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(54) **PACKAGING**

(57) Packaging comprising separate laminar bodies that form the base with opposing parallel sides and two pairs of side walls (2-3) that have, near the lower edges thereof, slots (5) into which tabs (4) on the edges of the base fit, the side edges of the second pair of side walls (3) having further tabs (4') that fit into further slots (5') made near the side edges of the first pair of side walls (2), the tabs (4-4') having harpoon-shaped retention stops that hook over areas adjacent to the ends of said slots (5-5') made in all the side walls (2-3). The packaging may also include a flat element at the top (10, 10', 10'') that acts as a lid for the packaging and makes the structure of the packaging more sturdy.

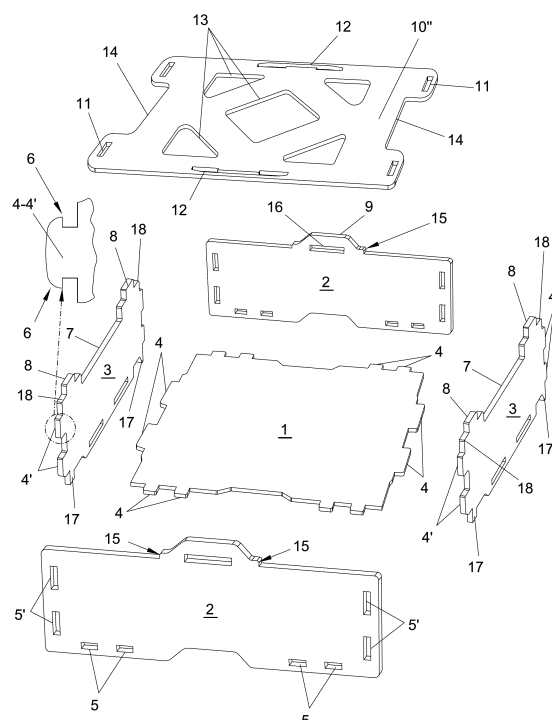


FIG. 1

Description

OBJECT OF THE INVENTION

[0001] The present invention, as described in the wording of this specification, relates to a packaging of the type that comprises, in principle, a base, two large side walls, two short side walls and a lid that closes the mouthpiece of the assembled packaging.

[0002] The packaging is of the type whose elements, which make up the packaging set, are separate interconnected pieces, so male and female elements interact with each other.

[0003] Based on this premise, the object of the invention is the adaptation of this type of packaging to current, more automatized assembly processes, which normally employ assembly machines that fit all the pieces of the packaging with enormous speed.

BACKGROUND OF THE INVENTION

[0004] Different types of boxes are currently known, among which we have those comprising separate pieces, whose automatized assembly presents inconveniences especially due to the need to submit some pieces, such as the side walls, to complex movements in order to fit them appropriately when using connectors with non-regular shapes.

[0005] In addition, the change of format of these boxes or packagings requires making complex adjustments in the automation systems of these machines, which must adapt their assembly movements to the new dimensions.

DESCRIPTION OF THE INVENTION

[0006] With the purpose of achieving the objectives and avoiding the inconveniences referred to in the previous sections, the invention proposes a packaging that comprises, in principle, separate pieces interconnected by means of male elements and female elements that supplement each other.

[0007] The invention is characterized in that the assembly connections of the large side walls with respect to the base only require displacements in perpendicular directions contained in horizontal planes.

[0008] Said connections comprise regular slots into which simple or double tabs, provided with harpoon-shaped retention stops, fit.

[0009] This way, the assembly machine only has to place the female elements and the male elements opposite each other and press perpendicularly to produce the fitting.

[0010] Whenever the format needs to be changed, the machine does not need to be adjusted to carry out the fitting; it only needs to detect the resistance in the introduction operation to confirm that the assembly has been carried out correctly and it will automatically adapt to the new packaging size.

[0011] The packaging may incorporate a flat element on top that closes the mouthpiece, which matches the utility model no. 201030758, owned by the holder of the present invention.

