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

(57) A basin structure for containing, in an overlapping removable multiple-level arrangement, a plurality of plate-like elements and/or fittings, comprises a basin body having a plurality of inner surfaces on which a plu-

rality of integral support elements suitable to support at different levels each said plate-like element and/or fittings are defined.

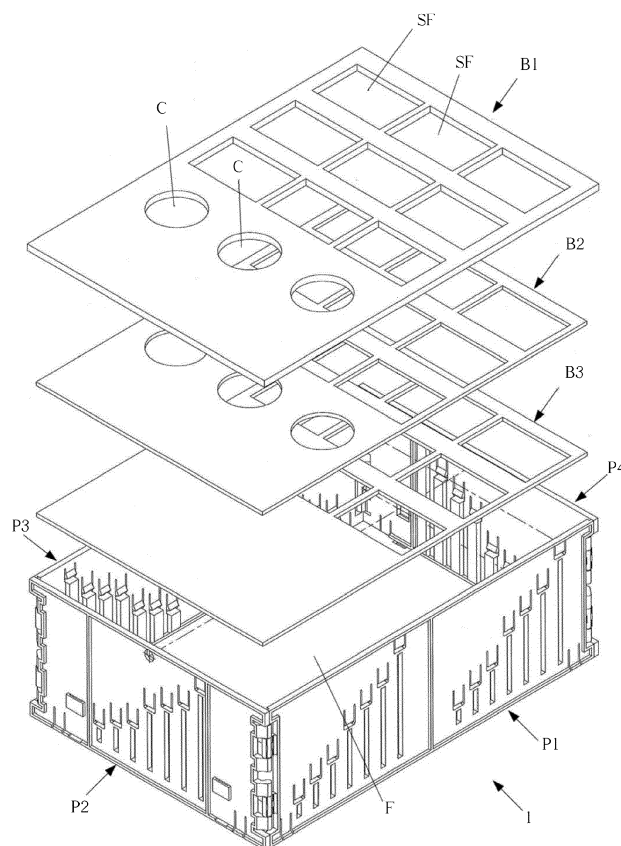


FIG.6

## 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.

### SUMMARY OF THE INVENTION

[0004] 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.

[0005] 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.

[0006] 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.

[0007] 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.

[0008] 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.

[0009] The above mentioned aim and objects, as well as further objects that will become more appear hereinafter, are achieved by a basin structure having the characteristics of the appended claims.

### BRIEF DESCRIPTION OF THE DRAWINGS

[0010] 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

[0011] 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.

[0012] 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.

[0013] 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.

[0014] 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.

[0015] 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.

[0016] 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.

[0017] 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.

[0018] 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.

[0019] 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.

[0020] 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.

[0021] Advantageously, to the inner surface of each wall P1, P2, P3, P4 element are also associated, preferably 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).

[0022] 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 borings C, intended, for example, to accommodate objects,.

[0023] 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.

[0024] 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.

[0025] The bottom F of the basin may be open or

closed.

[0026] 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.

[0027] As a further version, the material used for the basin manufacturing may be, besides plastics, wood or other materials.

[0028] 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.

[0029] For example, the form of the basin, instead of being rectangular, may be generally squared or polygonal, or even circular.

[0030] 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.

[0031] The cross-section changes may be also obtained by positioning support.

[0032] 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 for containing, in an overlapping removable multiple-level arrangement, a plurality of support elements of display products, **characterized in that** said support elements consist of a corresponding plurality of interchangeable plate-like elements and/or fittings, and **in that** said basin structure comprises a basin body having a plurality of inner surfaces on which are defined a plurality of integral support elements suitable to support at different levels each said plate-like element and/or fittings.
2. A basin structure, according to claim 1, **characterized in that** said basin is a fixed basin suitable to hold a plurality of plate-like elements wherein the top one also works as a cover for the basin, the plate-like elements inside the basin being removably supported by cross-section reductions defining respective pairs of steps suitable to removably support the respective plate-like element, said basin being integrally obtained, for example, by moulding a suitable coloured transparent plastic material and being or not also equipped with a bottom integrally moulded too.
3. A basin structure, according to claim 1, **characterized in that** said basin structure is a basin that can be disassembled and comprises a rectangular substantially plate-like bottom on the longitudinal or

longest sides of which are defined a plurality of slots, to the bottom being removably coupled four side walls, that is one side wall on a first longitudinal side of the bottom, one on a first transversal side of the bottom, one on a second longitudinal side of the bottom and one on a second transversal side of the bottom, the side walls being defined substantially by rectangular plate-like elements whose shortest transversal sides are removably coupled by hinge assemblies integrally formed with the walls themselves.

