



EUROPEAN PATENT APPLICATION

(43) Date of publication:
24.06.2020 Bulletin 2020/26

(51) Int Cl.:
A47K 10/42 (2006.01)

(21) Application number: **19217304.5**

(22) Date of filing: **18.12.2019**

(84) Designated Contracting States:
**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO
PL PT RO RS SE SI SK SM TR**
Designated Extension States:
BA ME
Designated Validation States:
KH MA MD TN

(71) Applicant: **Sofidel S.p.A.**
55016 Porcari (LU) (IT)

(72) Inventor: **LAZZARESCHI, Luigi**
55016 Porcari (LU) (IT)

(74) Representative: **Mannucci, Michele et al**
Ufficio Tecnico
Ing. A. Mannucci S.r.l.
Via della Scala, 4
50123 Firenze (IT)

(30) Priority: **21.12.2018 IT 201800020671**

(54) **A DISPENSER FOR CELLULOSE PRODUCTS IN SHEET FORM**

(57) The dispenser comprises a prismatic container (1) defined by: a substantially rectangular bottom wall (2); a first pair of opposite lateral walls (3, 4); a second pair of opposite lateral walls (5, 6).

Each lateral wall (3, 4, 5, 6) extends from the bottom wall (2) toward a respective upper end edge (3A, 4A, 5A, 6A) and the upper edges (3A, 4A, 5A, 6A) of the lateral walls (3, 4, 5, 6) surround an upper opening (7) of the prismatic container (1), opposite the bottom wall (2). The dispenser further comprises a substantially rectangular closing plate (8), comprising an opening (9) for picking up the cellulose products in sheet form. Each lateral wall (3, 4) of the first pair of lateral walls comprises a respective cutout (10, 11) extending in a direction oriented from the upper opening (7) toward the bottom wall (2). Each of two opposite edges (12, 13) of the rectangular plate (8) comprises a respective appendage (14, 15) adapted to be slidably engaged along a respective of said cutouts (10, 11).

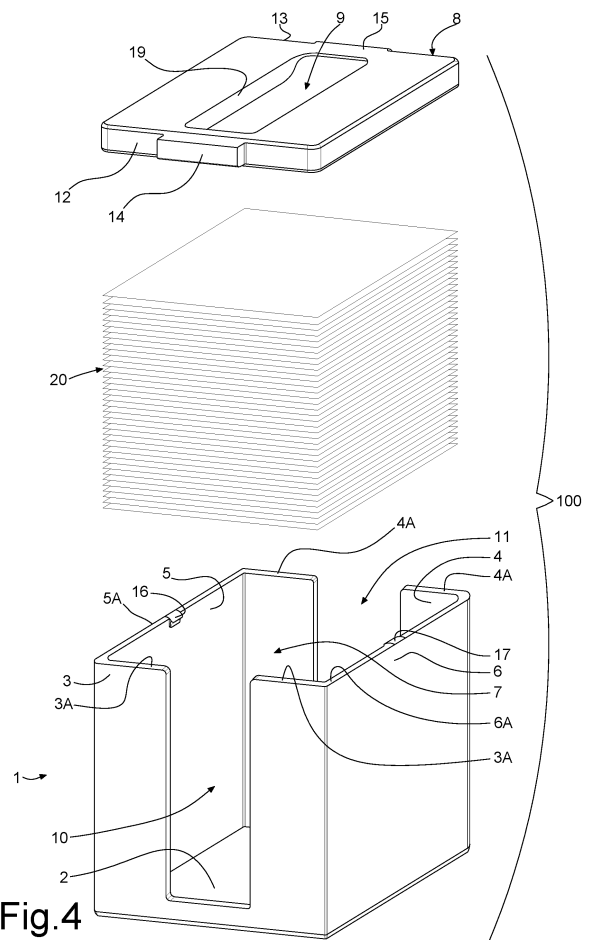


Fig.4

Description

TECHNICAL FIELD

[0001] The present invention concerns dispensers for handkerchiefs, napkins or other cellulose products in sheet form. Embodiments disclosed herein in particular relate to dispensers for handkerchiefs or other cellulose products in sheet form, typically folded or interfolded, having a rectangular prismatic form adapted to contain a stack or pack of rectangular sheets, for example interfolded tissues.

BACKGROUND ART

[0002] Disposable napkins or handkerchiefs are often products in packs or stacks containing interfolded handkerchiefs, folded so that, once inserted in a dispenser, it is possible to extract single napkins or handkerchiefs one at a time through an opening of the dispenser. Parallel-epiped shaped dispensers, with an upper wall provided with an opening through which the handkerchiefs are picked up, are often used to contain and dispense the handkerchiefs.

[0003] In the present context, upper and lower are meant as the positions taken by the dispenser or by parts thereof in a possible and preferred configuration for use. Typically, these dispensers are configured to be used resting on a surface with a lower wall or base of its own, opposite which is the upper wall provided with the dispensing opening.

