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(54) **Retail packaging system**

(57) A retail packaging system includes an electronic device case and a packaging box for enclosing and displaying the electronic device case. The packaging box includes a bottom cover and a top cover pivotally coupled to the bottom cover. A pedestal is positioned at least par-

tially within the bottom cover and supports the electronic device case, and a hinge is coupled to the pedestal and the top cover such that the pedestal lifts the electronic device case relative to the bottom cover as the packaging box is opened into a display position.

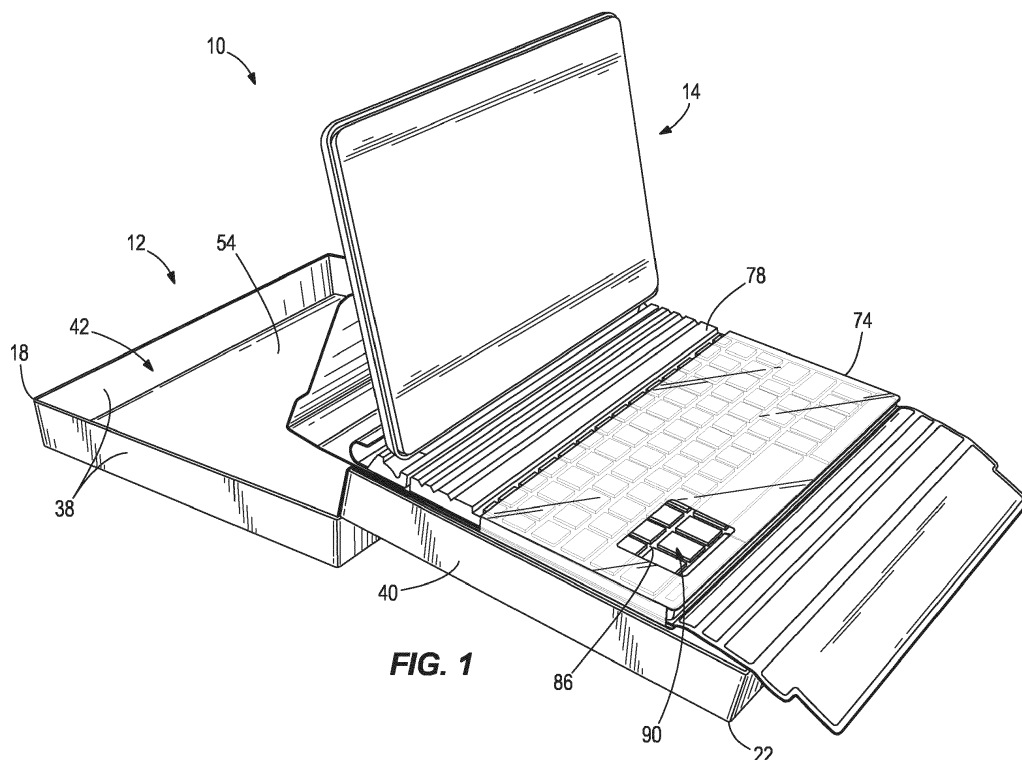


FIG. 1

Description

BACKGROUND

[0001] The present invention relates to retail packaging systems for consumer products such as, for example, tablet computer cases.

[0002] Retailers typically desire packaging that not only helps sell a product, but also keeps the product from being easily taken out of the packaging. Retailers also prefer packaging that is easy to re-merchandise (i.e., place the product/package back on a shelf and have it look the same).

[0003] Consumers, on the other hand, typically desire packaging that allows them to touch, feel, and completely experience a product. Consumers also prefer packaging that feels and looks of premium quality.

SUMMARY

[0004] In one aspect, the invention provides a retail packaging system including an electronic device case and a packaging box for enclosing and displaying the electronic device case. The packaging box includes a bottom cover, a top cover pivotally coupled to the bottom cover, a pedestal positioned at least partially within the bottom cover, the pedestal supporting the electronic device case, and a hinge coupled to the pedestal and the top cover such that the pedestal lifts the electronic device case relative to the bottom cover as the packaging box is opened into a display position.

[0005] Lifting the case allows the case to be viewed from all sides.

[0006] In a possible embodiment of the retail packaging system the electronic device case is manipulatable (e.g., tested, articulated, opened, closed, etc.) by a user while the packaging box is in the display position without removing the electronic device case from the packaging box.

[0007] In a possible embodiment, the electronic device case is openable and closeable while the packaging box is in the display position. Advantageously this results in that while the case is in a closed position, the encased electronic device is not viewable and is not touchable by a user. While the case is in an open position, the encased electronic device is viewable by a user and at least a portion thereof, for example a keyboard, is touchable by the user.

[0008] In a possible embodiment of the retail packaging system the packaging box further includes a securement member coupled to the pedestal, wherein the securement member secures the electronic device case to the pedestal.

[0009] In a further embodiment the securement member captures a portion of the electronic device case between the securement member and the pedestal to hold down the electronic device case. In a more particular embodiment the portion of the electronic device includes

a keyboard, and the securement member extends across and holds the keyboard against the pedestal. In an advantageous embodiment the securement member defines an aperture to allow a user to directly touch the keyboard.

[0010] In another further embodiment the securement member includes a transparent plastic sheet. This has the effect that the securement member is unobtrusive in that a user can still view the case without removing the case from the box.

[0011] In a possible embodiment of the retail packaging system the packaging box is moveable from a storage position into the display position, and the pedestal is moveable from a lowered position into a raised position. In a more particular embodiment the pedestal is disposed above an upper edge of the bottom cover while in the raised position.

[0012] In a possible embodiment of the retail packaging system the bottom cover includes a plurality of support tabs that support the pedestal above an inner surface of the bottom cover.

[0013] In a more particular embodiment each support tab includes at least one hinge that allows the support tab to move from a flush position while the packaging box is in a storage position to a folded position while the packaging box is in the display position. The support tabs formed this way guide and support the pedestal when the top cover is opened to help lift the pedestal and the case relative to the bottom cover.

[0014] In yet another possible embodiment the retail packaging system further comprises a pull tab extending from one of the top cover and the bottom cover to facilitate opening the packaging box. The pull tab facilitates separating the top cover from the bottom cover while opening the packaging box by holding the pull tab when opening the top cover.

[0015] In another aspect, the invention provides a method of displaying an electronic device case in a packaging box. The packaging box includes a bottom cover, a top cover pivotally coupled to the bottom cover, a pedestal positioned at least partially above the bottom cover, and a hinge coupled to the top cover and the pedestal. The method includes positioning the electronic device case on the pedestal; storing the electronic device case within the packaging box while the packaging box is in a storage position; opening the packaging box to a display position; and lifting the electronic device case relative to the bottom cover with the pedestal as packaging box is opened to the display position.

[0016] The method may further comprise manipulating the electronic device case while the packaging box is in the display position without removing the electronic device case from the packaging box. Manipulating the electronic device case may include opening and closing the electronic device case.

[0017] In a possible embodiment the packaging box includes a securement member coupled to the pedestal, and the method may further comprise securing the elec-

tronic device case to the pedestal with the securement member.

[0018] In a further embodiment the securement member includes a transparent plastic sheet, and securing the electronic device case to the pedestal may include capturing a portion of the electronic device case between the securement member and the pedestal to hold down the electronic device case.

