



(51) International Patent Classification:

G09F 3/02 (2006.01) *B65D 55/08* (2006.01)
B65D 75/58 (2006.01) *G09F 3/10* (2006.01)
G09F 3/03 (2006.01)

(21) International Application Number:

PCT/GB2012/051983

(22) International Filing Date:

14 August 2012 (14.08.2012)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

1113961.5 15 August 2011 (15.08.2011) GB
 1113960.7 15 August 2011 (15.08.2011) GB

(71) Applicant (for all designated States except US): **FIL-TRONA C&SP LIMITED** [GB/GB]; Giltway, Giltbrook, Nottingham NG16 2GT (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **PINCHEN, Stephen Paul** [GB/GB]; Park View, Ashbourne Road, Kirk Langley, Derbyshire DE6 4NS (GB). **SMART, Emily** [GB/GB]; 105 Cliff Road, Nottingham, Nottinghamshire NG1 1GB (GB). **TOMLINSON, David** [GB/GB]; 10 Crosby Close, Forest Town, Mansfield, Nottinghamshire NG19 0PW (GB).

(74) Agent: **MCCARTNEY, Jonathan William**; Haseltine Lake LLP, Redcliff Quay, 120 Redcliff Street, Bristol BS1 6HU (GB).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(54) Title: RESEAL TAMPER-EVIDENT LABEL

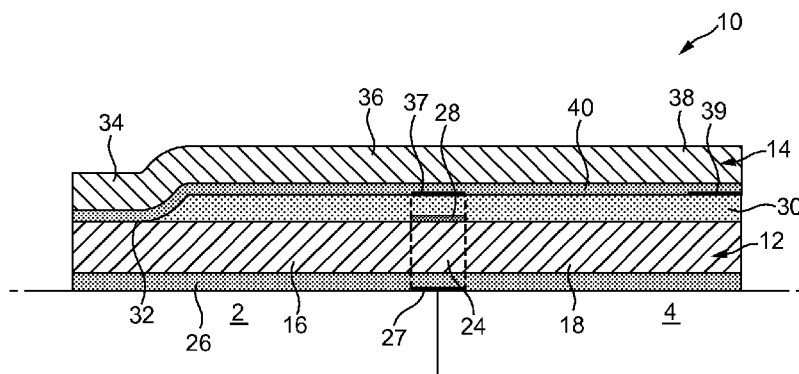


FIG. 1

(57) Abstract: A reseal tamper- evident label (10) for sealing packaging (1) having first and second packaging portions (2, 4) that can be moved relative to one another to open the packaging (1) is disclosed. The reseal tamper- evident label (10) comprises a base layer (12) having a first base portion (16) arranged to be adhered to the first packaging portion (2) and a second base portion (18) arranged to be adhered to the second packaging portion (4). A tear strip (24) can be torn away from the label (10) in a tear direction so as to separate the first and second base portions (16, 18), thereby allowing the packaging (1) to be opened. A reseal portion (36) extends from the first base portion (16) which in use can be adhered to and detached from the second packaging portion (4).

RESEAL TAMPER-EVIDENT LABEL

The invention relates to a reseal tamper-evident label for packaging having first and second packaging portions.

5

Many different types of packaging exist. One known type of packaging comprises first and second packaging portions that can be moved relative to one another to provide access to the product. Examples include, cigarette boxes having a main box and a hinged lid, tobacco pouches having a main pouch and a flap, CD jewel cases having a cover and a rear, coffee packets having an open top that can be folded over to seal the opening.

It is often desirable or necessary to provide a tamper-evident feature that indicates to the consumer that the packaging has not already been opened. One of the most common methods is to provide the packaging with a filmic overwrap that must be removed before the packaging can be opened. For example, a cigarette box is usually overwrapped with a film and a tear tape is provided to tear through the film so that the box can be opened. If the filmic overwrap is not present, the consumer knows that the cigarette box may already have been opened.

20

It is also often desirable to provide a reseal feature that allows the first and second packaging portions to be temporarily resealed. This is typically done by providing an adhesive label or tape that can be adhered to and detached from at least one of the packaging portions with ease. For example, a cigarette box may be provided with a reseal label that overlaps the lid and the main box portion so that the two may be temporarily secured together.

Whilst these measures are entirely satisfactory for many applications, there may be a desire to reduce the amount of packaging used for products. It is therefore desirable to provide a tamper-evident feature and a reseal feature which may be used to reduce the amount of packaging used to package products.

In a broad aspect the invention relates to a tamper-evident resealable label having a tear strip that can be torn away from the label so as to separate it into two parts and a reseal portion that allows the label to be used to reseal packaging.

35

According to an aspect of the invention there is provided a reseal tamper-evident label for sealing packaging having first and second packaging portions that can be moved relative to one another to open the packaging, the reseal tamper-evident label comprising: a base layer having a first base portion arranged to be adhered to the first packaging portion and a second base portion arranged to be adhered to the second packaging portion, wherein a tear strip can be torn away from the label in a tear direction so as to separate the first and second base portions, thereby allowing the packaging to be opened; and a reseal portion extending from the first base portion which in use can be adhered to and detached from the second packaging portion.

At least a part of the lower side of the reseal portion may be provided with an adhesive, such as a reseal adhesive. A reseal adhesive has a lower adhesive strength than a permanent adhesive and therefore the reseal portion can be adhered to, and removed from a packaging portion multiple times without significantly damaging the packing portion. In use, the reseal portion may be capable of being adhered to and detached from the second base portion which is attached to the second packaging portion.

The label may further comprise a reseal layer disposed above the base layer and comprising the reseal portion and a hinge portion that is permanently attached to the first base portion. The hinge portion may be permanently attached to the first base portion by an adhesive, such as a permanent adhesive. The term "permanent" means that the adhesive strength of the adhesive is such that the hinge portion is not easily detached from the base portion.

At least a portion of the upper side of the base layer may be provided with a release coating. This may allow the reseal portion to be adhered to, and removed from the base layer multiple times with ease and without significantly damaging the base layer. At least a portion of the upper side of the first base portion may be provided with a release coating. At least a portion of the upper side of the second base portion may be provided with a release coating.

The lower side of the reseal portion of the reseal layer in the region of the tear strip may have low adhesive strength. This may prevent the reseal portion from adhering to the packaging when the tear strip is removed. The lower side of the reseal portion of the reseal layer in the region of the tear strip may be adhesive free or may be provided with an adhesive barrier or deadening layer.

The reseal layer may further comprise a finger lift portion that is not adhered to the second base portion or the second packaging portion. This may allow a consumer to peel back the reseal layer with ease. The lower side of the finger lift portion may be
5 adhesive free or may be provided with an adhesive barrier or deadening layer.

The reseal layer may comprise a polymer or paper.

The base layer may comprise the reseal portion which may be disposed between the
10 first base portion and the second base portion. In such a situation the reseal portion would be part of the base layer which may be a substantially continuous film. This may provide a single-layer tamper-evident resealable label. The label may be configured such that the tear strip can be torn away from the label at a position between the reseal portion and the second base portion, so that the second base portion can be separated
15 from the first base portion and the reseal portion. The base layer may comprise a finger lift portion which is disposed between the reseal portion and the second base portion that in use is not adhered to the second packaging portion. The lower side of the finger lift portion may be adhesive free or may be provided with an adhesive deadening layer or an adhesive barrier.

20

The base layer may comprise first and second spaced tear initiation features arranged so that in use a tear strip can be torn away from the base layer. The first and second tear initiation features allow a tear strip to be torn away from the base layer itself without the need for a separate tear tape or thread to be provided underneath the base
25 layer. This reduces the cost of the label and allows it to be manufactured with ease.

The first and second tear initiation features may be provided on the same edge of the base layer. The first and second tear initiation features may be spaced apart by substantially the same distance as the width of the tear strip. The first tear initiation
30 feature may be a cut or notch in the edge of the base layer. The second tear initiation feature may be a cut or notch in the edge of the base layer. The base layer may comprise a pull-tab which is adjacent to the first and second tear initiation features. The first and second tear initiation features may define the tear strip that can be torn away from the base layer.

35

The base layer may comprise, or may be made from, a material that is arranged to preferentially tear in the tear direction. The base layer may comprise, or may be made from, a directionally oriented polymer which may be oriented in the tear direction. The base layer may comprise, or may be made from, a mono oriented polymer, such as
5 mono oriented polypropylene. This allows the tear strip to be torn away from the base layer without the need for perforations or weakened lines or the like. The base layer may be substantially uniform and/or continuous.

The label may further comprise a tear strip, such as a tear tape or a tear thread,
10 disposed underneath the base layer which in use can be torn through the base layer and away from the label so as to separate the first and second base portions.

At least part of the lower side of the first base portion and at least part of the lower side of the second base portion may be provided with an adhesive such that the first and
15 second base portions can be adhered to the first and second packaging portions respectively. The adhesive may be permanent adhesive. The term "permanent" in this context means that it is difficult for a user to remove the base portions from the packaging portions without damaging the packaging. The lower side of the base layer in the region of the tear strip may have low adhesive strength. This prevents the tear
20 strip from adhering to the packaging which allows it to be removed with ease without damaging the packaging. The lower side of the base layer in the region of the tear strip may be adhesive free or may be provided with an adhesive barrier or deadening layer over a layer of adhesive.

25 The upper side and/or the lower side of the base layer may be at least partially printed. The base layer may be printed with a commercial graphic or with a security feature, for example. In one arrangement the upper or lower side of the tear strip could be printed with a colour to aid identification of the tear strip.

30 The upper side and/or the lower side of the reseal layer may be at least partially printed.

The invention also relates to a wound reel of labels comprising a wound backing sheet with a plurality of labels, each in accordance with any statement herein, releasably
35 adhered to the backing sheet. Alternatively, the labels may be self-wound without a backing sheet.

According to another aspect of the invention there is provided packaging for at least one article or substance comprising: first and second packaging portions that can be moved relative to one another so as to open the packaging to provide access to the at least one article or substance; and a reseal tamper-evident label in accordance with any statement herein, wherein the first base portion is adhered to the first packaging portion and wherein the second base portion is adhered to the second packaging portion so as to seal the packaging and prevent the packaging from being opened without tearing the tear strip away from the base layer, wherein once the tear strip has been torn away from the base layer, the reseal portion can be adhered to and detached from the second packaging portion so as to reseal and reopen the packaging. .

