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(54) Carton with locking means and blank therefor

(57) A locking arrangement for maintaining a carton in a closed configuration, which locking arrangement comprises a first part and a second part, the first part having two or more protrusions, the second part having formed therein an aperture having first and second opposing edges, the two or more protrusions being engageable with the first and second edges of the aperture, the first part further comprising a pull tab that is grippable by a user such that a force may be applied to the first part to sufficiently deform either or both the first or second edge of the aperture, or either the first or second protrusion of the first part, to permit the first part to move relative to the second part, and thereby be disengageable therefrom.

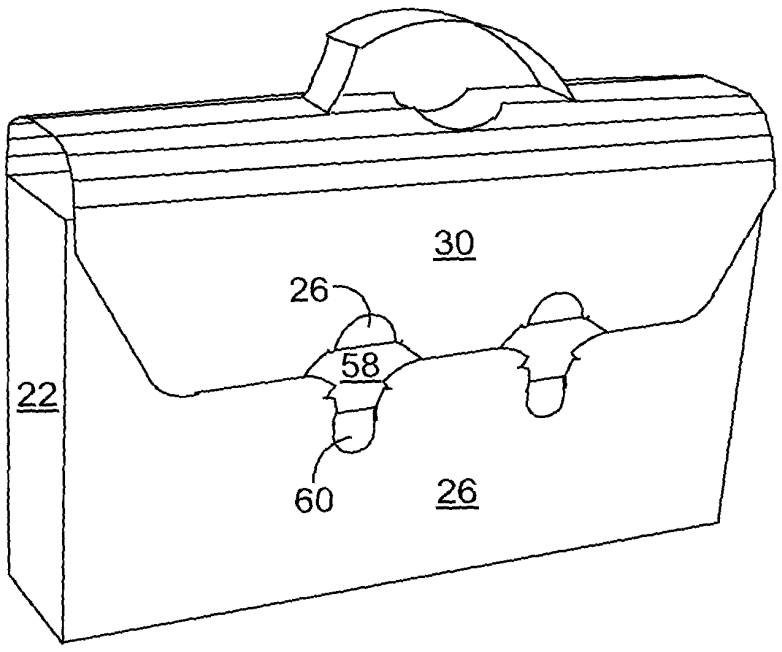


FIGURE 3A

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Description

Field of the Invention

[0001] The present invention relates to cartons for holding articles, and more specifically to locking means for ensuring the same is kept in a closed condition. More specifically, though not exclusively, the invention relates to a carton having a foldable closure means defined within which is an extendible handle and which further comprises a locking means for holding said closure means in a closed configuration resiliently yet providing augmented means for releasing said closing means.

Background of the Invention

[0002] Cartons in the prior art provide locking means that restrict movement of a closing portion in both a forward and backward direction. Such locking means is denoted in the art by the phrase "heel and toe" locking arrangements. However, by virtue of the intended arrangement of the heel and toe portions of the locking means, such arrangements are inherently difficult to open once the closure has been affected.

[0003] International Patent No. WO 2006/089305 discloses just such a carton, provided with a heel and toe locking arrangement, for maintaining a closure in a closed configuration. However the locking arrangement is difficult to open by the user owing to the fact that there are few edges of the locking means that may be accessed by the user once it has been closed.

[0004] It is also known from the art to provide cartons to having one or more handle members for carrying the carton once filled. Normally such handle members comprise apertures formed within one or more side walls and/or top walls of the carrier, which accept insertion of the user's fingers such that the carton may be lifted. Such arrangements require that the carton provides a volume of dead space on the interior side of the hand aperture, to accommodate the user's fingers when inserted. However there is a need for a handle member arrangement which allows the user to carry the carton comfortably whilst not requiring such dead volume to be present. It would be therefore advantageous if there were a handle member which could be extended to a position of use from a retracted position such that a suitable volume beneath the handle member could automatically be created without requiring the void of dead space to be present within the carton. This would mean that the carton size could be minimised, and thus have beneficial cost saving and storage requirements.

[0005] The present invention seeks to overcome or at least mitigate the above identified disadvantages of the prior art.

Summary of the Invention

[0006] A first aspect of the invention provides a locking arrangement for maintaining a carton in a closed configuration, which locking arrangement comprises a first part and a second part, the first part having two or more protrusions, the second part having formed therein an aperture having first and second opposing edges, the two or more protrusions being engageable with the first and second edges of the aperture, the first part further comprising a pull tab that is grippable by a user such that a force may be applied to the first part to sufficiently deform either or both the first or second edge of the aperture, or either the first or second protrusion of the first part, to permit the first part to move relative to the second part, and thereby be disengageable therefrom.

[0007] Preferably, a first of said two or more protrusions engages the first edge of the aperture to restrict movement of the first part relative to the second part, in a first direction, and wherein a second of said two or more protrusions, engages the second edge of the aperture to restrict movement of the first part relative to the second part in an opposing direction.

[0008] Preferably, the aperture formed in said second part is defined between cut lines, one of which cut lines defining a tab which protrudes into the aperture and that overlies a protrusion of the first part, such that the first protrusion abuts a terminal point of that cut line.

[0009] Preferably, the pull tab is hinged to the first part.

[0010] Preferably, the pull tab overlies a portion of the second part such that it is accessible by the user when the first and second parts are engaged with one another.

[0011] A second aspect of the invention provides a carton for containing articles such as bottles or drinks pouches, which carton has opposing first and second side walls connected by opposing first and second end walls and bottom closure structure formed from a plurality of bottom panels, and further having a cover panel that is hingeable with the second side wall so as to close the carton, and a two part locking means, comprising a first part and a second part, the first part having two or more protrusions, the second part having formed therein an aperture having first and second opposing edges, the two or more protrusions being engageable with the first and second edges of the aperture, the first part further comprising a pull tab that is grippable by a user such that a force may be applied to the first part to sufficiently deform either or both the first or second edge of the aperture, or either the first or second protrusion of the first part, to permit the first part to move relative to the second part, and thereby be disengageable therefrom, the first part being comprised in the cover panel, the second part of which two part locking means being formed in said first side wall.

[0012] Preferably, a first of said two or more protrusions is engagable with the first edge of the aperture to restrict movement of the first part relative to the second

part, in a first direction, and wherein a second of said two or more protrusions, engages the second edge of the aperture to restrict movement of the first part relative to the second part in an opposing direction.

[0013] Preferably, the aperture formed in said second part is defined between cut lines, one of which cut lines defining a tab that protrudes into the aperture and that overlies a protrusion of the first part, such that the first protrusion abuts a terminal point of that cut line.

[0014] Preferably, the cover panel also comprises a handle structure that is arcuate and extends through an aperture in the cover panel.

[0015] Preferably, the handle structure is extendable and comprises a handle panel, hinged at one end to the cover panel and secured to a flexible strap, which strap is secured at an opposing end to a portion of the cover panel, and whereby the handle structure is extendable by pulling the flexible strap material through an aperture in the cover panel.

