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(54) **EXHIBITION BASIN CONSTRUCTION WITH A FACILITATED ASSEMBLING SYSTEM FOR MOUNTING INTERCHANGEABLE OVERLAPPING PLATES**

AUSSTELLUNGSBECKEN MIT SYSTEM ZUR ERLEICHTERTEN MONTAGE ZUM MONTIEREN ÜBEREINANDER LIEGENDER PLATTEN

CONSTRUCTION DE BASSIN D'EXPOSITION POSSÉDANT UN SYSTÈME D'ASSEMBLAGE SIMPLIFIÉ PERMETTANT DE MONTER DES PLAQUES SUPERPOSÉES INTERCHANGEABLES

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Description**BACKGROUND OF THE INVENTION**

[0001] The object of the present invention is an exhibition or display basin construction in one piece or that may be disassembled by a facilitated or assisted assembling system of overlapping plates and/or fittings, particularly at pre-set variable heights.

[0002] The basin construction of the invention has been designed for the use in the cosmetic field, for modular couvettes, for the display of products on sale, for example, in cosmetic stands, and it may be used for various applications requiring overlapping plane or plate arrangements for the production of display stands, items and, more generally, for the display of products of the most diverse product sectors, for example the cosmetic, optical, trichological sectors and/or the like.

[0003] Display basin structures are already known, which however are extremely complicated to make and do allow an easy removable assembling and disassembling, for example, of a plurality of interchangeable overlapping plates, at different levels.

[0004] WO 2010/012929 A1 discloses a display stand including a bottom wall and side walls for defining a space for receiving products, wherein the bottom wall includes a substantially planar bracket and hooks connected to the bracket, the hooks being capable of hitching to the bracket on the side walls, with the hooks being slidably connected in a parallel manner to the bracket.

SUMMARY OF THE INVENTION

[0005] The aim of the invention is to provide a basin construction or structure suitable to improve the positioning, the precision and the assembling speed of items in general, particularly of plates and/or the like.

[0006] Within the above aim a main object of the invention is to provide a basin structure of the above mentioned kind that includes a minimum number of components.

[0007] A further object of the present invention is to provide a basin structure of the above mentioned kind that is extremely strong and having an economically competitive cost.

[0008] A further object of the present invention is to provide a basin structure of the above mentioned kind that can be easily manufactured from commercially available materials and equipment.

[0009] Yet a further object of the present invention is to provide a basin structure of the above mentioned kind wherein the plates may be easily and quickly replaced, that is upgraded, without changing the structure of the basin and the various parts composing it.

[0010] The above mentioned aim and objects, as well as further objects that will become more apparent hereinafter, are achieved by a basin structure having the characteristics of the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] Further characteristics and advantages of the basin structure according to the present invention will become clearer from the following detailed description of currently preferred embodiments thereof, illustrated by way of an indicative but non-limiting example in the appended schematic drawings, wherein:

Fig. 1 shows a vertical section view of a "fixed" or integral first embodiment of the basin structure of the present invention without plates in it;

Fig. 2 shows a further vertical section view of the basin structure of Fig. 1, with three plates B removably contained in it in an overlapping arrangement; Fig. 3 shows an axonometric section view of the basin structure of Figs. 1 and 2, with the plates about to be fitted into the basin;

Fig. 4 shows, in a disassembled perspective view, a possible "dismountable" embodiment of the basin structure of the invention comprising five parts, with different clamping elements of the plates (not shown in Fig. 4) at pre-set heights;

Fig. 5 shows, in an assembled perspective view, the dismountable basin of Fig. 4 ready to house, at different levels, a plurality of inner containment plates, or fittings, not shown in Fig. 5;

Fig. 6 shows a further perspective view of the basin of Fig. 5 in an assembled condition and with three plates to fit, generally indicated by B1, B2 and B3, depicted in an overlapping arrangement;

Fig. 7 shows the dismountable basin of Figs. 4 to 6 in an assembled position and without plates, in the top part, and in a disassembled position, in the lower part, from which it can be seen that the walls of the basin of the invention are easily refoldable-collapsible, thanks to the hinge coupling at the four transversal sides thereof.

DESCRIPTION OF PREFERRED EMBODIMENTS

[0012] Referring now to the mentioned Figures and particularly to Figures 1 to 3, a first embodiment of the basin structure of the invention, or the so called fixed basin, generally indicated by the letter A and herein provided for receiving, for example, but without limitation, a plurality of plate-like elements B of which the top one also works as a cover for the basin A, is therein represented.

[0013] The plate-like elements B "inside" the basin being removably supported thanks to suitable cross-section reductions, defining respective pairs of steps G1, G1; G2, G2; G3, G3, provided just to removably support the respective plate-like element B.

[0014] The basin A, integrally obtained, for example, by moulding a suitable transparent or coloured plastic material, may or not be as well provided with a bottom integrally moulded too.

[0015] The fixed basin of Figs. 1 to 3, for size reasons,

may contain only a rather limited number of plate-like elements and/or fittings, therefore the invention provides a further preferred embodiment wherein the basin is provided "dismountable", as shown in Figures 4 to 7.

[0016] Referring now to such Figures 4 to 7, the dismountable basin structure 1 of the present invention is therein shown in a disassembled perspective view.

[0017] It includes on the longitudinal or longest sides a rectangular substantially plate-like bottom F, wherein a plurality of slots S1,S1; S2,S2; S3,S3; and S4,S4 are defined.

[0018] To the bottom F four side walls may be removably connected, that is the side wall P1 on a first longitudinal side of the bottom F; P2 on a second transversal side of the bottom F; P3 on a second longitudinal side of the bottom F and P4 on a second transversal side of the bottom F.