[0004] In some current state of the art dispensers the upper wall, provided with the opening for picking up the handkerchiefs, consists of a moving plate mounted so as to slide inside the dispenser in a vertical direction (when in use) from a top position, when the dispenser is full of handkerchiefs, i.e., contains a new stack of handkerchiefs, to a bottom position, when the dispenser is empty. The plate is maintained constantly in contact with the upper face of the pack or stack of napkins contained in the dispenser as a result of gravity.

[0005] Devices of this type are described in US 1454180, US 3269593, US 3346141 and WO2015/088401.

[0006] It would be desirable to improve and perfect dispensers of the current state of the art to obtain a more functional and low-cost dispenser.

SUMMARY OF THE INVENTION

[0007] To completely or partially solve the problems and limits of dispensers of the current art, there is provided a dispenser of napkins or other typically folded and interfolded cellulose products in sheet form, comprising a prismatic container defined by: a substantially rectangular bottom wall; a first pair of opposite lateral walls; and a second pair of opposite lateral walls. Each lateral wall extends from the bottom wall toward a respective upper

end edge. The upper edges of the lateral walls surround an upper opening of the prismatic container, opposite the bottom wall. The dispenser further comprises a substantially rectangular closing plate, comprising an opening for picking up handkerchiefs contained in the prismatic container. The closing plate is adapted to slide in the prismatic container along the lateral walls. Characteristically, each lateral wall of the first pair of lateral walls comprises a respective cutout extending in a direction oriented from the upper opening toward the bottom wall. Two opposite edges of the rectangular plate comprise a respective appendage adapted to be slidably engaged along a respective one of said cutouts.

[0008] In the present description, specific reference will be made to "handkerchiefs". It must be understood that the dispenser according to the present invention can also be used to dispense other types of products in sheet form, typically cellulose products in sheet form and in particular folded and interfolded products in sheet form. In addition to handkerchiefs, examples of products of this type can also be napkins, facial wipes and similar products.

[0009] Each wall of the container is substantially rectangular. In the present description and in the appended claims "rectangular" is meant as a quadrangular or square shape, with right angles, which can nonetheless also have some elements that differ from a rectangle in the geometrical sense, such as appendages along one or more edges, rounded corners or the like.

[0010] The cutouts along the two opposite lateral walls, which in use are arranged vertically, act as guides for the extensions or appendages of the plate, which is thus guided in its vertical movement. The width of each of the two cutouts is substantially the same as, or slightly larger than, the dimension of the corresponding appendage in the direction of the edge from which said appendage protrudes.

[0011] The cutouts not only have a guiding function, but also allow the inside of the container to be viewed, for example in order to view the characteristics of the pack of napkins or handkerchiefs contained in the dispenser. For example, through the cutouts it is possible to check the type of napkins contained in the dispenser and the amount of products still available in the dispenser.

[0012] Each cutout can have a very limited width for example of a few millimeters, or even larger involving almost the whole of the width of the respective lateral wall. In advantageous embodiments the width of the cutout, and hence the corresponding dimension of the appendage provided on the respective edge of the plate, is from around 25% to around 50% of the width of the respective lateral wall.

[0013] A larger dimension of the cutouts allows better viewing of the content of the dispenser. Moreover, it reduces the amount of polymer material required to produce the dispenser and consequently the cost thereof.

[0014] Each cutout can start from a different height with

respect to the bottom wall. Each cutout ends at the edge of the respective lateral wall, so as to form in substance a recess extending from the upper edge to an intermediate position of the lateral wall, close to the bottom wall or at the bottom wall. As each cutout ends at the edge of the lateral wall, the upper edge of the lateral wall is interrupted and this facilitates mounting of the upper plate.

[0015] The dispenser and the components thereof can be made of any suitable material. In advantageous embodiments, the container and the plate can be made of polymer material (plastic). Different materials can also be used for the walls of the container and for the plate, respectively. In some embodiments the material can be completely or partly transparent.

[0016] To prevent the plate from being accidentally separated from the container, for example during extraction of a handkerchief through the opening of the plate, one or more stops can be provided along one or more upper edges of the lateral walls. For example, and preferably, two stops are provided on two edges of opposite walls, for example the two lateral walls without cutouts.

[0017] The prismatic container can have a rectangular shaped base with a long side and a short side. To obtain an improved guiding effect, in some embodiments the walls with the cutouts are those arranged along the short sides of the bottom wall.

[0018] The opening of the plate is preferably narrow and elongated, in the manner of a slot. For example, the length can be at least four or five times the transverse dimension of the opening.

[0019] In some embodiments, the opening of the plate can have a rectangular shape, preferably with rounded corners.

