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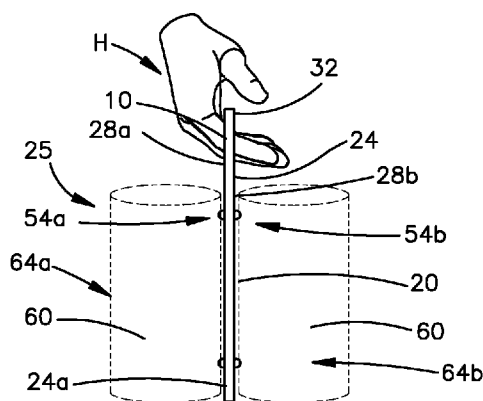


Fig.3

(57) Abstract: In one example, a carrier includes a body and a plurality of adhesive formulations disposed on the body. The adhesive formulations are configured to secure a plurality of containers to the body. A method of securing a plurality of containers to a carrier includes applying a plurality of adhesive formations to a body of a carrier, to the plurality of containers, or to both the body of the carrier and the plurality of containers, and then securing the plurality of containers to the body via the plurality of adhesive formations.



CONTAINER CARRIER

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims priority to U.S. Provisional Patent Application No. 62/864,400, filed June 20, 2019, the entire disclosure of which is hereby incorporated by reference as if set forth in its entirety herein.

TECHNICAL FIELD

[0002] The present disclosure relates to carriers for containers, and more particularly to carriers with adhesive formations configured to secure the containers to the carriers. The containers can be any of a variety of containers, such as food, beverages or other products in a can, bottle, jar, or the like (e.g., bottles of water, cartons of toothpaste, jars of balm), including combinations thereof (e.g., a carton of toothpaste and a toothbrush).

BACKGROUND

[0003] Conventionally, food, beverages, and other products are carried or packaged together using single-use packaging material. For example, existing carriers include plastic rings designed to fit about canned or bottled beverages, plastic shrink-wrapping, and packs designed to carry canned or bottled beverages (e.g., corrugated board beer carrier packs).

[0004] In many conventional carriers, single-use plastic, which is a non-biodegradable material, is often used, which may lead to wasteful material consumption. Similarly, in other conventional carriers, a large amount of paperboard must be used, which may also lead to wasteful material consumption.

[0005] It would therefore be desirable to provide a carrier that reduces material consumption. It would be particularly desirable if such carrier was designed to secure a plurality of containers thereto or therein without using a waste amount of materials and/or using biodegradable materials.

SUMMARY

[0006] Described herein are carriers, such as for containers. In an example, a carrier comprises a body and a plurality of adhesive formations disposed on the body. The plurality of adhesive formations are configured to secure a plurality of containers to the body.

[0007] A further example is a pack of containers. The pack comprises a carrier as described above and a plurality of containers secured to the body of the carrier via the plurality of adhesive formations.

[0008] A further example is a method of securing a plurality of containers to a carrier. The method comprises applying a plurality of adhesive formations a body of the carrier, to the plurality of containers, or to both the body of the carrier and the plurality of containers. The method further comprises securing the plurality of containers to the body via the plurality of adhesive formations.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] The following description of the illustrative examples may be better understood when read in conjunction with the appended drawings. It is understood that potential examples of the disclosed systems and methods are not limited to those depicted.

[0010] FIG. 1A shows a first side view of a carrier according to one example;

[0011] FIG. 1B shows a second side view of the carrier of FIG. 1 according to one example;

[0012] FIG. 2 shows another first side view of the carrier of FIG. 1 with a plurality of cylindrical containers secured thereto according to one example;

[0013] FIG. 3 shows an end view of the carrier of FIG. 1 with a plurality of cylindrical containers secured thereto according to one example;

[0014] FIG. 4 shows a first side view of a carrier according to one example;

[0015] FIG. 5 shows another first side view of the carrier of FIG. 4 with a plurality of cylindrical containers secured thereto according to one example;

[0016] FIG. 6 shows an end view of the carrier of FIG. 4 with a plurality of cylindrical containers secured thereto according to one example;

[0017] FIG. 7 shows a first side view of a carrier according to one example;

