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(54) **IMPROVED BOX FOR PACKING AND TRANSPORTING ITEMS IN GENERAL**

(57) A box for packing and transporting items in general, of the type formed by a punched sheet (2) having:

- at least one handle (4);
- a bottom flap (6);
- two side flaps (7, 8);
- a front side wall flap (9);
- a rear side wall flap (5);

wherein said punched sheet (2) further comprises a flap (3) reinforcing said rear side wall (5) of the box (1, 13). Compared to the prior art boxes for packaging and transporting items, the box according to the present invention offers the advantage that it can also be made with materials other than cardboard, in particular with sheets or rolls of materials obtained from the recovery of processing scraps, such as leather or the like, which have a lower rigidity than cardboard.

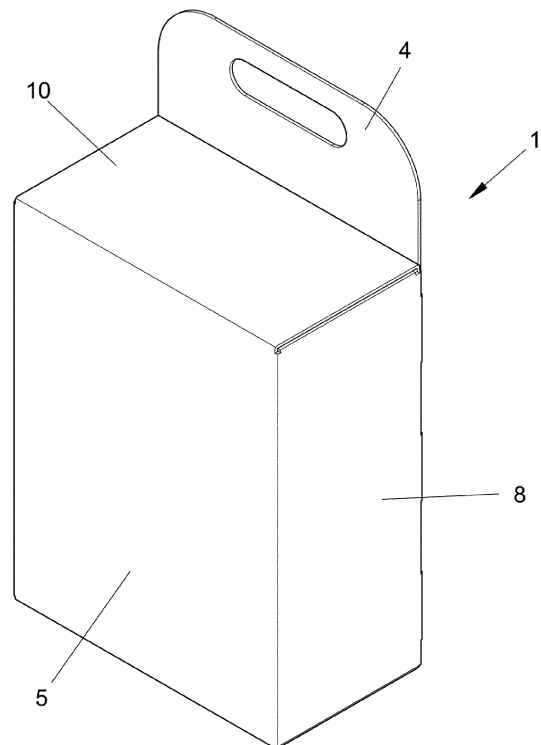


FIG.1

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Description

BACKGROUND OF THE INVENTION

[0001] The present invention relates to an improved box for packing and transporting items in general.

[0002] The boxes used to contain and transport items, such as shoes, clothing, bags and the like, are traditionally made of cardboard, i.e. a material which has a structural rigidity making it suitable for the manufacture of boxes that are strong enough for packing and transporting these items.

[0003] Currently there are also materials obtained from the recycling of processing scraps, such as leather processing scraps and the like, which have the advantage of allowing the recovery of these scraps of material and of being low in cost, but which nevertheless have the drawback of being less rigid than cardboard.

[0004] For this reason, the structure of traditional boxes does not allow them to be manufactured with such recycled materials, because they would not be strong enough for use in the packaging and transport sector.

SUMMARY OF THE INVENTION

[0005] The main object of the present invention is to provide a new box which has a structure such as to make it suitable for packing and transporting items such as shoes, clothing, bags and the like, even with the use of materials that are less rigid than cardboard and which, preferably, are obtained from the recovery of scraps from the processing of leather, fibers, fabrics and the like.

[0006] This and other objects are accomplished through the box of claim 1. Some preferred embodiments of the box according to the invention are characterized in the remaining claims.

[0007] Compared to the prior art boxes for packaging and transporting items, the box according to the present invention offers the advantage that it can also be made with materials other than cardboard, in particular with sheets or rolls of materials obtained from the recovery of processing scraps, such as leather or the like, which have a lower rigidity than cardboard.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] These and other objects, advantages and characteristics result from the following description of some preferred embodiments of the box of the present invention illustrated, by way of non-limiting examples, in the Figures of the attached drawing sheets.

[0009] In these:

- Figure 1 is an overall perspective view of a first embodiment of the box according to the invention;
- Figure 2 is a plan view of the punched sheet of the box in Figure 1;
- Figures 3 to 8 show the assembly phases of the box

in Figure 1;

- Figure 9 shows a variant embodiment of the box according to the invention;
- Figures 10 to 16 show the different phases of production of the box in Figure 9;
- Figure 17 shows a further embodiment of the box in Figure 9.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0010] The box according to the invention illustrated in Figure 1, indicated as a whole by the numeral 1, is obtained by assembling the punched sheet 2 of Figure 2. The following can be seen in this sheet:

- a flap 3 bearing the handle 4 and identifying the reinforcing element of the rear side wall 5 of the box 1;
- a flap 6 which forms the bottom of the box 1;
- two flaps 7 and 8 provided with respective tabs 7a, 7b and 8a, 8b for forming the right and left sides of the box 1;
- a flap 9 forming the front side wall of the box 1;
- a lid 10 provided with a closing tab 10a.

[0011] The punched sheet 2 in Figure 2 also includes tongues 11 on the free edge of the side 8, adapted to fit into respective notches 12 of the free edge of the rear side wall 5, in order to allow the lateral closure of the box 1. Obviously, it is possible to omit the presence of these tongues, since for the invention it may also be suitable to resort to simple direct gluing and the like on the side 8 of the wall 5 of the box 1.

[0012] In the first box assembly operation shown in Figure 3, the rear side wall 5 and the left side 7 of the box are raised above the front side wall 9 and on the edge of the right side 8, engaging the tongues 11 of the latter into the notches 12 of the wall 5 (Figures 3 and 4).

[0013] In the subsequent operation illustrated in Figure 5, the reinforcing flap 3 is passed, together with the handle 4, under the wall 5 and above the folded tabs 7a, 7b and 8a, 8b of the sides 7 and 8, respectively, of the box 1. In this way the structure illustrated in Figures 6 and 7 is obtained.

[0014] Subsequently the lid 10 is closed with its tab 10a on the opening 14 of the box 1 and against the flap 3 bearing the handle 4 (Figure 8).

[0015] In the variant illustrated in Figures 9 to 16, the box according to the invention is indicated as a whole by the numeral 13 and comprises two handles 4a, 4b at the opening 14 of the box.

[0016] In this variant, the handle 4b is made directly on the flap 9 forming the front side wall of the box, on the side opposite the bottom 6.

[0017] In assembling the box 13, illustrated in Figures 11 to 15, the same operations described for Figures 3 to 7 are carried out, but with the use of an adhesive on the edge 5a of the wall 5 which closes on the corresponding

edge of the side 8 (Figure 11).

[0018] Starting from the configuration illustrated in Figures 14 and 15, the tabs 7b and 8b of the sides 7, 8 of the box 13 are folded over the opening 14, leaving accessibility to the handles 4a, 4b (Figure 16).

[0019] In the variant illustrated in Figure 17, the opening 14 of the box 13 is completely closed by the tabs 7b, 8b of the sides 7, 8 fixed together by engaging the tongue 15 of the tab 7b into the notch 16 of the tab 8b.

[0020] In both embodiments described above, the stiffening of the boxes 1 and 13, respectively, is achieved through the described operation of overlapping the rear side wall 5 above the reinforcing flap 3, see Figure 5 for the box 1 and Figure 13 for the box 13.

Claims

1. Box for packing and transporting items in general, of the type formed by a punched sheet (2) having:
 - at least one handle (4);
 - a bottom flap (6);
 - two side flaps (7, 8);
 - a front side wall flap (9);
 - a rear side wall flap (5);

characterized in that said punched sheet (2) further comprises a flap (3) reinforcing said rear side wall (5) of the box (1, 13), wherein said flaps (7, 8) are connected to said flap (9) by longitudinal folding lines, wherein said flap (5) is connected to a flap (7) of the aforementioned side flaps by a longitudinal folding line, wherein said reinforcing flap (3) is arranged against said flap (5) in a position inside the box and wherein the handle (4) is formed on the reinforcing flap (3) at its opposite end with respect to the bottom of the box, said front side wall flap (9) being provided, on the side opposite the opening (14) of the box (1, 13), with said bottom flap (6) in correspondence with a transversal folding line, said flap (6) being in turn joined to the aforementioned reinforcing flap (3) by means of a transversal folding line.
2. Box according to claim 1, **characterized in that**, with the box assembled, said reinforcing flap (3) is arranged against said rear side wall (5), in a position inside the box (1, 13).
3. Box according to claim 2, **characterized in that** said sides (7, 8) are provided with foldable tabs (7a, 7b; 8a, 8b), respectively.
4. Box according to claim 1, **characterized in that** said front side wall flap (9) of the box (1) is provided, on the side of the opening (14), with a lid (10) with a respective closing tab (10a).

5. Box according to claim 1, **characterized in that** said front side wall flap (9) is provided, on the opening side (14) of the box (13), with a first handle (4b), a second handle (4a) being provided at the free end of said reinforcing flap (3).
6. Box according to claim 5, **characterized in that** said tabs (7b, 8b) of the sides (7, 8) facing the opening (14) of the box (13) are provided with an engaging tongue (15) and a notch (16), respectively, adapted for engaging with each other to close said opening (14).
7. Box according to any one of the preceding claims, **characterized in that** the free edge of said rear side wall (5) is provided with notches (12) and that the free edge of said side flap (8) is provided with tongues (11) adapted for engaging into said notches (12).

