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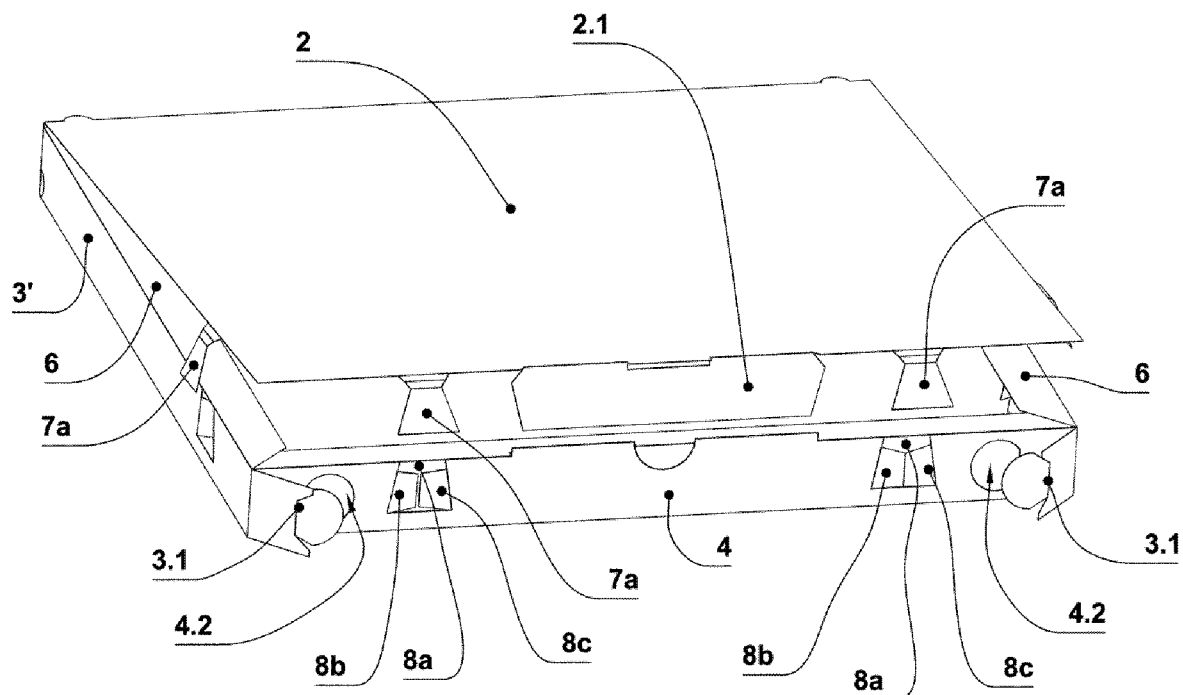
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(54) PIZZA BOX WITH SEALING ELEMENTS OR SEALS

(57) The invention is a new box for pizzas or other take-away food in general, consisting of a die-cut and folded sheet made from food grade cardboard, provided with elements, parts, appendages, holes, slots, seats (7a,7b,7c,8a,8b,8c) that prevent the box itself from being

opened without damage or breakage of said elements, parts, appendages, in such a way that the damage or breakage or evident modification of said elements, parts, appendages shows that the box itself has been opened.

**Fig. 3****EP 4 491 528 A1**

Description**FIELD OF APPLICATION**

[0001] The present patent concerns containers, or boxes, for pizzas, calzones, baguettes, and in particular it concerns a box for pizzas, calzones, baguettes and cardboard containers for other take-away food in general, provided with sealing appendages intended to highlight any opening of and tampering with the box/container during delivery by home delivery staff commonly called riders.

STATE OF THE ART

[0002] At present several types of take-away pizza boxes are available, constituted by a single element made from die-cut food grade cardboard, generally divided into two main parts, both in a square shape, or in another suitable shape, which, folded on top of each other, form the bottom and the lid of the box.

[0003] The bottom generally also includes two folded side edges, a front edge and a back edge. Said edges are generally provided, at the corners, with tabs, or holes, or other portions suited to be inserted into corresponding slots made in the adjacent edges, which facilitates the connection between the sides of the box, guaranteeing the solidity of the box itself and creating the volume in which the pizza will be contained.

[0004] Between the square bottom and the square lid there are two pairs of conveniently spaced parallel folded edges. Said folded edges constitute the thickness, or height, of the box and delimit its sides, which are suited to ensure that the pizza will be contained therein. Even the rear edge has, in proximity to the corners, tabs, or holes, or other coupling devices suited to be connected to corresponding devices provided on the side edges.

[0005] All the known solutions are provided with a cardboard tab on the lid, which must be inserted into a slot on the front strip of the box; however, this solution, which has been used for some time now, does not guarantee that the box cannot first be opened and then closed again during delivery.