[0018] FIG. 8 shows another first side view of the carrier of FIG. 7 with a plurality of cylindrical containers secured thereto according to one example;

[0019] FIG. 9 shows an end view of the carrier of FIG. 7 with a plurality of cylindrical containers secured thereto according to one example;

[0020] FIG. 10 shows a first side view of a carrier with a plurality of cylindrical containers secured thereto according to one example;

[0021] FIG. 11 shows a top view of the carrier of FIG. 10 with the plurality of cylindrical containers secured thereto according to one example;

[0022] FIG. 12 shows an end view of the carrier of FIG. 10 with the plurality of cylindrical containers secured thereto according to one example;

[0023] FIG. 13 shows a first side view of a carrier with a plurality of cylindrical containers secured thereto according to one example;

[0024] FIG. 14 shows a top view of the carrier of FIG. 13 with the plurality of cylindrical containers secured thereto according to one example;

[0025] FIG. 15 shows an end view of the carrier of FIG. 15 with the plurality of cylindrical containers secured thereto according to one example;

[0026] FIG. 16 shows adhesive formations in the form of an elongate strip, dots, ovals, and a spiral pattern according to various examples; and

[0027] FIG. 17 shows an end view of a carrier with a plurality of cylindrical containers secured thereto according to one example.

DETAILED DESCRIPTION

[0028] In the following detailed description, reference is made to the accompanying drawings, which form a part hereof. In the drawings, similar symbols identify similar components, unless context dictates otherwise. The illustrative examples described in the detailed description and drawings are not meant to be limiting and are for explanatory purposes. Other examples may be utilized, and other changes may be made, without departing from the spirit or scope of the subject matter presented herein. It will be readily understood that the aspects of the present disclosure, as generally described herein and illustrated in the drawings, may be arranged, substituted, combined, and designed in a wide variety of different configurations, each of which are explicitly contemplated and form a part of this disclosure.

[0029] While conventional carriers and packs have been adequate for their intended purpose, there is a need for a carrier that reduces material consumption. Such a carrier may be designed to secure a plurality of containers thereto or therein without using a waste amount of materials and/or using a biodegradable material.

[0030] The carriers and packs of the present disclosure can be used in a variety of applications as will be readily appreciated by those skilled in the art and may be used for securing and/or carrying essentially any object. By way of non-limiting example, it is contemplated that the foregoing may be used to secure and/or carry containers having various shapes, such as cylindrical containers (e.g., canned food or beverages), rectangular containers (e.g., toothpaste cartons), and/or hexagonal containers (e.g., jarred balm). The carriers and packs described herein may advantageously ease the process of transportation from a manufacturing

facility (e.g., a factory in which the container is made and/or packed) to the point of sale (e.g., a store in which the container is offered for sale).

[0031] As described herein, a plurality of containers can be secured to a single carrier (e.g., to define a pack), which may ease the process of transportation of large quantities of containers. The carriers include a plurality of adhesive formations (e.g., elongate strips, dots, ovals) disposed thereon. The containers may be secured to the carrier by attaching the containers to the adhesive formations, thereby forming a pack of containers. The pack may then be conveniently transported by moving the pack (e.g., by grasping a handle of the carrier). The carriers and packs described herein can be readily adapted to suit a particular application and may therefore vary in size and shape to accommodate a wide variety of containers. It is specifically contemplated that each carrier is designed to secure a plurality of containers thereto via adhesive formations that are disposed on either the carrier or on the containers themselves. A pack may thus be formed by securing the containers to the carrier via the adhesive formations.

[0032] Referring to FIGS. 1A-3, a carrier 10 according to a first example may be seen. The carrier includes a body 24. In this example, the body 24 has a relatively thin (e.g., planar), substantially rectangular shape, although other examples of the disclosure are not so limited. As will be readily appreciated by those skilled in the art, the body 24 may have any desirable size, shape, and/or thickness to suit a particular application. In this regard, the size and/or the shape of the body 24 may generally be chosen with respect to the containers with which the carrier is intended to be used. In examples, the body 24 may be made from a recyclable material. The body 24 may, in certain examples, be made from a biodegradable material. By way of non-limiting example, the body 24 may be made from cardboard, corrugated board, cardstock, paperboard, or combinations thereof. In certain examples, the body 24 may be laminated. By way of non-limiting example, the body 24 may be laminated with a natural textile (e.g., cotton). Laminating the body 24 may advantageously impart additional strength and/or prevent weakening due to condensation (e.g., when the carrier is used with a product that may be refrigerated). In some examples, the body 24 is rigid. In other examples, the body 24 may be flexible.