[0012] Therefore, the packaging is characterized in that all the side walls comprise, near the lower edges thereof, slots into which tabs arranged on the edges of the base fit in a supplementary manner, two of the side walls having further tabs as an extension of said side walls that fit into further slots made near the side edges of the other pair of side walls.

[0013] Next, in order to facilitate a better comprehension of this specification and being an integral part thereof, the following figures are attached, wherein the object of the invention has been represented in an illustrative rather than limitative manner.

BRIEF DESCRIPTION OF THE DRAWINGS

[0014]

Figure 1. Shows a perspective exploded view of the packaging object of the invention.

Figure 2. Shows a perspective view of the packaging of the invention.

Figure 3. Shows a perspective view of the packaging of the invention, wherein the packaging incorporates end supporting plates.

Figure 4. Shows a perspective view of the packaging of the invention, wherein the packaging incorporates corner supporting plates.

Figure 5. Shows a perspective view of the packaging of the invention, wherein the packaging incorporates a complete supporting plate.

References:

[0015]

- 1: Base
- 2: Longer side walls
- 3: Shorter side walls
- 4: Base tabs
- 4': Side wall tabs
- 5: Slots of the lower edge of the side walls
- 5': Slots of the side edge of the side walls
- 6: Retention stop
- 7: Trapezoidal indentations
- 8: Upper flanges
- 9: Centered flanges
- 10: End supporting plate
- 10': Corner supporting plate
- 10'': Complete supporting plate
- 11: Corner slots
- 12: Centered slots
- 13: Ventilation openings
- 14: Longitudinal recesses
- 15: End steps

- 16: Slotting
- 17: Specific feet
- 18: Specific supports

DESCRIPTION OF THE PREFERRED EMBODIMENT

[0016] Taking into account the numbering adopted in the figures, the packaging comprises, in principle, a base 1, a first pair of side walls 2 facing each other and a second pair of walls 3, also facing each other, and an upper flat element (10, 10', 10'') closing the mouthpiece of the assembled packaging.

[0017] This upper flat element (10, 10', 10'') acts as the lid of the packaging but it also makes it sturdier. This is specially important when several packagings are stacked on top of each other, since, in these cases, the packagings known in the state of the art that are similar to the present one break or are deformed because they are not able to withstand all the weight. Thanks to the incorporation of the flat element (10, 10', 10''), the assembly of the packaging is made more rigid and sturdier.

[0018] All the elements described are separate pieces interconnected by means of male elements, materialized by tabs 4-4', and female elements, materialized by slots 5-5', into which the aforementioned tabs 4-4', provided with harpoon-shaped retention stops 6 that provide full safety in the connection between the different pieces making up the packaging, fit.

[0019] The tabs 4 of the base 1 are an extension thereof, which fit into supplementary slots 5 made near the lower edges of the side walls 2 and 3, a part thereof protruding below the aforementioned base 1.

[0020] On the other hand, the second pair of side walls 3 incorporate the tabs 4' in their side edges as an extension thereof, which fit into the supplementary slots 5' made near the side edges of the first pair of side walls 2.

[0021] Therefore, the tabs 4-4' and the slots 5-5' provide a characteristic connection thanks to which the packaging and box assembly machine only has to place said tabs 4-4' and said slots 5-5' opposite each other and press perpendicularly to produce the fitting and assembly of the corresponding packaging.

[0022] On the other hand, as in the case of the utility model no. 201030758, the second pair of side walls 3 are provided with broad trapezoidal indentations 7, which delimit the end supports interrupted by upper flanges 8, said end supports being at the same height than the upper edges of the first pair of opposing side walls 2, said upper edges being interrupted by centered flanges 9, provided with slotting 16 as well.