[0020] In possible embodiments, the lower face of the plate, i.e., the face that in the configuration mounted for use is facing the bottom wall of the container, can have a rib extending along the opening of the plate. Preferably, the lower face of the plate has two substantially parallel ribs, one along each of two opposite edges of the plate opening. When the plate opening has an elongated, for example rectangular, shape, the rib/ribs is/are arranged along the long sides of the opening. The ribs, if present, have many advantages and functions. According to some aspects, the ribs can be adapted to stiffen the structure of the plate and/or to increase its weight, so as to facilitate descent of the plate by gravity onto the upper surface of the pack or stack of tissues contained in the prismatic container. Moreover, the rib/ribs reduces/reduce the mutual contact surface between the plate and the stack or pack of handkerchiefs, thereby facilitating extraction.

BRIEF DESCRIPTION OF THE DRAWINGS

[0021] The invention will be better understood by following the description and the accompanying drawings, which illustrate an exemplifying and non-limiting embodiment of the invention. More particularly, in the drawings:

Fig.1 shows an axonometric view of the container without the upper closing plate;

Fig.2 shows an axonometric view from above of the plate of the container;

Fig.3 shows an axonometric view from below of the plate of the container;

Fig.4 shows an exploded axonometric view of the dispenser with a pack

Fig.5 shows an axonometric view of the dispenser mounted and filled.

DETAILED DESCRIPTION OF AN EMBODIMENT

[0022] The dispenser, indicated as a whole with 100, comprises a container 1 approximately cubic or prismatic in shape and with a rectangular base. The dimension of the container 1 is such as to accommodate a pack or stack 20 of napkins or handkerchiefs (cf. Figs.4 and 5). The container 1 comprises a lower or bottom wall 2 from which lateral walls extend. More in particular, from the bottom wall 2 there extend two opposite lateral walls 3 and 4 and further two opposite lateral walls 5 and 6. In the illustrated embodiment, the walls 3 and 4 extend from the shorter sides of the bottom wall 2 which has an elongated rectangular shape. The walls 5 and 6 extend from the longer edges of the bottom wall 2.

[0023] Each of the two opposite walls 3 and 4 has a vertical cutout, i.e., orthogonal to the bottom wall 2. The cutouts are indicated with 10 and 11. Both the cutouts 10 and 11 extend up to the upper edges 3A, 4A of the respective walls 3, 4. In other words, the upper edges 3A, 4A of the walls 3 and 4 are interrupted at the cutouts 10 and 11.

[0024] Along the upper edges 5A and 6A of the lateral walls 5 and 6 two protrusions 16, 17 are provided, which form stops for a plate 8 described below.

[0025] The upper edges 3A, 4A, 5A, 6A of the lateral walls 3, 4, 5, 6 define an empty wall or upper opening 7 of the container 1. The opening 7 is closed by a plate 8 when the dispenser 100 is in use. The plate 8 has a rectangular shape substantially the same as the shape of the bottom wall 2 and of the upper opening 7 of the container 1. A respective appendage 14, 15 is provided along each of the short edges, indicated with 12 and 13, of the plate 8. Each of these appendages 14, 15 slidably engages a corresponding one of said cutouts 10, 11. In this way, a guide system of the plate 8 along the lateral walls 3, 4, 5, 6 of the container 1 is obtained. To facilitate vertical sliding of the plate 8 in the inner volume of the container, delimited by the walls 3, 4, 5 and 6, the width of each cutout 10, 11 is preferably slightly larger than the length of the respective appendage 14, 15, i.e., of the dimension of said appendages in the direction parallel to the edge of the plate 8 from which they protrude.

[0026] In advantageous embodiments the plate 8 is very thin, to reduce the amount of polymer material required for its production. A perimeter edge, visible in particular in Fig.3, can be provided to stiffen the plate 8.

Preferably, the perimeter edge protrudes from the lower face of the plate 8, i.e., from the face that, in use, is facing the bottom wall, so as not to be visible.

[0027] The plate 8 has a central opening 9 for removing the handkerchiefs from the stack or pack 20. Preferably, the opening 9 has a rectangular and preferably elongated shape. In embodiments disclosed herein, as can be seen in particular in Fig.3, ribs 18, 19 extend along the long sides of the opening 9 of the plate 8. The ribs 18, 19 extend from the lower face of the plate 8, i.e., from the face that, in use, is facing the inside of the container 1 and the bottom wall 2. The ribs 18, 19 are preferably joined with a rounded edge to the upper face of the plate 8, as can be seen in Fig.2.

[0028] In mounted configuration, with the pack 20 of handkerchiefs inserted in the container 1, the ribs 18, 19 press on the upper surface of the pack 20 of napkins with a limited contact surface. On the one hand, this retains the pack of handkerchiefs and, on the other, provides a guide effect to facilitate removal of the handkerchiefs that are pulled by the user to be removed from the container 1. The purpose of the ribs 18, 19 is also to stiffen the plate 8, which acts as a cover of the container 1, preventing it from warping downward.