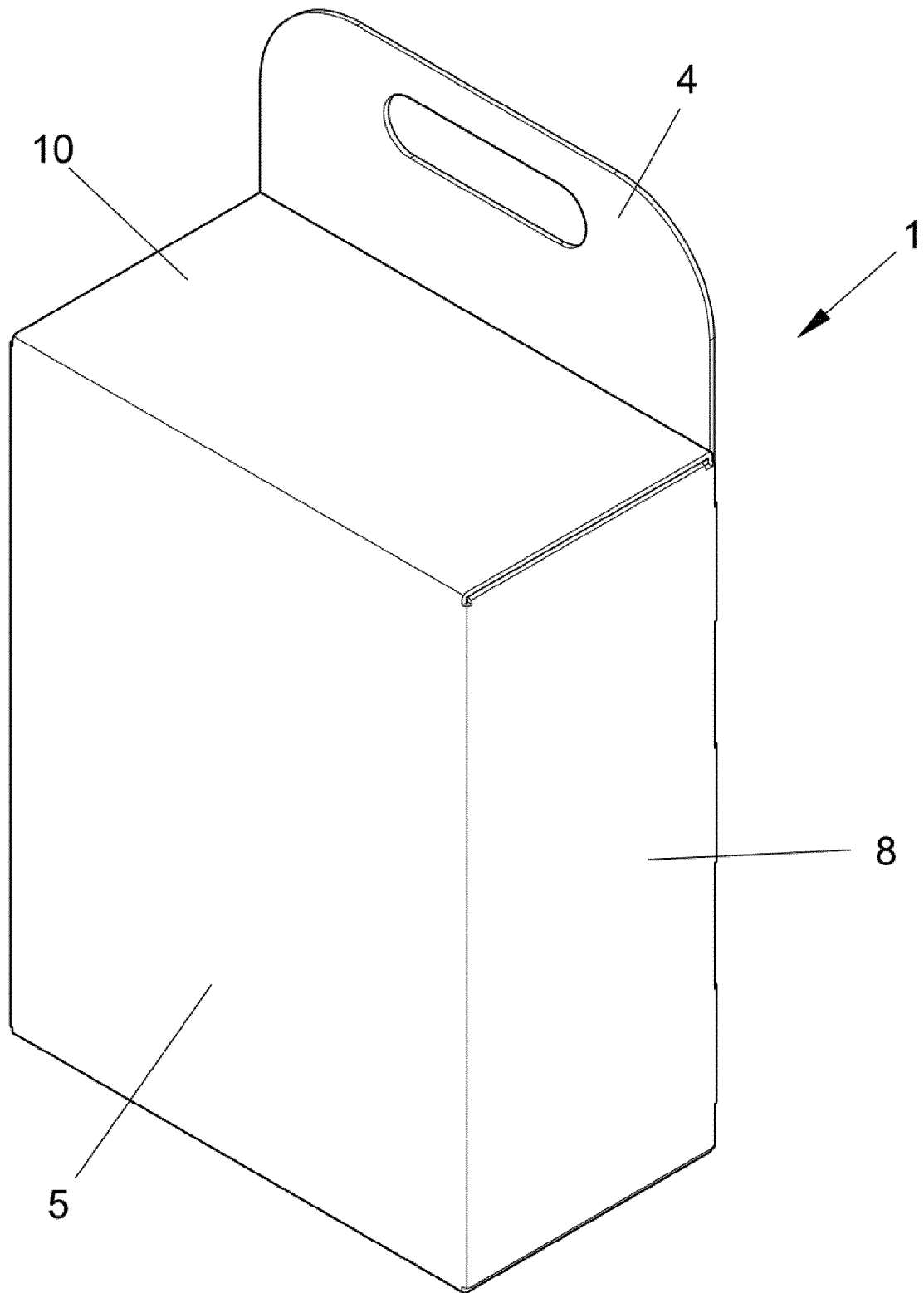
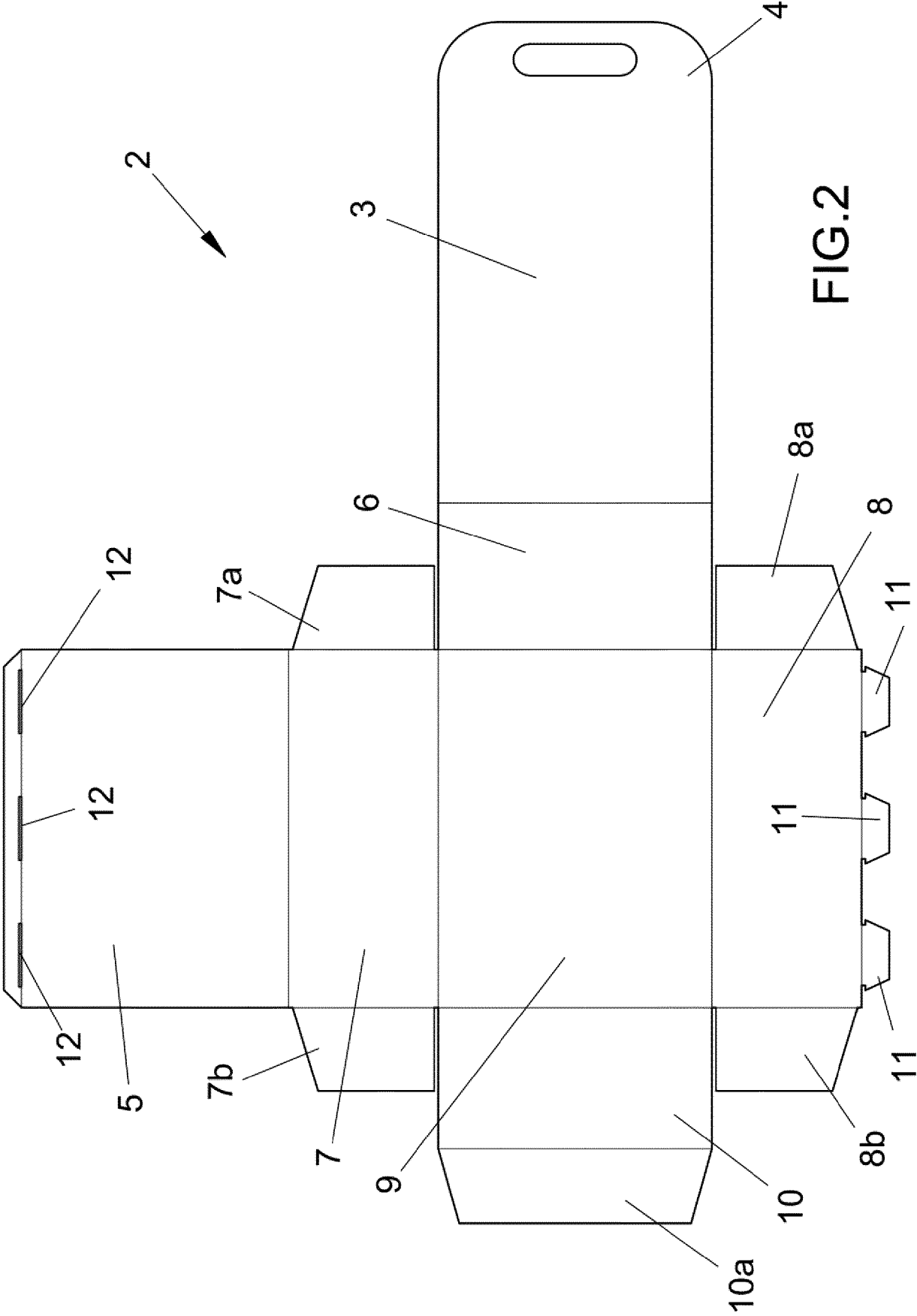