[0019] Also the walls P1, P2, P3 and P4 are substantially defined by rectangular plate-like elements whose transversal sides, namely the shortest sides, are removably connected by hinge assemblies, indicated by the reference letters C1, C2 for the walls P1, P2; and C3, C4 for the walls P3 and P4, respectively; advantageously the hinge assemblies are integrally formed with the side walls themselves.

[0020] In other words, as noted, the shortest transversal sides of the walls P1, P2, P3, P4 may be all rotatably connected to one another, thereby the side walls, not connected to the bottom F, form a hinged manually foldable, or collapsible structure, as can be seen for example in Fig. 7, simplifying the storage of the four rotatably connected side walls.

[0021] For a further removable connection of the side walls P1, P2, P3 and P4 to the bottom F each side wall comprises, at its lower side, respective pairs of tongues L1,L1; L2,L2; L3,L3; L4,L4; each pair of tongues being integrally formed with the side walls and each tongue may be removably slidably engaged into the corresponding slots S1,S1; S2,S2; S3,S3; S4,S4 integrally formed in the bottom F of the basin structure 1.

[0022] Advantageously, to the inner surface of each wall P1, P2, P3, P4 element are also associated, integrally formed, pin elements SP of different heights, for supporting at a plurality of different levels the plates B1, B2, B3 (see Fig. 6 wherein the plates B1, B2 and B3 are about to be fitted into the basin structure of the invention in an already assembled condition).

[0023] The plates B1, B2, B3 are also substantially plate-like slabs and are therein defined, for example, a plurality of substantially rectangular openings SF and a corresponding plurality of substantially circular bores C, intended, for example, to accommodate objects.

[0024] In Fig. 7, as stated, the dismountable basin structure of the invention is shown in an assembled condition in the top part and in a condition with the bottom F removed in the lower part, from which lower part it can be seen that, thanks to the hinge connection of the side walls P1, P2, P3 and P4, the assembly of the side walls

themselves is easily manually collapsible.

[0025] Preferably the dismountable basin structure of the invention is also produced by injection moulding or blow moulding or thermoforming of plastic materials or by other processing and manufacturing techniques.

[0026] The bottom F of the basin may be open or closed.

[0027] In addition, on the sides of the basin, either of a fixed or dismountable type, clamping systems (not shown) may be fitted for clamping more basins to one another.

[0028] As a further version, the material used for the basin manufacturing may be, besides plastics, wood or other materials.

[0029] Although the basin structure of the invention has been described referring to two currently preferred embodiments thereof, it is liable to several modifications and variations, all falling within the scope of the inventive concept.

[0030] For example, the form of the basin, instead of being rectangular, may be generally squared or polygonal, or even circular.

[0031] In addition, at the cross-section changes of the fixed basin, clamping systems, for example undercuts or daps, allowing a simplified interchangeability of the parts may be provided.

[0032] The cross-section changes may be also obtained by positioning support.

[0033] Finally, the basin of the invention may also include tongue or support feed systems, price tag holders, flag holders and everything might help to improve the display and selling characteristics.

Claims

1. A basin structure (A; 1) containing, in an overlapping removable multiple-level arrangement, a plurality of support elements for display products, whereby said support elements consist of a corresponding plurality of interchangeable plate-like elements (B; B1,B2, B3), and said basin structure comprises a basin body having a plurality of side walls (P1, P2, P3 and P4) with inner surfaces on which are defined a plurality of integral support elements suitable to support at different levels each said plate-like elements (B; B1, B2,B3), **characterized in that:**

said basin is an integral basin (A) suitable to hold said plurality of plate-like elements (B) wherein the top one also works as a cover for the basin (A), the plate-like elements (B) inside the basin (A) being removably supported by cross-section reductions defining respective pairs of steps (G1,G1; G2,G2; G3,G3) suitable to removably support the respective plate-like element (B), said basin (A) being integrally obtained, for example, by moulding a suitable coloured trans-

parent plastic material and being or not also equipped with a bottom integrally moulded too; or
 said basin is a dismountable basin (1) and to the inner surface of each wall (P1, P2, P3, P4) element there being integrally formed, pin elements (SP) of different heights, for supporting at a plurality of different levels the plate-like elements (B1, B2, B3).

2. A basin structure, according to claim 1, **characterized in that** said basin structure is a basin (1) that can be disassembled and comprises a rectangular substantially plate-like bottom (F) on the longitudinal or longest sides of which are defined a plurality of slots (S1,S1; S2,S2; S3,S3; and S4,S4), to the bottom (F) being removably coupled said four side walls (P1, P2, P3 and P4), that is one side wall (P1) on a first longitudinal side of the bottom (F), one (P2) on a first transversal side of the bottom (F), one (P3) on a second longitudinal side of the bottom and one (P4) on a second transversal side of the bottom (F), the side walls (P1, P2, P3 and P4) being defined by rectangular plate-like elements whose shortest transversal sides are removably coupled by hinge assemblies (C1, C2, C3 and C4) integrally formed with the walls themselves.
3. A basin structure, according to claim 2, **characterized in that** said plate-like elements are substantially plate-like slabs in which a plurality of substantially rectangular openings (SF) and a corresponding plurality of substantially circular borings (C) are defined for accommodating objects and/or products.
4. A basin structure, according to any one of the preceding claims 2-3, **characterized in that** each said side wall element comprises a plurality of integral tongues (L1,L1; L2,L2; L3,L3; L4,L4) each of which may be slidably engaged in a respective slot (S1,S1; S2,S2; S3,S3; S4,S4) integrally formed in said bottom (F) plate-like element.
5. A basin structure, according to any one of the preceding claims 2-4, **characterized in that** each said side of said side walls (P1, P2, P3 and P4) comprises integral hinge portions (C1, C2, C3 and C4) so fitted as to rotatably connect respective pairs of said side walls (P1, P2, P3 and P4).
6. A basin structure, according to any one of the preceding claims 2-5, **characterized in that** said basin structure defines, in an assembled condition thereof, a bottom surrounded by hinged side walls and an open top which may be removably or non-removably closed by a cover element.
7. A basin structure, according to any one of the pre-

ceding claims, **characterized in that** it is made of a plastic material, preferably injection moulded, and **in that** it may be completely manually disassembled without using dedicated tools.