[0033] In the example illustrated in FIGS. 1A-3, the body 24 defines an outer surface 24a. The body 24 may also define a first side 28a and a second side 28b. The first side 28a and the second side 28b may be spaced apart from and/or opposite one another. As may be seen in FIG. 1A and FIG. 1B, in the first example, the first and second sides 28a, 28b of the body are mirror images of one another, although other examples of the disclosure are not so limited. In

this example, the first and second sides 28a, 28b define a generally planar surface against which containers may be secured. Though the body 24 in this example is illustrated as generally having two sides or surfaces to which containers may be secured, it is to be understood that the body 24 could have more sides. For example, in certain embodiments, the body 24 may have three sides, four sides, five sides, or more than five sides.

[0034] With continued reference to FIGS. 1A-3, the body 24 may define a base 20 and a handle 32, although other examples of the disclosure are not so limited. The handle 32 may generally operate so as to allow for easy transport of the carrier 10. In examples, the handle 32 may be elongate along a first direction 2. In certain examples, the handle 32 may be differentiated from the rest of the body 24 (and from the base 20) by a gap 36 extending through the body 24 from the first side 28a to the second side 28b thereof. In this example, the gap 36 defines a substantially elongated rectangular shape, although other examples of the disclosure are not so limited. By way of non-limiting example, the gap 36 may be formed in the body 24 by die-cutting or pre-punching the gap 36. In examples, the body 24 may include multiple, spaced-apart gaps that collectively assist in defining the handle 32. In examples, the handle 32 may define a substantially elongated, thin rectangular strip of the body 24.

[0035] When it is desired to transport the carrier 10, a user may insert his or her hand H through the gap 36 and grasp the handle 32, such as is shown in FIG. 3. Similarly, a machine may grasp the handle 32 or another portion of the body 24 for transporting the carrier 10. Although the first example illustrated in FIGS. 1A-3 is shown with a specific handle as described above, it is to be understood that other shapes, sizes, and/or forms of handles could be employed. For example, it is specifically contemplated that in certain non-depicted examples, the carrier 10 may include a handle attached to and extending from the body 24 (e.g., in the form of a strap or hook). Further, it is specifically contemplated that in certain non-depicted examples, the carrier 10 may include more than one handle. In the first example illustrated in FIGS. 1A-3, the handle 32 is elongate along the first direction 2, and the body 24 is also elongate along the first direction 2. In this first example, the handle 32 is positioned proximate an upper edge (i.e., extending along the first direction 2) of the body 24 of the carrier 10.

[0036] The carrier 10 includes a plurality of adhesive formations 50. The adhesive formations 50 are disposed on the body 24 (e.g., on the outer surface 24a of the body 24). The adhesive formations are configured to secure containers 60 to the body 24 of the carrier 10 to form a pack 25. In this first example, the containers 60 are illustrated as cylindrical containers, although other examples of the disclosure are not so limited. By way of non-limiting example,

the containers may be cylindrical, rectangular, hexagonal, the like, and/or combinations thereof. The pack 25 may include containers 60 of one or more shapes (e.g., containers with at least two different shapes) and/or containers 60 of one or more products (e.g., containers with at least two different products). In certain examples, the pack 25 may include containers of associated products (e.g., at least one container 60 of toothpaste and at least one other container 60 of a toothbrush), though other examples of the disclosure are not so limited. The adhesive formations 50 may, in certain examples, include a hotmelt adhesive. In examples, the adhesive formations 50 may be a structural-grade hotmelt adhesive. In such examples, the adhesive formations 50 may have sufficient peel strength to secure containers 60 to the body 24 of the carrier 10, such that the containers 60 remain secured to the body 24 of the carrier 10 during transit of the carrier 10 but may be removed from securement as described herein with fiber tear. The adhesive formations 50 may be a pressure-sensitive adhesive. In such examples, the adhesive formations 50 may have sufficient peel strength to secure containers 60 to the body 24 of the carrier 10, such that the containers 60 remain secured to the body 24 of the carrier 10 during transit of the carrier 10 but may be removed from securement as described herein without damaging the containers 60 and without fiber tear. The adhesive formations 50 may be a fugitive adhesive. In such examples, the adhesive formations 50 may be removed from the containers 60 and/or the body 24 of the carrier 10 by rubbing.