FIG.1



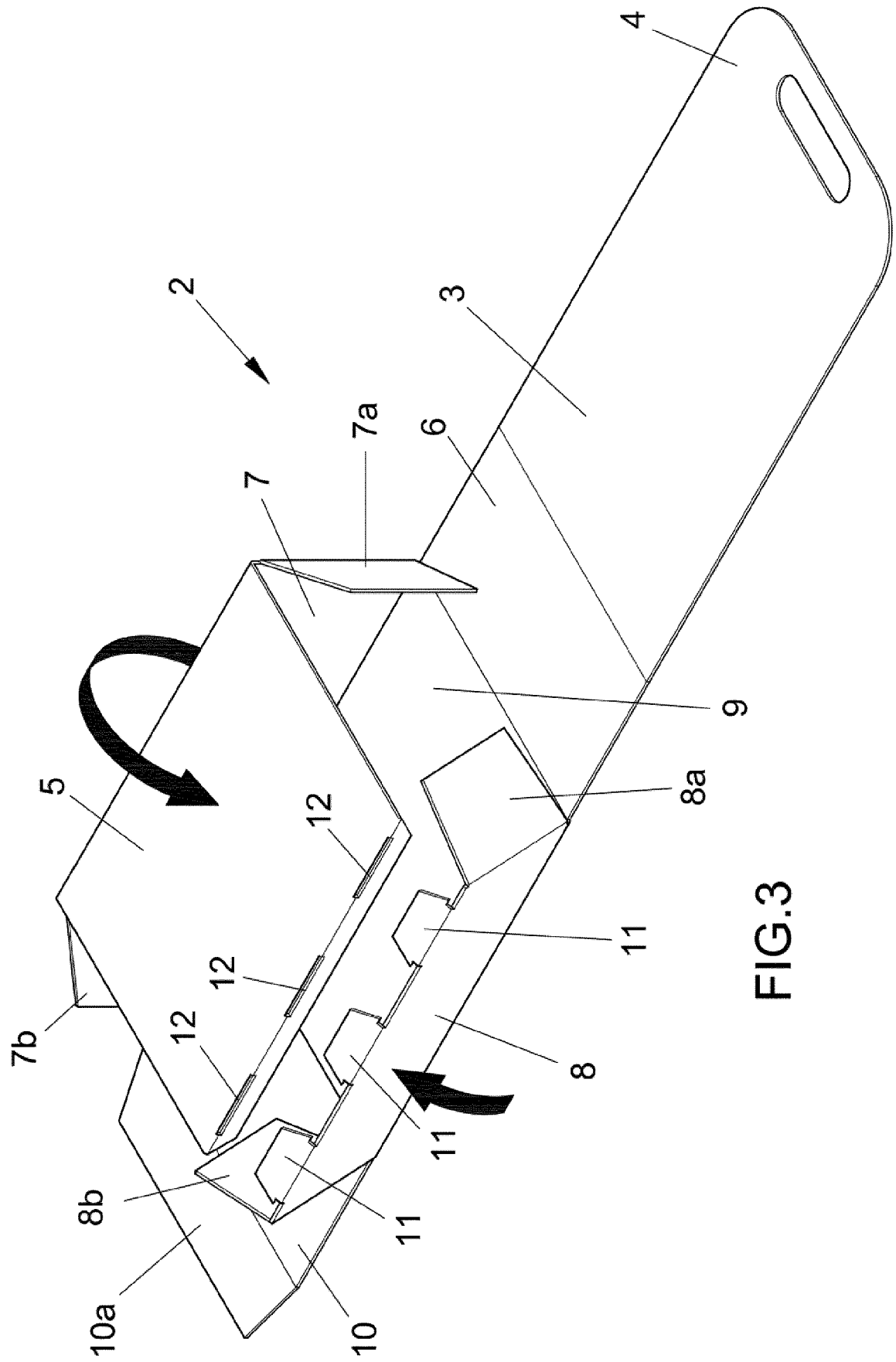
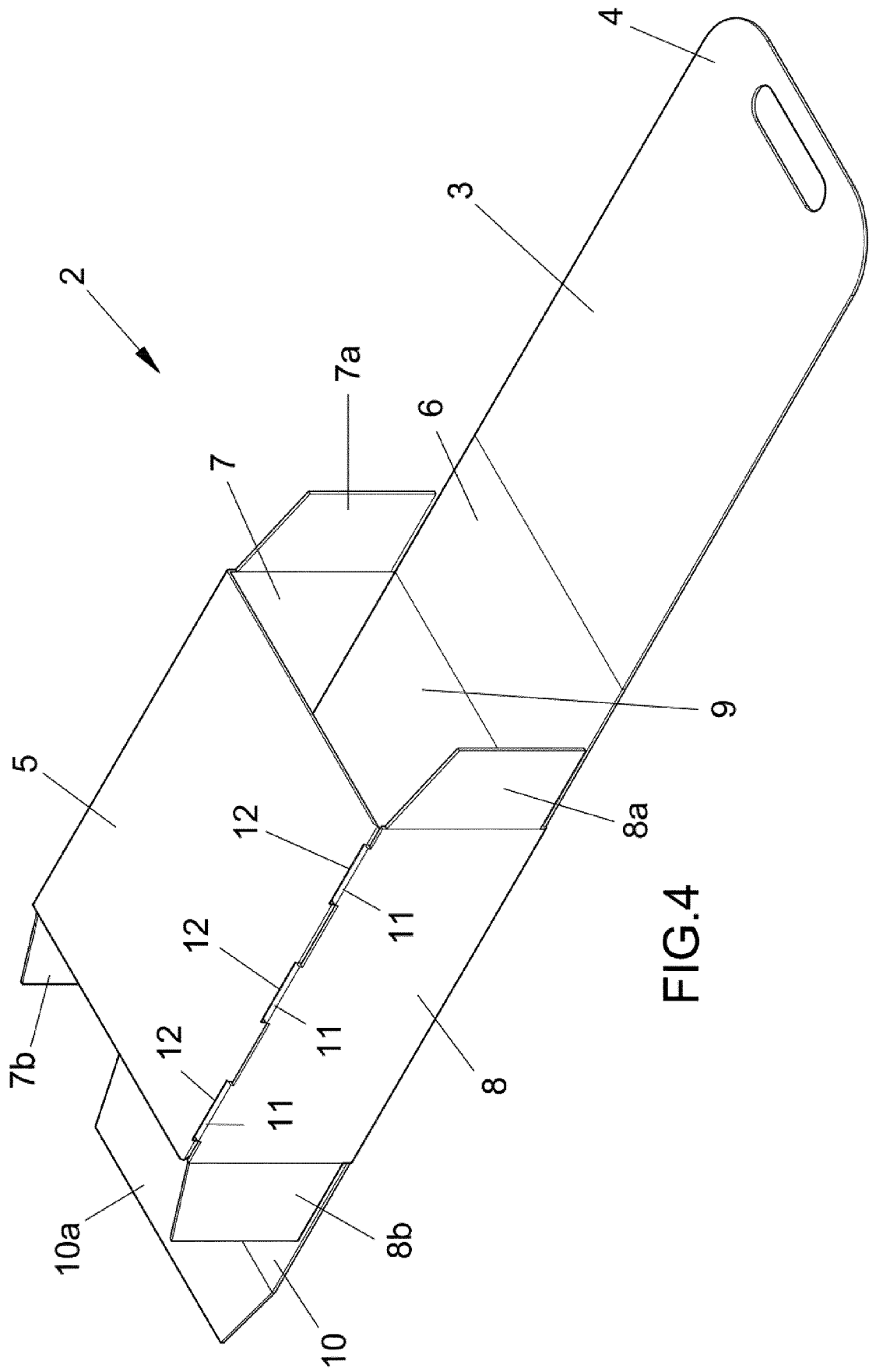