The packaging may be a box for smoking articles. One of the packaging portions may be a main box portion for retaining the smoking articles. The other packaging portion may be a lid portion hingedly attached to the main box portion and moveable between at least a closed position and an open position. In another arrangement the packaging may be a box for tea, for example.

The packaging may be a pouch for tobacco. One of the packaging portions may be a main pouch portion for containing the tobacco. The other packaging portion may be a flap attached to the main pouch portion and moveable between at least a closed position and an open position.

According to a further aspect of the invention there is provided a tamper-evident label for sealing packaging having first and second packaging portions that can be moved relative to one another to open the packaging, the tamper-evident label comprising: a base layer having a first base portion arranged to be adhered to the first packaging portion and a second base portion arranged to be adhered to the second packaging portion, the base layer comprising first and second spaced tear initiation features arranged so that in use a tear strip can be torn away from the base layer in a tear direction so as to separate the first and second base portions, thereby allowing the packaging to be opened.

The invention may comprise any combination of the features and/or limitations referred to herein, except combinations of such features as are mutually exclusive.

Embodiments of the invention will now be described, by way of example, with reference to the accompanying drawings, in which:

Figure 1 schematically shows a cross-sectional view of a first embodiment of a reseal
5 tamper-evident label;

Figure 2 schematically shows a front view of the reseal tamper-evident label of Figure 1;

10 Figure 3 schematically shows the reseal tamper-evident label of Figure 1 with the reseal layer peeled away;

Figure 4 schematically shows the reseal tamper-evident label of Figure 1 with the reseal layer peeled away and the tear strip torn away;

15 Figure 5 schematically shows a front view of the reseal tamper-evident label of Figure 4;

Figure 6 schematically shows the reseal tamper-evident label of Figure 1 with the tear
20 strip torn away and the reseal layer folded down;

Figure 7 schematically shows the reseal tamper-evident label of Figure 1 applied to a cigarette box;

25 Figure 8 schematically shows the cigarette box of Figure 7 with the tear strip torn away;

Figure 9 schematically shows the cigarette box of Figure 7 with the lid in an open position;

30 Figure 10 schematically shows a front view of a second embodiment of a reseal tamper-evident label;

Figure 11 schematically shows a front view of a third embodiment of a reseal tamper-evident label;

Figure 12 schematically shows a cross-sectional view of a fourth embodiment of a reseal tamper-evident label;

Figure 13 schematically shows a cross-sectional view of a fifth embodiment of a reseal
5 tamper-evident label;

Figure 14 schematically shows a front view of the reseal tamper-evident label of Figure 13;

10 Figure 15 schematically shows the reseal tamper-evident label of Figure 13 with the tear strip torn away;

Figure 16 schematically shows the front view of the reseal tamper-evident label of Figure 15;
15

Figure 17 schematically shows the reseal tamper-evident label of Figure 13 with the reseal portion peeled away;

Figure 18 schematically shows the reseal tamper-evident label of Figure 13 applied to
20 a tobacco pouch;

Figure 19 schematically shows the tobacco pouch of Figure 18 with the tear strip torn away;

25 Figure 20 schematically shows the tobacco pouch of Figure 18 with the flap in an open position; and

Figure 21 schematically shows a cross-sectional view of a sixth embodiment of a reseal tamper-evident label
30

Figures 1 and 2 show a first embodiment of a generally rectangular reseal tamper-evident label 10 that is adhered to packaging 1 comprising first and second packaging portions 2, 4 that can move relative to one another so as to open the packaging 1. Examples of packaging include, but are not limited to, boxes having a main portion and an openable lid, such as a cigarette box, or a flexible pouch having a main pouch
35 portion and an openable flap, such as a tobacco pouch. As can be seen in Figures 1

and 2, the first and second packaging portions 2, 4 meet one another, or overlap, and the reseal tamper-evident label 10 overlaps the first and second packaging portions 2, 4.

- 5 With reference to Figure 1, the reseal tamper-evident label 10 is of a laminate structure and comprises a base layer 12 and a reseal layer 14 that is disposed above the base layer 12. In this particular embodiment the base layer 12 is a film of mono oriented polypropylene (MOPP) and the reseal layer 14 is a film of polypropylene. It should be appreciated that other suitable materials could be used. For example, the base layer
- 10 12 may be a film of material that is arranged to preferentially tear in a particular tear direction and therefore may be any directionally oriented film, or may be polyethylene terephthalate (PET), polypropylene (PP), polyethylene (PE) or paper. The reseal layer 14 may be MOPP, polyethylene terephthalate (PET), polypropylene (PP), polyethylene (PE) or paper. In this particular embodiment the base layer 12 and the reseal layer 14
- 15 are transparent, however, in other embodiments one or both of the layers 12, 14 may be pigmented or metallised, for example. In this embodiment the thickness of the base layer 12 is approximately 40 microns and the thickness of the reseal layer 14 is approximately 60 microns. However, any suitable thicknesses may be used.
- 20 The base layer 12 is continuous and comprises a first base portion 16 that is adjacent to a second base portion 18. The first base portion 16 is at one end of the label 10 and the second base portion 18 is at the opposite end of the label. The base layer 12 is also provided with first and second tear initiation features 20, 22. In this embodiment the tear initiation features 20, 22 are in the form of two cuts in the base layer 12
- 25 positioned between the first and second base portions 16, 18. The tear initiation features 20, 22 are provided on the same edge or side of the base layer 12 and are spaced from one another. As will be described in detail below, the tear initiation features 20, 22 allow a tear strip 24 to be torn away from the base layer 12 through its entire thickness and width so as to separate the first and second base portions 16, 18.
- 30 The lower surface of the first and second base portions 16, 18 are provided with a permanent pressure sensitive adhesive coating 26 so that the label 10 can be adhered to the first and second packaging portions 2, 4 by the application of pressure. The nature of the adhesive coating 26 prevents the label 10 from being removed from the
- 35 packaging 1 without damaging the packaging 1 and also prevents a removed label 10 from being applied to a different article. The adhesive coating 26 may be a rubber or

acrylic based adhesive and may either be a hot melt, emulsion, solvent based or UV hot melt adhesive. As will be apparent to one skilled in the art, other suitable adhesives may be used. The lower surface of the base layer 12 in the region of the tear strip 24 is provided with an adhesive deadening layer 27 (or barrier) over the adhesive coating 26 and therefore the tear strip 24 does not adhere to the packaging 1. This allows the tear strip 24 to be torn away from the base layer 12 with ease without damaging the actual packaging 1. The spacing of the tear initiation features 20, 22 determines the width of the tear strip 24 which may be less than 10mm, less than 5mm, or less than 3mm, for example.

The upper surface of the base layer 12 is printed red 28 in the region of the tear strip 24. Therefore, the entire length and width of the tear strip 24 is a distinctive and easily recognisable colour. The tear strip 24 could be printed with any suitable colour, or with a covert security ink or mark. In other arrangements, the tear strip 24 could be provided with another security feature such as a hologram. The location of the tear strip 24 can therefore be determined with ease, and it can be readily determined if the tear strip 24 has already been removed. The upper surface of the base layer 12 is provided with a release layer 30 which may be a silicone release coating. The release layer 30 is provided over the printed region 28. However, a strip 32 of the base layer 12 which is at the edge of the base layer 12 in the region of the first base portion 16 is not provided with the release layer 30.

The reseal layer 14 comprises a hinge portion 34, a reseal portion 36 and a finger lift portion 38. The hinge portion 34 is disposed at one end of the reseal layer 14 and is attached to the first base portion 16 of the base layer 12, the reseal portion 36 extends over the first base portion 16 and the second base portion 18, and the finger lift portion 38 is disposed at the opposite end of the reseal layer 14 and is positioned over the second base portion 18. The majority of the lower surface of the reseal layer 14 is coated with a permanent pressure sensitive adhesive coating 40. Since the edge strip 32 of the first base portion 16 is not coated with the release coating 40, the adhesive 40 on the lower surface of the hinge portion 34 permanently attaches the hinge portion 34 to the first base portion 16. The lower surface of the reseal portion 36 in the region of the tear strip 24 is provided with an adhesive deadening layer 37 so that in use the reseal layer 14 does not permanently adhere to the packaging 1. The lower surface of the finger lift portion 38 is provided with an adhesive deadening layer 39 so that a user can easily peel away the reseal layer 14 from the base layer 12.

Although it has been described that various portions of the base layer 12 and reseal layer 14 are provided with an adhesive deadening layer, the purpose of this is to prevent the portions from adhering to the packaging. Therefore, as opposed to being provided with an adhesive deadening layer, the portions could be adhesive free. This would still prevent the portions from adhering to the packaging.

In use, the reseal tamper-evident label 10 is adhered to packaging 1 in such a position that the first base portion 16 is attached to a first packaging portion 2 and the second base portion 18 is attached to a second packaging portion 4. The label 10 therefore overlaps the first and second packaging portions 2, 4. After the label 10 has been applied to the packaging 1, the packaging 1 cannot be opened because the continuous base layer 12 secures the first and second packaging portions 2, 4 together.

With reference to **Figure 3**, in order to open the packaging 1, the reseal layer 14 is peeled away from the base layer 12 by a user grasping the finger lift portion 38, the lower surface of which is provided with an adhesive deadening layer 39. The release layer 30 provided on the upper surface of the base layer 12 allows the reseal layer 14 to be peeled away with ease. The reseal layer 14 is peeled back so that the reseal portion 36 no longer overlaps the first and second base portions 16, 18. This exposes the tear strip 24 that separates and joins the first and second base portions 16, 18. The reseal layer 14 cannot be completely detached from the base layer 12 since the hinge portion 34 is permanently adhered to the edge of the first base portion 16.

