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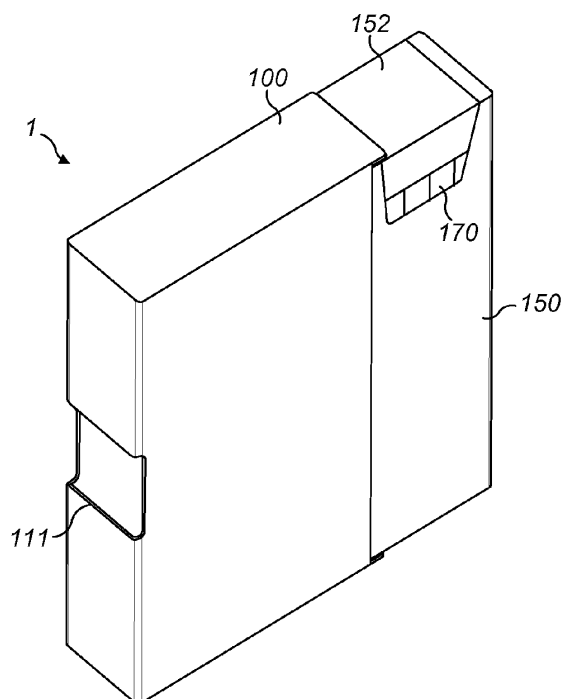
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(54) **Packaging**

(57) Packaging (1) is provided which comprises an inner packet part (150, 250) and an outer packet part (100, 200) which are movable relative to each other. The inner packet part (150, 250) can be moved from a closed position to an open position by a user. A locking element

and an engagement portion are provided, which provide resistance to this movement, thereby ensuring that the packaging (1) does not open accidentally. Furthermore, the locking element may provide a noise as it is received in one or both of the closed position and the open position.



**FIG. 1B**

## Description

### Field of the Invention

[0001] The present invention generally relates to the field of packaging, particularly for tobacco products. More particularly, the present invention relates to a new type of cigarette packaging, and blanks used in the construction of such packaging.

### Background to the Invention

[0002] It is an ongoing requirement to improve the ergonomic and practical design of packaging. One area in which such a requirement is prevalent is the provision of a packaging for tobacco products such as cigarette packaging.

[0003] Cigarette packaging must meet a range of challenging requirements. In particular, not only should the packaging be cheap and capable of mass production, but it should also be sufficiently robust to keep the cigarettes safe, maintain their freshness and retain its integrity over multiple sequences of opening and closing the packaging.

[0004] Perhaps the most common design for cigarette packaging today can be characterised as a hinged lid pack. In this design, a cardboard pack is provided with a hinged lid integrally formed at an upper end. The cigarettes are disposed longitudinally such that a user may remove the cigarettes by their ends when the lid is open.

[0005] It is of course desirable that the hinged lid does not open without active user input. In one design an inhibition on movement of the lid between a closed position and an open position is achieved by the use of a collar or sleeve over which the lid must pass. The sleeve is designed such that as the lid opens (or closes) an element of friction is introduced between the lid and sleeve which must be overcome if the lid is to be moved further.

[0006] In alternative designs, a locking element may additionally or alternatively be used. For example, a locking element may be mounted to the pack in such a manner that as the lid is opened it engages with an engagement portion of the lid. The engagement of the locking element can inhibit movement unless the user overcomes the resistive force that results.

[0007] While the above solutions and others have found some success in the context of hinged lid packs, they are not appropriate for other design concepts. For example, it has been proposed to provide cigarette packaging with slide or swing opening mechanisms. In such an approach, an inner packet part which holds the cigarettes is disposed within an outer packet part. In a closed position, an opening of the inner packet part is covered by the outer packet part, while the inner packet part is movable relative to the outer packet part to an open position in order to allow access to the cigarettes stored within.

[0008] In a slide arrangement, the inner packet part

moves relative to the outer packet part with a linear motion, while in a swing arrangement the inner packet part moves relative to the outer packet part with motion comprising at least some rotation. In these arrangements, as well as in others, there is an ongoing desire to provide some control over the relative movement of the inner packet part and the outer packet part to avoid unwanted opening of the packaging.

### Summary of the Invention

[0009] According to a first aspect of the present invention, there is provided packaging, comprising: an outer packet part; an inner packet part disposed within the outer packet part, the inner packet part being movable relative to the outer packet part between a first position and a second position; and

at least one locking mechanism comprising a locking element and an engagement portion,

wherein the locking element projects from the inner packet part and the engagement portion protrudes from an internal surface of the outer packet part facing the inner packet part, wherein the locking element and the engagement portion are arranged such that movement of the inner packet part between the first position and the second position is effective to engage the locking element and the engagement portion at a first edge of the engagement portion and to subsequently disengage the locking element and the engagement portion at a second edge of the engagement portion.

[0010] The present invention can provide packaging in which spontaneous movement of an inner packet part relative to an outer packet part is inhibited. As the locking element passes the engagement portion it engages and then disengages with the engagement portion. Between engaging the engagement portion at a first edge and disengaging at a second edge, the locking element may travel across the surface of the engagement portion. This engagement of the locking element causes resistance to the movement of the inner packet part relative to the outer packet part. As the locking element also disengages during movement between positions, the reverse movement can also be effective to re-engage the locking element. As such, movement can be inhibited in both directions. The first and second positions may, for example, be a closed position in which access to the contents of the packaging is not possible and an open position in which the user may access the contents.

[0011] In preferred embodiments, the locking element is concealed by the outer packet part in one or both of the first position and the second position. Preferably, the locking element is concealed by the outer packet part both in the first position and in the second position. In this manner, the operation of the locking element is hidden from the user. This increases the effectiveness of the sensation provided by the locking element.

[0012] In preferred embodiments, the locking element and the engagement portion are configured such that at

least disengagement of said locking element and engagement portion generates a sound, preferably a sound which is audible to the user. Preferably, the locking element is arranged to generate a sound when the inner packet part reaches the first position and/or when the inner packet part reaches the second position. This can provide a signal to the user that the inner packet part has reached the desired position. This increases confidence in the operation of the packaging, particularly when a sound is generated when the inner packet part reaches a closed position.

**[0013]** Preferably, the sound is generated by elastic release of said locking element from said engagement portion. For example, the locking element may be arranged to generate the sound by striking against one of the opposing faces of the inner packet part when released from engagement with the engagement portion. In particular, the locking element may be biased against the opposing face and the first and/or second engagement portions may comprise a raised area of said face. Accordingly, as the locking element passes over the edge of such a raised area it is released to strike against the face.

**[0014]** In preferred embodiments the engagement portion comprises at least one engagement flap folded in position above an inner face of the outer packet part to form a raised portion on said inner surface, wherein a first edge of the engagement portion is formed by a fold of said engagement flap and a second edge is formed by a distal end of said engagement flap. This provides an effective formation of the engagement portion which can thus be integrally formed with the remainder of the outer packet part. In preferred embodiments, a debossed region is provided adjacent to said distal end of said engagement flap. This causes an indentation which more clearly defines the engagement portion.

**[0015]** Preferably, the locking element is cut from a corner portion of the inner packet part such that its distal edge projects from the inner packet part. In this way, the locking element can project into a space between the inner packet part and the outer packet part, while being formed relatively simply from the inner packet part.

**[0016]** Preferably, the packaging comprises a second locking mechanism, wherein the first locking mechanism is disposed on a first side of the packaging and the second locking mechanism is disposed on a second side of the packaging. In particularly preferred embodiments, the first and second sides of the packaging are opposing sides.

**[0017]** The first and second sides of the packaging can either be the upper and lower sides or the front and back sides of it. In practice, having locking mechanism on opposite sides of the packaging further improves stability of inner and outer parts of the packaging relative to each other. By providing locking mechanisms on more than one side of the packaging, preferred embodiments can improve the locking effect of the present invention. The second locking mechanism preferably comprises the

same features as the first locking mechanism and may thus operate in an analogous manner.

**[0018]** Preferably, the first locking mechanism is offset from the centre of the first side of the packaging in a first direction and the second locking mechanism is offset from the centre of the second side of the packaging in a second direction opposite to the first direction. In particularly preferred embodiment, the offset of the first and second locking mechanisms is equal in magnitude. Accordingly, in preferred embodiment, the locking mechanisms can be located away from a centre of the packaging, which may be required for other purposes, while retaining an overall balance in the operation of the mechanisms.

**[0019]** Preferably, the present invention further comprises a restraining mechanism arranged to limit movement of the inner packet part relative to the outer packet part. In particular, the restraining mechanism may prevent movement of the inner packet part beyond the first and/or second positions.

**[0020]** In preferred embodiments, the restraining mechanism comprises a first restraining element and a second restraining element provided on opposing faces of the inner packet part and the outer packet part, wherein engagement of the first and second elements is effective to limit movement of the inner packet part relative to the outer packet part.

**[0021]** Preferably, the first restraining element is a restraining tab and the second restraining element is arranged to receive the restraining tab between the second restraining element and a face of the inner packet part or the outer packet part. The second restraining element may, for example, comprise a restraining flap folded inwardly from the face of the outer packet part or inner packet part, or may comprise a restraining portion which allows ingress of the restraining tab into a position between the restraining element and the face of the inner packet part or outer packet part.

**[0022]** In preferred embodiments, the outer packet part comprises at least one opening or recess through which one can push or pull the inner packet part to initiate movement of the inner packet part relative to the outer packet part. This allows easy opening and/or closing of packaging by a user.

**[0023]** Preferably, longitudinal edges of the packaging when the inner packet part is in a closed position have a curved profile. This provides a pleasing configuration for the user, and in particular improves comfort in the user's hand. It further reduces the risk of damage to the vessel in which the packaging is carried, such as a user's pocket or bag that might otherwise result from sharp edges of the packaging.

**[0024]** In preferred embodiment, the relative movement of the inner packet part and the outer packet part occurs substantially parallel to the opposing faces on which the locking mechanism is provided. In particular, movement of the inner packet part from the first position to the second position may comprise linear movement.

Alternatively or additionally, movement of the inner packet part from the first position to the second position may comprise rotational movement.

**[0025]** Preferably, at least one engagement portion is provided on the outer packet part. Similarly, in preferred embodiments, at least one locking element is provided on the inner packet part. This arrangement is found to offer an effective and reliable engagement between the locking element and the engagement portion.

**[0026]** In preferred embodiments, the inner packet part comprises at least one opening in an upper face to allow access to a product in the inner packet part, wherein the opening is concealed by the outer packet part when the inner packet part is in the first position. Accordingly, the first position is a closed position in which access to the product is not possible. In the second, open position, the outer packet part does not conceal the opening. More generally, the opening may be placed on any face through which it is desired to provide access to the contents of the inner packet part.

**[0027]** Preferably, the opening of the inner packet part extends into at least one side of the inner packet part. This arrangement further facilitates user access to products within the inner packet part.