[0029] The perimeter edge of the plate 8 and the ribs 18, 19 provide the plate 8 with a structural strength without excessively increasing its weight and maintaining a reduced thickness. In less advantageous embodiments, the plate 8 can have a uniform thickness equal to the height of the perimeter edge and/or of the ribs 18, 19.

[0030] To load the pack or stack 20 of handkerchiefs into container 1 the upper closing plate 8 can be removed by appropriately tilting it with respect to the horizontal so as to move one of its long edges beyond the corresponding stop 16 or 17. After loading the stack of napkins the plate 8 can be repositioned in the container 2, with a movement opposite the one performed for its removal, making the plate 8 descend by gravity until it is resting on the stack or pack 20 of handkerchiefs. The user can then extract single handkerchiefs, picking them up through the opening 9 of the plate 8. As the stack 20 is consumed, the plate 8 descends by gravity toward the bottom of the container 1.

Claims

1. A dispenser (100) for cellulose products in sheet form comprising:

a prismatic container (1) defined by: a substantially rectangular bottom wall (2); a first pair of opposite lateral walls (3, 4); a second pair of opposite lateral walls (5, 6); wherein each lateral wall (3, 4, 5, 6) extends from the bottom wall (2) toward a respective upper end edge (3A, 4A, 5A, 6A); and wherein the upper edges (3A, 4A, 5A, 6A) of the lateral walls (3, 4, 5, 6) surround

an upper opening (7) of the prismatic container (1), opposite the bottom wall (2);

a substantially rectangular closing plate (8), comprising an opening (9) for picking up the cellulose products in sheet form contained in the prismatic container (1), said closing plate (8) being adapted to slide in the prismatic container (1) along said lateral walls (3, 4, 5, 6);

characterized in that each lateral wall (3, 4) of the first pair of lateral walls comprises a respective cut-out (10, 11) extending in a direction oriented from the upper opening (7) toward the bottom wall (2); and **in that** each of two opposite edges (12, 13) of the rectangular plate (8) comprises a respective appendage (14, 15) adapted to be slidably engaged along a respective one of said cutouts (10, 11).

2. The dispenser of claim 1, wherein the closing plate (8), the bottom wall (2) and the opening (7) have a rectangular shape with a longer side and a shorter side and wherein the first pair of lateral walls (10, 11) are arranged at the shorter side of the base wall (2) and of the opening (7).
3. The dispenser of claim 1 or 2, wherein in proximity of the upper edge (5A, 6A) of at least two of said lateral walls (3, 4, 5, 6) respective stops (16, 17) are provided adapted to prevent the rectangular plate (8) from being accidentally separated from the prismatic container (1) when a cellulose product in sheet form is extracted from the container through said opening (9) of the rectangular plate (8).
4. The dispenser of claim 1 or 2, wherein in proximity of the upper edge (5A, 6A) of each lateral wall (5, 6) of said second pair of lateral walls a respective stop (16, 17) is provided, adapted to prevent the rectangular plate (8) from being accidentally separated from the prismatic container (1) when a cellulose product in sheet form is extracted from the container through said opening (9) of the rectangular plate (8).
5. The dispenser of one or more of the preceding claims, wherein said plate (8) comprises at least one rib (18; 19) on a face of the plate (8) facing the bottom wall (2) when the plate (8) is mounted between the lateral walls (3, 4, 5, 6) of the container (1), said at least one rib (18; 19) extending along the opening (9) of the plate.
6. The dispenser of one or more of claims 1 to 4, wherein the opening (9) of the plate (8) has an elongated shape with a larger dimension and a smaller dimension, and wherein along two opposite edges extending along the larger dimension of the opening (9) two respective ribs (18, 19) extend, protruding from a face of the plate (8) facing the bottom wall (2) when

the plate (8) is mounted between the lateral walls (3, 4, 5, 6) of the container (1).

7. The dispenser of claim 6, wherein the larger dimension of the opening (9) of the plate (8) extends or- 5
thogonally to the edges of the plate (8) on which said
appendages (14, 15) are provided.
8. The dispenser of claim 6 or 7, wherein each rib (18, 19) is joined to the opening (9) of the plate (8) with 10
a preferably rounded corner.
9. The dispenser of one or more of the preceding
claims, wherein the plate (8) has a perimeter edge
protruding from the face of the plate (8) which, in 15
use, is facing the lower wall (2) of the container (1).