[0016] Preferably, the cover panel further comprises a reinforcing panel, hinged to a side edge of the cover panel, to which reinforcing panel the strap is secured, the reinforcing panel being folded into and secured in coplanar contact with a portion of the surface of the cover panel such that a folded portion of the strap material is releasably held in folded condition therebetween, which folded portion is releasable by pulling hinging the handle panel away from the cover panel.

[0017] Preferably: a) the cover panel is formed from a first blank, and the remainder of the carton is formed from a second blank; or b) the carton is formed from a single piece blank.

[0018] A third aspect of the invention provides a blank for forming a carton for containing articles, which blank has panels for forming opposing first and second side walls connected by opposing first and second end walls and bottom closure structure formed from a plurality of bottom panels, and further having a cover panel that is hingeable with the second side wall so as to close the set up carton, and a two part locking means, comprising a first part and a second part, the first part having two or more protrusions, the second part having formed therein an aperture having first and second opposing edges, the two or more protrusions being engageable with the first and second edges of the aperture when the carton has been set up, the first part further comprising a pull tab that is grippable by a user such that a force may be applied to the first part to sufficiently deform either or both the first or second edge of the aperture, or either the first or second protrusion of the first part, to permit the first part to move relative to the second part, and thereby be disengageable therefrom, the first part being comprised in the cover panel, the second part of which two part locking means being formed in said first side wall.

Brief Description of the Drawings

[0019] Exemplary embodiments of the present invention are now described, by way of example only, with reference to the accompanying drawings in which:

FIGURE 1 illustrates a plan view of a blank for forming a carton according to a first embodiment of the present invention;

FIGURE 2 illustrates a plan view of a blank for forming a carton according to a second embodiment of the present invention;

FIGURE 3A illustrates a carton according to a first embodiment of the present invention;

FIGURE 3B illustrates an enlarge view of a locking means of the carton of FIGURE 3A;

FIGURE 4 illustrates a plan view of a blank for forming a first part of a carton according to a third embodiment of the present invention;

FIGURE 5 illustrates a plan view of a blank for forming a second part of a carton according to a third embodiment of the present invention;

FIGURE 6A illustrates a first step in the folding process necessary to form the blank of FIGURE 4 into a first part of a carton according to the third embodiment of the invention;

FIGURE 6B illustrates a second step in the folding process necessary to form the blank of FIGURE 4 into a first part of a carton according to the third embodiment of the invention;

FIGURE 7 illustrates a fully set up carton according to the third embodiment of the present invention; and

FIGURE 8 illustrates the carton of FIGURE 7 opened so as to reveals the contents thereof.

Detailed Description of the Exemplary Embodiments

[0020] The present invention relates to a carton for containing articles which carton has walls and covering portion formed from one or more blanks.

[0021] A first embodiment of the present invention is depicted in Figure 1 which provides a blank 2 comprising a first end panel 22, first side panel 20, second end panel 24 and second side panel 26 each hinged one to the next in linear series about fold lines 74, 72, 76 respectively. A glue panel 28 is hinged to the terminal end of the second side panel 26 about fold line 78. To one edge of the linear series of panels 22, 20, 24, 26 are hinged bottom closure panels 38, 32, 36, 34 about fold lines 84, 82, 81, 80 respectively.

[0022] Bottom panels 32 and 34 each have a terminal free edge comprising a detent, which detents are ar-

ranged such that the two bottom panels 34 and 32 may interlock with one another as the set up carton is formed (the process of erecting the blank is set out in greater detail below).

[0023] Further, bottom panels 32 and 34 have corner portions 87 and 89 hinged thereto about diagonal fold lines 86 and 88 respectively. These corner portions 87 and 89 are so hinged as to allow the bottom of the set up carton to be formed through an interlocking arrangement of the bottom panels 32 and 34 and the bottom end panels 36 and 38. Further discussion of the setting up of the carton from the blank is given below.

[0024] Defined within second side panel 26 are apertures 62, which apertures are defined between a plurality of cut lines 64, 66, 68, 70. These cut lines extend such that cut line 64 forms one uppermost terminal edge of the aperture 62, with cut lines 66 defining tabs Ti hinged to the second side panel 26 depending therebelow. The edges of the tabs Ti defined by cut lines 66 continue downwards to another pair of tabs T2. A final tab T3 is created by cut line 70 which tab extends between the edge of tabs T2 created by cut lines 68, thereby to form a completed aperture 62. In the exemplary embodiment illustrated in Figure 1 there are two apertures 62, formed side by side and spaced either side of the mid point of second side panel 26. Hinged to first side panel 20 along fold line 90 opposite fold line 82 is cover panel 30. Defined within cover panel 30 are a plurality of spaced parallel fold lines 40 which are provided so as to aid flexing of the cover panel 30 during set up of the carton (discussed in further detail below).

[0025] Also defined in cover panel 30 is handle panel 51 which handle panel is defined between fold line 50, cut lines 42 and cut line 48. Fold line 50 is orientated transversely to the width of the cover panel 30 and is parallel to and offset from cut line 48 about a mid-point of the width of cover panel 30, Extending between the terminal points of fold line 50 and cut line 48 are cut lines 42. Centred along cut lines 45, further cut line 44 extend either side of the handle panel 51 to define arcuate indentations into the cover panel 30. Thus, between cut lines 44 and 42, either side of the handle panel 51, there are defined apertures 46 that are substantially, though optionally, semi-circular in geometry.

[0026] Hinged to the side of cover panel 30 about fold line 41 is reinforcing panel 56. Reinforcing panel 56 is substantially rectangular in shape and comprises flanged portions about its side edges adjacent the cover panel 30, so as to define an inwardly tapering portion which meets the hinge line 41. Defined within the reinforcing panel 56, proximate the fold line 41, is rectangular aperture 54 having substantially the same width as that of the handle panel 51.

[0027] As indicated in Figure 1 a strap of flexible material 52 is positioned over a portion of the cover panel 30, handle panel 51, reinforcing panel 56 and substantially all of aperture 54. The flexible strap 52 may be formed of any suitable flexible material such as a plastic material, paperboard or synthetic fibre. The strap 52 has substantially the same width as handle panel 51 and aperture 56. The strap 52 is secured to the blank 2 at locations depicted on Figure 1 by G1 and G2, and to substantially the entirety of handle panel (51). It is contemplated that securing methods such as adhesives, mechanical fasteners and other means known in the art may be employed.

[0028] Defined within the terminal edge of cover panel 30, distal from fold line 90, are locking means L that, in the set up carton, engage with the apertures 62 defined in the side panel 26 so as to lock the cover panel 30 in a closed configuration. This is discussed in further detail below. The locking means L comprise primary panels 58 and pull tabs 60. The pull tab is contained entirely within the locking means and is not formed from the primary panel or any portion of the cover panel 30. The pull tab is connected to the free end of the primary panel along fold line 94. Since the pull tab is connected to the primary panel 58 and not formed structurally from the cover panel or primary panel, it allows for a more structurally strengthened releasing mechanism and reduces tearing. Each primary panel 58 is hinged, along two outwardly angled fold lines 92, to portions of the cover panel 30. Pull tab 60 is hinged to the primary panel 58 about fold line 94.