8. A basin structure, according to any one of the preceding claims, **characterized in that** said basin structure comprises, either individually or in combination, one or more integral clamping means for coupling and fixing a plurality of said basins; clamping means for additional fittings and components, such as flags and lighting systems; and power supply and/or arrangement means of electrical systems, for example LED, video and/or the like systems.

Patentansprüche

1. Beckenstruktur (A; 1), die in einer überlappenden entfernbaren Anordnung mit mehreren Ebenen mehrere Tragelemente für Verkaufsprodukte enthält, wodurch die Tragelemente aus entsprechenden mehreren austauschbaren plattenartigen Elementen (B; B1, B2, B3) bestehen und die Beckenstruktur einen Beckenkörper umfasst, der mehrere Seitenwände (P1, P2, P3 und P4) mit inneren Flächen hat, auf denen mehrere einstückige Tragelemente definiert sind, die geeignet sind, um auf unterschiedlichen Ebenen jedes der plattenartigen Elemente (B; B1, B2, B3) zu tragen, **dadurch gekennzeichnet, dass:**

das Becken ein einstückiges Becken (A) ist, das geeignet ist, um die mehreren plattenartigen Elemente (B) zu halten, wobei das oberste auch als eine Abdeckung für das Becken (A) fungiert, wobei die plattenartigen Elemente (B) im Inneren des Beckens (A) durch Querschnittsreduzierungen entfernter getragen sind, die jeweilige Paare von Stufen (G1, G1; G2, G2; G3, G3) definieren, die geeignet sind, um das jeweilige plattenartige Element (B) zu tragen, wobei das Becken (A) einstückig erhalten ist, zum Beispiel durch Formen eines geeigneten farbigen transparenten Kunststoffmaterials, und auch mit einem Boden ausgestattet ist oder nicht, der auch einstückig gegossen ist; oder
 das Becken ein zerlegbares Becken (1) ist und an der inneren Fläche jedes Elements der Wand (P1, P2, P3, P4) Stiffelemente (SP) mit unterschiedlichen Höhen zum Tragen der plattenartigen Elemente (B1, B2, B3) auf mehreren unterschiedlichen Höhen einstückig gebildet sind.

2. Beckenstruktur nach Anspruch 1, **dadurch gekennzeichnet, dass** die Beckenstruktur ein Becken (1) ist, das zerlegt werden kann und einen rechteckigen im Wesentlichen plattenartigen Boden (F) umfasst,

- auf dessen Längs- oder längsten Seiten mehrere Schlitz (S1, S1; S2, S2; S3, S3; und S4, S4) definiert sind, wobei die vier Seitenwände (P1, P2, P3 und P4) mit dem Boden (F) entfernter gekoppelt sind, das heißt, eine Seitenwand (P1) auf einer ersten Längsseite des Bodens (F), eine (P2) auf einer ersten Querseite des Bodens (F), eine (P3) auf einer zweiten Längsseite des Bodens und eine (P4) auf einer zweiten Querseite des Bodens (F), wobei die Seitenwände (P1, P2, P3 und P4) durch rechteckige plattenartige Elemente definiert sind, deren kürzesten Querseiten durch Scharnieranordnungen (C1, C2, C3 und C4), die mit den Wänden selbst einstückig gebildet sind, entfernter gekoppelt sind.
3. Beckenstruktur nach Anspruch 2, **dadurch gekennzeichnet, dass** die plattenartigen Elemente im Wesentlichen plattenartige Tafeln sind, in denen mehrere im Wesentlichen rechteckige Öffnungen (SF) und entsprechende mehrere im Wesentlichen kreisförmigen Bohrungen (C) zum Aufnehmen von Gegenständen und/oder Produkten definiert sind.
 4. Beckenstruktur nach einem der vorhergehenden Ansprüche 2-3, **dadurch gekennzeichnet, dass** jedes Seitenwandelement mehrere einstückige Zungen (L1, L1; L2, L2; L3, L3; L4, L4) umfasst, von denen jede in einem jeweiligen Schlitz (S1, S1; S2, S2; S3, S3; S4, S4), der in dem Boden (F) des plattenartigen Elements einstückig gebildet ist, verschiebbar in Eingriff stehen kann.
 5. Beckenstruktur nach einem der vorhergehenden Ansprüche 2-4, **dadurch gekennzeichnet, dass** jede Seite der Seitenwände (P1, P2, P3 und P4) einstückige Scharnierabschnitte (C1, C2, C3 und C4) umfasst, die derart angebracht sind, dass sie jeweilige Paare der Seitenwände (P1, P2, P3 und P4) drehbar verbinden.
 6. Beckenstruktur nach einem der vorhergehenden Ansprüche 2-5, **dadurch gekennzeichnet, dass** die Beckenstruktur in einem zusammengesetzten Zustand davon einen Boden, der von mit Scharnier versehenen Seitenwänden umgeben ist, und eine offene Oberseite, die durch ein Abdeckungselement entfernter oder nicht entfernter geschlossen werden kann, definiert.
 7. Beckenstruktur nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** sie aus einem Kunststoffmaterial hergestellt ist, vorzugsweise spritzgegossen, und dadurch, dass sie vollständig manuell zerlegt werden kann, ohne spezielle Werkzeuge zu verwenden.
 8. Beckenstruktur nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** die Be-

ckenstruktur, entweder einzeln oder in Kombination, ein oder mehrere einstückige Klemmmittel zum Kopeln und Befestigen von mehreren der Becken, Klemmmittel für zusätzliche Anschlussstücke und Komponenten, wie etwa Kennzeichnungen und Beleuchtungssysteme, und Stromversorgungs- und/oder Anordnungsmittel von elektrischen Systemen, zum Beispiel LED-, Video- und/oder ähnliche Systeme, umfasst.

