



(11)

EP 4 772 448 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
08.07.2026 Bulletin 2026/28

(51) International Patent Classification (IPC):
B65D 5/38 ^(2006.01) **B65D 5/46** ^(2006.01)

(21) Application number: **25150110.2**

(52) Cooperative Patent Classification (CPC):
B65D 5/38; **B65D 5/4604**; **B65D 2215/02**

(22) Date of filing: **02.01.2025**

(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 ME MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA
Designated Validation States:
GE KH MA MD TN

(72) Inventors:
• **Leysen, Robin**
2200 Herentals (BE)
• **Mertens, Tim**
2460 Tielen (BE)
• **Bertels, Jos**
2400 Mol (BE)
• **Verlinden, Geert**
2350 Vosselaar (BE)

(71) Applicant: **Van Genechten Packaging N.V.**
2300 Turnhout (BE)

(74) Representative: **Ipsilon Belgium**
Bellevue 5/501
9050 Gent-Ledeberg (BE)

(54) **SLIDING BOX PACKAGING AND METHOD OF MANUFACTURING A SLIDING BOX PACKAGING**

(57) A sliding box packaging (10) comprising an outer sleeve (100), an inner tray (200) and locking means and a method of manufacturing the sliding box packaging (10). The closed sliding box packaging (10) is secured by the locking means, which is realized by engaging the inner tray (200) with the outer sleeve (100) to prevent the fully-inserted inner tray (200) from sliding, thereby preventing unauthorized access to the products. The sliding box packaging (10) is also child-resistant. To open the

sliding box packaging (10), at least two activating tabs (102, 103) must be pressed simultaneously, thereby providing tamper-evidence against unauthorized opening, and making it substantially difficult for children to open. Thereafter, the inner tray (200) disengages from the outer sleeve (100), so as to permit sliding movement of the inner tray (200) to open the sliding box packaging (10).

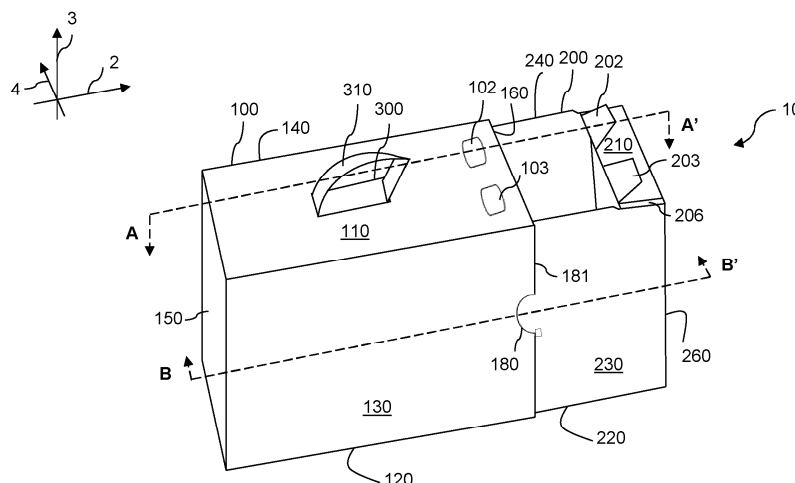


Fig. 1

Description

Technical Field

[0001] The present invention generally relates, amongst others, to packaging. More particularly, it relates to a sliding box packaging with tamper-evident and child-resistant closures for packaging sensitive and hazardous materials and to a method of manufacturing the sliding box packaging.

Background

[0002] A sliding box packaging, often referred to as a slipcase box or a drawer box, is a type of packaging that comprises an outer sleeve and an inner tray. The outer sleeve is either open on both sides or closed on one of the sides to allow the inner tray to slide into the outer sleeve. The inner tray can be pulled out like a drawer from the outer sleeve, allowing easy access to contents hosted in the inner tray. This type of packaging is commonly used for products, such as for example cosmetics, confectionery products, electronics, luxury items, etc., protecting the product from external influences while presenting it aesthetically. The sliding mechanism provides the product with the right amount of protection while also allowing for, for example, creative brand logo to be printed on the outer sleeve.

[0003] However, beyond the basic robustness and aesthetics, new requirements have emerged when packaging sensitive and/or hazardous products, such as for example medicine, supplements, cleaning supplies, chemicals, etc. Packaging is expected to be tamper-evident and child-resistant.

[0004] A tamper-evident packaging comprises one or more indicators or barriers to entry. If an indicator or a barrier to entry is damaged or missing from the packaging, the consumer has obvious evidence that tampering has occurred. In short, tampering is obvious to the consumer as the indicator or the barrier to entry is single use, meaning that when once damaged, it cannot be reapplied. The tamper-evident packaging assures customers that a product has not been altered from the time it is sealed at the manufacturer to the time it reaches the customer. As a visual indicator, the tamper-evident packaging shows that the products have not been tampered with, increasing consumer confidence in the brand. Although it cannot protect the product from being tampered with, it does ensure that customers are using the product as promised by the manufacturer.

[0005] Moreover, packaging for sensitive and/or hazardous products is expected to be child-resistant, which means that the packaging is designed to be more difficult and time-consuming for children to open, although not difficult for adults to use properly. This design prevents children from accessing products that pose a certain health and/or safety risk. This feature makes the packaging appear secure, reassuring customers that there is

no potential harm for children and encouraging them to buy the product for their safety.

Summary

[0006] There is a need to develop a sliding box packaging being tamper-evident and child-resistant for sensitive and/or hazardous products, which can be readily manufactured with robustness.

[0007] A sliding box being child-resistant and tamper-evident is known. There are numerous variants for both.

[0008] However, it remains challenging to customize the sliding box size, preferably enlarging the sliding box size to expand the capacity of the sliding box packaging. The child-resistant embodiments can be realized with one or more locking means. To open the sliding box packaging, two hands may be required, with one hand unlocking the locking means relying on the span of two fingers to cover for example detachable/depressible parts of the locking means at the same time and the other hand sliding an inner tray out of an outer sleeve. The size of the sliding box is thus often limited to the span of an adult's fingers.

[0009] Additionally, it remains challenging to close back the sliding box and restore the child-resistant function by simply sliding the inner tray back into the outer sleeve. In some examples, this may require relocating parts of one or more locking means back into their original position to restore the locked status. Failure to restore the locking means, possibly due to negligence and/or wearing/softening of parts of the locking means can compromise the child-resistant function and put their safety at risk.

[0010] It further remains challenging to avoid potential spilling risks. In some examples, the inner tray can be fully pulled out of the outer sleeve. In this way, sensitive and/or hazardous products, such as dishwasher pods, can easily spill out upon accidental flipping over.

[0011] It further remains challenging to design the blank being rectangular/square. In the mass production of blanks, for example cardboard blanks, the designed blank shapes need to be cut efficiently from larger cardboards to reduce waste. A less regular blank shape, drifting away from the standard rectangular and square shapes, can substantially increase waste.

[0012] It is thus an object of embodiments of the present disclosure to propose a packaging which do not show the inherent shortcomings of the prior art. More specifically, it is an object of embodiments of the present disclosure to propose a sliding box packaging and a method of manufacturing the sliding box packaging.

[0013] The scope of protection sought for various embodiments of the disclosure is set out by the independent claims.

[0014] The embodiments and features described in this specification that do not fall within the scope of the independent claims, if any, are to be interpreted as examples useful for understanding various embodiments of

the invention.

[0015] There is a need for a sliding box packaging which can securely package sensitive and/or hazardous materials to prevent unauthorized access. There is a need for a sliding box packaging which can keep the contents of the sliding box packaging out of children's reach.

[0016] According to the first aspect of the disclosure, a sliding box packaging is provided. The sliding box packaging comprises:

- an outer sleeve comprising a plurality of outer sleeve walls;
- an inner tray being slidable relative to the outer sleeve and configured to host one or more products; wherein the inner tray comprises a plurality of inner tray walls; and
- locking means comprising:
 - an outer locking tab, extending from one of the outer sleeve walls and being folded inwards, or being fixed inside the outer sleeve to one of the outer sleeve walls; and
 - at least two inner locking tabs extending from one of the inner tray walls and being folded outwards;

wherein the two inner locking tabs engage with the outer locking tab to prevent sliding movement of the inner tray when the inner tray is fully inserted into the outer sleeve, the fully inserted position preventing access to the products; and wherein the locking means further comprise at least two activating tabs cutout from the outer sleeve wall coupled to the outer locking tab; and wherein the two activating tabs are adapted to disengage the two inner locking tabs from the outer locking tab when the two activating tabs are pressed, so as to permit sliding movement of the inner tray.

[0017] In the context of the present disclosure, the term packaging refers to a material used to enclose or contain products for distribution, storage, sale, and use. A sliding box packaging is a type of packaging comprising an outer sleeve and an inner tray. The outer sleeve can be either open on both sides or closed on one of the sides, preferably being closed on one of the sides. The inner tray can be fully or partially open to host one or more products. The inner tray is preferably adapted to be partially open to reduce potential spilling risk upon accidental flipping over. Moreover, the preferable partially open inner tray ensures that one or more edges of the inner tray cannot be grabbed and torn open without authorization, which protects the products held in the inner tray from tampering.

[0018] The locking means are something useful or helpful to lock the inner tray with the outer sleeve. Upon

in the close status, the inner tray is locked with the outer sleeve, meaning that the inner tray cannot be slid out of the outer sleeve or have relative movement to the outer sleeve without damaging the inner tray and/or the outer sleeve. Only after unlocking the locking means, the inner tray is slidable relative to the outer sleeve to enable the opening or the closing back of the sliding box packaging.

[0019] At least two inner locking tabs engage with the outer locking tab to prevent sliding movement of the inner tray when the inner tray is fully inserted into the outer sleeve, the fully inserted position preventing access to the products hosted in the inner tray. The engagement of the inner locking tab and the outer locking tab refers to a status the above two interlock with each other, so that the movement of both is impeded or even cannot begin. The engagement can happen at one or more points and these points can for example be referred to as engagement points. More preferably, the engagement can happen along one or more lines and these lines can for example be referred to as engagement lines. The strength of the engagement can depend on the strength of the respective materials of the inner locking tab and the outer locking tab, and can also rely on the cross-sectional area of contact between the inner locking tab and the outer locking tab. The greater the material strength and/or the larger the cross-sectional area of contact, the stronger the engagement, and thus the more secure the locking between the inner tray and the outer sleeve.

[0020] It is advantageous to have the inner locking tab folded in a way that its furthest free end points toward the opening side of the outer sleeve. This creates a secure engagement between the inner locking tab and the outer locking tab that is extremely difficult to tamper with, such as by inserting a rigid sheet between the inner tray and outer sleeve to pry open.

[0021] The fully inserted position of the inner tray into the outer sleeve prevents access to the products. The inner tray can be partially or fully open to hold the products. When being fully inserted into the outer sleeve, the opening of the inner tray is fully covered by the outer sleeve and the locking means prevent preferably any sliding movement of the inner tray, thus preventing access to the products.

[0022] The locking means further comprise at least two activating tabs cutout from the outer sleeve wall coupled to the outer locking tab. The two activating tabs are adapted to disengage the two inner locking tabs from the outer locking tab when the two activating tabs are pressed, so as to permit sliding movement of the inner tray.

[0023] It is advantageous that the sliding box packaging comprises locking means. The sliding box packaging is very difficult and time-consuming for children to open, thus being child-resistant and keeping the sensitive and/or hazardous products away from children's reach. However, adults can still open and close back the sliding box packaging, creating a brand-related safety experience for parents and children. To unlock the lock-

ing means, at least two fingers are required to apply force and uniformly press the activating tabs, which are relatively distant from one another. At the same time, the other hand is required to pull the inner tray out of the outer sleeve. The instructions to simultaneously press at least two activating tabs with a certain level of force and pull the inner tray out of the outer sleeve are not obvious to children, and children rarely do it. In addition, the distance between the activating tabs is relatively large compared to the span of a child's hand, making it difficult to reach for children. In short, the first aspect of the disclosure covers embodiments to create a very secure packaging of sensitive and/or hazardous products that are out of reach of children while readily accessible to adults. The sliding box packaging can be repeatedly opened and closed back to access the products or to reliably seal the products between uses.

[0024] It is advantageous that the sliding box packaging comprises the activating tabs being used as evidence of tampering, so the sliding box packaging is tamper-evident. Upon pressing on the activating tabs, the activating tabs at least partially detach from the outer sleeve while being hinged to the outer sleeve via a folder line. After pulling the inner tray out of the outer sleeve, the activating tab tends to incline towards the space enclosed by the outer sleeve due to the pressing direction and the plasticity of the material around the fold line. If the inner tray is slid back into the outer sleeve, the inner tray will get in contact with the tilted activating tabs and push the activating tabs along the sliding direction. Therefore, at least part of the inner locking tab is exposed through the opening in the outer locking tab upon fully inserting the inner tray into the outer sleeve. It is evident that the sliding box packaging has been opened and subsequently been closed back. If the opening is not authorized, then the user of the sliding box packaging will instantly notice the tampering.

[0025] The sliding box packaging being described in this disclosure comprises an outer sleeve, an inner tray, and locking means.

[0026] The inner tray is slidable relative to the outer sleeve. When the inner tray is slid out of the outer sleeve, the products held in the inner tray are accessible and the sliding box packaging is in an open status. When the inner tray is slid back and is fully inserted back into the outer sleeve, the products held in the inner tray are not accessible anymore and the sliding box packaging is in a closed status.

[0027] The outer sleeve comprises a plurality of outer sleeve walls. Upon being erected into the outer sleeve, the outer sleeve walls can be adjacent or opposite to each other. The adjacent outer sleeve walls can be connected and hinged to each other via fold lines. Alternatively, the adjacent outer sleeve walls can be secured to each other via at least one outer connecting tab, which can be secured to the corresponding adjacent outer sleeve wall through for example gluing, stapling, and/or any other suitable method.

[0028] The inner tray comprises a plurality of inner tray walls. Upon being erected into the inner tray, the inner tray walls can be adjacent or opposite to each other. The adjacent inner tray walls can be connected and hinged to each other via fold lines. Alternatively, the adjacent inner tray walls can be secured to each other via at least one inner connecting tab, which can be secured to the corresponding adjacent inner tray wall through for example gluing, stapling, and/or any other suitable solution.

[0029] The locking means comprise an outer locking tab and at least two inner locking tabs. A tab can refer to a short projection device, such as a small flap by which something may be grasped or pulled. Alternatively, the tab can refer to a small addition. The tab can be an extension of the inner tray walls or the outer sleeve walls, preferably with a reduced size compared to the inner tray walls or the outer sleeve walls from which it extends.

[0030] In the context of the present disclosure, the tab extending from a respective wall means that the tab is directly connected to the respective wall and the tab is hinged to the respective wall via a fold line. The tab is preferably made out of the same material as the respective inner tray wall or outer sleeve wall from which it extends.

[0031] The outer locking tab can extend from one of the outer sleeve walls and be folded inwards. Folding inwards means that the tab is folded via the fold line towards the space enclosed by the outer sleeve. The outer locking tab is preferably secured to the outer sleeve via for example gluing, stapling, and/or any other suitable solution. Alternatively, the outer locking tab can be folded inwards but not be secured to the outer sleeve. It is advantageous to secure the outer locking tab to the outer sleeve because this configuration increases the overall robustness of the outer sleeve and prevents to some extent tearing opening. In addition, it promotes the proper engagement/disengagement between the inner locking tab and the outer locking tab, as the inner locking tabs are easier to engage/disengage with a fixed outer locking tab rather than a movable one.

