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(54) REUSABLE RECYCLABLE PACKAGING AND THE METHOD OF ITS FOLDING

(57) A reusable recyclable packaging providing arrestment of transported goods has a cross-section comprising a base part (A) which is joined via an edge (1a) by a part (B) which is divided by an edge (b), further the base part (A) is joined via an edge (2a) by a part (C), which is divided by edge (c), then the base part (A) is followed by part (D) which is divided by edge (d) via edge (3a), then the base part (A) is followed by part (E) which is divided by edge (e) via edge (4a), then part (E) is followed by part (F) in the direction inverted to part (B) via edge (f), wherein creased hinges (g) are formed on the edge (f) to facilitate

folding of the part (F) around the edge (f), wherein the edges (1a, 3a, 4a, c) are formed by double creasing and the edges (2a, b, d, e) are formed by single creasing and the edge (f) is cut, then on the front side there is a Velcro fastener (5a) on the part (D) at the bottom, which co-operates with Velcro fasteners (5b and 5c) situated on the back side of the piece (E), on the top of the piece (C) from the front side there are Velcro fasteners (6a) which co-operate with Velcro fasteners (6b) situated on the back side of the piece (B) under the edge (b).

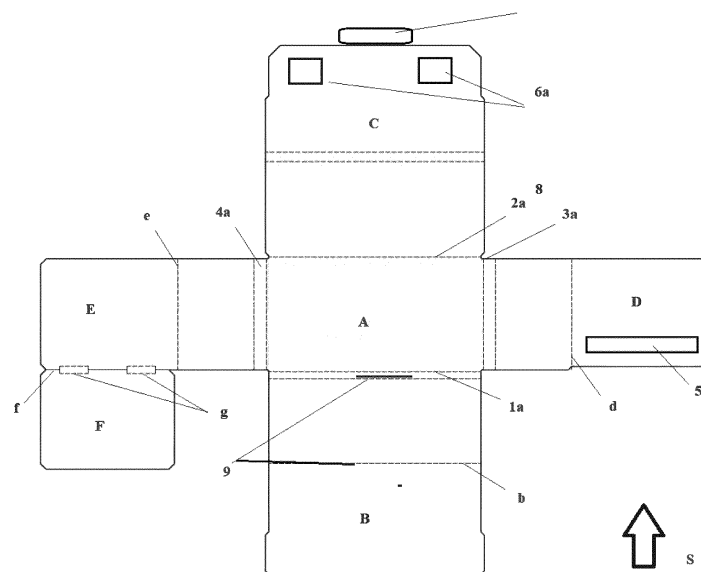


Fig. 1a

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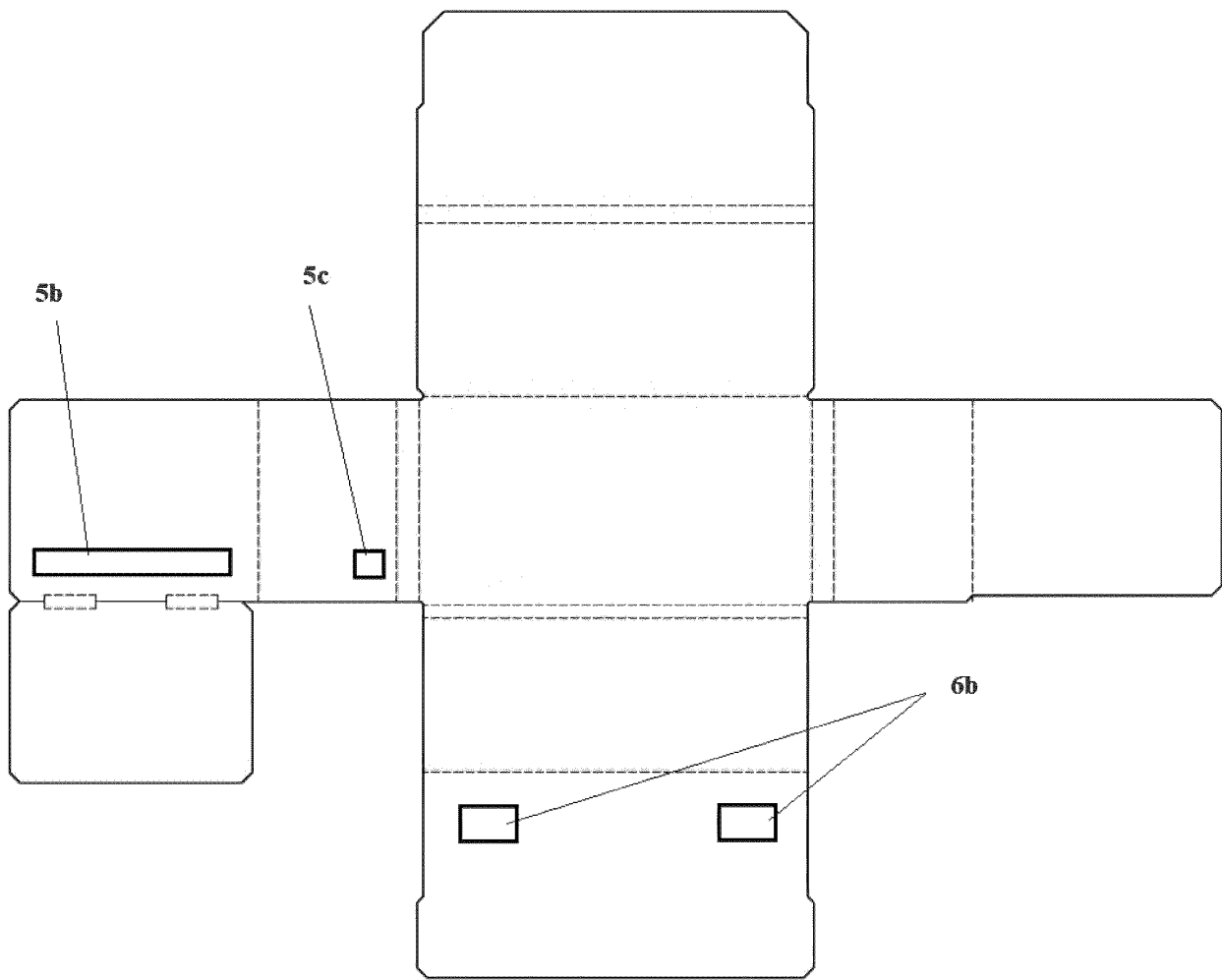


Fig. 1b

Description

Field of technology

[0001] The invention relates to a reusable recyclable packaging providing arrestment of transported goods, which can be used multiple times more than once and which is made of recyclable material and applicable to goods of variable dimensions.

State of the art

[0002] Currently, cardboard boxes are used to pack goods to be delivered to the consumer by delivery companies and freight forwarders, but they are not of an appropriate size and therefore the free space between the goods and the walls of the box is filled with a variety of lightweight material, paper, chopped cardboard or plastic material such as various foils, the most commonly used bubble wrap or styrene-based foams or plastics. This