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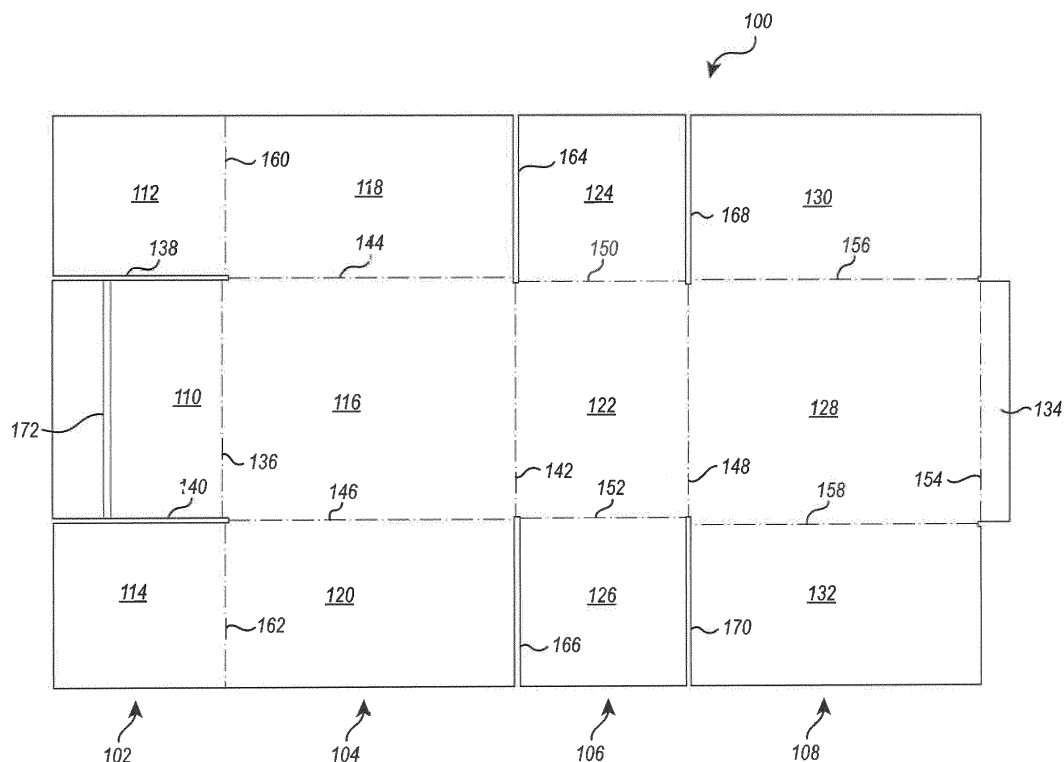
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(54) **BOX TEMPLATE**

(57) A foldable template (100) for forming a box includes first, second, third, and fourth segments (102, 104, 106, 108) and a glue tab (134). Each segment includes a center section and opposing first and second flaps. The flaps (112, 114) of the first segment are separated from the first center section (110) by a cut or cutout (138, 140).

The flaps of each of the second, third, and fourth segments are separated from the corresponding center section by creases. The glue tab (134) extends from the center section of either the first or the fourth segment and is separated therefrom by a crease (154).



**FIG. 1**

## Description

### 1. The Field of the Invention

**[0001]** Exemplary embodiments of the disclosure relate to packaging. More specifically, embodiments of the disclosure relate to box templates that may be assembled around one or more to-be-packaged items.

### 2. The Relevant Technology

**[0002]** In many industries, packaging materials are used to deliver products to clients. Often such packaging materials take the form of boxes which the products are placed in for delivery. Such boxes may, of course, be of virtually any size and configuration. It may be that the product is placed directly inside the box without any additional protection. In other cases, there may be some additional protection or cushioning provided. For instance, foam peanuts, bags of air, bubble-wrap, and the like may be used to protect a fragile or other product.

**[0003]** When an item is placed directly inside of a box, care is often taken to select a box that has dimensions that generally correspond to the dimensions of the item being boxed so that the item fits snugly within the box. Such may be desirable to prevent excess movement of the item and, consequently, reduce the shaking or movement of the item therein. The dimensions of standard sized boxes, however, often do not correspond to the size of the items being packaged therein. As a result, the items being packaged routinely do not snugly fit in standard sized boxes. To avoid excessive movement of the packaged items in such cases, additional cushioning is often placed in the box around the item.

**[0004]** Packaging items in boxes that are too large or that require additional cushioning is costly and inefficient. For instance, the additional material used in creating the larger packages and in cushioning items packaged therein increases the cost of packaging the items. Furthermore, storing a large assortment of premade boxes can require significant amounts of storage space that could otherwise be eliminated or more efficiently used. Moreover, packages that are too large for a particular item are more expensive to ship. Shipping prices are often affected by the size of the shipped package, and not just the weight of the package. Thus, reducing the size of an item's package can reduce the price of shipping the item.

**[0005]** To avoid such costs and inefficiencies, systems have been developed for creating custom sized boxes. Such systems create templates out of a planar material which may be folded to form boxes. The templates include sections that, when folded, form the sidewalls of the box. The templates also include flaps that, when folded, form the tops and bottoms of the boxes.

**[0006]** Prior to assembling such a template into a box, opposing sidewall sections are attached together to hold the template in a generally rectangularly shaped tube. The opposing sidewall sections are attached to one an-

other via a glue tab. The glue tab is often integrally formed with and extends from one of the sidewall sections. Glue is applied to the glue tab and/or the opposing side wall section and the glue tab is secured to the opposing sidewall section. The glue is then allowed to set, after which the template may be arranged into a box shape, filled, and shipped.

**[0007]** Although the above-described custom sized boxes may reduce the costs and some inefficiencies associated with using standard sized boxes, there are still some inefficiencies associated with these custom sized boxes. For instance, the noted boxes must be glued and partially erected before items are placed in the boxes. Only thereafter can the boxes be fully closed.

**[0008]** Accordingly, it would be advantageous to have a box template that may be assembled relatively quickly into a box around the items to be packaged and which is custom sized to fit the items being packaged.

**[0009]** This disclosure relates to foldable templates and methods for making custom sized boxes therefrom. More specifically, the disclosure relates to foldable box templates that can be folded around to-be-packaged items and which may be custom sized according to a particular need.

**[0010]** According to a first aspect there is provided a foldable template for forming a box includes first, second, third, and fourth segments and a glue tab. The first segment is disposed at a first end of the template and includes a first center section and opposing first and second flaps. Each of the opposing flaps is separated from the first center section by a cut or cutout. The second segment has a second center section and opposing first and second flaps. Each of the opposing flaps of the second segment is separated from the second center section by a crease. The third segment has a third center section and opposing first and second flaps. Each of the opposing flaps of the third segment is separated from the third center section by a crease. The fourth segment has a fourth center section and opposing first and second flaps. Each of the opposing flaps of the fourth segment is separated from the fourth center section by a crease. The glue tab extends from either the first or fourth center section and is separated from the first or fourth center section by a crease.

**[0011]** The first center section and the second center section may be separated by a crease.

**[0012]** The first flap of the first segment may be separated from the first flap of the second segment by a crease.

**[0013]** The crease between the first center section and the second center section may be offset from the crease between the first flap of the first segment and the first flap of the second segment.

**[0014]** The offset may be equal to about a thickness of the foldable template.

**[0015]** The second flap of the first segment may be separated from the second flap of the second segment by a crease.

**[0016]** The crease between the first center section and the second center section may be offset from the crease between the second flap of the first segment and the second flap of the second segment.

**[0017]** The offset may be equal to about a thickness of the foldable template.

**[0018]** The creases separating the opposing first and second flaps from the third center section may be spaced apart a first distance.

**[0019]** The creases separating the opposing first and second flaps from the second center section may be spaced apart a second distance, the second distance may be greater than the first distance.

**[0020]** The creases separating the opposing first and second flaps from the fourth center section may be spaced apart a third distance, the third distance may be greater than the second distance.

**[0021]** The difference between the first distance and the second distance and/or between the second distance and the third distance may be equal to about a thickness of the foldable template.

**[0022]** One or more of: the first flap of the second segment may be separated from the first flap of the third segment by a cut or cutout; the first flap of the third segment may be separated from the first flap of the fourth segment by a cut or cutout; the second flap of the second segment may be separated from the second flap of the third segment by a cut or cutout; and the second flap of the third segment may be separated from the second flap of the fourth segment by a cut or cutout.

**[0023]** The first center section may comprise a tear-away strip, the tear-away strip may comprise one or more of: one or more cuts or cutouts which may be formed in an edge of the first center section; and a strip of plastic secured to a surface thereof.