Revendications

1. Structure de bassin (A ; 1) contenant, dans un arrangement à plusieurs niveaux amovible superposé, une pluralité d'éléments de support pour la présentation de produits, dans laquelle lesdits éléments de support consistent en une pluralité correspondante d'éléments du genre plaque (B ; B1, B2, B3) interchangeables, et ladite structure de bassin comprend un corps de bassin comportant une pluralité de parois latérales (P1, P2, P3 et P4) avec des surfaces intérieures sur lesquelles sont définis une pluralité d'éléments de support intégraux adaptés pour supporter à différents niveaux chacun desdits éléments du genre plaque (B ; B1, B2, B3), **caractérisée en ce que** :

ledit bassin est un bassin intégral (A) adapté pour contenir ladite pluralité d'éléments du genre plaque (B), parmi lesquels celui du dessus sert également de couvercle pour le bassin (A), les éléments du genre plaque (B) à l'intérieur du bassin (A) étant supportés de façon amovible par des réductions de section transversale définissant des paires de gradins (G1, G1 ; G2, G2 ; G3, G3) respectives adaptés pour supporter de façon amovible l'élément du genre plaque (B) respectif, ledit bassin (A) étant obtenu intégralement, par exemple par moulage d'une matière plastique transparente teintée appropriée et étant ou pas également équipé d'un fond également moulé intégralement ; or
ledit bassin est un bassin démontable (1) et des éléments de broche (SP) de différentes hauteurs sont formés intégralement sur la surface intérieure de chaque paroi (P1, P2, P3, P4), pour supporter les éléments du genre plaque (B1, B2, B3) à une pluralité de niveaux différents.

2. Structure de bassin selon la revendication 1, **caractérisée en ce que** ladite structure de bassin est un bassin (1) susceptible d'être désassemblé et comprend un fond rectangulaire substantiellement du genre plaque (F), sur les côtés longitudinaux ou les plus longs duquel sont définies une pluralité de fentes (S1, S1 ; S2, S2 ; S3, S3 ; et S4, S4), lesdites quatre parois latérales (P1, P2, P3 et P4) étant ac-

couplées de façon amovible au fond (F), notamment une paroi latérale (P1) sur un premier côté longitudinal du fond (F), une (P2) sur un premier côté transversal du fond (F), une (P3) sur un deuxième côté longitudinal du fond et une (P4) sur un deuxième côté transversal du fond (F), les parois latérales (P1, P2, P3 et P4) étant définies par des éléments rectangulaires du genre plaque, dont les côtés transversaux les plus courts sont accouplés de façon amovible par des ensembles de charnière (C1, C2, C3 et C4) formés intégralement avec les parois elles-mêmes.

3. Structure de bassin selon la revendication 2, **caractérisée en ce que** lesdits éléments du genre plaque sont des dalles substantiellement du genre plaque, dans lesquelles sont définis une pluralité d'ouvertures substantiellement rectangulaires (SF) et une pluralité correspondante d'alésages substantiellement circulaires (C) pour l'accueil d'objets et/ou de produits. 15
4. Structure de bassin selon l'une quelconque des revendications précédentes 2 - 3, **caractérisée en ce que** chacun desdits éléments de paroi latérale comprend une pluralité de langues intégrales (L1, L1 ; L2, L2 ; L3, L3 ; L4, L4), parmi lesquelles chacune peut être engagée de façon coulissante dans une fente (S1, S1 ; S2, S2 ; S3, S3 ; S4, S4) respective formée intégralement dans ledit fond (F) de l'élément du genre plaque. 25
5. Structure de bassin selon l'une quelconque des revendications précédentes 2 - 4, **caractérisée en ce que** chacun desdits côtés desdites parois latérales (P1, P2, P3 et P4) comprend des parties de charnière intégrales (C1, C2, C3 et C4) ajustées de manière à connecter de façon rotative des paires respectives desdites parois latérales (P1, P2, P3 et P4). 30
6. Structure de bassin selon l'une quelconque des revendications précédentes 2 à 5, **caractérisée en ce que** ladite structure de bassin définit, dans un état assemblé de celle-ci, un fond entouré par des parois latérales articulées et un dessus ouvert susceptible d'être fermé de façon amovible ou non amovible par un élément de couvercle. 35
7. Structure de bassin selon l'une quelconque des revendications précédentes, **caractérisée en ce que** celle-ci est constituée d'une matière plastique, de préférence moulée par injection, et **en ce qu'**elle peut être désassemblée entièrement manuellement, sans utiliser d'outils spéciaux. 40
8. Structure de bassin selon l'une quelconque des revendications précédentes, **caractérisée en ce que** ladite structure de bassin comprend, soit individuel- 45

lement ou de façon combinée, un ou plusieurs moyens de serrage pour l'accouplement et la fixation d'une pluralité desdits bassins ; des moyens de serrage pour des raccords et des composants supplémentaires, tels que des étiquettes et des systèmes d'éclairage ; et des moyens d'alimentation électrique et/ou d'agencement de systèmes électriques, par exemple des systèmes DEL, des systèmes vidéo et/ou similaires. 50