[0019] The method possibly further comprises supporting the electronic device case on the pedestal above an upper edge of the bottom cover while the packaging box is opened to the display position.

[0020] In a possible embodiment the packaging box includes a pull tab extending from one of the top cover and the bottom cover, and opening the packaging box includes grasping the pull tab.

[0021] Other aspects of the invention will become apparent by consideration of the detailed description and accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0022]

Fig. 1 is a front perspective view of a retail packaging system embodying the invention, the system including a packaging box in a display position and an electronic device case in an open position.

Fig. 2 is a front perspective view of the retail packaging system of Fig. 1 with the packaging box in the display position and the electronic device case in a closed position.

Fig. 3 is a front perspective view of the packaging box of Fig. 1 while in the display position.

Fig. 4 is a perspective view of the packaging box of Fig. 1 while in a storage position.

Fig. 5 is an exploded perspective view of the packaging box of Fig. 1.

Fig. 6 is a rear perspective view of the packaging box of Fig. 1 while in the display position.

Figs. 7A-B are side cross-sectional views of the packaging box of Fig. 1, illustrating a pedestal in a lowered position and the packaging box in the storage position.

Figs. 8A-B are side cross-sectional views of the packaging box of Fig. 1, illustrating the pedestal moving from the lowered position to a raised position while the packaging box is moving from the storage position to the display position.

Figs. 9A-B are side cross-sectional views of the

packaging box of Fig. 1, illustrating the pedestal in the raised position and the packaging box in the display position.

5 DETAILED DESCRIPTION

[0023] Before any embodiments of the invention are explained in detail, it is to be understood that the invention is not limited in its application to the details of construction and the arrangement of components set forth in the following description or illustrated in the following drawings. The invention is capable of other embodiments and of being practiced or of being carried out in various ways.

[0024] Figs. 1-2 illustrate a retail packaging system 10 for enclosing and displaying a consumer product or electronic device case in a retail setting. The system 10 includes a packaging box 12 and an electronic device case 14. In the illustrated embodiment, the packaging box 12 is configured to enclose and display a keyfolio or tablet computer case 14. In other embodiments, the packaging box 12 may be configured to enclose other types of products such as, for example, smartphone cases, e-reader cases, mp3 player cases, etc. The illustrated packaging box 12 is made of a relatively rigid paper material, such as cardboard or cardstock. However, the packaging box 12 may alternatively be made of other materials, such as plastic, metal, or a combination of materials.

[0025] The illustrated packaging box 12 is assembled from various pre-cut cover materials that form portions of the box 12, which includes a top cover 18, a bottom cover 22, a first hinge 26, and a pedestal 28 (Fig. 5). The top and bottom covers 18, 22 cooperate together to support and enclose the tablet computer case 14. The top and bottom covers 18, 22 are coupled together by the first hinge 26, which allows the top cover 18 to pivot open relative to the bottom cover 22 from a storage position (Fig. 4) into a display position (Figs. 1-3). As shown in Fig. 4, while the box 12 is in the storage position, the box 12 is closed such that the top cover 18 covers the bottom cover 22, and the case 14 is enclosed within the box 12. As shown in Figs. 1-3, while the box 12 is in the display position, the box 12 is open such that the top cover 18 and the bottom cover 22 are positioned generally side-by-side and the case 14 is viewable by a user. In both positions, the top cover 18 remains connected to the bottom cover 22 via the first hinge 26. In the illustrated embodiment, the first hinge 26 includes a strip of rigid paper material that is secured (e.g., glued) to the top and bottom covers 18, 22. In other embodiments, the first hinge 26 may be coupled to the top and bottom covers 18, 22 using other suitable securing means, or may be integral with the top cover 18 and/or the bottom cover 22.

[0026] As illustrated in Fig. 5, the top cover 18 and the bottom cover 22 each include a base 30, 32 having an inner surface 34, 36, respectively. The covers 18, 22 also include side walls 38, 40 extending from the corresponding bases 30, 32. The bases 30, 32 and the sidewalls 38, 40 define upper and lower chambers 42, 44 that are sized

for receiving the case 14. The bottom cover 22 further includes a tab sheet 46 with a plurality of support tabs 50. The tab sheet 46 is attached (e.g., glued) to the inner surface 36 of the bottom cover 22 and is described in more detail below.

[0027] In reference to Figs. 1-2 the pedestal 28 supports the tablet computer case 14 and is positioned partially above the base 32 of the bottom cover 22. The pedestal 28 is configured to move vertically from a lowered position (Fig. 7A), in which the supported case 14 is contained within the lower chamber 44 of the bottom cover 22, to a raised position (Fig. 9A), in which the supported case 14 is lifted at least partially above the side walls 40 of the bottom cover 22 and at least partially out of the lower chamber 44. The pedestal 28 is tied to the upper cover 18 such that the pedestal 28 automatically moves to the raised position when the upper cover 18 is moved to the display position, and automatically moves back to the lowered position when the cover 18 is moved to the storage position. In some embodiments, the case 14 is lifted completely above the side walls 40 of the bottom cover 22 and is completely outside the lower chamber 44 when the pedestal 28 is in the raised position. In other embodiments, the case 14 may be lifted such that a portion of the case 14 remains within the lower chamber 44 (i.e., beneath the upper edges of the side walls 40). Lifting the case 14 at least partially out of the lower chamber 44 allows the computer case 14 to be viewed from all sides. In addition, such an arrangement allows the computer case 14 to be manipulated (e.g., tested, articulated, opened, closed, etc.) without removing the case 14 from the packaging box 12, as shown in Figs. 1-2. While the computer case 14 is in a closed position (Fig. 2), the encased electronic device is not viewable and the keyboard 86 is not touchable by a user. While the computer case 14 is in an open position (Fig. 1), the encased electronic device is viewable by a user and at least a portion of the keyboard 86 is touchable by the user (Fig. 1).

[0028] As shown in Fig. 5, the illustrated pedestal 28 includes an upper flap 54 coupled (e.g., glued) to the inner surface 34 of the top cover 18, a lower flap 58 coupled (e.g., glued) to the support tabs 50 of the tab sheet 46, and a second hinge 62 extending between the upper and lower flaps 54, 58. As the top cover 18 is opened relative to the bottom cover 22, the upper flap 54 pulls the second hinge 62 to lift the pedestal 28 relative to the base 32 and the inner surface 36 of the bottom cover 22. The pedestal 28, thereby, lifts the tablet computer case 14 relative to and out of the bottom cover 22. The upper flap 54 is substantially planar and sits generally flush or parallel with the inner surface 34 of the top cover 18. The upper flap 54 is illustrated having dimensions corresponding to the inner surface 34 and covering the entire surface 34; however, the upper flap 54 could also be formed to cover only a portion of the surface 34. The lower flap 58 is also substantially planar and is dimensioned to correspond with the shape and size of the case 14. However, the lower flap 58 could be formed with al-

ternative dimensions. In some embodiments, the pedestal 28 may also include separate pieces secured together to form the entire pedestal 28.