[0032] Alternatively, the outer locking tab can be one or more separate pieces from a blank from which the outer sleeve is formed. The outer locking tab can be fixed inside the outer sleeve to one of the outer sleeve walls. The inside of the outer sleeve refers to the sides of the outer sleeve facing the inner tray when the inner tray is fully inserted into the outer sleeve. The material of the outer locking tab is preferably the same materials as the outer sleeve. The thickness of the outer locking tab, which refers to the smallest dimension of the outer locking tab, is preferably comparable to thickness of the outer sleeve. Indeed, relying on a thinner material for the outer locking tab than the material of the outer sleeve can compromise the robustness of the locking means, while relying on a thicker material for the outer locking tab than the material of the outer sleeve can jeopardize the proper fitting of the inner tray into the outer sleeve.

[0033] The outer locking tab can extend from one of the

outer sleeve walls. The outer locking tab can extend from any one of the plurality of outer sleeve walls. Alternatively, the outer locking tab is a separate piece and is fixed inside the outer sleeve to one of the outer sleeve walls. The outer locking tab can be fixed inside the outer sleeve to any one of the plurality of outer sleeve walls.

[0034] At least two inner locking tabs extend from one of the inner tray walls and are folded outwards. The locking means can comprise two or more inner locking tabs. The at least two inner locking tabs are not necessarily identical to each other in terms of dimensions, such as length or width. The at least two inner locking tabs are folded outwards, meaning that the inner locking tabs are folded via one or more fold lines deviating from the space enclosed by the inner tray. The inner locking tabs can be folded to align in parallel to the inner tray wall from which they extend.

[0035] At least two inner locking tabs can be positioned on the same inner tray wall. Alternatively, at least two inner locking tabs can be positioned on two adjacent inner tray walls. The maximum profile distance between the two furthest inner locking tabs is preferably equal to or less than the maximum span between two fingers of an adult.

[0036] The activating tabs are cut out from the outer sleeve wall coupled to the outer locking tab. When opening the sliding box packaging, each of the activating tabs is pressed by preferably one finger. The pressing direction is preferably perpendicular to the outer sleeve wall and directing towards the space enclosed by the outer sleeve. When the activating tabs are pressed, the forces applied by each finger to the activating tabs are transmitted to the inner locking tabs underneath. In this way, the activating tabs activate the relative movement of the inner locking tab away from the outer locking tab. The cross-sectional contact areas between the inner locking tabs and the outer locking tab decrease until they are completely disengaged from each other. By pulling the inner tray out of the outer sleeve with the other hand, the inner tray can slide out of the outer sleeve, so as to open the sliding box packaging.

[0037] The activating tab can be two or more than two, preferably less or equal to five. Preferably, to each activating tab corresponds one inner locking tab.

[0038] According to some embodiments, each of the activating tabs may correspond to a respective opening extending through the outer locking tab and defining a respective periphery of each respective opening in the outer locking tab. Each of the inner locking tabs may engage with a respective periphery in the outer locking tab to prevent sliding movement of the inner tray when the inner tray is fully inserted into the outer sleeve.

[0039] The outer locking tab may have one or more openings, each extending through the outer locking tab and defining a respective periphery of each respective opening in the outer locking tab. The opening is preferably with a regular shape, such as for example an oval, or a rectangle with rounded corners. The opening can be

delimited from the blank via a cutout. The sizes of the activating tabs, the openings in the outer locking tab and the inner locking tabs are preferably comparable to each other to enable more reliable locking means. The periphery of the opening refers to a perimeter of a closed curve of the opening.

[0040] More specifically, to prevent sliding movement of the inner tray when the inner tray is fully inserted into the outer sleeve, each of the inner locking tabs may engage with a respective periphery in the outer locking tab. As mentioned in the first aspect of the disclosure, the inner locking tab is hinged to the inner tray wall from which it extends via the respective fold line, defining a respective free end of the inner locking tab that can rotate around the respective fold line. The angle between the inner locking tab and the respective inner tray wall from which it extends is preferable less than 90 degrees.

[0041] When the inner tray is fully inserted into the outer sleeve, preferably, the free end of the inner locking tab can reach into the opening of the outer locking tab and is in direct contact with the respective periphery of the outer locking tab. Upon unauthorized opening, the inner tray is pulled out of the outer sleeve. However, the directions of translation of the free end of the inner locking tab and the outer locking tab are opposite to each other, thus creating tension in the engagement line(s) and/or engagement point(s) to impede the translation of the inner locking tab relative to the outer locking tab. Thereby the translation of the inner tray relative to the outer sleeve is impeded, making it impossible to pull the inner tray out of the outer sleeve intact.

[0042] It is advantageous to have the above-mentioned embodiments because it can prevent unauthorized opening, thereby being child-resistant and preventing tampering. The free end of the inner locking tab reaches into the opening of the outer locking tab and the opening is partially or fully covered by the respective activating tab. When the sliding box packaging is closed and unauthorized opening happens, the locking means are in effect, thereby preventing unauthorized opening. If anyone tries to use a rigid sheet to dig into the channel/gap formed in between the outer sleeve and the inner tray to pry open, the free end of the inner locking tab will be forced to move away from the respective inner tray wall rotating along the respective fold line, thereby forming a larger angle relative to the respective inner tray wall. However, the opening is covered by the activating tab, thereby limiting the further movement of the free end of the inner locking tab and restricting the free end of the inner locking tab at least partially within the space enclosed by the opening. This tampering action will only make the engagement in between the inner locking tab and the outer locking tab more effective but not make it fail. In addition, it is extremely difficult for children to make the locking means fail. Children may extend their fingers into the channel/gap formed in between the outer sleeve and the inner tray, but this action will not lead to the failure of the locking means.

[0043] According to some embodiments of the disclosure, each of the activating tabs may come in contact with one of the two inner locking tabs when the two activating tabs are pressed.

[0044] Each of the activating tabs may fully or partially cover the opening cutout from the outer locking tab, while the inner locking tab reaches into the opening of the outer locking tab. When the activating tabs are pressed by fingers, the activating tabs are forced to move towards the space enclosed by the outer sleeve, thereby towards the inner locking tabs. In sequence, each of the activating tabs comes in contact with one of the two inner locking tabs and transmits the pressing forces to the inner locking tabs. Under the forces, each of the inner locking tabs tends to move towards the respective inner tray walls from which it extends and the angles between each of the inner locking tabs and the respective inner tray walls decreases. The locking means fully fail when the free ends of the inner locking tab fully move out of the opening.

[0045] It is advantageous to press the activating tabs to unlock the locking means. For children, opening such a sliding box packaging is not obvious. Firstly, the users must use their fingers with a certain level of strength to press at least two activating tabs at the same time. In addition, the activating tabs can have a certain distance between each other, thereby applying higher requirements for children's finger activities.

[0046] According to some embodiments, the activating tabs may partially or fully cover the inner locking tabs of the inner tray when the inner tray is fully inserted into the outer sleeve.

[0047] When trying to open the sliding box packaging after fully inserting the inner tray into the outer sleeve, it is essential that the forces applied to each of the activating tabs can be transmitted to the respective inner locking tabs, so that the inner locking tabs disengage from the outer locking tab, thereby making the locking means temporarily fail. As a result, it is advantageous to have the activating tabs partially or fully cover the inner locking tabs when the inner tray is fully inserted into the outer sleeve, because this increases a contact area in between the activating tab and the respective inner locking tab as the activating tab is pressed. It is understandable that the increased contact area helps to realize that the force becomes increasingly homogeneous, and uniformly applied to the inner locking tab, which can effectively reduce possible wearing/softening of the free end of the inner locking tab. This improvement can extend a life of the locking means and a life of the sliding box packaging, so that the sliding box packaging can be opened and closed back repeatedly with little compromise in functions of the sliding box packaging.

[0048] According to some embodiments, the activating tabs may be further adapted to be pushed inwards by the inner tray when the inner tray is slid back into the sliding box packaging.

[0049] It is advantageous to have these embodiments in this disclosure because the activating tabs can be used

as evidence of tampering, so the sliding box packaging is tamper-evident. The activating tabs can be partially detachable from the outer sleeve walls, which can be delimited by a perforation and/or scoring and/or weakening curve. Alternatively, the activating tabs can be delimited by a plurality of perforation and/or scoring and/or weakening lines. Upon pressing on the activating tabs, the activating tabs at least partially detach from the outer sleeve while being hinged to the outer sleeve via a folder line. After pulling the inner tray out of the outer sleeve, the activating tab tends to incline towards the space enclosed by the outer sleeve due to the pressing direction and the plasticity of the material around the fold line. If the inner tray is slid back into the outer sleeve, the inner tray will get in contact with the tilted activating tabs and push the activating tabs along the sliding direction. The angle between the tilted activating tab and the opening of the outer locking tab will preferably be larger than 90 degrees. Therefore, at least part of the inner locking tab is exposed through the opening in the outer locking tab upon fully inserting the inner tray into the outer sleeve. It is evident that the sliding box packaging has been opened and subsequently been closed back. If the opening is not authorized, then the user of the sliding box packaging will instantly notice the tampering.

[0050] Moreover, although the activating tabs no longer partially or fully cover the inner locking tabs, the sliding box packaging is still child-resistant. To reopen the sliding box packaging, it still requires applying force to each of the activating tab with fingers at the same time and the activating tabs are still distant from each other. The children may notice the openings as the exposed inner locking tabs may have colours different from the outer sleeve but pressing the activating tabs at the same time with at least two fingers and using the other hand to pull the inner tray out of the outer sleeve are not obvious or physically possible to children.

[0051] The activating tabs can be further adapted to be pushed inwards by the inner tray when the inner tray is slid back into the sliding box packaging, thereby causing the activating tabs to no longer partially or fully cover the inner locking tabs of the inner tray when the inner tray is fully inserted back into the outer sleeve. Alternatively, the activating tabs can be further adapted to be pushed inwards by the inner tray when the inner tray is slid back into the sliding box packaging, thereby at least partially exposing the inner locking tabs. Alternatively, the activating tabs can be further adapted to be pushed inwards by the inner tray when the inner tray is slid back into the sliding box packaging, thereby causing the activating tabs to be located between the outer locking tab of the outer sleeve and the inner locking tabs of the inner tray when the inner tray is fully inserted back into the outer sleeve. Alternatively, the activating tabs can be further adapted to be pushed inwards by the inner tray when the inner tray is slid back into the sliding box packaging, thereby causing the inner locking tabs of the inner tray not to be fully covered by the activating tabs when the

inner tray is fully inserted back into the outer sleeve.

[0052] According to some embodiments,

- the outer sleeve walls may comprise two opposite outer longitudinal walls, two opposite outer transverse walls and an outer back wall; and
- the inner tray walls may comprise two opposite inner longitudinal walls, an inner front wall, an inner locking wall and an opposite inner transverse wall;

and wherein the sliding box packaging may further comprise limiting means comprising:

- an inner limiting tab extending from one of the opposite inner longitudinal walls and being folded outwards; and
- an outer limiting tab extending from one of the opposite outer longitudinal walls and being folded inwards;

and wherein the outer limiting tab engages with the inner limiting tab to limit a sliding course of the inner tray when opening the sliding box packaging; and/or

- an inner limiting tab extending from the inner locking wall or the opposite inner transverse wall and being folded outwards; and
- an outer limiting tab extending from one of the opposite outer transverse walls and being folded inwards;

and wherein the outer limiting tab engages with the inner limiting tab to limit a sliding course of the inner tray when opening the sliding box packaging.

[0053] It is advantageous that the sliding box packaging may comprise limiting means, because in this way the inner tray cannot be fully slid out of the outer sleeve. This improvement can to some extent reduce the spilling risk upon accidental flipping over. Moreover, the limiting means is provided to the sliding box packaging by simply folding wall extensions from the inner tray and outer sleeve. If the inner tray can be fully slid out of the outer sleeve, there is a risk that the user cannot properly assemble the sliding box packaging, as there are some couplings between the inner locking tabs and the respective outer locking tab. As a result, the embodiments of the limiting means help to ensure that the sliding box packaging is functioning properly throughout the life of the sliding box packaging.

[0054] In this disclosure, unless explicitly mentioned differently, a longitudinal wall refers to a wall comprising a longitudinal plane related to length or the lengthwise dimension and comprising a longitudinal direction; a transverse wall refers to a wall comprising a transverse plane related to width or the dimension of the width and comprising a transverse direction traverse to the longitudinal direction. The longitudinal walls are preferably in pairs being opposite to each other. The transverse walls

may be in pairs and be opposite to each other. Two walls are being opposite when the two walls are parallel and face one another. Alternatively, being opposite means being the other of a pair that are corresponding or complementary in position.

[0055] The outer sleeve may comprise two opposite outer longitudinal walls, two opposite outer transverse walls and an outer back wall. The outer sleeve is preferably closed on one side by the outer back wall and open on the other side to let the inner tray slide into the outer sleeve. In other words, the inner tray is inserted into the outer sleeve through the opening of the outer sleeve and slid towards the outer back wall.

[0056] The inner tray may comprise two opposite inner longitudinal walls, an inner front wall, an inner locking wall and an opposite inner transverse wall. The inner locking wall and the opposite inner transverse wall can be in parallel and opposite to each other. The inner locking tabs preferably extend from the inner locking wall and are folded outwards forming respective angles preferably smaller than 90 degrees with the inner locking wall. The inner locking wall preferably partially covers the space enclosed by the inner tray. The inner front wall is a wall opposite to the outer back wall and is separated from the outer back wall by the space enclosed by the inner tray. To open the sliding box packaging, the span of fingers may cover the width of the inner front wall and grasp the inner tray.

[0057] The limiting means may comprise an inner limiting tab and an outer limiting tab and the inner limiting tab engages with the outer limiting tab to limit a sliding course of the inner tray when opening the sliding box packaging. The inner limiting tab may extend from one of the opposite inner longitudinal walls and be folded outwards. Therefore, the inner limiting tab is directly connected to one of the opposite inner longitudinal walls via a fold line. The inner limiting tab is folded outwards via this fold line. Folding outwards means that the inner limiting tab forms an angle of preferably less than 90 degrees with the respective opposite inner longitudinal walls, wherein the angle is located between the channel formed between the inner tray and the outer sleeve.

[0058] The outer limiting tab may extend from one of the opposite outer longitudinal walls and be folded inwards. Therefore, the outer limiting tab is directly connected to one of the opposite outer longitudinal walls via a fold line. The outer limiting tab is folded inwards via this fold line. Folding inwards means that the outer limiting tab forms an angle of preferably less than 90 degrees with the respective opposite outer longitudinal walls and it locates between the channel formed between the inner tray and the outer sleeve.

[0059] Preferably, the inner limiting tab and the outer limiting tab are secured to the respective walls from which they extend via for example gluing and/or stapling and/or any other suitable technique. This ensures a reliable limiting means which is functional after repetitive opening and closing back. Preferably, the inner limiting tab and the

outer limiting tab have smaller but similar length to the respective walls from which they extend.

[0060] It is advantageous to have the outer limiting tab being extending from one of the opposite outer longitudinal walls and being folded inwards. The outer limiting tab helps to increase the overall robustness of the sliding box packaging and helps to some extent prevent tear opening.

[0061] When opening the sliding box packaging to a certain extent, the inner limiting tab and the outer limiting tab come in contact with each other. Since the inner limiting tab and the outer limiting tab move in different directions, they engage with each other when opening the sliding box packaging and prevent the other limiting tab from moving further in translation, thereby limiting the sliding course of the inner tray when opening the sliding box packaging.