[0029] Each primary main panels 58 of each locking means L is shaped such that its edge continues from a terminal edge of the cover panel 30 and extends outwardly to form a protrusion therefrom (as best shown in Figures 3A and 3B). The protrusion comprises shoulder portions S that extends transversely of the length of the protrusion. Disposed at the end of each primary panel 58 is pull tab 60 which has substantially parallel side edges and a substantially semi-circular terminal end. Between terminal points on fold lines 92 extends curved cut line 47 which defines heel portion H of the locking means L. The size and arrangement of heel portion H and shoulder portions S are such that the heel portion H may be passed through corresponding aperture 62 so as to overlie interior portions of second side panel 26 proximate cut line 64. The shoulder portions S are sized and arranged such that each shoulder portion S may be disposed interior of the carton, in contact with tabs T2. More detail of engagement of locking means L with aperture 62 is given below.

[0030] Figure 2 illustrates a second embodiment of the blank and like references have been used to denote like elements. Only the differences between the two embodiments will be described below.

[0031] Blank 102 comprises only a single aperture 162, complimentary to a single locking means L formed from primary panel 158 and pull tab 160 extending from cover portion 130.

[0032] The blanks 2, 102 of Figures 1 and 2 can be assembled into the erected carton of Figure 3A. The process for each blank is substantially the same, and is as follows, with reference to the numerals of the embodiment of Figure 1. Panels 28, 26, 24, 20 and 22 are hinged

about fold lines 78, 76, 72 and 74 respectively so as to bring glue panel 28 into contact with first end panel 22, to which it is fastened by some means known in the art. Thus a tubular structure is formed between panels 28, 26, 24, 20 and 22. The bottom panels 34, 36, 32, 38 are then folded inwardly to close the bottom of that tubular structure. In one possible folding sequence, bottom panels 38 and 32 are first folded into a coplanar arrangement at which point corner portion 89 of bottom panel 32 is secured in face contacting relation with bottom panel 38. Thereafter, bottom panels 36 and 34 are folded into coplanar arrangement and corner portion 87 of bottom panel 34 secured to bottom panel 36. One or both of bottom panels 32 or 34 are then urged interior of the carton until the complementary detents on bottom panels 32 and 34 interlock to close the bottom of the carton.

[0033] Reinforcing panel 56 is hinged about fold line 41 so as to come into surface contacting relation with cover panel 30, to which it is secured by adhesive or other fastening means at locations G3. Strap 52 is not secured to blank 2 at points 03. The folding of reinforcing panel 56 causes strap 52 to become folded where it overlies fold line 41. The aperture 54 allows the added width of the fold in the strap 52 to be accommodated.

[0034] Cover panel 30 is folded, primarily about fold line 90, but also about fold lines 40 as required, so as to insert shoulder portions S of locking means L under tabs T2, whilst at the same time, heel portion H is inserted into aperture 62 by bending the heel portion about the terminal points of fold lines 92. Thus pull tab 60 comes to rest in surface contacting relation with an exterior surface of tab Ti whilst shoulder portions S and heel portion Hare disposed in surface contacting relationship with an interior surface of tabs T2 and second side panel 26 respectively.

[0035] The locking means L is thus robustly engaged with apertures 62, restricted from disengagement by abutment between cut line 64 and terminal ends of curved cut lines 47 and further between should portions S and tabs T2.

[0036] Nonetheless, locking means L can be disengaged from aperture 62, and this is facilitated by the provision of pull tab 60. By pulling on pull tab 60, the user is able to easily apply sufficient leverage to the locking means L to warp tabs T2 out of coplanar alignment with second side panel 26 and thereby disengage with shoulders S of the locking means L. The locking means L may thereafter be fully disengaged by pulling the pull tab 60, so as to withdraw the heel portion H, fully from aperture 62.

[0037] Once the cover panel 30/230 has been established in a closed condition by engagement of locking means L with corresponding ones of apertures 62, the carton is ready to be carried. This is effected by extending the handle panel 51 by hinging it about fold line 50 such that excess strap 52 material held between reinforcing panel 56 and cover panel 30 may be pulled through until the weight of the carton is supported by the fastening between the strap 52 and the reinforcing panel 56 at 01. Thus an aperture between an underside of the handle panel 51 and a top surface of cover panel 30 is created through which the user's fingers may pass.

[0038] Initial gripping of the handle panel 51 is facilitated by apertures 46 that allow gripping of the side edges of the handle panel 51. The extended handle panel 51 may be retracted by pushing the loose strap 52 material interior of the carton and, optionally, back through a channel formed between reinforcing panel 56 and cover panel 30 and bound on either side by fastening means at locations 03. A third embodiment of the present invention can be seen in Figure 4 which provides a blank 202 forming blank a first part of a two part assembly for creating the set up carton illustrated in Figure 7. The features of blank 202 are substantially similar to those of blank 2, and only the differences will be described below. Like numbering will be used to refer to like features, prefixed with the number '2'. Blank 202 comprises a back panel 211, hinged at either end to first and second spacer panels 208 and 213 respectively, about fold lines 209 and 212. Partition panel 206 is then hinged to the free end of first spacer panel 208 about fold line 207, and then, about fold line 205 to a glue panel 215.

[0039] Defined within cover panel 230 are handle flaps 216, 218 which are hinged to the cover panel 230 along adjacent portions of fold lines 240. The end edges of each of the handle flaps 216, 218 are defined by apertures 210 formed, by cut lines 21 4a and 2 14b, transversely of the width of cover panel 230. The handle flaps 216, 218 are separated from one another by cut line 212. Handle strap 296 is hinged to the side of cover panel 230 by fold line 295 and is longer than the width of the cover panel 230. Hinged along one side of the handle strap 296 is reinforcing strip 298. Transverse to the length of both handle strap 296 and reinforcing strip 298 are a plurality of fold lines 297.

[0040] The second part 203 of the two part assembly is illustrated best in Figure 5 which shows blank 203 comprising a first side panel 220 hinged on either side to first and second end panels 224, 222 about dual spaced fold lines 272, 274, and about one longitudinal edge to bottom panel 232 about dual spaced fold line 282. Second end panel 224 is then, in turn, hinged to second side panel 226 about dual spaced fold lines 276 and defined therewithin are two apertures 262.

[0041] Carton 201, shown in Figure 7, may be erected from the two part blank of Figure 4 and Figure 5 using the following exemplary process.

[0042] Second spacer panel 213 of blank 202 is folded about fold line 212. The partition panel is then folded about fold line 207, and spacer panel 208 folded about fold line 209 so as to bring glue panel 205 into coplanar contact in which the two are secured through some means known in the art.

[0043] The blank 203 of Figure 5 is erected into a tubular form by folding panels 228, 226, 224, 220 and 222 as was described in the embodiment of Figure 1. The

fold lines, in this embodiment, may each take the form of dual spaced fold lines, but perform the same function nonetheless. The bottom panels are also manipulated so as to close the bottom of the structure in the same manner as described in relation to the embodiment of Figure 1.