**[0028]** In preferred embodiments, the inner packet part and the outer packet part are each obtained from a single foldable blank of paper, cardboard, plastic material or a combination thereof. Indeed, the present invention further encompasses blanks for use in the production of the inner packet part and the outer packet part. Furthermore, the invention comprises forming the inner packet part or the outer packet part from such blanks.

### Brief Description of the Figures

**[0029]** Preferred embodiments of the present invention will now be described by way of example only with reference to the accompanying drawings, in which:

Figure 1A shows a first preferred embodiment of the present invention in a closed position;

Figure 1 B shows the first preferred embodiment in an open position;

Figure 2A is a side view of a front of an outer packet part of the first preferred embodiment;

Figure 2B is a side view of a rear of the outer packet part of the first preferred embodiment;

Figure 3 shows a blank for use in the production of the outer packet part of the first preferred embodiment;

Figure 4A is a side view of a front of an inner packet part of the first preferred embodiment;

Figure 4B is a side view of a rear of the inner packet part of the first preferred embodiment;

Figure 5 shows a blank for use in the production of the inner packet part of the first preferred embodiment;

Figure 6A is a side view illustrating the position of

the inner packet part within the outer packet part when in a closed position;

Figure 6B is a side view illustrating the position of the inner packet part within the outer packet part when in an intermediate position as the inner packet part is moved from the closed position towards an open position;

Figure 6C is a side view illustrating the position of the inner packet part within the outer packet part when in the open position;

Figure 6D is a side view illustrating the position of the inner packet part within the outer packet part when in the intermediate position as the inner packet part is moved from the open position towards the closed position;

Figure 7A shows a cross section of the first preferred embodiment from above when the inner packet part is in the closed position;

Figure 7B shows a cross section of the first preferred embodiment from above when the inner packet part is in the open position;

Figure 8 shows a second preferred embodiment of the present invention in a closed position;

Figure 9 shows the second preferred embodiment in an open position;

Figure 10 is a side view of a front of an outer packet part of the second preferred embodiment;

Figure 11 shows a blank for use in the production of the outer packet part of the second preferred embodiment;

Figure 12 is a side view of a front of an inner packet part of the second preferred embodiment;

Figure 13 shows a blank for use in the production of the inner packet part of the second preferred embodiment;

Figure 14A is a side view illustrating the position of the inner packet part within the outer packet part when in a closed position; and

Figure 14B is a side view illustrating the position of the inner packet part within the outer packet part when in the open position.

### Detailed Description

**[0030]** Referring to Figures 1A and 1B, there is shown a first preferred embodiment of packaging 1 according to the present invention. The packaging comprises an outer packet part 100 and an inner packet part 150. The inner packet part 150 is movable relative to the outer packet part and in particular is slidable between a first, closed position as illustrated in Figure 1A and a second, open position as shown in Figure 1 B.

**[0031]** The user may effect sliding of the inner packet part 150 by pushing the part of the inner packet part 150 that is exposed through an opening 111 in the outer packet part 100 with a thumb or finger. As can be seen in Figure 1 B, the inner packet part 150 comprises a tear strip 152 which can be removed to form an opening in

the inner packet part 150 to expose cigarettes 170.

**[0032]** The outer packet part 100 and the inner packet part 150 are coupled to each other in such a way as to provide an audible noise when the pack enters either the closed position or the open position. Furthermore, a degree of resistance is provided to retain the inner packet part in the open position and in the closed position. In this manner, accidentally movement of the outer pack 100 relative to the inner packet part 150 can be inhibited. The mechanism by which these effects are produced can be understood with reference to Figures 2A to 5, and will be described in greater detail below.

**[0033]** Figures 2A, 2B and 3 illustrate the outer packet part 100. The outer packet part is formed by folding a cardboard blank, illustrated in Figure 3. Figure 2A shows a front side view of the outer packet part, while Figure 2B shows a rear side view of the outer packet part 100.

**[0034]** The outer packet part 100 comprises a front face 101a and a rear face 101b which oppose each other when the outer packet part 100 is formed. The front face 101a and the rear face 101b are connected by a side face 105. The opening 111 is formed in the side face 105. Furthermore, a front strengthening flap 106a and a rear strengthening flap 106b are formed towards the front and rear of the opening 111 respectively. When the outer packet part 100 is formed, the strengthening flaps 106a, 106b are folded inwardly and glued to the inner front and rear faces 101a, 101b of the outer packet part 100, as illustrated in Figures 2A and 2B.

**[0035]** A top face of the outer packet part 100 is formed of front top face part 102a, rear top face part 102b and side top face part 102c. When the outer packet part 100 is formed, rear top face part 102b and side top face part 102c are glued to an underside of front top face part 102a. Similarly, a bottom face of the outer packet part is formed of front bottom face part 103a, rear bottom face part 103b and side bottom face part 103c. When the outer packet part is formed, rear bottom face part 103b and side bottom face part 103c are glued to a top side of front bottom face part 103a.

**[0036]** The outer packet part 100 further comprises a front restraining flap 107a and a rear restraining flap 107b, which extend from the front face 101a and the rear face 101b respectively. Furthermore, a front engagement flap 108a and a rear engagement flap 108b extend from the front restraining flap 107a and rear restraining flap 107b.

**[0037]** When the outer packet part is formed, the front restraining flap 107a and the rear restraining flap 107b are folded inwardly while the engagement flaps 108a, 108b are folded back upon the restraining flaps 107a, 107b. This is illustrated in Figures 2A and 2B. As a result, the engagement flaps 108a, 108b form a raised platform on the inner surface of the outer packet part which acts as an engagement portion as will be described in further detail below.

**[0038]** The engagement flaps 108a, 108b are preferably glued to the restraining flaps 107a, 107b in the po-

sitions shown in figures 2A and 2B. Similarly, the restraining flaps 107a, 107b underneath the engagement flaps are preferably glued to the front and rear faces 101a, 101b of the outer packet part. However, the glue preferably does not extend across the entirety of the restraining flaps 107a, 107b, but instead is arranged so as to allow material to enter between the flaps 107a, 107b and the faces 101a, 101b in a region away from the engagement flaps 108a, 108b.

**[0039]** Additionally, the first restraining flap 107a and the second restraining flap 107b comprise a first debossed region 109a and a second debossed region 109b respectively. The debossed regions 109a, 109b form indentations in the restraining flaps 107a, 107b and are located so that they are adjacent to the distal ends of the engagement flaps 108a, 108b when these are folded over as shown in Figures 2A and 2B.

**[0040]** Figures 4A, 4B and 5 illustrate the inner packet part 150. The inner packet part 150 is formed by folding a cardboard blank, illustrated in Figure 5. Figure 4A shows a front side view of the inner packet part 150, while Figure 4B shows a rear side view of the inner packet part 150.

**[0041]** The inner packet part 150 comprises a front face 151a and a rear face 151b which oppose each other when the inner packet part 150 is formed. The front face 151a and the rear face 151b are connected by a base face 156. A first side face is formed of a front first side flap 154a and rear first side flap 154b, while a second side face is formed of a front second side flap 155a and a rear side face flap 155b. The rear side face flaps 154b, 155b are glued to inner surfaces of the front side flaps 154a, 155a to form front and rear sides of the inner packet part 150.

**[0042]** Base flaps 157 are connected to the first and second rear side flaps 154b, 155b. When the inner packet part 150 is formed, the base flaps are glued to an upper surface of the base face 156.

**[0043]** A top face of the inner packet part is formed of a rear top face flap 153b, a front top face flap 153a, a rear tear strip flap 152b and a front tear strip flap 152a. The front and rear top face flaps 152a, 152b are glued together to form a permanent portion of the top face of the inner packet part 150. The front and rear tear strip flaps 152a, 152b are glued together to form the tear strip 152 shown in Figure 1 B. The front and rear tear strip flaps are connected to the remainder of the inner packet part 150 by perforations, allowing the user to remove the tear strip 152 when they wish.

**[0044]** The inner packet part further comprises a front locking element 161a and a rear locking element 161b. The locking elements 161a, 161b are disposed in cut away portions 160a, 160b located at the junctions between the front and rear faces 151a, 151b and the second side face. When the inner packet part 150 is formed, the locking elements 161a, 161b project beyond the front and rear faces 151a, 151b. It is noted that front locking element 161a is disposed in an upper portion of the front

face 151a, while the rear locking element 161b is disposed in a lower portion of the rear face 151b. More generally, the front locking element 161a and rear locking element 161b are preferably disposed in different regions of the front and rear faces 151a, 151b, and in particular are offset in opposing directions from a centre of the front and rear faces 151a, 151b between the base face 156 and the opposing end of the front and rear faces 151a, 151b.

**[0045]** Additionally, the inner packet part comprises a front restraining tab 159a and a rear restraining tab 159b. The restraining tabs 159a, 159b are disposed in cut away portions 158a, 158b of the front face 151a and rear face 151b respectively. It is noted that front restraining tab 159a is disposed in a lower portion of the front face 151a, while the rear restraining tab 159b is disposed in an upper portion of the rear face 151b. More generally, the front restraining tab 159a and rear restraining tab 159b are preferably disposed in different regions of the front and rear faces 151a, 151b, and in particular are offset in opposing directions from a centre of the front and rear faces 151a, 151b between the base face 156 and the opposing end of the front and rear faces 151a, 151b.

**[0046]** The operation of the package 1 can be understood with reference to Figures 6A to 6D, which show the position of the inner packet part 150 relative to the outer packet part 100 from a front view during movement between the closed and open positions, and also with reference to Figures 7A and 7B, which show a plan view through the cross sections A-A in Figures 6A and 6C. In Figures 6A to 6D features of the outer packet part 100 which are not visible are shown in dashed lines, while those of the inner packet part 150 that are not visible are shown in dotted lines.

**[0047]** Figures 6A and 7A show the inner packet part 150 in a closed position relative to the outer packet part 100. In this position, the locking elements 161a, 161b are disposed away from the engagement flaps 108a, 108b, as best seen from figure 7A. The locking elements 161a, 161b project perpendicularly outwardly from the front and rear faces 151a, 151b of the inner packet part 150, thus occupying a space between the inner packet part 150 and the outer packet part 100.

**[0048]** As the user moves the inner packet part from the closed position shown in Figures 6A and 7A, the locking elements 161a, 161b approach the engagement flaps 108a, 108b. As the engagement flaps protrude above the inner surface of the outer packet part 100, after a certain amount of movement the locking elements make contact and engage with the engagement flaps 108a, 108b. Further movement of the inner packet part 150 causes the locking elements to continue their engagement with the engagement flaps 108a, 108b, rubbing along the top surface of the engagement flaps 108a, 108b. At this stage, the locking elements are slightly deflected from the perpendicular orientation relative to the front and rear faces 151a, 151b of the inner packet part 150. The requirement to deflect the locking elements

161a, 161b from their original orientation creates an inhibiting effect on the movement of the inner packet part 150 relative to the outer packet part 100 when engagement of the locking elements 161a, 161b and the engagement flaps 108a, 108b is initiated.