creates unnecessary paper and plastic waste, and the cardboard box is also usually no longer usable and thrown away either in sorted waste or in mixed municipal waste. The second negative feature is that an unnecessarily large box takes up more space in the transport vehicle, thereby incurring higher transport costs. Another way of packaging is in a plastic bag, but where the goods are also wrapped in a layer of cushioning material, which is a variety of films, most commonly bubble wrap or foams or styrene-based materials. In this packaging method, the same negative indicators as in the carton packaging described above come to the fore.

Essence of the invention

[0003] The shortcomings mentioned in the prior art are remedied by the invention, the essence of which is based on a reusable recyclable packaging ensuring the arrestment of the goods without additional supplementary materials. A reusable recyclable packaging providing arrestment of transported goods has a cross-section comprising a base portion which is joined via an edge by a portion which is divided by an edge, further the base portion is joined via an edge by a portion which is divided by an edge, further, the base part is followed through the edge by a part which is divided by the edge, further, the base part is followed through the edge by a part which is divided by the edge, then the part is followed through the edge by a part in a direction inverted to the part, wherein creased hinges are provided on the edge to facilitate tipping of the part around the edge, wherein the edges are formed by double creasing and the edges are formed by single creasing and the edge is cut through, then a Velcro fastener is provided on the part from the front side at the bottom which interacts with the Velcro fasteners located on the back side of the part, Velcro fasteners are located on the top of the part from the front side, which cooperate with Velcro fasteners located

on the back side of the part under the edge, and also one of the parts is equipped with a protrusion used for seizing the folded package when it is being carried.

[0004] The top edge of the part may be provided with adhesive tape to indicate unwrapping.