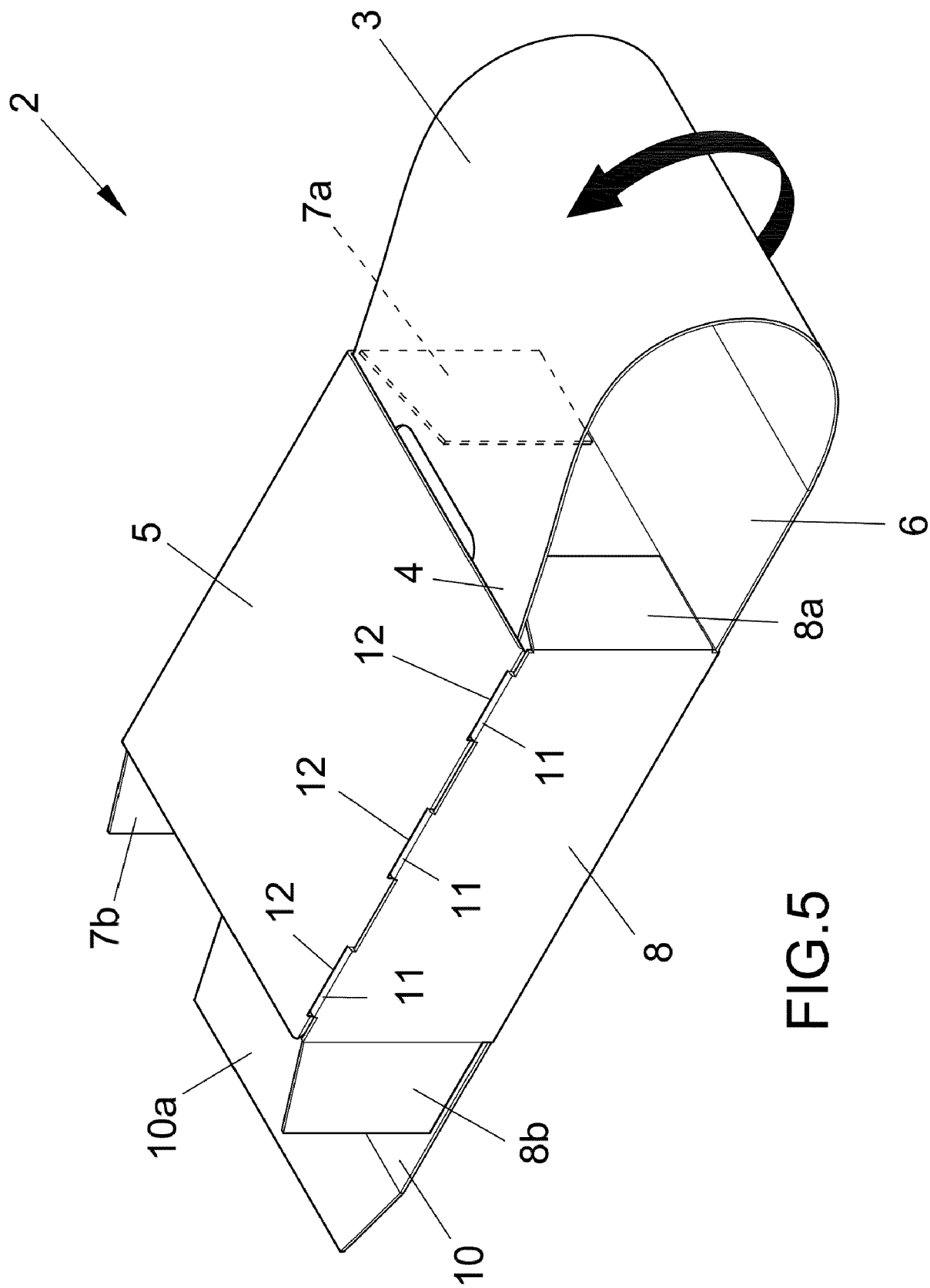
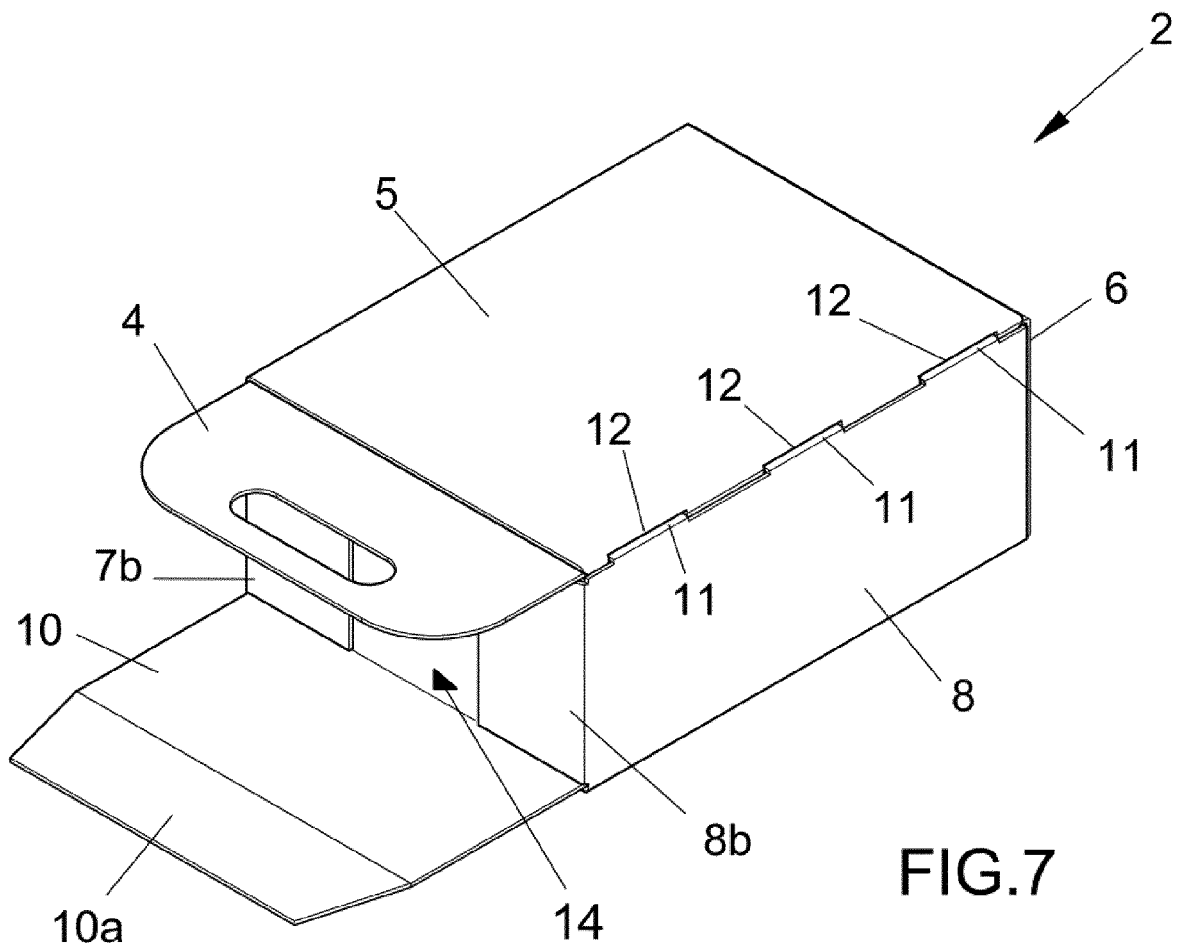
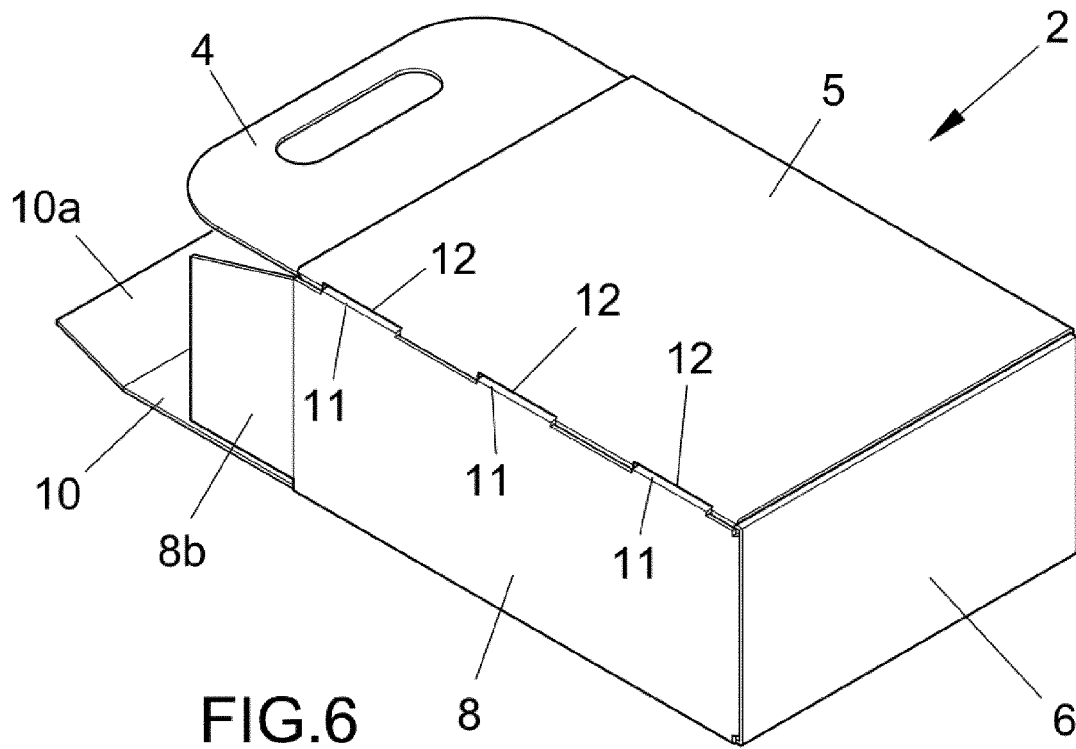