**[0049]** The inner packet part 150 is then moved relative to the outer packet part 100 further to the open position, as shown in Figures 6C and 7B. As the inner packet part enters the open position, the locking elements 161a, 161b move beyond the engagement flaps 108a, 108b and therefore disengage with the engagement flaps 108a, 108b. As a consequence, the locking elements 161a, 161b, flick outwardly towards the inner surface of the outer packet part 100. The debossed regions 109a, 109b receive the locking elements 161a, 161b at this point. As the locking elements 161a, 161b strike the surface of the debossed regions 109a, 109b, an audible click is produced, to give confidence to the user that the appropriate position has been reached.

**[0050]** Excessive opening of the inner packet part 150 relative to the outer packet part 100 is prevented by engagement of the restraining tabs 159a, 159b with the restraining flaps 107a, 107b. In particular, the restraining tabs 159a, 159b are received between the restraining flaps 107a, 107b and the front and rear faces 101a, 101b of the outer packet part 100 respectively. Thus, when the front edges restraining flaps 107a, 107b engage with the base of the restraining tabs 159a, 159b the inner packet part 150 can move no further relative to the outer packet part 100.

**[0051]** When the inner packet part 150 is moved from the open position shown in Figures 6C and 7B towards the closed position, the tip of the locking elements 161a again engages with the engagement flaps 109a, 109b, causing the locking elements 161a, 161b to be deflected from an orientation perpendicular to the front and rear faces 151a, 151b of the inner packet part 150 as shown in Figure 6D. As for movement from the closed position, movement from the open position is therefore inhibited as it requires the locking elements 161a, 161b to be deflected from their original positions.

**[0052]** As the inner packet part 150 enters the closed position, the locking elements 161a, 161b pass beyond the engagement flaps 108a, 108b, and flick outwardly to contact the front and rear faces of the inner packet part 150. Again, this causes an audible click, indicating to the user that the action has completed or is nearly complete.

**[0053]** A package according to a second preferred embodiment of the invention is illustrated in Figures 8 and 9. Like the first embodiment, the package of the second embodiment comprises an inner packet part 250 and an outer packet part 200. The inner packet part 250 is movable relative to the outer packet part 200 and in particular is rotatable between a closed position as illustrated in Figure 8 and an open position as shown in Figure 9.

**[0054]** The user may effect rotation of the inner packet part 250 by pushing the part of the inner packet part 250 that is exposed through an opening 211 in the outer pack-

et part 200 with a thumb or finger. Although not shown in Figure 9, when the outer packet part is in the open position, cigarettes held within the inner packet part 250 may be accessed by the user.

**[0055]** The outer packet part 200 and the inner packet part 250 are coupled to each other in such a way as to provide an audible noise when the pack enters either the closed position or the open position. Furthermore, a degree of resistance is provided to retain the inner packet part in the open position and in the closed position. In this manner, accidentally movement of the outer packet part 200 relative to the inner packet part 250 can be inhibited. The mechanism by which these effects are produced can be understood with reference to Figures 10 to 14B, and will be described in greater detail below.

**[0056]** Figures 10 and 11 illustrate the outer packet part 200. The outer packet part is formed by folding a cardboard blank, illustrated in Figure 11. Figure 10 shows a front side view of the outer packet part 200 once formed.

**[0057]** The outer packet part 200 comprises a front face 201a and a rear face 201b which oppose each other when the outer packet part 200 is formed. The front face 201a and the rear face 201b are connected by a side face 205. The opening 211 is formed in the side face 205. Furthermore, a front strengthening flap 206a and a rear strengthening flap 206b are formed towards the front and rear of the opening 311 respectively. When the outer packet part 200 is formed, the strengthening flaps 205a, 205b are folded inwardly and glued to the inner front and rear faces 201a, 201b of the outer packet part 200, as can be seen in Figure 10.

**[0058]** A top face of the outer packet part is formed of front top face part 202a, rear top face part 202b and side top face part 202c. When the outer packet part 200 is formed, rear top face part 202b and side top face part 202c are glued to an underside of front top face part 202a. Similarly, a bottom face of the outer packet part 200 is formed of front bottom face part 203a, rear bottom face part 203b and side bottom face part 203c. When the outer packet part 200 is formed, rear bottom face part 203b and side bottom face part 203c are glued to a top side of front bottom face part 203a.

**[0059]** The bottom face formed of the bottom face parts 203a, 203b, and 203c does not cover the entire bottom surface of the outer packet part 200 when formed. The outer packet part further comprises a connecting flap 204, which is foldably connected to the bottom face part 203b. Unlike the bottom face part 203b, the connecting flap is separated from the rear face 201b. As a result, when the outer packet part 200 is formed, the connecting flap 204 is able to move rotationally relative to the rest of the outer packet part 200. As will be described further below, the inner packet part 250 is mounted to the connecting flap 204.

**[0060]** The outer packet part 200 further comprises a front restraining flap 208a and a rear restraining flap 208b. Furthermore, a front engagement flap 208a and a rear engagement flap 208b extend from the front restrain-

ing flap 207a and rear restraining flap 207b.

**[0061]** When the outer packet part is formed, the front restraining flap 207a and the rear restraining flap 207b are folded inwardly while the engagement flaps 208a, 208b are folded back upon the restraining flaps 207a, 207b. This is illustrated in Figures 10. As a result, the engagement flaps 208a, 208b form a raised platform on the inner surface of the outer packet part 200 which acts as an engagement portion as will be described in further detail below.

**[0062]** The engagement flaps 208a, 208b are preferably glued to the restraining flaps 207a, 207b in the positions shown in Figure 10. Similarly, the restraining flaps 207a, 207b underneath the engagement flaps are preferably glued to the front and rear faces 201a, 201b of the outer packet part. However, the glue preferably does not extend across the entirety of the restraining flaps 207a, 207b, but instead is arranged so to allow material to enter between restraining portions 210a, 210b of the restraining flaps 207a, 207b and the faces 201a, 201b in a region away from the engagement flaps 208a, 208b.

**[0063]** Additionally, the first restraining flap 207a and the second restraining flap 207b comprise a first debossed region 209a and a second debossed region 209b respectively. The debossed regions 209a, 209b form indentations in the restraining flaps 207a, 207b and are located so that they are adjacent to the distal ends of the engagement flaps 208a, 208b when these are folded over as shown in Figure 10.

**[0064]** Figures 12 and 13 illustrate the inner packet part 250 of the second embodiment. The inner packet part 250 is formed by folding a cardboard blank, illustrated in Figure 13. Figure 12 shows a front side view of the inner packet part 250 once formed.

**[0065]** The inner packet part 250 comprises a front face 251a and a rear face 251b which oppose each other when the inner packet part 250 is formed. The front face 251a and the rear face 251b are connected by a base face 256. A first side face is formed of a front first side flap 254a and rear first side flap 254b, while a second side face is formed of a front second side flap 255a and a rear side face flap 255b. The rear side face flaps 254b, 255b are glued to inner surfaces of the front side face flaps 254a, 255a to form front and rear sides of the inner packet part 250.

**[0066]** Base flaps 257 are connected to the first and second rear side flaps 254b, 255b. When the inner packet part 250 is formed, the base flaps are glued to an upper surface of the base face 256.

**[0067]** The inner packet part 250 has an open top. Front reinforcing flap 253a and rear reinforcing flap 253b are connected to upper edges of the front and rear faces 251a, 251b respectively, and are folded inwardly.

**[0068]** The inner packet part further comprises a front locking element 261a and a rear locking element 261b. The locking elements 261a, 261b are disposed in cut away portions 260a, 260b located at the junctions between the front and rear faces 251a, 251b and the second

side face. When the inner packet part 250 is formed, the locking elements 261a, 261b project beyond the front and rear faces 251a, 251b.

**[0069]** Additionally, the inner packet part comprises a front restraining tab 259a and a rear restraining tab 259b. The restraining tabs 259a, 259b are disposed in cut away portions 258a, 258b of the front face 251a and rear face 251b respectively. The operation of the package can be understood with reference to Figures 14A and 14B, which show the position of the inner packet part 250 relative to the outer packet part 200 from a front view in both the closed position of Figure 8 and the open position of Figure 9. In Figures 14A and 14B, features of the outer packet part 200 not visible are shown in dashed lines, while features of the inner packet part 250 that are not visible are shown in dotted lines.

**[0070]** Figure 14A shows the inner packet part 250 in a closed position relative to the outer packet part 200. In this position, the locking elements 261a, 261b are disposed away from the engagement flaps 208a, 208b, as best seen from Figure 7A. The locking elements 261a, 261b project perpendicularly outwardly from the front and rear faces 251a, 251b of the inner packet part 250, thus occupying a space between the inner packet part 250 and the outer packet part 200.

**[0071]** As the user moves the inner packet part from the closed position shown in Figure 14A, the locking elements 261a, 261b approach the engagement flaps 208a, 208b. As the engagement flaps protrude above the inner surface of the outer packet part 200, after a certain amount of movement the locking elements make contact and engage with the engagement flaps 208a, 208b. Further movement of the inner packet part 250 causes the locking elements to continue their engagement with the engagement flaps 208a, 208b, rubbing along the top surface of the engagement flaps 208a, 208b. At this stage, the locking elements 261a, 261b are slightly deflected from the perpendicular orientation relative to the front and rear faces 251a, 251b of the inner packet part 250. The requirement to deflect the locking elements 261a, 261b from their original orientation creates an inhibiting effect on the movement of the inner packet part 250 relative to the outer packet part 200 when engagement of the locking elements 261a, 261b and the engagement flaps 208a, 208b is initiated.

**[0072]** The inner packet part 250 is then moved relative to the outer packet part 200 further to the open position, as shown in Figures 6C and 7B. As the inner packet part enters the open position, the locking elements 261a, 261b move beyond the engagement flaps 208a, 208b and therefore disengage with the engagement flaps 208a, 208b. As a consequence, the locking elements 261a, 261b, flick outwardly towards the inner surface of the outer packet part 200. The debossed regions 209a, 209b receive the locking elements 261a, 261b at this point. As the locking elements 261a, 261b strike the surface of the debossed regions 209a, 209b, an audible click is produced, to give confidence to the user that the ap-

propriate position has been reached.

**[0073]** Excessive opening of the inner packet part 250 relative to the outer packet part 200 is prevented by engagement of the front restraining tabs 259a with the restraining flap 207a and of the rear restraining tab 259b with the restraining flap 207b. In particular, the front restraining tab 259a is received between the restraining flap 207a and the front face 201a, while the rear restraining tab 259b is received through the restraining portion 207b between the rear flap 208b and the rear face 201b of the outer packet part 200. As a result, this engagement of the restraining tabs 259a, 259b prevents movement of the inner packet part 250 beyond the open position.