**[0024]** According to a second aspect there is provided a foldable template for forming a box includes a plurality of identifiable sections that are arranged in first, second, third, fourth, and fifth columns and first, second, and third rows. The first column includes a first flap in the first row, a first center section in the second row, and a second flap in the third row, with each of the first and second flaps being separated from the first center section by a cut or cutout. The second column includes a first flap in the first row, a second center section in the second row, and a second flap in the third row, with each of the first and second flaps being separated from the second center section by a crease. The third column includes a first flap in the first row, a third center section in the second row, and a second flap in the third row, with each of the first and second flaps being separated from the third center section by a crease. The fourth column includes a first flap in the first row, a fourth center section in the second row, and a second flap in the third row, with each of the first and second flaps being separated from the fourth center section by a crease. The fifth column includes a glue flap in the second row.

**[0025]** The first flaps in the first and second columns

may be separated by a crease.

**[0026]** The first and second center sections may be separated by a crease that may be offset from the crease separating the first flaps in the first and second columns.

**[0027]** The second flaps in the first and second columns may be separated by a crease.

**[0028]** The first and second center sections may be separated by a crease that may be offset from the crease separating the second flaps in the first and second columns.

**[0029]** One or more of: the first flaps in the second and third columns may be separated by a cut or cutout; the second flaps in the second and third columns may be separated by a cut or cutout; the first flaps in the third and fourth columns may be separated by a cut or cutout; and the second flaps in the third and fourth columns may be separated by a cut or cutout.

**[0030]** The creases separating the first and second flaps from the third center section may be spaced apart a first distance.

**[0031]** The creases separating the first and second flaps from the second center section may be spaced apart a second distance, the second distance may be greater than the first distance.

**[0032]** The creases separating the first and second flaps from the fourth center section may be spaced apart a third distance, the third distance may be greater than the second distance.

**[0033]** A difference between the first distance and the second distance and/or between the second distance and the third distance may be equal to about a thickness of the foldable template.

**[0034]** The first center section may comprise a tear-away strip, the tear-away strip may comprise one or more of: one or more cuts or cutouts formed in an edge of the first center section; and a strip of plastic secured to a surface thereof.

**[0035]** According to a third aspect there is provided a foldable template includes first, second, third, and fourth segments and a glue tab. The first segment is disposed at a first end of the template and has a first center section and opposing first and second flaps. The second segment has a second center section and opposing first and second flaps. Each of the opposing flaps of the second segment is separated from the second center section by a crease. The first flap of the second segment is separated from the first flap of the first segment by a crease and the second flap of the second segment is separated from the second flap of the first segment by a crease. The third segment has a third center section and opposing first and second flaps with each of the opposing flaps of the third segment being separated from the third center section by a crease. The fourth segment has a fourth center section and opposing first and second flaps with each of the opposing flaps of the fourth segment being separated from the fourth center section by a crease. The glue tab extends from either the first center section or the fourth center section and is separated from the

first center section or the fourth center section by a crease.

**[0036]** Each of the opposing first and second flaps of the first segment may be separated from the first center section by a cut or cutout.

**[0037]** These and other objects and features of the present invention will become more fully apparent from the following description and appended claims, or may be learned by the practice of the invention as set forth hereinafter.

#### BRIEF DESCRIPTION OF THE DRAWINGS

**[0038]** To further clarify the above and other advantages and features of the present invention, a more particular description of the invention will be rendered by reference to specific embodiments thereof which are illustrated in the appended drawings. It is appreciated that these drawings depict only illustrated embodiments of the invention and are therefore not to be considered limiting of its scope. The invention will be described and explained with additional specificity and detail through the use of the accompanying drawings in which:

Figure 1 illustrates a plan view of a foldable box template according to an exemplary embodiment of the present invention.

Figure 2 illustrates a perspective view of the foldable box template of Figure 1.

Figures 3-10 illustrate the foldable box template of Figures 1 and 2 being folded into a box according to one exemplary method for constructing a box using the foldable box template of Figures 1 and 2.

#### DETAILED DESCRIPTION

**[0039]** The embodiments described herein generally relate to a foldable box template that may be arranged into a box around one or more items to be packaged in the box.

**[0040]** As used herein, the term "template" shall refer to a flat stock of material that can be folded into a box. A template may have cuts, notches, cutouts, divides, and/or creases that allow the template to be bent and/or folded into a box. Additionally, a template may be made from any suitable material, generally known to those skilled in the art. For example, cardboard or corrugated paperboard may be used as the template material. Such template materials may have any suitable thickness and weight to permit the template to be bent and/or folded into a box.

**[0041]** As used herein, the term "crease" shall refer to a line along which any portion of the template may be folded. For example, a crease may be an indentation in the template material, which may facilitate the folding of a portion of the template that is adjacent to the crease. A suitable indentation may be created by applying sufficient pressure to reduce the thickness of the material in

the desired location and/or by removing some of the material along the desired location, such as by scoring.

**[0042]** The term "cut" refers to a separation between portions of the template material, such that an incision is made through the template. The terms "notch" and "cutout" refer to a shape made by removing material from the template. A "notch" or "cutout" may be similar to a "cut" in that a "notch" or "cutout" separates portions of the template material. In contrast to a "cut" (which only makes an incision between portions of the template material), a "notch" or "cutout" also removes material between portions of the template material. In some instances herein, the terms "cut", "notch", and "cutout" are used interchangeably, but it will be appreciated that a distinction can be made between these terms as noted.

**[0043]** While the present disclosure will be described in detail with reference to specific configurations, the descriptions are illustrative and are not to be construed as limiting the disclosure. Various modifications can be made to the illustrated configurations as defined by the claims. For better understanding, like components have been designated by like reference numbers throughout the various accompanying figures.

**[0044]** All creases are identified on the figures with broken or dashed lines, and all notches or cuts are identified with bold/solid lines. Additionally, references to the "top", "bottom", or "sides" of the box are arbitrary and made for descriptive purposes only. Similarly, the terms "length," "width," and "height" are chosen arbitrarily. Thus, a described "length" may be considered a width or a height, a described "width" may be considered a length or a height, and a described "height" may be considered a length or a width. Such designations are not intended to represent or connote any specific orientation or location of the box template, its components, or a box formed therewith.

**[0045]** Figure 1 illustrates an exemplary embodiment of a foldable box template 100. The foldable box template 100 may have a substantially rectangular shape and may comprise four primary segments 102, 104, 106, 108. The first segment 102 includes a first center section 110 and opposing flaps 112, 114. The second segment 104 includes a second center section 116 and opposing flaps 118, 120. The third segment 106 includes a third center section 122 and opposing flaps 124, 126. The fourth segment 108 includes a fourth center section 128 and opposing flaps 130, 132. In the illustrated embodiment, a glue tab 134 extends from the fourth center section 128. In other embodiments, the glue tab 134 may extend from the first center section 110.

**[0046]** Each center section and/or opposing flaps of a segment and the glue tab may have substantially rectangular shapes and may be defined by one or more creases, cuts, notches, and/or edges of the foldable box template 100. The creases, cuts, and/or notches may facilitate the folding of adjacent sections relative to one another in order to form a box from box template 100.

**[0047]** More specifically, with regard to the center sec-

tions, center section 110 of first segment 102 is defined by a crease 136 formed between center sections 110, 116, cutouts 138, 140 formed between center section 110 and opposing flaps 112, 114, respectively, and an edge of box template 100. Center section 116 of second segment 104 is defined by crease 136 formed between center sections 110, 116, a crease 142 formed between center sections 116, 122, and creases 144, 146 formed between center section 116 and opposing flaps 118, 120, respectively. Center section 122 of third segment 106 is defined by crease 142 formed between center sections 116, 122, a crease 148 formed between center sections 122, 128, and creases 150, 152 formed between center section 122 and opposing flaps 124, 126, respectively. Center section 128 of third segment 108 is defined by crease 148 formed between center sections 122, 128, a crease 154 formed between center section 128 and glue tab 134, and creases 156, 158 formed between center section 128 and opposing flaps 130, 132, respectively.

**[0048]** As noted above, glue tab 134 may extend from first center section 110 rather than fourth center section 128. In such embodiments, first center section 110 may be defined by a crease between glue tab 134 and the first center section 110 rather than an edge of box template 100. Similarly, fourth center section 128 may be defined by an edge of box template 100 rather than a crease between fourth center section 128 and glue tab 134.

**[0049]** Flap 112 is defined by cutout 138 formed between flap 112 and center section 110, a crease 160 formed between flaps 112, 118, and two edges of box template 100. Similarly, flap 114 is defined by cutout 140 formed between flap 114 and center section 110, a crease 162 formed between flaps 114, 120, and two edges of box template 100.

**[0050]** Flap 118 is defined by a crease 144 formed between flap 118 and center section 116, a crease 160 formed between flap 112 and flap 118, a cutout 164 formed between flaps 118, 124, and an edge of box template 100. Similarly, flap 120 is defined by a crease 146 formed between flap 120 and center section 116, a crease 162 formed between flap 114 and flap 120, a cutout 166 formed between flaps 120, 126, and an edge of box template 100.

**[0051]** Flap 124 is defined by crease 150 formed between flap 124 and center section 122, a cutout 164 formed between flap 124 and flap 118, a cutout 168 formed between flaps 124, 130, and an edge of box template 100. Similarly, flap 126 is defined by crease 152 between flap 126 and center section 122, a cutout 166 formed between flap 126 and flap 120, a cutout 170 formed between flaps 126, 132, and an edge of box template 100.

