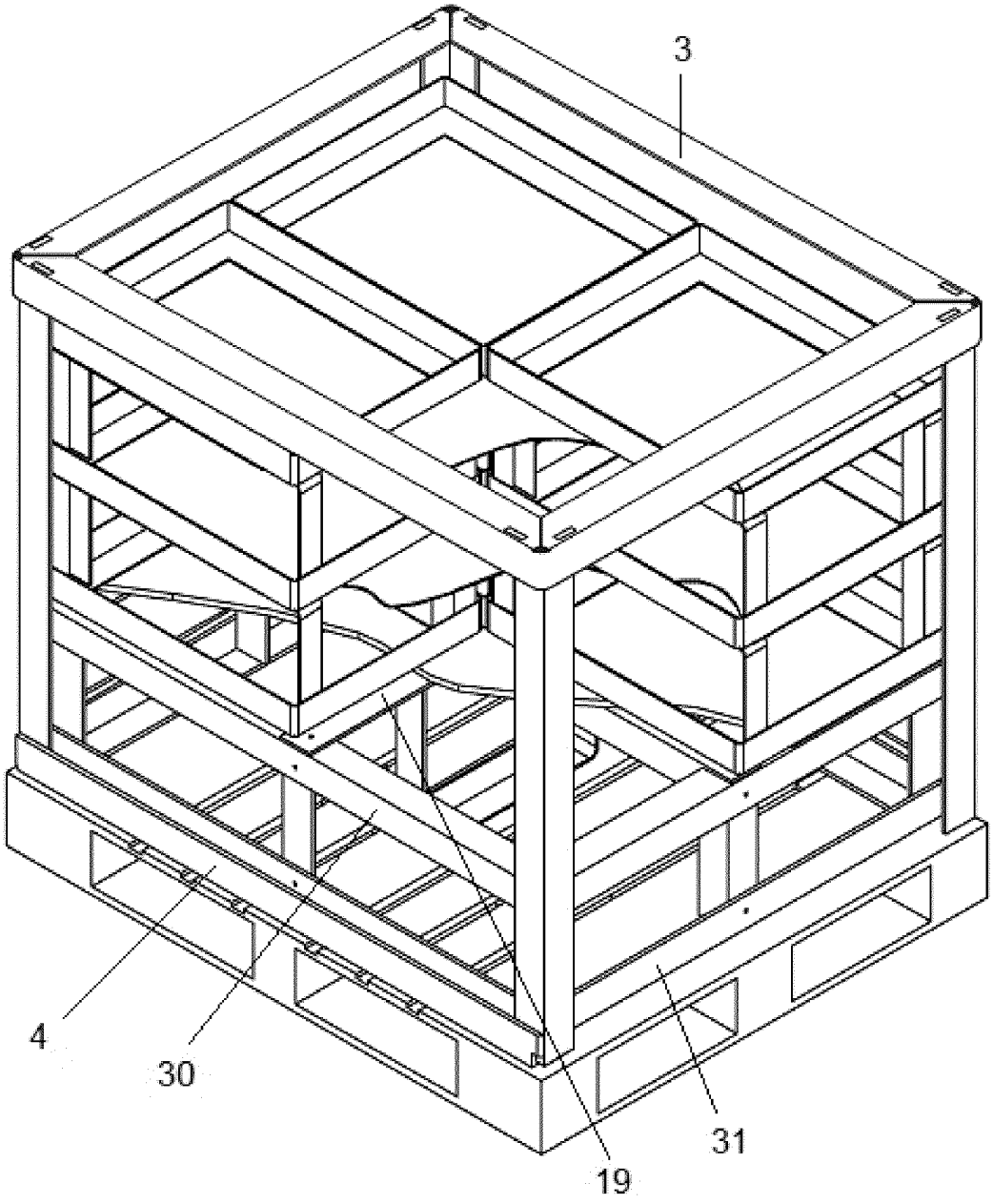


Fig. 19

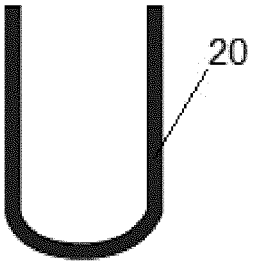
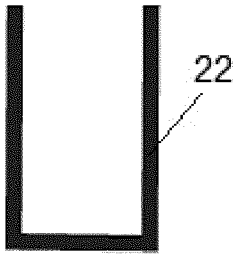


Fig. 20.1



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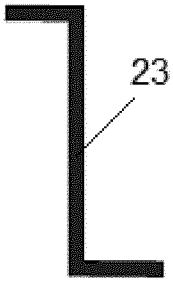

Fig. 20.3

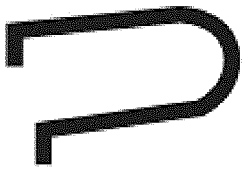

Fig. 20.4

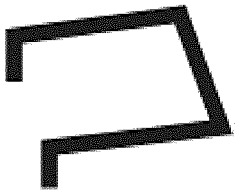

Fig. 20.5

INTERNATIONAL SEARCH REPORT

International application No.
PCT/ES2015/070558

A. CLASSIFICATION OF SUBJECT MATTER

See extra sheet

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)
B65D, A47F

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

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

EPODOC, INVENES, WPI

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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Y		5, 11-13
A		22-23
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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
14/04/2016	**(15.04.2016)**
Name and mailing address of the ISA/ OFICINA ESPAÑOLA DE PATENTES Y MARCAS Paseo de la Castellana, 75 - 28071 Madrid (España) Facsimile No.: 91 349 53 04	Authorized officer I. Coronado Poggio Telephone No. 91 3496860

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INTERNATIONAL SEARCH REPORT

International application No.
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C (continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

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Information on patent family members

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PCT/ES2015/070558

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/ES2015/070558

CLASSIFICATION OF SUBJECT MATTER

B65D19/38 (2006.01)
B65D85/18 (2006.01)
A47F5/10 (2006.01)

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