[0037] In the example illustrated in FIGS. 1A-C, each container 60 is secured to the body 24 of the carrier 10 by at least one, such as a pair of adhesive formations 50, although other examples of the disclosure are not so limited. For example, it is specifically contemplated that each adhesive formation 50 may, in certain examples, secure a corresponding container 60 to the body 24 of the carrier 10. In further, non-depicted examples, it is specifically contemplated that each adhesive formation 50 may, in certain examples, secure more than one container 60 to the body 24 of the carrier 10. As will be readily appreciated by those skilled in the art, the number of adhesive formations 50 may be varied as desired to suit a particular application. In examples, two or more adhesive formations 50 may operate collectively to secure a corresponding container 60 to the body 24 of the carrier 10. In other examples, each adhesive formation 50 may operate independently of the other adhesive formations 50 to secure a corresponding container 60 to the body 24 of the carrier 10.

[0038] In the example illustrated in FIGS. 1A-C, each adhesive formation 50 is in the form of an elongate strip of adhesive, although other examples of the disclosure are not so limited. As will be readily appreciated by those skilled in the art, the size and/or shape of each

adhesive formation 50 may be varied as desired to suit a particular application. By way of non-limiting example, the adhesive formations 50 may be in the form of elongate strips (e.g., adhesive formation 50a shown in FIG. 16), dots (e.g., adhesive formation 50b shown in FIG. 16), ovals (e.g., adhesive formation 50c shown in FIG. 16), beads, slot patterns, spiral patterns, fiberized patterns, or a combination thereof. Generally, the adhesive formations 50 may be in any desired size and/or shape suitable for securing the containers 60 to the carrier 10. In examples, certain ones of the plurality of adhesive formations 50 on a given carrier 10 may be different in size and/or shape from other ones of the plurality of adhesive formations 50 on the carrier 10. In the first example illustrated in FIGS. 1A-3, each of the adhesive formations 50 is elongate along the first direction 2. As described herein, the adhesive formations 50 may be dispensed on the body 24 of the carrier 10 and/or on the containers 60. In examples, the adhesive formations 50 may be dispensed in a solid form. In other examples, the adhesive formations 50 may be dispensed as a foam, which may advantageously require less adhesive

[0039] In the first example illustrated in FIGS. 1A-3, the plurality of adhesive formations 50 includes a first set 54a of adhesive formations 50 disposed on the first side 28a of the body 24 of the carrier 10. The plurality of adhesive formations 50 may further include a second set 54b of adhesive formations 50 disposed on the second side 28b of the body 24 of the carrier 10. The first set 54a of adhesive formations 50 may generally secure one or more containers 60 to the first side 28a of the body 24 of the carrier 10, such as is illustrated in FIG. 3. The second set 54b of adhesive formations 50 may generally secure one or more other containers 60 to the second side 28b of the body 24 of the carrier 10, such as is illustrated in FIG. 3. In this first example, the first set 54a of adhesive formations 50 secures a first set 60a (defined, in this example, by three containers 60) to the first side 28a of the body 24 of the carrier 10, and the second set 54b of adhesive formations 50 secures a second set 60b (defined, in this example, by three containers 60) to the second side 28b of the body 24 of the carrier 10. It will be understood that, as used herein, the term “set” is used in the mathematical sense. Thus, as used herein, a “set” can define a plurality of elements or can define a single element (e.g., a unit set or singleton) unless otherwise defined to have a plurality of elements.