**[0074]** When the inner packet part 250 is moved from the open position shown in Figure 14B towards the closed position, the locking elements 261a again engage with the engagement flaps 209a, 209b, causing the locking elements 261a, 261b to be deflected from an orientation perpendicular to the front and rear faces 251a, 251b of the inner packet part 250. As for movement from the closed position, movement from the open position is therefore inhibited as it requires the locking elements 261a, 261b to be deflected from their original positions.

**[0075]** As the inner packet part 250 enters the closed position, the locking elements 261a, 261b pass beyond the engagement flaps 208a, 208b, and flick outwardly to contact the front and rear faces of the inner packet part 250. Again, this causes an audible click, indicating to the user that the action has completed or is nearly complete.

**[0076]** The above description relates to two particularly preferred embodiments of the invention, but it will be appreciated that other implementations are possible. In particular, the skilled person may modify or alter the particular geometry and arrangement of the particular features of the packaging. Particularly, the respective positions of the locking elements and engagement portions on the inner and outer packet parts can easily be modified or inverted by the skilled person without affecting the functional behaviour of the packaging of the invention. Other variations and modifications will also be apparent to the skilled person. Such variations and modifications may involve equivalent and other features which are already known and which may be used instead of, or in addition to, features described herein. Features that are described in the context of separate embodiments may be provided in combination in a single embodiment. Conversely, features which are described in the context of a single embodiment may also be provided separately or in any suitable subcombination.

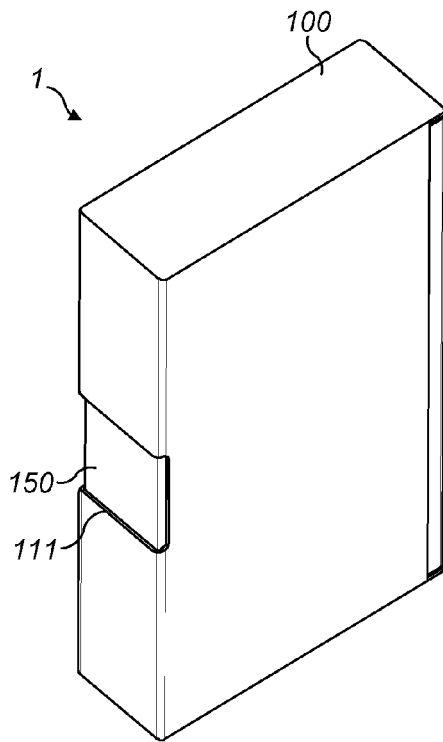
## Claims

### 1. Packaging, comprising:

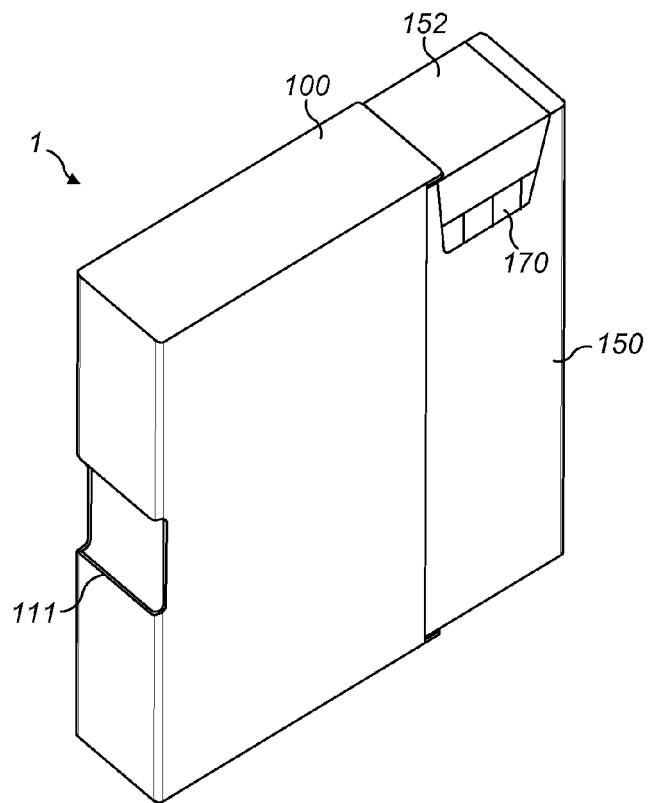
- an outer packet part;
- an inner packet part disposed within the outer packet part, the inner packet part being movable



- relative to the outer packet part between a first position and a second position; and at least one locking mechanism comprising a locking element and an engagement portion, wherein the locking element projects from the inner packet part and the engagement portion protrudes from an internal surface of the outer packet part facing the inner packet part, wherein the locking element and the engagement portion are arranged such that movement of the inner packet part between the first position and the second position is effective to engage the locking element and the engagement portion at a first edge of the engagement portion and to subsequently disengage the locking element and the engagement portion at a second edge of the engagement portion.
2. Packaging according to claim 1, wherein the locking element is concealed by the outer packet part in one or both of the first position and the second position.
  3. Packaging according to claim 1 or claim 2, wherein said locking element and said engagement portion are configured such that at least disengagement of said locking element and engagement portion generates a sound.
  4. Packaging according to claim 3, wherein sound is generated by elastic release of said locking element from said engagement portion.
  5. Packaging according to any of the preceding claims, wherein the engagement portion comprises at least one engagement flap folded in position above an inner face of the outer packet part to form a raised portion on said inner surface, wherein a first edge of the engagement portion is formed by a fold of said engagement flap and a second edge is formed by a distal end of said engagement flap.
  6. Packaging according claim 5, further comprising a debossed region adjacent to said distal end of said engagement flap.
  7. Packaging according to any of the preceding claims, wherein said locking element is cut from a corner portion of the inner packet part such that its distal edge projects from the inner packet part.
  8. Packaging according to any one of the preceding claims, further comprising a second locking mechanism, wherein the first locking mechanism and the second locking mechanism are disposed respectively on opposing sides of the packaging with regard to a median plane of said packaging.
  9. Packaging according to any one of the preceding claims, further comprising a restraining mechanism comprising a first restraining element and a second restraining element provided on opposing faces of the inner packet part and the outer packet part, wherein engagement of the first and second elements is effective to limit movement of the inner packet part relative to the outer packet part.
  10. Packaging according to any one of the preceding claims, wherein the outer packet part comprises at least one opening or recess through which one can push or pull the inner packet part to initiate movement of the inner packet part relative to the outer packet part.
  11. Packaging according to any one of the preceding claims, wherein longitudinal edges of the packaging when the inner packet part is in a closed position have a curved profile.
  12. A blank for forming the inner packet part of any one of the preceding claims.
  13. A blank for forming the outer packet part of any one of claims 1 to 11.
  14. A method of forming a packaging according to any of claims 1 to 13, comprising the steps of:
    - forming an inner packet part by folding the blank of claim 12, and
    - forming an outer packet part by folding the blank of claim 13 around said inner packet part such that said inner part is in said first position when packaging is complete.