[0062] Alternatively, the inner limiting tab can extend from the inner locking wall or the opposite inner transverse wall and being folded outwards. Therefore, the inner limiting tab is directly connected to the inner locking wall or the opposite inner transverse wall via a fold line. The inner limiting tab is folded outwards via this fold line. Folding outwards means that the inner limiting tab forms an angle of preferably less than 90 degrees with the respective inner locking wall or the respective opposite inner transverse wall and it is located between the channel formed between the inner tray and the outer sleeve. The outer limiting tab may extend from one of the opposite outer transverse walls and be folded inwards. Therefore, the outer limiting tab is directly connected to one of the opposite outer transverse walls via a fold line. The outer limiting tab is folded inwards via this fold line. Folding inwards means that the outer limiting tab forms an angle of preferably less than 90 degrees with the respective opposite outer transverse walls, wherein the angle is located between the channel formed between the inner tray and the outer sleeve.

[0063] It is advantageous to have the outer limiting tab extending from one of the opposite outer transverse walls and being folded inwards. The outer limiting tab helps to increase the overall robustness of the sliding box packaging and helps to some extent prevent tearing an opening.

[0064] According to some embodiments, the opposite inner transverse wall of the inner tray may comprise at least four inner closure flaps and the inner closure flaps can be secured to each other.

[0065] In this disclosure, a flap refers to a flat element which projects freely and it is an element extending to form a closure. A closure flap refers to a flap that is adapted to close the space enclosed by the inner tray or the outer sleeve. It is preferable to have four or more than four closure flaps to ensure a robust and secure packaging of the products.

[0066] This creates a sliding box packaging that is very well sealed, even around a transverse area of the inner tray. Moreover, the four inner closure flaps increase the

overall robustness of the sliding box packaging. The inner closure flaps are secured to each other, preferably via for example gluing and/or stapling and/or any other suitable technique. Preferably, at least two of the inner closure flaps cover the full area of the inner transverse wall. The other two inner closure flaps can have smaller sizes compared to the full area of the inner transverse wall.

[0067] According to some embodiments, the outer back wall of the outer sleeve may comprise at least four outer closure flaps and the outer closure flaps can be secured to each other.

[0068] This creates a sliding box packaging that is very well sealed, even around a back area of the outer sleeve. Moreover, the four outer closure flaps increase the overall robustness of the sliding box packaging. The outer closure flaps are secured to each other, preferably via for example gluing and/or stapling and/or any other suitable technique.

[0069] According to some embodiments, the two opposite outer longitudinal walls and the two opposite outer transverse walls may comprise a respective outer wall extension being folded inwards. The outer wall extensions can be fixed to the respective outer sleeve walls. The outer wall extensions may comprise the outer limiting tab.

[0070] It is advantageous to have the outer wall extensions being folded inwards and fixed to the respective outer sleeve walls. This increases the overall robustness of the sliding box packaging as an extra supporting layer. Moreover, they prevent to some extent tear opening of the sliding box packaging, so as to create a very well-sealed packaging. Furthermore, the outer wall extensions can be the outer limiting tab as a part of the limiting means to prevent the inner tray from fully sliding out of the outer sleeve, thereby preventing to some extent a spillage of the products held in the inner tray upon accidental flipping over.

[0071] According to some embodiments, the inner locking tabs of the inner tray may be provided on the inner locking wall. The inner locking tabs can be adjacent to each other and along a width of the inner locking wall.

[0072] In one embodiment of the disclosure, the inner locking tabs may extend from the inner locking wall and be folded outwards. The inner locking wall has four edges. Two of the edges can be secured to the opposite outer longitudinal walls, preferably by for example gluing the edges to the respective opposite outer longitudinal wall extensions. One of the edges can be connected to the inner front wall via for example a fold line. The inner locking tabs preferably extend from the fourth edge and are folded outwards away from the space enclosed by the inner tray, thereby forming a respective angle preferably smaller than 90 degrees with the inner locking wall.

[0073] It is advantageous to provide the inner locking tabs on the inner locking wall, being adjacent to each other and along a width of the inner locking wall, so that the sliding box packaging is convenient for adults to open

while not obvious for children to open, thus being child-resistant. To open the sliding box packaging, the user can use the fingers of one hand pressing the activating tabs and use the other hand pulling the inner tray out of the outer sleeve at the same time. This operation is manageable by adults while remaining difficult for children.

[0074] According to some embodiments, one of the opposite outer transverse walls may further comprise a third cutout forming a third opening extending through the opposite outer transverse wall and the sliding box packaging may further comprise a handle extending through the third opening, wherein the handle can be adapted to handle or lift the sliding box packaging.

[0075] The third opening is preferably in a regular shape, such as for example a rectangle, an oval, or any other suitable shape. The dimension of the third opening along a length of the respective opposite outer transverse wall, is preferably larger than its dimension along a width of the respective opposite outer transverse wall. Preferably, the third opening is located in the middle of the respective opposite outer transverse wall. Moreover, the third opening may be formed by cutting out a shape in the respective outer transverse wall and subsequently removing the shape leaving the third opening through the respective opposite outer transverse wall. A handle may extend through the third opening and the handle may comprise one or more of the following materials: paper; fabric; rubber; cardboard; plastic. The handle is preferably fixed to the respective opposite outer transverse wall from which it extends via for example

gluing, stapling, and/or any other suitable fixing methods.

[0076] It is advantageous to cover these embodiments in the disclosure, because these ensure that the force applied to the handle to handle or lift the sliding box packaging can be uniformly transmitted to the outer sleeve, to some extent preventing the possible accidental flipping over due to the loss of balance upon handling or lifting. In addition, the force applied when handling or lifting the sliding box packaging is perpendicular to the respective opposite outer transverse wall and is not consistent with the direction in which the inner tray slides out of the outer sleeve. This improvement can prevent accidental spillage when handling or lifting the sliding box package to a certain extent. In addition, this improvement can reduce the possible softening/wearing of the locking means and the limiting means due to lifting or handling, thereby extending a service life of the sliding box package.

[0077] According to some embodiments, each of the two opposite outer longitudinal walls may comprise an outer edge and a circumference of an opening of the outer sleeve into which the inner tray is slid may comprise both outer edges. Each of the two opposite outer longitudinal walls may further comprise a handle tab cutout forming a handle tab opening extending from the respective outer edge.

[0078] The outer edges may be fold lines, along which the outer wall extensions are folded inwards, and be fixed

to the respective opposite outer longitudinal walls. The handle tab cutout may have for example the shape of square with rounded corners, rectangle with rounded corners, oval, round, and/or any other suitable shape.

The handle tab cutout may be shared by the respective opposite outer longitudinal wall and the outer wall extension. As a result, upon folding the outer wall extension inwards and fixing it to the respective opposite outer longitudinal wall, the two halves of a periphery of the handle tab cutout may overlap, thereby forming a handle tab opening.

[0079] It is advantageous to have preferably two handle tab openings extending from the respective outer edges, because they enable the fingers to grasp the inner tray as it is slid out of the outer sleeve. In the absence of the handle tab openings, the user may need to glide the fingers into the channel formed by the inner tray and the outer sleeve to grasp the inner tray, which can distort the outer sleeve and/or the inner tray, leading to possible damage in case of repetitive opening/closing cycles. Preferably, the inner tray comprises at least one grip or gripping portion on a corresponding surface of the inner tray exposed by the respective handle tab opening to improve grip when sliding the inner tray out of the outer sleeve. The at least one grip or gripping portion may have a slightly different surface texture than the inner tray and/or the outer sleeve.

[0080] According to some embodiments, the activating tabs can be at least partially detachable and/or pressable. The activating tabs can be delimited by a perforation and/or scoring and/or creasing and/or one or more weakening lines and/or one or more cutting lines.

[0081] It is advantageous to have the activating tabs at least partially detachable and/or pressable as they can function as tamper-evidence for unauthorized opening. To unlock the locking means, the activating tabs must be firstly pressed. Upon pressing, the curve or a plurality of edges defined by the perforation and/or scoring and/or the weakening line break(s)/tear(s) up irreversibly, thereby leaving tamper-evidence. After being pressed, the activating tabs are still at least partially connected to the respective outer sleeve wall(s), such as for example via a fold line. It is additionally worth mentioning that it is not obvious for children that the first step to open a sliding box packaging is to press at least two activating tabs.

[0082] According to some embodiments, the activating tabs may be fully detachable from the outer sleeve wall, from which the outer locking tab extends.

[0083] The contours of the activating tabs may be fully delimited by a perforation and/or scoring and/or a weakening line. Moreover, each of the activating tabs may be fixed to the respective inner locking tabs behind them via for example gluing, stapling, and/or any other suitable fixing methods, when the activating tabs are pressed. Upon pressing, the activating tabs then fully detach from the respective outer sleeve wall(s) and then move together with the inner locking tabs. Alternatively, each of the activating tabs may fully detach from the outer sleeve

wall when the activating tab is pressed, thereby forming waste.

[0084] It is advantageous to have the activating tabs fixed to the respective inner locking tabs, because the fully detached activating tabs create strong tamper-evidence. Once the sliding box is opened, the contours of the activating tabs irreversibly detach from the respective outer sleeve wall(s) and the activating tabs cannot be reapplied. Furthermore, fixing the activating tabs with the inner locking tabs reduces the waste associated with opening the sliding waste packaging.

[0085] According to a second aspect of the disclosure, the disclosure relates to a method to manufacture a sliding box packaging. The method of manufacturing the sliding box packaging comprises the steps of:

- from a first blank, forming an outer sleeve comprising a plurality of outer sleeve walls;
- from a second blank, forming an inner tray being slidable relative to the outer sleeve and configured to host one or more products, wherein the inner tray comprises a plurality of inner tray walls;
- providing locking means comprising:
 - an outer locking tab, extending from the outer sleeve walls and being folded inwards, or being fixed inside the outer sleeve to one of the outer sleeve walls; and
 - at least two inner locking tabs extending from one of the inner tray walls and being folded outwards;
 wherein the two inner locking tabs engage with the outer locking tab to prevent sliding movement of the inner tray when the inner tray is fully inserted into the outer sleeve, the fully inserted position preventing access to the products;
- providing at least two activating tabs at the locking means cutout from the outer sleeve wall coupled to the outer locking tab; and
- pressing the two activating tabs, thereby disengaging the two inner locking tabs from the outer locking tab, so as to permit sliding movement of the inner tray.

[0086] Hence, the method according the second aspect of the disclosure may manufacture the sliding box packaging according to the first aspect of the disclosure.

[0087] It is advantageous that the inner tray and the outer sleeve can be made in two pieces, because different materials can be used for the inner tray and the outer sleeve. The outer sleeve may use materials with high robustness, such as for example thicker cardboard, especially corrugated cardboard. In addition, a cardboard with a high-quality outer surface that is easy to print on can be used for the outer sleeve, while a grey cardboard can be used for the inner tray. The inner tray and the outer sleeve for example can be both printed in

order to add for example content information, notes, brand marketing or any other information. It is advantageous if the inner tray can be equipped on its inside with for example a resistant layer, in particular for example against liquids and the resistant layer can be designed as for example a lacquer application, coating, impregnation and/or lamination. Moreover, the inner tray can be designed to be for example liquid-tight at least with regard to the walls and base. This improvement is advantageous to hold sensitive and/or hazardous products, creating a highly reliable and secure packaging.

[0088] The sliding box packaging may comprise a plurality of fold lines adapted to assist in erecting the sliding box packaging from at least two blanks and a part of the fold lines is preferably formed at least in sections as double fold lines or wider fold lines or is replaced at least in sections by scoring, creasing, cutting lines or any other suitable solution. This is advantageous to allow the fold lines to be adapted to the respective conditions, especially when using thicker cardboard, such as corrugated cardboard. Moreover, these embodiments effectively reduce folding cracking when manufacturing the sliding box packaging, thereby increasing the overall robustness of the sliding box packaging throughout the lifetime of the sliding box packaging.

[0089] After forming the outer sleeve and the inner tray from two separate blanks, the locking means, comprising an outer locking tab and at least two inner locking tabs, are provided. After that, at least two activating tabs at the locking means are cutout from the outer sleeve wall, being at least partially detachable and/or pressable or being fully detachable from the outer sleeve wall. To each of the activating tab corresponds a position coupled to the outer locking tab. Products are hosted into the inner tray. Then the inner tray can be slid into the outer sleeve until the inner tray is fully inserted into the outer sleeve. The inner locking tabs engage with the outer locking tab, causing the locking means to come into force, thereby securely packaging the products in the sliding box packaging. Therefore, the sliding box packaging is robust and child-resistant. Upon opening the sliding box packaging, the two activating tabs are pressed to disengage the two inner locking tabs from the outer locking tab, so as to permit sliding movement of the inner tray. It should be evident to observe that the activating tabs have been pressed, thereby leaving tamper-evidence if the access is not authorized.

[0090] It is clear that one or more features of one of the aspects of the disclosure may be construed with one, more or all aspects of one or more other aspects of the disclosure.

Brief Description of the Drawings

[0091] Some example embodiments will now be described with reference to the accompanying drawings.

Fig. 1 depicts a perspective view of a first variant of a

sliding box packaging with an inner tray partially sliding into an outer sleeve according to the disclosure.

Fig. 2 is a side view of the first variant of the sliding box packaging with a cross-section A-A' when the inner tray is fully inserted into the outer sleeve according to the disclosure.

Fig. 3 is a side view of the first variant of the sliding box packaging with the cross-section A-A' when the inner tray is slid out of the outer sleeve according to the disclosure.

Fig. 4 is a top view of the first variant of the sliding box packaging with a cross-section B-B' when the inner tray is slid out of the outer sleeve according to the disclosure.

Fig. 5 is a side view of the first variant of the sliding box packaging with the cross-section A-A' when the inner tray is slid back into the outer sleeve according to the disclosure.

Fig. 6 is a side view of a second variant of the sliding box packaging with the cross-section A-A' when the inner tray is slid out of the outer sleeve according to the disclosure.

Fig. 7 is a side view of the second variant of the sliding box packaging with the cross-section A-A' when the inner tray is slid back into the outer sleeve according to the disclosure.

Fig. 8 is a perspective view of a third variant of the sliding box packaging with the inner tray partially sliding into the outer sleeve according to the disclosure.

Fig. 9 is a perspective view of a fourth variant of the sliding box packaging with the inner tray partially sliding into the outer sleeve according to the disclosure.

Fig. 10 is a perspective view of a fifth variant of the sliding box packaging with the inner tray partially sliding into the outer sleeve according to the disclosure.

Fig. 11 shows a blank from which a first variant of the outer sleeve of the sliding box packaging according to the disclosure can be erected.

Fig. 12 shows a blank from which a first variant of the inner tray of the sliding box packaging according to the disclosure can be erected.

refer to the same or a similar feature.

Detailed Description of Embodiment(s)

[0093] Axes 2, 3 and 4 are orthogonal to each other and indicate directions from which a sliding box packaging 10 according to the present disclosure is observed. Axis 2 is a longitudinal direction of the sliding box packaging 10, axis 4 is a transverse direction of the sliding box packaging 10, and axis 3 is a third direction transverse to axis 2 and axis 4.

[0094] Fig. 1 illustrates an example embodiment of a first variant of the sliding box packaging 10 determined by an example embodiment of a method according to the present disclosure. Fig. 1 depicts a perspective view of the first variant of the sliding box packaging 10 with an inner tray 200 partially sliding into an outer sleeve 100 according to the disclosure.