**[0052]** Flap 130 is defined by crease 156 between flap 130 and center section 128, cutout 168 between flap 130 and flap 124, and two edges of box template 100. Similarly, flap 132 is defined by crease 158 between flap 132 and center section 128, cutout 170 between flap 126 and

flap 132, and two edges of box template 100.

**[0053]** In view of the above, box template 100 may be viewed as having a plurality of rows and columns. A first row includes flaps 112, 118, 124, 130, a second row includes center sections 110, 116, 122, 128 and glue flap 134, and a third row includes flaps 114, 120, 126, 132. Similarly, a first column includes center section 110 and flaps 112, 114, a second column includes center section 116 and flaps 118, 120, a third column includes center section 122 and flaps 124, 126, a fourth column includes center section 128 and flaps 130, 132, and a fifth column includes glue flap 134. In the illustrated embodiment, the fifth column (e.g., with glue flap 134) is disposed next to the fourth column. In other embodiments, the fifth column may be disposed next to the first column.

**[0054]** In some embodiments, as can be seen in Figure 1, the creases can optionally be located and/or spaced apart to facilitate the folds described below. For instance, creases 160, 162 may be generally aligned with one another, while crease 136 is slightly offset therefrom. The offset of crease 136 may allow flaps 112, 114 to be folded and positioned inside of crease 136 to allow center section 110 to be folded against outer surfaces of flaps 112, 114, as shown and described below in connection with Figures 6 and 9. In some embodiments, the offset between crease 136 and creases 160, 162 may be about the thickness of the material used to make box template 100. In other embodiments, creases 136, 160, and 162 may be generally aligned with one another.

**[0055]** Similarly, the spacing between creases 144, 146, creases 150, 152, and creases 156, 158 may be different. For instance, creases 150, 152 may be spaced apart a first distance, creases 144, 146 may be spaced apart a second distance that is greater than the first distance, and creases 156, 158 may be spaced apart a third distance that is greater than the first distance and the second distance. The different spacing between the noted flaps can facilitate certain portions of box template 100 being folded inside or outside of other portions thereof.

**[0056]** For instance, the spacing difference between creases 150, 152 and creases 144, 146 enables flaps 124, 126 to be folded inside of flaps 118, 120, respectively, as shown in Figures 4-5. Similarly, the spacing differences between creases 144, 146 and creases 156, 158 enables flaps 130, 132 to be folded onto the outside of flaps 118, 120, respectively, as shown in Figure 10. In some embodiments, the spacing differences (e.g., between the first distance and the second distance, and between the second distance and the third distance) may be about the thickness of the material used to make box template 100.

**[0057]** In other embodiments, some of creases 144, 146, 150, 152, 156, and 158 may be generally aligned with one another. For instance, some or all of creases 144, 150, 156 may be generally aligned with one another. Likewise, some or all of creases 146, 152, and 158 may be generally aligned with one another.

**[0058]** As shown in Figure 1, the first segment 102 and the fourth segment 108 (and the glue flap 134) are disposed at opposite ends of the foldable box template 100. The second segment 104 is disposed between the first segment 102 and the third segment 106. The third segment 106 is disposed between the second segment 104 and the fourth segment 108. The fourth segment 108 is disposed between the third segment 106 and the fifth segment (e.g., glue tab 134).

**[0059]** Following is a brief discussion of various dimensional relationships between segments 102, 104, 106, 108. Although specific relationships will be discussed, it will be understood that these relationships are merely exemplary, and that foldable box templates according to the present disclosure may have dimensional relationships that are different than the exemplary relationships described below.

**[0060]** In some implementations, including the embodiment illustrated in Figure 1, box template 100 may be folded to form a generally rectangular box in which the opposing sides of the box have dimensions that are generally equal to one another. For instance, when box template 100 is folded into a box, center sections 110 and 122 form opposing outer surfaces of the box, center sections 116, 128 form opposing outer surfaces, and flaps 130, 132 form opposing outer surfaces. In order for the resulting box to be generally rectangular in shape, center sections 110, 122 may be formed with similar or identical dimensions, center sections 116, 128 may be formed with similar or identical dimensions, and flaps 130, 132 may be formed by similar or identical dimensions.

**[0061]** Although the remaining flaps (112, 114, 118, 120, 124, 126) are folded to be disposed on an interior of the folded box (as will be discussed below), the corresponding flaps may also have similar or identical dimensions. For instance, flaps 112, 114 may have similar or identical dimensions, flaps 118, 120 may have similar or identical dimensions, and flaps 124, 126 may have similar or identical dimensions. Furthermore, the length of flaps 124, 126 may be similar or identical to the width of flaps 112, 114.

**[0062]** As noted above, the various flaps and center sections of the foldable box template 100 may be folded along the creases in order to construct a box. Figures 2-10 illustrate an example method or sequence of steps for folding the foldable box template 100 to create a box therefrom. It will be understood that the following description is an exemplary method for constructing a box using box template 100 and is not intended to limit the disclosure. Other methods may be used to create a box using template 100.

**[0063]** When forming a box from box template 100 according to the present method, one or more to-be-packaged items may be placed on top of box template 100 when the box template 100 is flat as shown in Figure 2 and box template 100 may be folded around the item(s). In the embodiment illustrated in Figure 2, for example, the item(s) may be placed on top of center section 116

and the remainder of box template 100 may be folded around the item(s) as described below.

**[0064]** To begin the folding process, as shown in Figure 3, the box template 100 is folded along crease 142, so that center section 122 is positioned against or adjacent to the item(s) positioned on center section 116. Thereafter, as shown in Figure 4, flaps 124, 126 are folded along creases 150, 152, respectively, inward towards the item(s) positioned on center section 116. As can be seen in Figure 4, flaps 124, 126 may be folded to be positioned slightly inside of creases 144, 146, respectively. Such positioning of flaps 124, 126 can facilitate the later folding of flaps 118, 120 as discussed below.

**[0065]** As shown in Figure 5, flaps 118, 120 are then folded along creases 144, 146, respectively, inward towards the item(s) positioned on center section 116. When so folded, flaps 118, 120 form portions of opposing walls of the box being formed. Because flaps 112, 114 are attached to flaps 118, 120, respectively, flaps 112, 114 are also folded up to the same orientation as flaps 118, 120.

**[0066]** Thereafter, as shown in Figure 6, flaps 112, 114 are then folded along creases 160, 162, respectively, inward towards the item(s) positioned on center section 116. When so folded, flaps 112, 114 form a portion of a wall of the box being formed opposite the wall formed by center section 122. While flaps 112, 114 overlap one another in the illustrated embodiment, in other embodiments flaps 112, 114 may not overlap one another or they may abut one another.

**[0067]** As shown in Figure 7, box template 100 is then folded along crease 148 so that center section 128 is positioned against or adjacent to the item(s) positioned on center section 116. When so folded, center section 128 forms a wall (in some embodiments, a top) of the box being formed and is positioned opposite to center section 116 (which in some embodiments forms a bottom of the box).

**[0068]** The glue flap 134 is then folded along crease 154 towards flaps 112, 114, as shown in Figure 8. Center section 110 is then folded along crease 136 towards flaps 112, 114 and glue flap 134, as shown in Figure 9. Prior to or while center section 110 is being folded, glue can be applied to center section 110 (e.g., the portion that will interface with glue tab 134) and/or glue tab 134. Once center section 110 is folded against glue tab 134, the glue disposed there between can secure center section 110 and glue tab 134 together. In alternative embodiments, center section 110 can be folded first and glue tab 134 can be folded and glued to an outer surface of center section 110.

**[0069]** As shown in Figures 9 and 10, flaps 130, 132 can be folded along creases 156, 158, respectively, towards flaps 118, 120 respectively. Prior to or while flaps 130, 132 are being folded, glue can be applied to flaps 118, 120 and/or flaps 130, 132. Once flaps 130, 132 are folded against flaps 118, 120, respectively, the glue disposed there between can secure flap 130 to flap 118 and

flap 132 to flap 120.

**[0070]** While the foregoing discussion references the use of glue to secure various portions of box template 100 together, it will be appreciated that the use of glue is merely exemplary. Other securing mechanisms may be used. For instance, the various panels of box template 100 that are secured together may be secure using tape, staples, or any other suitable fastener.

**[0071]** The above-noted construction of a box using box template 100 provides a box with sidewalls formed with multiple layers of material. For instance, the box shown in Figure 10 includes a sidewall formed with flaps 118, 124, 130, a sidewall formed with flaps 120, 126, 132, and a sidewall formed with center section 110, flaps 112, 114, and glue tab 134. As a result, all or portions of the noted sidewalls are formed with at least two or three layers of material. Forming at least some of the sidewalls with multiple layers of materials may provide additional strength and structural integrity to the box. The added strength and structural integrity of the box in turn may allow for a thinner material to be used when making box template 100 without reducing the strength or structural integrity of the box compared to a traditional box. Using a thinner material to form a box as disclosed herein can reduce the overall amount of material used to create a box compared to traditional boxes. As noted, however, a box as described herein may provide at least the same strength and structural integrity while using less material compared to a traditional box.