After the reseal layer 14 has been peeled away to expose the tear strip 24, the tear strip 24 can be torn away from the base layer 12 to separate the first and second base portions 16, 18. In order to pull away the tear strip 24, a user may grasp the edge of the base layer 12 at a position between the first and second tear initiation features 20, 22. As the edge of the base layer 12 is pulled away from the packaging, the base layer starts to tear along two lines in a tear direction that is across the width of the label. The tear lines start from the tear initiation features 20, 22 which are arranged to cause a high stress concentration when the edge of the base layer 12 is pulled. The base layer 12 material is configured or arranged so that it preferentially tears in a tear direction that is across the width of the label. For example, in the present embodiment the base layer 12 is made from MOPP with the polymer chains aligned in a tear direction that is across the width of the base layer 12. Therefore, when the edge of the base layer 12

in between the tear initiation features 20, 22 is pulled away from the packaging, the base layer 12 tears along two tear lines that run across the base layer 12 in the direction of orientation of the polymer chains. The properties of the base layer 12 material ensure that a tear strip 24 can be easily torn away from the base layer 12. In this particular embodiment the tear strip 24 that is completely torn away from the base layer 12 is of a constant width that is defined by the spacing of the tear initiation features.

As can be seen from **Figures 4 and 5**, once the tear strip 24 has been torn away from the base layer 12, the base layer 12 comprises two discrete parts, namely, the first base portion 16 that is adhered to the first packaging portion 2 and the second base portion 18 that is adhered to the second packaging portion 4. Since the first and second base portions 16, 18 are no longer attached together, the packaging 1 can be opened by moving the first packaging portion 2 relative to the second packaging portion. If the tear strip 24 is printed with a distinctive pattern or colour, it is easy to visually assess whether or not the packaging has been opened. The label 10 therefore provides an important tamper-evident feature.

Referring to **Figure 6**, after the packaging 1 been closed after first opening by bringing the first and second packaging portions 2, 4 back together, the packaging 1 can be resealed by folding the reseal layer 14 back down over the first and second base portions 16, 18 so that the reseal portion 36 is adhered to both the first base portion 16 and the second base portion 18. Since the reseal portion 36 is indirectly adhered to both the first and second packaging portions 2, 4 the packaging 1 is temporarily sealed. Although the reseal tamper-evident label 10 is no longer in tact as the tear strip 24 has been removed, it still provides the additional function of being able to reseal the packaging 1 to prevent it from inadvertently opening. When a user needs to open the packaging 1 again, the reseal layer 14 comprising the reseal portion 26 can be easily peeled away from the first and second base portions 16, 18 such that the first and second packaging portions 2, 4 can be moved apart. The packaging 1 can then be resealed again. In this particular embodiment, a good reseal is obtained since the reseal layer 14 reseals by adhering to the upper surface of the second base portion 16.

Figure 7 illustrates packaging 100, in the form of a cigarette box, comprising a main box portion 102 for retaining cigarettes and a lid 104 which is hingedly attached to the main box portion 102. The hinged lid 104 can be moved between at least a closed

position in which the box is closed, and an open position in which cigarettes within the main box portion 102 can be accessed. The packaging 100 further comprises the reseal tamper-evident label 10 described above with the first base portion 16 adhered to the lid 104 and the second base portion 18 adhered to the main box portion 102.

5 The tear strip 24 extends across the label and is aligned with the join line between the lid 104 and the main box 102. A user can easily determine that the cigarette box has not yet been opened since the tear strip 24 is still in place. In order to open the cigarette box, the reseal layer 14 is peeled away from the base layer 12 to expose the tear strip 24. The edge of the tear strip 24 is then grasped and torn away from the
10 base layer 12 so as to separate the first and second base portions 16, 18 (**Figure 8**). This allows the lid 104 to be opened in order to provide access to the interior of the main box portion 102 (**Figure 9**). Once a cigarette has been removed from the main box portion 102, the lid 104 is shut and the reseal layer 14 is folded back over the first and second base portions 16, 18 so that it is indirectly attached to the main box 102
15 and the lid 104. This prevents the cigarette box from opening accidentally. A user can now visually determine that the cigarette box has already been opened because the tear strip 24 is no longer present. However, the cigarette box can be temporarily resealed by the use of the reseal layer 14.

20 **Figure 10** shows a second embodiment of the reseal tamper-evident label 10 which is similar to the first embodiment. However, the base layer 12 is provided with a pull-tab 42 that extends from the edge of the base layer 12. The right-angles between the sides of the pull-tab 42 and the main side of the base layer 12 form first and second tear initiation features 20, 22. When the pull-tab 42 is pulled away from the packaging
25 1, stress is concentrated at the tear initiation features 20, 22 and the base layer 12 tears along two tear lines starting from the tear initiation features 20, 22 across the entire width of the label 10. This separates the first and second base portions 16, 18 and allows the packaging to be opened.

30 **Figure 11** shows a third embodiment of the reseal tamper-evident label 10 which is similar to the first embodiment. However, in this embodiment the reseal layer 14 is smaller than the base layer 12. The larger second base portion 16 provides a larger area for the reseal layer 14 to adhere to. This may be appropriate if the packaging with which the label 10 is to be used is particularly flexible. Also, the tear initiation features
35 20, 22 are notches as opposed to cuts or right-angles.

Figure 12 shows a fourth embodiment of the reseal tamper-evident label 10 which is similar to the first embodiment. However, in this embodiment the base layer 12 is a layer of paper that is not arranged to tear in a particular direction. Instead, the label 10 is further provided with a tear strip 46, which in this embodiment is a waxed tear thread, which is disposed under the base layer 12 between the first and second base portions 16, 18. The tear thread 46 extends across the width of the label 10 and projects from one edge. In use, in order to open the packaging 1, the reseal layer 14 is peeled back and the tear thread 46 is pulled through the base layer 12 so as to separate the first and second base parts 16, 18.

Figures 13 and 14 shows a single-layer tamper-evident and reseal label 210 that is generally rectangular. The label 210 is adhered to packaging 1 comprising first and second packaging portions 2, 4 that can move relative to one another so as to open the packaging. The reseal tamper-evident label 210 comprises a base layer 212 that is made from a similar material to the base layer 212 of the first embodiment. Specifically, the base layer 212 is made from a film of MOPP with the polymer chains oriented across the label.

The base layer 212 is continuous and comprises a first base portion 216 that is disposed at one end of the label 210 and a second base portion 218 that is disposed at the opposite end of the label 210. The base layer 212 also comprises a reseal portion 236 that extends from the first base portion 216 and a finger lift portion 238 that is provided next to the reseal portion 236. The base layer 212 is also provided with first and second tear initiation features 220, 222 which in this embodiment are in the form of two cuts in the base layer 212. The tear initiation features 220, 222 are positioned between the finger lift portion 238 and second base portion 218. As for the first embodiment, the tear initiation features 220, 222 are provided on the same edge or side of the base layer 212 and are spaced from one another. As for the first embodiment, the tear initiation features 220, 222 allow a tear strip 224 to be torn away from the base layer 212 through its entire thickness and width so as to separate the first and second base portions 216, 218.

The lower surface of the base layer 212 is provided with a permanent pressure sensitive adhesive coating 226 in the region of the first base portion 216, the reseal portion 236 and the second base portion 218. However, the lower surface of the finger lift portion 238 and the tear strip 224 are provided with an adhesive deadening layer

239, 237. This prevents the finger lift and the tear strip 224 from adhering to the packaging. The adhesive used may be similar to the adhesive described for use in the first embodiment. As for the first embodiment, the upper surface of the base layer 212 is printed red 228 in the region of the tear strip 224. The adhesive provided on the lower surface of the reseal portion 236 is overcoated with a screen of release varnish 244. This reduces the adhesive strength of the adhesive 226 and therefore allows the reseal portion 236 to be adhered to and detached from the packaging portions 2, 4.

In use, the reseal tamper-evident label 210 is adhered to the packaging in such a position that the first base portion 216 is attached to a first packaging portion 2 and the second base portion 218 is attached to a second packaging portion 4. The reseal portion 236 extends from the first base portion 216 and overlaps the first and second packaging 2, 4 portions to which it is loosely adhered. The tear strip 224 joins the reseal portion 236 to the second base portion 218 and is offset from the join of the first and second packaging portions 2, 4. After the label 210 has been applied to the packaging 1, the packaging 1 cannot be opened because the reseal portion 236 secures the first and second packaging portions 2, 4 together.

With reference to **Figures 15 and 16**, in order to open the packaging 1, the tear strip 224 can be torn away from the base layer 212 to separate the first base portion 216 and the reseal portion 236 from the second base portion 218. As for the first embodiment, in order to pull away the tear strip 224, a user may grasp the edge of the base layer 12 at a position between the first and second tear initiation features 220, 222. As the edge of the base layer 212 is pulled away from the packaging, the base layer 212 tears along two tear lines in a tear direction that is across the width of the label. Once the tear strip 224 has been torn away from the base layer 212, the base layer 212 comprises two discrete parts, namely, the first base portion 216 and the reseal portion 236, and the second base portion 218. In this embodiment, although the tear strip 224 has been torn away from the base layer 212, the packaging cannot be opened because the reseal portion 236 is attached to both the first packaging portion 2 and the second packaging portion 4.

As shown in **Figure 17**, in order to allow the packaging to be opened 2, 4, a user can grasp the adhesive-free finger lift portion 238 and peel the reseal portion 236 away from both the first and second packaging portions 2, 4. This can be done without damaging the packaging due to the release varnish 244 provided over the adhesive

226. The reseal portion 236 cannot be completely detached from the packaging because it is permanently attached by the first base portion 216 to the first packaging portion 2. After the reseal portion 236 has been peeled away from the packaging, the packaging can be opened by moving the first and second packaging portions 2, 4
5 relative to one another. Once the packaging has been closed, the reseal portion 236 can be folded down and adhered to both the first packaging portion 2 and the second packaging portion 4. This can prevent the packaging from being inadvertently opened.

Figure 18 illustrates packaging 300, in the form of a pouch for tobacco, comprising a
10 main pouch portion 302 for retaining tobacco and a flap 304 which is attached to the main pouch portion 302. The flap 304 can be moved between at least a closed position in which the pouch is closed, and an open position in which tobacco within the main pouch portion 302 can be accessed. The packaging 300 further comprises the reseal tamper-evident label 210 described above with reference to Figures 13-17, with
15 the first base portion 216 adhered to the flap 304, the second base portion 318 adhered to the main pouch portion 302, and the reseal portion 236 overlapping and loosely adhered to the flap 304 and the main pouch portion 302. The tear strip 224 extends across the label and is offset from the overlap line between the flap 304 and the main pouch 302. A user can easily determine that the pouch has not yet been
20 opened since the tear strip 224 is still in place. In order to open the pouch, the edge of the tear strip 224 is grasped and torn away from the base layer 212 so as to separate the first base portion 216 and the reseal portion 236 from the second base portion 218 (**Figure 19**). The finger lift portion 238 is then grasped and peeled away from the main pouch portion 302. This allows the flap 304 to be opened in order to provide access to
25 the interior of the main pouch portion 302 (**Figure 20**). Once tobacco has been removed from the main pouch portion 302, the flap 304 is shut and the reseal portion 236 is folded back onto the main pouch 302 in order to reseal the pouch. This prevents the pouch from opening accidentally. A user can now visually determine that the pouch has already been opened because the tear strip 224 is no longer present. However,
30 the pouch can be temporarily resealed by the use of the reseal portion 236.