[0044] Figures 6A and 6B together show the formation of the handle arrangement from the handle strap 296 and the reinforcing strip 298. The reinforcing strip 298 is folded about fold line 299 in direction A so that it is superimposed onto handle strap 296 to which it is then secured by some fastening or adhesive means. Handle strap 296 is then folded about fold line 295 so as to bring the reinforcing strip 298 into superposition over cover panel 230. Handle flaps 216, 218 are optionally folded back, about fold lines 40 so that the handle strap 296 then directly overlies the resulting aperture found therebetween. Figure 6B illustrates how the width of handle strap 296 and reinforcing strip 298 is substantially identical to the distance between fold lines 240 hinging handle flaps 216, 218. The handle strap 296 and handle strip 298 are bent about fold lines 297 so as to form an arcuate handle structure that protrudes through the apertures 210 and externally of the set up carton as the handle flaps 216 and 218 are folded back into the plane of the cover panel 230. Thus the embodiment of Figures 4 to 8 provides a two part carton 290 that has a fixed handle structure rather than the extendable hinged handle panel 51 of Figure 3A.

[0045] Semi-erected blank 202 is then disposed within the erected lower portion of carton 201 such that back panel 211 can be secured in surface contacting relation with side panel 226. The two part construction thus arrives at a stage substantially identical to that of the embodiment of Figure 1, with the cover portion ready to be closed through engagement of locking means L with apertures 262.

[0046] The remainder of the process for setting up carton 201 from the two part blanks 202 and 203 is identical to that described above in relation to the first embodiment of the carton 1.

[0047] Any of the above embodiments of carton 1,201 are capable of being loaded with articles, such as posts, bottles or drink pouches P, amongst others. Figures 7 and 8 show the loaded carton 201 in respective closed and open configurations.

[0048] As best seen in Figure 8, the articles (in this case, drinks pouches P) are arranged inside the carton 201. Depending on the geometry of the articles, and as is the case in the illustrated example, it may be preferred to forego the step of securing the glue panel 205 to the spacer panel 213, as this means that the partition panel extends rigidly across the middle of the bottom of the carton 201. It may be preferable to omit the spacer panels and partition panel 206, 208 and 213 all together if they are not required, or else leave them unsecured such that they do not obstruct the articles P, and can be formed into the desired formation once the user has removed the articles A. This can be of interest were carton is to be reused in such a way that a partition would become a useful feature, but where the partition is not necessary initially to retain the articles P (e.g. in use as a pencil case).

[0049] The above description sets out a series of exemplary embodiments of the present invention. Clearly, variations in the number of locking arrangements L are considered along with optional one piece, or multi-blank assemblies. One skilled in the art would readily appreciate that many such variations are possible, without departing from the scope of the invention as defined by the attached claims.

[0050] Positional and directional adjectives used to denote or refer to elements in the above description, such as 'upper', 'lower', 'back', 'front', 'inner', 'outer' etc are non-limiting and are included only in the interests of aiding clarity of the description.

[0051] In the above description, the term "fold line" will be readily understood by one skilled in the art to encompass not only score lines, but also any common variation used in the field, such as intermittent cut lines and weakened lines etc. Nor does the term specifically denote single lines; each fold line could involve multiple fold lines parallel with one another as is illustrated in the above embodiments.

Claims

1. A locking arrangement for maintaining a carton in a closed configuration, which locking arrangement comprises a first part and a second part, the first part having two or more protrusions, the second part having formed therein an aperture having first and second opposing edges, the two or more protrusions being engageable with the first and second edges of the aperture, the first part further comprising a pull tab that is grippable by a user such that a force may be applied to the first part to sufficiently deform either or both the first or second edge of the aperture, or either the first or second protrusion of the first part, to permit the first part to move relative to the second part, and thereby be disengageable therefrom.

2. The locking arrangement of claim 1, wherein a first of said two or more protrusions engages the first edge of the aperture to restrict movement of the first part relative to the second part, in a first direction, and wherein a second of said two or more protrusions, engages the second edge of the aperture to restrict movement of the first part relative to the second part in an opposing direction.

3. The locking arrangement of claim 1 or claim 2, wherein the aperture formed in said second part is defined between cut lines, one of which cut lines defining a tab which protrudes into the aperture and that overlies a protrusion of the first part, such that

the first protrusion abuts a terminal point of that cut line.

4. The locking arrangement according to claims 1 to 3, wherein the pull tab is hinged to the first part.

5. The locking arrangement according to claims 1 to 4, wherein the pull tab overlies a portion of the second part such that it is accessible by the user when the first and second parts are engaged with one another.

6. A carton for containing articles such as bottles or drinks pouches, which carton has opposing first and second side walls connected by opposing first and second end walls and bottom closure structure formed from a plurality of bottom panels, and further having a cover panel that is hingeable with the second side wall so as to close the carton, and a two part locking means, comprising a first part and a second part, the first part having two or more protrusions, the second part having formed therein an aperture having first and second opposing edges, the two or more protrusions being engageable with the first and second edges of the aperture, the first part further comprising a pull tab that is grippable by a user such that a force may be applied to the first part to sufficiently deform either or both the first or second edge of the aperture, or either the first or second protrusion of the first part, to permit the first part to move relative to the second part, and thereby be disengageable therefrom, the first part being comprised in the cover panel, the second part of which two part locking means being formed in said first side wall.

7. The carton of claim 6, wherein a first of said two or more protrusions is engagable with the first edge of the aperture to restrict movement of the first part relative to the second part, in a first direction, and wherein a second of said two or more protrusions, engages the second edge of the aperture to restrict movement of the first part relative to the second part in an opposing direction.

8. The carton of claim 6 or claim 7, wherein the aperture formed in said second part is defined between cut lines, one of which cut lines defining a tab that protrudes into the aperture and that overlies a protrusion of the first part, such that the first protrusion abuts a terminal point of that cut line.

9. The carton of claims 6 to 8, wherein the cover panel also comprises a handle structure that is arcuate and extends through an aperture in the cover panel.

10. The carton of claim 9, wherein the handle structure is extendable and comprises a handle panel, hinged at one end to the cover panel and secured to a flexible strap, which strap is secured at an opposing end to a portion of the cover panel, and whereby the handle structure is extendable by pulling the flexible strap material through an aperture in the cover panel.

11. The carton of claim 10 wherein the cover panel further comprises a reinforcing panel, hinged to a side edge of the cover panel, to which reinforcing panel the strap is secured, the reinforcing panel being folded into and secured in coplanar contact with a portion of the surface of the cover panel such that a folded portion of the strap material is releasably held in folded condition therebetween, which folded portion is releasable by pulling hinging the handle panel away from the cover panel.

12. The carton of claims 6 to 11 wherein: a) the cover panel is formed from a first blank, and the remainder of the carton is formed from a second blank; or b) the carton is formed from a single piece blank.