FIG. 3







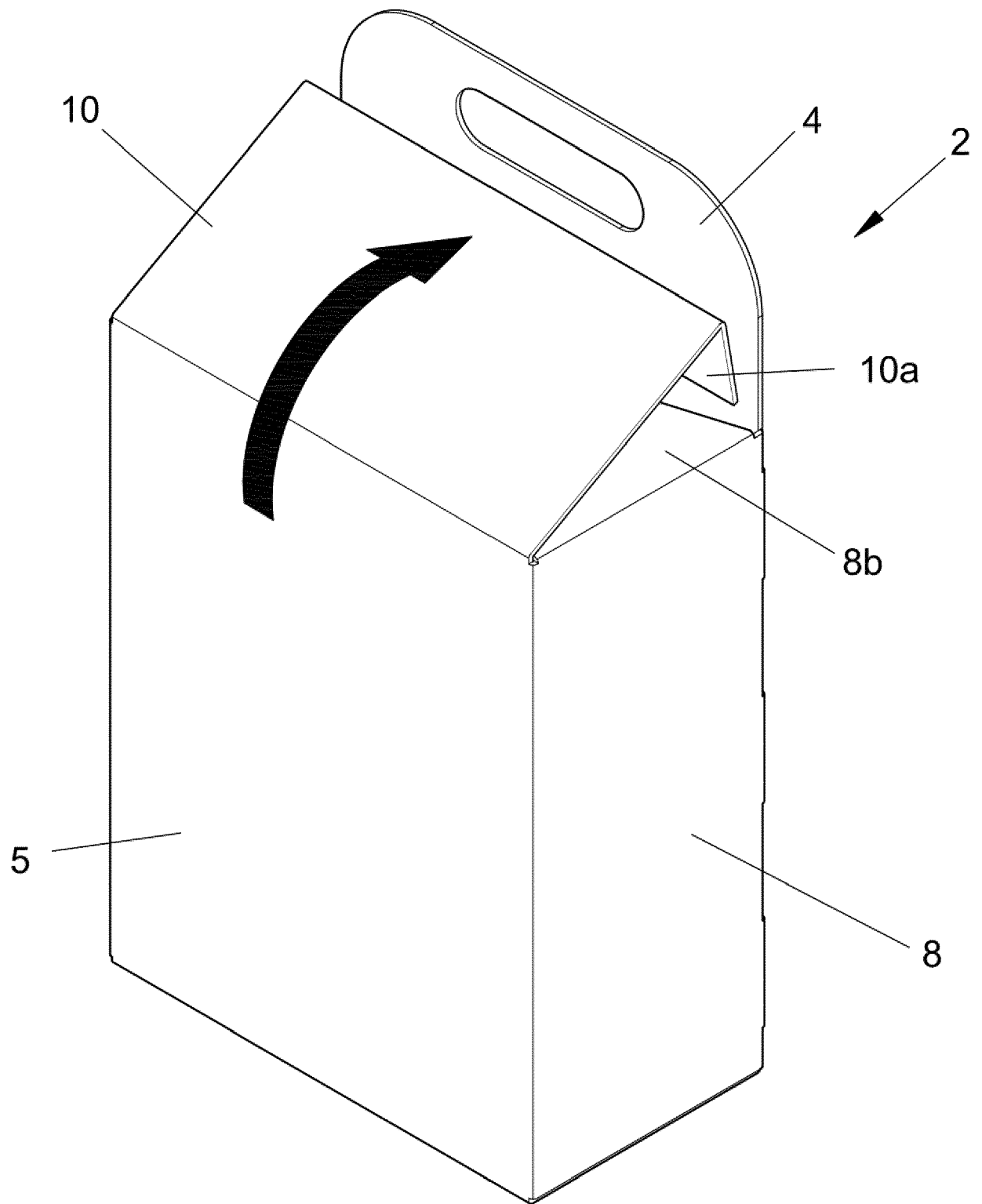


FIG. 8

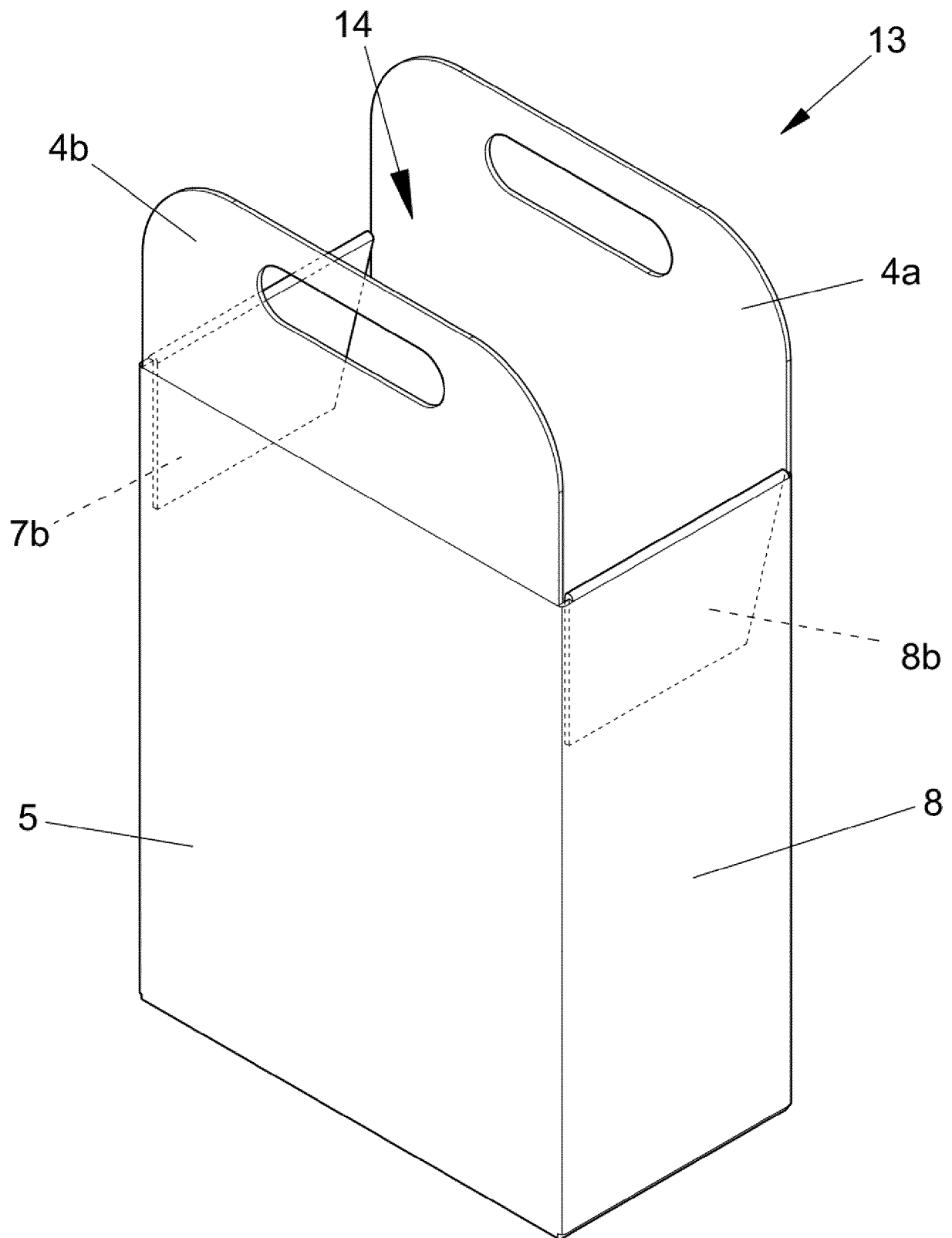


FIG.9

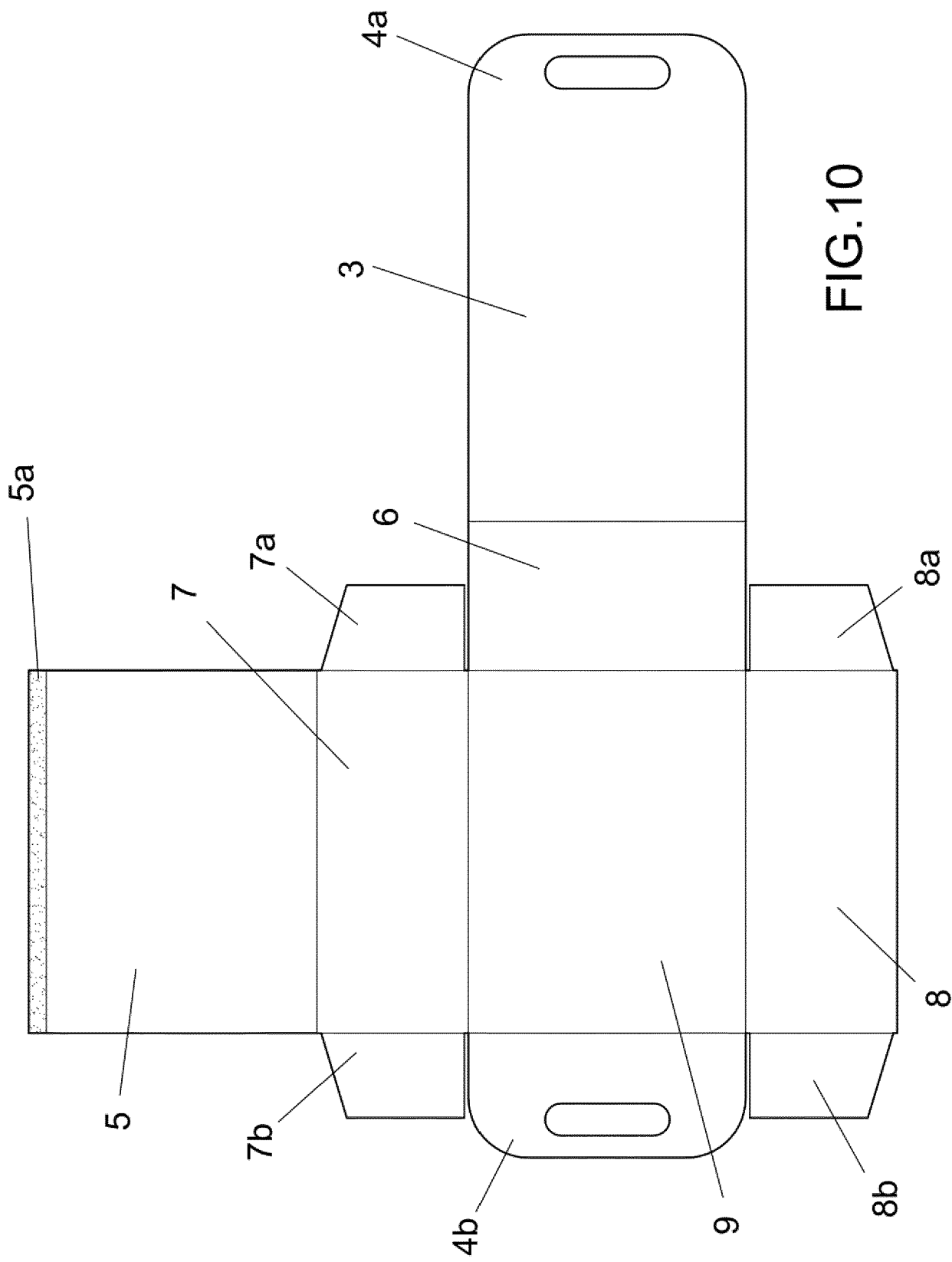