4. A basin structure, according to claim 1, **characterized in that** said plate-like elements are substantially plate-like slabs in which a plurality of substantially rectangular openings and a corresponding plurality of substantially circular borings are defined for accommodating objects and/or products. 15
5. A basin structure, according to any one of the preceding claims, **characterized in that** each said side wall element comprises a plurality of integral tongues each of which may be slidably engaged in a respective slot integrally formed in said bottom plate-like element. 20 25
6. A basin structure, according to any one of the preceding claims, **characterized in that** each said side of said side wall elements comprises integral hinge portions so fitted as to rotatably connect respective pairs of said sides. 30
7. A basin structure, according to any one of the preceding claims, **characterized in that** each said side wall element comprises a plurality of integral supporting and locking means arranged at different levels on an inner surface of each said side wall element for removably supporting and locking at different levels each said plate-like element as said basin is in an assembled condition. 35 40
8. A basin structure, according to any one of the preceding claims, **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. 45
9. A basin structure, according to claim 7, **characterized in that** said supporting and locking means comprise undercut bearing or toothed elements integrally formed on an inner surface of each said side wall element, preferably at cross-section changes. 50
10. A basin structure, according to any one of the preceding claims, **characterized in that** it is made of a plastic material, preferably injection moulded, and **in that** it may be completely manually disassembled 55

without using dedicated tools.

11. 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.