**[0072]** Box template 100 can also include features to facilitate the ready opening of the constructed box. For instance, as shown in Figures 1, 9, and 10, box template 100 may include a tear-away strip 172. In the illustrated embodiment, first center section 110 may include tear-away strip 172. In some embodiments, tear-away strip 172 includes cuts, notches, or cutouts formed on at least one edge of first center section 110. Tear-away strip 172 may also or alternatively include perforations extending between opposing edges of first center section 110. Furthermore, tear-away strip 172 may also or alternatively include a strip of plastic secured to a surface thereof. Still further, flaps 130, 132 may also include similar tear-away strips 172.

**[0073]** In any configuration, tear-away strip 172 may facilitate the separation of first center section 110 into two pieces (e.g., by tearing along the perforations or tearing through first center section 110 with the aid of the plastic strip). Before or after first center section 110 is separated into two pieces, flaps 130, 132 may be separated from flaps 118, 120, respectively. Separating first center section 110 is separated into two pieces and separating flaps 130, 132 from flaps 118, 120 allows the constructed box to open. With the box open, the contents can be removed and the box template can be easily flattened for disposal.

**[0074]** The present invention may be embodied in other specific forms. The described embodiments are to be considered in all respects only as illustrative and not re-

strictive. The scope of the invention is, therefore, indicated by the appended claims rather than by the foregoing description. All changes which come within the meaning and range of equivalency of the claims are to be embraced within their scope.

## Claims

1. A foldable template for forming a box, comprising:
  - a first segment disposed at a first end of said template, the first segment having a first center section and opposing first and second flaps, each of the opposing flaps being separated from the first center section by a cut or cutout;
  - a second segment having a second center section and opposing first and second flaps, each of the opposing flaps of the second segment being separated from the second center section by a crease;
  - a third segment having a third center section and opposing first and second flaps, each of the opposing flaps of the third segment being separated from the third center section by a crease;
  - a fourth segment having a fourth center section and opposing first and second flaps, each of the opposing flaps of the fourth segment being separated from the fourth center section by a crease; and
  - a glue tab extending from either the first center section or the fourth center section, the glue tab being separated from the first center section or the fourth center section by a crease.
2. The foldable template of claim 1, wherein the first center section and the second center section are separated by a crease; and wherein the first flap of the first segment is separated from the first flap of the second segment by a crease.
3. The foldable template of claim 2, wherein the crease between the first center section and the second center section is offset from the crease between the first flap of the first segment and the first flap of the second segment; and wherein the offset is equal to about a thickness of the foldable template.
4. The foldable template of claim 2, wherein the second flap of the first segment is separated from the second flap of the second segment by a crease.
5. The foldable template of claim 4, wherein the crease between the first center section and the second center section is offset from the crease between the second flap of the first segment and the second flap of the second segment; and wherein the offset is equal to about a thickness of the foldable template.

6. The foldable template of claim 1, wherein the creases separating the opposing first and second flaps from the third center section are spaced apart a first distance.

7. The foldable template of claim 6, wherein the creases separating the opposing first and second flaps from the second center section are spaced apart a second distance, the second distance being greater than the first distance; and wherein the creases separating the opposing first and second flaps from the fourth center section are spaced apart a third distance, the third distance being greater than the second distance.

8. The foldable template of claim 7, wherein a difference between the first distance and the second distance and/or between the second distance and the third distance is equal to about a thickness of the foldable template.

9. The foldable template of claim 1, wherein one or more of:

the first flap of the second segment is separated from the first flap of the third segment by a cut or cutout;

the first flap of the third segment is separated from the first flap of the fourth segment by a cut or cutout;

the second flap of the second segment is separated from the second flap of the third segment by a cut or cutout; and

the second flap of the third segment is separated from the second flap of the fourth segment by a cut or cutout.

10. The foldable template of claim 1, wherein the first center section comprises a tear-away strip, the tear-away strip comprising one or more of:

one or more cuts or cutouts formed in an edge of the first center section; and  
a strip of plastic secured to a surface thereof.

11. A foldable template for forming a box, comprising: a plurality of identifiable sections that are arranged in first, second, third, fourth, and fifth columns and first, second, and third rows, wherein:

the first column includes a first flap in the first row, a first center section in the second row, and a second flap in the third row, each of the first and second flaps being separated from the first center section by a cut or cutout;

the second column includes a first flap in the first row, a second center section in the second row, and a second flap in the third row, each of the

first and second flaps being separated from the second center section by a crease;

the third column includes a first flap in the first row, a third center section in the second row, and a second flap in the third row, each of the first and second flaps being separated from the third center section by a crease;

the fourth column includes a first flap in the first row, a fourth center section in the second row, and a second flap in the third row, each of the first and second flaps being separated from the fourth center section by a crease; and  
the fifth column includes a glue flap in the second row.

12. The foldable template of claim 11, wherein the first flaps in the first and second columns are separated by a crease and wherein the first and second center sections are separated by a crease that is offset from the crease separating the first flaps in the first and second columns.

13. The foldable template of claim 12, wherein the second flaps in the first and second columns are separated by a crease; and wherein the first and second center sections are separated by a crease that is offset from the crease separating the second flaps in the first and second columns.

14. The foldable template of claim 11, wherein one or more of:

the first flaps in the second and third columns are separated by a cut or cutout;

the second flaps in the second and third columns are separated by a cut or cutout;

the first flaps in the third and fourth columns are separated by a cut or cutout; and

the second flaps in the third and fourth columns are separated by a cut or cutout.

15. The foldable template of claim 11, wherein the creases separating the first and second flaps from the third center section are spaced apart a first distance.

16. The foldable template of claim 15, wherein the creases separating the first and second flaps from the second center section are spaced apart a second distance, the second distance being greater than the first distance; and wherein the creases separating the first and second flaps from the fourth center section are spaced apart a third distance, the third distance being greater than the second distance.

17. The foldable template of claim 16, wherein a difference between the first distance and the second distance and/or between the second distance and the third distance is equal to about a thickness of the



foldable template.

18. The foldable template of claim 11, wherein the first center section comprises a tear-away strip, the tear-away strip comprising one or more of:

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one or more cuts or cutouts formed in an edge of the first center section; and  
a strip of plastic secured to a surface thereof.