**FIG. 1A**



**FIG. 1B**

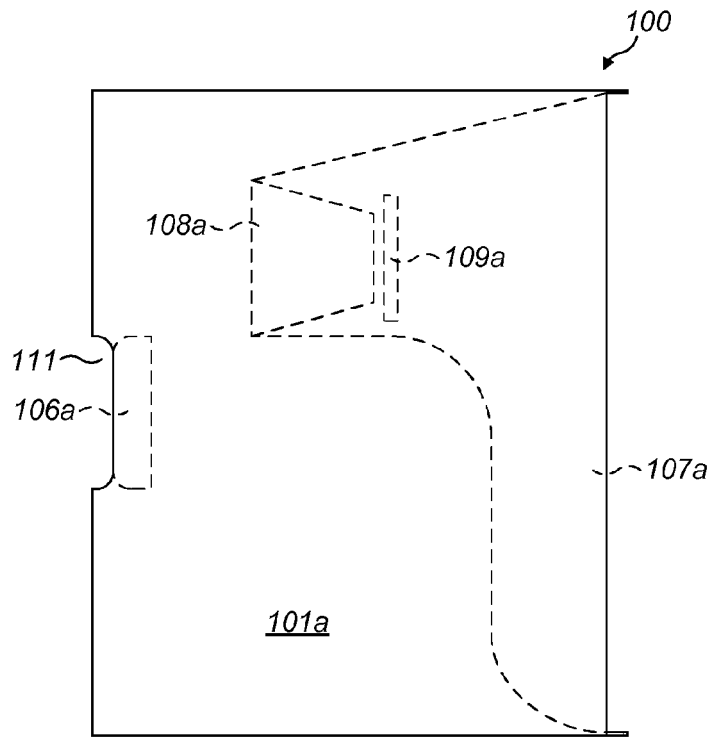


FIG. 2A

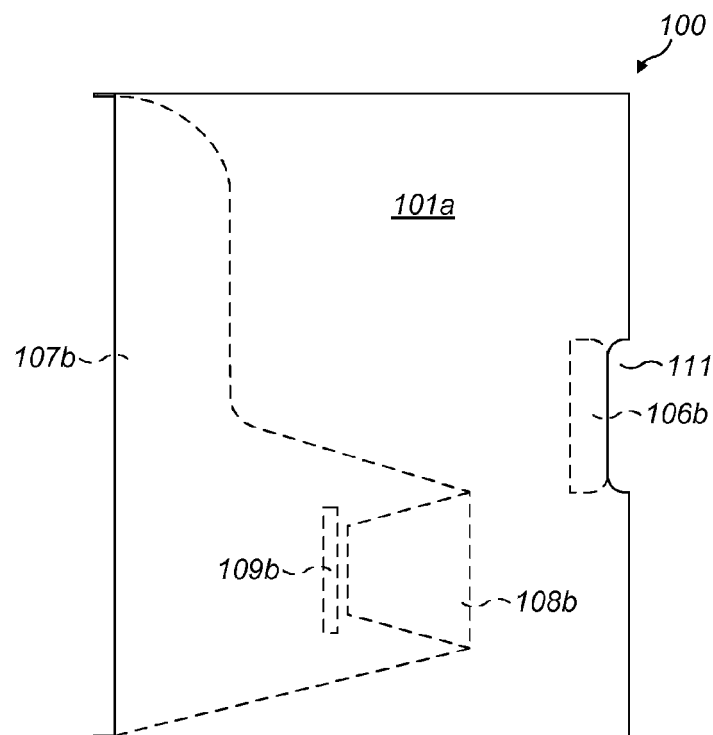
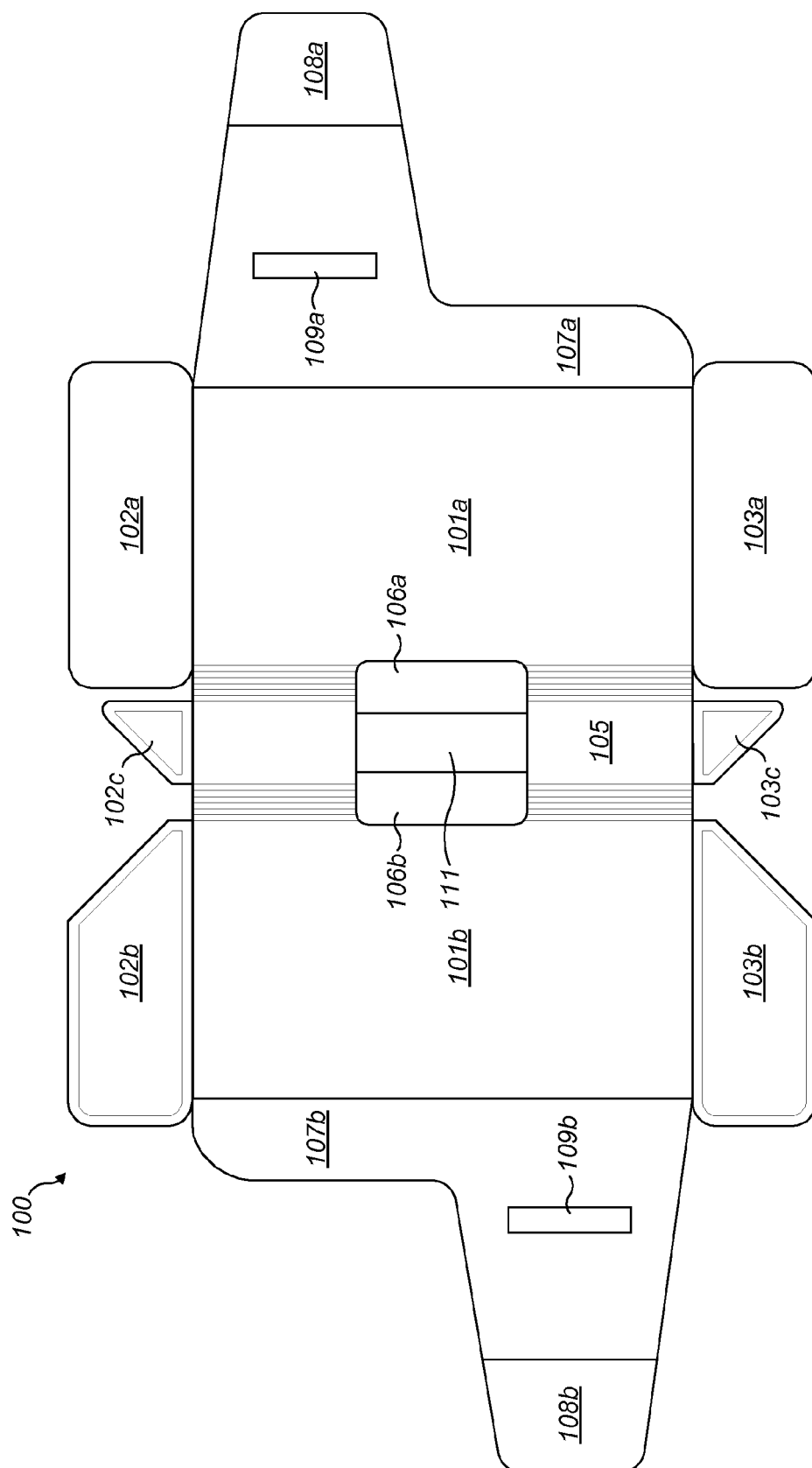


FIG. 2B



**FIG. 3**

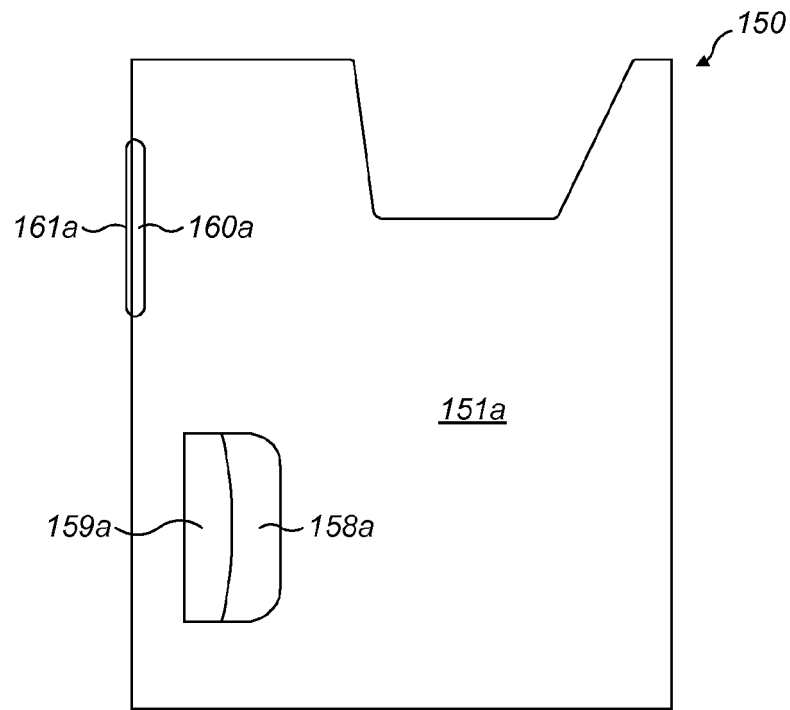


FIG. 4A

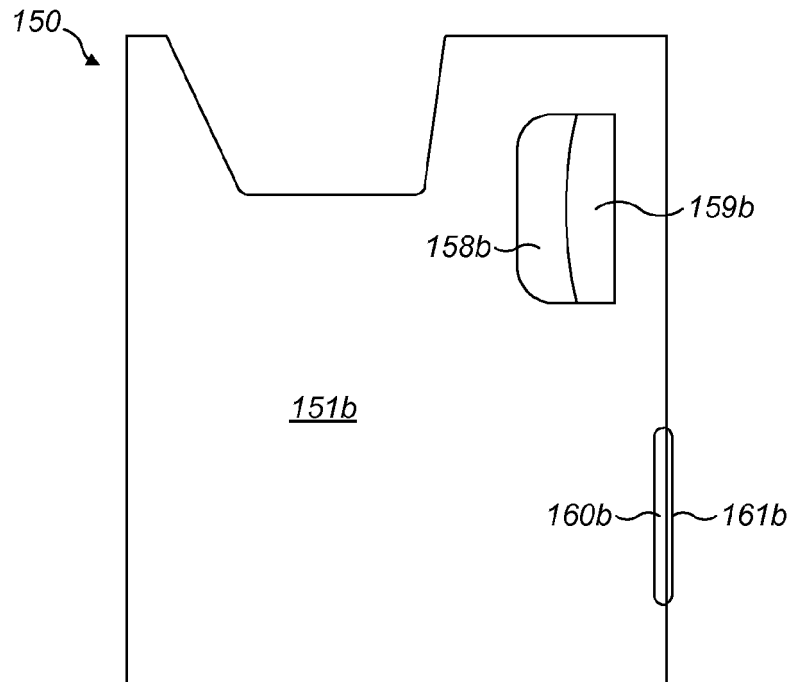


FIG. 4B

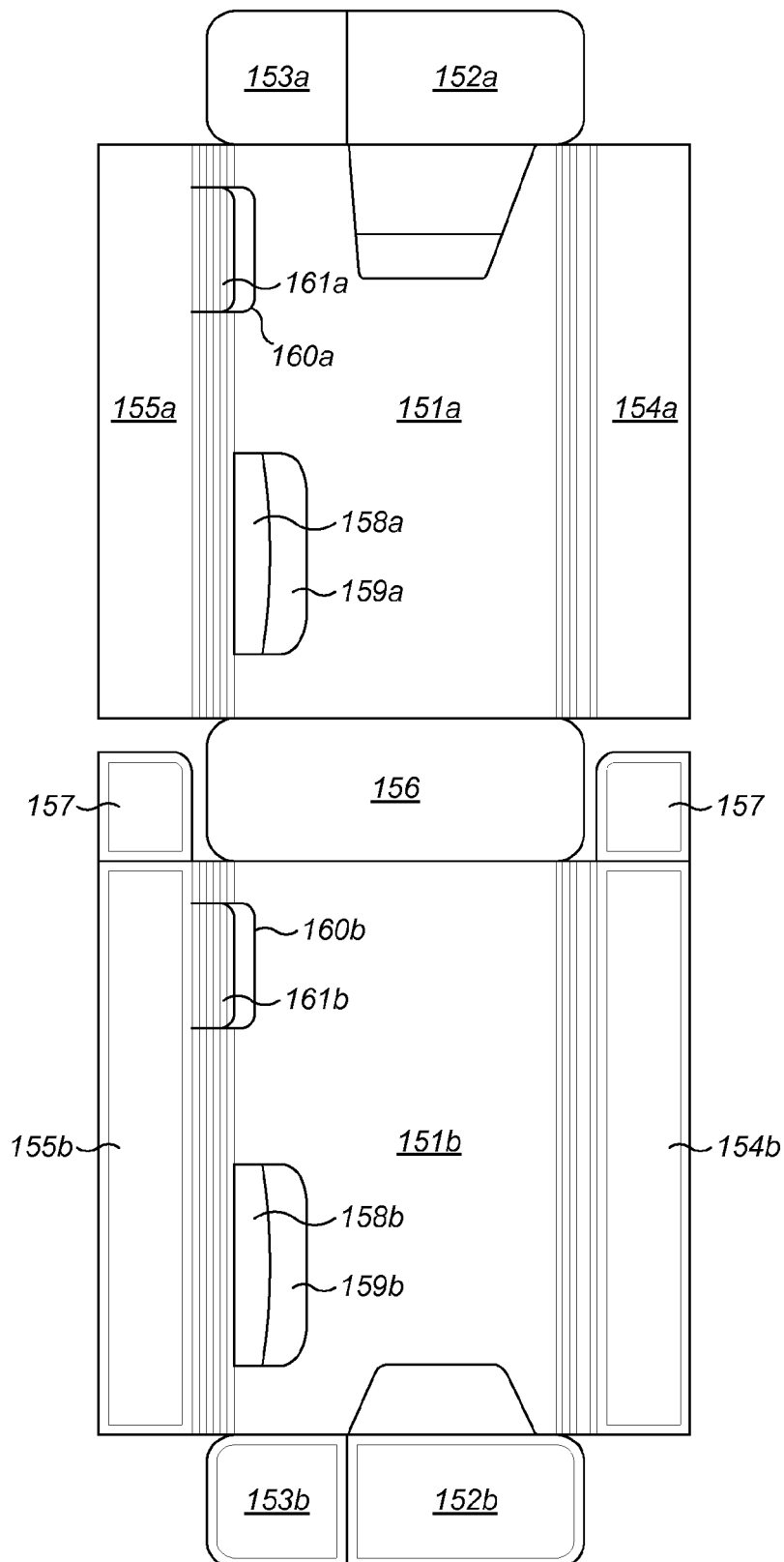
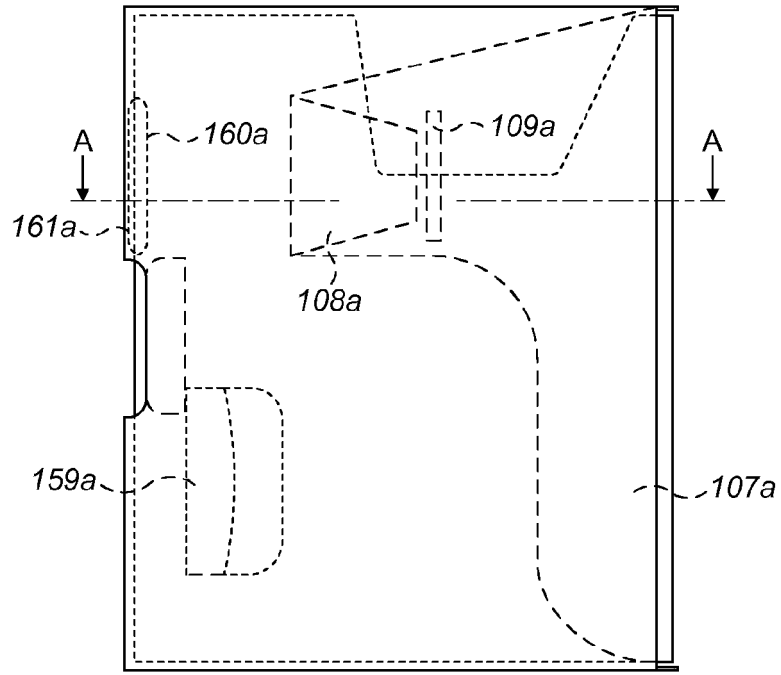
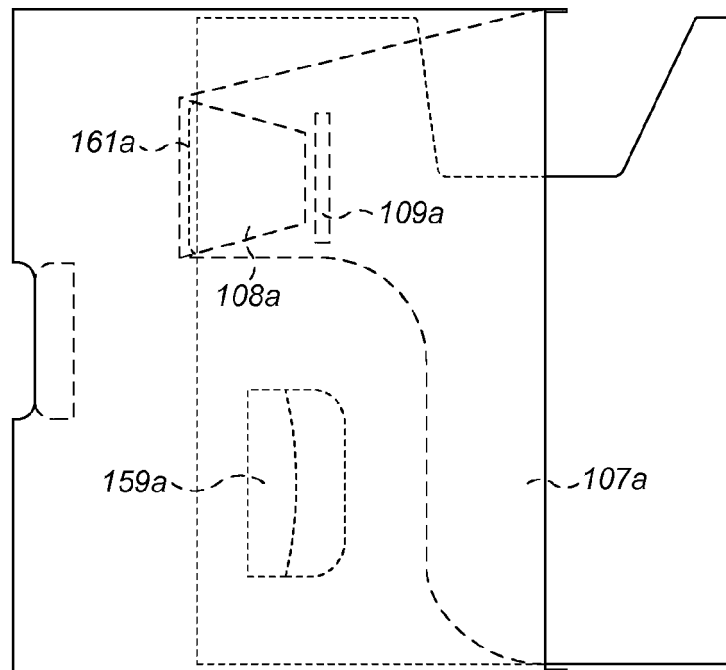