[0095] The sliding box packaging 10 comprises the outer sleeve 100 and the inner tray 200. The inner tray 200 is slidable relative to the outer sleeve 100 and is configured to host one or more products. The outer sleeve 100 comprises two opposite outer longitudinal walls 130 and 140, two opposite outer transverse walls 110 and 120, and one outer back wall 150. The outer sleeve 100 is closed on one side with the outer back wall 150 and is open on the other side with an opening 160. The circumference of the opening 160 into which the inner tray 200 is slid comprises two outer edges 181. Each of the two opposite outer longitudinal walls 130 and 140 further comprises a handle tab opening (180 in Fig. 1) extending from the respective outer edge (181 in Fig. 1) to assist a user in grasping the inner tray 200 when pulling the inner tray 200 out of the outer sleeve 100 to open the sliding box packaging 10.

[0096] The inner tray 200 comprises two opposite inner longitudinal walls 230 and 240, one inner locking wall 210, one inner front wall 260 and one opposite inner transverse wall 220. The inner locking wall 210 partially closes the inner tray 200 to prevent to some extent spilling upon accidental flipping over. Moreover, the inner locking wall 210 helps to prevent tear opening or reaching into the products inside the inner tray 200 without sliding the inner tray 200 out of the outer sleeve 100. The inner locking wall 210 is further connected to the opposite inner longitudinal wall 230 via the inner connecting tabs 206 extending from the opposite inner longitudinal wall 230.

[0097] The sliding box packaging of Fig. 1 further comprises a locking means, which comprise an outer locking tab and at least two inner locking tabs 202 and 203. When the inner tray 200 is fully inserted into the outer sleeve 100, the two inner locking tabs 202 and 203 engage with the outer locking tab to prevent sliding movement of the inner tray 200, thereby the fully inserted position preventing access to the products. In a preferred example embodiment illustrated in Fig. 1, the outer locking tab extends from one of the outer sleeve walls 110 and is folded inwards. It is also envisaged that the outer locking tab can

[0092] In different figures, identical reference/signs

be a separate piece and be fixed inside the outer sleeve 100 to one of the outer sleeve walls 110, 120, 130, 140 and 150. In this embodiment, it is understandable that the material of the outer locking tab can be different from the materials of the inner tray 200 and/or the outer sleeve 100. In Fig. 1, two inner locking tabs 202 and 203 extend from the inner locking wall 210 and is folded outwards. The two inner locking tabs 202 and 203 are adjacent to each other and along a width of the inner locking wall 210. It is understandable that there can be more than two inner locking tabs 202, 203. It is also understandable that the sizes, the shapes, the materials of each of the inner locking tabs 202, 203 can be different. It is also understandable that the at least two inner locking tabs 202, 203 can locate on different inner tray walls 210, 220, 230, 240 and 250. Preferably, they are adjacent to each other. The maximum distance between the two farthest inner locking tabs 202, 203 is within a span of an adult's hand.

[0098] As illustrated in Fig. 1, the locking means further comprise two activating tabs 102 and 103 cutout from the outer sleeve wall 110 coupled to the outer locking tab. It is understandable that there can be more than two activating tabs 102 and 103 and the activating tabs 102 and 103 can be cutout from one or more of the outer sleeve walls 110, 120, 130, 140 and 150 coupled to the outer locking tab. The activating tabs 102 and 103 are adapted to disengage the two inner locking tabs 202 and 203 from the outer locking tab when the two activating tabs 102 and 103 are pressed, so as to permit sliding movement of the inner tray 200. The activating tabs 102 and 103 are partially detachable from the outer sleeve wall 110 and are delimited by cutting lines. It is understandable that one or both of the activating tabs 102 and 103 may have a different shape from the shape as depicted in Fig. 1.

[0099] As illustrated in Fig. 1, the sliding box packaging 10 further comprises a handle 310 to handle or lift the sliding box packaging 10, which extends through one of the opposite outer transverse walls 110. The opposite outer transverse wall 110 comprises a third cutout forming a third opening 300 in a shape close to rectangle with rounded corners. It is understandable that the shape, size, location of the third opening 300 can be varied from the embodiments shown in Fig. 1. The material of the handle 310 may comprise one or more of the following materials: paper; fabric; rubber; cardboard; plastic.

[0100] Fig. 2 is a side view of the first variant of the sliding box packaging 10 with a cross-section A-A' when the inner tray 200 is fully inserted into the outer sleeve 100 according to the disclosure. Components having identical reference numbers than on Fig. 1 fulfil the same function. Fig. 2 illustrates a situation that the inner tray 200 can be firstly filled with products, then the inner tray 200 is slid into the outer sleeve 100 and the locking means comes into force, so as to prevent the sliding movement of the inner tray 200. The inner tray 200 is partially closed by the inner locking wall 210. The sliding box packaging 10 has been closed and has not yet been reopened. The locking means is demonstrated in the

detailed enlargement (circled and directed by the dashed circles and the dashed lines). An opening (whose dimension is indicated by 106) extends through the outer locking tab 104 and defines a respective periphery in the outer locking tab 104. When the inner tray 200 is fully inserted into the outer sleeve 100, to prevent sliding movement of the inner tray 200, each of the inner locking tab (202 in Fig. 2) engages with a respective periphery in the outer locking tab 104. Moreover, the activating tab 102 corresponds to the respective opening extending through the outer locking tab 104.

[0101] The activating tab 102 partially covers the inner locking tab 202. The activating tab 102 is delimited from the outer sleeve wall 110 by cutting lines while is still connected to the outer sleeve wall 110 at point 410. A dashed vertical line 5 indicates the relative locations of the activating tab 102 and the inner locking tab 202.

[0102] As illustrated in Fig. 2, the opposite inner transverse wall of the inner tray 200 comprises four inner closure flaps 221, 222, 223 and 224. The four outer closure flaps 221, 222, 223 and 224 are secured to each other via for example gluing. Moreover, the outer back wall of the outer sleeve 100 comprises four outer closure flaps 151, 152, 153 and 154. The four outer closure flaps 151, 152, 153 and 154 are secured to each other via for example gluing. More specifically, the outer closure flaps 151 and 152 are secured to the outer closure flap 153. The outer closure flap 153 is further secured to the outer closure flap 154. The inner closure flaps 221 and 222 are secured to the inner closure flap 223. The inner closure flap 223 is further secured to the inner closure flap 224.

[0103] As shown in Fig. 2, the outer wall extensions 104 and 105 extend from the two opposite outer transverse walls 110 and 120 respectively and are folded inwards. The outer wall extensions 104 and 105 are fixed to the respective opposite outer transverse walls 110 and 120 via for example gluing. The inner locking wall 210 is secured to the opposite inner longitudinal walls via two inner connecting tabs (207 in Fig. 2) extending from the opposite inner longitudinal walls via for example gluing.

[0104] Fig. 3 is a side view of the first variant of the sliding box packaging 10 with the cross-section A-A' when the inner tray 200 is slid out of the outer sleeve 100 according to the disclosure. Components having identical reference numbers than on Fig. 1 or Fig. 2 fulfil the same function. Compared to Fig. 2, Fig. 3 illustrates a sequence after pressing the activating tabs (102 in Fig. 3). The inner locking tabs (202 in Fig. 3) are disengaged from the outer locking tab 104, and the inner tray 200 is partially slid out of the outer sleeve 100. After pressing the activating tab 102, the activating tab 102 partially detaches from the outer sleeve wall 110 while being hinged to the outer sleeve wall 110 via a fold line. As illustrated in Fig. 3, the activating tab 102 moves from its original position (as indicated by the square dotted lines and the dashed vertical line 5) and bends toward the space enclosed by the outer sleeve 100.

[0105] Fig. 4 is a top view of the first variant of the

sliding box packaging 10 with a cross-section B-B' when the inner tray 200 is slid out of the outer sleeve 100 according to the disclosure. Components having identical reference numbers than on Fig. 1 or Fig. 2 or Fig. 3 fulfil the same function. As illustrated in Fig. 4, when opening the sliding box packaging 10, the inner tray 200 cannot be fully pulled out of the outer sleeve 100 due to a limiting means. The limiting means comprises an inner limiting tab 201 and an outer limiting tab 101. The inner limiting tab 201 extends from the opposite inner longitudinal wall 240 and is folded outwards. The outer limiting tab 101 extends from the opposite outer longitudinal wall 140 and is folded inwards. When opening the sliding box packaging 10, the outer limiting tab 101 engages with the inner limiting tab 201 at an engagement line 430 to limit a sliding course of the inner tray 200. The opposite outer longitudinal walls 130 and 140 comprise a respective outer wall extension 108 and 101. The outer wall extensions 108 and 101 are folded inwards and fixed to the respective outer sleeve walls 130 and 140 via for example gluing. Each of the two opposite outer longitudinal walls 130 and 140 further comprise a handle tab opening 180 and 170. The outer closure flaps 154 and 153 are secured to each other via for example gluing. The inner back wall 250 is secured to the opposite inner longitudinal wall 240 via for example gluing a wall extension of the inner back wall 250 to the opposite inner longitudinal wall 240.

[0106] Fig. 5 is a side view of the first variant of the sliding box packaging 10 with the cross-section A-A' when the inner tray 200 is slid back into the outer sleeve 100 according to the disclosure. Components having identical reference numbers than on Fig. 1 or Fig. 2 or Fig. 3 or Fig. 4 fulfil the same function. When the inner tray 200 is slid back into the sliding box packaging 10, the activating tab 102 is pushed inwards by the inner tray 200. As a result, the activating tab 102 no longer partially covers the inner locking tab 202 when the inner tray 200 is fully inserted back into the outer sleeve 100. The activating tab 102 can function as tamper-evidence. The inner locking tab 202 engages with the outer locking wall 104 to prevent the sliding course of the inner tray 200.

[0107] Fig. 6 and Fig. 7 illustrate an alternative embodiment of the sliding box packaging 10, with the limiting means locate in an alternative location. Components having identical reference numbers than on Fig. 1 or Fig. 2 or Fig. 3 or Fig. 4 or Fig. 5 fulfil the same function. As illustrated in Fig. 6 and Fig. 7, the opposite inner transverse wall 220 of the inner tray 200 comprises four inner closure flaps 221, 222, 223 and 224. The four inner closure flaps 221, 222, 223 and 224 are secured to each other via for example gluing. Moreover, the outer back wall 150 of the outer sleeve 100 comprises four outer closure flaps 151, 152, 153 and 154. The four outer closure flaps 151, 152, 153 and 154 are secured to each other via for example gluing. More specifically, the outer closure flaps 151 and 152 are secured to the outer closure flap 153. The outer closure flap 153 is further

secured to the outer closure flap 154. The inner closure flaps 221 and 222 are secured to the inner closure flap 223. The inner closure flap 223 is further secured to the inner closure flap 224.

[0108] Fig. 6 is a side view of a second variant of the sliding box packaging 10 with the cross-section A-A' when the inner tray 200 is slid out of the outer sleeve 100 according to the disclosure. Moreover, Fig. 6 illustrates a sequence after the activating tabs (102 in Fig. 6) are pressed. The inner locking tabs (202 in Fig. 6) are disengaged from the outer locking tab 104, and the inner tray 200 is partially slid out of the outer sleeve 100. After pressing the activating tab 102, the activating tab 102 partially detaches from the outer sleeve wall 110 while the activating tab 102 being hinged to the outer sleeve wall 110 via a fold line. As illustrated in Fig. 6, the activating tab 102 moves from its original position (as indicated by the square dotted lines and the dashed vertical line 5) and bends toward the space enclosed by the outer sleeve 100. In Fig. 6, the inner limiting tab 205 extends from the opposite inner transverse wall and is folded outwards, while the outer limiting tab 105 extends from the opposite outer transverse wall 120 and is folded inwards. When opening the sliding box packaging 10, the outer limiting tab 105 engages with the inner limiting tab 205 at an engagement line 440 to limit the sliding course of the inner tray 200. The inner limiting tab 205 can be secured to the opposite inner transverse wall via for example gluing or other fixing methods. The outer limiting tab 105 is secured to the opposite outer transverse wall 120 via for example gluing. It is understandable that the outer limiting tab 105 may not be secured to the opposite outer transverse wall 120 or can be secured to the opposite outer transverse wall 120 via other fixing methods.

[0109] Fig. 7 is a side view of the second variant of the sliding box packaging 10 with the cross-section A-A' when the inner tray 200 is slid back into the outer sleeve 100 according to the disclosure. The inner limiting tab 205 disengages with the outer limiting tab 105. When the inner tray 200 is slid back into the sliding box packaging 10, the activating tab 102 is pushed inwards by the inner tray 200. As a result, the activating tab 102 no longer partially covers the inner locking tab 202 when the inner tray 200 is fully inserted back into the outer sleeve 100. The activating tab 102 can function as tamper-evidence. The inner locking tab 202 engages with the outer locking wall 104 to prevent the sliding course of the inner tray 200.

[0110] Fig. 8, Fig. 9, and Fig. 10 illustrate three alternative locations of the locking means, comprising the inner locking tabs 202 and 203, the outer locking tab(s), and the activating tabs 102 and 103. Components having identical reference numbers than on Fig. 1-7 fulfil the same function. It is understandable that the locking means can locate in more locations being not limited to the alternatives shown in Fig. 1-12. It is also understandable that the shape, the size, the material, the method to manufacturing (such as delimiting by cutting lines, weak-

ening lines, scoring, creasing, perforation, and/or any other suitable solution), the number of the inner locking tabs 202 and 203, the outer locking tab(s), and the activating tabs 102 and 103 can vary from the examples of the disclosure as illustrated in Fig. 1-12.

[0111] In Fig. 8, the two inner locking tabs 202 and 203 extend from the inner locking wall 210, being adjacent to each other. The two inner locking tabs 202 and 203 are not along the width of the inner locking wall 210, as illustrated in Fig. 1-7. The two inner locking tabs 202 and 203 are along a line which makes an angle of around 30 degrees with the width of the inner locking wall 210. The openings in the outer locking tab locate in an alternative location and couple to the alternative inner locking tabs 202 and 203 to ensure the locking means effective. The activating tabs 102 and 103 locate in an alternative location and couple to the alternative outer locking tab to ensure the locking means effective. When opening the sliding box packaging 10, one hand presses the two activating tabs 102 and 103 at the same time and the other hand pulls the inner tray 200 out of the outer sleeve 100. The distance between the inner activating tabs 102 and 103 is within the span of an adult's hand.

[0112] In Fig. 9, one of the inner locking tabs 203 locates on the inner locking wall 210, while the other inner locking tab 202 locates on the opposite inner longitudinal wall 230. The inner locking tab 203 extends from the inner locking wall 210 and is folded outwards. The inner locking tab 202 is delimited by cutting lines 231, 232 and 233 from the opposite outer longitudinal wall 230 and is folded outwards via the fold line 234. The openings in the outer locking tabs locate in two alternative locations and couple to the alternative inner locking tabs 202 and 203 to ensure the locking means effective. The activating tabs 102 and 103 locate in two alternative locations and couple to the alternative outer locking tab to ensure the locking means effective. When opening the sliding box packaging 10, one hand presses the two activating tabs 102 and 103 at the same time and the other hand pulls the inner tray 200 out of the outer sleeve 100. The distance between the activating tabs 102 and 103 is within the span of a hand of an adult. The outer locking tab is an outer wall extension extending from the opposite outer longitudinal wall 130 and being folded inwards. The outer locking tab is secured to the opposite outer longitudinal wall 130 via for example gluing. It is understandable that the outer locking tab 108 can also be secured to the opposite outer longitudinal wall 130 via stapling or any other suitable securing method.