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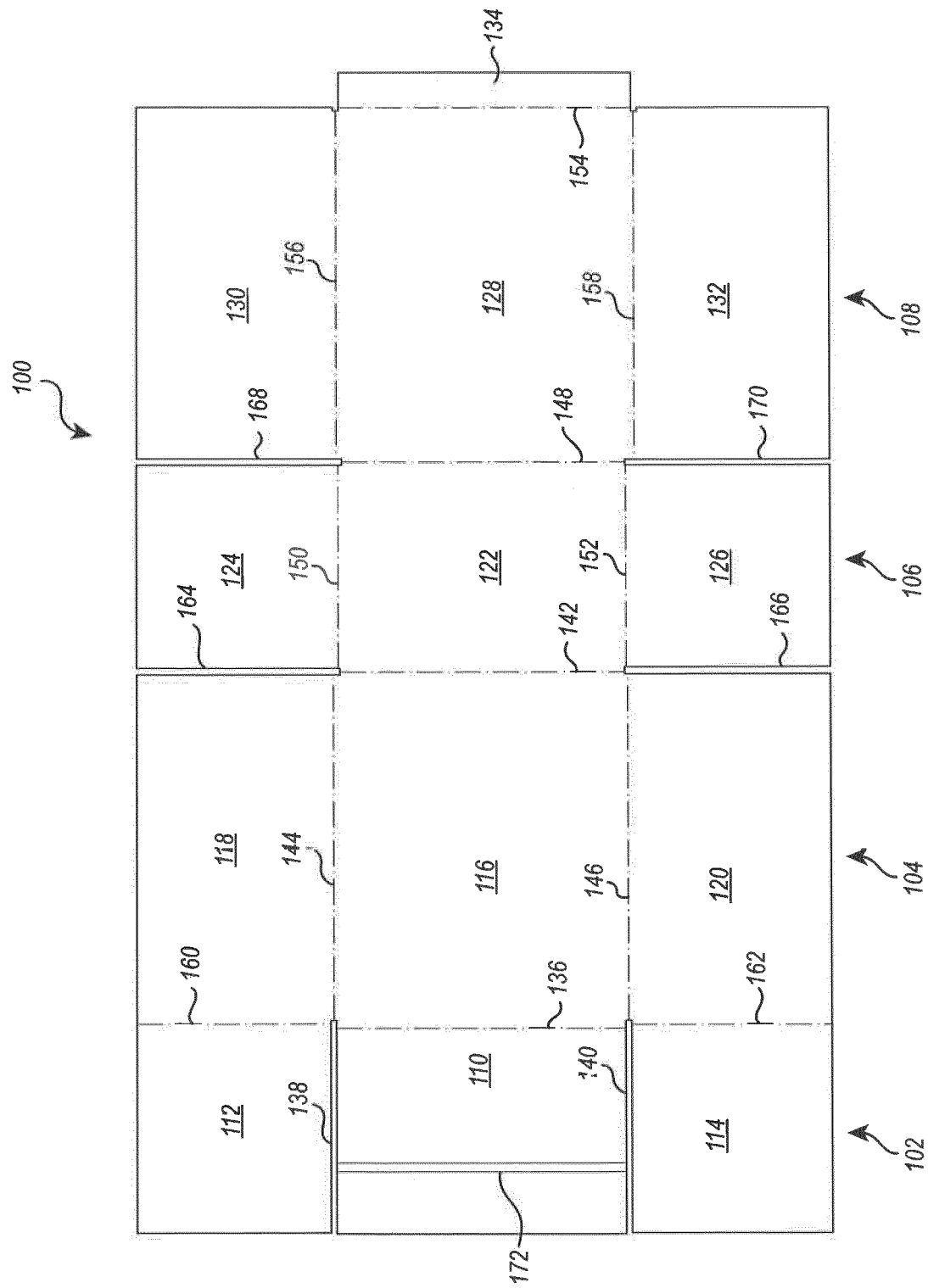
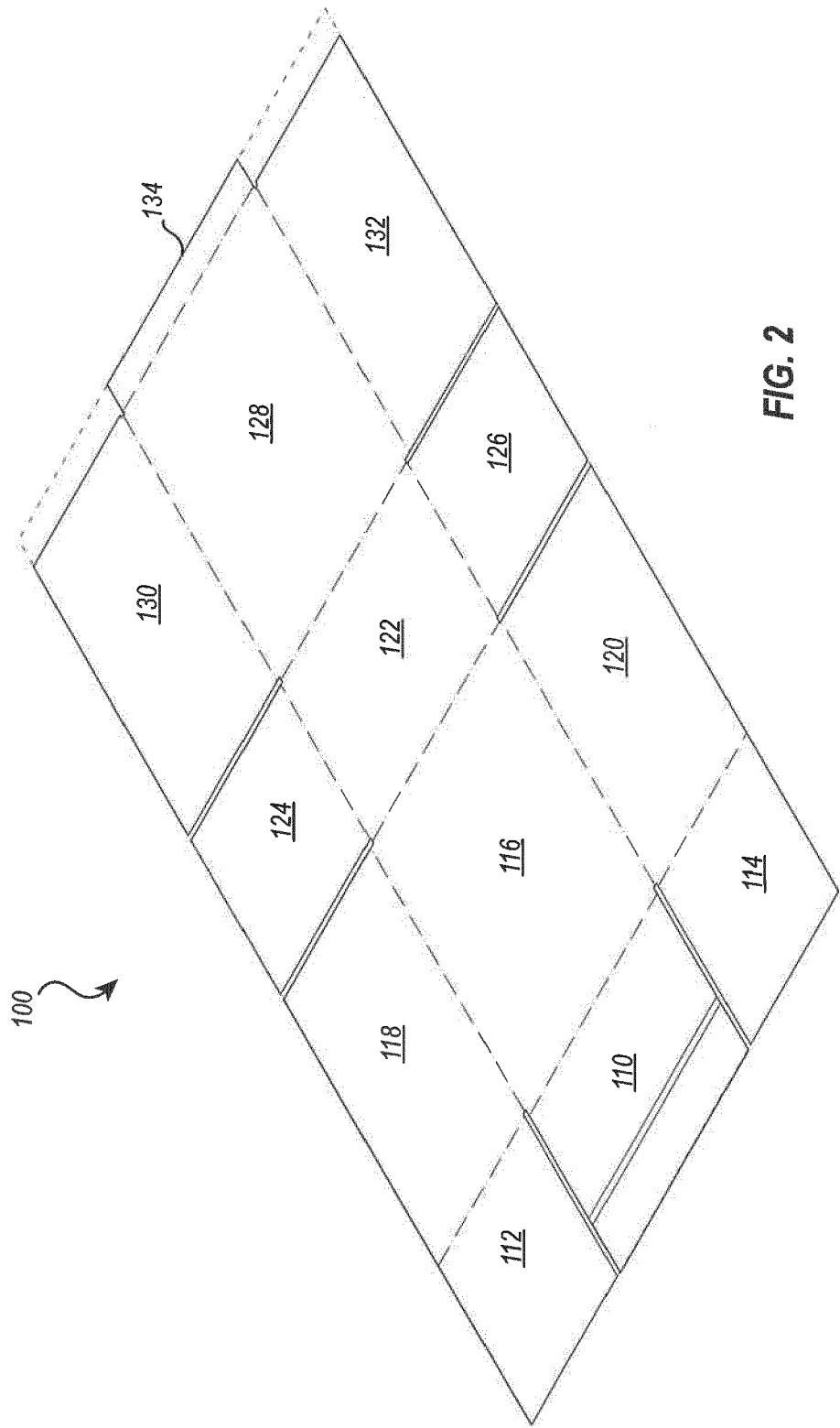