20

25

30

35

40

45

50

55

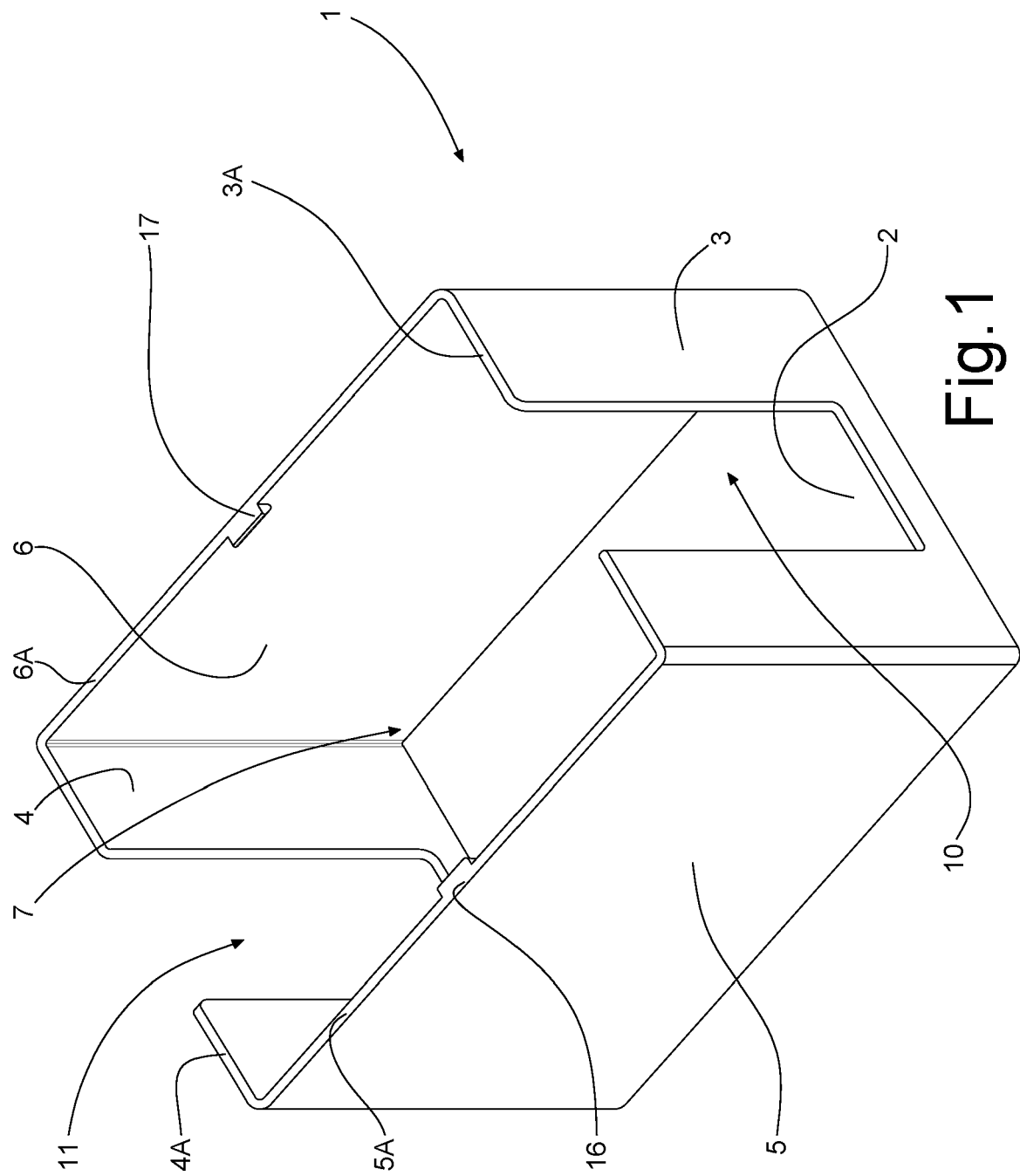