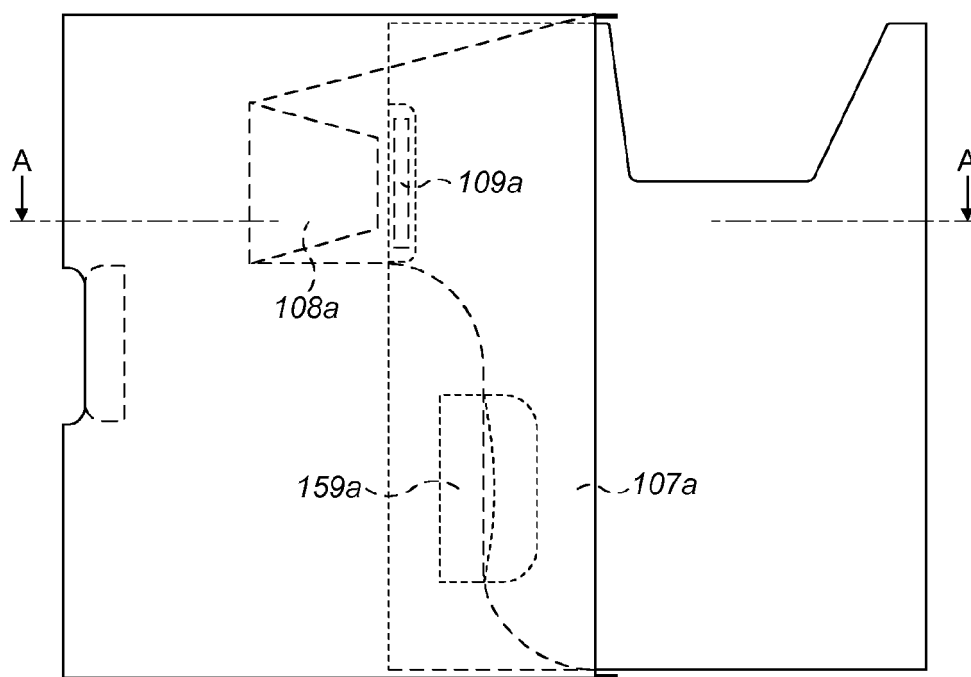
FIG. 5



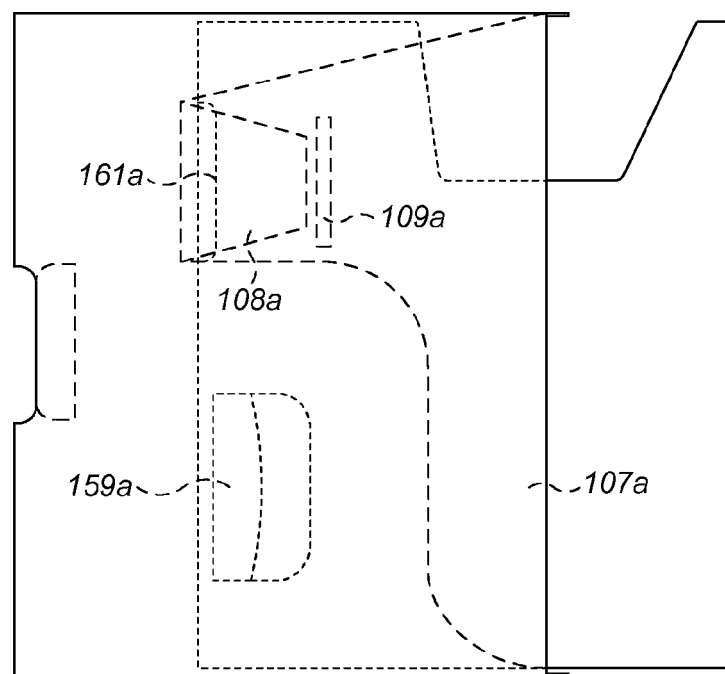
**FIG. 6A**



**FIG. 6B**

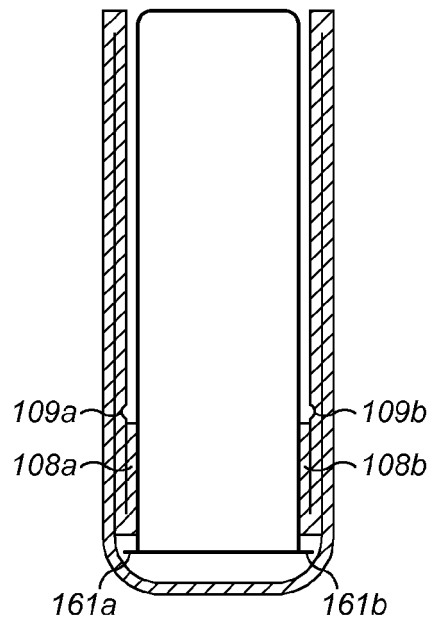


**FIG. 6C**

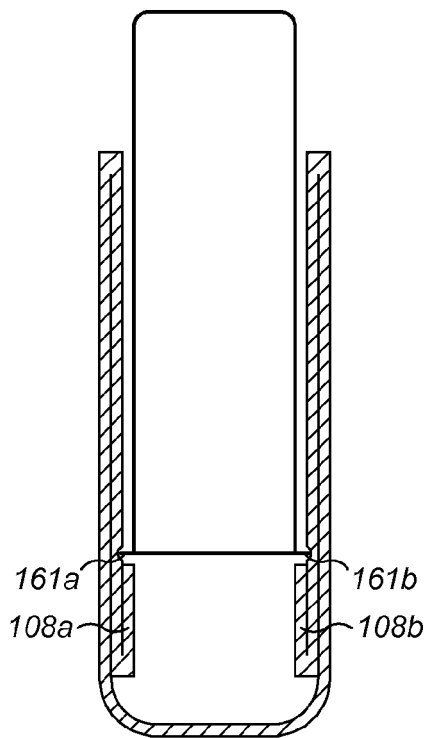


**FIG. 6D**

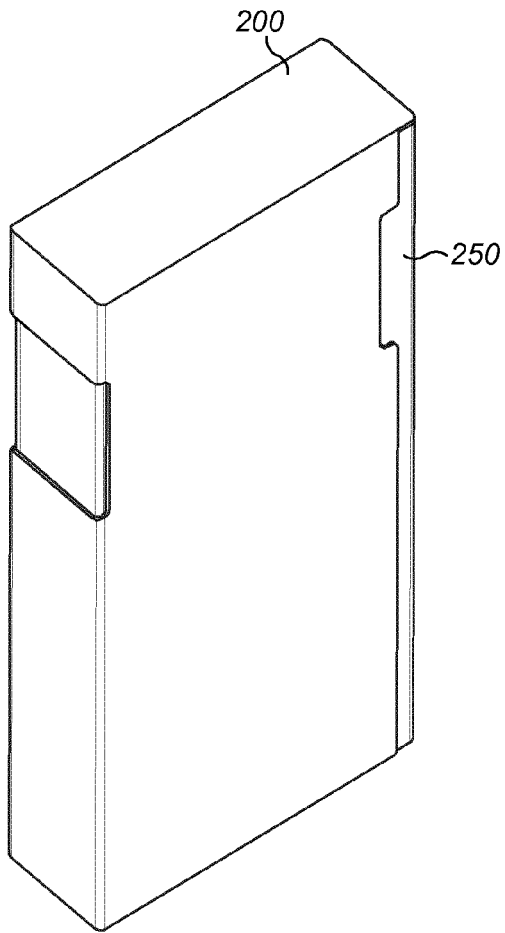