[0005] The reusable recyclable packaging ensuring the arrestment of transported goods is conveniently made of hollow polypropylene board.

[0006] The reusable recyclable packaging ensuring the arrestment of the transported goods has the cavities oriented in the direction of the cut.

[0007] The goods are placed on the base part and the goods are folded over the part, which is then folded over the part and the Velcro fasteners are fastened in such a way as to arrest the packaged goods by tightening the Velcro fasteners, then the part is folded over the fastened parts in the transverse direction and the Velcro fasteners are pressed over the part and then the part, and the Velcro fasteners are fastened together. The packaging may be secured with adhesive tape indicating the unwrapping of the glued parts.

[0008] Upon delivery, the goods are unpacked from the packaging and handed over by the carrier and the packaging is then folded as a cut or partially flat pack (Figure 4) and returned to the seller for further use.

Overview of figures on drawings

[0009]

Figures 1a and 1b show the cross-section from which the packaging is assembled with spaces for Velcro fasteners. Figure 2 shows the packaging in a semi-folded state with the goods inside.

Figure 3 shows a folded packaging with the goods inside. Figure 4 shows the packaging in the folded state in which it can be stored and also transported back to the seller for further use.

Examples of implementation

[0010] A reusable recyclable packaging providing arrestment of transported goods has a cross-section comprising a base part A which is joined via edge 1a by a part B which is divided by edge b, further the base part A is joined via edge 2a by a part C which is divided by edge c, then the base part A is followed by a part D divided by an edge d via edge 3a, then the base part A is followed by a part E divided by an edge e via edge 4a, then the part E is followed by a part F in the direction inverted to the part B via edge f, the edge f being provided with creased hinges g to facilitate the tilting of the part F around the edge f, where edges 1a, 3a, 4a, c are formed by double creasing and edges 2a, b, d, e are formed by single creasing and edge f is cut through, then from the front side there is a Velcro fastener 5a at the bottom of part D, which interacts with Velcro fasteners 5b and 5c located on the rear side of part E, on part C at the top from the front side there are

Velcro fasteners 6a, which cooperate with Velcro fasteners 6b located on part B from the back side under the edge b, one of the parts (C,A) equipped with a projection 8, used in the transfer of the folded package to arrest it by inserting it into the cut-out 9 in the creased line, e.g., the cut-out 9 in the creased line 1a.

[0011] The top edge of the part C may be provided with an adhesive tape 7 indicating unwrapping of the package.

[0012] The reusable recyclable packaging ensuring the arrestment of transported goods is conveniently made of hollow polypropylene board.

[0013] The reusable recyclable packaging ensures the arrestment of transported goods and has S-oriented cavities.

[0014] The goods 8 are placed on the base part A and the base part E is folded over and overlapped by part D and the Velcro fasteners 5a, 5b, 5c are fastened together in such a way that they lock the packaged goods 8 by tightening the Velcro fasteners 5a, 5b, 5c, then part F is folded over the fastened parts E and D in the transverse direction and pressed by part B and then by part C, whereby the Velcro fasteners 6a and 6b are fastened together. The packaging may be secured by adhesive tape 7 indicating the unwrapping of the glued parts C and B.

[0015] Upon delivery of the goods 8, the carrier unpacks them from the packaging and hands them over, and the packaging is then folded as a cut or partially flat-packed package (Figure 4) and returned to the seller for further use.

Industrial applicability

[0016] The reusable recyclable packaging ensuring the arrestment of transported goods is designed for the packaging of goods of variable dimensions and will find its use in transport and delivery companies, as well as in sellers of electronics, mobile phones and various e-shops or telecommunication companies.

Claims

1. A reusable recyclable packaging providing arrestment of transported goods, **characterized in that** it is formed by a cross-section comprising a base part (A) which is connected via an edge (1a) to a part (B) which is divided by an edge (b), further, the base part (A) is connected via the edge (2a) by a part (C) which is divided by the edge (c), further, the base part (A) is connected via the edge (3a) by a part (D) which is divided by the edge (d), further, the base part (A) is connected via the edge (4a) by a part (E), which is divided by edge (e), where the edges (1a, 3a, 4a, c) are formed by double creasing and the edges (2a, b, d, e) are formed by single creasing, then on the front side there is a Velcro fastener (5a) at the bottom of

part (D), which interacts with Velcro fasteners (5b and 5c) located on the back of the piece (E), on the top of the piece (C) from the front side there are Velcro fasteners (6a) which interact with Velcro fasteners (6b) located on the back of the piece (B) from the back side under the edge (b).