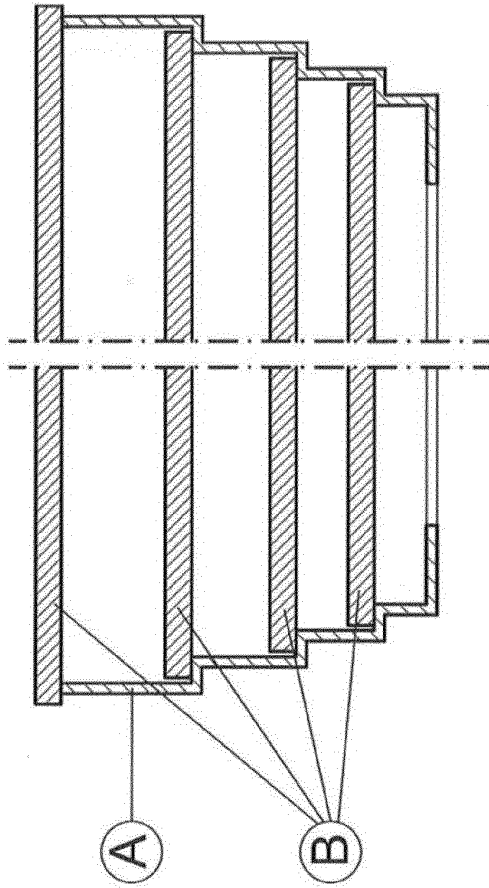


FIG.2

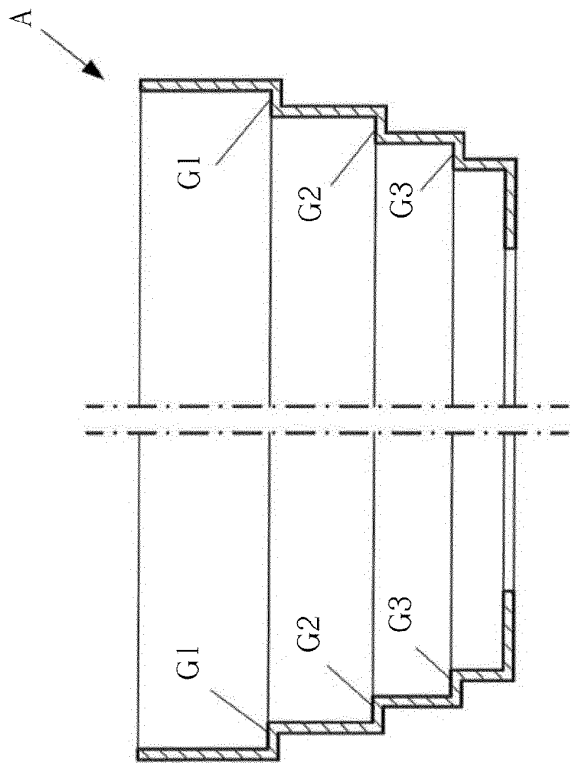


FIG.1