13. A blank for forming a carton for containing articles, which blank has panels for forming opposing first and second side walls connected by opposing first and second end walls and bottom closure structure formed from a plurality of bottom panels, and further having a cover panel that is hingeable with the second side wall so as to close the set up carton, and a two part locking means, comprising a first part and a second part, the first part having two or more protrusions, the second part having formed therein an aperture having first and second opposing edges, the two or more protrusions being engageable with the first and second edges of the aperture when the carton has been set up, the first part further comprising a pull tab that is grippable by a user such that a force may be applied to the first part to sufficiently deform either or both the first or second edge of the aperture, or either the first or second protrusion of the first part, to permit the first part to move relative to the second part, and thereby be disengageable therefrom, the first part being comprised in the cover panel, the second part of which two part locking means being formed in said first side wall.

14. A blank for forming a carton according to claims 6 to 12.

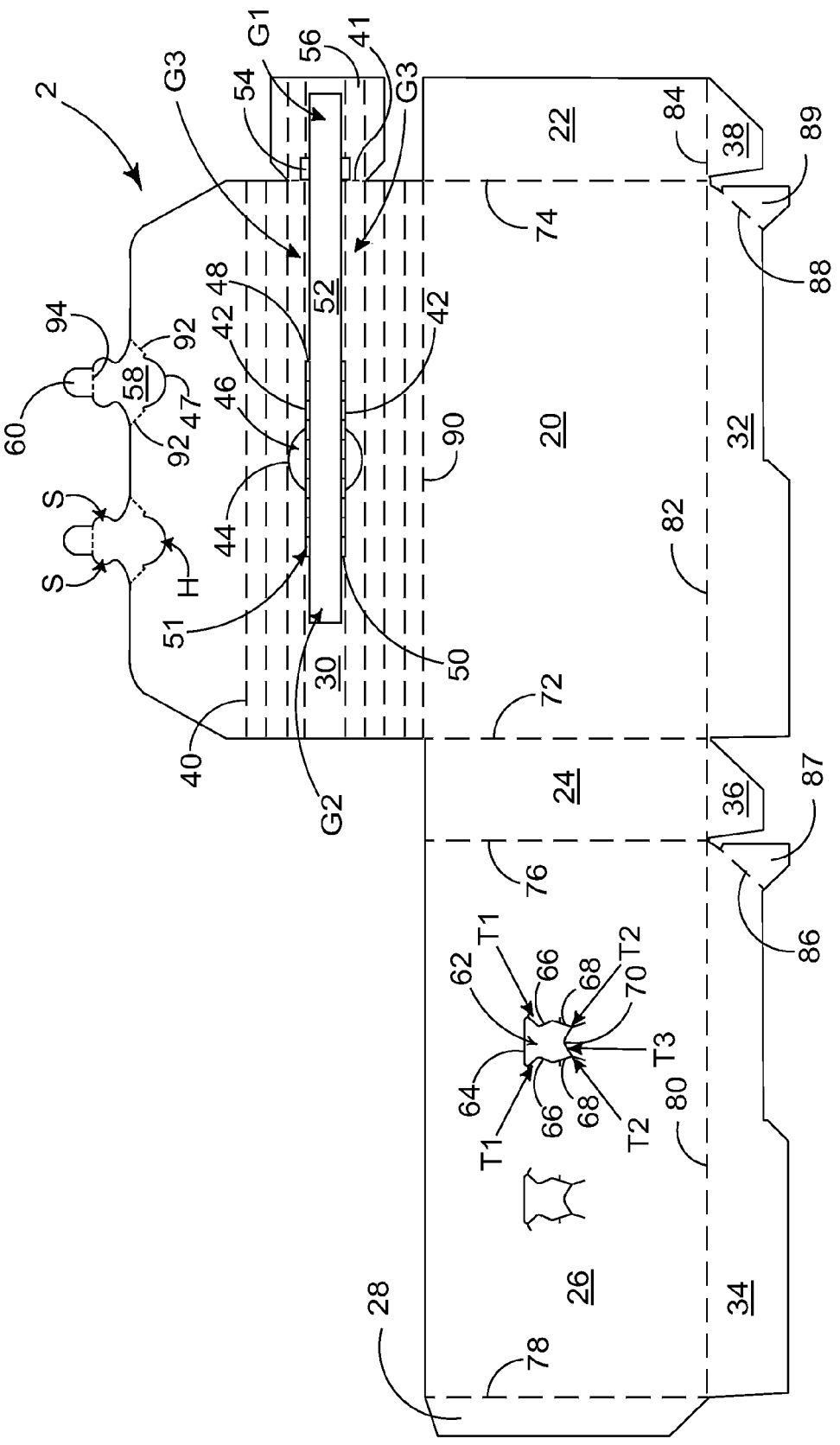

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G3
G1
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T1
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T2
T1
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FIGURE 1