2. The reusable recyclable packaging providing arrestment of the transported goods according to claim 1, **characterized in that** the part (E) is connected to the part (B) in a direction adjacent to the part (B) through the edge (f), wherein creased hinges (g) are made on the edge (f) to facilitate the tipping of the part (F) around the edge (f).

3. A reusable recyclable packaging providing arrestment of the transported goods according to claims 1 and 2, **characterized in that** the top edge of the part (C) is provided with an adhesive tape (7) indicating the unwrapping of the packaging.

4. Reusable recyclable packaging providing arrestment of transported goods according to previous claims, **characterized by** being made of hollow polypropylene board.

5. A reusable recyclable packaging providing arrestment of transported goods according to the preceding claims, **characterized by** having the cavities oriented in the (S) direction.

6. A reusable recyclable packaging providing arrestment of the transported goods according to any of the preceding claims, **characterized in that** one of the parts (C,A) is provided with a protrusion (8).

7. A method of folding a packaging providing arrestment of transported goods according to any of the preceding claims, **characterized in that** the goods (8) are placed on the base part (A) and the base part (E) is folded over the goods (8), which is subsequently folded over by the part (D) and the Velcro fasteners (5a, 5b, 5c) are fastened together in such a way as to arrest the packaged goods (8) by tightening the Velcro fasteners (5a, 5b, 5c), then the part (B) is folded over the fastened parts (E and D) and pressed in, followed by the part (C), the Velcro fasteners (6a and 6b) being fastened together.

8. A method of folding a packaging providing arrestment of the transported goods according to any of the preceding claims, **characterized in that** the part (F) is folded in the transverse direction over the glued parts (E and D), which is pressed by a part (B) and then by a part (C), the Velcro fasteners (6a and 6b) being fastened together.