[0040] In the first example illustrated in FIGS. 1A-3, the first set 54a of adhesive formations 50 disposed on the first side 28a of the body 24 of the carrier 10 and the second set 54b of adhesive formations 50 disposed on the second side 28b of the body 24 of the carrier 10 each include six total adhesive formations 50. In this example, the adhesive formations 50 in each of the first and second sets 54a, 54b are arranged in a 2x3 grid, although other examples of

the disclosure are not so limited. As may be seen in FIGS. 1A-2, the adhesive formations 50 in each of the first and second sets 54a, 54b are arranged such that there are two rows of adhesive formations 50 (i.e., with the rows spaced apart along the second direction 4) and three columns of adhesive formations 50 (i.e., with the columns spaced apart along the first direction 2). The adhesive formations 50 within each row are generally spaced apart from one another along the first direction 2. The adhesive formations 50 within each column are generally spaced apart from one another along a second direction 4 substantially perpendicular to the first direction 2. In this example, the pair of adhesive formations 50 forming each column collectively secure a corresponding container to the body 24 of the carrier 10, such as is illustrated in FIG. 2. Put another way, in this first example, each container 60 is secured along a single side thereof by a pair of vertically-spaced adhesive formations 50 (i.e., spaced apart from one another along the second direction 4). In this first example, the containers 60 are positioned side-by-side along the first direction 2 and oriented such that they are elongate along the second direction 4. The containers 60 in this first example are arranged into a single row and three columns. Each column includes a single container 60 secured to the body 24 of the carrier 10 via two adhesive formations 50. The row includes three containers 60, each of which is secured to the body 24 of the carrier 10 via two adhesive formations 50. The containers 60 in this first example are positioned upright when the pack 25 is being transported (refer to FIG. 3). In addition, when the pack 25 is placed at rest on a surface such that the carrier 10 is elongate along the first direction 2, the containers 60 in this first example remain positioned upright (refer to FIG. 2, in which the containers 60 are illustrated as semi-transparent to show how the containers 60 are secured to the body 24 of the carrier 10 via the adhesive formations 50 to form pack 25).

[0041] As previously explained, the adhesive formations 50 may be disposed on the body 24 of the carrier 10 in any desired arrangement or pattern to suit a particular application. For example, in certain non-depicted examples, the adhesive formations 50 may be disposed on the body 24 of the carrier 10 in a random and/or undefined arrangement or pattern.

[0042] To assemble the carrier 10 of the first example, the plurality of adhesive formations 50 are applied to the body 24 of the carrier 10, and the plurality of containers 60 can be secured to the body 24 of the carrier 10 by attaching the plurality of containers 60 to the plurality of adhesive formations 50. In examples, attachment can occur by pressing each of the plurality of containers 60 to corresponding one(s) of the plurality of adhesive formations 50. In such examples, a container 60 may be selectively removed from securement with the body 24 of the carrier 10 by applying a pulling force. In certain examples, the containers 60 may include

labels or the like, and the adhesive formations 50 may be selectively disposed on the body 24 of the carrier 10 so as to secure the containers 60 to the body 24 of the carrier 10 via the labels. In such examples, a container 60 may be selectively removed from securement with the body 24 of the carrier 10 (e.g., by applying a pulling force) while its corresponding label remains secured to the body 24 of the carrier 10 via one or more of the adhesive formations 50.

[0043] Alternatively, the adhesive formations 50 can be applied to the plurality of containers 60, and the plurality of containers 60 can be secured to the body 24 of the carrier 10 by attaching the plurality of containers 60 to the body 24 of the carrier 10 via the adhesive formations 50 (e.g., by pressing each of the plurality of containers 60, with adhesive formation(s) disposed thereon, against the body 24 of the carrier 10). In certain examples, the containers 60 may include labels or the like, and the adhesive formations 50 may be selectively disposed on the labels so as to secure the containers 60 to the body 24 of the carrier 10 via the labels. In such embodiments, a container 60 may be selectively removed from securement with the body 24 of the carrier 10 (e.g., by applying a pulling force) while its corresponding label remains secured to the body 24 of the carrier 10 via one or more of the adhesive formations 50.