[0113] In Fig. 10, the two inner locking tabs 202 and 203 locate on the opposite inner longitudinal wall 230. The inner locking tab 202 is delimited by cutting lines 231, 232 and 233 from the opposite outer longitudinal wall 230 and is folded outwards via the fold line 234. The inner locking tab 203 is delimited by cutting lines 235, 236 and 237 from the opposite outer longitudinal wall 230 and is folded outwards via the fold line 238. The openings in the outer locking tab locate in two alternative locations and

couple to the alternative inner locking tabs 202 and 203 to ensure the locking means effective. The activating tabs 102 and 103 locate in two alternative locations and couple to the alternative outer locking tab to ensure the locking means effective. When opening the sliding box packaging 10, one hand presses the two activating tabs 102 and 103 at the same time and the other hand pulls the inner tray 200 out of the outer sleeve 100. The distance between the activating tabs 102 and 103 is within the span of a hand of an adult. The outer locking tab is an outer wall extension extending from the opposite outer longitudinal wall 130 and being folded inwards. The outer locking tab is secured to the opposite outer longitudinal wall 130 via for example gluing. It is understandable that the outer locking tab can also be secured to the opposite outer longitudinal wall 130 via for example stapling or any other suitable securing method.

[0114] Fig. 11 shows a blank from which the first variant of the outer sleeve 100 of the sliding box packaging 10 according to the disclosure can be erected. Components having identical reference numbers than on Fig. 1-10 fulfil the same function. The opposite outer longitudinal wall 130 or 140 is hinged to an opposite outer transverse wall 110 via a fold line 1 or 2. The other opposite outer transverse wall 120 is hinged to the opposite outer longitudinal wall 140 via a fold line 3. At the upper edges of the opposite outer longitudinal walls 130 and 140 and the opposite outer transverse walls 110 and 120, the outer closure flaps 153, 154, 151 and 152 are hinged via fold lines 4, which together form an outer back of the outer sleeve 100. The outer wall extension 108 or 101 is hinged to the opposite outer longitudinal wall 130 or 140 via a fold line 181 or 171. The outer wall extension 105 is hinged to the opposite outer transverse wall 120 via a fold line 11. Two handle tab openings 180 and 170 are delimited from the opposite outer longitudinal walls 130 and 140 by cutting lines. The third opening 300 in the outer sleeve 100 is delimited by cutting lines, from which the handle to handle or lift the sliding box packaging 10 extends. The outer locking wall 104 is hinged to the opposite outer transverse wall 110 via a fold line 5. Two openings are delimited from the outer locking wall 104 but cutting lines. Two partially detachable activating tabs 102 and 103 are provided on the opposite outer transverse wall 110, each of which is formed by two cutting lines 6 and 7 for the activating tab 102 and 8 and 9 for the activating tab 103. The cutting lines are depicted in square-dotted lines and/or curves. It is understandable that one or both of the activating tabs 102 and 103 may have a different shape from the shape as depicted in Fig. 11. An outer connecting tab 12 connects the opposite outer longitudinal wall 130 to the opposite outer transverse wall 120 to form an outer bottom of the sliding box packaging 10.

[0115] The activating tabs 102 and 103 can additionally be provided with a respective adhesive point towards the inner locking tabs 202 and 203, so that this provides additional transport security. It is understandable that the activating tabs 102 and 103 can be delimited by other

methods, including but not limited to one or more of the following: creasing, scoring, weakening line(s), cutting line(s), perforation.

[0116] Fig. 12 shows a blank from which the first variant of the inner tray 200 of the sliding box packaging 10 according to the disclosure can be erected. Components having identical reference numbers than on Fig. 1-11 fulfil the same function. The inner tray 200 comprises two opposite inner longitudinal walls 230 and 240, the inner front wall 260, the inner back wall 250, and the inner connecting tab 13. The walls and the tab are connected to each other via fold lines 18. The inner limiting tab 201 is hinged to the opposite inner longitudinal walls 240 via a fold line 14. At the lower edges of the opposite inner longitudinal walls 230 and 240, the inner back wall 250 and the inner front wall 260, the inner closure flaps 224, 223, 221 and 222 are hinged via fold lines 15, which together form an inner bottom of the inner tray 200. The inner locking wall 210 is hinged to the inner front wall 260 via a fold line 16. The two inner locking tabs 202 and 203, which extend from the inner locking wall 210, are hinged to the inner locking wall 210 via fold lines 19. Moreover, two inner connecting tabs 206 and 207 extend from the two opposite inner longitudinal walls 230 and 240, which can be glued to the inner locking wall 210 to secure the inner locking wall 210. The inner connecting tabs 206 and 207 are hinged to the two opposite inner longitudinal walls 230 and 240 via fold lines 17. The inner tray 200 further comprises two gripping portions 30 and 31 being located at the opposite inner longitudinal walls 230 and 240. The two gripping portions 30 and 31 are depicted with dash-dotted lines. The two gripping portions 30 and 31 have a surface texture slightly different from the surface texture of the opposite inner longitudinal walls 230 and 240, thereby improving grip when pulling the inner tray 200 out of the outer sleeve 100 to open the sliding box packaging 10. Each of the two gripping portions 30 and 31 is located on a surface of the inner tray 200 being exposed by the respective handle tab opening 180 or 170.

[0117] Although the present invention has been illustrated by reference to specific embodiments, it will be apparent to those skilled in the art that the invention is not limited to the details of the foregoing illustrative embodiments, and that the present invention may be embodied with various changes and modifications without departing from the scope thereof. The present embodiments are therefore to be considered in all respects as illustrative and not restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description, and all changes which come within the scope of the claims are therefore intended to be embraced therein.

[0118] It will furthermore be understood by the reader of this patent application that the words "comprising" or "comprise" do not exclude other elements or steps, that the words "a" or "an" do not exclude a plurality, and that a single element. Any reference signs in the claims shall

not be construed as limiting the respective claims concerned. The terms "first", "second", "third", "a", "b", "c", and the like, when used in the description or in the claims are introduced to distinguish between similar elements or steps and are not necessarily describing a sequential or chronological order. Similarly, the terms "top", "bottom", "over", "under", and the like are introduced for descriptive purposes and not necessarily to denote relative positions. It is to be understood that the terms so used are interchangeable under appropriate circumstances and embodiments of the invention are capable of operating according to the present invention in other sequences, or in orientations different from the one(s) described or illustrated above.

Claims

1. A sliding box packaging (10) comprising:

- an outer sleeve (100) comprising a plurality of outer sleeve walls (110, 120, 130, 140, 150);
- an inner tray (200) being slidable relative to the outer sleeve (100) and configured to host one or more products; wherein the inner tray (200) comprises a plurality of inner tray walls (210, 220, 230, 240, 250, 260); and
- locking means comprising:

- an outer locking tab (104), extending from one of the outer sleeve walls (110, 120, 130, 140, 150) and being folded inwards, or being fixed inside the outer sleeve (100) to one of the outer sleeve walls (110, 120, 130, 140, 150); and

- at least two inner locking tabs (202, 203) extending from one of the inner tray walls (210, 220, 230, 240, 250, 260) and being folded outwards;

wherein the two inner locking tabs (202, 203) engage with the outer locking tab (104) to prevent sliding movement of the inner tray (200) when the inner tray (200) is fully inserted into the outer sleeve (100), the fully inserted position preventing access to the products; and

wherein the locking means further comprise at least two activating tabs (102, 103) cutout from the outer sleeve wall (110, 120, 130, 140, 150) coupled to the outer locking tab (104); and wherein the two activating tabs (102, 103) are adapted to disengage the two inner locking tabs (202, 203) from the outer locking tab (104) when the two activating tabs (102, 103) are pressed, so as to permit sliding movement of the inner tray (200).

2. The sliding box packaging (10) according to claim 1,

wherein to each of the activating tabs (102, 103) corresponds to a respective opening extending through the outer locking tab (104) and defining a respective periphery of each respective opening in the outer locking tab (104); and wherein each of the inner locking tabs (202, 203) engages with a respective periphery in the outer locking tab (104) to prevent sliding movement of the inner tray (200) when the inner tray (200) is fully inserted into the outer sleeve (100).

3. The sliding box packaging (10) according to claim 2, wherein each of the activating tabs (102, 103) comes in contact with one of the two inner locking tabs (202, 203) when the two activating tabs (102, 103) are pressed.

4. The sliding box packaging (10) according to claim 2 or 3, wherein the activating tabs (102, 103) partially or fully cover the inner locking tabs (202, 203) of the inner tray (200) when the inner tray (200) is fully inserted into the outer sleeve (100).

5. The sliding box packaging (10) according to any of the preceding claims, wherein the activating tabs (102, 103) are further adapted to be pushed inwards by the inner tray (200) when the inner tray (200) is slid back into the sliding box packaging (10).

6. The sliding box packaging (10) according to any one of the preceding claims, wherein:

- the outer sleeve walls (110, 120, 130, 140, 150) comprise two opposite outer longitudinal walls (130, 140), two opposite outer transverse walls (110, 120) and an outer back wall (150); and
- the inner tray walls (210, 220, 230, 240, 250, 260) comprise two opposite inner longitudinal walls (230, 240), an inner front wall (260), an inner locking wall (210) and an opposite inner transverse wall (220);

and wherein the sliding box packaging further comprises limiting means comprising:

- an inner limiting tab (201) extending from one of the opposite inner longitudinal walls (230, 240) and being folded outwards; and
 - an outer limiting tab (101) extending from one of the opposite outer longitudinal walls (130, 140) and being folded inwards;
- and wherein the outer limiting tab (101) engages with the inner limiting tab (201) to limit a sliding course of the inner tray (200) when opening the sliding box packaging (10); and/or
- an inner limiting tab (205) extending from the inner locking wall (210) or the opposite inner transverse wall (220) and being folded out-

wards; and

- an outer limiting tab (105) extending from one of the opposite outer transverse walls (110, 120) and being folded inwards;
- and wherein the outer limiting tab (105) engages with the inner limiting tab (205) to limit a sliding course of the inner tray (200) when opening the sliding box packaging (10).

7. The sliding box packaging (10) according to claim 6, wherein the opposite inner transverse wall (220) of the inner tray (200) comprises at least four inner closure flaps (221, 222, 223, 224), and wherein the inner closure flaps (221, 222, 223, 224) are secured to each other.

8. The sliding box packaging (10) according to claim 6 or 7, wherein the outer back wall (150) of the outer sleeve (100) comprises at least four outer closure flaps (151, 152, 153, 154), and wherein the outer closure flaps (151, 152, 153, 154) are secured to each other.

9. The sliding box packaging (10) according to any of the claims 6 to 8, wherein the two opposite outer longitudinal walls (130, 140) and the two opposite outer transverse walls (110, 120) comprise a respective outer wall extension (108, 101, 104, 105) being folded inwards, wherein the outer wall extensions (108, 101, 104, 105) are fixed to the respective outer sleeve walls (130, 140, 110, 120); and wherein the outer wall extensions (108, 101, 104, 105) comprise the outer limiting tab (105).

10. The sliding box packaging (10) according to any of the claims 6 to 9, wherein the inner locking tabs (202, 203) of the inner tray (200) are provided on the inner locking wall (210); and wherein the inner locking tabs (202, 203) are adjacent to each other and along a width of the inner locking wall (210).

11. The sliding box packaging (10) according to any one of the claims 6 to 10, wherein one of the opposite outer transverse wall (110) further comprises a third cutout forming a third opening (300) extending through the opposite outer transverse wall (110); and wherein the sliding box packaging (10) further comprises a handle (310) extending through the third opening (300), wherein the handle (310) is adapted to handle or lift the sliding box packaging (10).

12. The sliding box packaging (10) according to any of the claims 6 to 11, wherein each of the two opposite outer longitudinal walls (130, 140) comprises an outer edge (181, 171); and wherein a circumference of an opening of the outer sleeve (160) into which the inner tray (200) is slid comprises both outer edges (171, 181); and wherein each of the two opposite

outer longitudinal walls (130, 140) further comprises a handle tab cutout forming a handle tab opening (180, 170) extending from the respective outer edge (181, 171).

to permit sliding movement of the inner tray (200).

- 5
13. The sliding box packaging (10) according to any of the preceding claims, wherein the activating tabs (102, 103) are at least partially detachable and/or pressable, and wherein the activating tabs (102, 103) are delimited by a perforation and/or scoring and/or creasing and/or one or more weakening lines and/or one or more cutting lines. 10
14. The sliding box packaging (10) according to any of the claims 1 to 12, wherein the activating tabs (102, 103) are fully detachable from the outer sleeve wall (110, 120, 130, 140, 150) from which the outer locking tab (104) extends. 15
15. A method of manufacturing a sliding box packaging (10), wherein the method comprises the steps of: 20
- from a first blank, forming an outer sleeve (100) comprising a plurality of outer sleeve walls (110, 120, 130, 140, 150); 25
 - from a second blank, forming an inner tray (200) being slidable relative to the outer sleeve (100) and configured to host one or more products, wherein the inner tray (200) comprises a plurality of inner tray walls (210, 220, 230, 240, 250, 260); 30
 - providing locking means comprising:
 - an outer locking tab (104), extending from the outer sleeve walls (110, 120, 130, 140, 150) and being folded inwards, or being fixed inside the outer sleeve (100) to one of the outer sleeve walls (110, 120, 130, 140, 150); and 35
 - at least two inner locking tabs (202, 203) extending from one of the inner tray walls (210, 220, 230, 240, 250, 260) and being folded outwards; 40
 - wherein the two inner locking tabs (202, 203) engage with the outer locking tab (104) to prevent sliding movement of the inner tray (200) when the inner tray (200) is fully inserted into the outer sleeve (100), the fully inserted position preventing access to the products; 45 50
 - providing at least two activating tabs (102, 103) at the locking means cutout from the outer sleeve wall (110, 120, 130, 140, 150) coupled to the outer locking tab (104); and 55
 - pressing the two activating tabs (102, 103), thereby disengaging the two inner locking tabs (202, 203) from the outer locking tab (104), so as