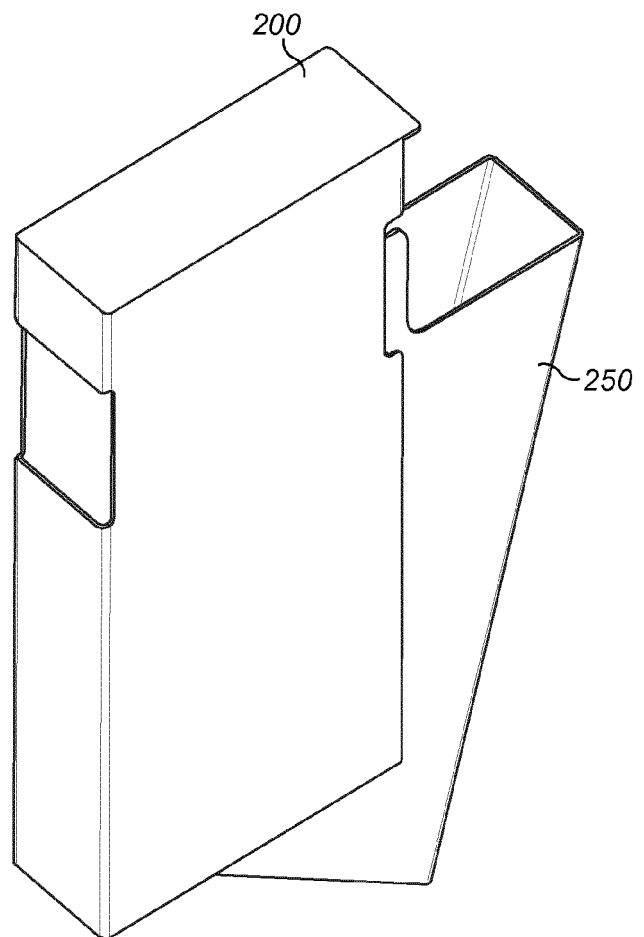
**FIG. 7A**



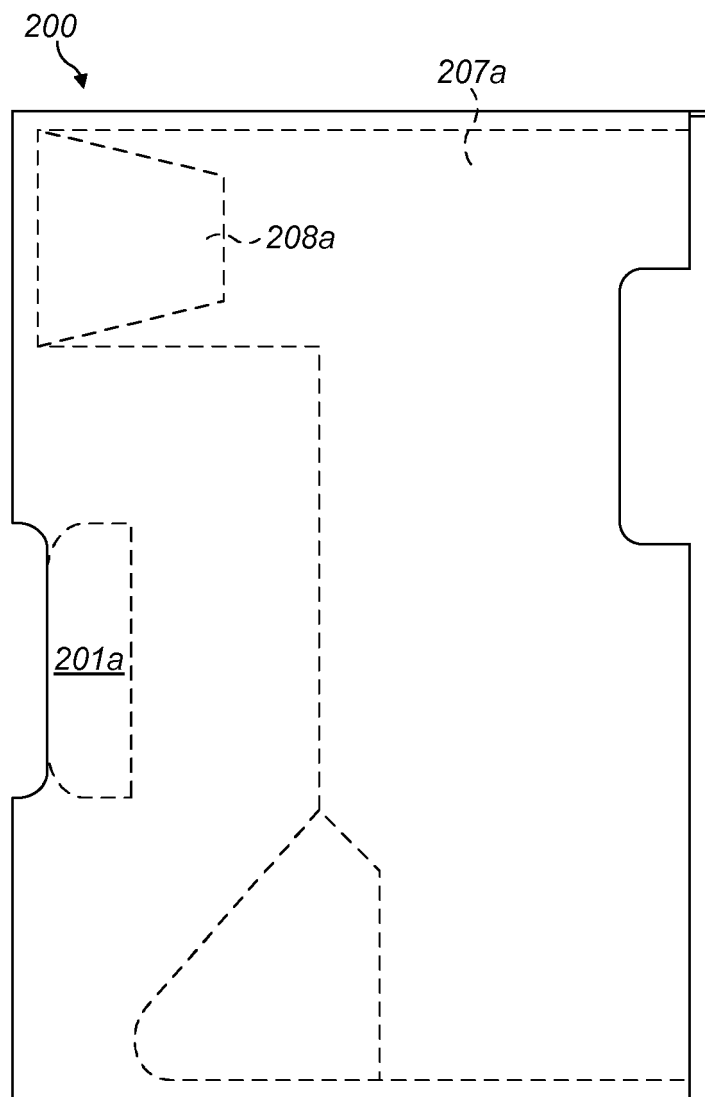
**FIG. 7B**



**FIG. 8**



**FIG. 9**



**FIG. 10**

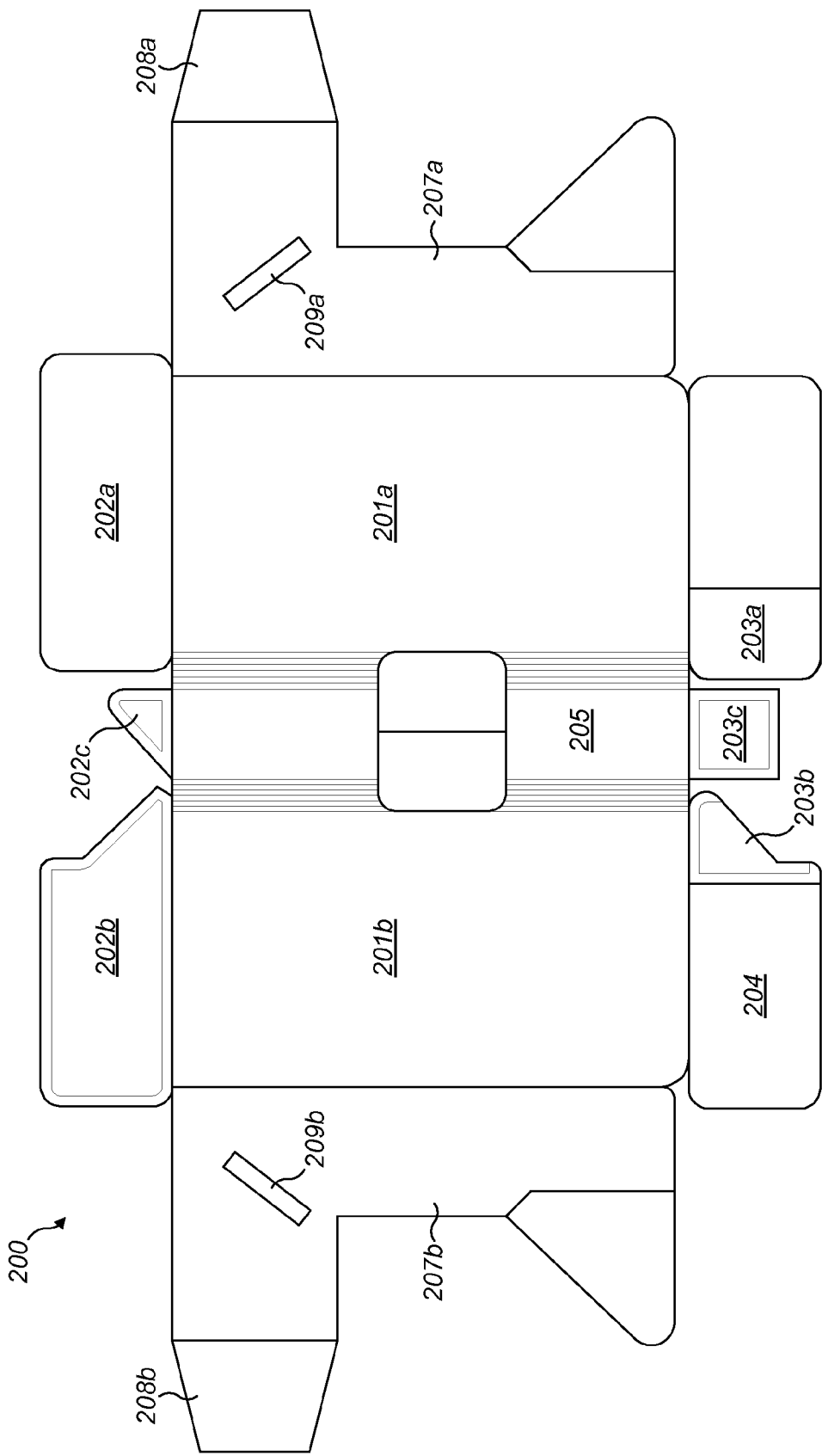
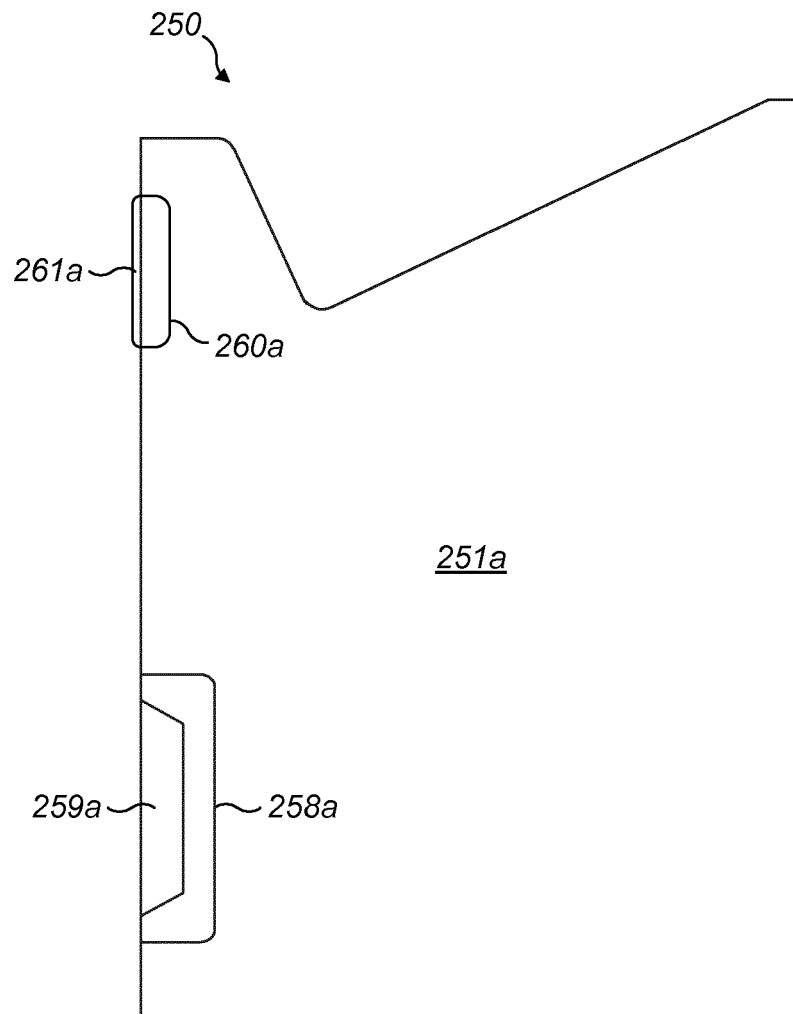