[0044] As may be seen in FIG. 1A and FIG. 1B, the body 24 of the carrier 10 may include one or more graphics, though other examples of the disclosure are not so limited. In examples, the graphic(s) may be disposed on the first side 28a and/or the second side 28b of the body 24 of the carrier 10. The graphic(s) may generally be any desired pictorial and/or textual information. By way of non-limiting example, the graphic(s) may be a logo or other information regarding the containers 60, an indication of recyclability of the containers 60 and/or the carrier 10, the manufacturer of the containers 60 and/or the carrier 10, or combinations thereof. As will be readily appreciated by those skilled in the art, the graphic(s) may be of any suitable size and/or shape and may be in any suitable location on the body 24 of the carrier 10. In certain examples, one or more graphics may individually or collectively comprise the entirety and/or a substantial portion of the first and/or second sides 28a, 28b of the body 24. It is to be understood that the existence of one or more graphics on the body 24 of the carrier 10 is entirely optional, and, in certain examples, the body 24 may include no graphics.

[0045] Turning now to FIGS. 4-6, a carrier 100 according to a second example may be seen. In FIGS. 4-6, similar reference numerals are used to denote similar functions to those with respect to carrier 10, and carrier 100 may generally operate similarly to carrier 10, except as described below.

[0046] The carrier 100 of this second example includes a body 124 having a base 120, a handle 132, and a plurality of adhesive formations 150 configured to secure a plurality of containers 60 to the body 124 of the carrier 100 to form a pack 125. In the carrier 100 of this second example, the body 124 is elongate along the first direction 2. In addition, each of the adhesive formations 150 is elongate along the first direction 2. The handle 132, however, is elongate along the second direction 4 substantially perpendicular to the first direction 2. In this second example, the handle 132 is positioned proximate a side edge (i.e., extending along the second direction 4) of the body 124 of the carrier 100.

[0047] In the second example illustrated in FIGS. 4-6, the plurality of adhesive formations 150 includes a first set 154a of adhesive formations 150 disposed on the first side 128a of the body 124 of the carrier 100. The plurality of adhesive formations 150 may further include a second set 154b of adhesive formations 150 disposed on the second side 128b of the body 124 of the carrier 100. The first set 154a of adhesive formations 150 may generally secure one or more containers 60 to the first side 128a of the body 124 of the carrier 100, such as is illustrated in FIG. 6. The second set 154b of adhesive formations 150 may generally secure one or more other containers 60 to the second side 128b of the body 124 of the carrier 100, such as is illustrated in FIG. 6. In this second example, the first set 154a of adhesive formations 150 secures a first set 164a (defined, in this example, by three containers 60) to the first side 128a of the body 124 of the carrier 100, and the second set 154b of adhesive formations 150 secures a second set 164b (defined, in this example, by three containers 60) to the second side 128b of the body 124 of the carrier 100.

[0048] In the second example illustrated in FIGS. 4-6, the first set 154a of adhesive formations 150 disposed on the first side 128a of the body 124 of the carrier 100 and the second set 154b of adhesive formations 150 disposed on the second side 128b of the body 124 of the carrier 100 each include six total adhesive formations 150. In this example, the adhesive formations 150 in each of the first and second sets 154a, 154b are arranged in a 2x3 grid, although other examples of the disclosure are not so limited. As may be seen in FIG. 4 and FIG. 5, the adhesive formations 150 in each of the first and second sets 154a, 154b are arranged such that there are two rows of adhesive formations 150 (i.e., with the rows spaced apart along the second direction 4) and three columns of adhesive formations 150 (i.e., with the columns spaced apart along the first direction 2). The adhesive formations 150 within each row are generally spaced apart from one another along the first direction 2. The adhesive formations 150 within each column are generally spaced apart from one another along the second direction 4. In this