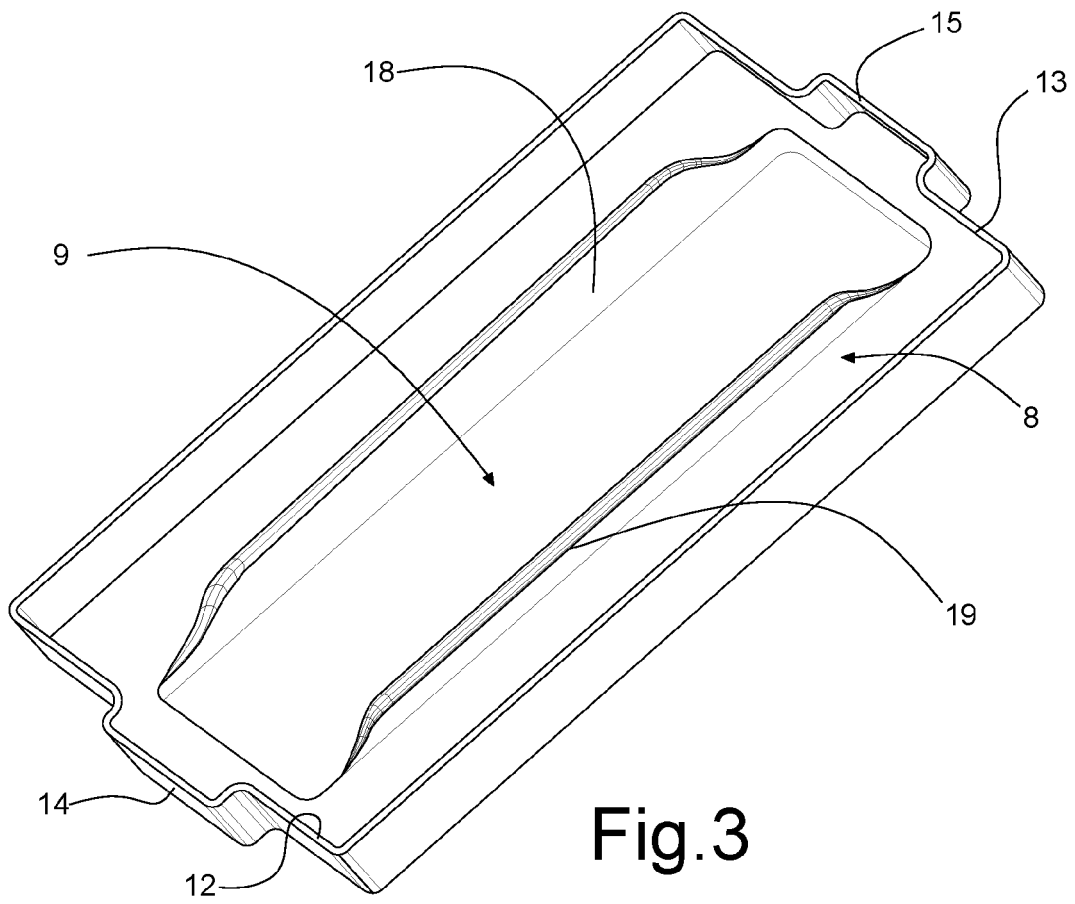