[0006] Nowadays, the home delivery of pizzas made by both take-away and traditional pizzerias is becoming increasingly widespread, wherein this service is not performed by personnel having a direct relationship with the pizzeria or by the customer who collects the pizza personally, but is carried out by home delivery staff, commonly called riders. Said personnel often are not directly selected and supervised. It is well known that the rider, during the delivery route, can open the pizza container and tamper with its contents.

[0007] It is important for the end user, for reasons related to hygiene and to the risk of food contamination, to be certain that the contents of the box, in practice the pizza or food contained therein, have not been touched or tampered with or otherwise damaged by the delivery

staff.

SCOPE OF THE INVENTION

[0008] To overcome all the above-mentioned drawbacks, a new type of box for pizzas or other take-away food has been designed and produced.

[0009] The object of the new take-away pizza box is to ensure that the lid has not been opened and reclosed during delivery with the risk of partial removal or damage of its contents.

[0010] It is another object of the invention to provide a box made from a single homogeneous material, such as food grade cardboard, in such a way as to facilitate its disposal and to guarantee that the box is suited to contain food.

DESCRIPTION OF THE INVENTION

[0011] The example of embodiment described herein is particularly suitable for take-away pizza boxes.

[0012] Said boxes can be in the classic shape, most commonly square, which is suitable for normal round pizzas as well as for small, medium or larger ones.

[0013] The new box can have other shapes, rectangular for elongated pizzas, rectangular with higher edges to contain calzones or baguettes.

[0014] The preferred version comprises a single, die-cut food grade cardboard element divided into at least two main parts: a covering surface, hereinafter referred to as the lid, and a bottom surface, hereinafter referred to as the bottom.

[0015] Along each edge of the bottom there is a strip, rectangular and parallel to the edge of the bottom, to which it is connected.

[0016] Each of said strips, when folded, forms one of the vertical perimeter sides of the pizza box, which are suited to define the height of the box itself.

[0017] One of said strips, hereinafter referred to as the back strip, is suited to connect the lid with the bottom.

[0018] The strip opposite said back strip is hereinafter referred to as the front strip, while the other two strips between said front strip and said back strip are hereinafter referred to as the side strips.

[0019] Both the side strips and the front strip have, on their edge opposite said bottom, a further folded strip intended to support the lid.

[0020] The edge of the lid opposite said back strip is provided with an element suited to be inserted into a slot specially created between the front strip and the corresponding lid support strip.

[0021] The side strips are provided with folding appendages in proximity to the front strip, while the front strip has holes or openings in proximity to the side strips to accommodate said folding appendages of the side strips.

[0022] The new take-away pizza box includes elements, parts, appendages, holes, slots, seals, and seats suited to show that the box has been opened, as said

seals are torn or otherwise altered when the box is opened.

[0023] Either the lid or the strips is/are provided with one or more appendages in the shape of a trapezoid or dovetail, divergent, or in an equivalent shape, and correspondingly the strips or the lid are/is provided with openings, slots, flexible portions suited to allow said appendages to be inserted therein but not to be removed.

[0024] When the new box is correctly closed, said elements, parts, appendages, holes, slots, seats are correctly arranged and/or coupled together.

[0025] In the optimal solution, several trapezoidal appendages are provided on the lid.

[0026] In view of the simultaneous presence of several appendages correctly inserted into the corresponding seats, to open the new box it is necessary to break, damage or otherwise visibly alter said elements, parts, appendages.

PREFERRED SOLUTION

[0027] The characteristics of the new object are better clarified in the following description, with reference to the drawings that are attached hereto by way of nonlimiting example.

[0028] Figure 1 shows the new box before the folding operation, consisting of a die-cut sheet of food grade cardboard.

[0029] In the illustrated example, the new pizza box is of the type for classic round pizzas, but the details described below are to be considered valid for elongated rectangular pizza boxes, for calzone boxes, for baguette boxes or for any other container, suitable for food or not, requiring devices that guarantee sealing.

[0030] The new box comprises a bottom part (1), a lid part (2), rectangular strips (3, 3', 4, 5) along the perimeter of the bottom (1).

[0031] The cutting lines between the various parts are indicated with a continuous line while the pre-folding lines consisting of short, aligned cuts are indicated with a broken line.

[0032] One of said strips, called back strip (5), connects the bottom (1) with the lid (2). The two strips (3, 3') adjacent to said back strip (5) are hereinafter referred to as the side strips (3, 3'), while the strip (4) opposite said back strip (5) is hereinafter referred to as the front strip (4).

[0033] The other three strips (3, 3', 4) are provided with further strips (6), opposite said bottom (1), suited to support the lid (2) when the folded box is closed.

[0034] The edge of the lid (2) opposite said back strip (5) has a portion or tab (2.1) suited to be inserted into a slot (4.1) specially created between the front strip (4) and the corresponding strip (6) designed to support the lid (2).

[0035] The side strips (3, 3') have folding appendages (3.1) in proximity to the front strip (4), while the front strip (4), in proximity to the side strips (3, 3'), is provided with holes or openings (4.2) suited to accommodate said

folding appendages (3.1) of the side strips (3, 3').