example, the pair of adhesive formations 150 forming each column collectively secure a corresponding container to the body 124 of the carrier 100, such as is illustrated in FIG. 5. Put another way, in this second example, each container 60 is secured along a single side thereof by a pair of vertically-spaced adhesive formations 150 (i.e., spaced apart from one another along the second direction 4). In this second example, the containers 60 are positioned side-by-side along the first direction 2 and oriented such that they are elongate along the second direction 4. The containers 60 in this second example are arranged into a single row and three columns. Each column includes a single container 60 secured to the body 124 of the carrier 100 via two adhesive formations 150. The row includes three containers 60, each of which is secured to the body 124 of the carrier 100 via two adhesive formations 150. The containers 60 in this second example are positioned sideways when the pack 125 is being transported (refer to FIG. 6). However, when the pack 125 is placed at rest on a surface such that the carrier 100 is elongate along the first direction 2, the containers 60 in this second example are then positioned upright (refer to FIG. 5, in which the containers 60 are illustrated as semi-transparent to show how the containers 60 are secured to the body 124 of the carrier 100 via the adhesive formations 150 to form pack 125).

[0049] Turning now to FIGS. 7-9, a carrier 200 according to a third example may be seen. In FIGS. 7-9, similar reference numerals are used to denote similar functions to those with respect to carrier 10, and carrier 200 may generally operate similarly to carrier 10, except as described below.

[0050] The carrier 200 of this third example includes a body 224 having a base 220, a handle 232, and a plurality of adhesive formations 250 configured to secure a plurality of containers 60 to the body 224 of the carrier 200 to form a pack 225. In the carrier 200 of this third example, the body 224 is elongate along the first direction 2. Each of the adhesive formations 250, however, is elongate along the second direction 4 substantially perpendicular to the first direction 2. In addition, the handle 232 is elongate along the second direction 4. In this third example, the handle 232 is positioned proximate a side edge (i.e., extending along the second direction 4) of the body 224 of the carrier 200.

[0051] In the third example illustrated in FIGS. 7-9, the plurality of adhesive formations 250 includes a first set 254a of adhesive formations 250 disposed on the first side 228a of the body 224 of the carrier 200. The plurality of adhesive formations 50 may further include a second set 254b of adhesive formations 250 disposed on the second side 228b of the body 224 of the carrier 200. The first set 254a of adhesive formations 250 may generally secure

one or more containers 60 to the first side 228a of the body 224 of the carrier 200, such as is illustrated in FIG. 9. The second set 254b of adhesive formations 250 may generally secure one or more other containers 60 to the second side 228b of the body 224 of the carrier 200, such as is illustrated in FIG. 9. In this third example, the first set 254a of adhesive formations 250 secures a first set 264a (defined, in this example, by four containers 60) to the first side 228a of the body 224 of the carrier 200, and the second set 254b of adhesive formations 250 secures a second set 264b (defined, in this example, by four containers 60) to the second side 228b of the body 224 of the carrier 200.

[0052] In the third example illustrated in FIGS. 7-9, the first set 254a of adhesive formations 250 disposed on the first side 228a of the body 224 of the carrier 200 and the second set 254b of adhesive formations 250 disposed on the second side 228b of the body 224 of the carrier 200 each include eight total adhesive formations 250. In this example, the adhesive formations 250 in each of the first and second sets 254a, 254b are arranged in a 2x4 grid, although other examples of the disclosure are not so limited. As may be seen in FIG. 7 and FIG. 8, the adhesive formations 250 in each of the first and second sets 254a, 254b are arranged such that there are two rows of adhesive formations 250 (i.e., with the rows spaced apart along the second direction 4) and four columns of adhesive formations 250 (i.e., with the columns spaced apart along the first direction 2). The adhesive formations 250 within each row are generally spaced apart from one another along the first direction 2. The adhesive formations 250 within each column are generally spaced apart from one another along the second direction 4. In this example, a first pair of adhesive formations 250 in each row collectively secure a first corresponding container to the body 224 of the carrier 200 and another pair of adhesive formations 250 in the same row collectively secure another corresponding container to the body 224 of the carrier 200, such as is illustrated in FIG. 8. Put another way, in this third example, each container 60 is secured along a single side thereof by a pair of laterally-spaced adhesive formations 250 (i.e., spaced apart from one another along the first direction 2). In this third example, each container 60 has an adjacently-positioned container to its side along the first direction 2 and another adjacently-positioned container above or below it along the second direction 4. In this way, the containers 60 may be positioned side-by-side along the first direction 2 and one above another along the second direction 4. In this third example, the containers 60 are oriented such that they are elongate along the first direction 2. The containers 60 in this third example are arranged into two rows and two columns. Each column includes two containers 60, each of which is secured to the body 224 of the carrier 200 via two adhesive