Figure 21 illustrates a sixth embodiment of a reseal tamper-evident label 210 which is similar to that of the fifth embodiment of Figure 13. However, in this embodiment the base layer 212 is made from a polyester film that is substantially isotropic and therefore
35 is not arranged to preferentially tear in a tear direction. A tear strip 246 in the form of a length of tear tape made from MOPP is disposed underneath the base layer 212 in

between the finger lift portion 238 and the second base portion 218. The polymer chains of the MOPP tear tape 246 are oriented across the width of the label 210 and the tear tape extends across the entire width of the label. In use, in order to open the packaging 12, the edge of the tear tape 246 is grasped and pulled away from the label 210 so that it is torn through the polyester base layer 212. This results in the first base portion 216, reseal portion 236 and the finger lift portion 238 being separated from the second base portion 218, thereby allowing the packaging to be opened.

In any of the above described embodiments, the upper or lower surface of the base layer 12, 212 and/or the upper or lower surface of the reseal layer 14 may be printed. The surfaces may be printed with a commercial graphic or with a security print or ink. In some embodiments, the underside of the tear strip 24, 224 may be printed with a promotional code or the like.

The labels 10, 210 may be manufactured by any appropriate method and may be provided as a wound reel of labels comprising a plurality or series of discrete labels releasably adhered to a wound backing sheet. The labels may either be applied to packaging by hand or machine. Alternatively, the labels 10, 210 may be cut from a continuous tape which may either be self-wound or provided with a backing sheet.

The reseal tamper-evident labels described herein provide a number of benefits to both the product and brand owner, and the end consumer. The tear strip provides a tamper-evident feature as it is not possible to open the packaging without removing the tear strip. Therefore, if the tear strip is not present, it can be easily determined visually that the packaging has already been opened. This makes it easy to determine if a product might have been adulterated or interfered with. Products are very occasionally adulterated by opening the packaging, interfering with the product (for example by adding a hazardous component), and closing the packaging again.

If the tear strip is printed with a security feature such as a covert security ink, then it may be possible to tell that the tear strip has been tampered with or replaced with a non-authentic tear strip. The reseal portion of the label allows the consumer to reseal the packaging after initial opening. This may help to maintain the freshness of the product within the packaging and may also help to prevent the product from inadvertently falling out of the packaging.

The tear strip is particularly easy to remove and allows the packaging to be opened with ease. If the tear strip is part of, or integral with, the base layer, this may reduce the overall cost of the label as it is not necessary to provide a separate tear strip. The use of a directionally oriented polymer allows the tear strip to be integrally part of the base layer. This reduces to overall cost and manufacturing complexity of enabling a tear strip to be removed. Only first and second tear initiation features need to be formed to facilitate the removal of a tear strip. This may be considered an improvement over perforations which may result in a fragile tear strip that can be easily damaged.

CLAIMS:

1. A reseal tamper-evident label for sealing packaging having first and second packaging portions that can be moved relative to one another to open the packaging,
5 the reseal tamper-evident label comprising:
a base layer having a first base portion arranged to be adhered to the first packaging portion and a second base portion arranged to be adhered to the second packaging portion, wherein a tear strip can be torn away from the label in a tear direction so as to separate the first and second base portions, thereby allowing the
10 packaging to be opened; and
a reseal portion extending from the first base portion which in use can be adhered to and detached from the second packaging portion.
2. A reseal tamper-evident label according to claim 1, wherein at least a part of the
15 lower side of the reseal portion is provided with an adhesive, such as a reseal adhesive.
3. A reseal tamper-evident label according to claim 1 or 2, wherein in use the reseal portion can be adhered to and detached from the second base portion which is
20 attached to the second packaging portion.
4. A reseal tamper-evident label according to any preceding claim, further comprising a reseal layer disposed above the base layer and comprising the reseal portion and a hinge portion that is permanently attached to the first base portion.
25
5. A reseal tamper-evident label according to claim 4, wherein the hinge portion is permanently attached to the first base portion by an adhesive.
6. A reseal tamper-evident label according to claim 4 or 5, wherein at least a portion
30 of the upper side of the base layer is provided with a release coating.
7. A reseal tamper-evident label according to any of claims 4-6, wherein at least a portion of the upper side of the first base portion is provided with a release coating and/or wherein at least a portion of the upper side of the second base portion is
35 provided with a release coating.

8. A reseal tamper-evident label according to any of claims 4-7, wherein the lower side of the reseal portion of the reseal layer in the region of the tear strip has low adhesive strength.
- 5 9. A reseal tamper-evident label according to any of claims 4-8, wherein the lower side of the reseal portion of the reseal layer in the region of the tear strip is adhesive free or is provided with an adhesive deadening layer.
- 10 10. A reseal tamper-evident label according to any of claims 4-9, wherein the reseal layer further comprises a finger lift portion that is not adhered to the second base portion or the second packaging portion.
11. A reseal tamper-evident label according to claim 10, wherein the lower side of the finger lift portion is adhesive free or is provided with an adhesive deadening layer.
- 15 12. A reseal tamper-evident label according to any of claims 4-11, wherein the reseal layer comprises a polymer or paper.
- 20 13. A reseal tamper-evident label according to claim 2, wherein the base layer comprises the reseal portion which is disposed between the first base portion and the second base portion.
- 25 14. A reseal tamper-evident label according to claim 13, wherein the label is configured such that a tear strip can be torn away from the base layer at a position between the reseal portion and the second base portion so that the second base portion can be separated from the first base portion and the reseal portion.
- 30 15. A reseal tamper-evident label according to claim 13 or 14, wherein the base layer comprises a finger lift portion which is disposed between the reseal portion and the second base portion that in use is not adhered to the second packaging portion.
16. A reseal tamper-evident label according to claim 15, wherein the lower side of the finger lift portion is adhesive free or is provided with an adhesive deadening layer.

17. A reseal tamper-evident label according to any preceding claim, wherein the base layer comprises first and second spaced tear initiation features arranged so that in use a tear strip can be torn away from the base layer.
- 5 18. A reseal tamper-evident label according to claim 17, wherein the first and second tear initiation features are provided on the same edge of the base layer.
19. A reseal tamper-evident label according to claim 17 or 18, wherein the first and second tear initiation features are spaced apart by substantially the same distance as
10 the width of the tear strip.
20. A reseal tamper-evident label according to any of claims 17-19, wherein the first tear initiation feature is a cut or notch in the edge of the base layer, and/or wherein the second tear initiation feature is a cut or notch in the edge of the base layer.
- 15 21. A reseal tamper-evident label according to any of claims 17-20, wherein the base layer comprises a pull-tab which is adjacent to the first and second tear initiation features.
- 20 22. A reseal tamper-evident label according to any preceding claim, wherein the base layer comprises a material that is arranged to preferentially tear in the tear direction.
23. A reseal tamper-evident label according to any preceding claim, wherein the
25 base layer comprises a directionally oriented polymer.
24. A reseal tamper-evident label according to any preceding claim, wherein the base layer comprises a mono oriented polymer, such as mono oriented polypropylene.
- 30 25. A reseal tamper-evident label according to any preceding claim, further comprising a tear strip disposed underneath the base layer which in use can be torn through the base layer and away from the label so as to separate the first and second base portions.
- 35 26. A reseal tamper-evident label according to any preceding claim, wherein at least part of the lower side of the first base portion and at least part of the lower side of the

second base portion is provided with an adhesive such that the first and second base portions can be adhered to the first and second packaging portions respectively.

27. A reseal tamper-evident label according to any preceding claim, wherein the
5 lower side of the base layer in the region of the tear strip has low adhesive strength.

28. A reseal tamper-evident label according to claim 27, wherein the lower side of the base layer in the region of the tear strip is adhesive free or is provided with an adhesive deadening layer.

10

29. A reseal tamper-evident label according to any preceding claim, wherein the upper side and/or the lower side of the base layer is at least partially printed.

30. A reseal tamper-evident label according to any of claims 4-12, wherein the upper
15 side and/or the lower side of the reseal layer is at least partially printed.

31. A wound reel of labels comprising a wound backing sheet with a plurality of labels, each in accordance with any preceding claim, releasably adhered to the backing sheet.

20

32. Packaging for at least one article or substance comprising:
first and second packaging portions that can be moved relative to one another so as to open the packaging to provide access to the at least one article or substance; and
a reseal tamper-evident label in accordance with any preceding claim, wherein
25 the first base portion is adhered to the first packaging portion and wherein the second base portion is adhered to the second packaging portion so as to seal the packaging and prevent the packaging from being opened without tearing the tear strip away from the base layer, wherein once the tear strip has been torn away from the base layer, the reseal portion can be adhered to and detached from the second packaging portion so
30 as to reseal and reopen the packaging. .

33. Packaging according to claim 32, wherein the packaging is a box for smoking articles and wherein one of the packaging portions is a main box portion for retaining the smoking articles and wherein the other packaging portion is a lid portion hingedly
35 attached to the main box portion and moveable between at least a closed position and an open position.

34. Packaging according to claim 32, wherein the packaging is a pouch for tobacco and wherein one of the packaging portions is a main pouch portion for containing the tobacco and wherein the other packaging portion is a flap attached to the main pouch
5 portion and moveable between at least a closed position and an open position.

35. A reseal tamper-evident label or packaging substantially as described herein with reference to the accompanying drawings.