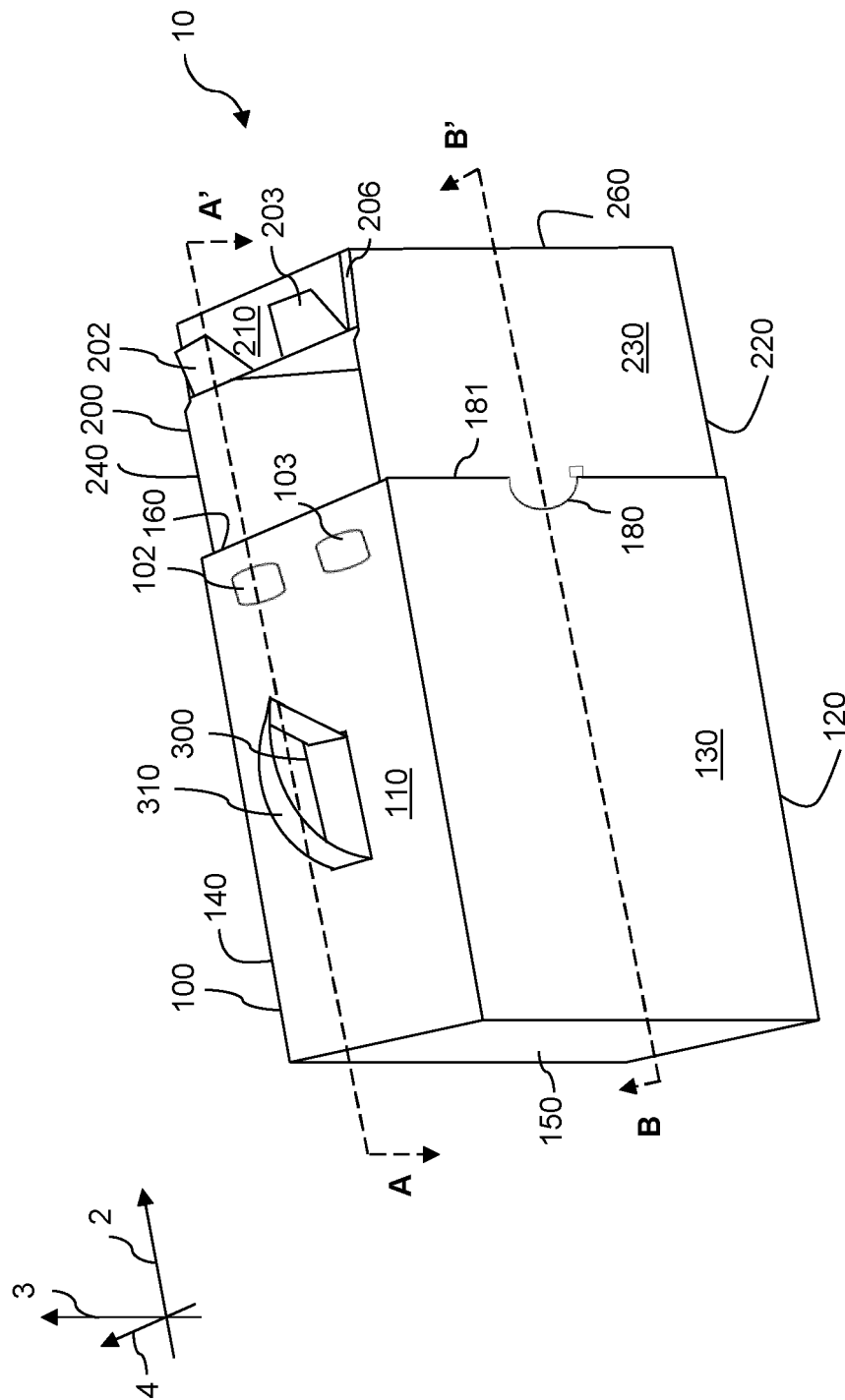


Fig. 1

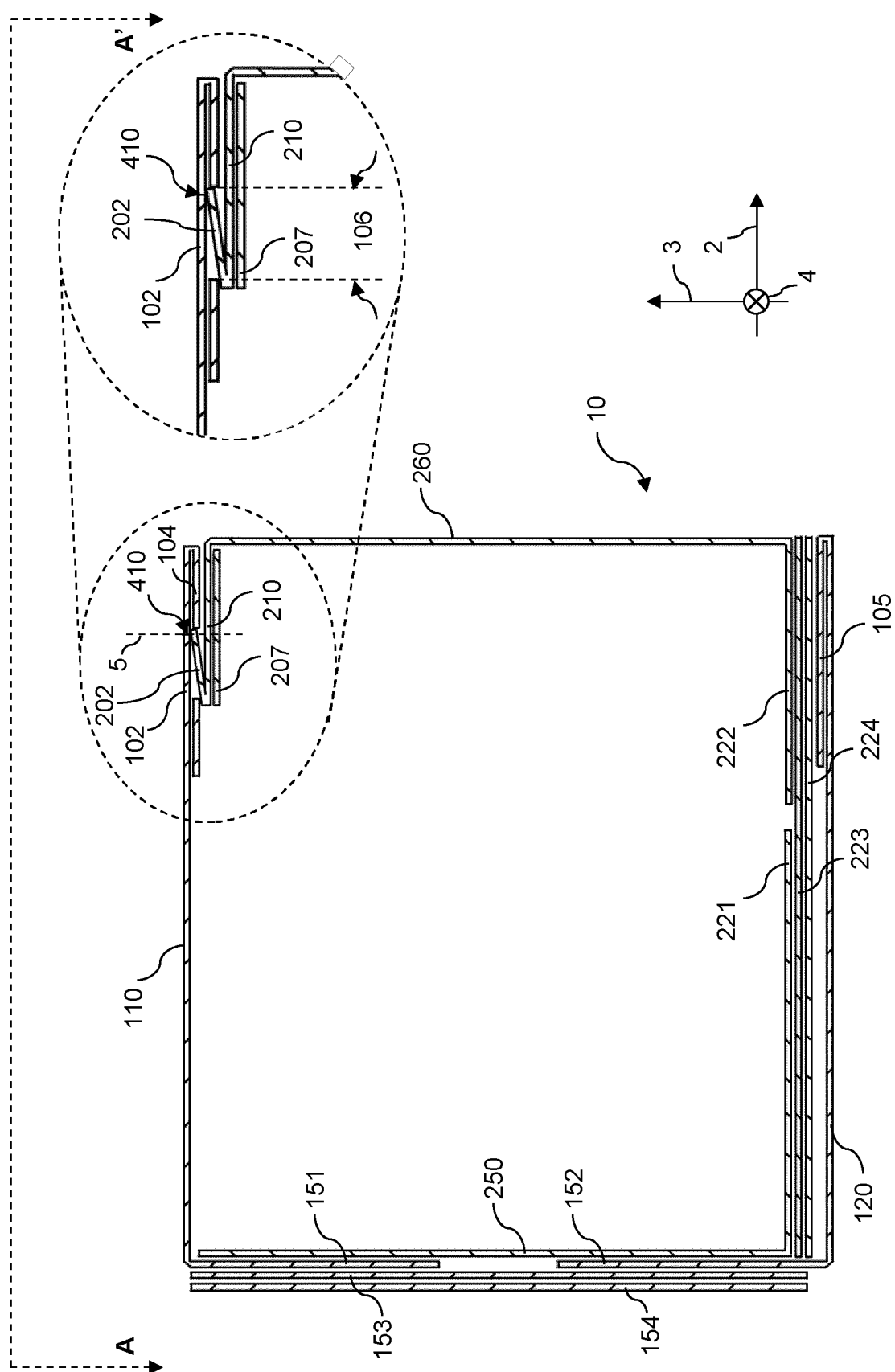


Fig. 2

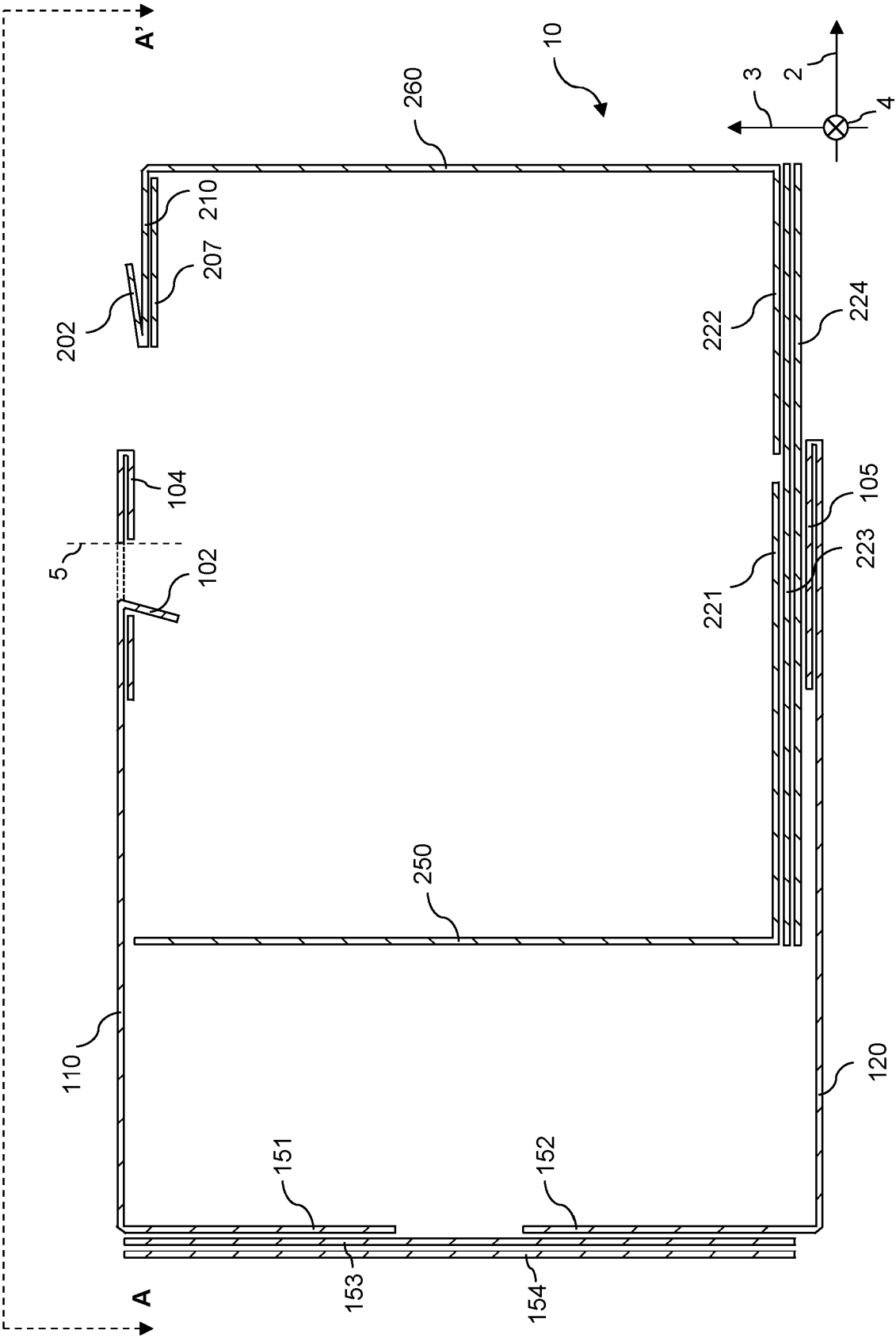


Fig. 3

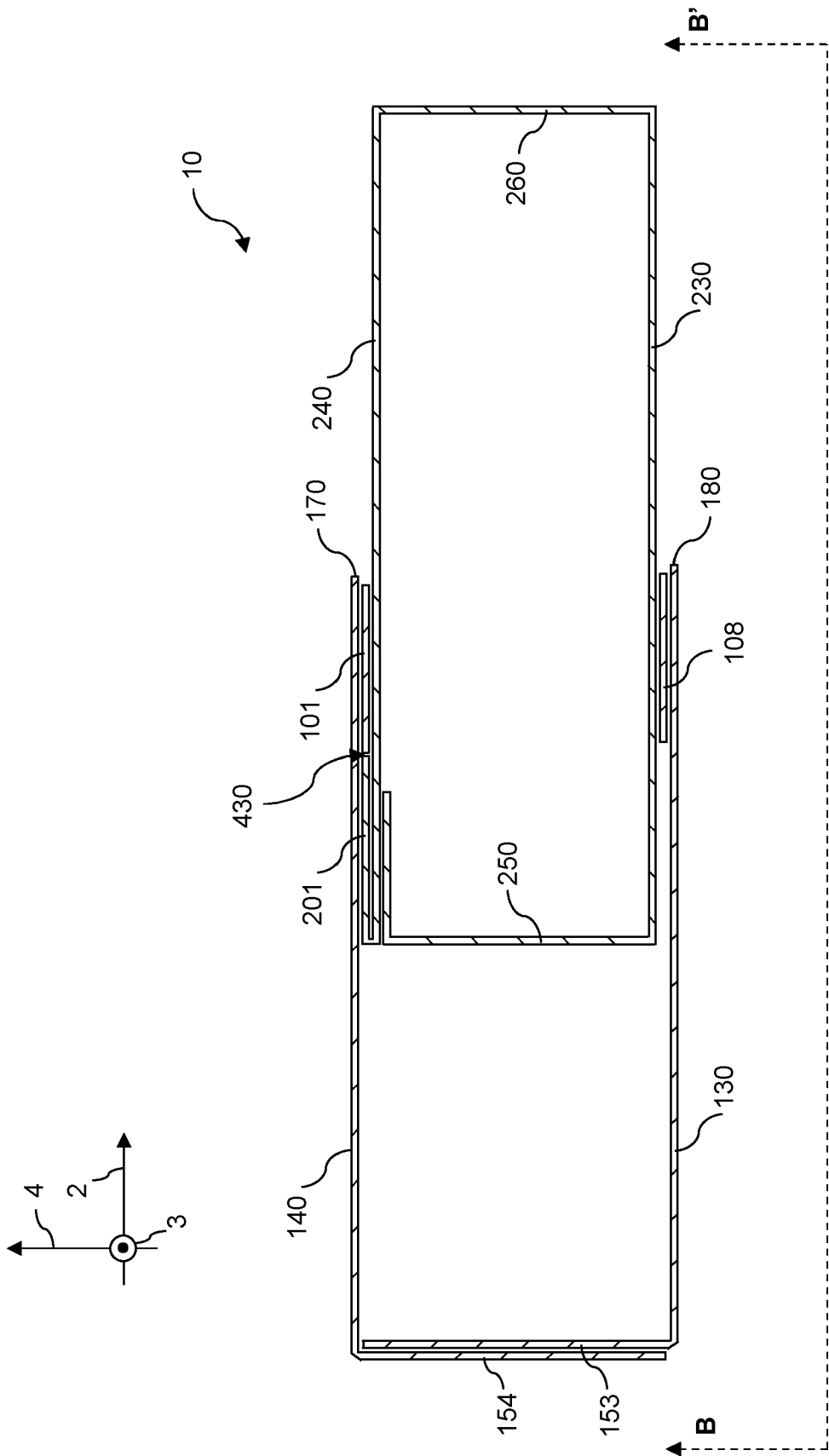


Fig. 4

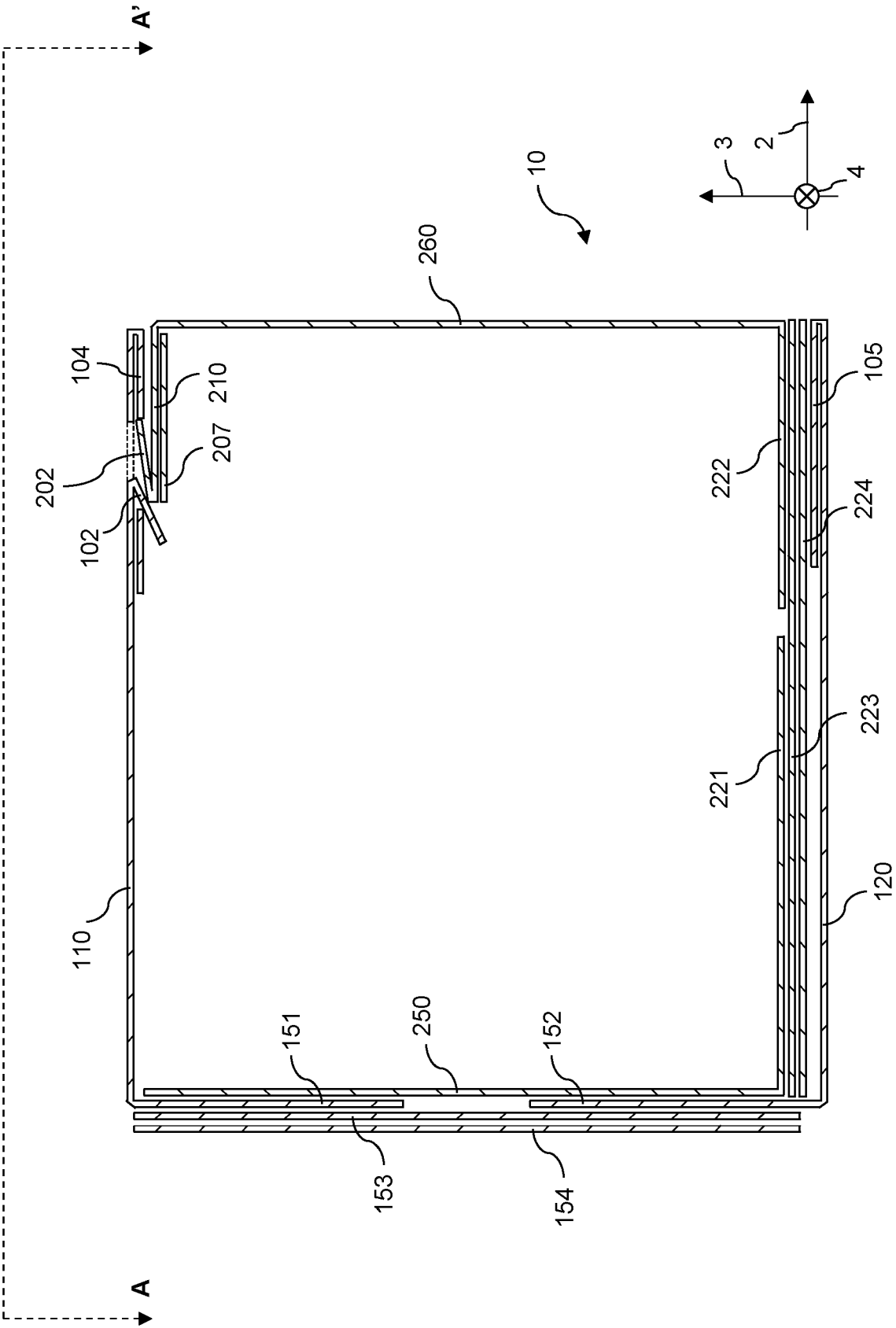


Fig. 5

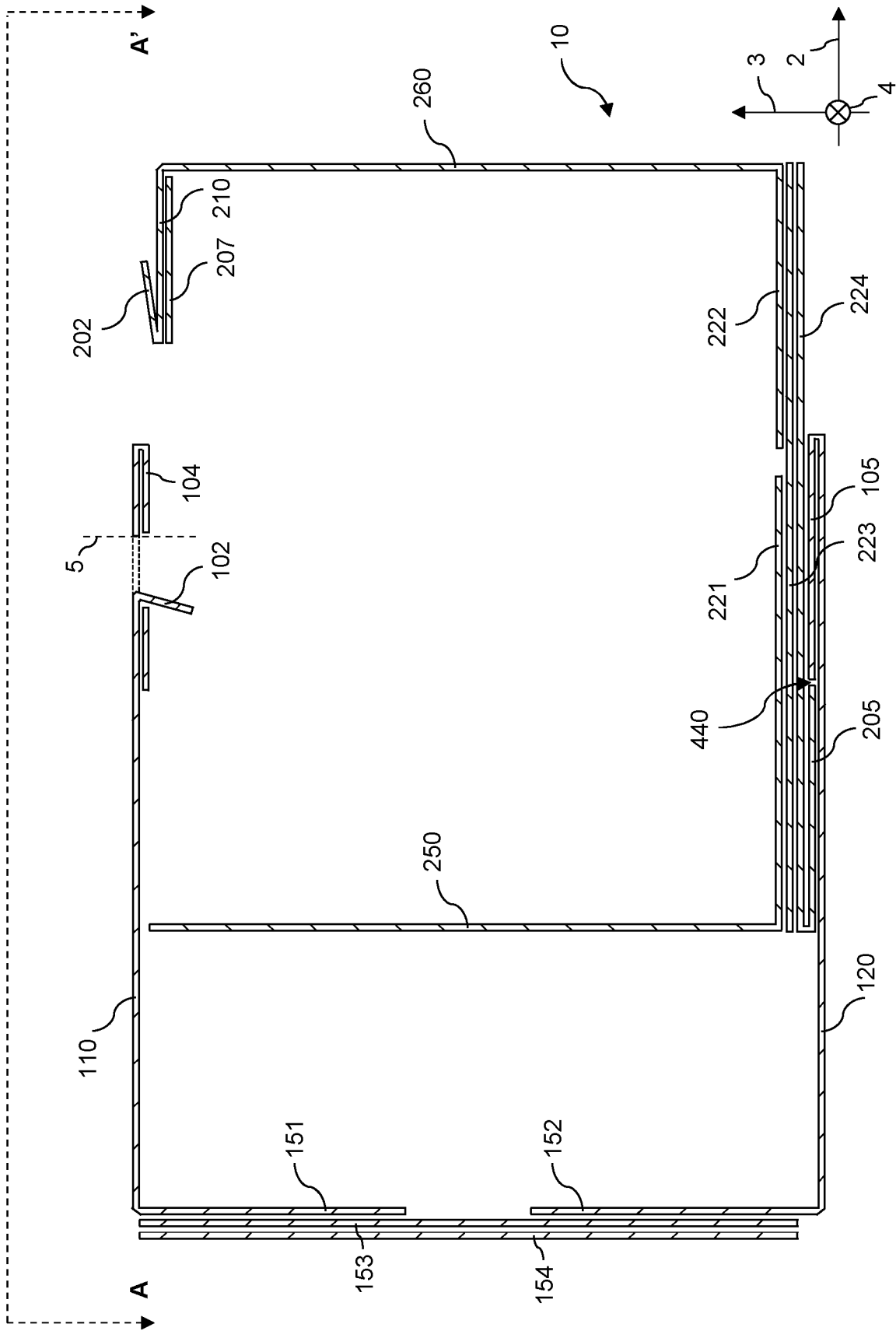


Fig. 6

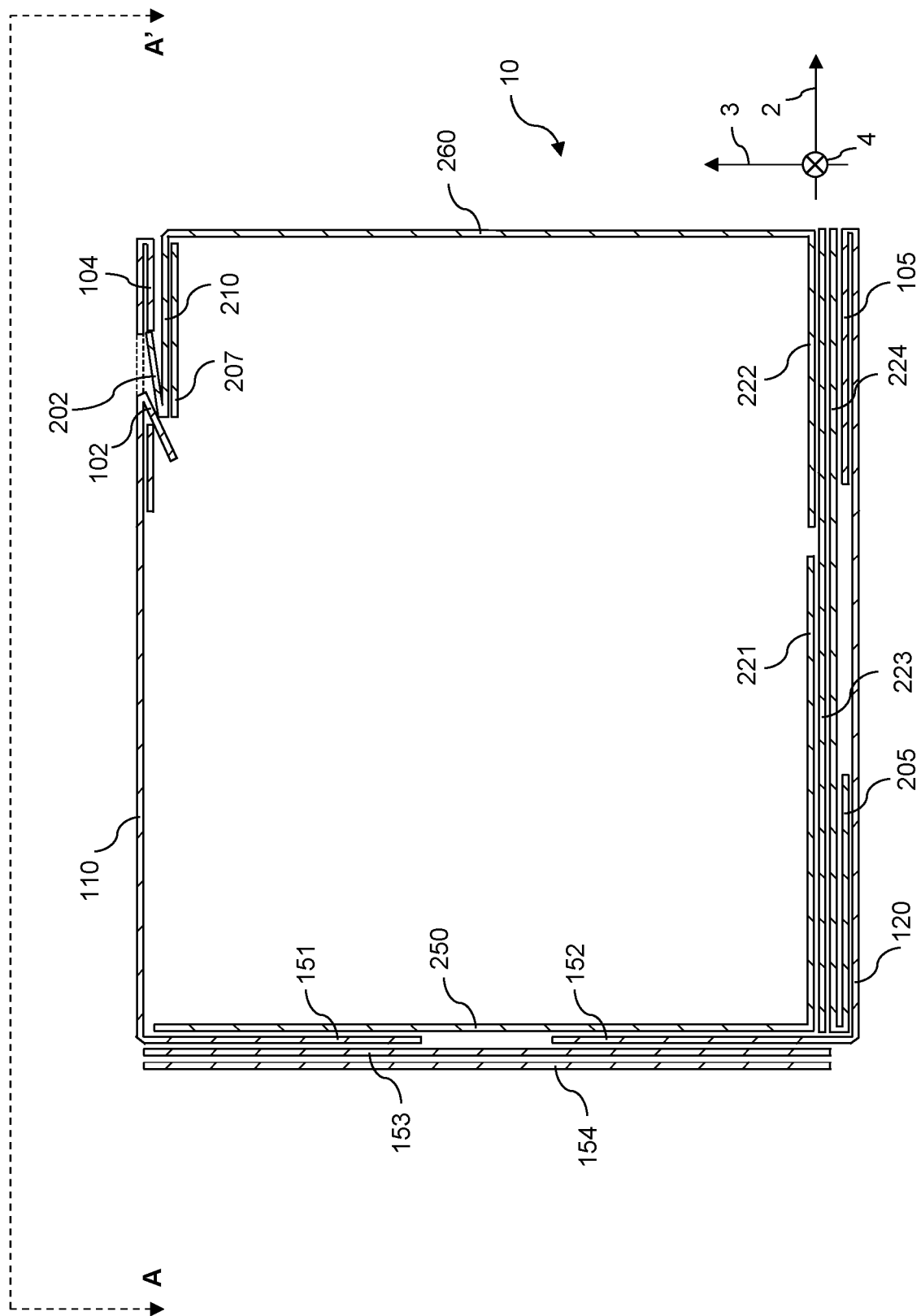


Fig. 7

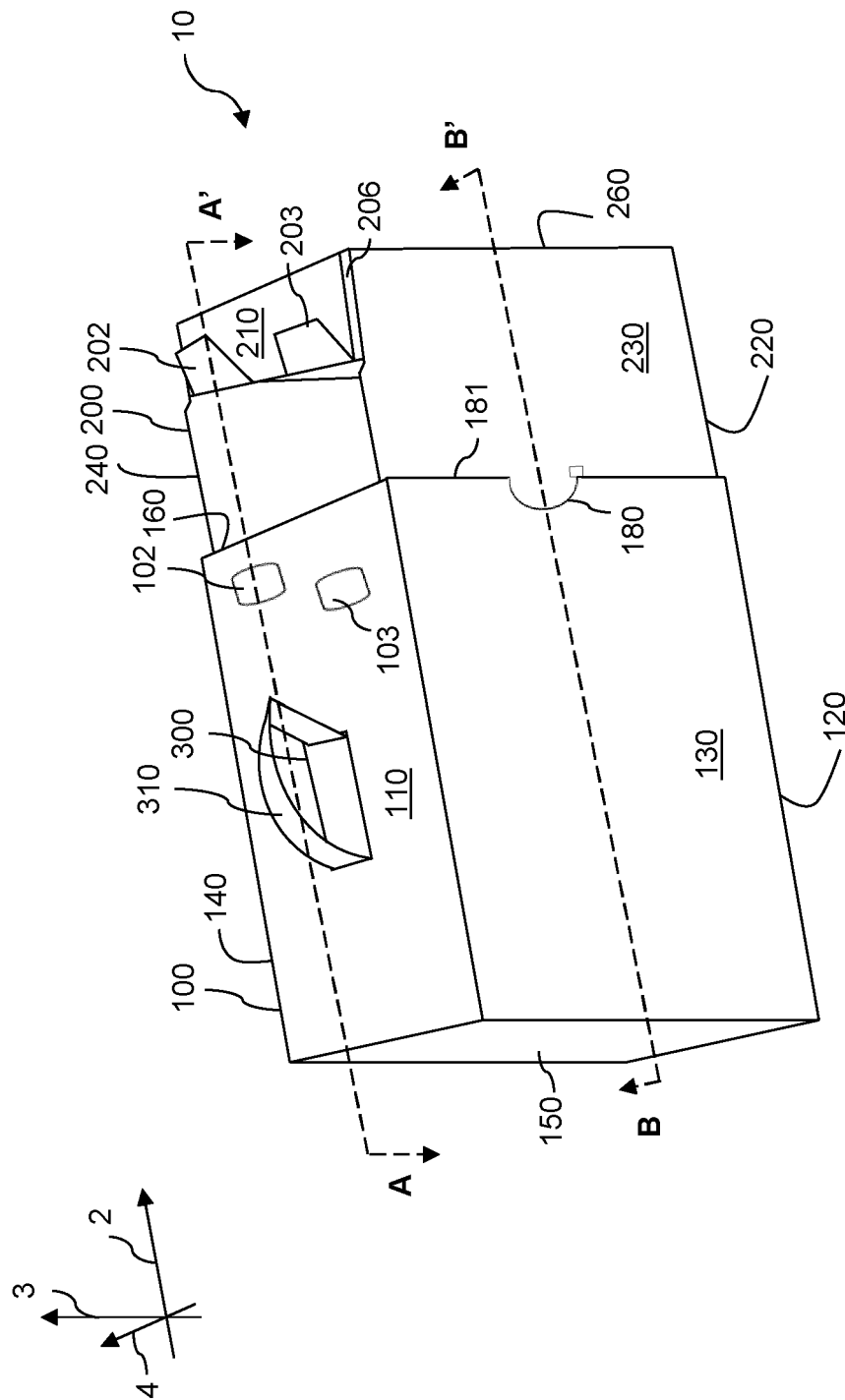


Fig. 8

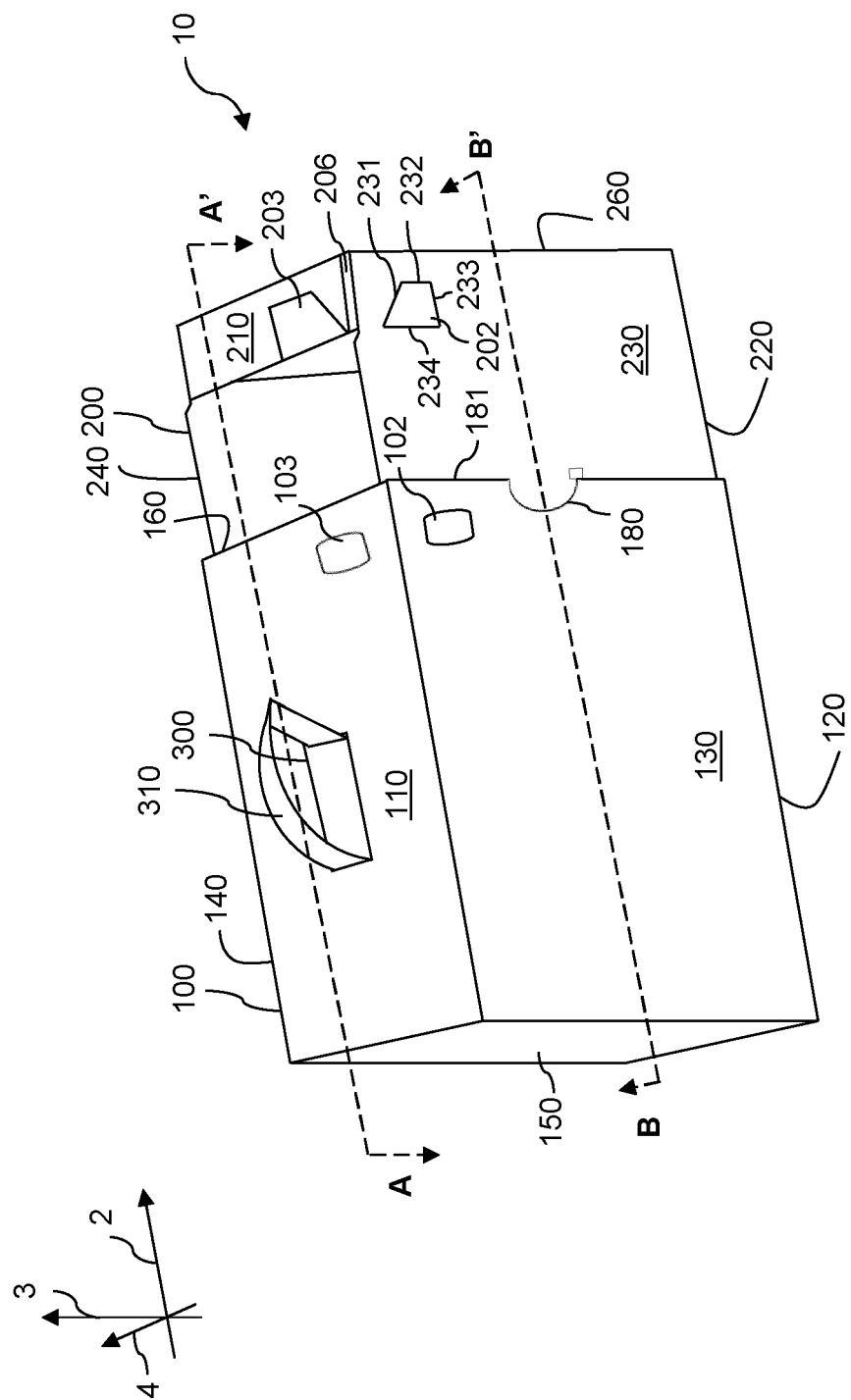


Fig. 9

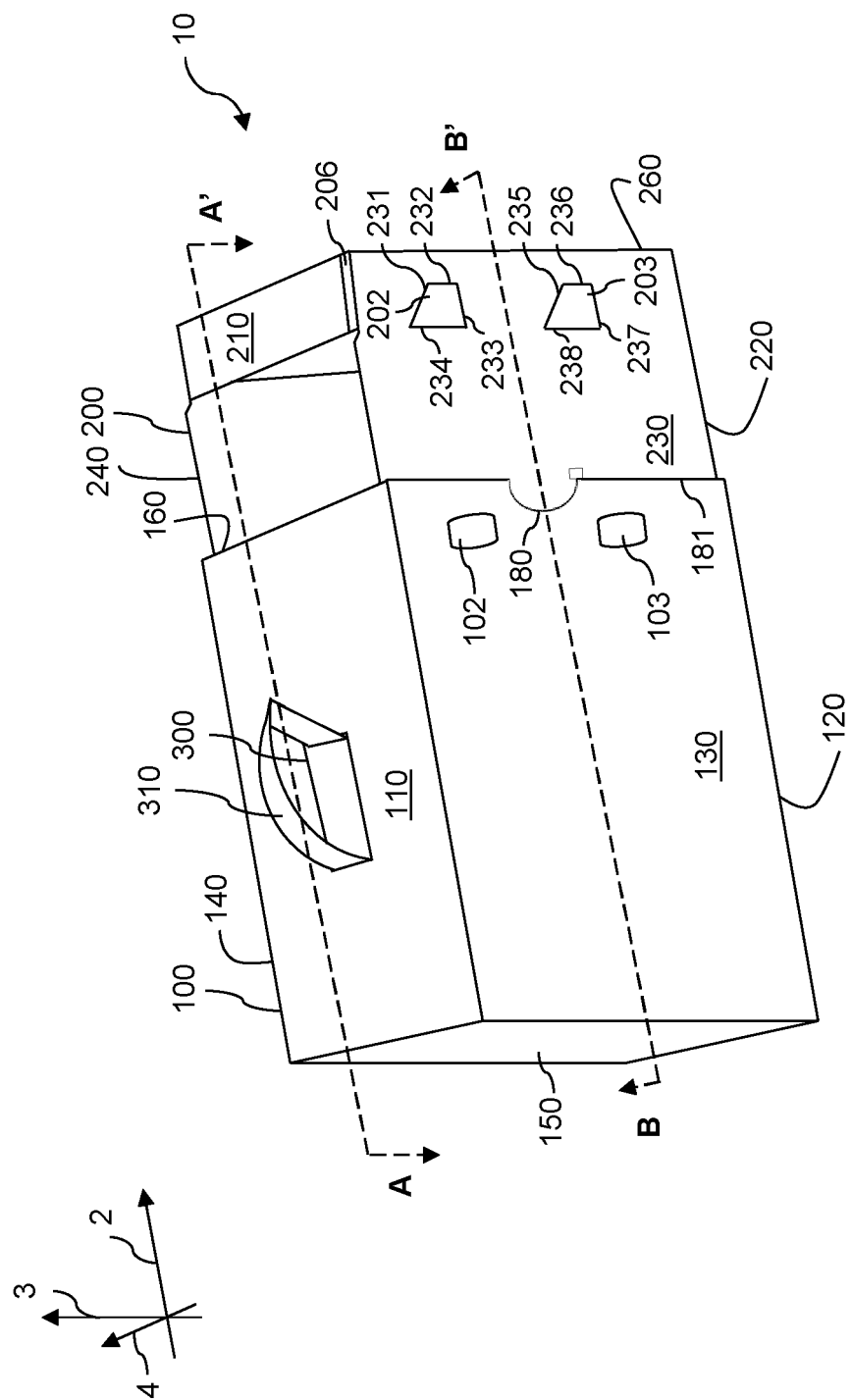


Fig. 10

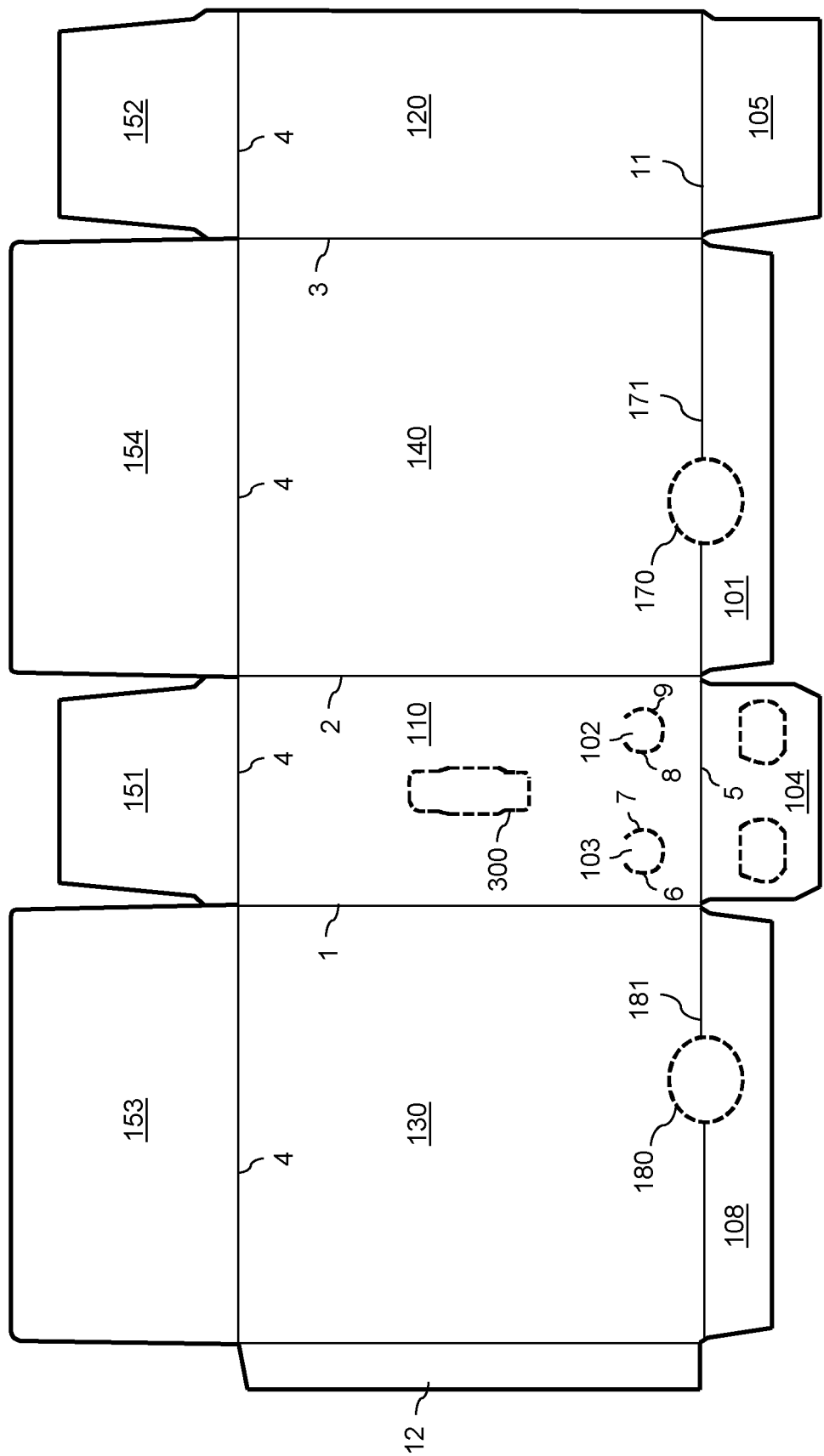


Fig. 11

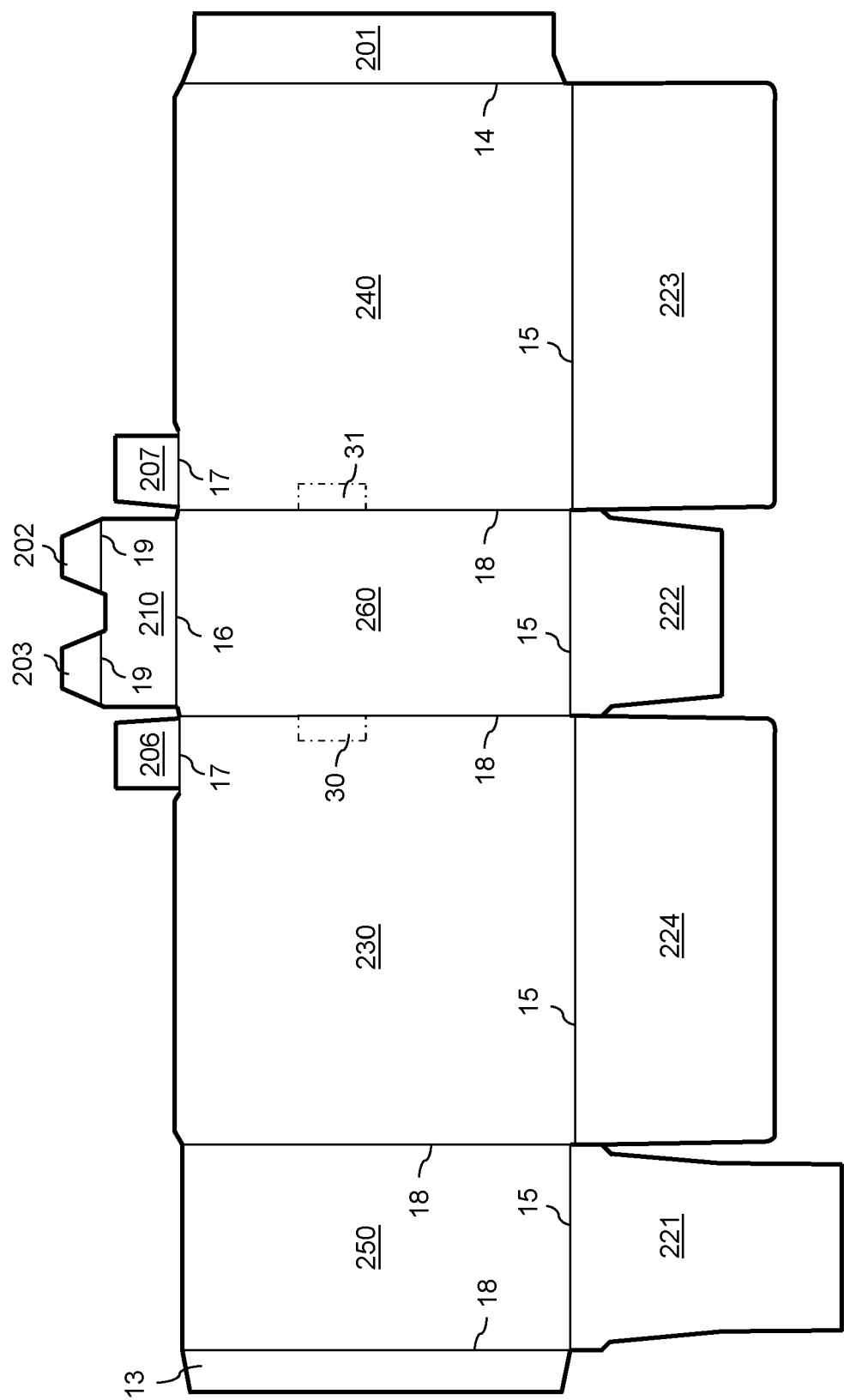


Fig. 12



EUROPEAN SEARCH REPORT

Application Number

EP 25 15 0110

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 2024/140641 A1 (GREER MATTHEW WILLIAM [US] ET AL) 2 May 2024 (2024-05-02) * page 2, paragraph 31 - page 7, paragraph 118 * * figures 1A-8C *	1-15	INV. B65D5/38 ADD. B65D5/46
X	JP 3 243521 U (?) 31 August 2023 (2023-08-31) * page 9, paragraph 27 - page 23, paragraph 137 * * figures 1-19 *	1-15	
X	US 2023/114580 A1 (DIXON JESSE [US] ET AL) 13 April 2023 (2023-04-13) * page 2, paragraph 41 - page 6, paragraph 91 * * figures 1-2B, 3-7 *	1-15	