[0029] The support tabs 50 are formed as part of the tab sheet 46 and are located adjacent the inner surface 36 of the bottom cover 22. The support tabs 50, unlike the remainder of the tab sheet 46, are not attached (e.g., glued) to the inner surface 36 of the bottom cover 22. Instead, the support tabs 50 are cutout or punched-out portions of the sheet 46 that are movable relative to the remainder of the sheet 46. Each support tab 50 includes one or more hinges or fold lines 66 that allow the tabs 50 to move (e.g., bend) relative to the rest of the sheet 46. In particular, each tab 50 is movable from a flush position (Fig. 7A) to a folded or extended position (Figs. 5 and 9A) to extend upward from the bottom cover 22 while engaging the lower flap 58 of the pedestal 28. While the support tabs 50 are in the flush position, the tabs 50 rest generally parallel with the remainder of the tab sheet 46 and lay substantially flat within the bottom cover 22. While the support tabs 50 are in the folded or extended position, the tabs 50 extend upward to form an angle between the support tabs 50 and the remainder of the tab sheet 46 and are no longer substantially flat. The support tabs 50 guide and support the pedestal 28 when the top cover 18 is opened to help lift the pedestal 28 and the tablet computer case 14 relative to the bottom cover 22. In the illustrated embodiment, the bottom cover 22 includes three support tabs 50. In other embodiments, the bottom cover 22 may include fewer or more support tabs 50.

[0030] As shown in Figs. 3, 5, and 6, the packaging box 12 further includes a securement member 74. The securement member 74 captures a portion of the tablet computer case 14 between the securement member 74 and the pedestal 28 to hold down or secure the case 14 to the pedestal 28. In some embodiments, the securement member 74 is configured such that the tablet computer case 14 is not removable from the packaging box 12 without disassembling portions of the box 12. The securement member 74, however, is unobtrusive so that a user can still view and manipulate the computer case 14 without removing the case 14 from the box 12. In the illustrated embodiment, the securement member 74 includes a transparent plastic sheet of, for example, polyethylene terephthalate (PET).

[0031] As shown in Fig. 1, the securement member 74 extends over a base portion 78 of the computer case 14 and wraps around a portion of the pedestal 28. The securement member 78 is secured (e.g., glued) to a bottom surface 82 of the pedestal 28. In such embodiments, a keyboard 86 on the base portion 78 of the computer case 14 is sandwiched between the securement member 74 and the pedestal 28, yet still accessible. The illustrated securement member 74 defines an aperture 90 that allows a user to directly touch or interact with the keyboard 86. For example, the aperture 90 allows a user to press and/or articulate some of the keys on the keyboard 86 to evaluate their tactile feedback (i.e., force needed to ac-

tuate, springiness, etc.). In other embodiments, the aperture 90 may be omitted. Additionally or alternatively, other types of securement members (e.g., clips, ties, magnets, etc.) may be used to hold the case 14 on the pedestal 28.

[0032] The packaging box 12 also includes a pull tab 94 attached to and extending from the bottom cover 22. In other embodiments, the pull tab 29 may be attached to and extend from the top cover 18. The pull tab 94 is made from, for example, a fabric material that can easily be grabbed by a user. The pull tab 94 facilitates separating the top cover 18 from the bottom cover 22 while opening the packaging box 12 by holding the pull tab 94 when opening the top cover 18.

[0033] In some embodiments, the packaging box 12 may include a handle extending from one of the top cover 18 and the bottom cover 22. The handle may be, for example, a fabric strap extending from a side of one of the covers 18, 22, which is graspable by a user for carrying the box 12. The handle may also facilitate separating the top cover 18 from the bottom cover 22 while open the packaging box 12.

[0034] In some embodiments, the packaging box 12 may further include a magnetic closure. In such embodiments, one of the top cover 18 and the bottom cover 22 may include an embedded magnet, and the other of the top cover 18 and the bottom cover 22 may include an embedded metal plate. The magnet may engage the metal plate when the packaging box 12 is closed to inhibit unintentional opening of the box 12.

[0035] In operation, a user may open and close the box 12 while the tablet computer case 14 is on the pedestal 28, as shown in Figs. 7-9. Initially, the packaging box 12 is closed (i.e., in the storage position), as shown in Figs. 7A-7B. To open the box 12, the user first grasps the pull tab 94 and rotates the top cover 18 away from the bottom cover 22. As the top cover 18 rotates away from the bottom cover 22, the pedestal 28 and the case 14 begin to rise due to the movement of the second hinge 62 pulling the lower flap 58 of the pedestal 28, as shown in Figs. 8A-8B. Further, the support tabs 50 begin to fold and extend away from the bottom cover 22. In the illustrated embodiment, the second hinge 62 and the support tabs 50 are configured to help the pedestal 28 rise generally linearly (e.g., vertically as shown in Fig. 8A) so that the lower flap 58 of the pedestal 28 remains generally parallel to the inner surface 32 of the bottom cover 22 as the pedestal 28 moves from the lowered position to the raised position. The user continues to rotate the top cover 18 relative to the bottom cover 22 until the box 12 is in the display position, as shown in Figs. 9A-9B.

[0036] Once the box 12 is in the display position, the user is free to view or manipulate the computer case 14 without removing the case 14 from the box 12. For example, the user can manipulate the case 14 from the closed position (Fig. 2) to the open position (Fig. 1). In addition, once opened, the user can manipulate at least a portion of the keyboard and/or adjust the viewing angle

of the case 14.

[0037] When a user wishes to close the box 12, the user will grasp the top cover 18 and rotate the cover 18 toward the bottom cover 22. As the top cover 18 approaches the bottom cover 22, the pedestal 28 and the case 14 will lower, and the support tabs 50 will begin to unfold. The pedestal 28 lowers due to a pushing force from the second hinge 62 and the weight of the computer case 14. Once the top cover 18 is fully closed and the box 12 is in the storage position, the case 14 is enclosed within the box 12 and protected from unwanted damage.

[0038] The retail packaging system 10 is, therefore, designed to allow a user to repeatedly open and close the packaging box 12 and manipulate the electronic device case 14 without requiring a retailer to repackage the system 10 after each use.

[0039] Various features and advantages of the invention are set forth in the following claims.

Claims

1. A retail packaging system (10) comprising:

an electronic device case (14); and
a packaging box (12) for enclosing and displaying the electronic device case (14), the packaging box (12) including

a bottom cover (22),
a top cover (18) pivotally coupled to the bottom cover (22),
a pedestal (28) positionable at least partially within the bottom cover (22), the pedestal (28) supporting the electronic device case (14), and
a hinge (62) coupled to the pedestal (28) and the top cover (18) such that the pedestal (28) lifts the electronic device case (14) relative to the bottom cover (22) as the packaging box (12) is opened into a display position.

2. The retail packaging system of claim 1, wherein the electronic device case (14) is manipulatable by a user while the packaging box (12) is in the display position without removing the electronic device case (14) from the packaging box (12).

3. The retail packaging system of claim 1 or 2, wherein the electronic device case (14) is openable and closeable while the packaging box (12) is in the display position.

4. The retail packaging system of any one of the preceding claims, wherein the packaging box (12) further includes a securement member (74) coupled to the pedestal (28), and wherein the securement mem-

ber (74) secures the electronic device case (14) to the pedestal (28).