1 / 15

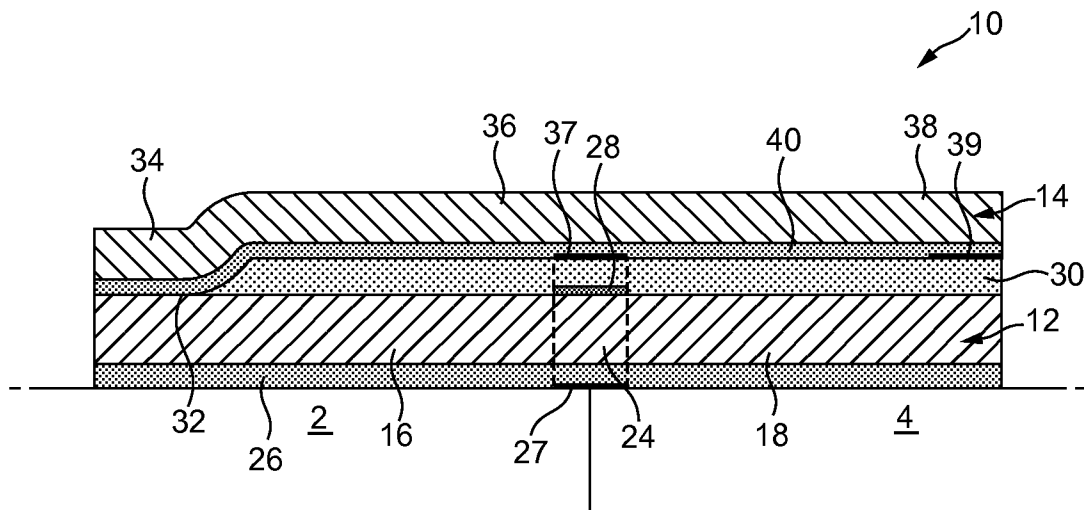


FIG. 1

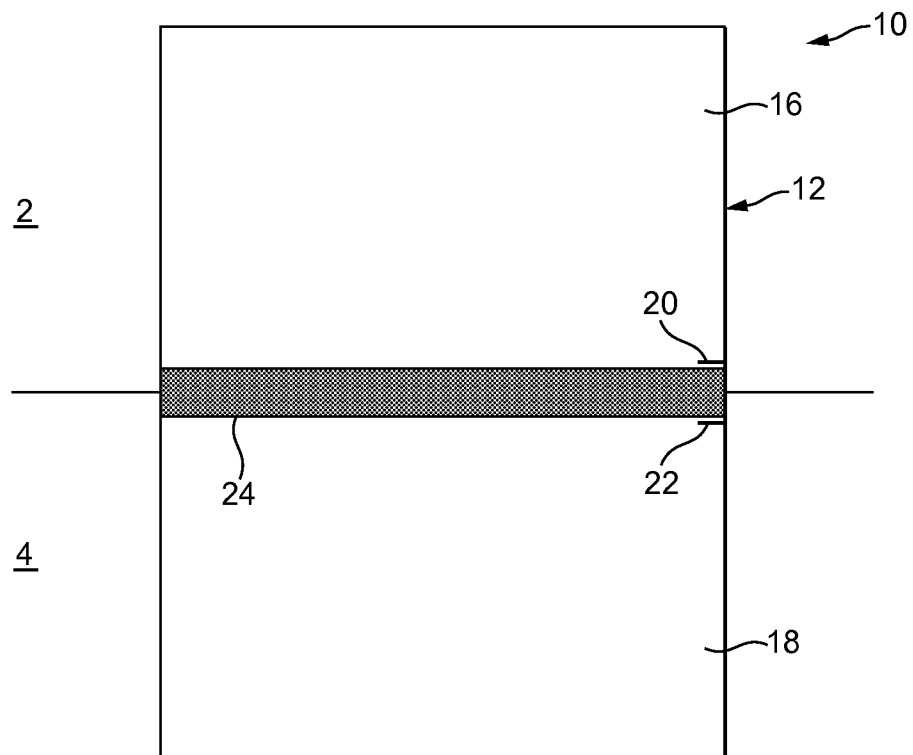


FIG. 2

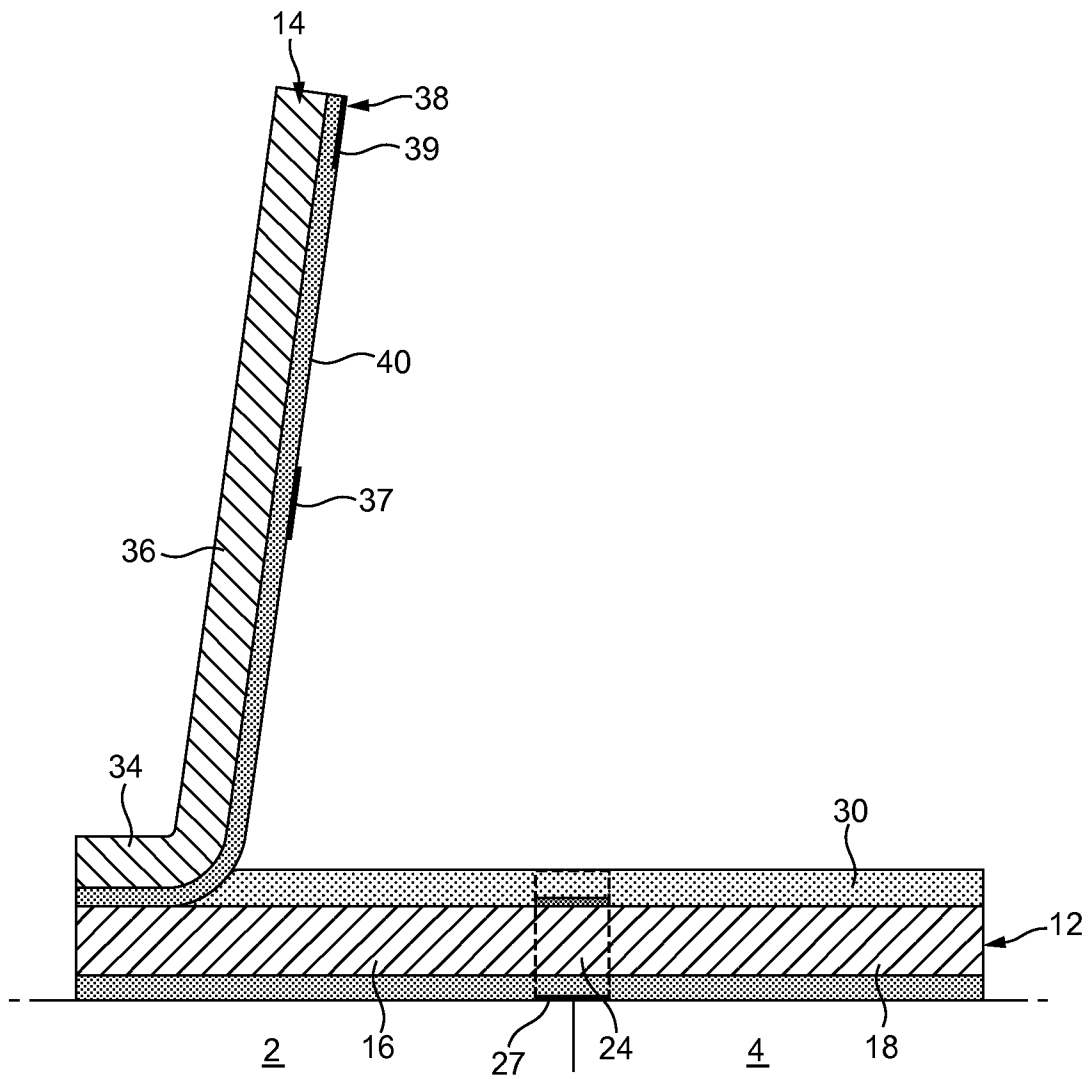


FIG. 3

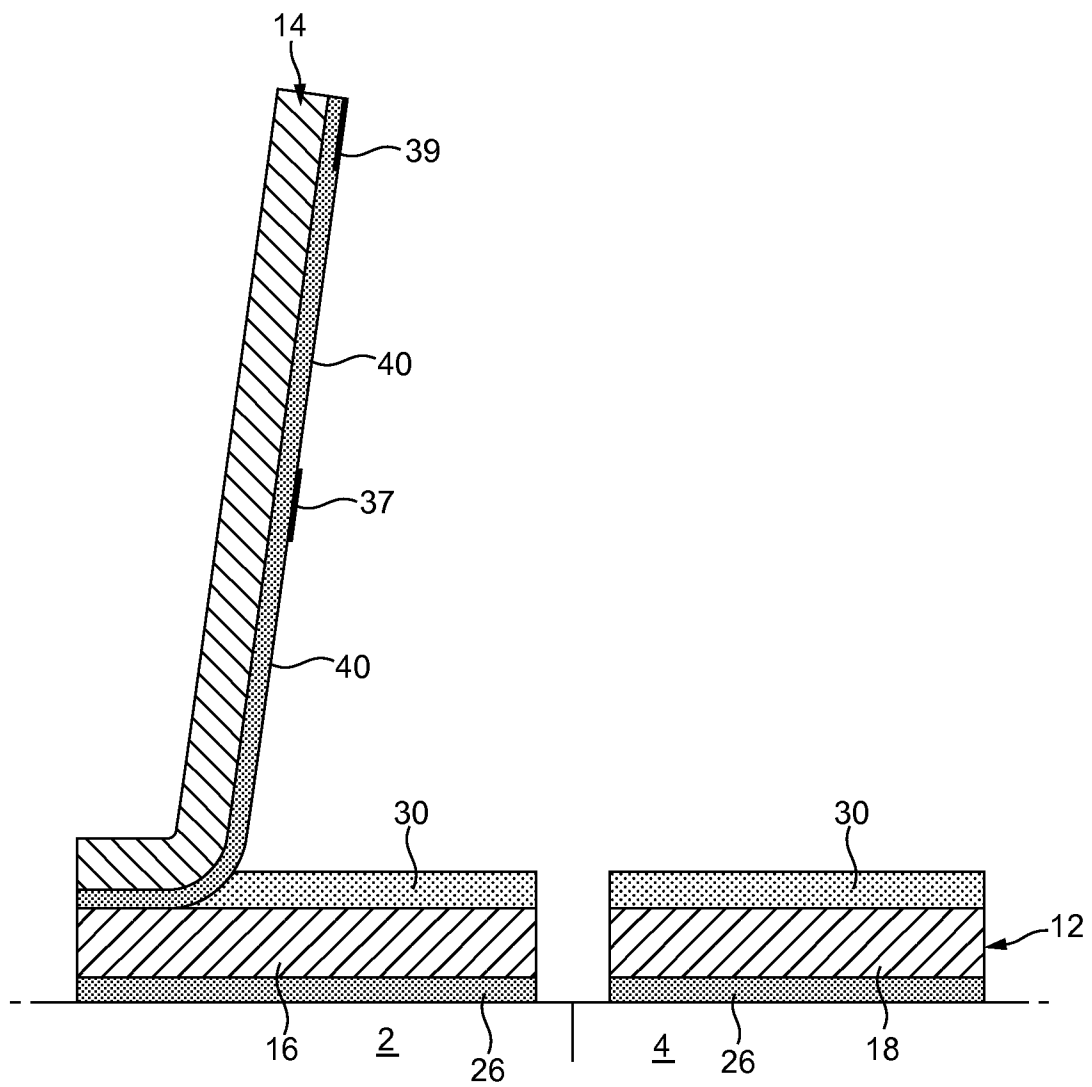


FIG. 4

4 / 15

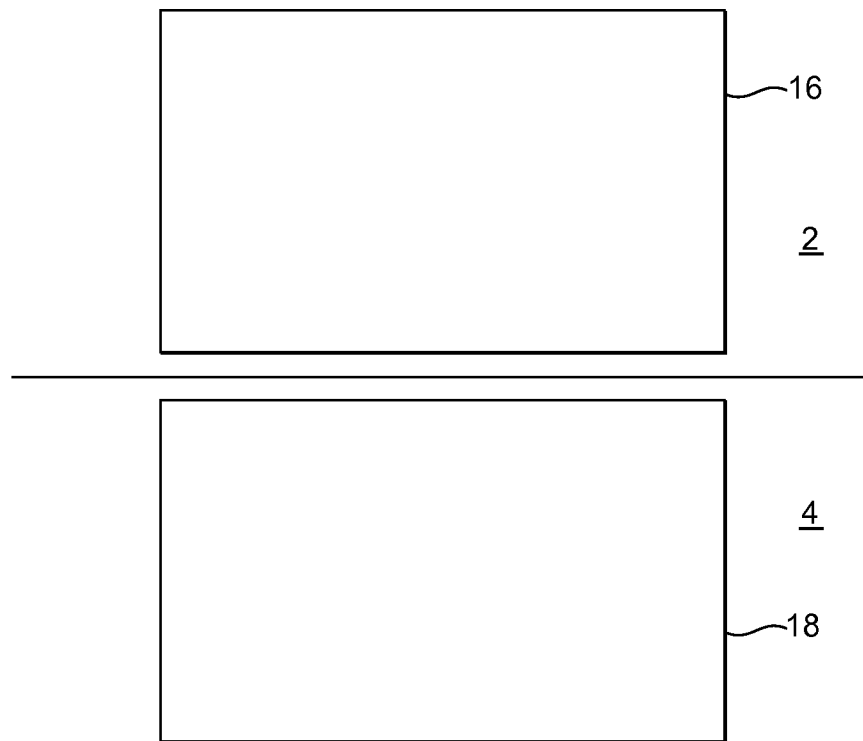


FIG. 5

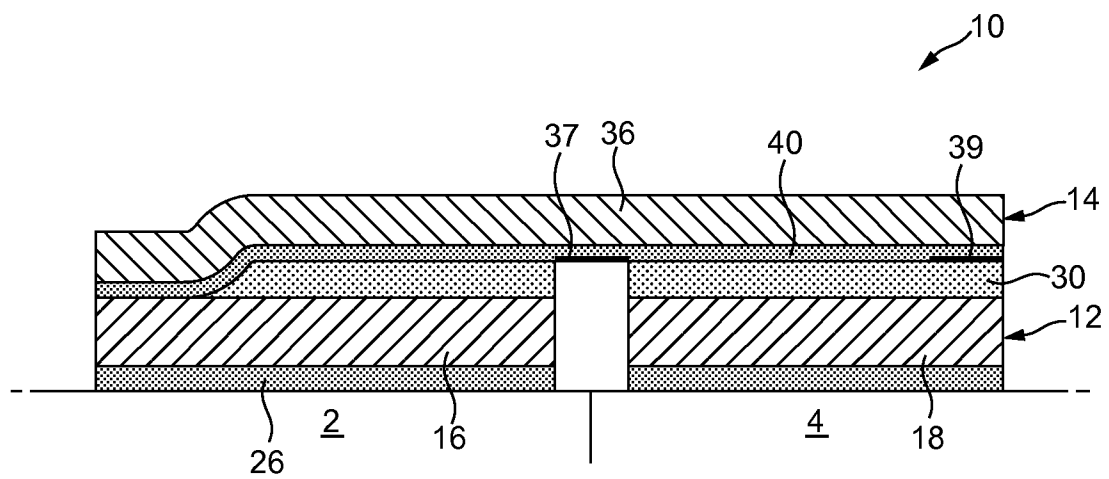


FIG. 6

5 / 15

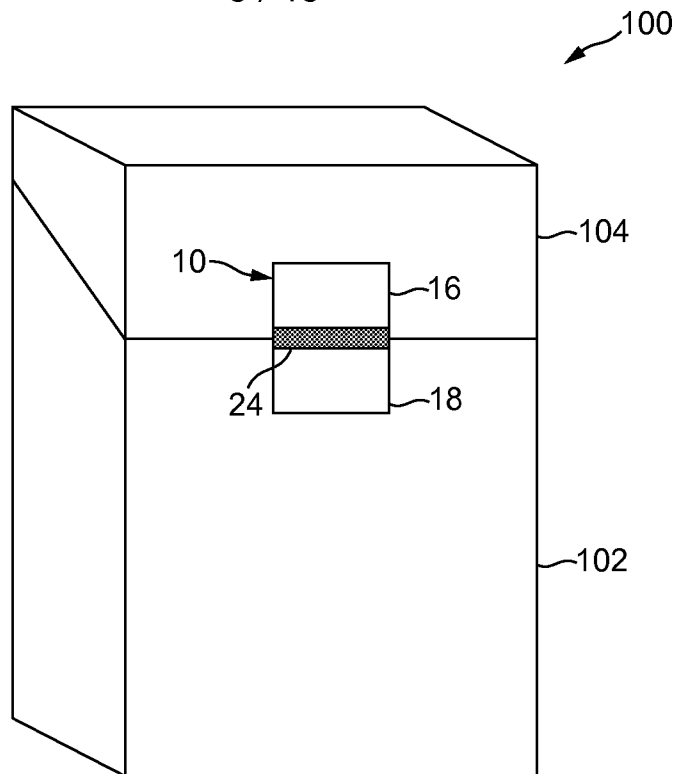


FIG. 7

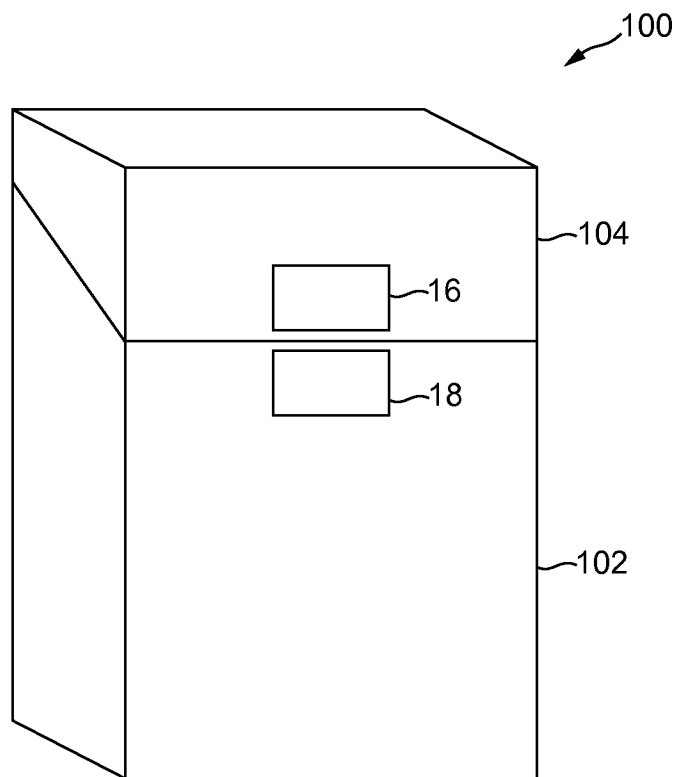


FIG. 8

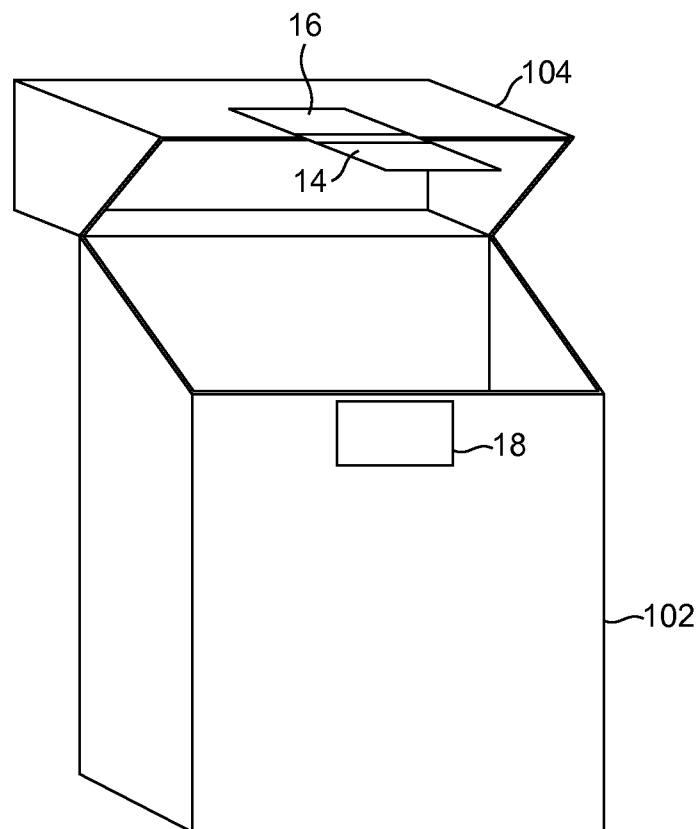


FIG. 9

7 / 15

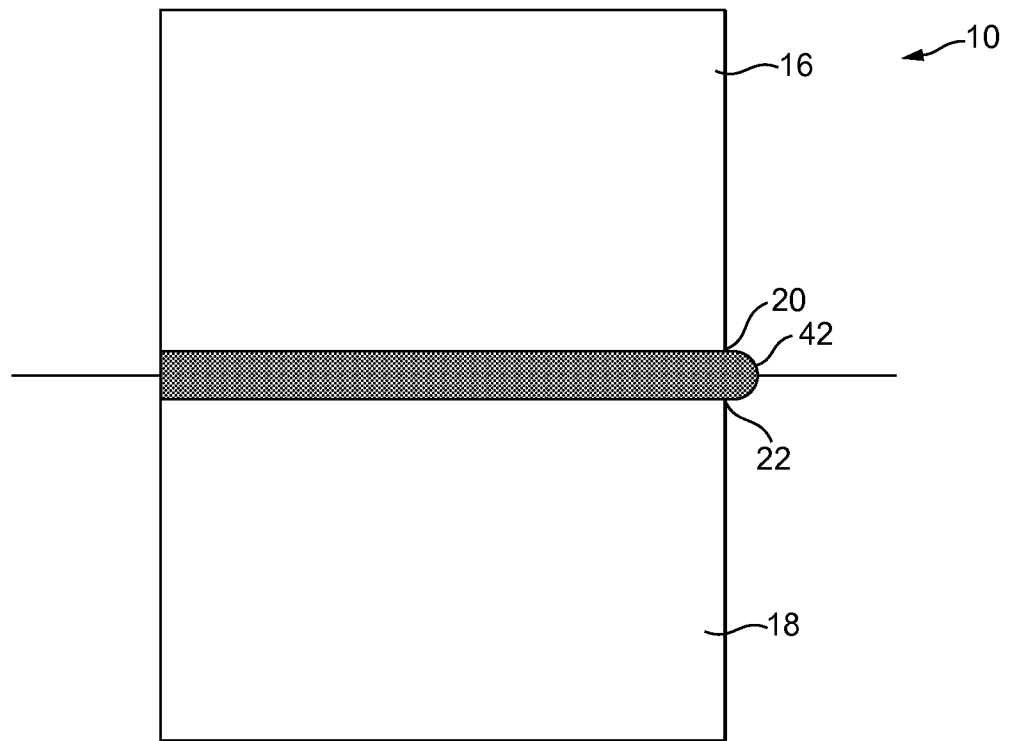


FIG. 10

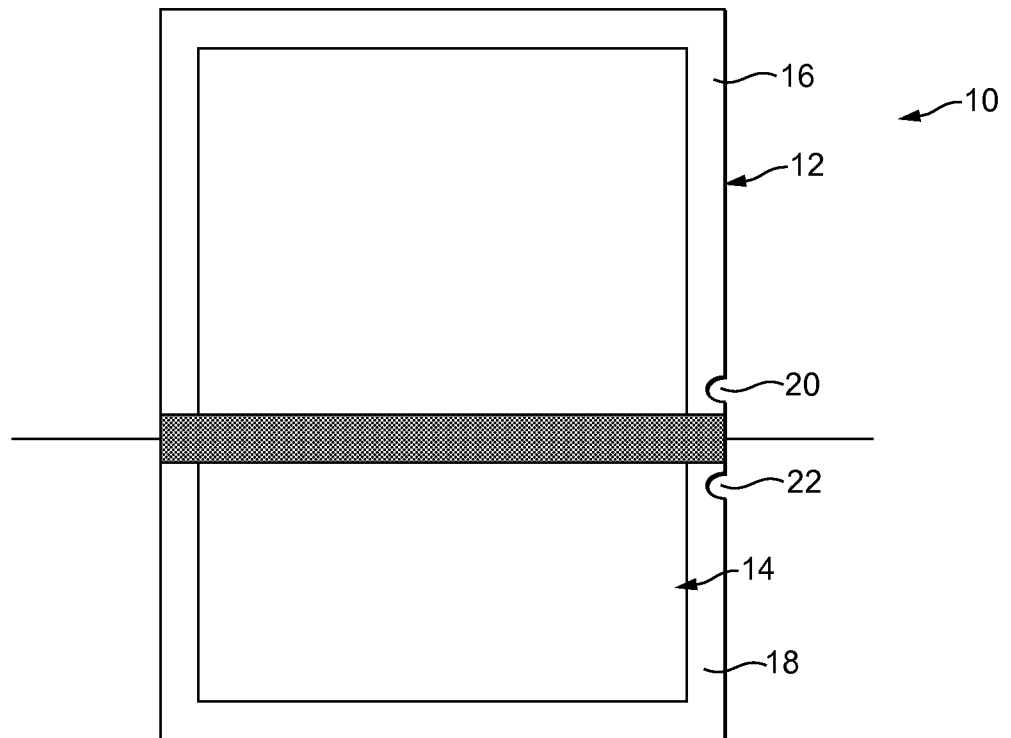


FIG. 11

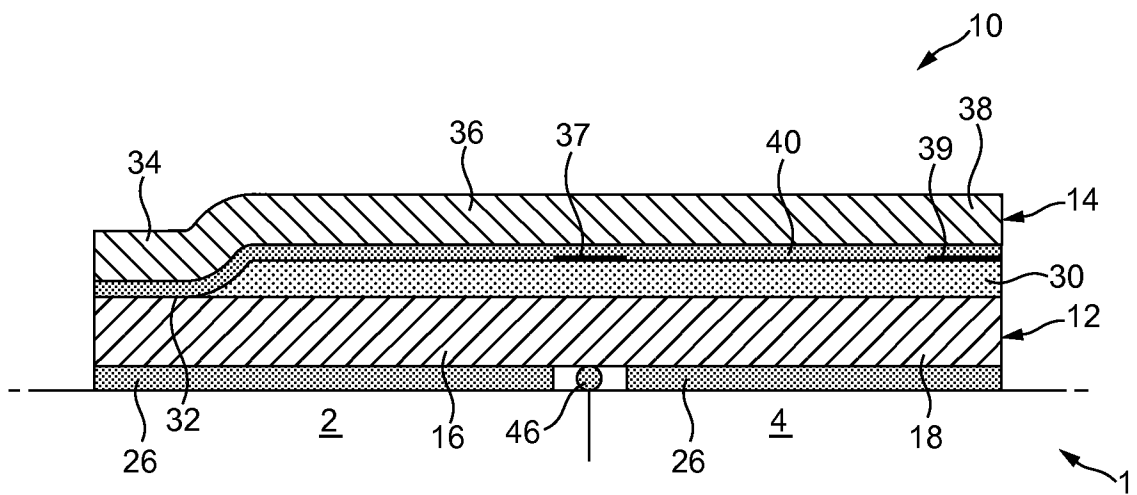


FIG. 12

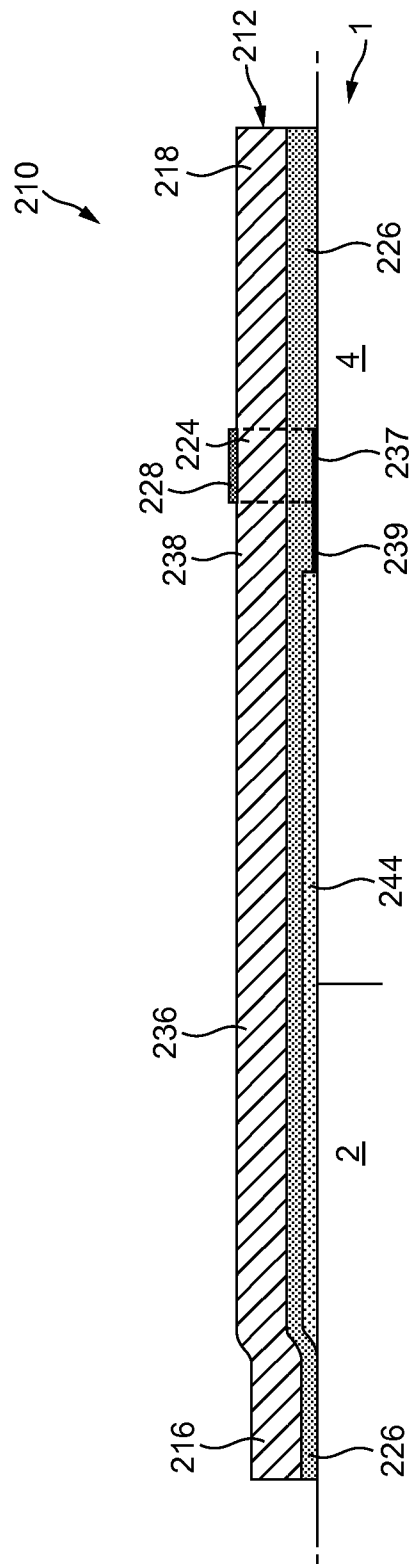