[0036] Both said folding appendages (3.1) and said holes or openings (4.2) are illustrated in greater detail in Figure 2, which shows the cardboard portion of the box forming the front strip (4) and the cardboard portion of the box forming the edge of the lid (2) with its round or square tab (2.1) opposite the back strip (5).

[0037] According to an equivalent solution, the folding appendages (3.1) are placed on the front strip (4) and the holes or openings (4.2) are correspondingly placed on the side strips (3, 3'), as shown in detail in Figure 2bis.

[0038] Figure 3 shows the assembled new box being closed.

[0039] Figure 4 shows a detail of the front-lateral part of the assembled new box being closed.

[0040] Figure 5 shows a detail of the front-lateral part of the assembled new box when fully closed.

[0041] The new take-away pizza box includes elements, parts, appendages (7a, 7b, 7c), holes, slots, seats (8a, 8b, 8c) that show that the box itself has been opened.

[0042] In the example illustrated, the lid (2) is provided with appendages in the shape of a trapezoid or dovetail, divergent, or in an equivalent shape, while the front strip (4) and the side strips (3, 3') are provided with openings with flexible portions (8a, 8b, 8c) suited to allow said appendages (7a, 7b, 7c) to be inserted therein but not to be removed.

[0043] Said trapezium-shaped appendages (7a, 7b, 7c) are such that they can be placed beside said openings with flexible portions (8a, 8b, 8c) and subsequently folded inside the box through said openings. This movement involves the rotation of said flexible portions (8a, 8b, 8c) of said openings and the subsequent return of the flexible portions (8b, 8c) themselves almost to their initial position, as can be seen in Figure 5, while the upper flexible portion (8a) remains inside and covered by the trapezium-shaped appendages (7a, 7b, 7c). In this way, when the lid is opened, the trapezium-shaped appendages (7a, 7b, 7c) are torn off.

[0044] Both the shape of the trapezium-shaped appendages (7a, 7b, 7c) and the shape of the openings as well as the configuration and the repositioning of the flexible portions (8a, 8b, 8c) prevent the direct extraction of said trapezium-shaped appendages (7a, 7b, 7c) from said openings with flexible portions (8a, 8b, 8c).

[0045] To open the new box, it is necessary to break, damage or otherwise clearly alter said elements, parts, appendages (7a, 7b, 7c).

[0046] In addition, notches can be provided where the elements, parts, appendages (7a, 7b, 7c) are attached to the lid (2) and/or to the front strip (4) and the side strips (3, 3'), in such a way as to cause them to come off during extraction.

[0047] These are the schematic outlines which are sufficient for the expert in the art to carry out the invention, consequently, upon concrete application variants may be obtained that do not affect the substance of the innovative concept introduced herewith.

[0048] Therefore, with reference to the above description and the enclosed drawings, the following claims are made.

Claims

1. Box for pizzas, or other take-away food in general, consisting of a die-cut and folded sheet made from food grade cardboard, **characterized in that** it comprises elements, parts, appendages, holes, slots, seats which prevent the box itself from being opened without damaging or breaking said elements, parts, appendages, *and wherein* the damage or breakage or evident modification of said elements, parts, appendages show that the box itself has been opened. 10

2. Pizza box according to claim 1, comprising a bottom (1), a lid (2), a back strip (5), side strips (3, 3'), a front strip (4), strips (6) supporting the lid (2), **characterized in that** it comprises, on the edges of the lid (2) or on the front strip (4) and/or on the side strips (3, 3'), two or more elements, parts, appendages (7a, 7b, 7c), and **in that** it comprises, on the front strip (4) and/or on the side strips (3, 3') or on the edge of the lid (2), holes, slots, seats (8a, 8b, 8c) suited to receive and retain said elements, parts, appendages (7a, 7b, 7c), and to prevent them from being extracted without damage or breakage. 20
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3. Pizza box according to the preceding claims, **characterized in that** said elements, parts, appendages (7a, 7b, 7c) are provided on the front edge of the lid (2) and said holes, slots, seats (8a, 8b, 8c) are provided on the front strip (4). 35

4. Pizza box according to claims 1, 2, **characterized in that** said elements, parts, appendages (7a, 7b, 7c) are provided on the side edges of the lid (2) and said holes, slots, seats (8a, 8b, 8c) are provided on the side strips (3, 3'). 40

5. Pizza box according to claims 1, 2, **characterized in that** said elements, parts, appendages (7a, 7b, 7c) are provided on the side edges and the front edge of the lid (2) and said holes, slots, seats (8a, 8b, 8c) are provided on the side strips (3, 3') and the front strip (4). 45

6. Pizza box according to the preceding claims, **characterized in that** said elements, parts, appendages (7a, 7b, 7c) have the shape of a trapezoid or dovetail, divergent, or an equivalent shape, *and wherein* said holes, slots, seats (8a, 8b, 8c) have a shape matching that of said elements, parts, appendages (7a, 7b, 7c) and are provided with flexible portions (8a, 8b, 8c) suited to allow said elements, parts, appendages (7a, 7b, 7c) to be inserted therein but not to be 50
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extracted without their evident tampering or breakage.