5. The retail packaging system of claim 4, wherein the securement member (74) captures a portion of the electronic device case (14) between the securement member (74) and the pedestal (28) to hold down the electronic device case (14). 5
6. The retail packaging system of claim 5, wherein the portion of the electronic device case (14) includes a keyboard (86), and wherein the securement member (74) extends across and holds the keyboard (86) against the pedestal (28). 10
7. The retail packaging system of claim 6, wherein the securement member (74) defines an aperture (90) to allow a user to directly touch the keyboard (86).
8. The retail packaging system of claim 4, wherein the securement member (74) includes a transparent plastic sheet. 20
9. The retail packaging system of any one of the preceding claims, wherein the packaging box (12) is moveable from a storage position into the display position, and wherein the pedestal (28) is moveable from a lowered position into a raised position. 25
10. The retail packaging system of claim 9, wherein the pedestal (28) is disposed above an upper edge of the bottom cover (22) while in the raised position. 30
11. The retail packaging system of any one of the preceding claims, wherein the bottom cover (22) includes a plurality of support tabs (50) that support the pedestal (28) above an inner surface (36) of the bottom cover (22). 35
12. The retail packaging system of claim 11, wherein each support tab (50) includes at least one hinge (66) that allows the support tab (50) to move from a flush position while the packaging box (12) is in a storage position to a folded position while the packaging box (12) is in the display position. 40
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13. The retail packaging system of any one of the preceding claims, further comprising a pull tab (94) extending from one of the top cover (18) and the bottom cover (22) to facilitate opening the packaging box (12). 50
14. A method of displaying an electronic device case (14) in a packaging box (12), the packaging box (12) including a bottom cover (22), a top cover (18) pivotally coupled to the bottom cover (22), a pedestal (28) positionable at least partially above the bottom cover (22), and a hinge (62) coupled to the top cover 55

(18) and the pedestal (28), the method comprising:

positioning the electronic device case (14) on the pedestal (28);
 storing the electronic device case (14) within the packaging box (12) while the packaging box (12) is in a storage position;
 opening the packaging box (12) to a display position; and
 lifting the electronic device case (14) relative to the bottom cover (22) with the pedestal (28) as the packaging box (12) is opened to the display position.

15. The method of claim 14, further comprising one or more of the following features:

- manipulating the electronic device case (14) while the packaging box (12) is in the display position without removing the electronic device case (14) from the packaging box (12) wherein, preferably, manipulating the electronic device case (14) includes opening and closing the electronic device case (14);
- the packaging box (12) includes a securement member (74) coupled to the pedestal (28), and the method further comprising securing the electronic device case (14) to the pedestal (28) with the securement member (74), wherein, preferably, the securement member (74) includes a transparent plastic sheet, and securing the electronic device case (14) to the pedestal (28) includes capturing a portion of the electronic device case (14) between the securement member (74) and the pedestal (28) to hold down the electronic device case (14);
- supporting the electronic device case (14) on the pedestal (28) above an upper edge of the bottom cover (22) while the packaging box is (12) opened to the display position;
- the packaging box (12) includes a pull tab (94) extending from one of the top cover (18) and the bottom cover (22), wherein opening the packaging box (12) includes grasping the pull tab (94).

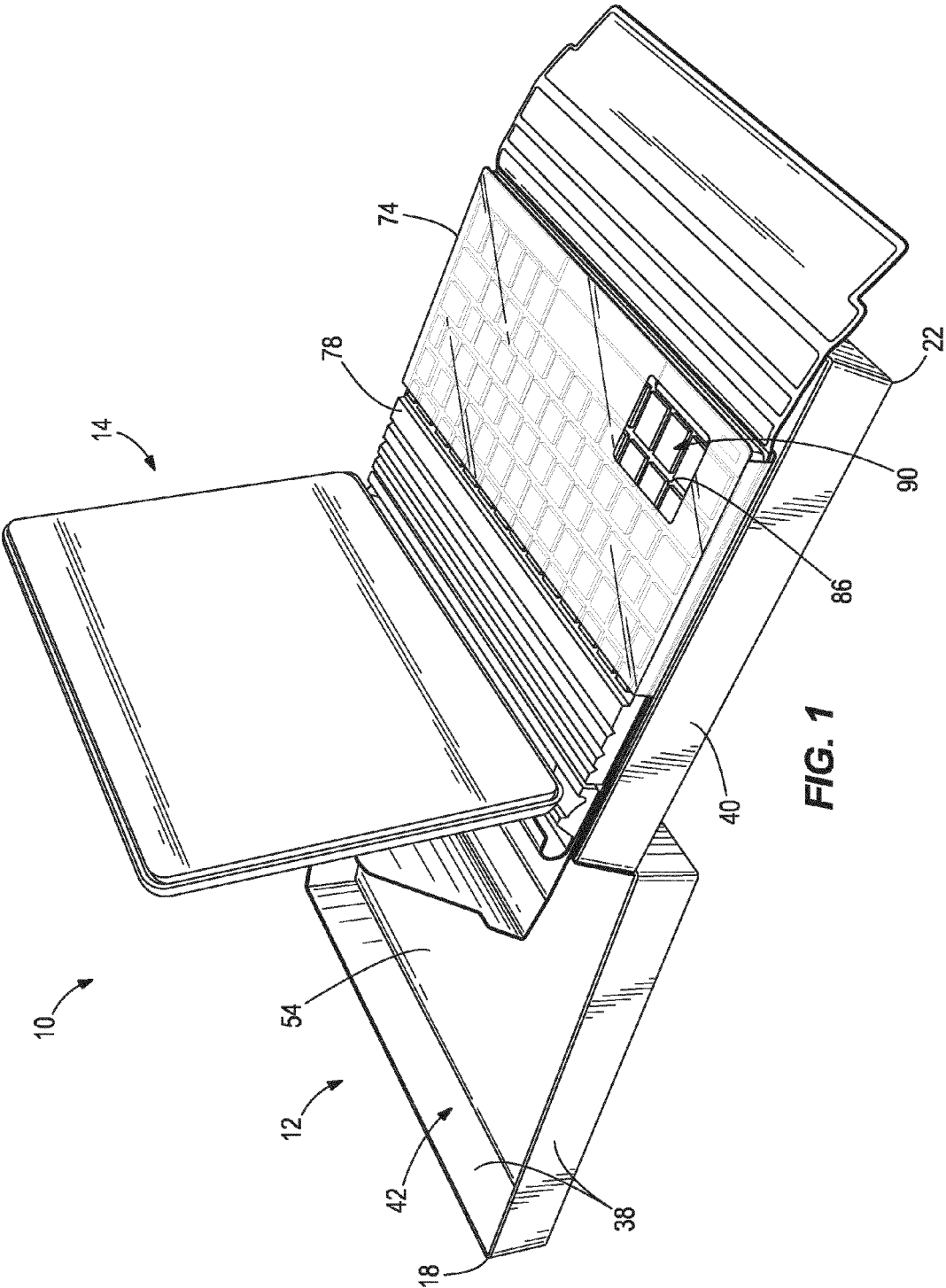
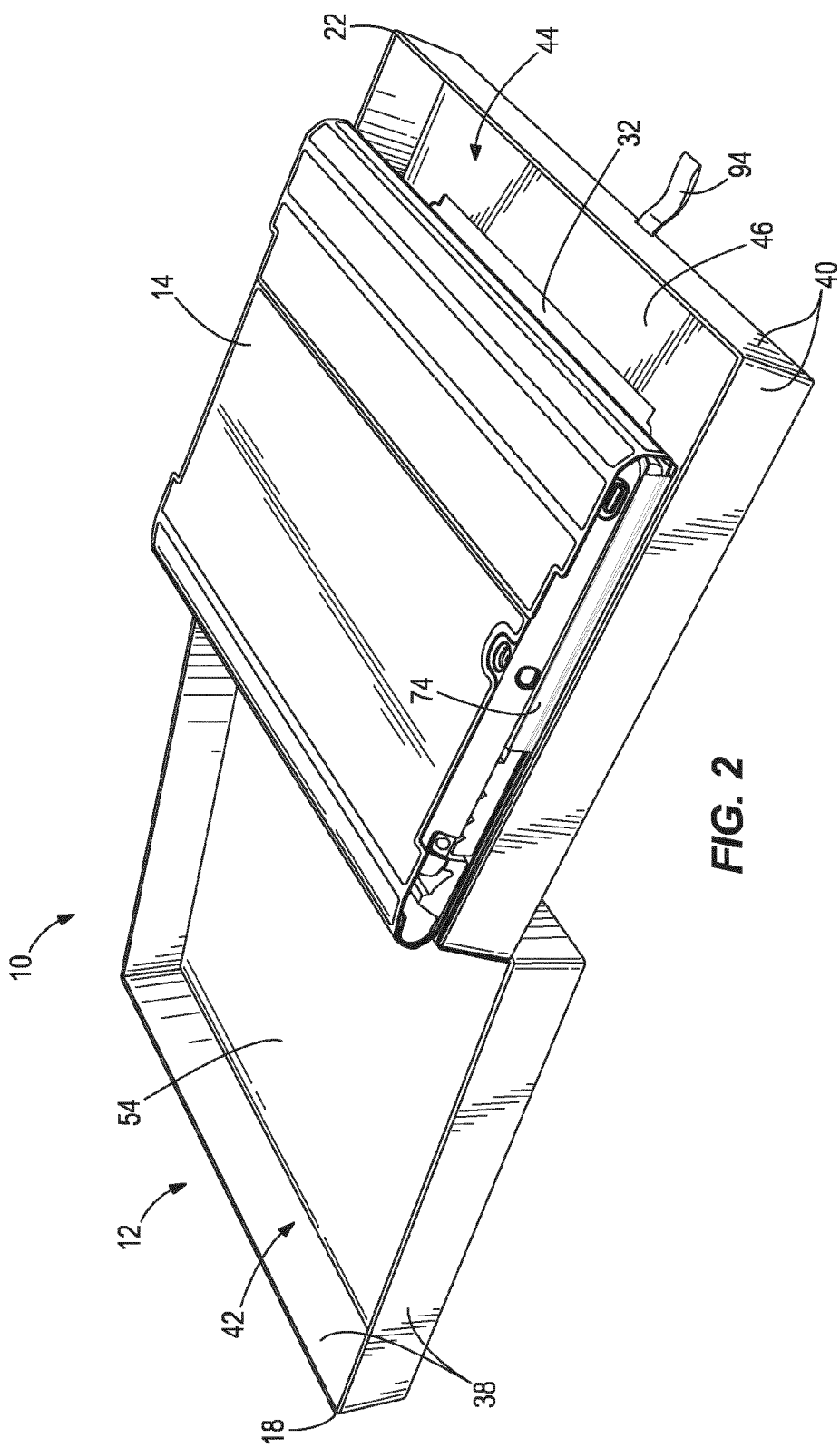