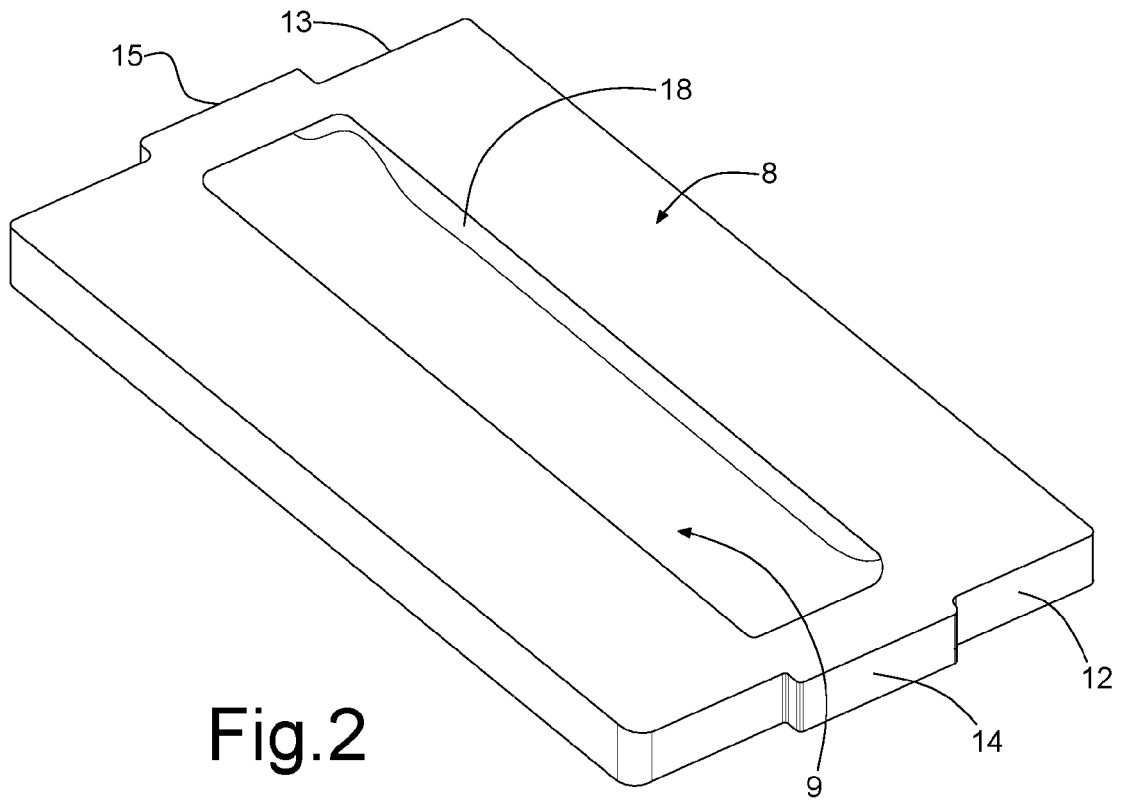
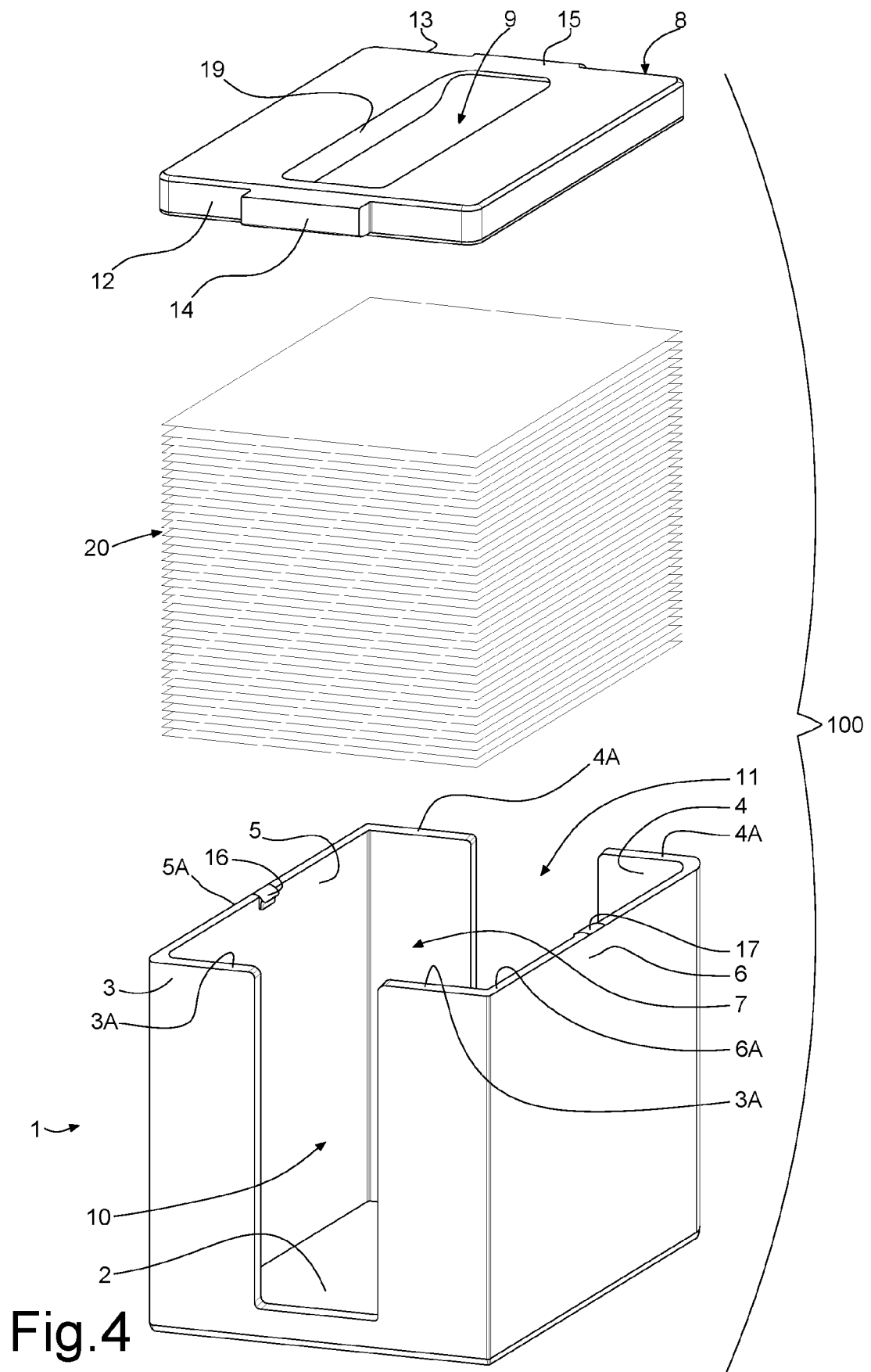