FIG.10

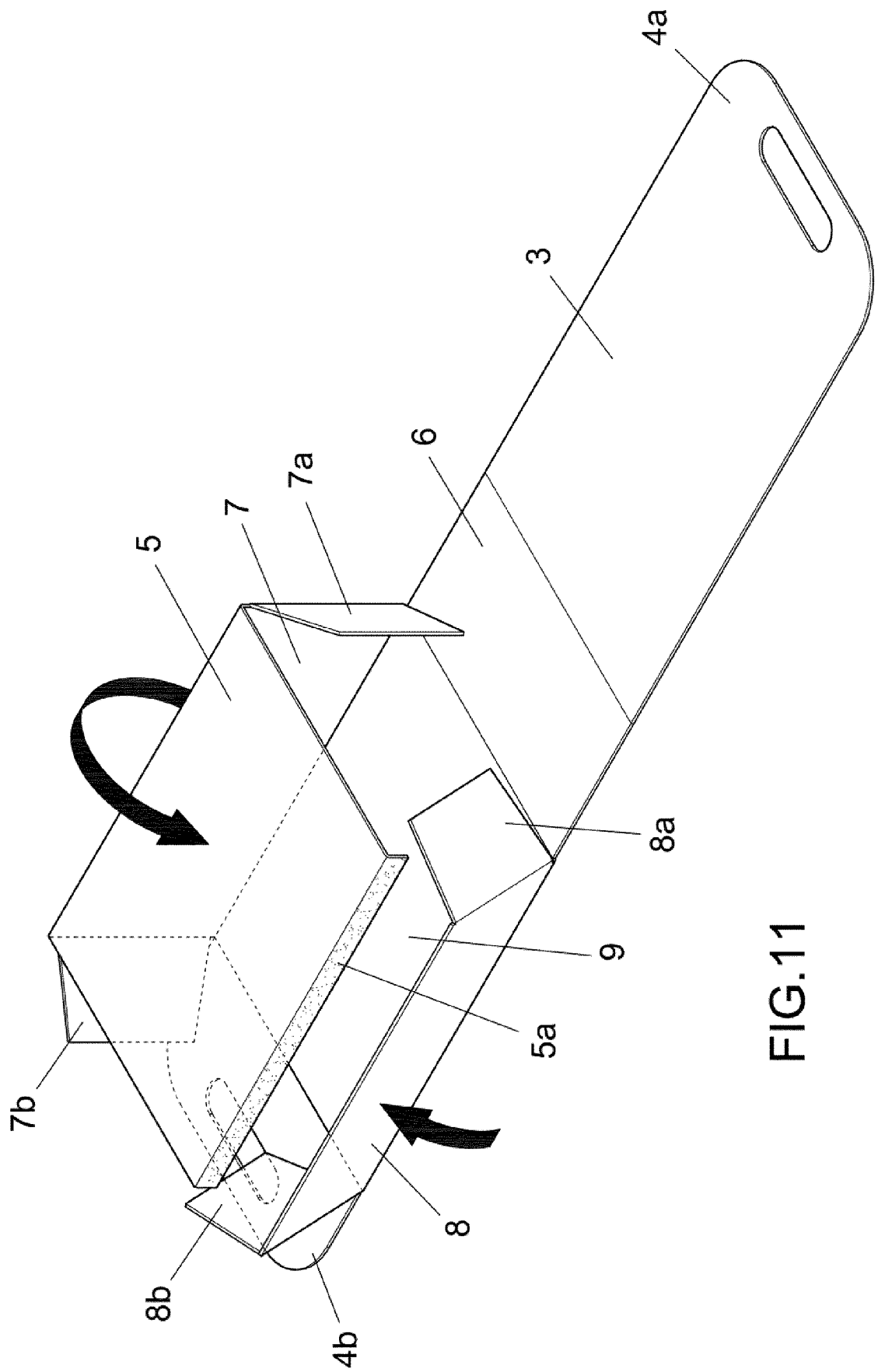


FIG.11

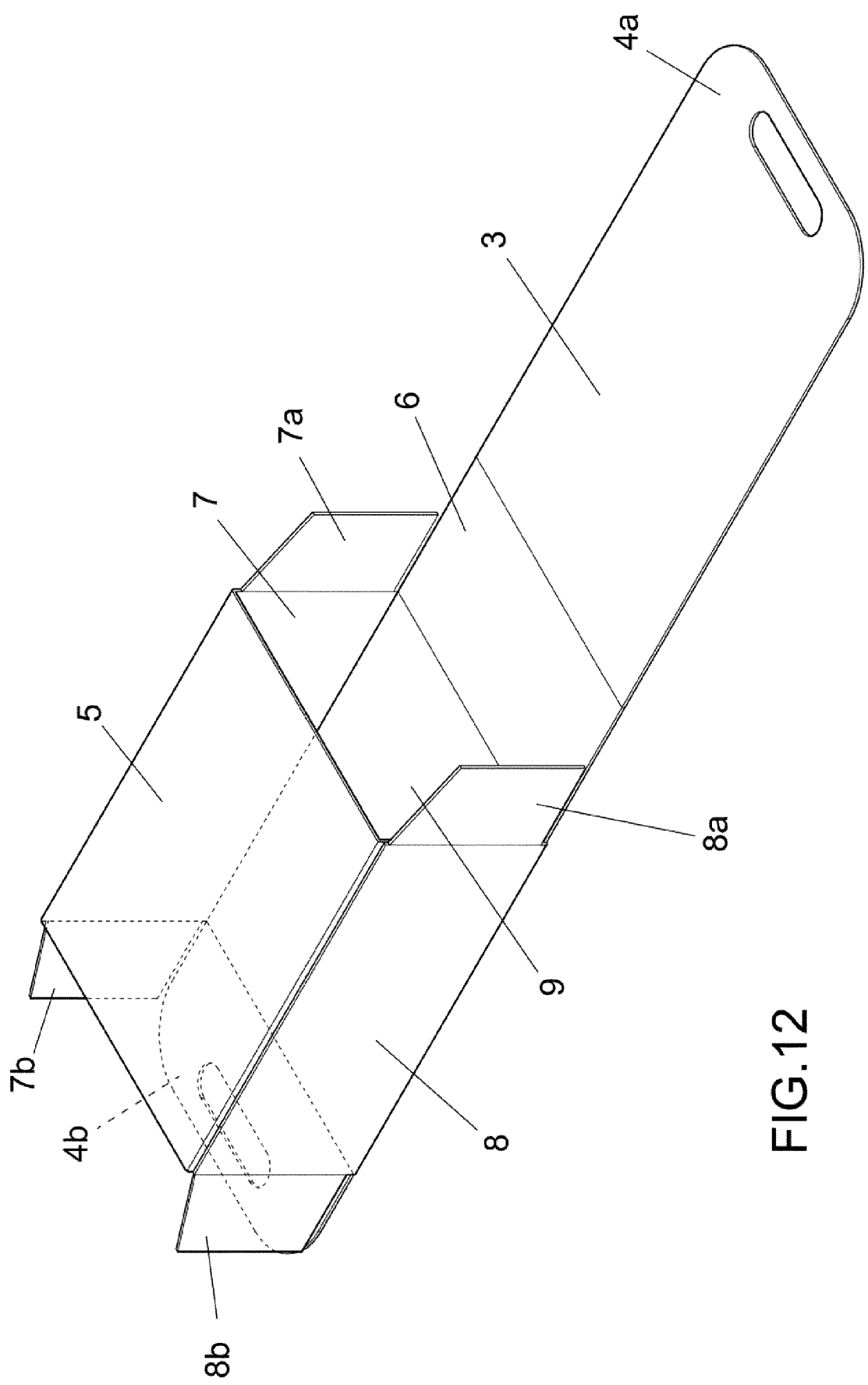
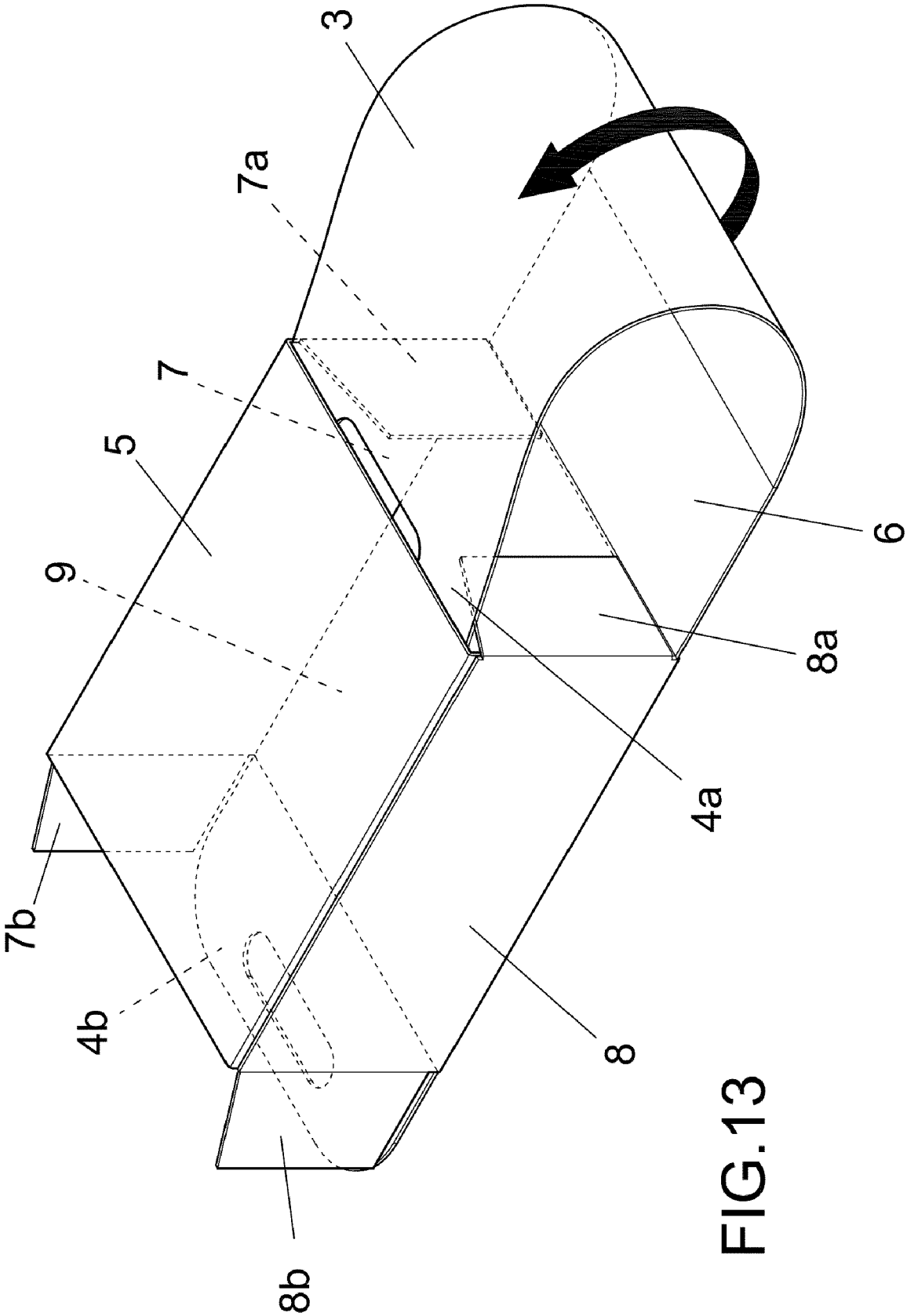