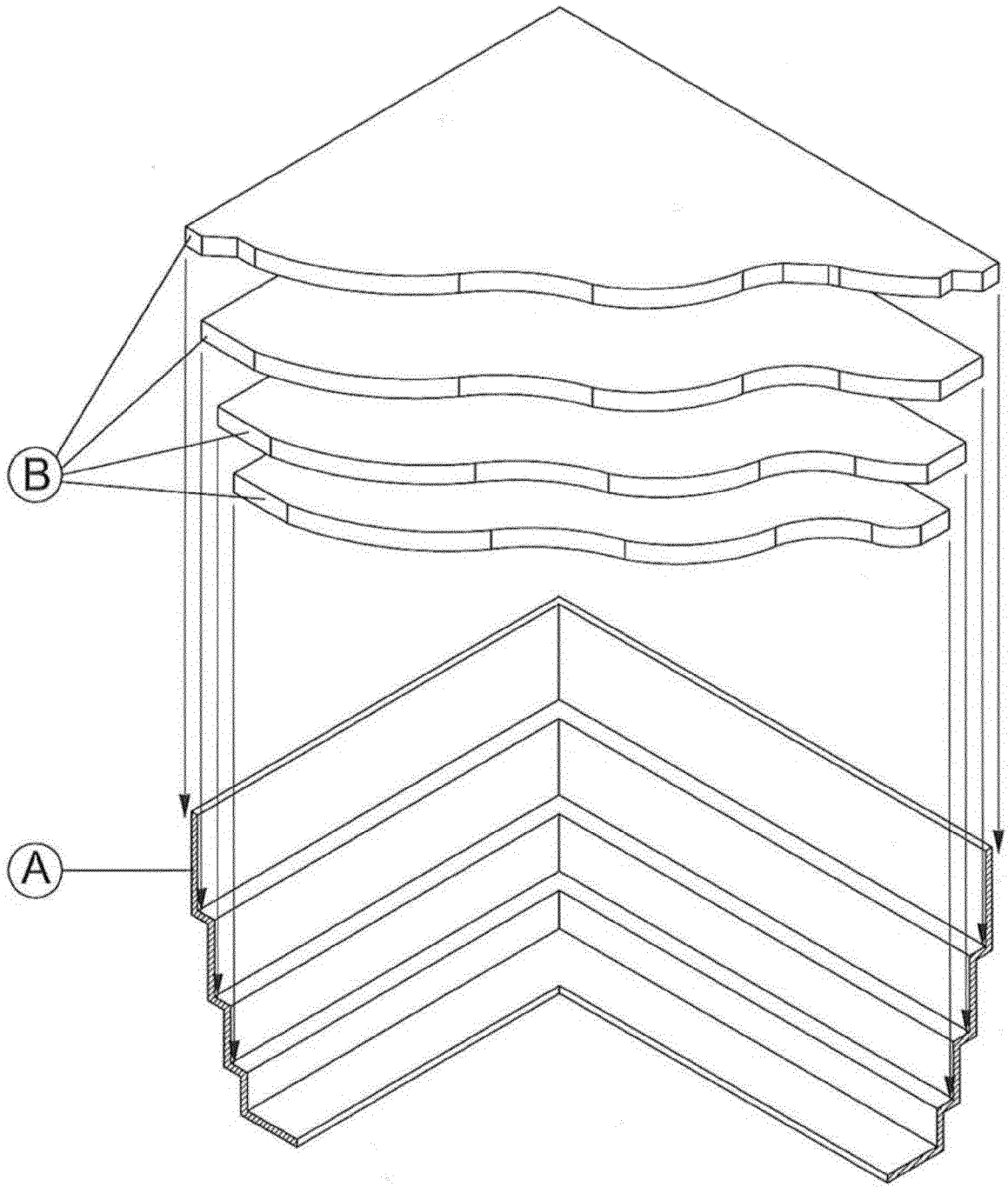


FIG. 3

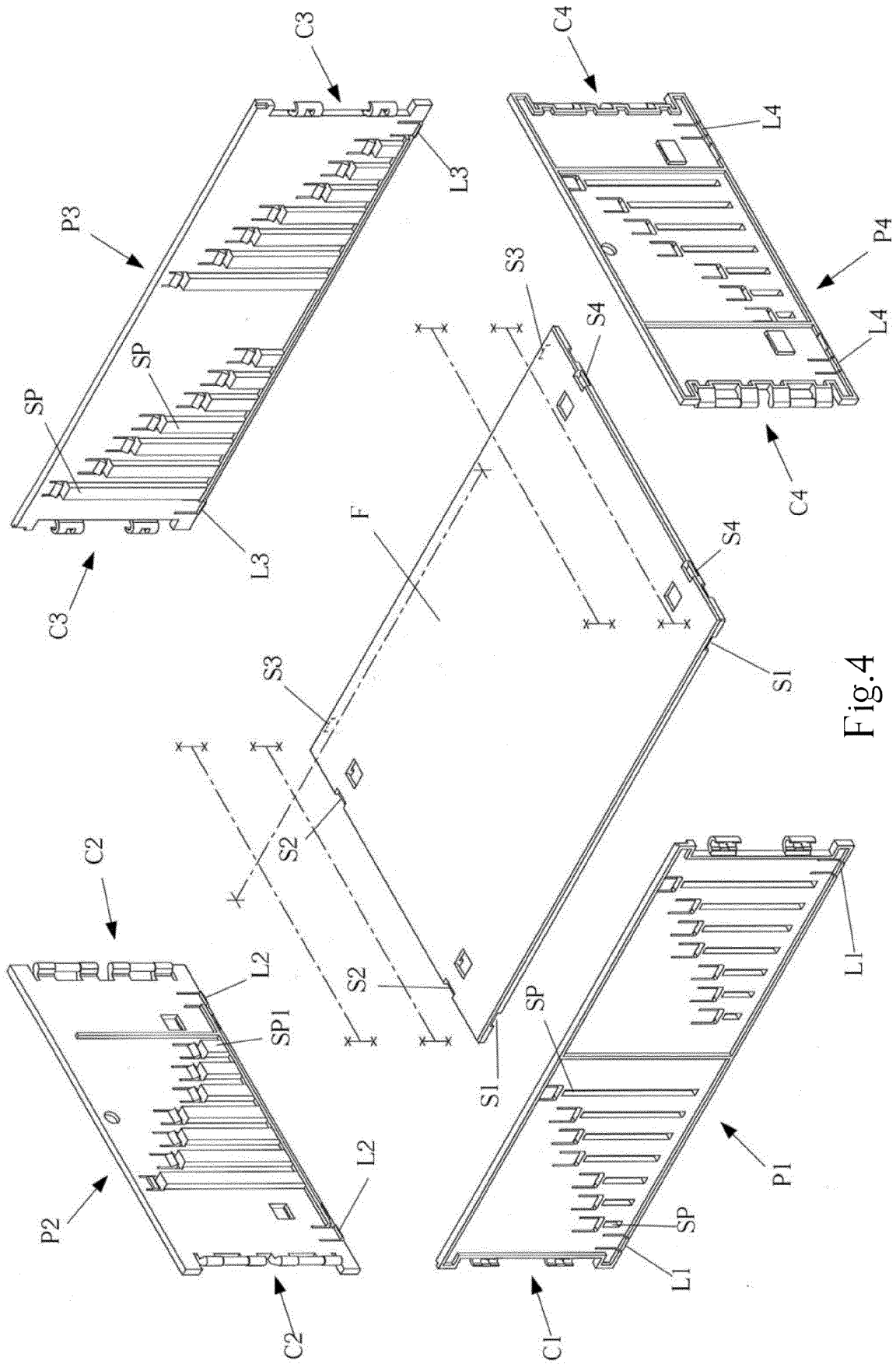


Fig.4