Fig. 1





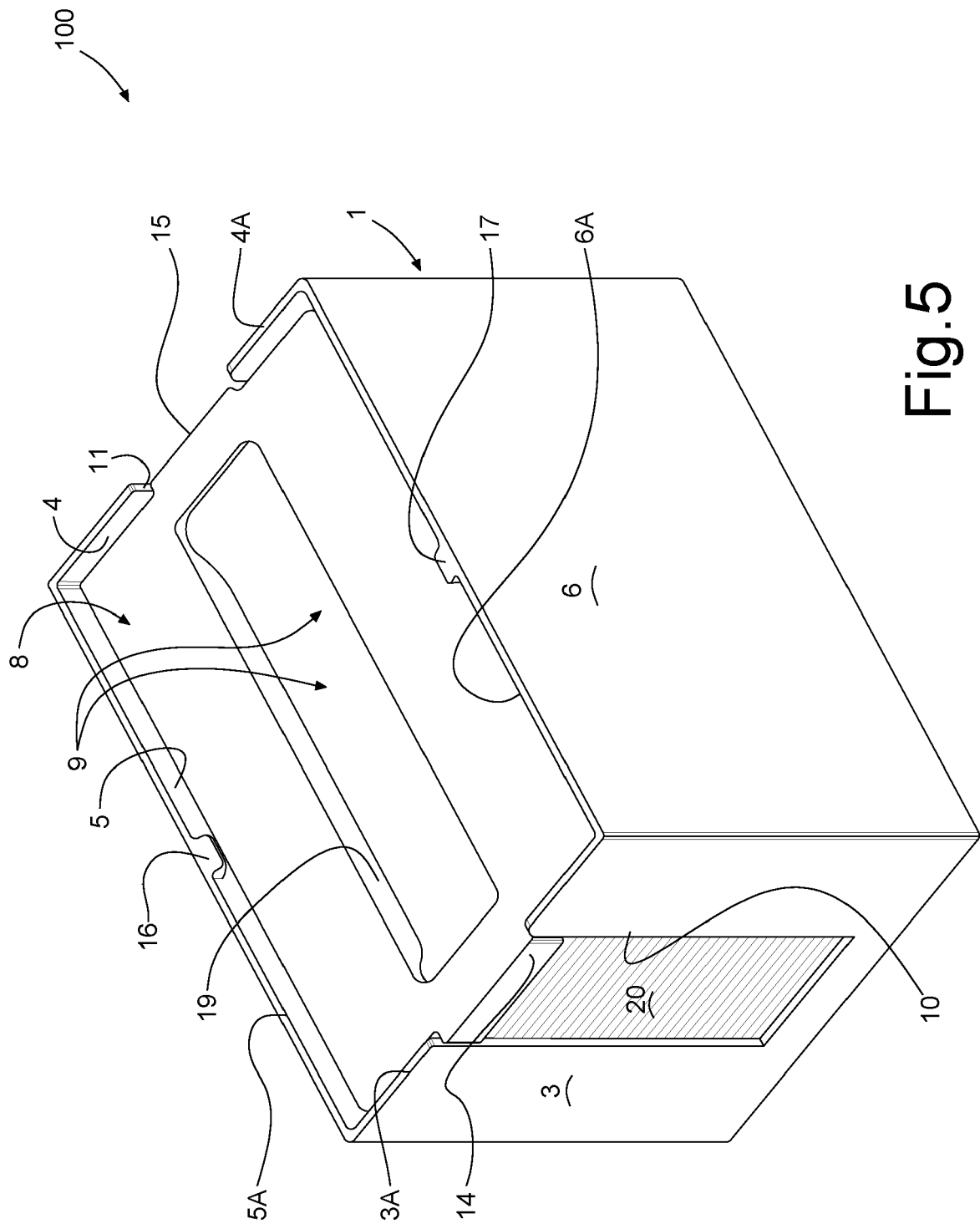


Fig. 5



EUROPEAN SEARCH REPORT

Application Number
EP 19 21 7304

5

10

15

20

25

30

35

40

45

50

55

1

EPO FORM 1503 03.82 (P04C01)

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 6 000 538 A (LEE JEN-SONG [TW]) 14 December 1999 (1999-12-14) * figures 2-8 *	1-9	INV. A47K10/42
X	US 1 587 463 A (ARMS LELAND J) 1 June 1926 (1926-06-01) * figures 1-3 *	1,2	
A,D	US 2016/302628 A1 (LARSSON BJÖRN [SE] ET AL) 20 October 2016 (2016-10-20) * figures 1-4,6-8 *	1-9	
			TECHNICAL FIELDS SEARCHED (IPC)
			A47K B65D
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 14 April 2020	Examiner Boyer, Olivier
<p>CATEGORY OF CITED DOCUMENTS</p> <p>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</p> <p>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</p>			

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 19 21 7304

5 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
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

14-04-2020

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6000538 A	14-12-1999	NONE	
US 1587463 A	01-06-1926	NONE	
US 2016302628 A1	20-10-2016	AU 2013407361 A1	23-06-2016
		CA 2933284 A1	18-06-2015
		CN 105813524 A	27-07-2016
		EP 3079548 A1	19-10-2016
		RU 2639975 C1	25-12-2017
		US 2016302628 A1	20-10-2016
		WO 2015088401 A1	18-06-2015

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- US 1454180 A [0005]
- US 3269593 A [0005]
- US 3346141 A [0005]
- WO 2015088401 A [0005]