X	CN 212 172 882 U (SHENZHEN GPA GLOBAL ENVIRONMENTAL PROTECTION TECH CO LTD) 18 December 2020 (2020-12-18) * page 5, paragraphs 28, 29 * * figures 1-5 *	1-15	TECHNICAL FIELDS SEARCHED (IPC) B65D
X	JP 2019 085118 A (MARUKIN INSATSU KK) 6 June 2019 (2019-06-06) * page 12, paragraph 26 - page 15, paragraph 36 * * figures 11-14 *	1-15	
A	CN 218 705 323 U (SHANGHAI HONGYANG PACKAGING TECH CO LTD) 24 March 2023 (2023-03-24) * page 2, paragraphs 21, 22 * * figures 1-5 *	1,2,15	
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 11 July 2025	Examiner Piolat, Olivier
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	



EUROPEAN SEARCH REPORT

Application Number

EP 25 15 0110

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	KR 200 365 618 Y1 (?) 22 October 2004 (2004-10-22) * figures 1-3 * -----	11	
A	KR 2011 0006414 U (??) 24 June 2011 (2011-06-24) * figures 1-4 * -----	11	
			TECHNICAL FIELDS SEARCHED (IPC)
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
Munich		11 July 2025	Piolat, Olivier
CATEGORY OF CITED DOCUMENTS		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	
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			



Application Number

EP 25 15 0110

CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).



**LACK OF UNITY OF INVENTION
SHEET B**

Application Number
EP 25 15 0110

5

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

10

1. claims: 1-10, 12-15

Sliding box packaging with locking means

15

2. claim: 11

Sliding box packaging with handle

20

25

30

35

40

45

50

55

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

EP 25 15 0110

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.

11-07-2025

10

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2024140641 A1	02-05-2024	NONE	
JP 3243521 U	31-08-2023	NONE	
US 2023114580 A1	13-04-2023	CA 3178811 A1 US 2023114580 A1	11-04-2023 13-04-2023
CN 212172882 U	18-12-2020	NONE	
JP 2019085118 A	06-06-2019	NONE	
CN 218705323 U	24-03-2023	NONE	
KR 200365618 Y1	22-10-2004	NONE	
KR 20110006414 U	24-06-2011	NONE	

15

20

25

30

35

40

45

50

55

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82