[0023] The upper flat element (10, 10', 10'') is provided with corner slots 11 into which the upper flanges 8 arranged on the end sections of the second pair of side walls 3 fit, forming a part thereof, and this connection of upper flanges 8 and corner slots 11 being supplemented with other characteristic centered slots 12, into which the centered flanges 9, beginning from the free edge of the first pair of side walls 2 and being an integral part thereof,

fit.

[0024] On the other hand, the flat element (10, 10', 10'') may have ventilation openings 13, as well as longitudinal recesses 14 to improve the view of the product contained inside the packaging and its ventilation.

[0025] The centered flanges 9 have end steps 15 that help to retain and stabilize the lid (10, 10', 10''), leaving it coplanar to said end steps 15.

[0026] The packaging may incorporate in its lower part of the box specific feet (17) arranged in the same vertical direction than the specific supports (18) arranged in the upper part of the packaging in correspondence with its mouthpiece, said specific supports and specific feet being in the same vertical corners of the packagings where the side walls (2-3) converge.

[0027] The flat element incorporated by the packaging may comprise two end supporting plates (10) as shown in figure 3, or two pairs of corner supporting plates (10') as shown in figure 4, or a complete supporting plate, as shown in any of the figures 1, 2 and 5.

Claims

1. Packaging comprising separate laminar bodies that form the base with opposing parallel sides, a first pair of side walls and a second pair of side walls; **characterized in that** all the side walls (2) and (3) comprise, near the lower edges thereof, slots (5) into which tabs (4) arranged on the edges of the base fit in a supplementary manner as an extension thereof, including the side edges of the second pair of side walls (3) further tabs (4') that fit into further slots (5') made near the side edges of the first pair of side walls (2), the tabs (4-4') having harpoon-shaped retention stops that hook over areas adjacent to the ends of said slots (5-5') made in all the side walls (2-3).
2. Packaging, according to claim 1, **characterized in that** its lower part, corresponding to its base, incorporates specific feet (17) arranged in the same vertical direction than specific supports (16) arranged in the upper part of the packaging, in correspondence to its mouthpiece, said specific supports and specific feet being in the same vertical corners than the packagings where the side walls (2-3) converge.
3. Packaging, according to any one of the claims 1 to 2, **characterized in that** it incorporates flat elements (10, 10', 10'') supported on at least one end portion of the free edges of the side walls (2-3), said flat elements (10, 10', 10'') incorporating slots (11, 12) into which the lower portions of tabs (8, 9), which begin from the free edge of the side walls (2-3), fit, the lower part or base of an upper packaging resting on top of the flat elements (10, 10', 10'') of another lower packaging when several packagings are

stacked on top of each other.

4. Packaging, according to claim 3, **characterized in that** the flat element of the packaging is composed of two end supporting plates (10). 5
 5. Packaging, according to claim 3, **characterized in that** the packaging comprises at least one flat element composed of two pairs of corner supporting plates (10'). 10
 6. Packaging, according to claim 3, **characterized in that** the packaging comprises at least one flat element composed of a complete supporting plate (10"). 15
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- 55