7. Pizza box according to the preceding claims, **characterized in that** said elements, parts, appendages (7a, 7b, 7c) are provided with notches where they are attached to the lid and/or to the strips (4, 3, 3'), in such a way as to cause them to come off during extraction.

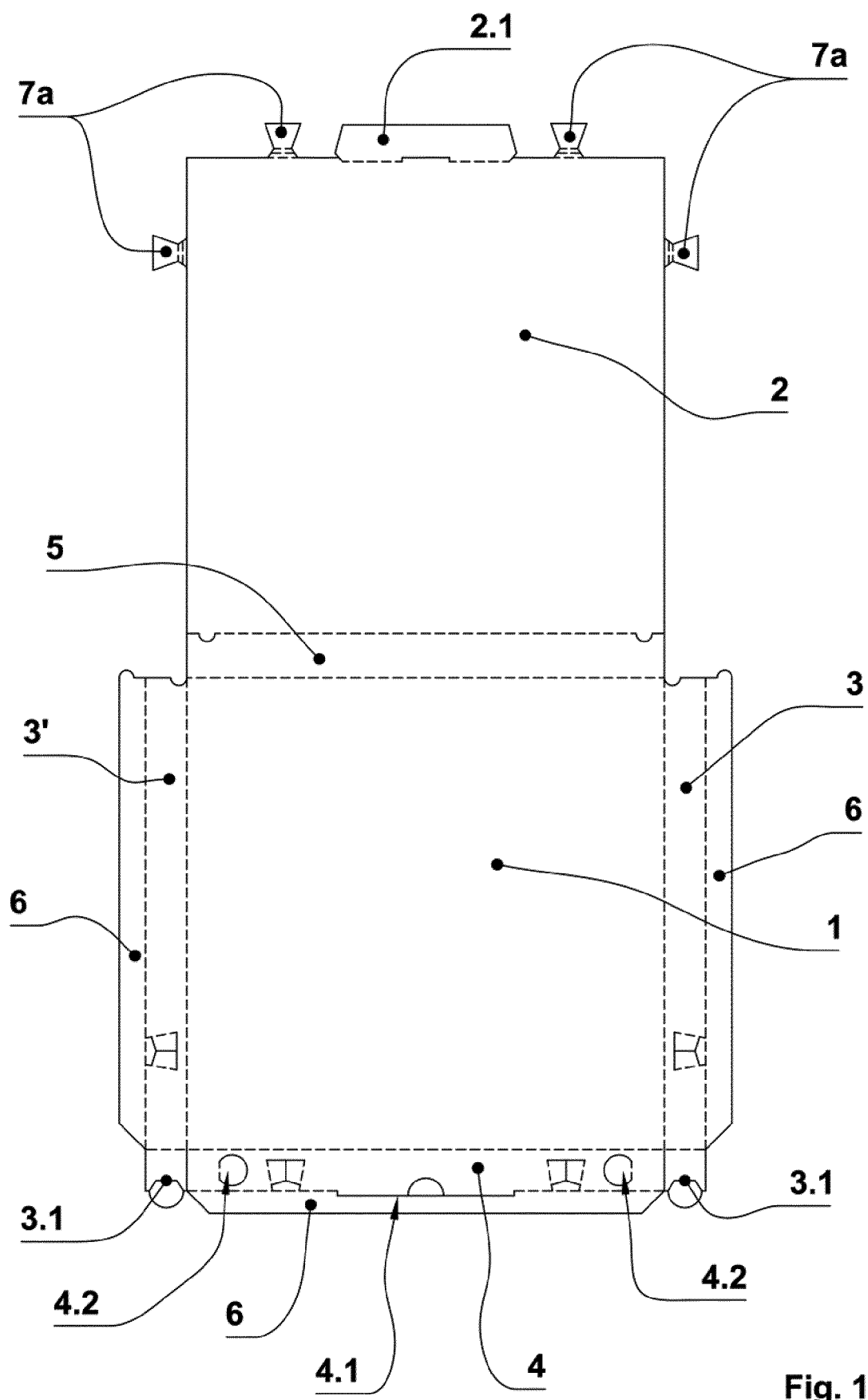


Fig. 1

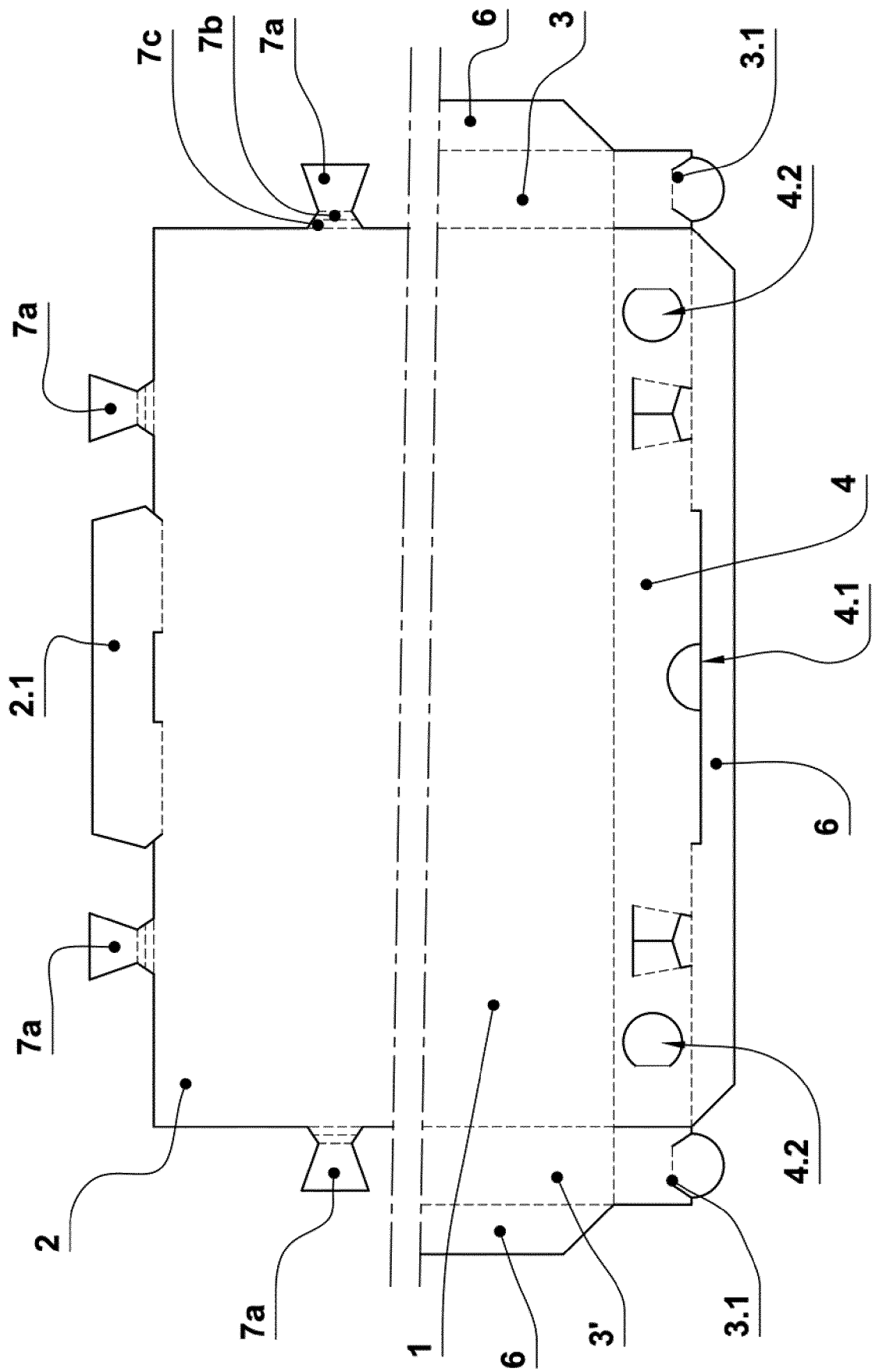