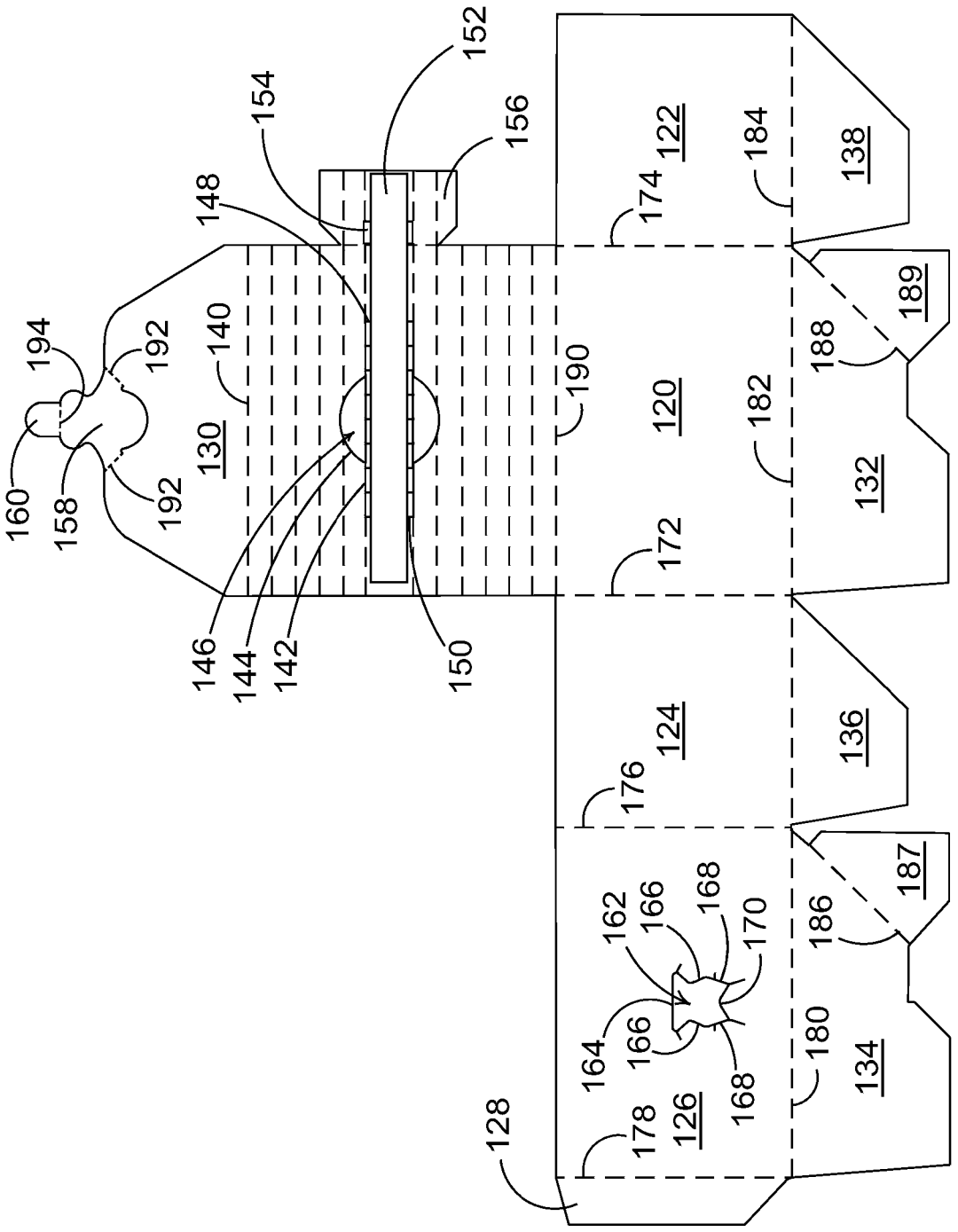

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FIGURE 2

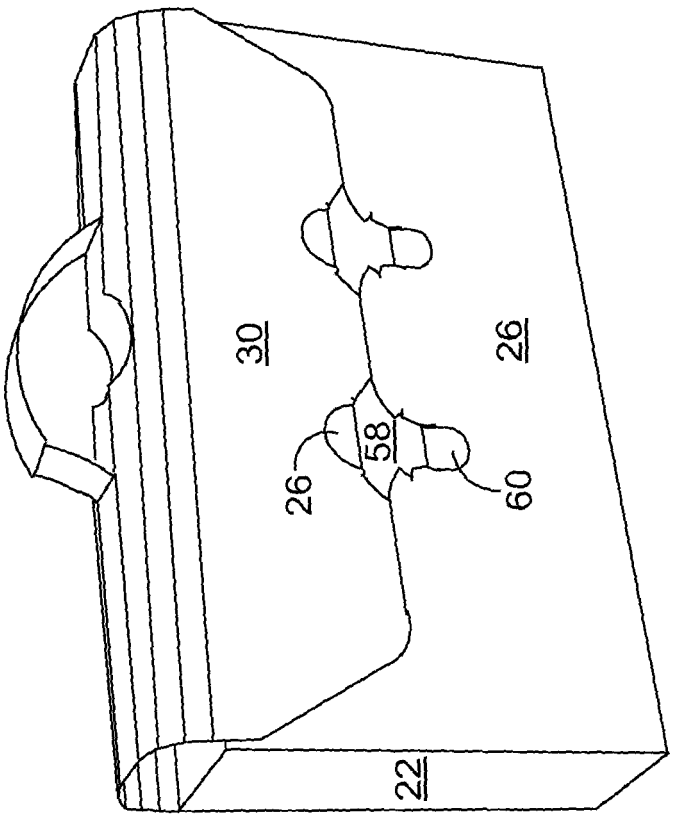


FIGURE 3A

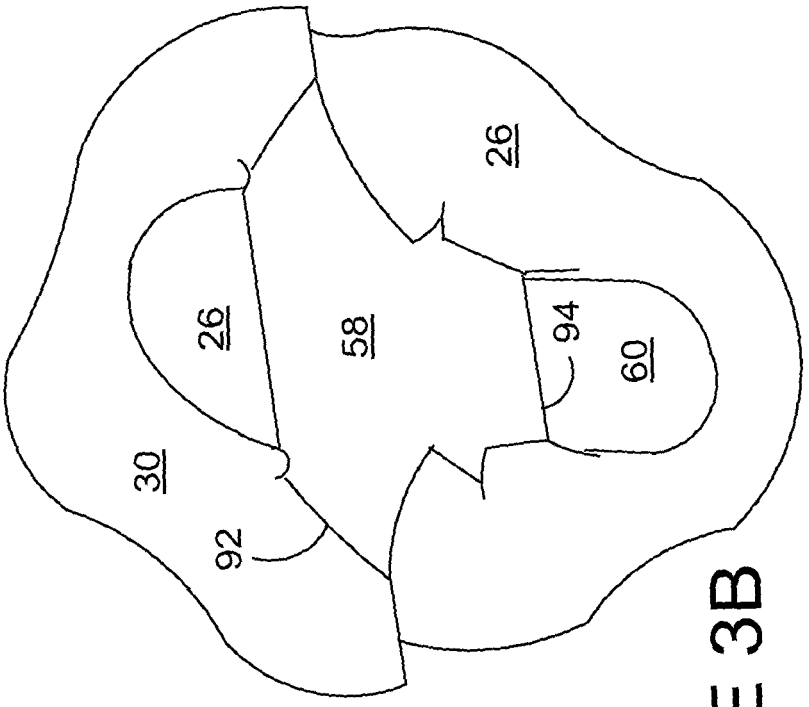


FIGURE 3B

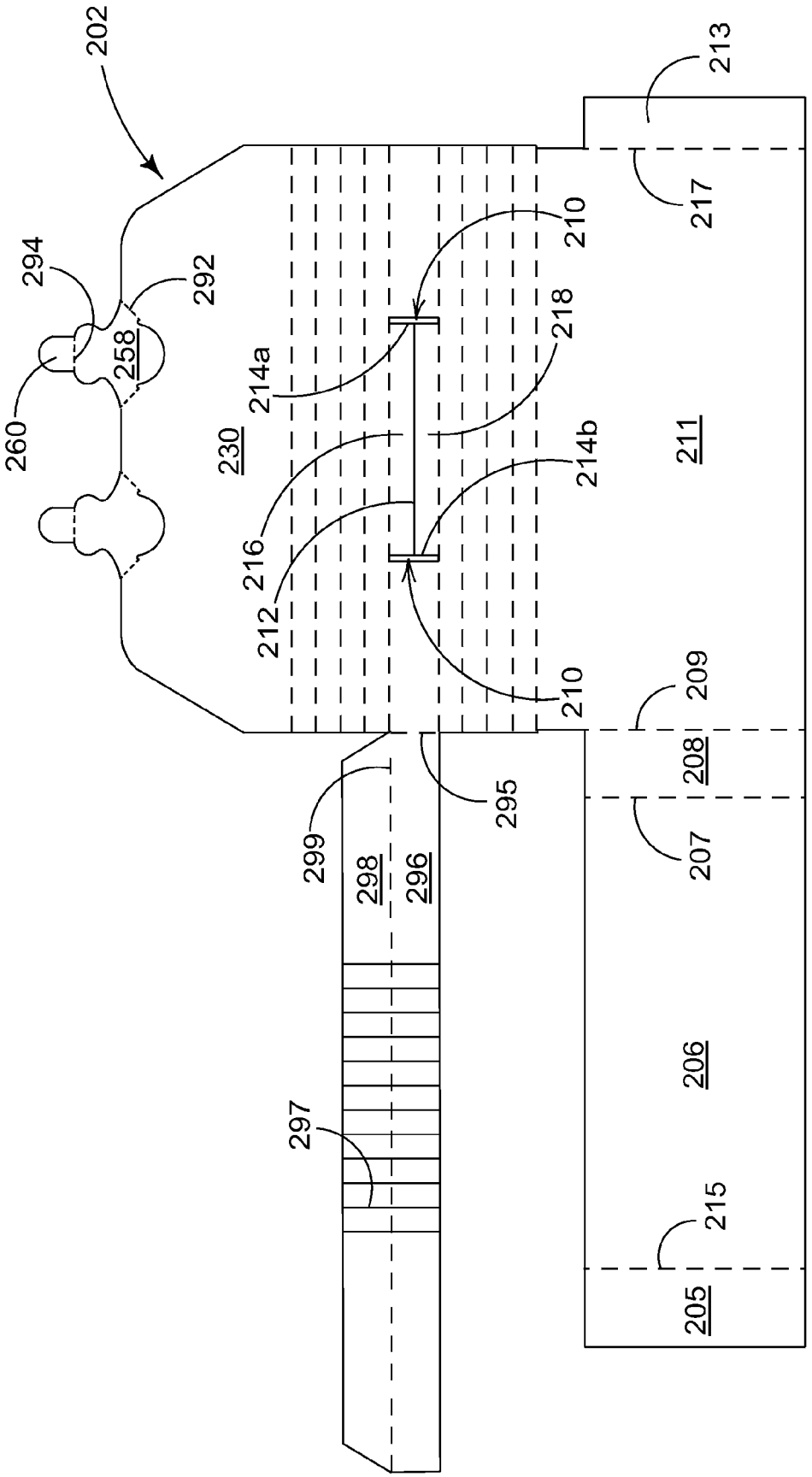

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FIGURE 4