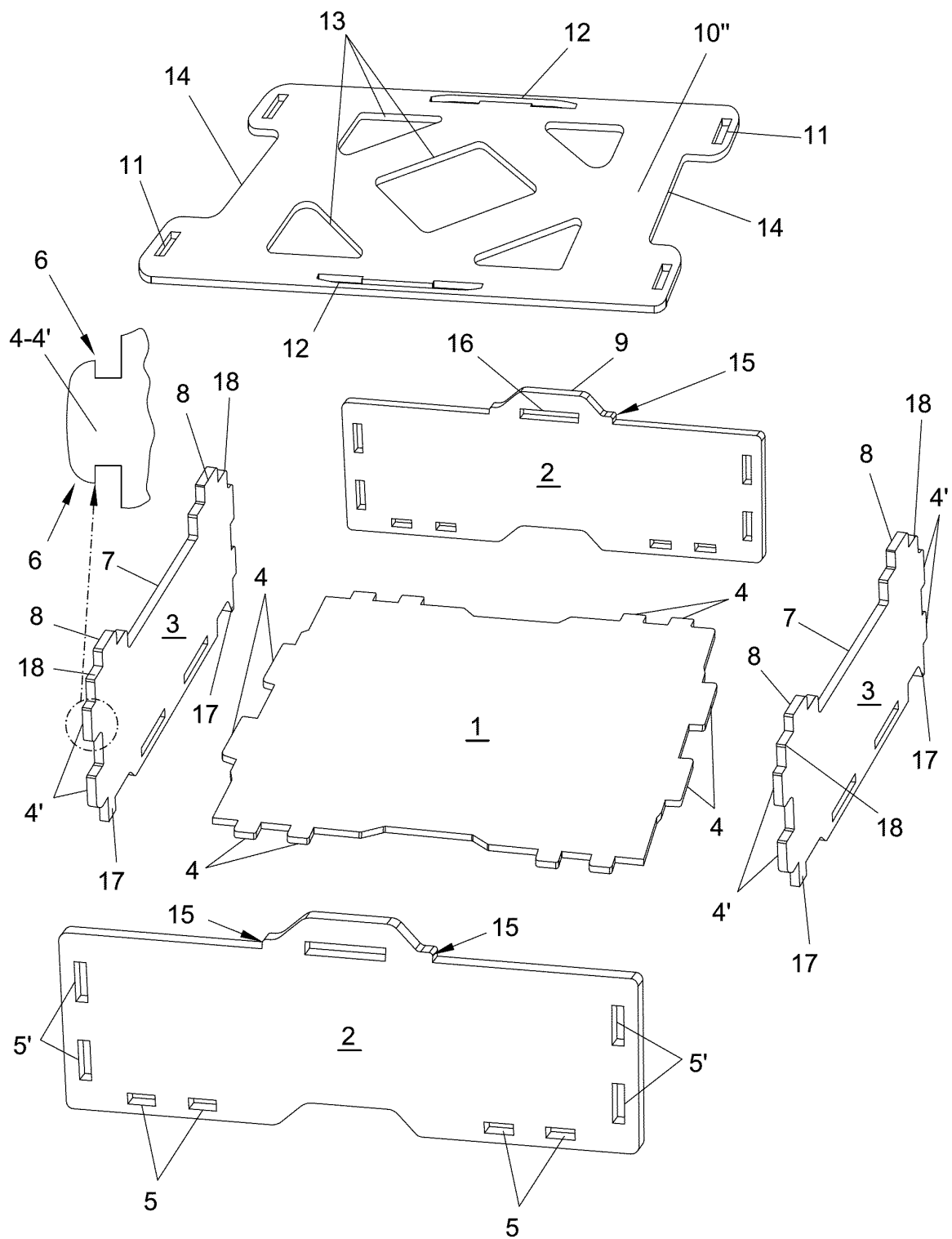