FIG. 11



**FIG. 12**

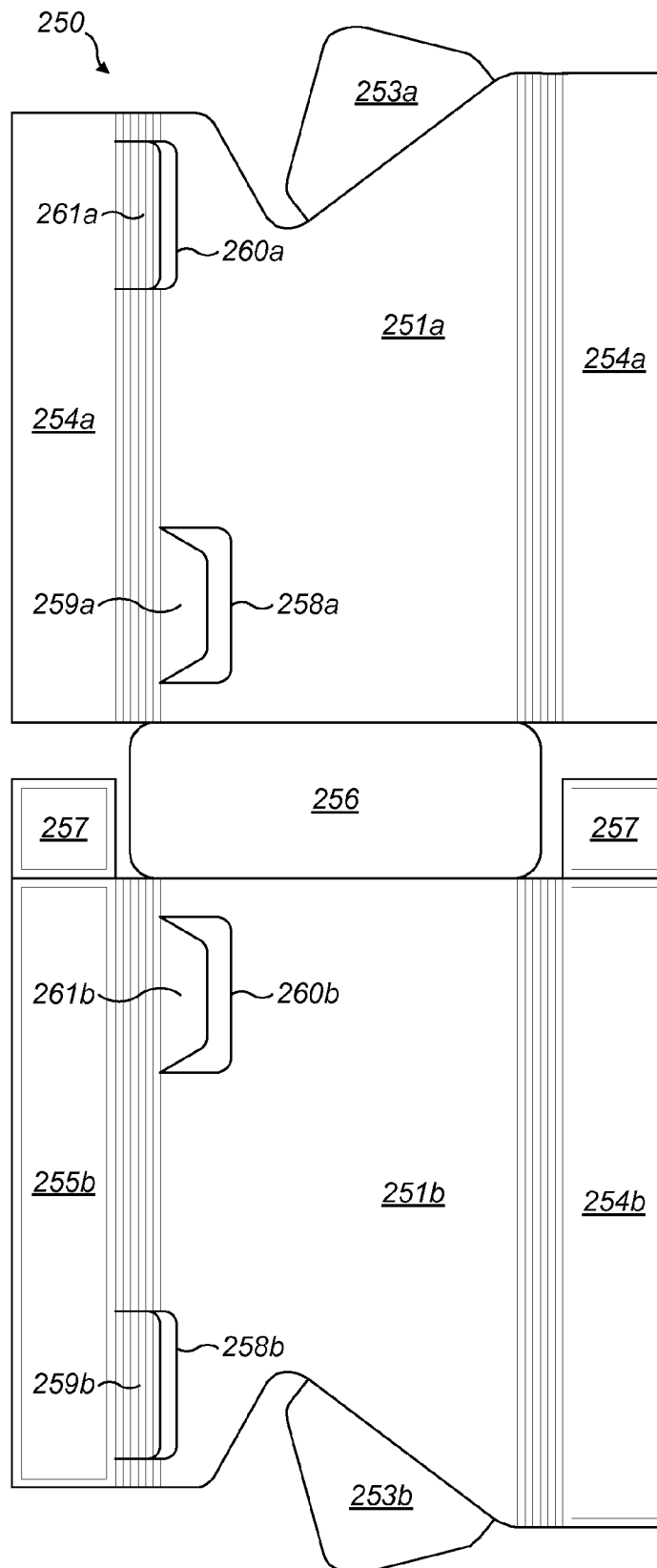
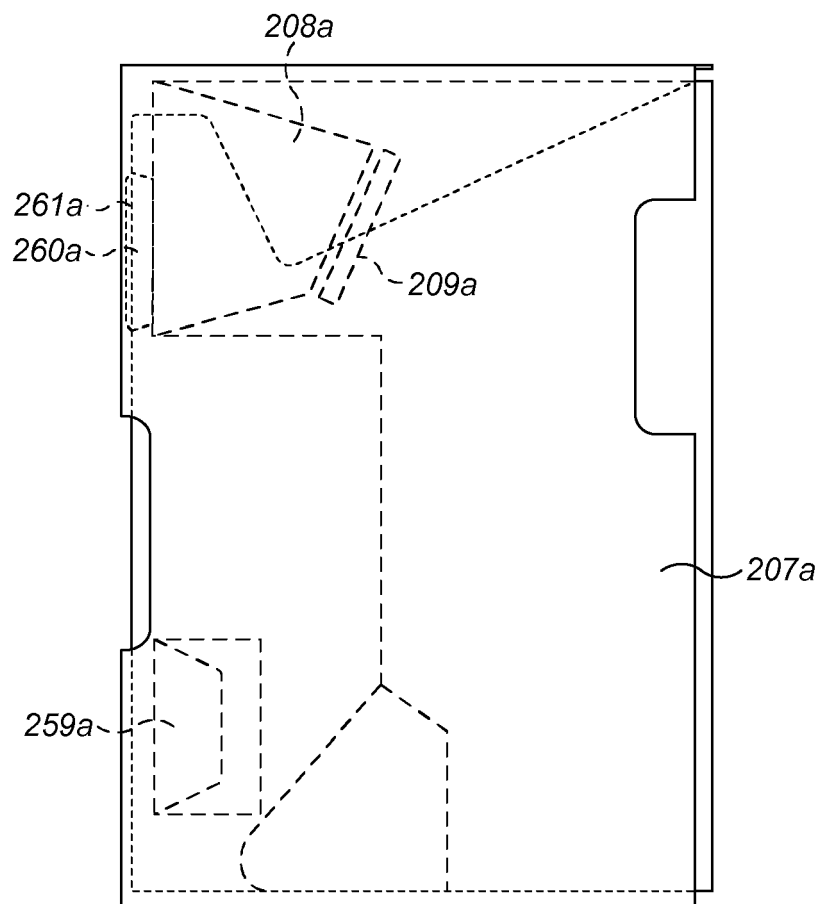
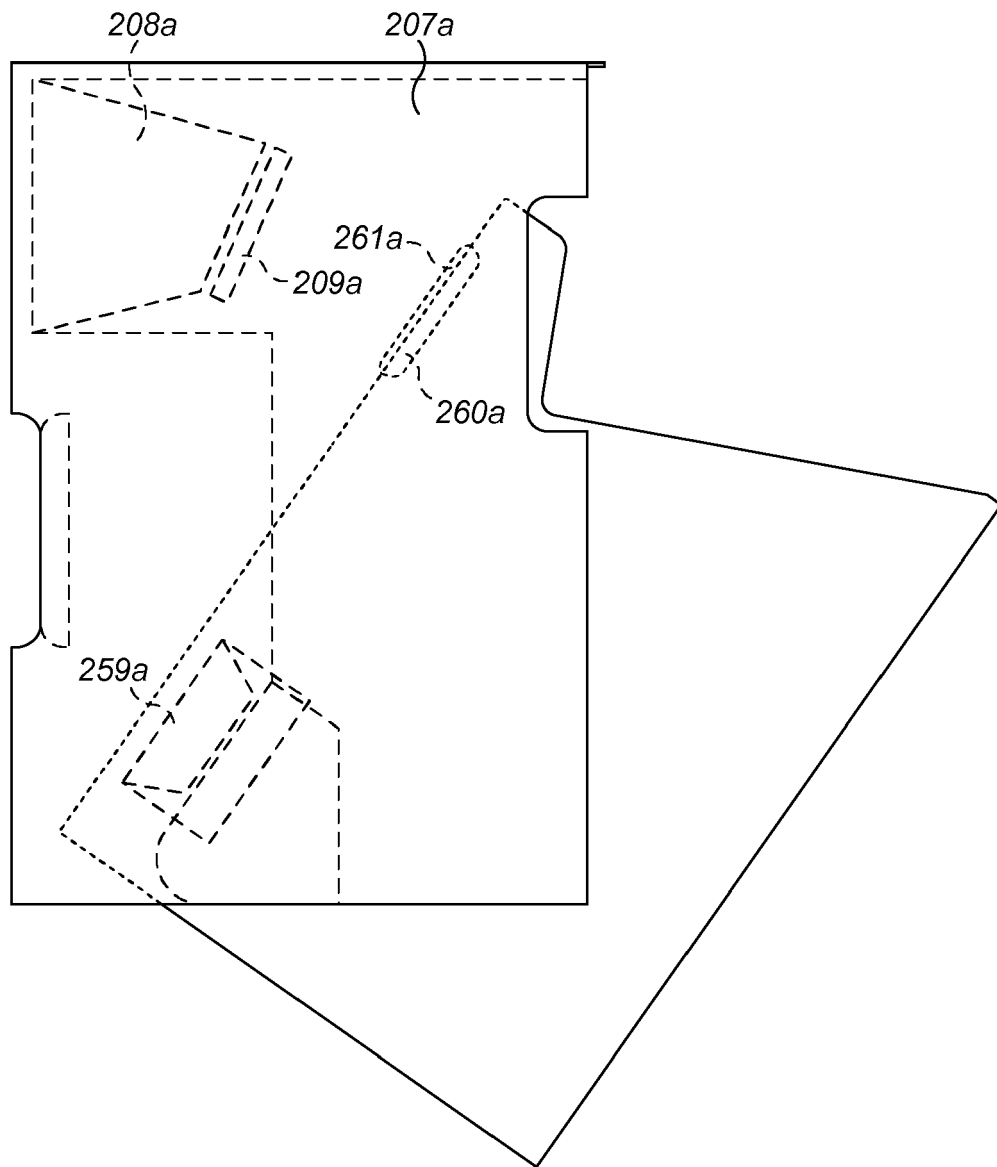


FIG. 13



**FIG. 14A**



**FIG. 14B**





## EUROPEAN SEARCH REPORT

Application Number  
EP 12 18 7131

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	EP 1 669 306 A1 (PHILIP MORRIS PROD [CH]) 14 June 2006 (2006-06-14)	1-4,9-14	INV. B65D5/38 B65D5/42 B65D5/52 B65D85/10
A	* abstract; figures 1-3 * * paragraph [0011] - paragraph [0027] * -----	5-8	
X	WO 2011/154822 A1 (GD SPA [IT]; GHINI MARCO [IT]; BIONDI ANDREA [IT]) 15 December 2011 (2011-12-15)	1,2,5-14	
Y	* abstract; figures 1-16 * * page 4, line 15 - page 14, paragraph 2 * -----	3,4	
Y	EP 0 884 247 A1 (JAPAN TOBACCO INC [JP]) 16 December 1998 (1998-12-16)	3,4	
A	* abstract; figures 1-7 * * column 3, line 28 - column 7, line 34 * -----	5,6	
A	FR 2 499 947 A3 (REYNOLDS TOBACCO GMBH [DE]) 20 August 1982 (1982-08-20) * page 4, line 21 - page 5, last paragraph; figures 1-3 * -----	1-14	
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			B65D
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 5 March 2013	Examiner Segerer, Heiko
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons &amp; : member of the same patent family, corresponding document</p>			

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