Fig. 2

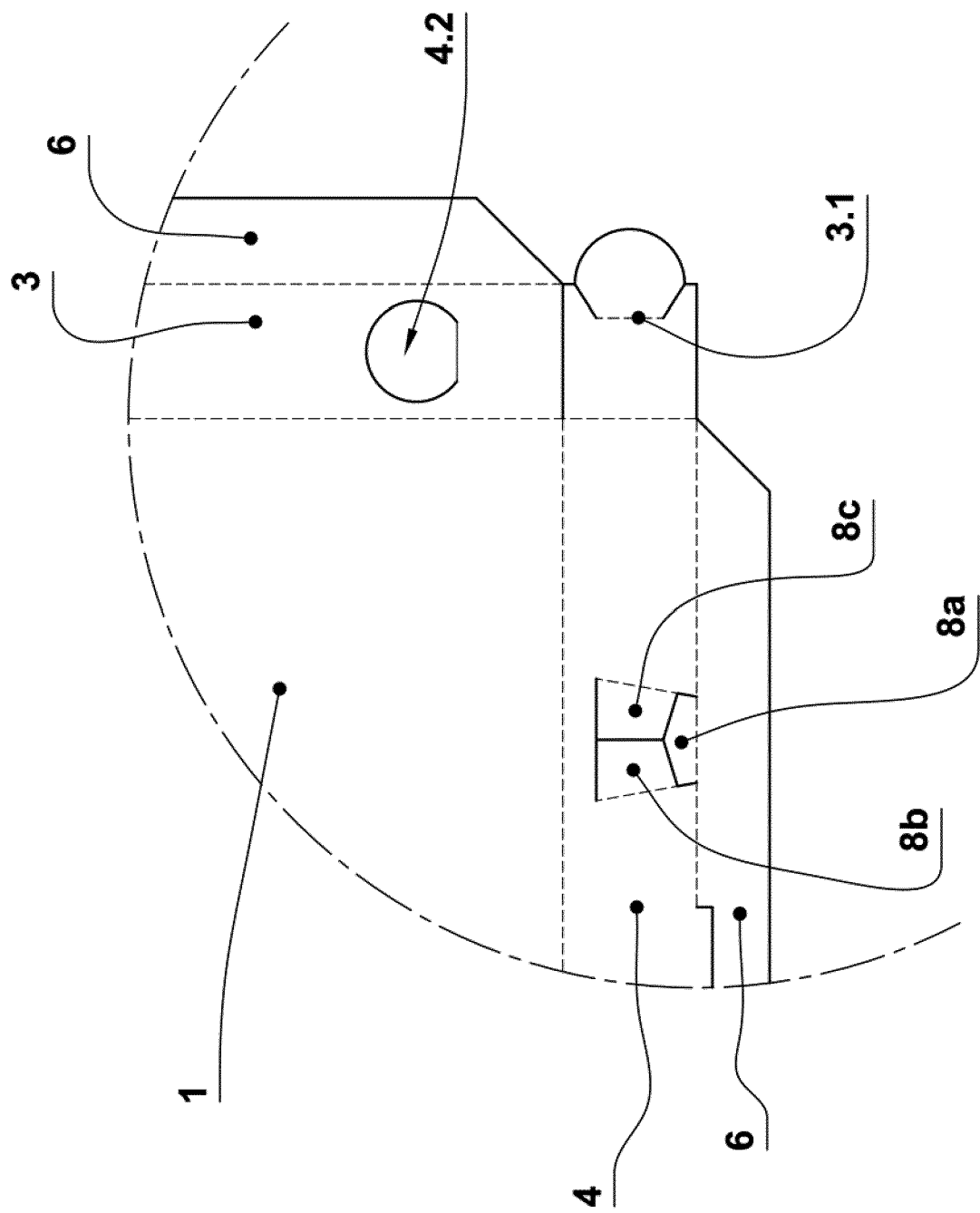


Fig. 2bis

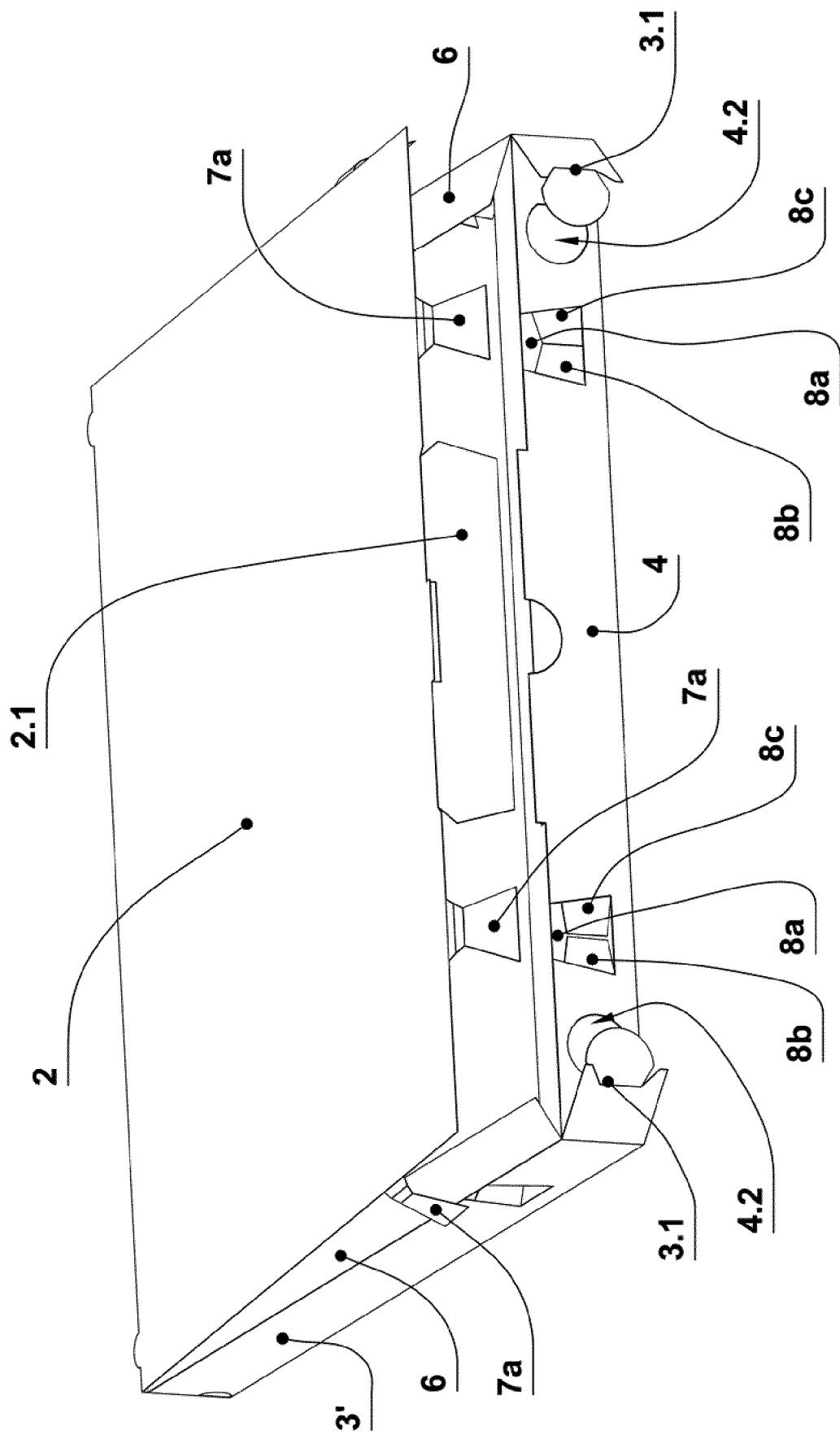


Fig. 3

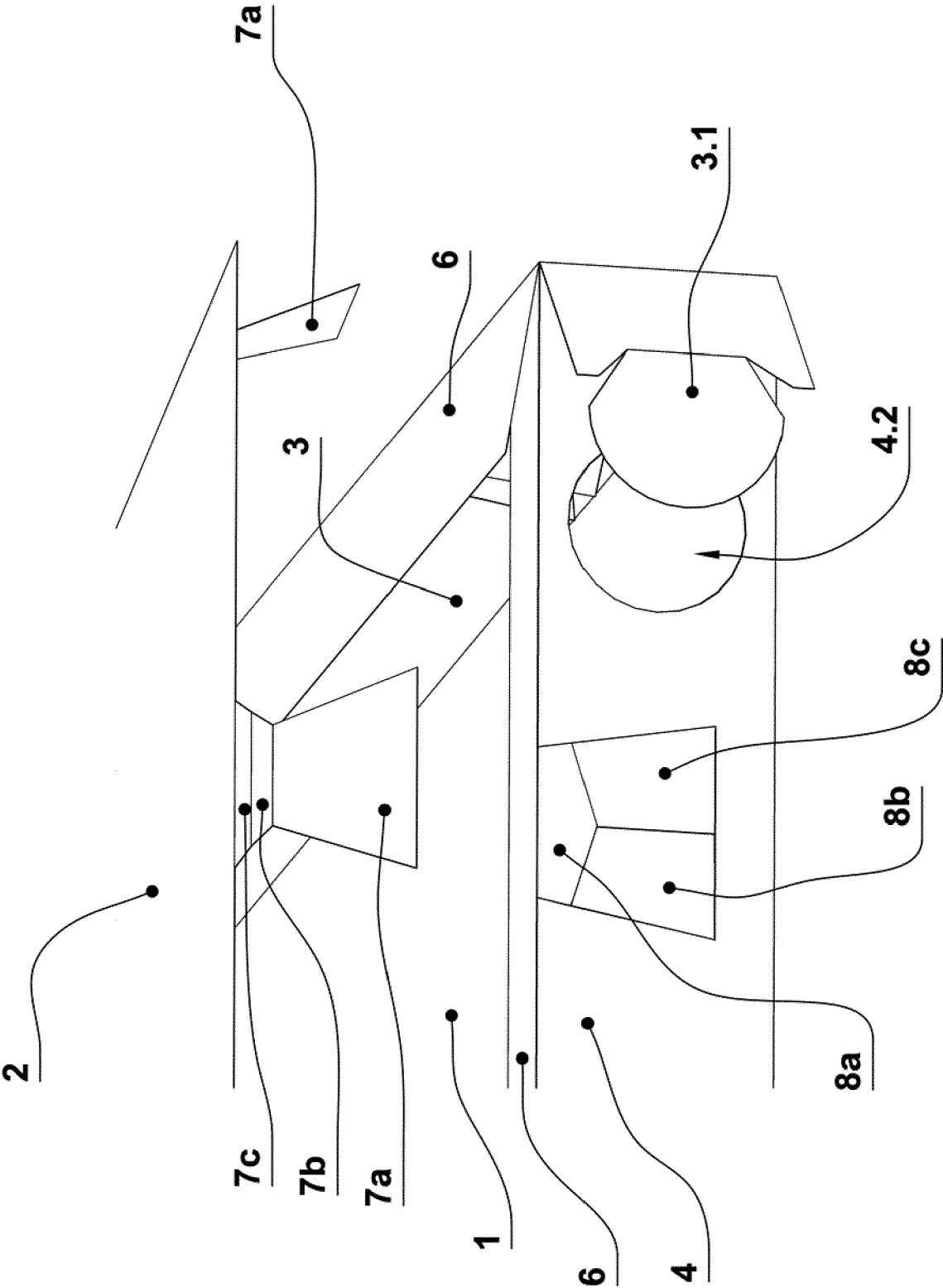


Fig. 4

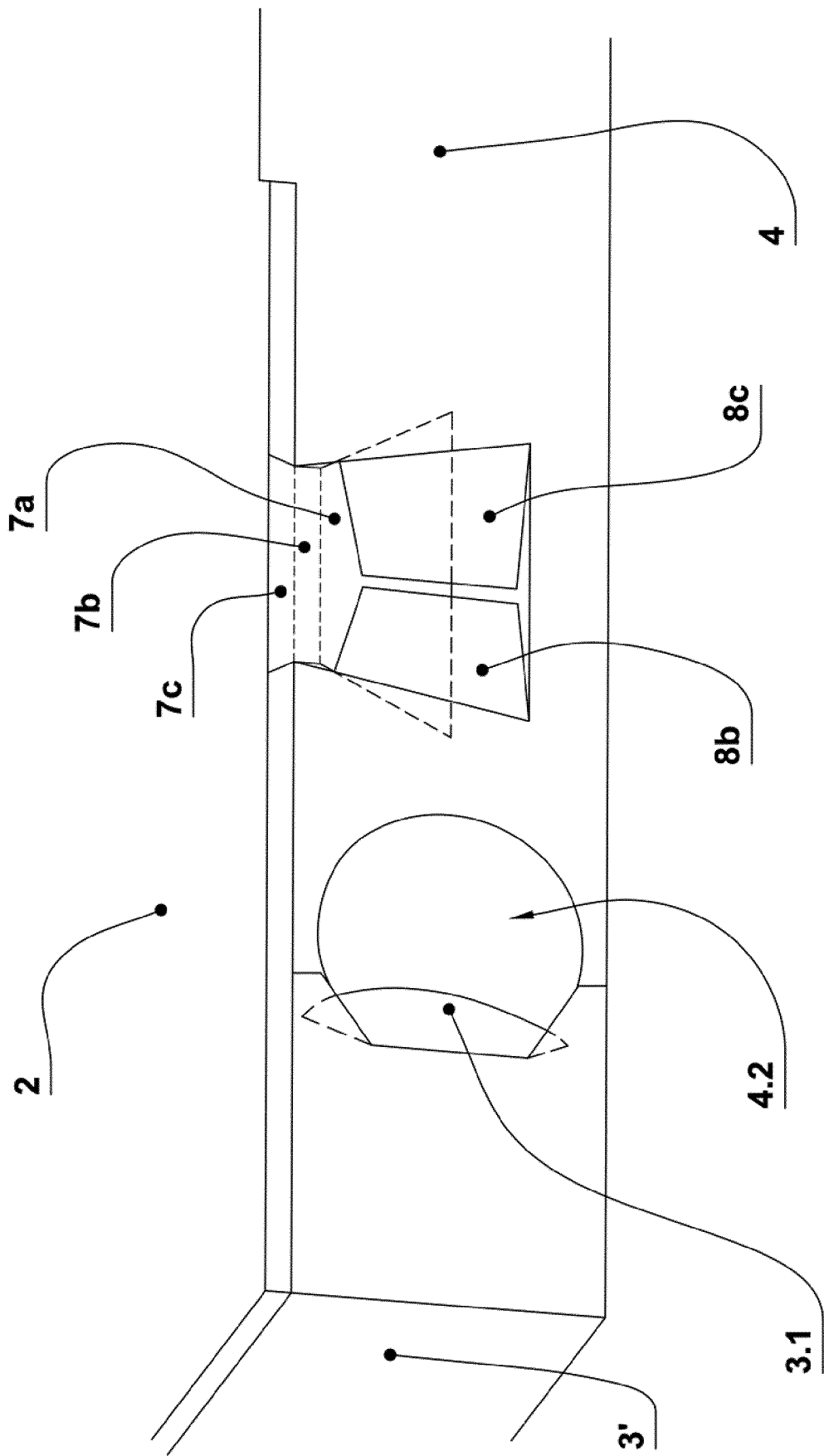


Fig. 5



EUROPEAN SEARCH REPORT

Application Number

EP 23 18 5243

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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
The Hague		16 July 2024	Pernice, Ciro
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 ON EUROPEAN PATENT APPLICATION NO.

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