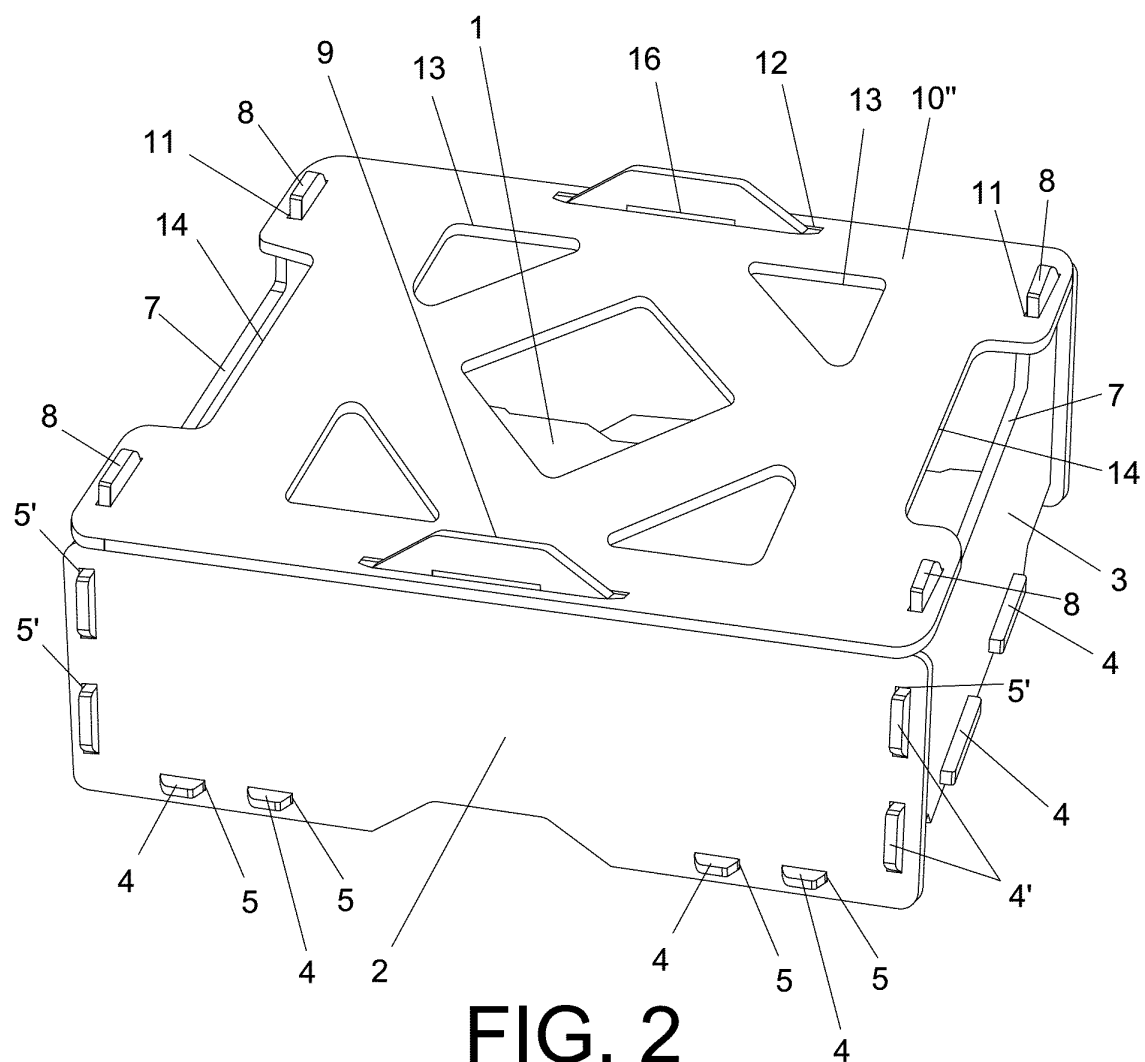