FIG. 1



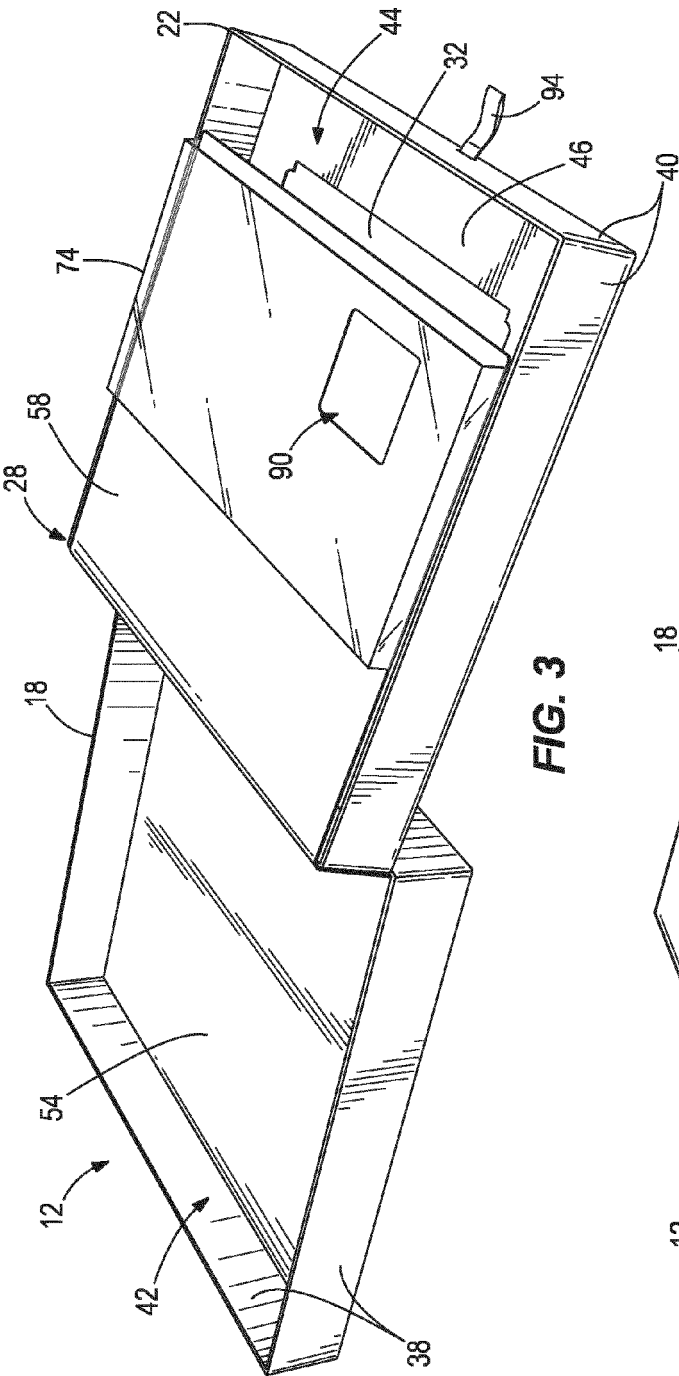


FIG. 3

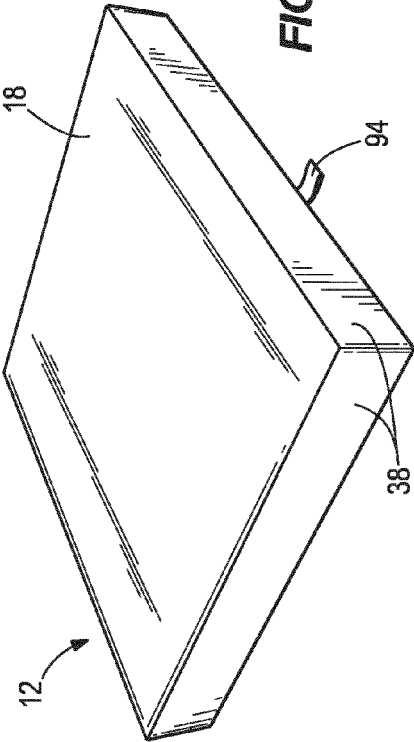


FIG. 4