FIG. 13

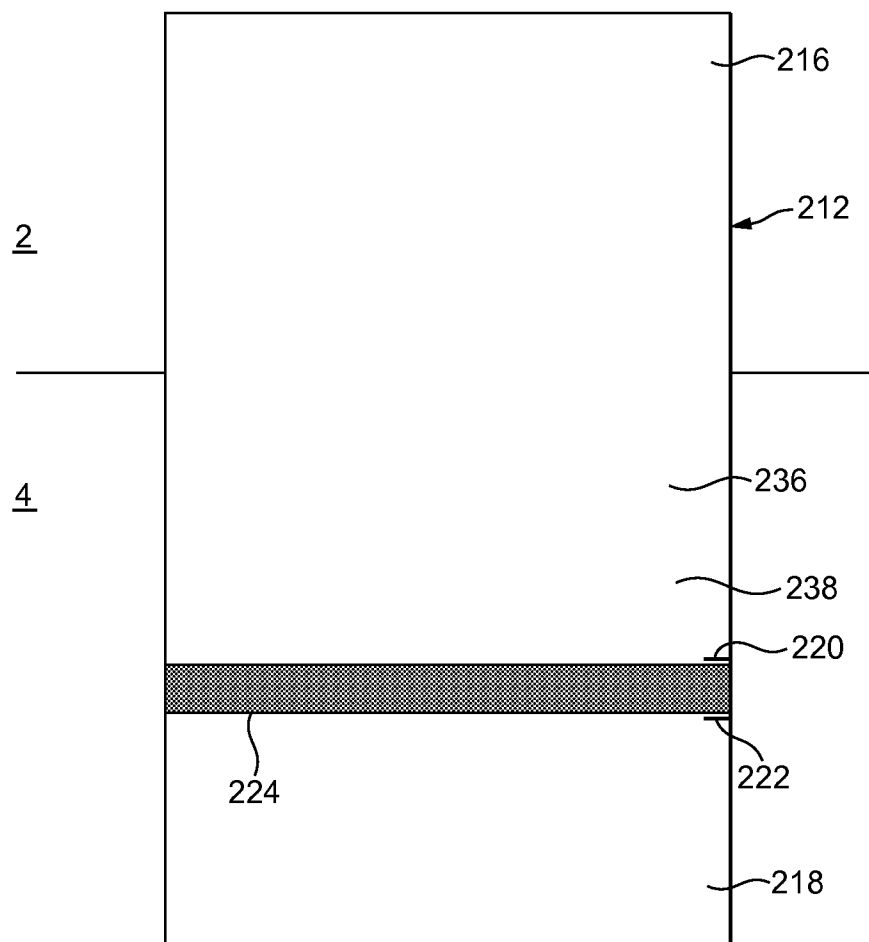


FIG. 14

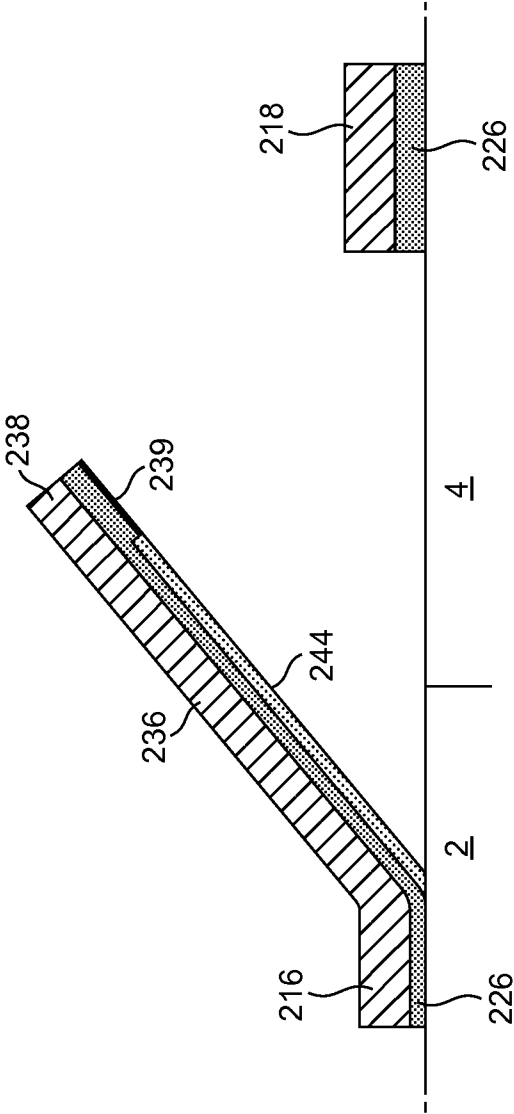


FIG. 17

14 / 15

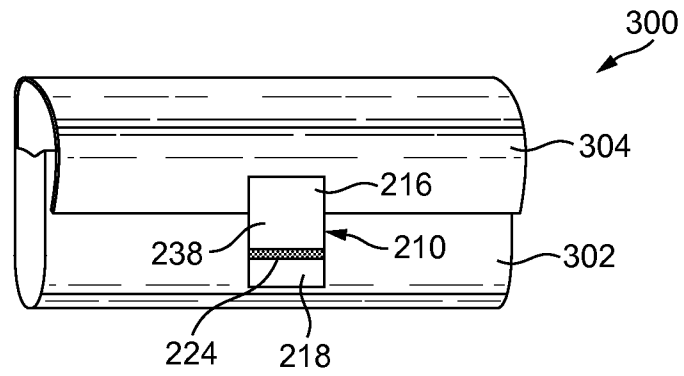


FIG. 18

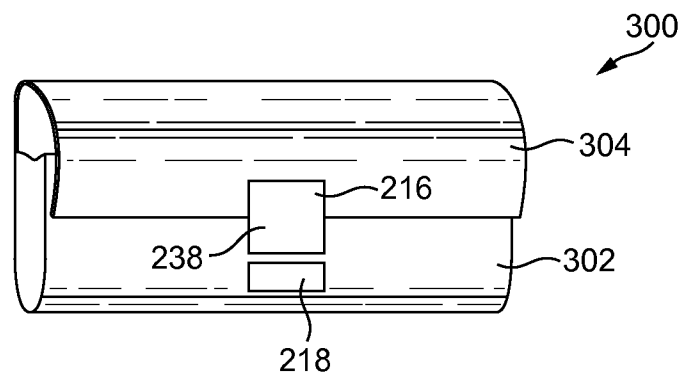


FIG. 19

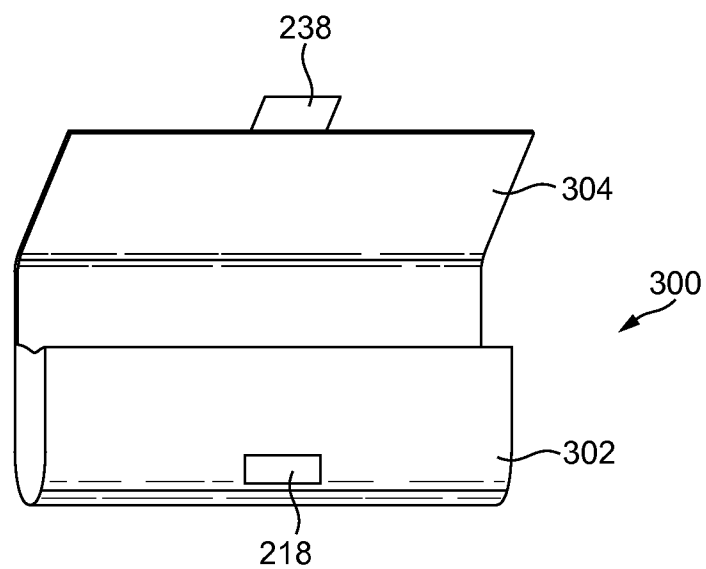


FIG. 20

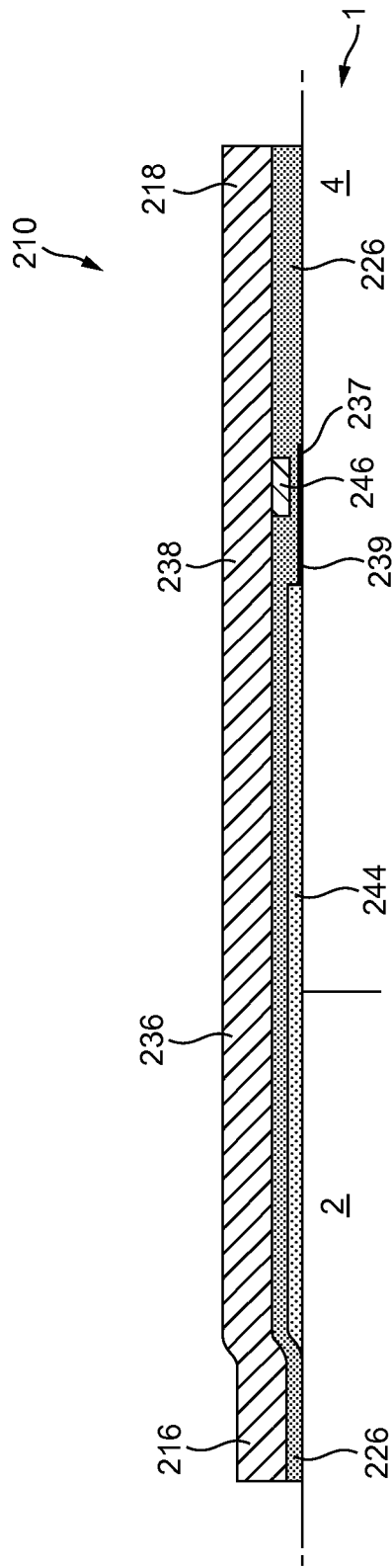


FIG. 21

INTERNATIONAL SEARCH REPORT

International application No
PCT/GB2012/051983

A. CLASSIFICATION OF SUBJECT MATTER

INV. G09F3/02 B65D75/58 G09F3/03 B65D55/08 G09F3/10
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

G09F B65D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EP0-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	