FIG. 1



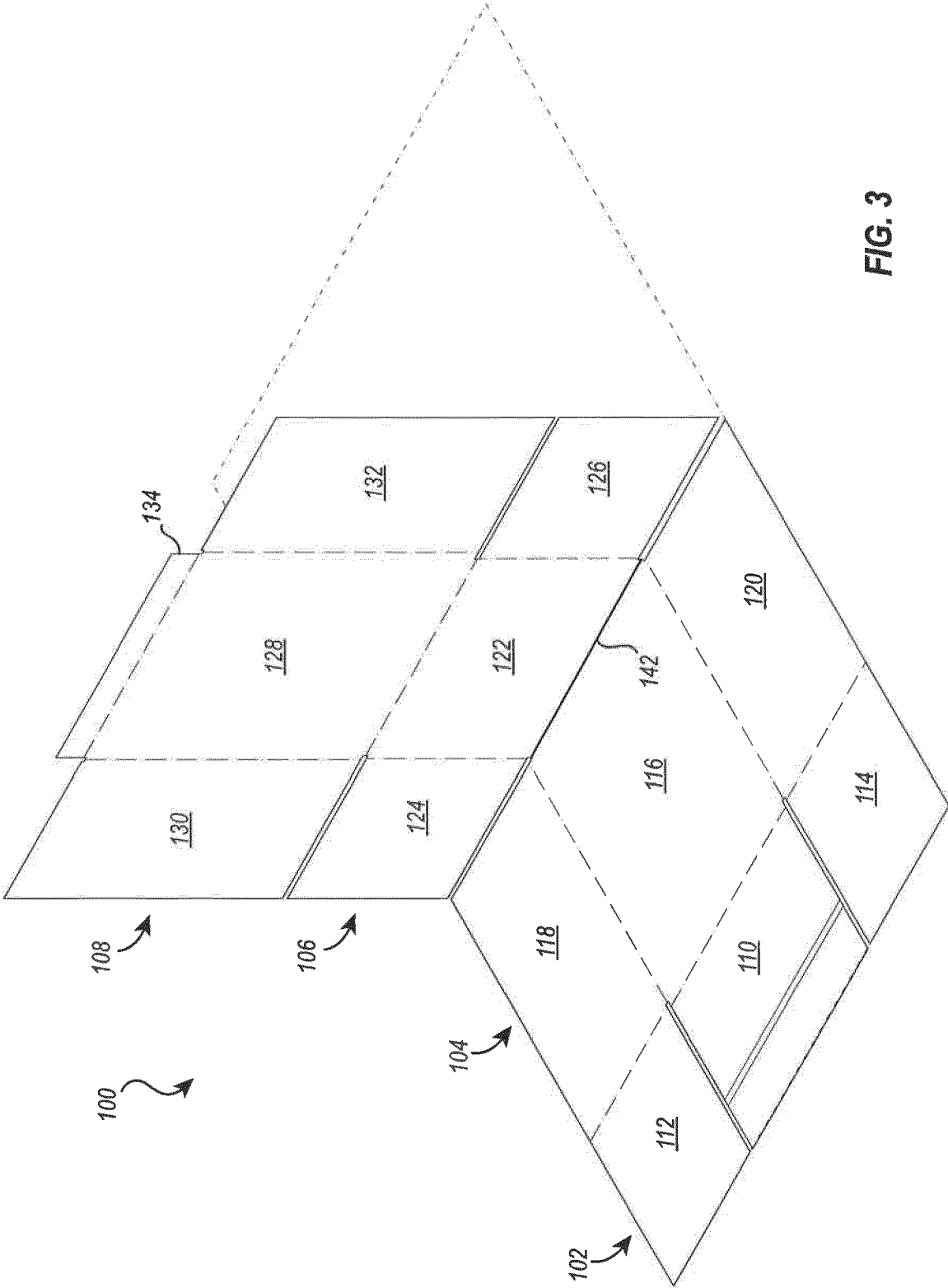


FIG. 3

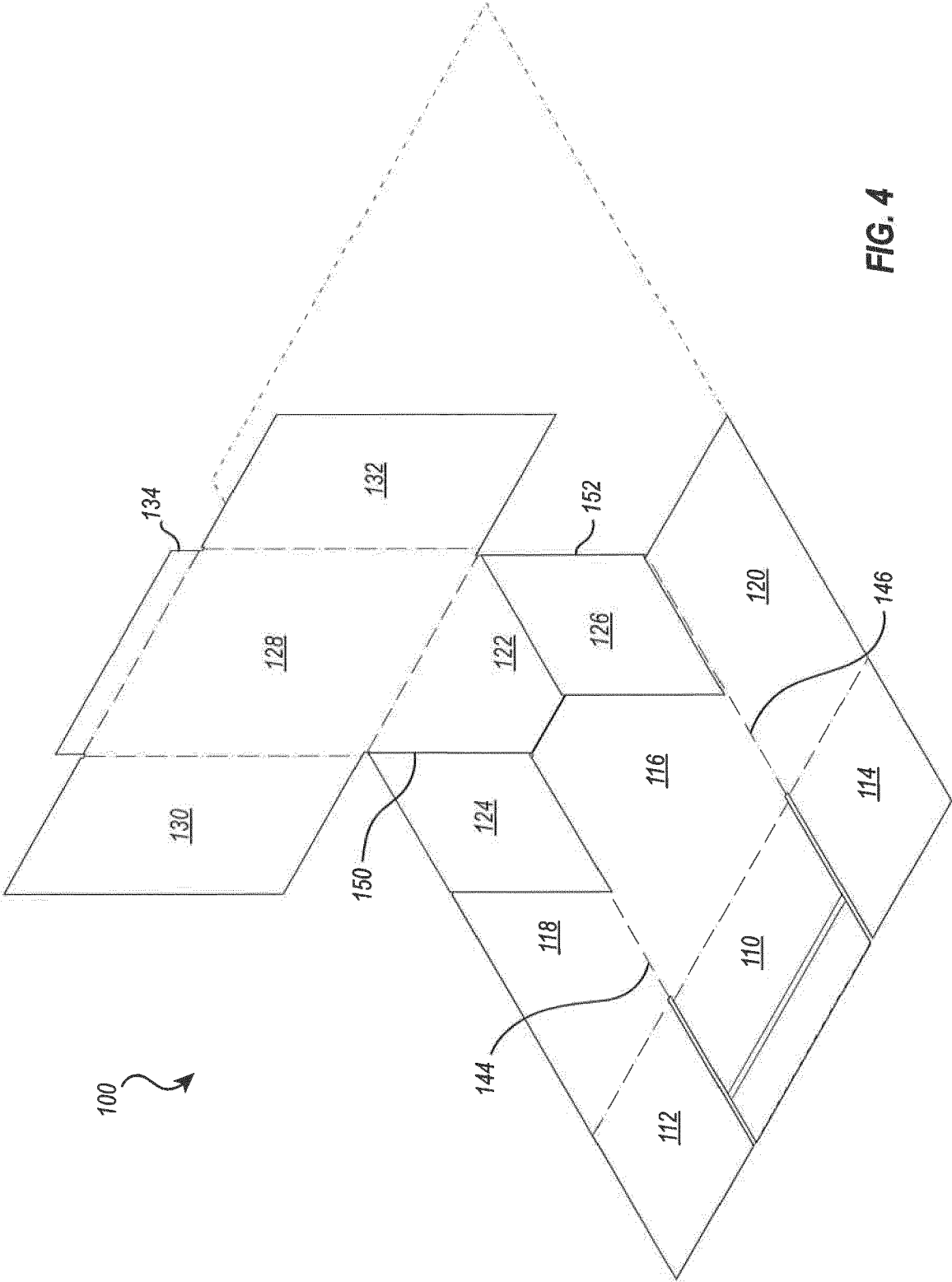
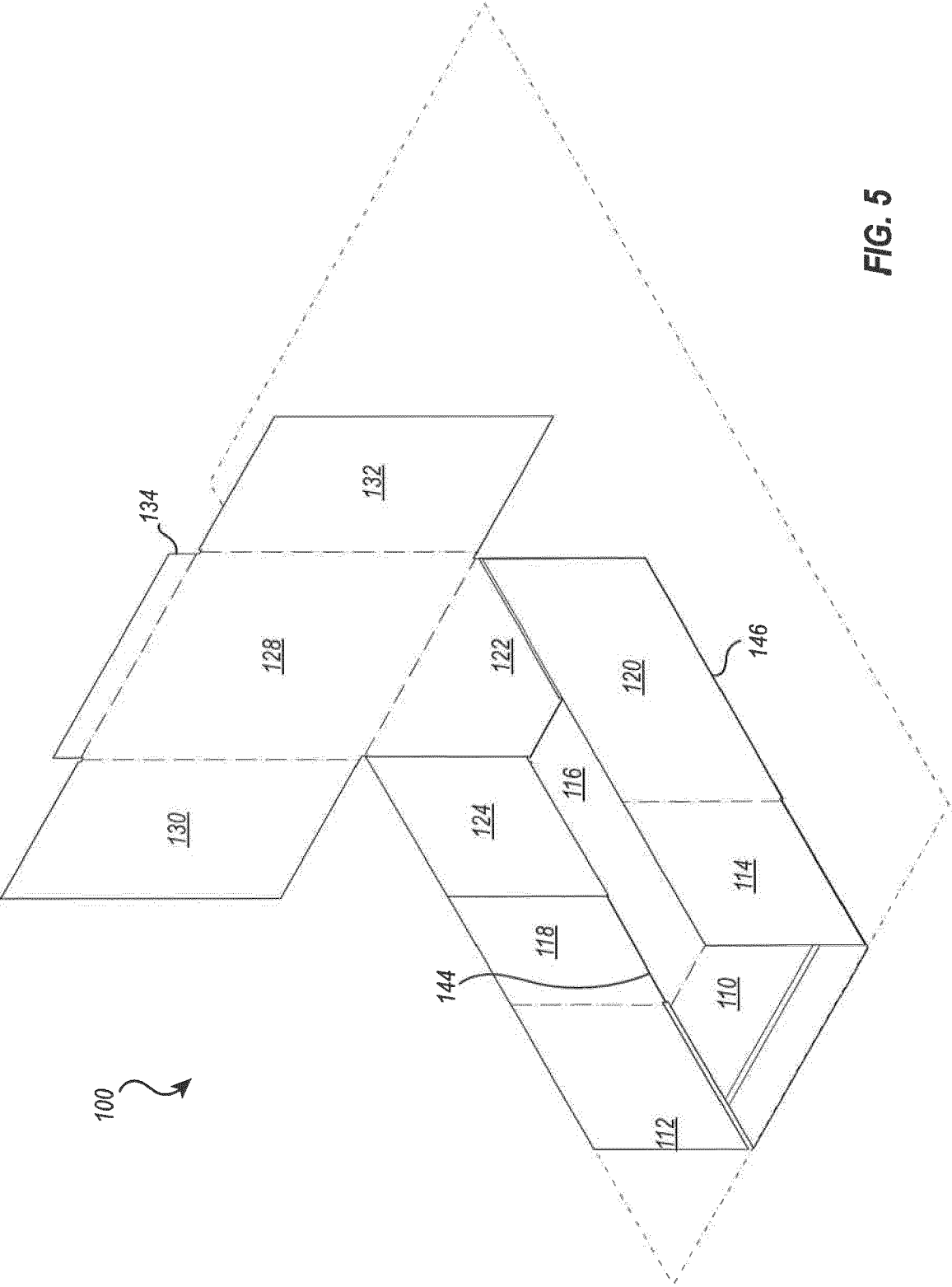