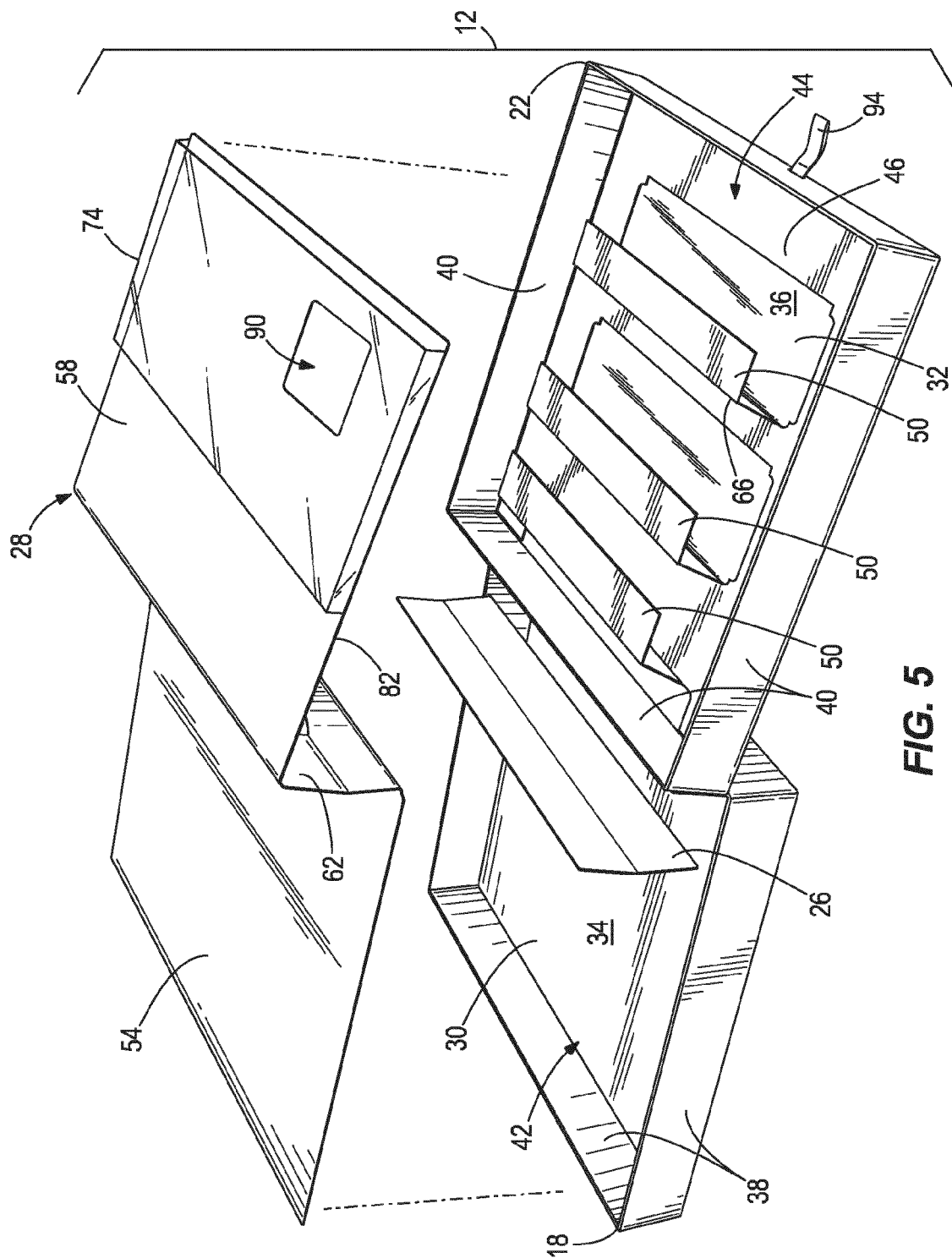
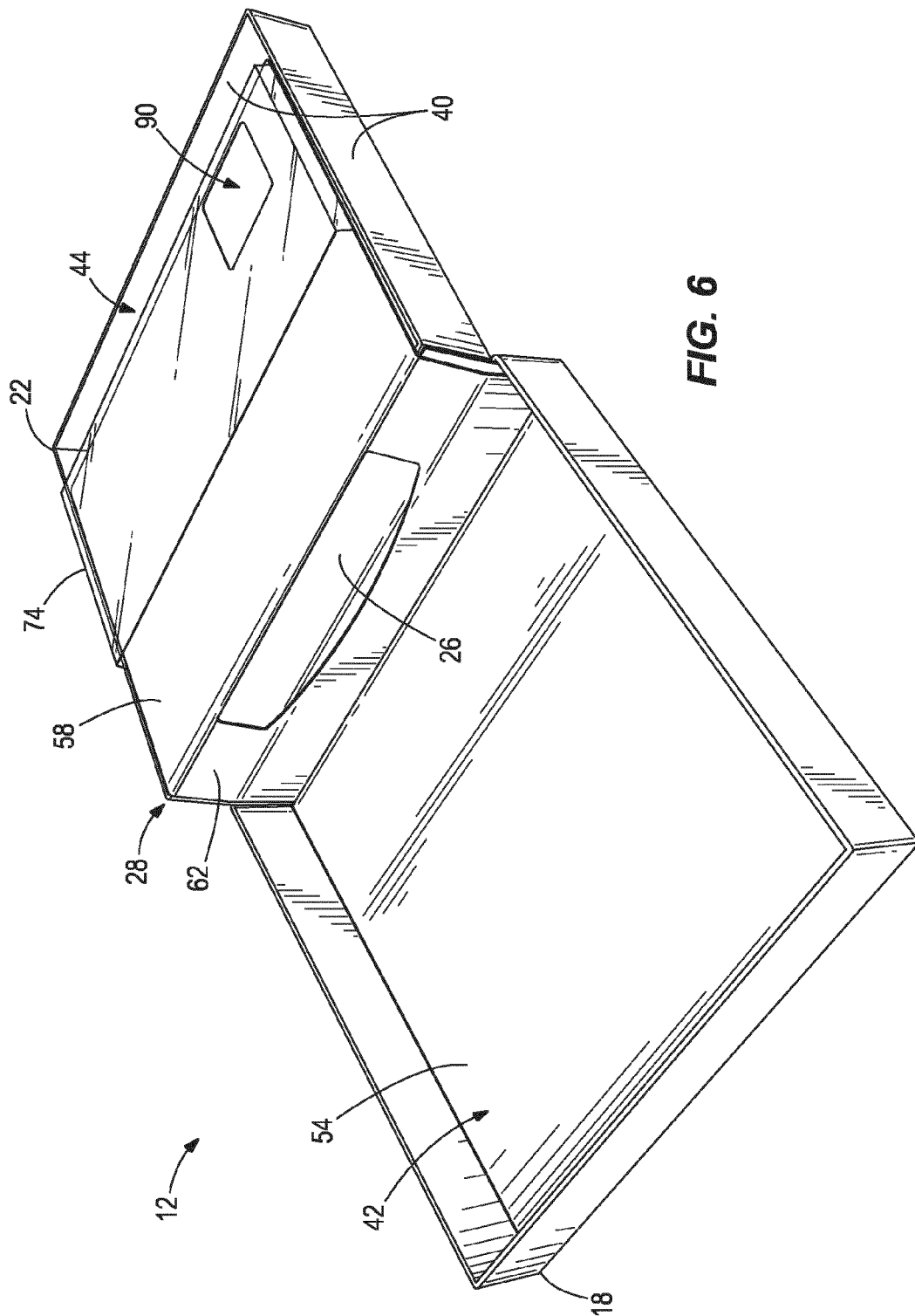
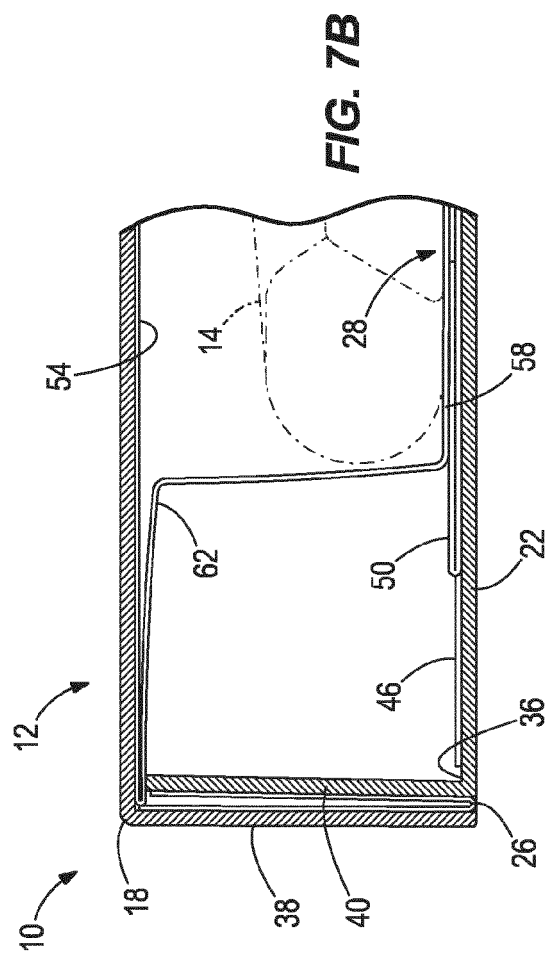