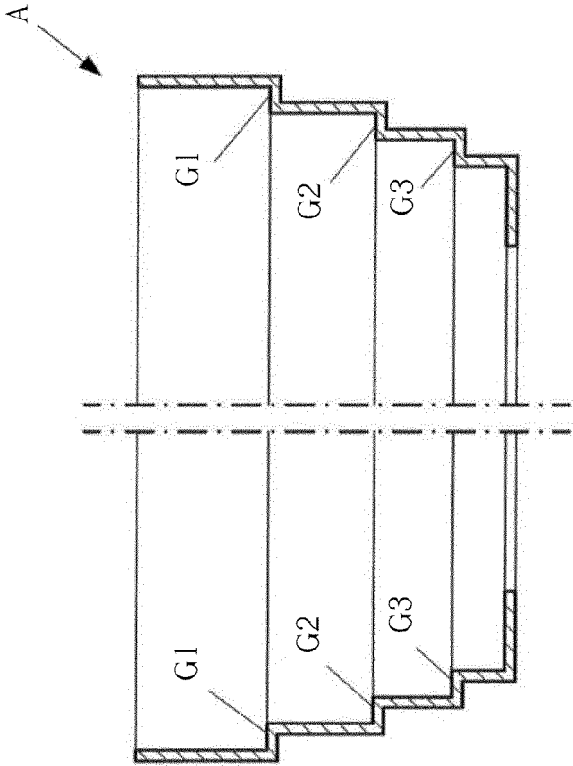


FIG.1

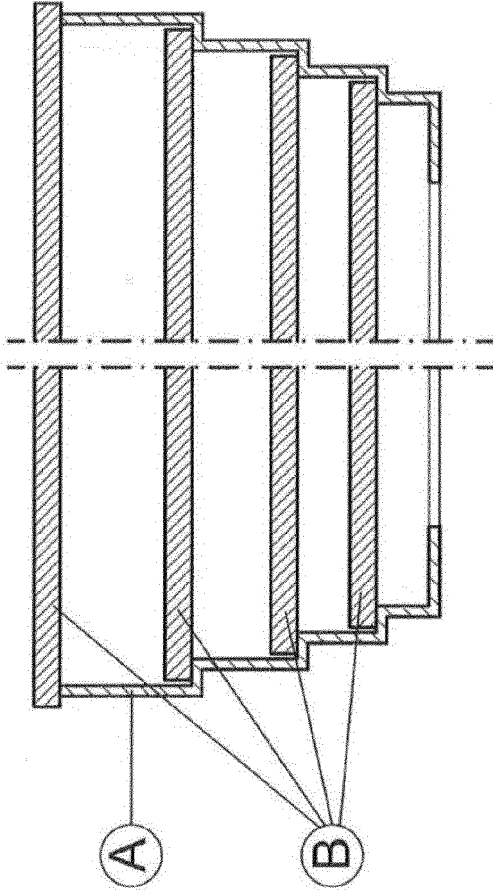


FIG.2

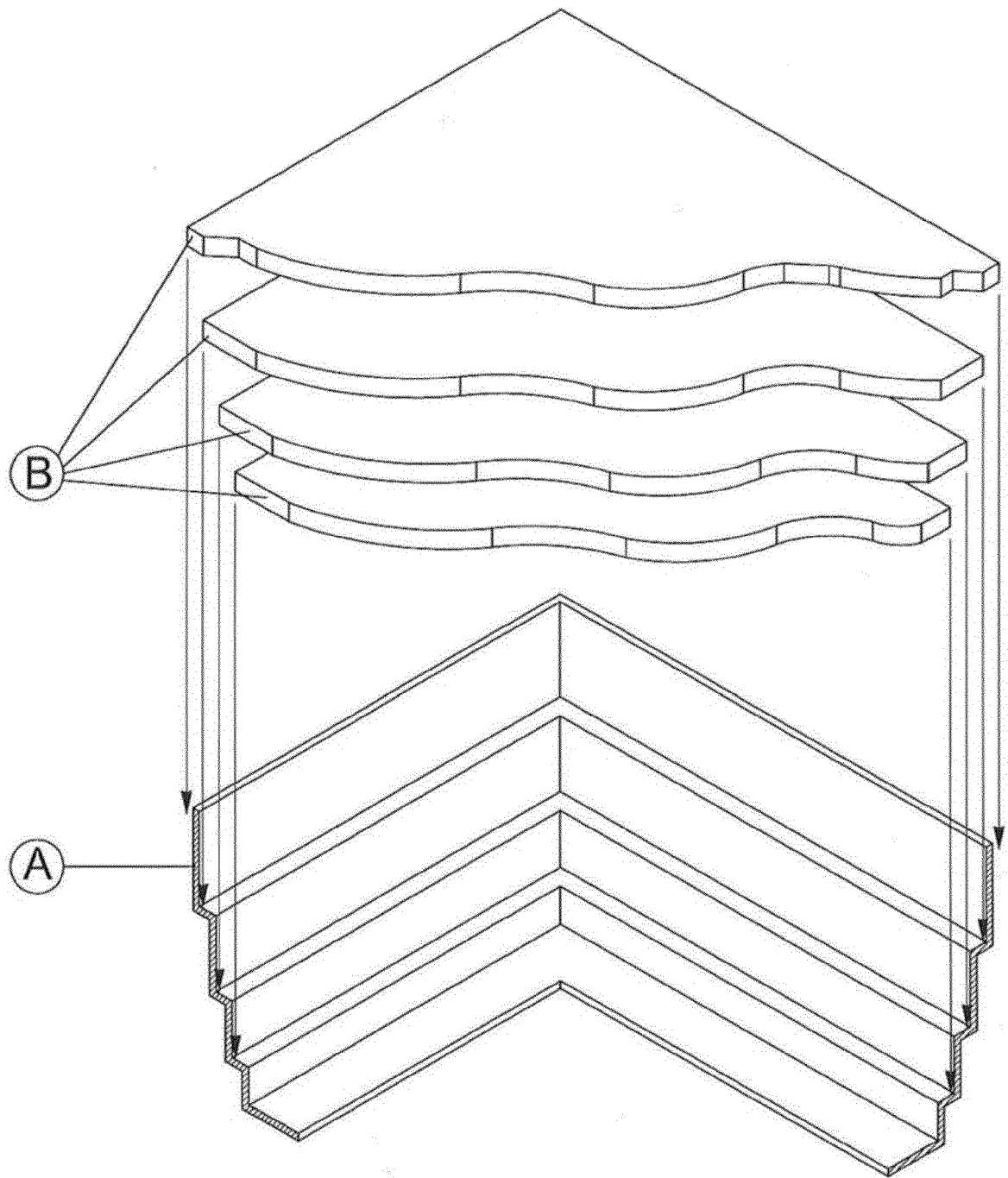


FIG. 3