FIG. 4



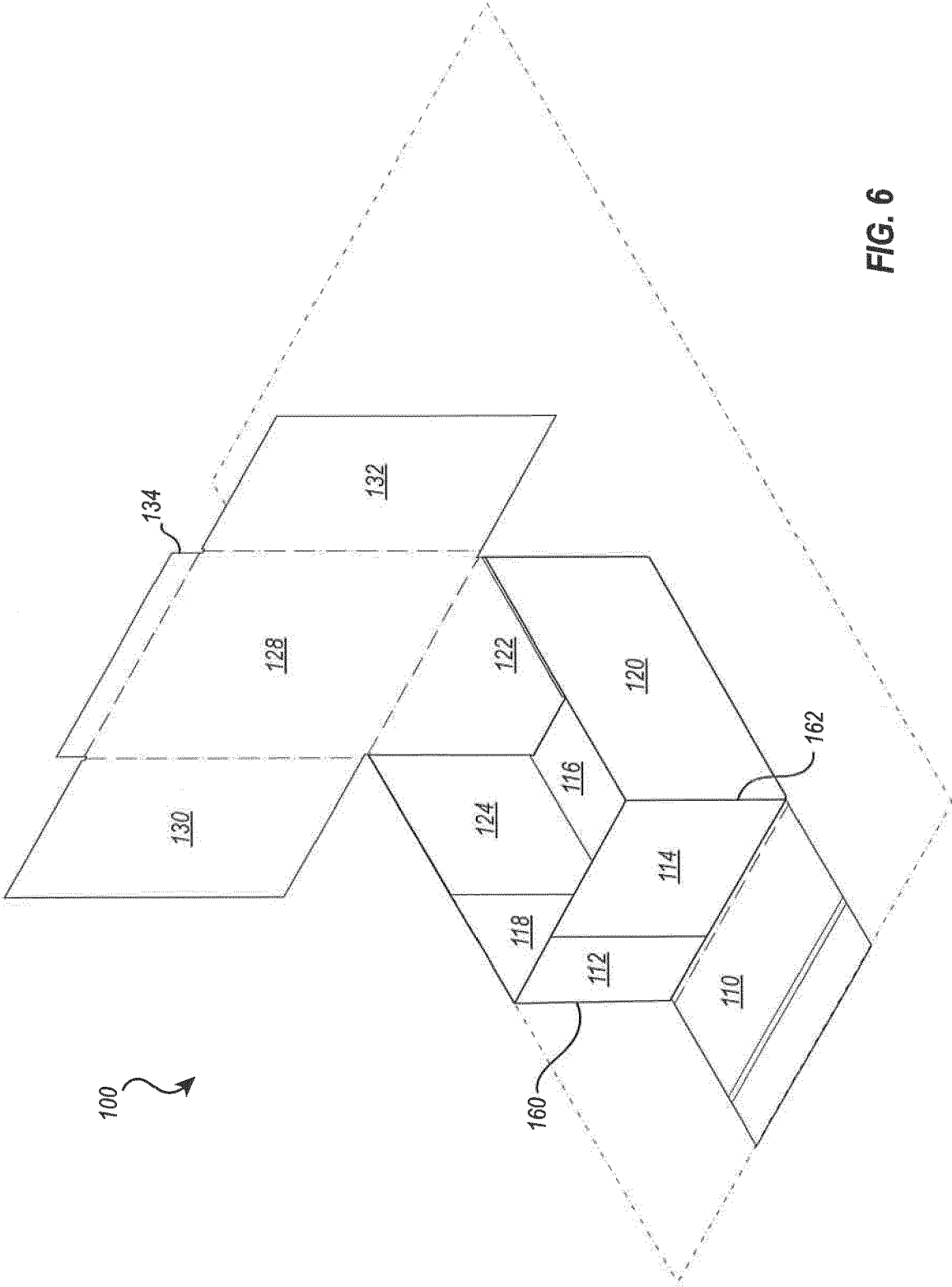
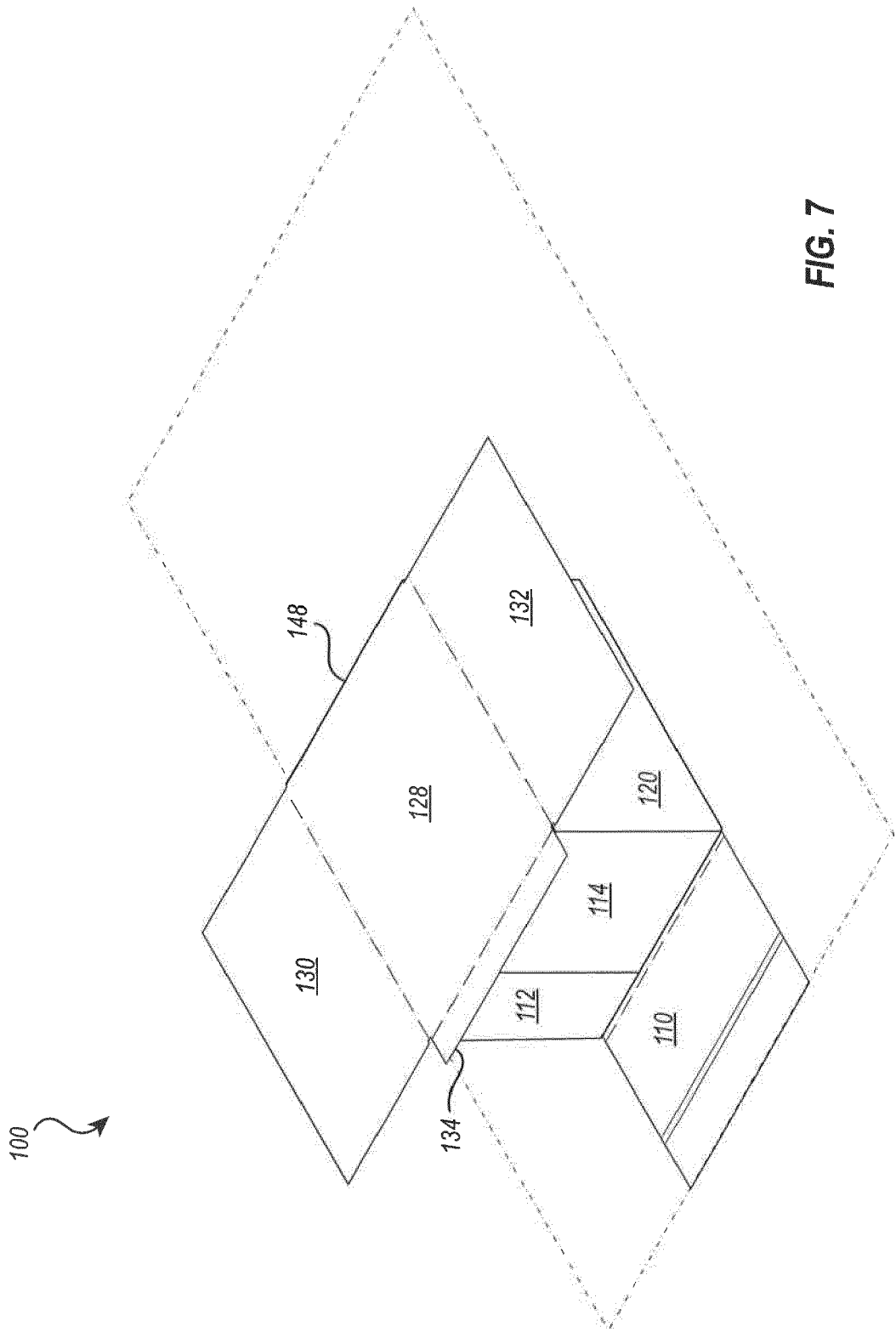