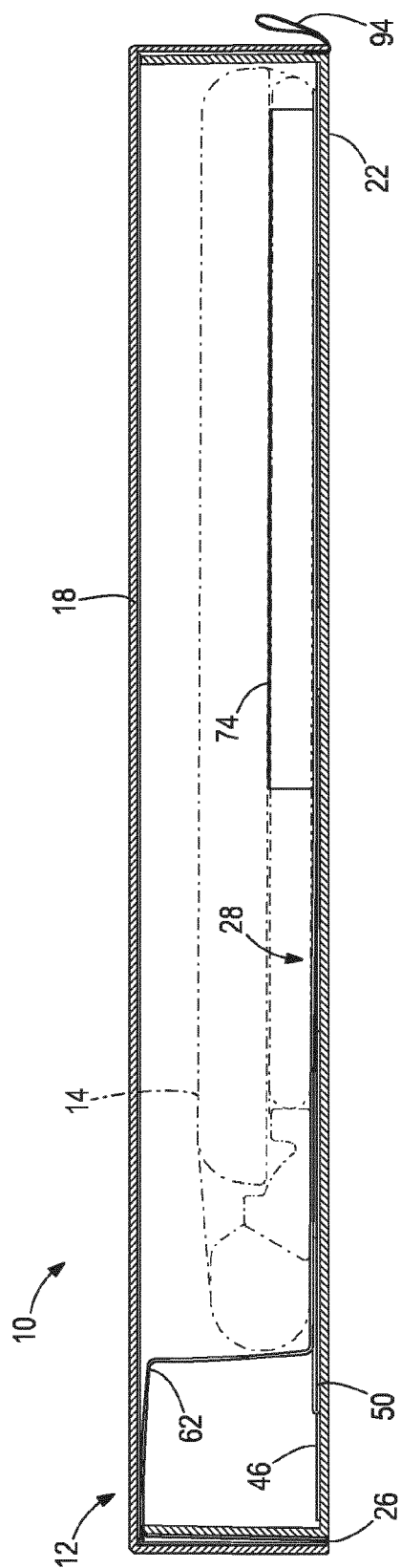
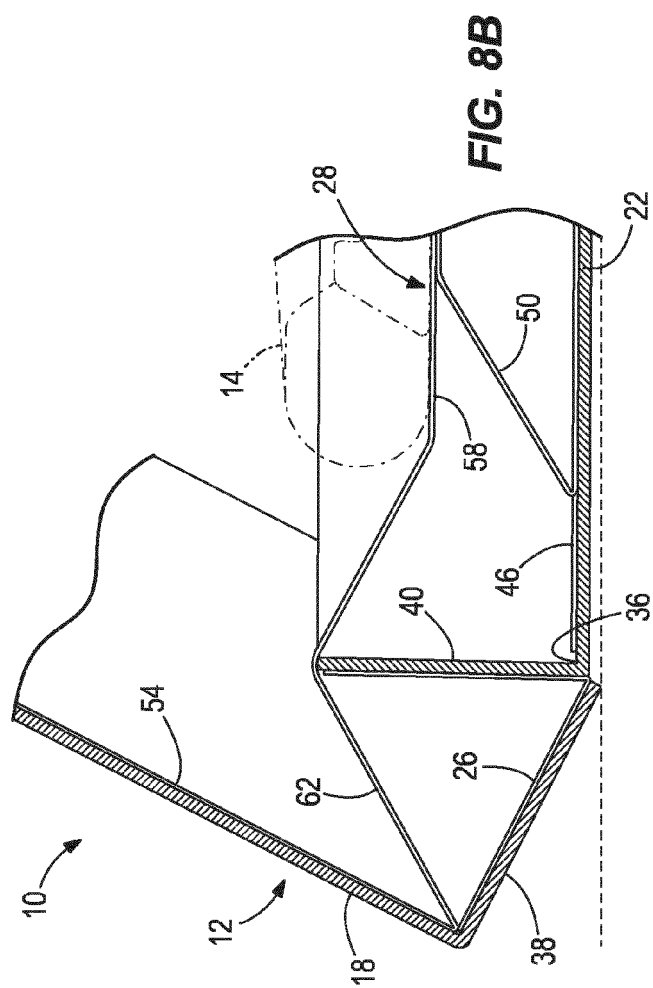
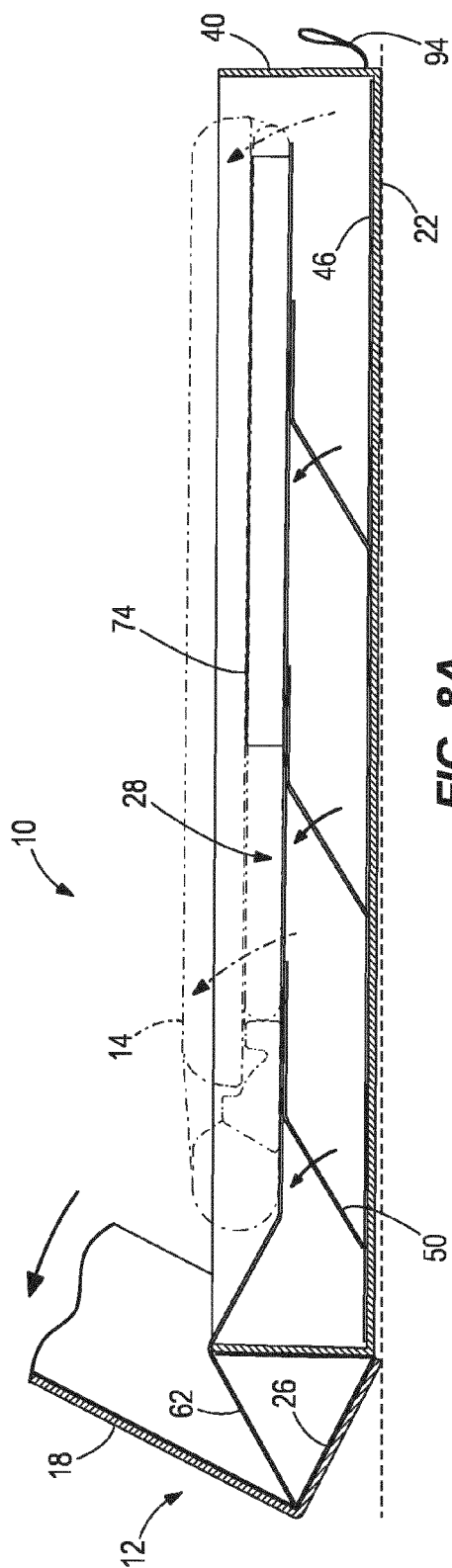