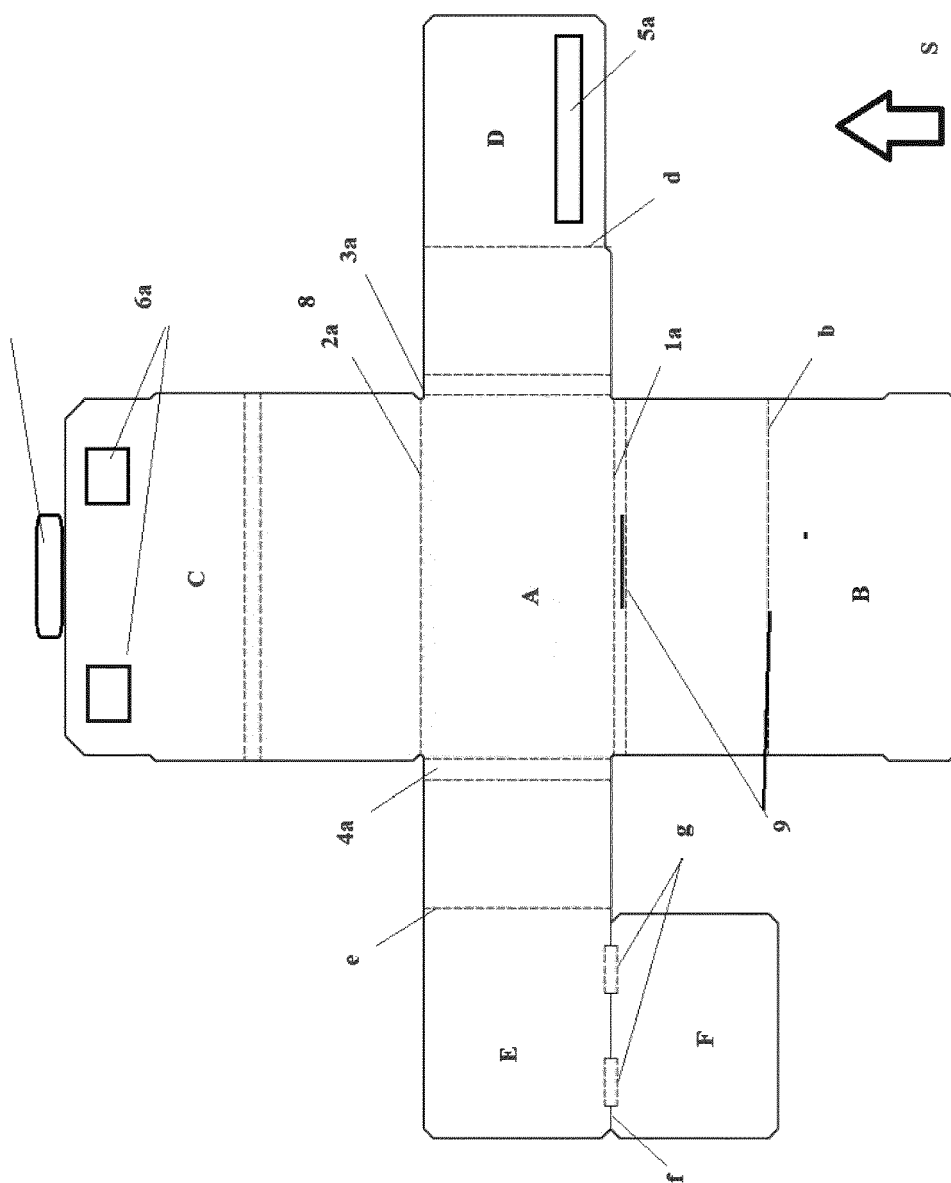


Fig. 1a

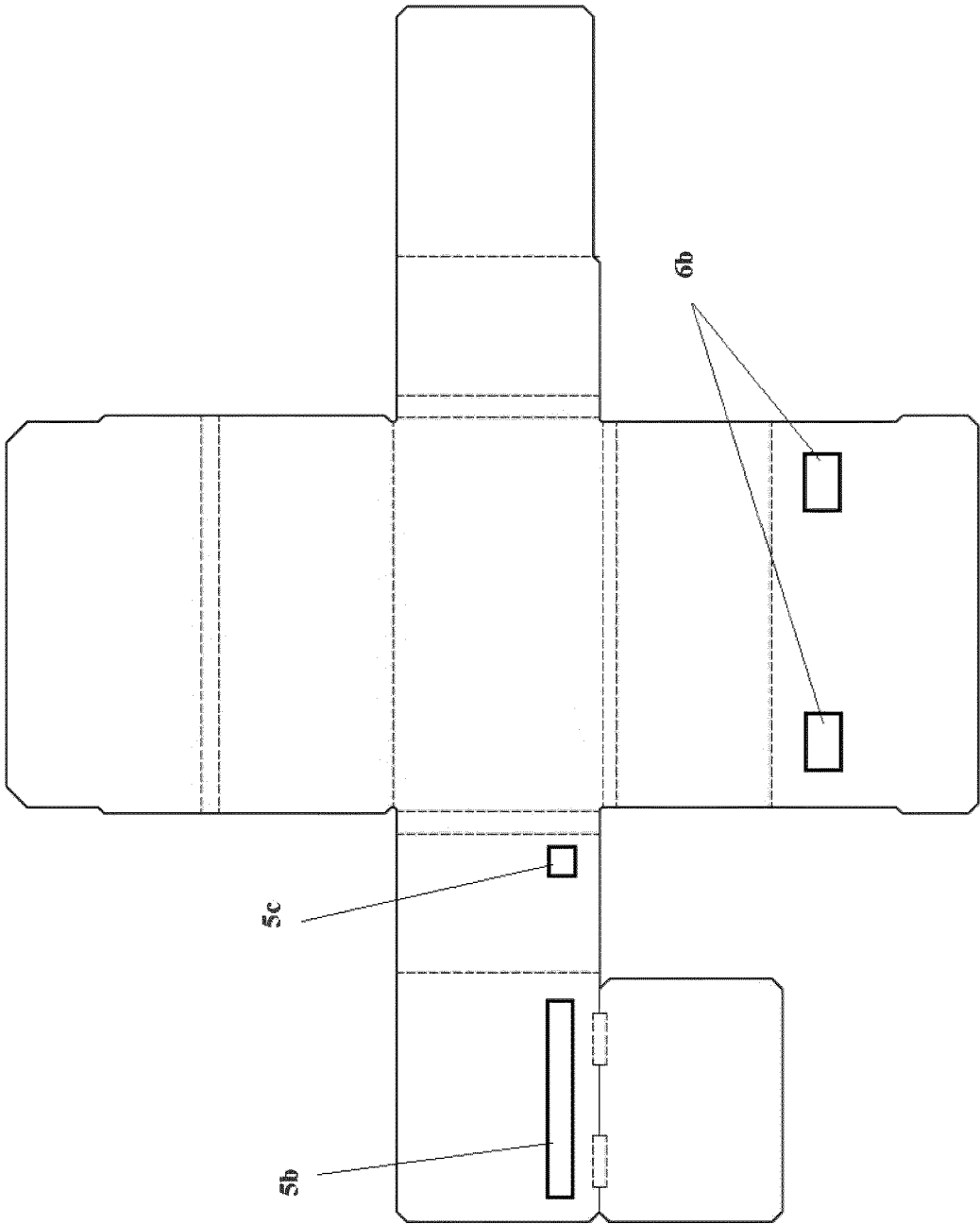


Fig. 1b

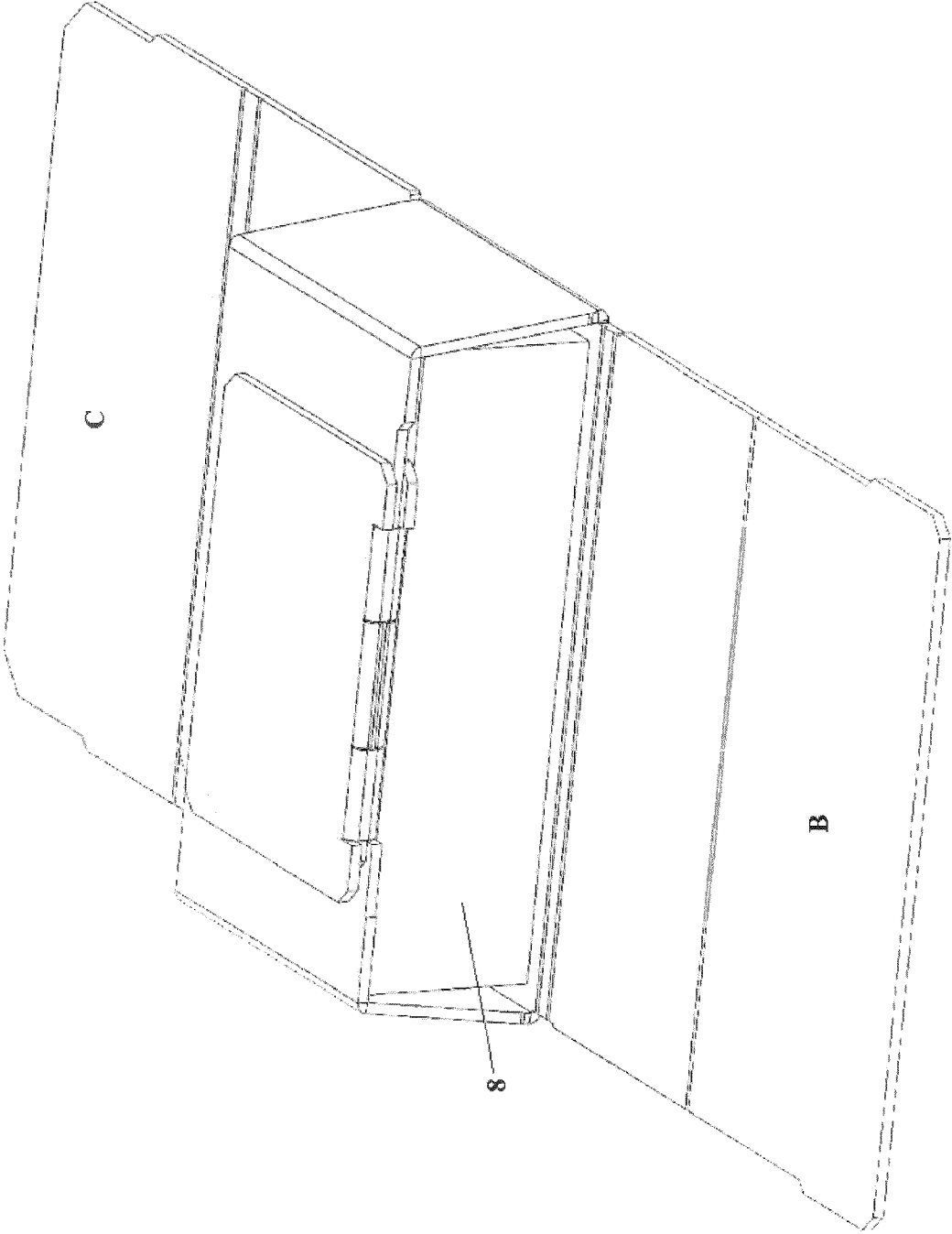


Fig. 2

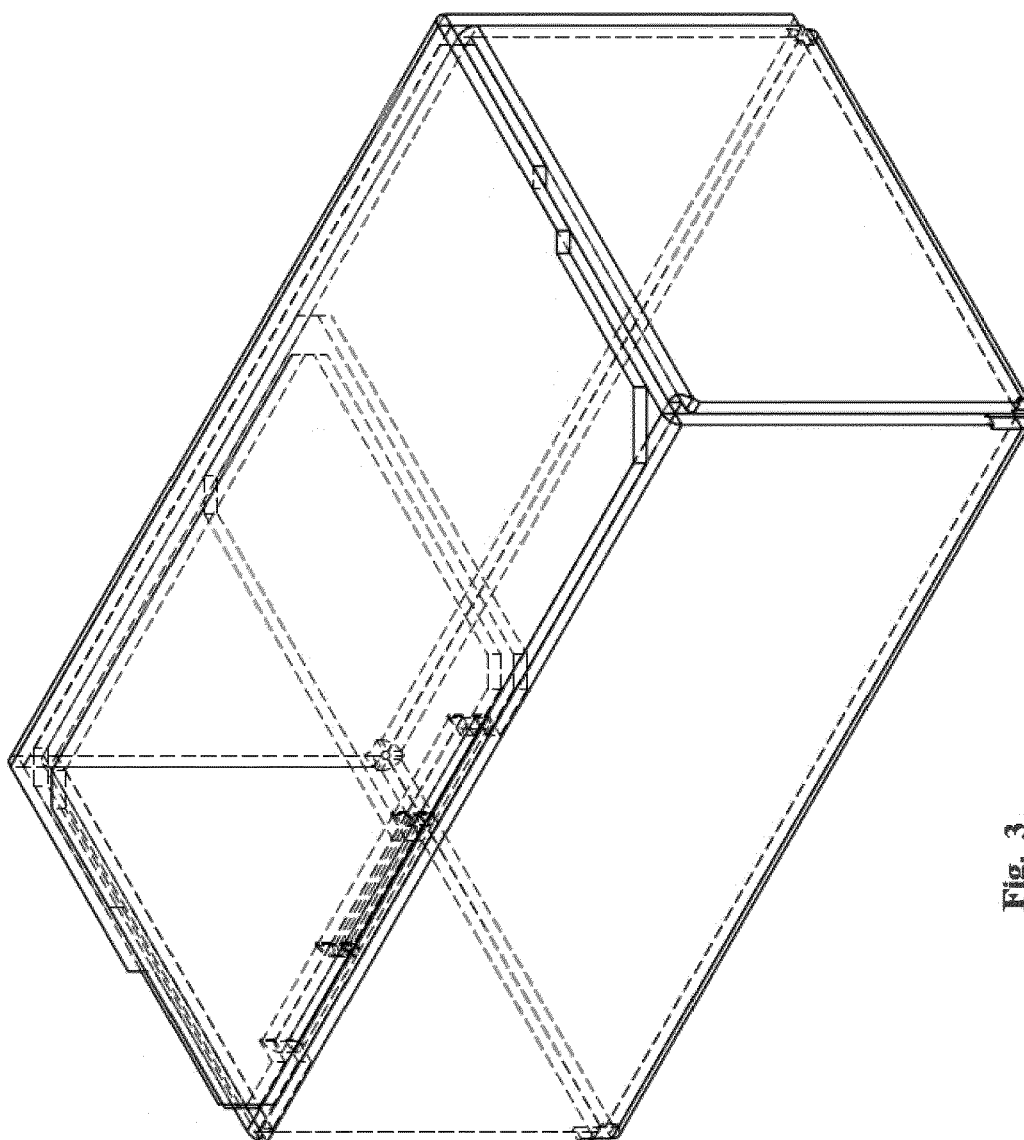


Fig. 3

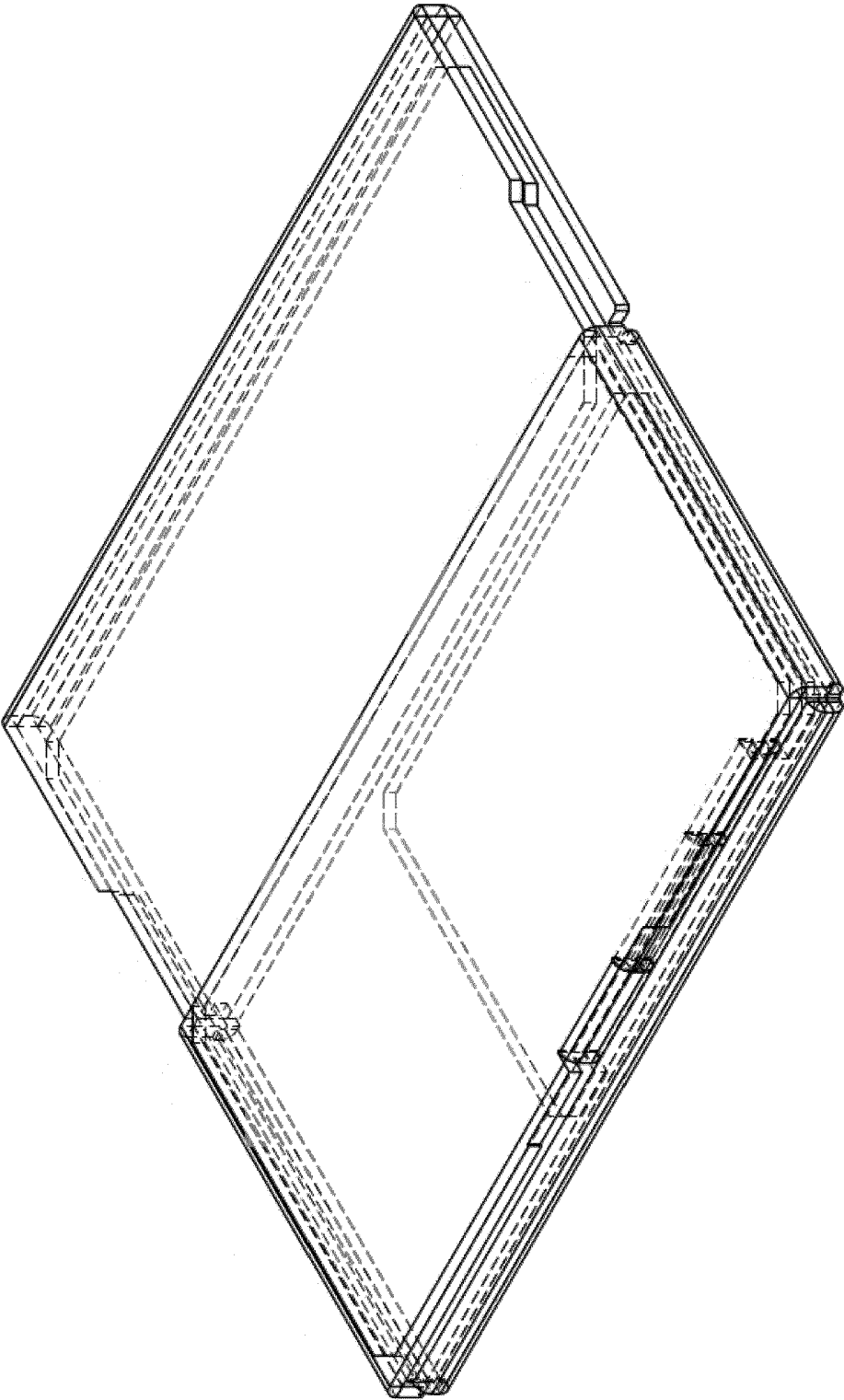


Fig. 4



EUROPEAN SEARCH REPORT

Application Number

EP 23 18 5874

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Y	US 5 477 965 A (HERBECK THOMAS [DE]) 26 December 1995 (1995-12-26) * column 5, line 37 - column 10, line 10 * * figures 1-21 *	1-8	INV. B65D5/66
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Y	US 2011/290865 A1 (BLACK TONY [GB]) 1 December 2011 (2011-12-01) * paragraph [0001] - paragraph [0161] * * figures 1,2 *	1-8	
			TECHNICAL FIELDS SEARCHED (IPC)
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The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
Munich		16 July 2024	Rodriguez Gombau, F
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			
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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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