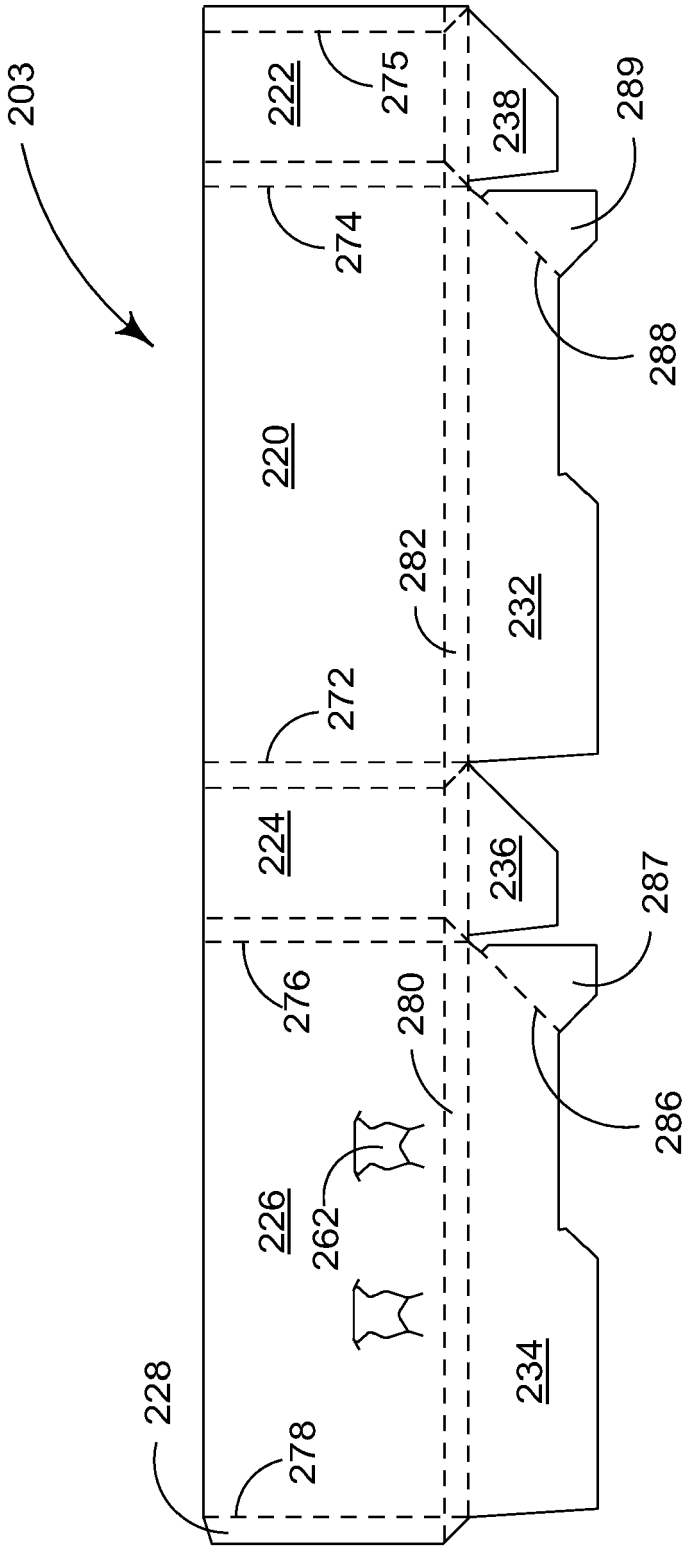

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FIGURE 5

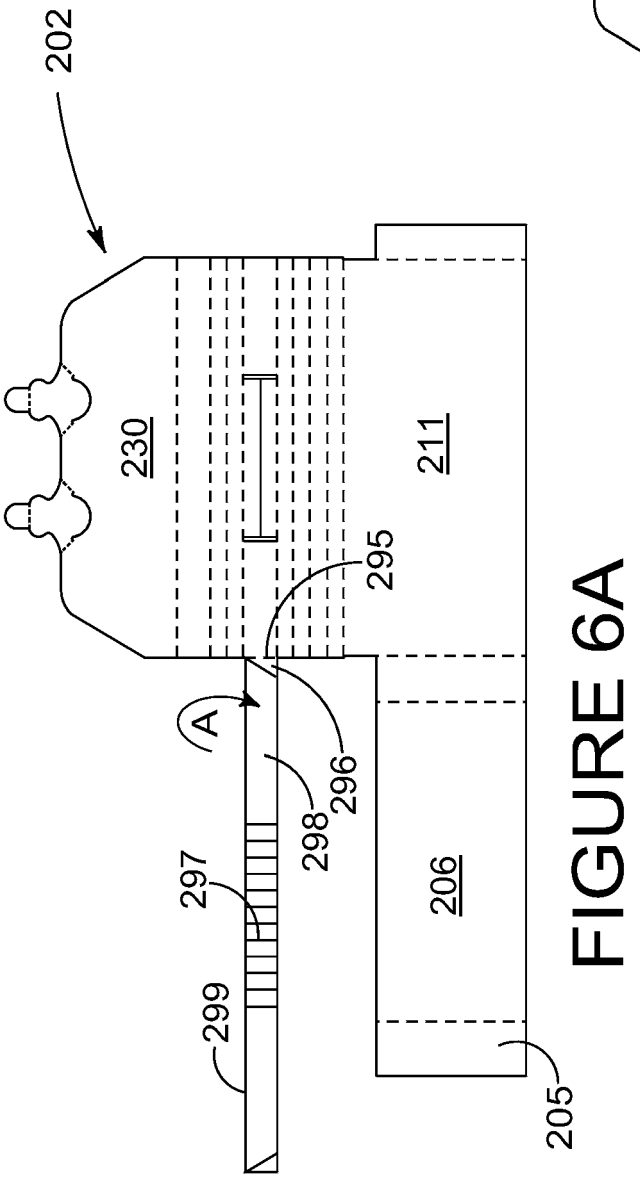


FIGURE 6A

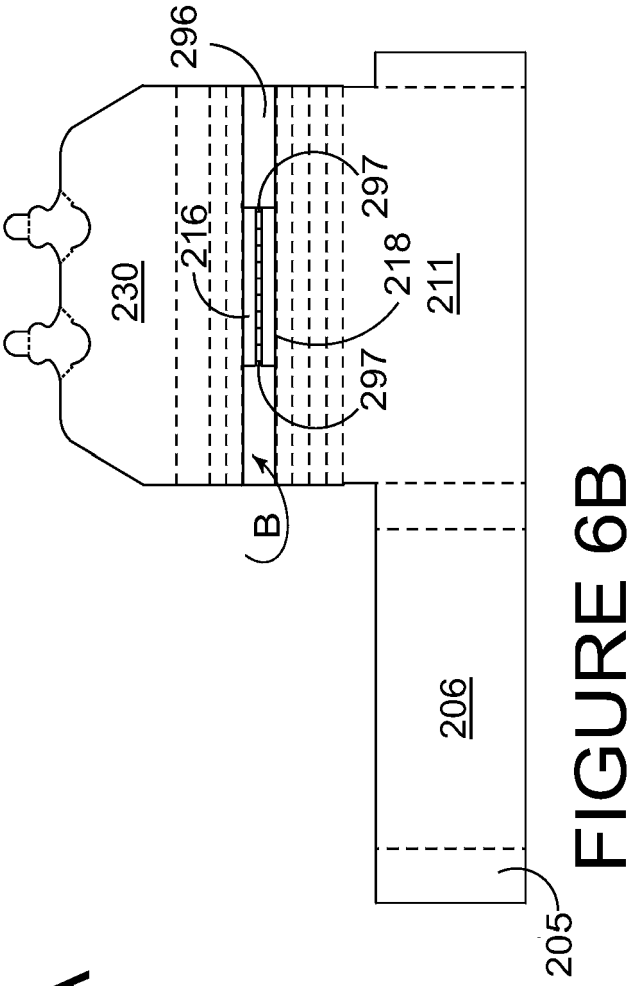


FIGURE 6B

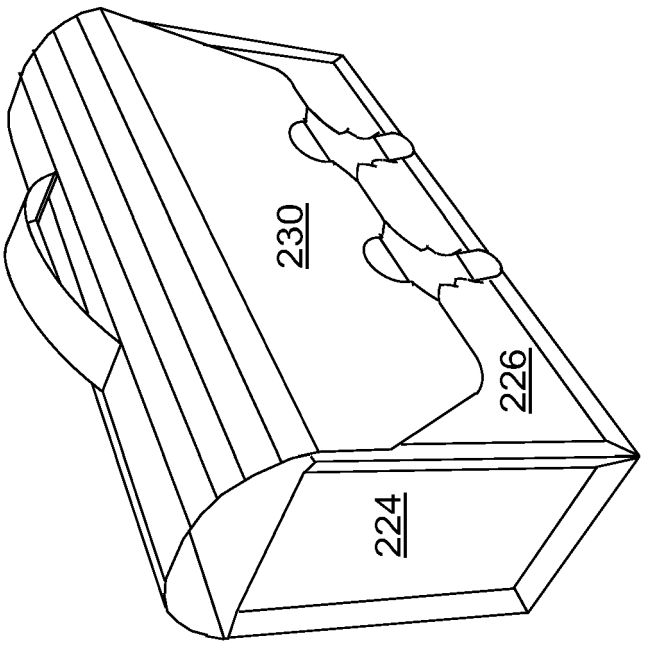


FIGURE 7