FIG. 5







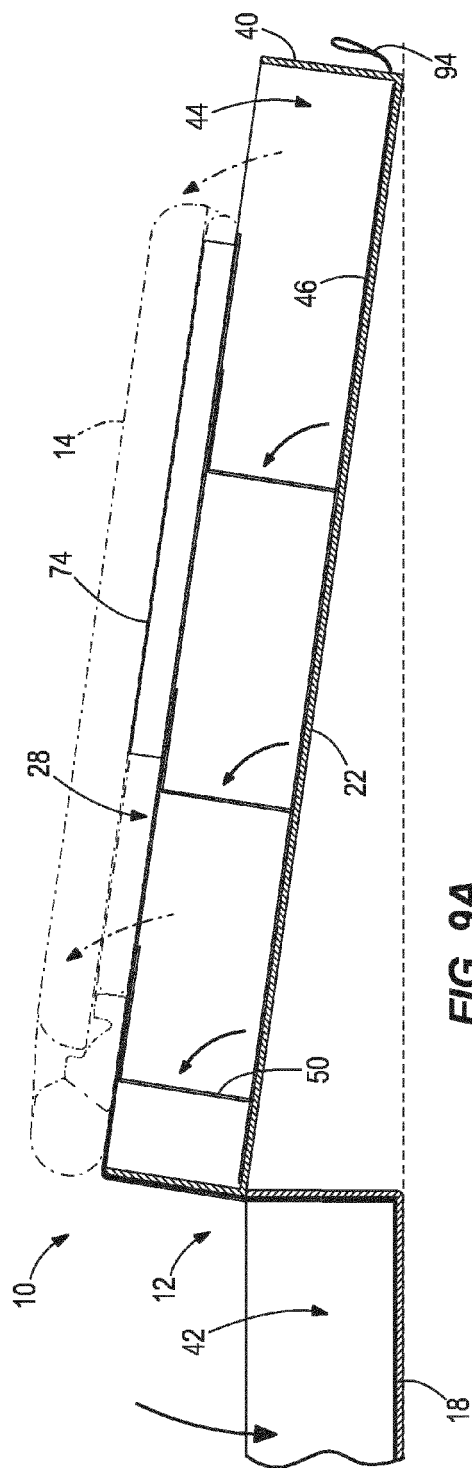


FIG. 9A

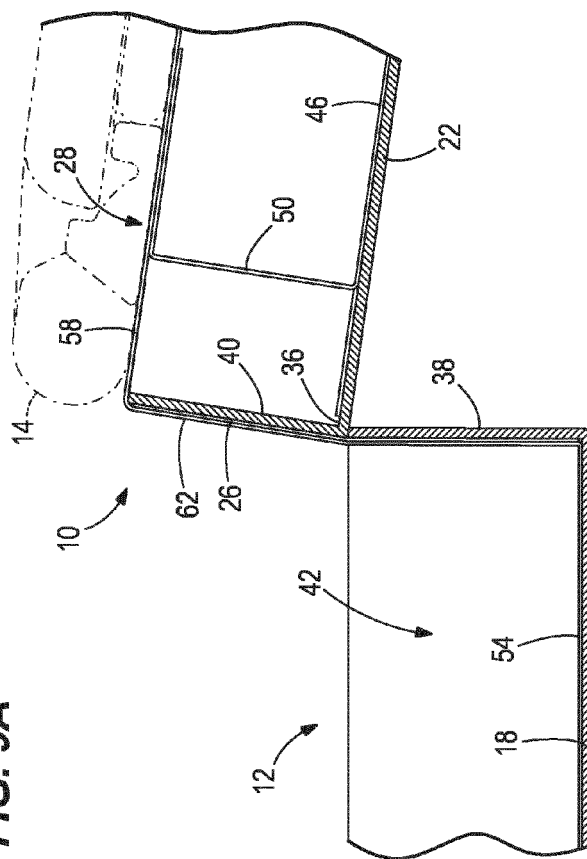


FIG. 9B



EUROPEAN SEARCH REPORT

Application Number
EP 14 18 5383

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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 2 680 512 A (DOUGLAS YOUNG LEWIS) 8 June 1954 (1954-06-08) * column 2, line 52 - column 3, line 29; figures 1-3 *	1-15	INV. B65D5/50 B65D5/52
X	US 2 657 793 A (MELVYN GOLDSHINE) 3 November 1953 (1953-11-03) * column 2, line 3 - line 46 *	1-15	
X	WO 2011/072806 A1 (PHILIP MORRIS PROD [CH]; SAINT-GIRONS SANDRINE [CH]) 23 June 2011 (2011-06-23) * page 13, last paragraph - page 14, last line; figures 1-6 *	1-15	
			TECHNICAL FIELDS SEARCHED (IPC)
			B65D
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 18 March 2015	Examiner Derrien, Yannick
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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EPO FORM 1503 03.02 (P04001)

**ANNEX TO THE EUROPEAN SEARCH REPORT
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18-03-2015

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2680512 A	08-06-1954	NONE	
US 2657793 A	03-11-1953	NONE	
WO 2011072806 A1	23-06-2011	CN 102712381 A	03-10-2012
		EP 2512938 A1	24-10-2012
		JP 2013513533 A	22-04-2013
		KR 20120103706 A	19-09-2012
		RU 2012129922 A	27-01-2014
		TW 201139221 A	16-11-2011
		WO 2011072806 A1	23-06-2011

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EPO FORM P0459

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