FIG. 6





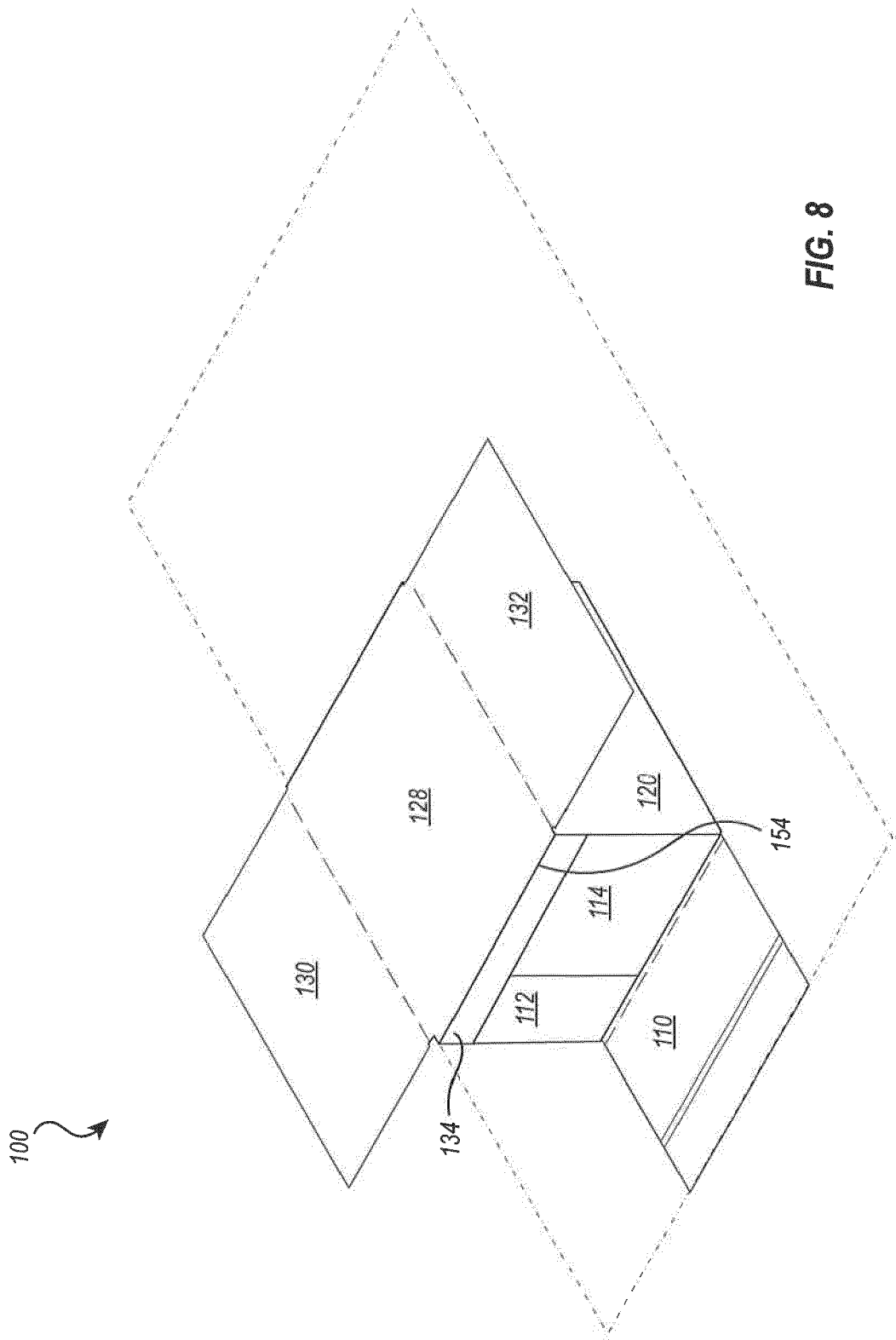


FIG. 8

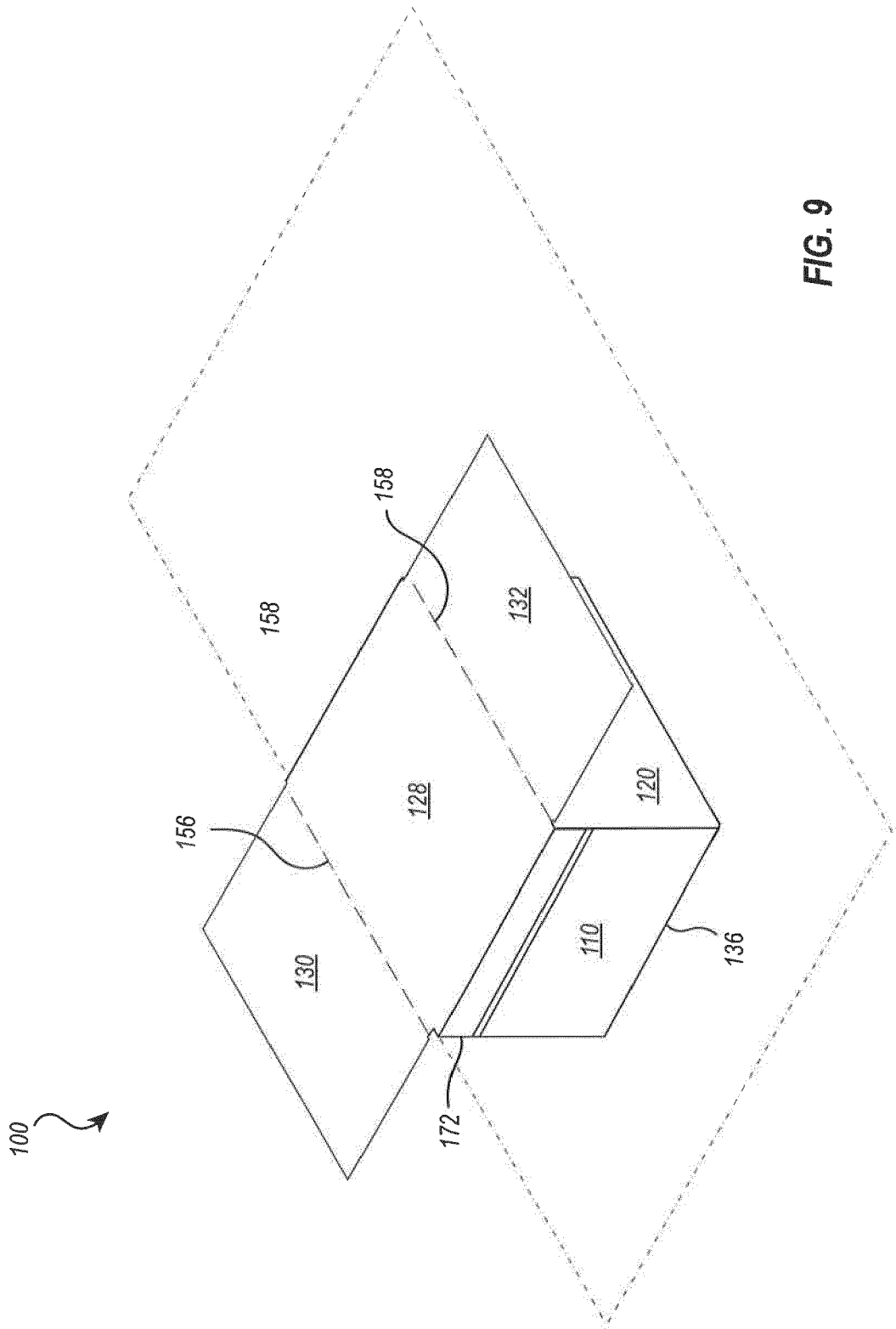


FIG. 9

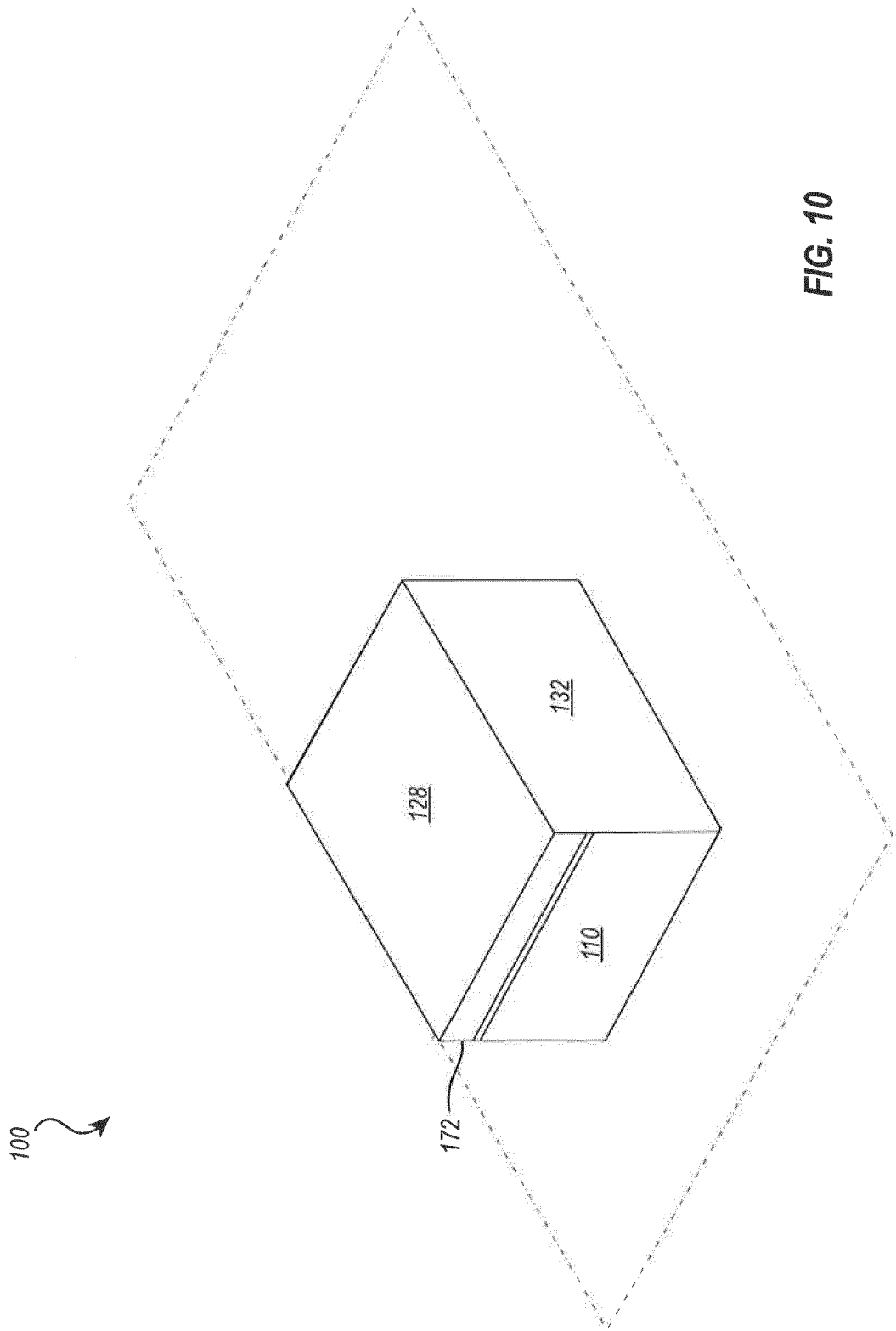


FIG. 10



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Application Number  
EP 19 18 1846

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			B65D
The present search report has been drawn up for all claims			
Place of search <b>Munich</b>		Date of completion of the search <b>5 August 2019</b>	Examiner <b>Segerer, Heiko</b>
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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5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
The members are as contained in the European Patent Office EDP file on  
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05-08-2019

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