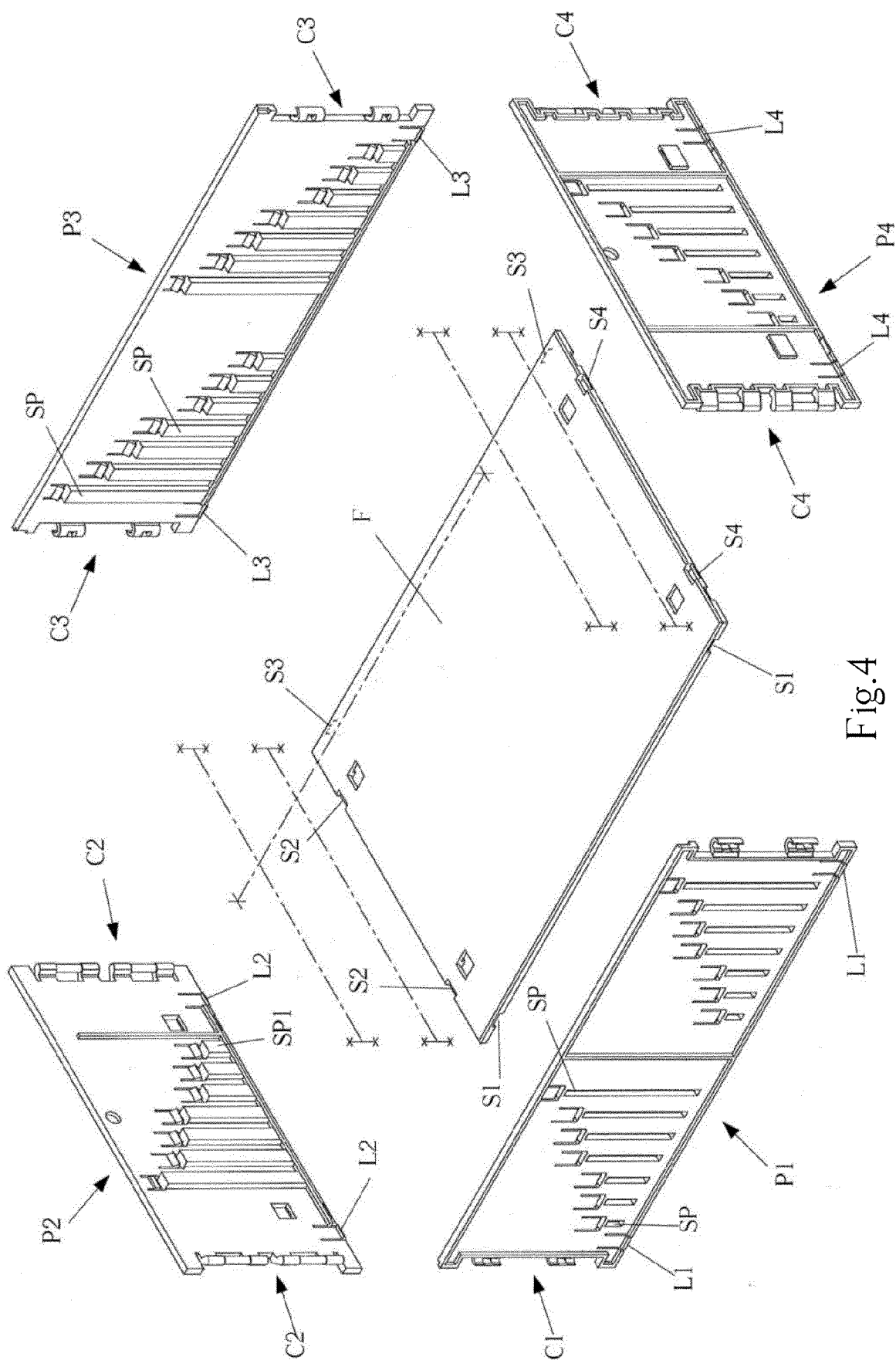


Fig. 4

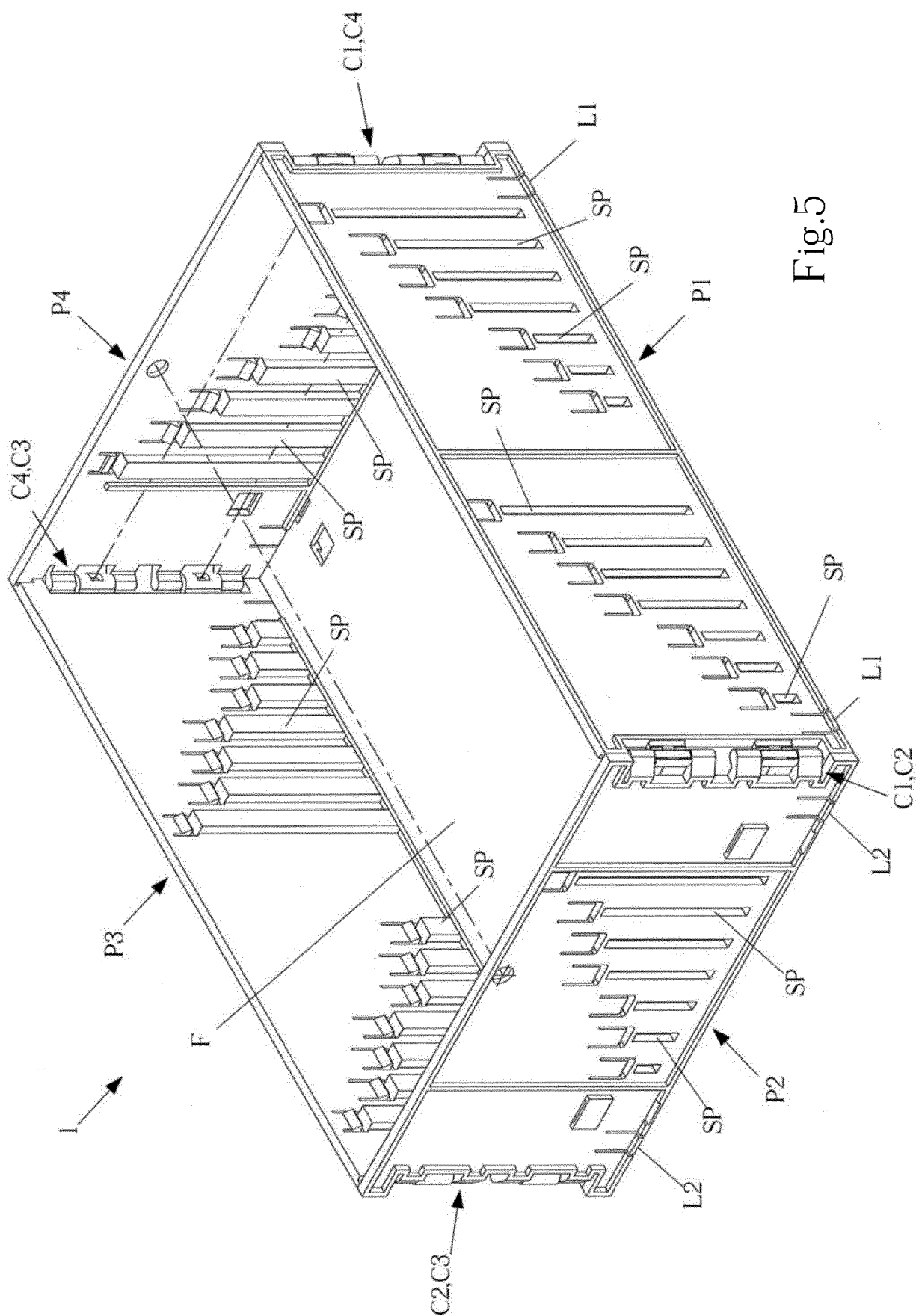


Fig. 5



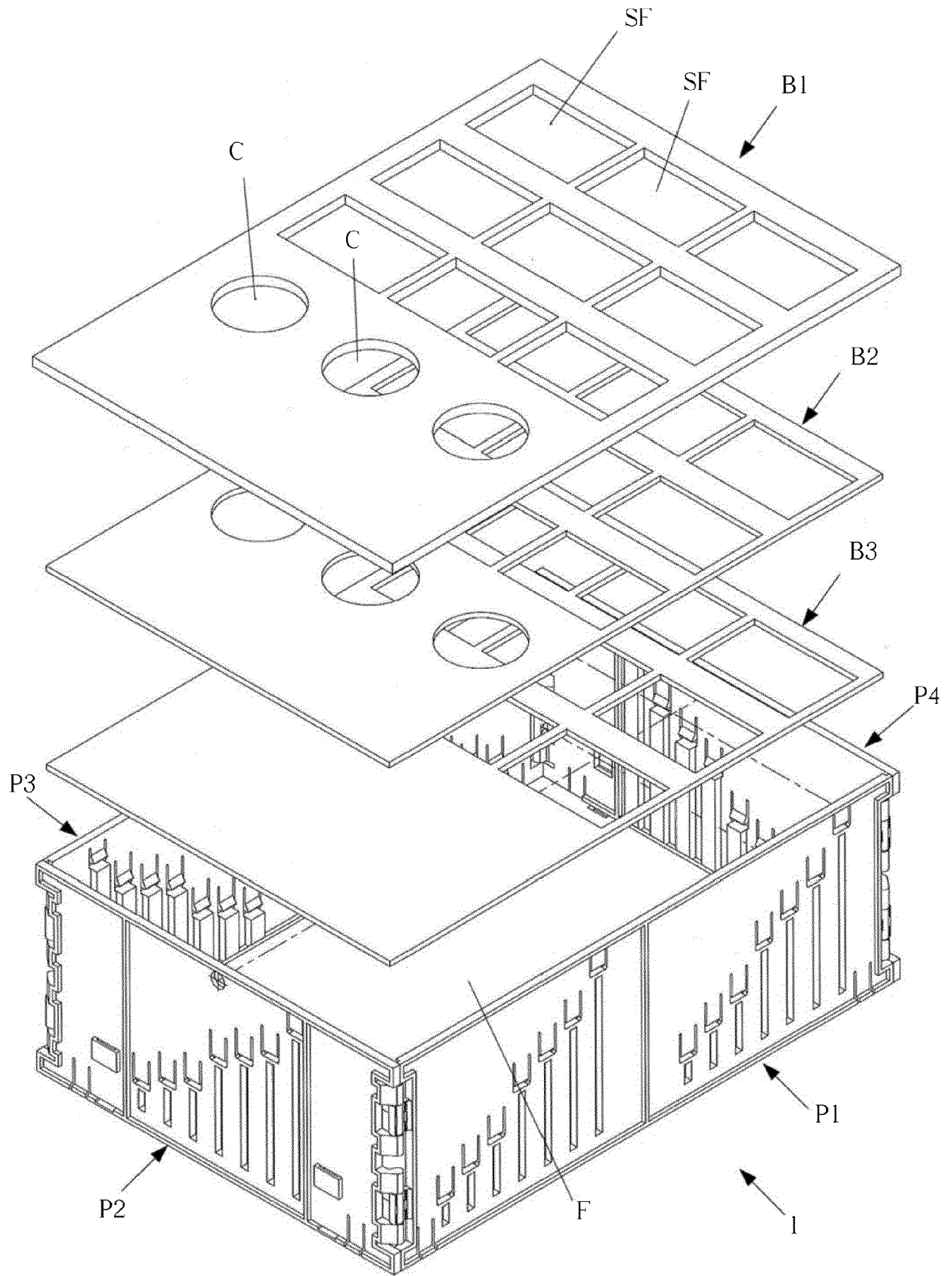


FIG.6

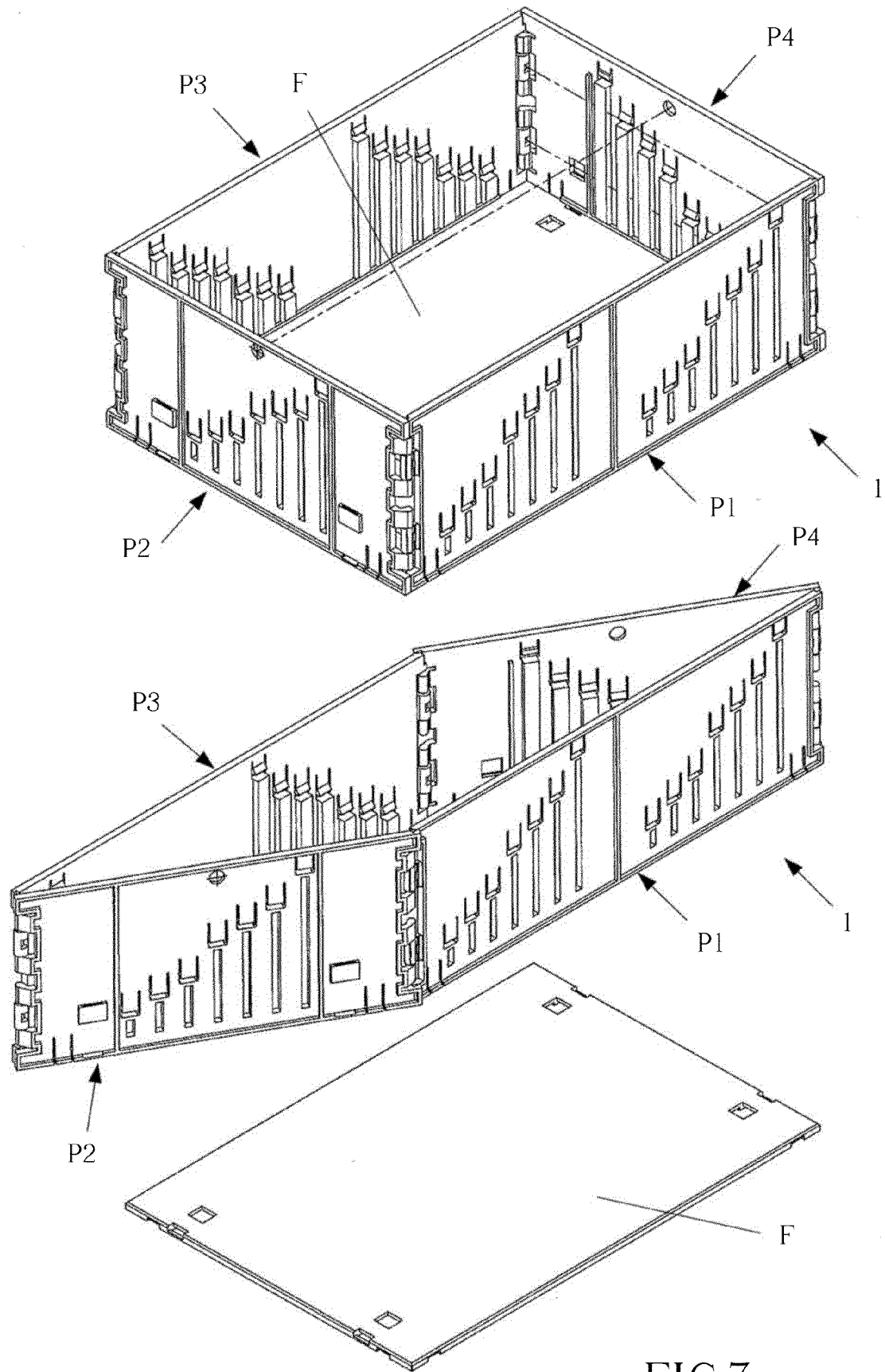


FIG.7



## EUROPEAN SEARCH REPORT

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The present search report has been drawn up for all claims			
Place of search <b>The Hague</b>		Date of completion of the search <b>9 February 2017</b>	Examiner <b>Ottesen, Rune</b>
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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**ANNEX TO THE EUROPEAN SEARCH REPORT  
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