DE 10 2008 028075 A1 (TESA BANDFIX AG [CH]) 17 December 2009 (2009-12-17)	1-8, 10-13, 15-30, 32,35
A	paragraphs [0019], [0021] - [0023], [0055], [0061] - [0064], [0084] - [0095], [0098] - [0106] figures 1-5	9,14,31, 33,34
Y	US 2009/091121 A1 (URBANEK DEBRA A [US]) 9 April 2009 (2009-04-09)	1-8, 10-13, 15-30, 32,35
A	paragraphs [0018], [0019], [0021] - [0023]; figures 3-7 ----- -/--	9,14,31, 33,34

☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

19 November 2012

Date of mailing of the international search report

27/11/2012

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040,
Fax: (+31-70) 340-3016

Authorized officer

Lechanteux, Alice

INTERNATIONAL SEARCH REPORT

International application No

PCT/GB2012/051983

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DE 20 2008 003877 U1 (CCL LABEL GMBH [DE]) 13 August 2009 (2009-08-13) paragraphs [0015], [0038] - [0043] figures 1-3,9,10,13 -----	1-35
A	JP 9 156677 A (FUJI SEAL IND CO LTD) 17 June 1997 (1997-06-17) abstract figures -----	1-35

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/GB2012/051983

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 102008028075 A1	17-12-2009	NONE	
US 2009091121 A1	09-04-2009	NONE	
DE 202008003877 U1	13-08-2009	DE 202008003877 U1 EP 2104083 A1	13-08-2009 23-09-2009
JP 9156677 A	17-06-1997	NONE	