FIG.12



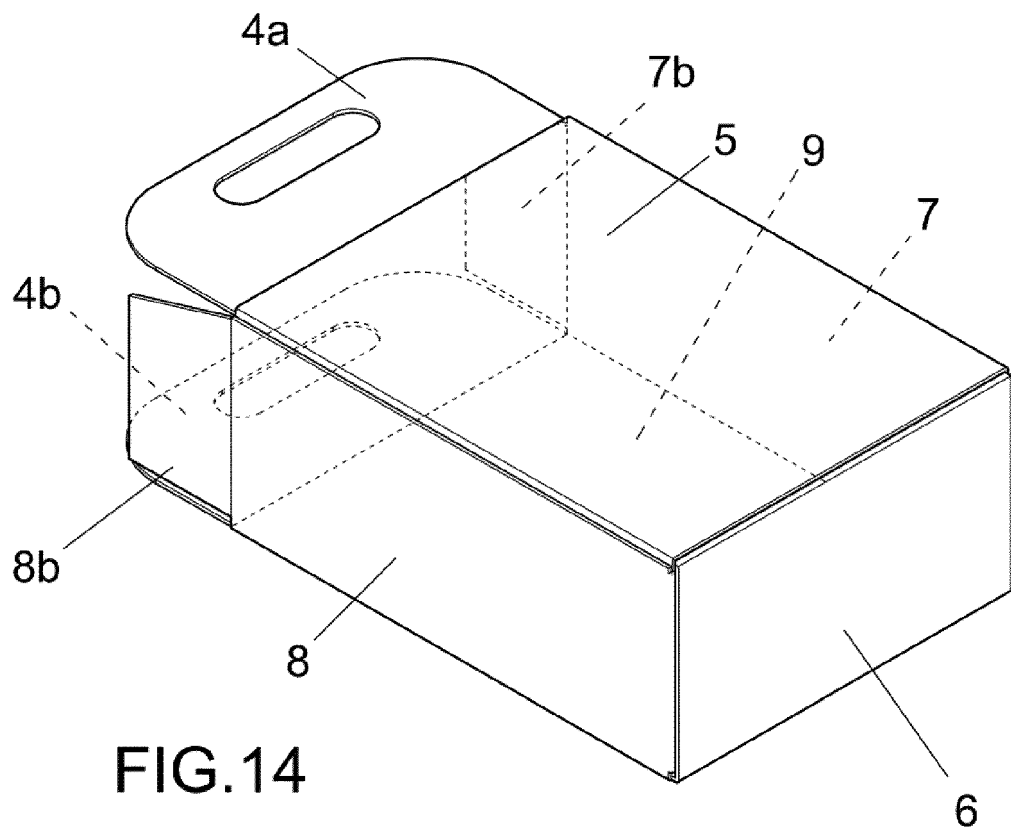


FIG.14

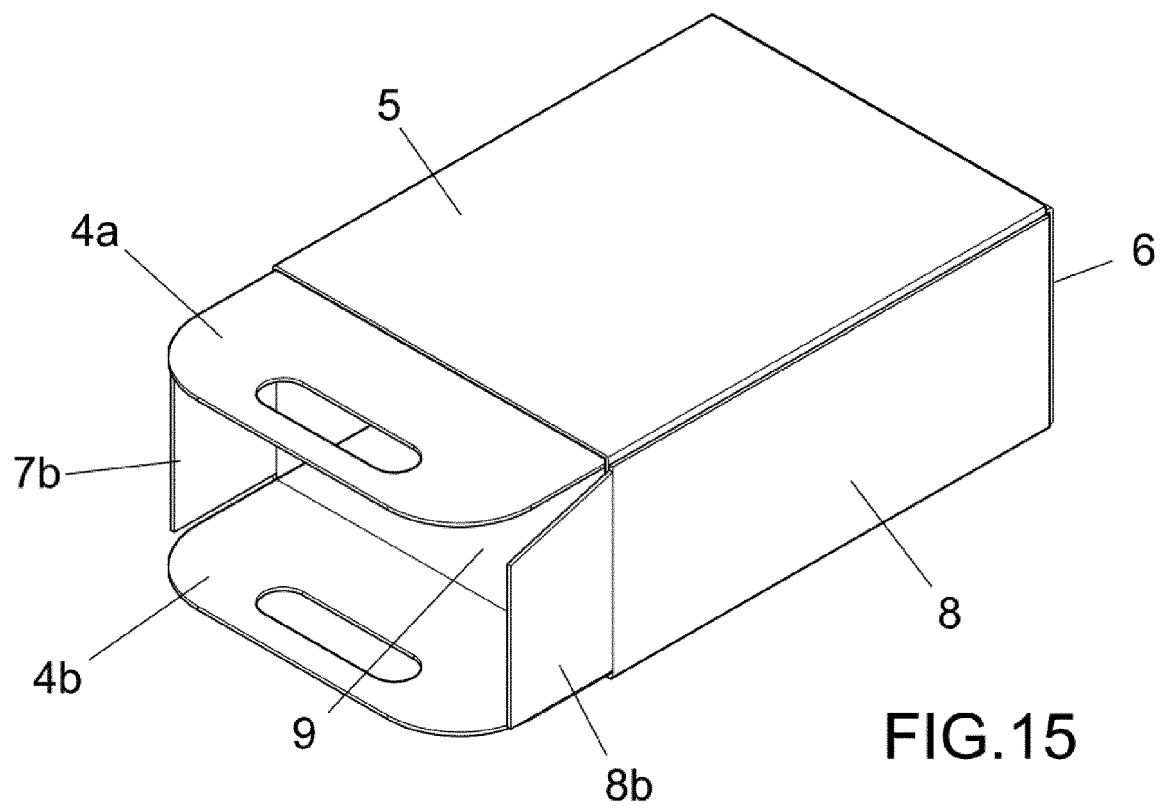


FIG.15

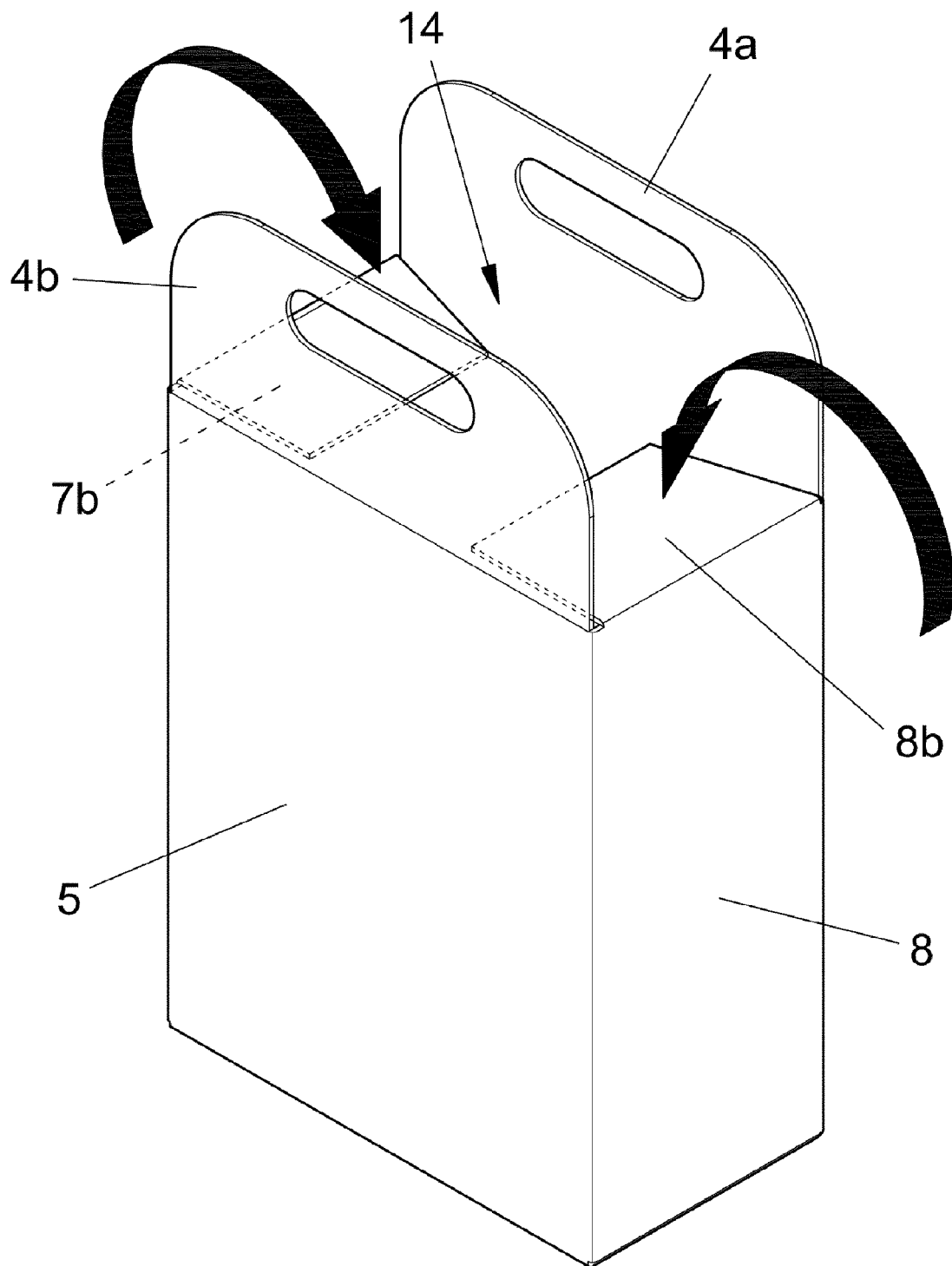


FIG.16

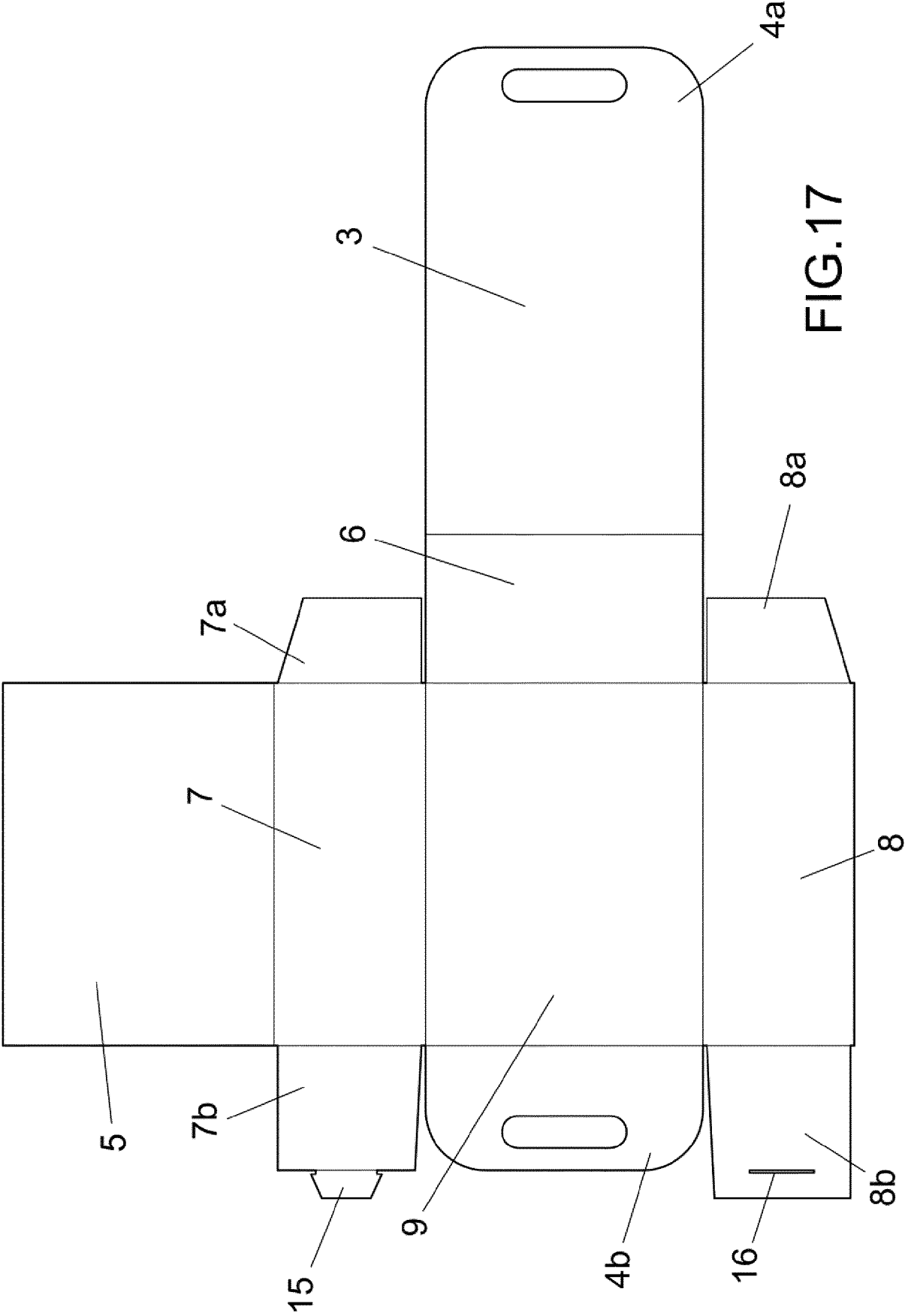


FIG.17



EUROPEAN SEARCH REPORT

Application Number

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EPO FORM 1503 03.82 (P04C01)

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	DE 88 14 829 U1 (BÄRENFÄNGER) 12 January 1989 (1989-01-12) * page 6, paragraph 2 * -----	1-7	INV. B65D5/02 B65D5/10 B65D5/42 B65D5/46
A	US 3 193 172 A (WELSHENBACH CHARLES D) 6 July 1965 (1965-07-06) * figures 5-7 *	1-7	
A	US 3 121 524 A (VICTOR MONOT PIERRE LOUIS) 18 February 1964 (1964-02-18) * figures 1-4 * -----	1-7	
			TECHNICAL FIELDS SEARCHED (IPC)
			B65D
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 2 August 2023	Examiner Derrien, Yannick
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02-08-2023

10	Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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