FIG. 1



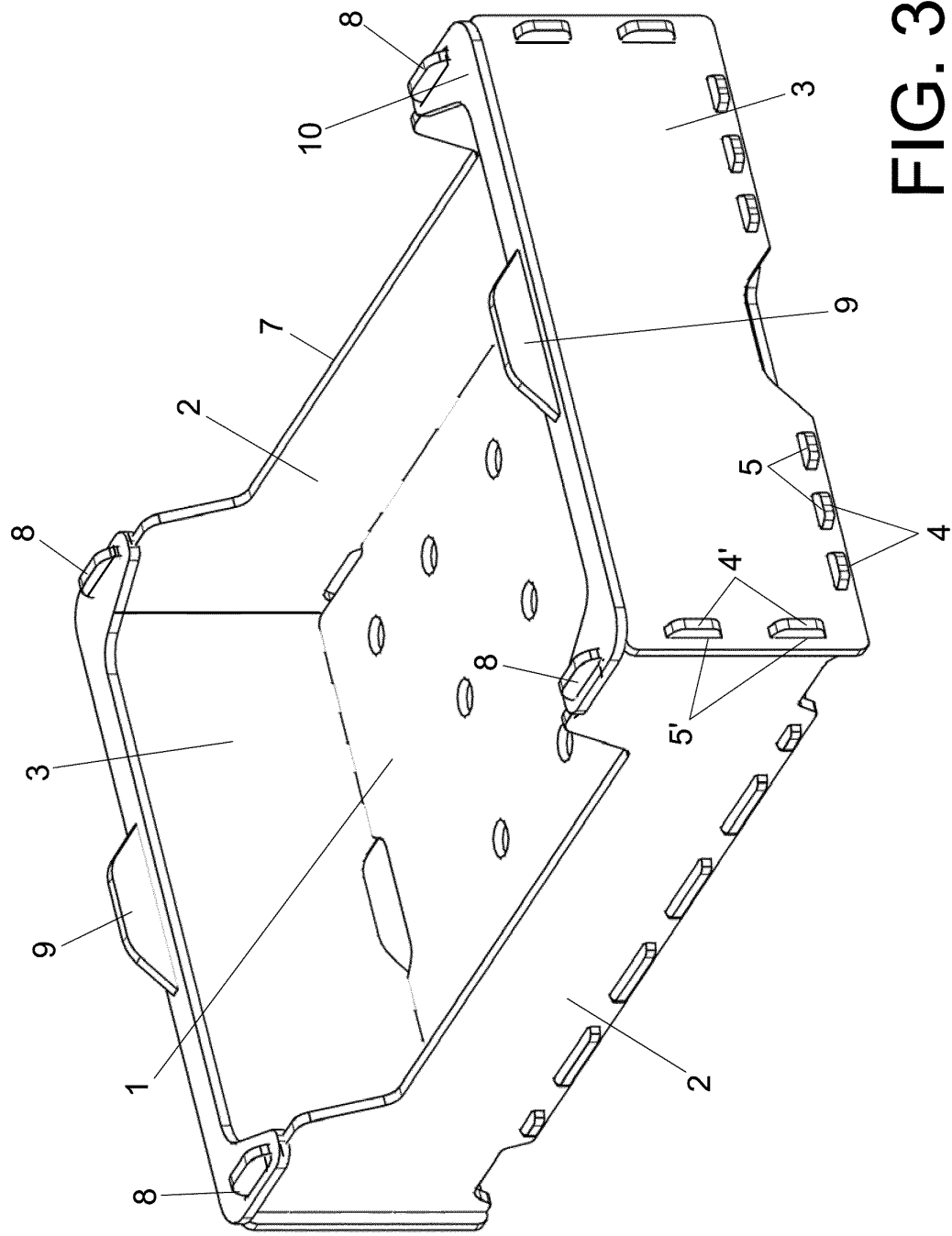


FIG. 3

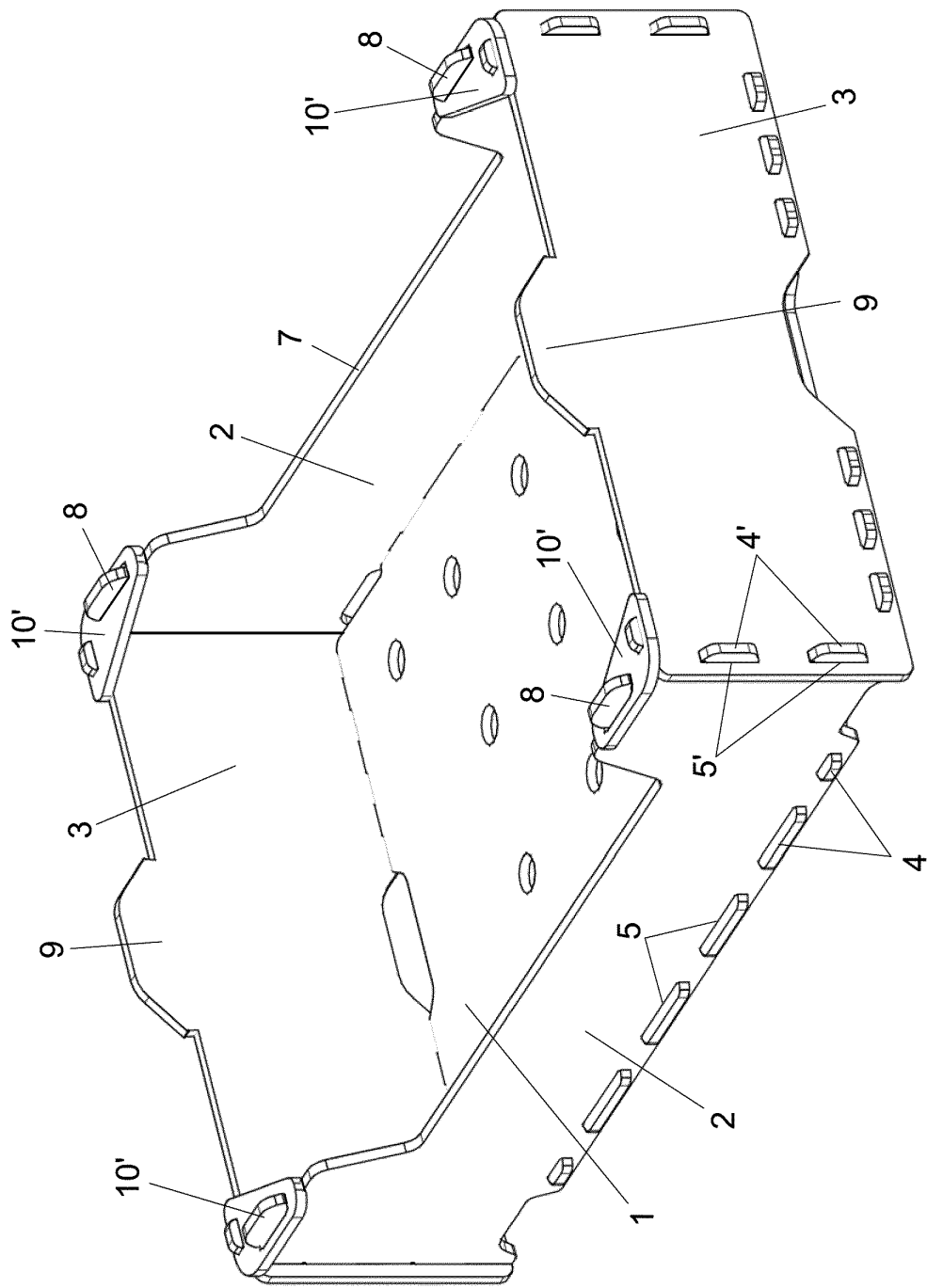


FIG. 4

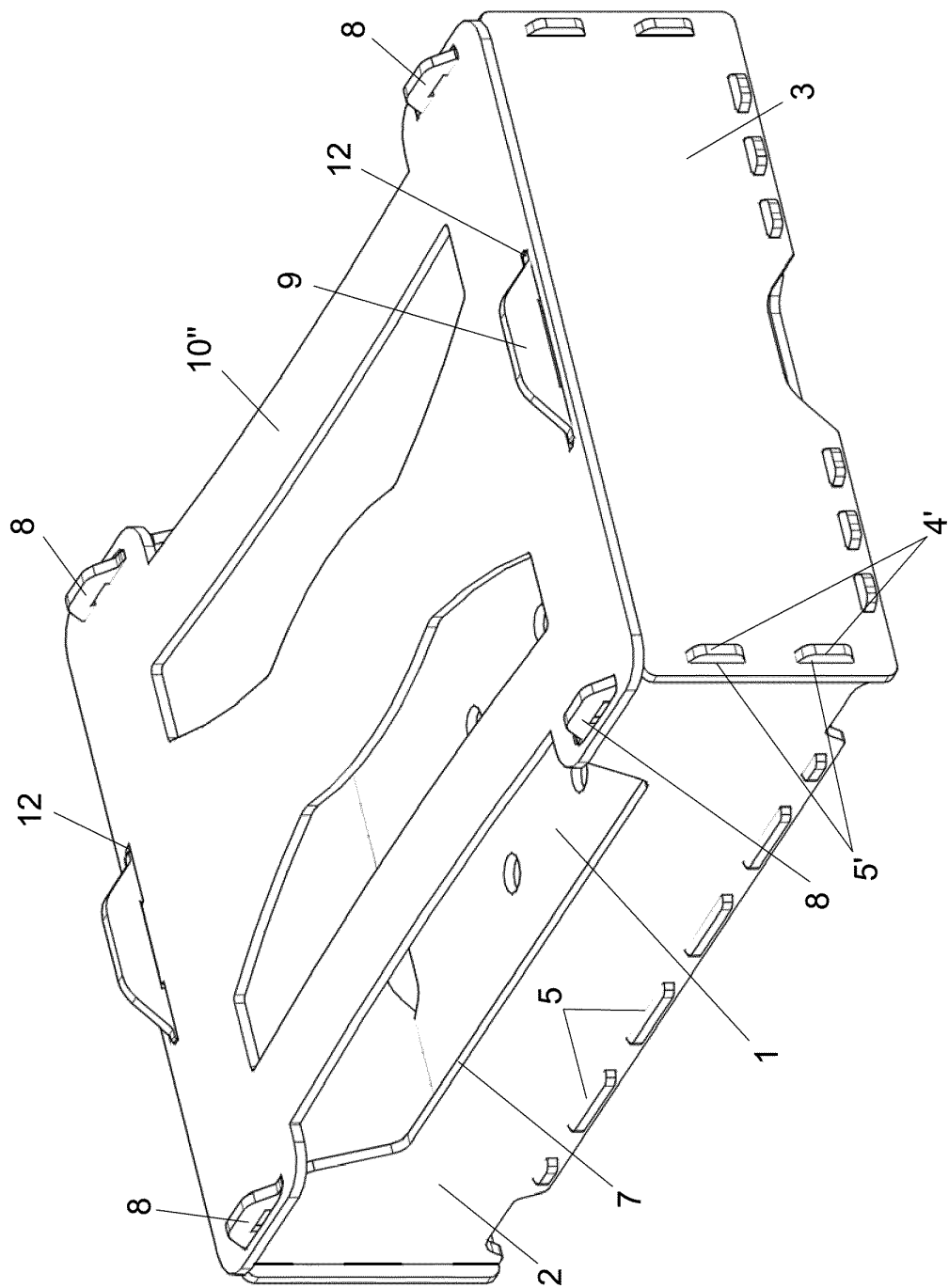


FIG. 5

INTERNATIONAL SEARCH REPORT

International application No.
PCT/ES2010/070802

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

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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Y		2
Y	FR 2613699 A1 (BALZANI) 14/10/1988, Abstract; figure 1	2
X	WO 2006075031 A1 (BOXIDEA) 20/07/2006, The whole the document	1,3,6
Y		2,4,5
Y	ES 2010578 A6 (GISBERT) 16/11/1989, Abstract; figures 1-3	2
Y	ES 1012930 U (IBEROAMERICANA DE EMBALAJE) 01/10/1990, claim 1; figures 2,3	4

☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance.	
"E" earlier document but published on or after the international filing date	
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"O" document referring to an oral disclosure use, exhibition, or other means.	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other documents, such combination being obvious to a person skilled in the art
"P" document published prior to the international filing date but later than the priority date claimed	"&" document member of the same patent family

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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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CLASSIFICATION OF SUBJECT MATTER

B65D6/16 (2006.01)

B65D21/02 (2006.01)

B65D85/34 (2006.01)

REFERENCES CITED IN THE DESCRIPTION

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