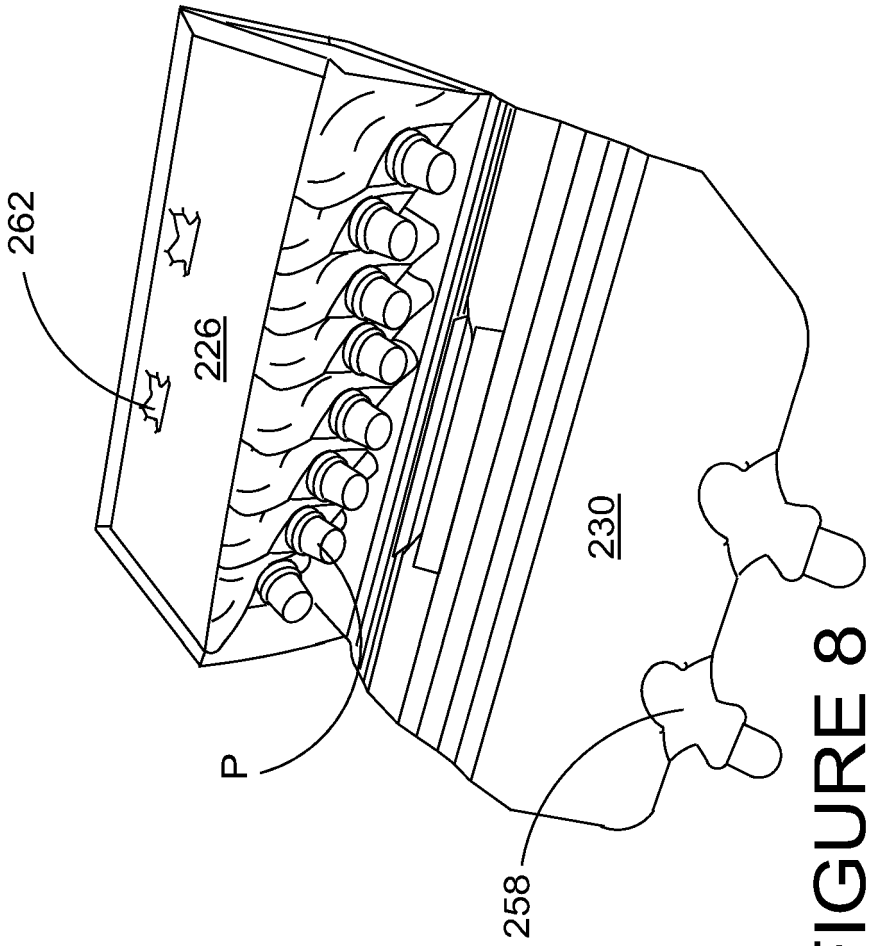


FIGURE 8

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Application Number
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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	19 November 2008	Jervelund, Niels

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