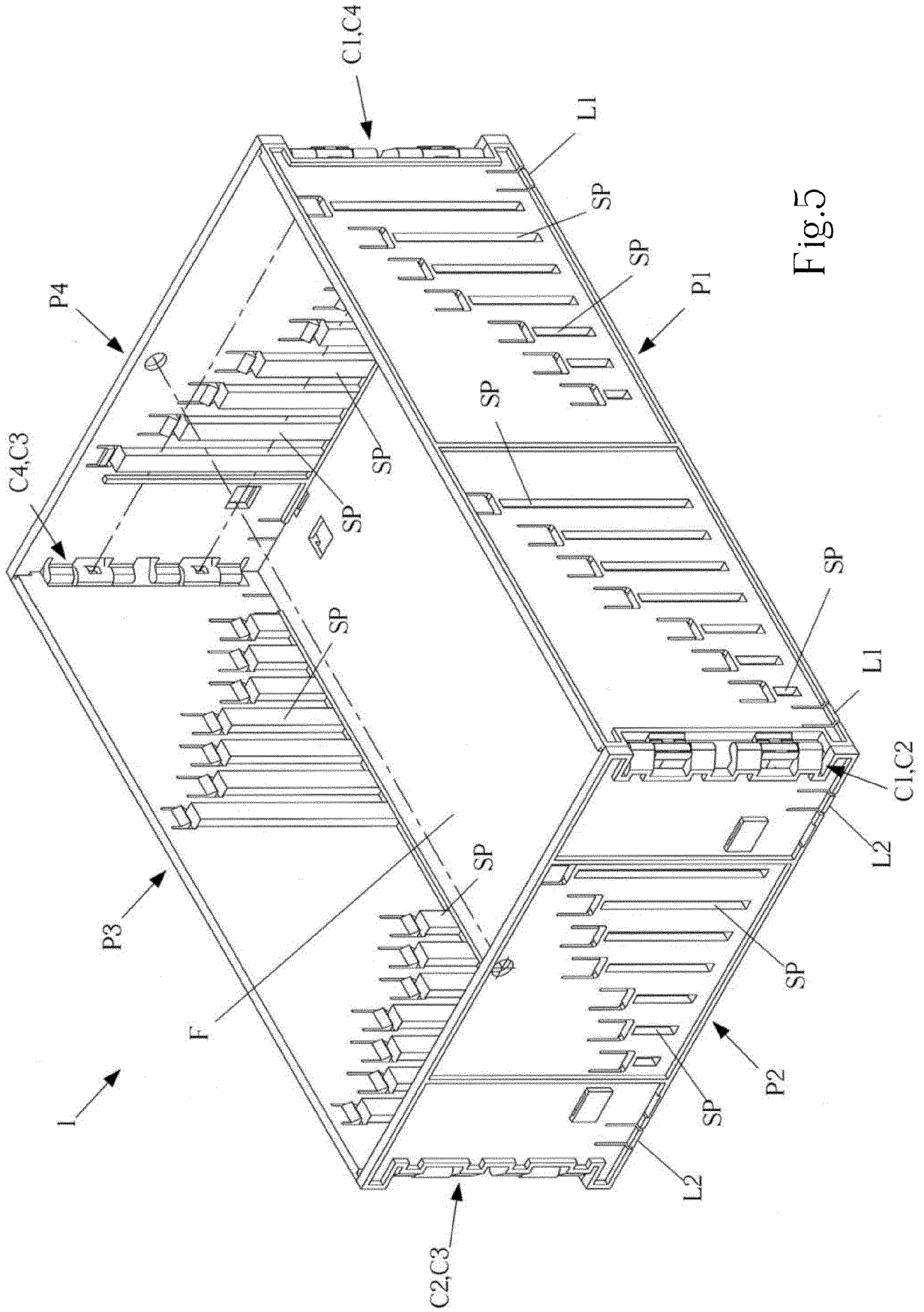


Fig.5

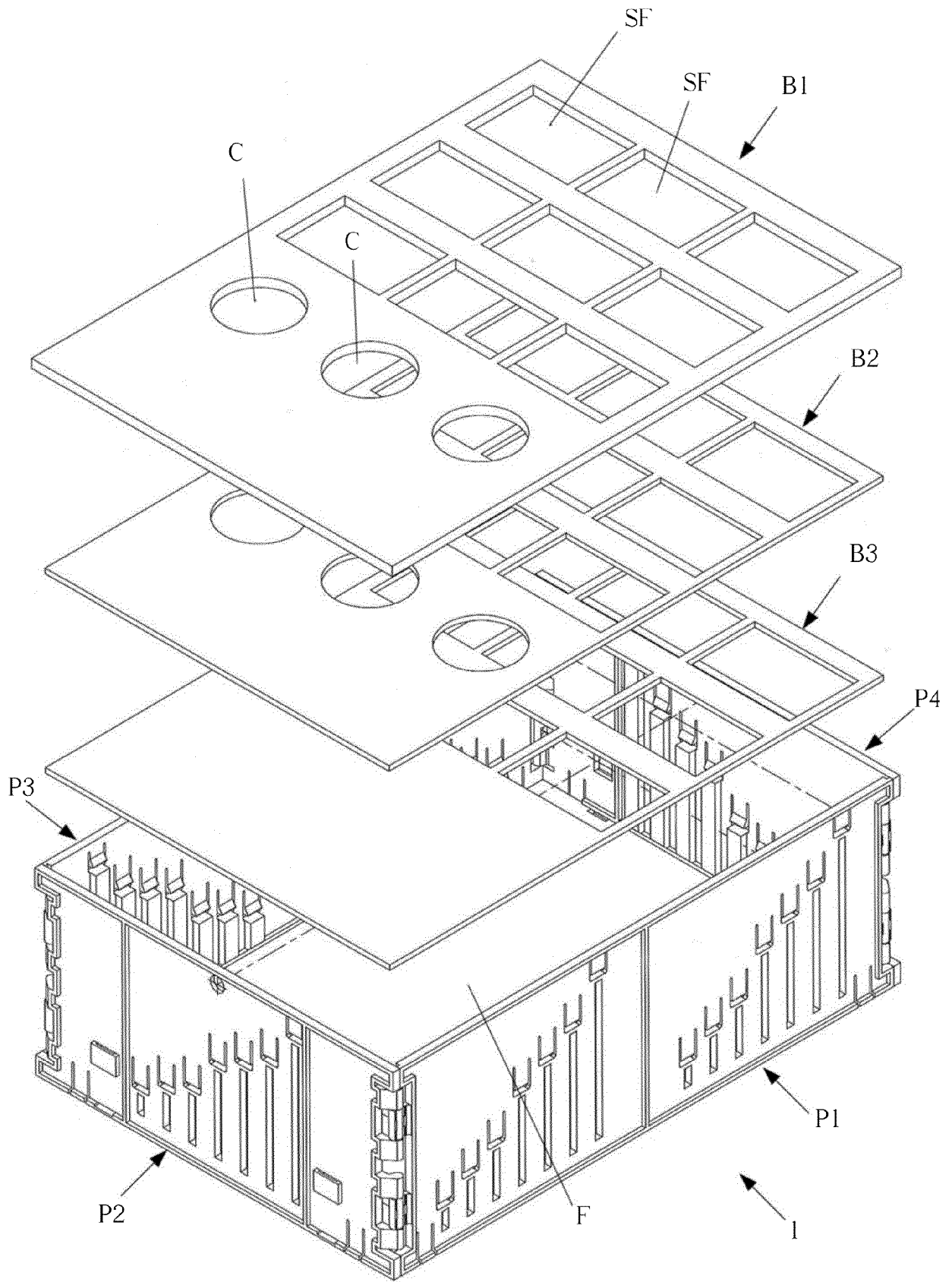


FIG.6

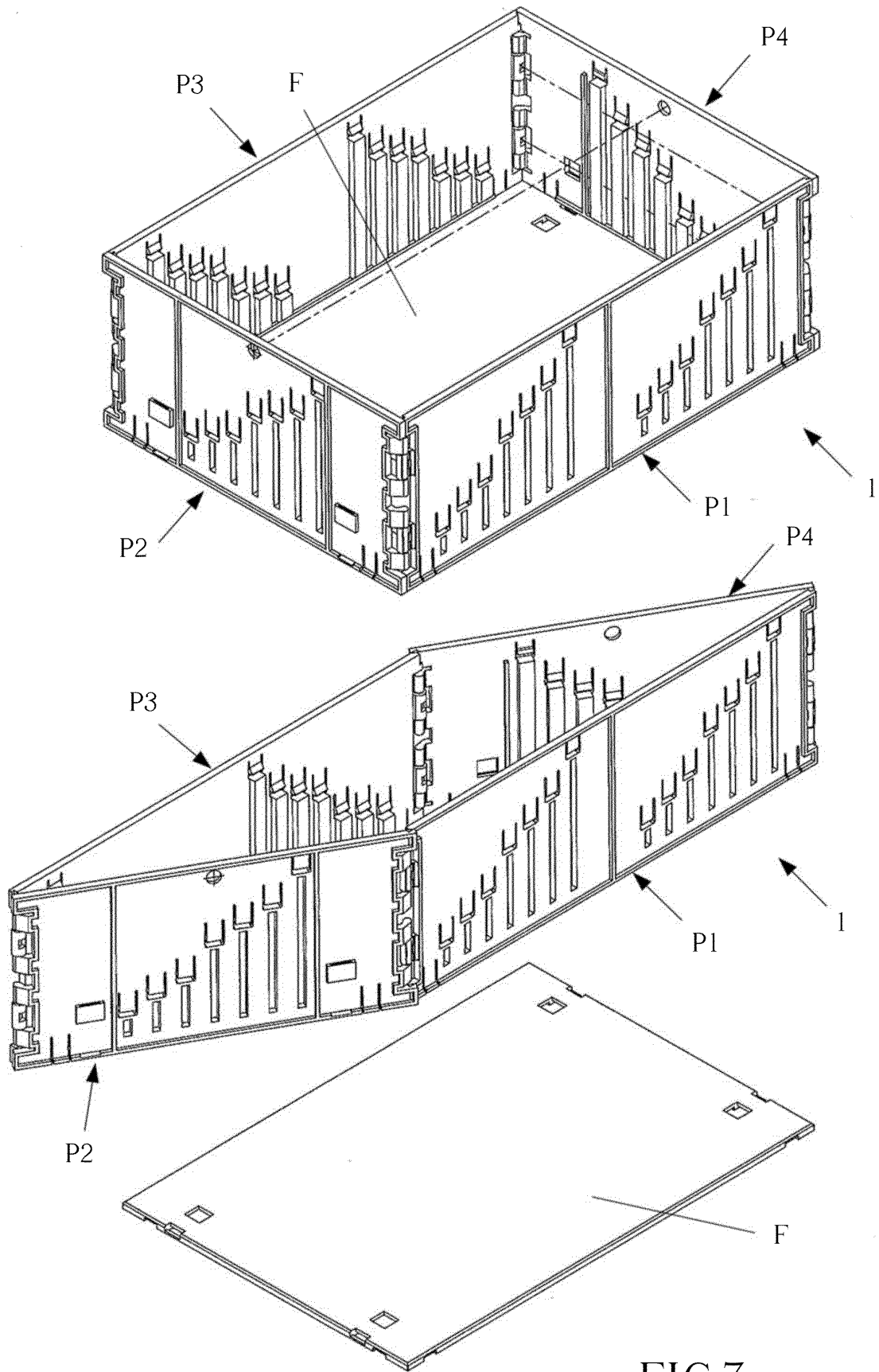


FIG.7

REFERENCES CITED IN THE DESCRIPTION

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