formations 250. Each row includes two containers 60, each of which is secured to the body 224 of the carrier 200 via two adhesive formations 250. The containers 60 in this third example are positioned upright when the pack 225 is being transported (refer to FIG. 9). However, when the pack 225 is placed at rest on a surface such that the carrier 200 is elongate along the first direction 2, the containers 60 in this third example are then positioned sideways (refer to FIG. 8, in which the containers 60 are illustrated as semi-transparent to show how the containers 60 are secured to the body 224 of the carrier 200 via the adhesive formations 250 to form pack 225).

[0053] Turning now to FIGS. 10-12, a carrier 300 according to a fourth example may be seen. In FIGS. 10-12, similar reference numerals are used to denote similar functions to those with respect to carrier 10, and carrier 300 may generally operate similarly to carrier 10, except as described below.

[0054] The carrier 300 of this fourth example includes a body 324 having a base 320, a handle 332, and a plurality of adhesive formations 350 configured to secure a plurality of containers 60 to the body 324 of the carrier 300 to form a pack 325. In the carrier 300 of this fourth example, the body 324 is elongate along the first direction 2. In addition, each of the adhesive formations 350 is elongate along the first direction 2. The handle 332, however, is elongate along the second direction 4 substantially perpendicular to the first direction 2. In this fourth example, the handle 332 is positioned proximate a side edge (i.e., extending along the second direction 4) of the body 324 of the carrier 300.

[0055] In the fourth example illustrated in FIGS. 10-12, the body 324 includes a first member 328 and a second member 330, although other examples of the disclosure are not so limited. The first and second members 328, 330 are also referred to herein as extensions. The first extension 328 and the second extension 330 may each be elongate along the first direction 2. As may be seen in FIG. 11 and FIG. 12, the first and second extensions 328, 330 may be spaced apart from one another along a third direction 6 substantially perpendicular to the first and second directions 2, 4. In this fourth example, the carrier 300 includes two extensions 328, 330 and one handle 332. The handle 332 may, in certain examples, be positioned substantially centrally between the extensions 328, 330.

[0056] The first extension 328 of the body 324 may define a first side 328a and a second side 328b. The first side 328a and the second side 328b of the first extension 328 may be spaced apart from and/or opposite one another. The second extension 330 of the body 324 may define a first side 330a and a second side 330b. The first side 330a and the second side 330b of the second extension 330 may be spaced apart from and/or opposite one another. As may be

seen in FIG. 11 and FIG. 12, in this fourth example, the first and second extensions 328, 330 of the body may be mirror images of one another, although other examples of the disclosure are not so limited. In this example, the first and second sides 328a, 328b of the first extension 328 and the first and second sides 330a, 330b of the second extension 330 each define a generally planar surface. As may be seen in FIG. 11 and FIG. 12, the second side 328b of the first extension 328 and the first side 330a of the second extension 330 may define generally planar surfaces against which containers may be secured. In particular, the second side 328b of the first extension 328 may face the first side 330a of the second extension 330, and one or more containers 60 may be secured therebetween. In further, non-depicted embodiments, it is contemplated that containers could also be secured to each of the first side 328a of the first extension 328 and the second side 330b of the second extension 330.

[0057] In the fourth example illustrated in FIGS. 10-12, the plurality of adhesive formations 350 includes a first set 354a of adhesive formations 350 disposed on the second side 328b of the first extension 328. The plurality of adhesive formations 350 may further include a second set 354b of adhesive formations 350 disposed on the first side 330a of the second extension 330. The first set 354a of adhesive formations 350 may generally secure one or more containers 60 to the second side 328b of the first extension 328, such as is illustrated in FIG. 11. The second set 354b of adhesive formations 350 may generally secure one or more containers 60 to the first side 330a of the second extension 330, such as is illustrated in FIG. 11. In this fourth example, the first set 354a of adhesive formations 350 secures a total of five containers 60 to the second side 328b of the first extension 328 along one side of each container 60, and the second set 354b of adhesive formations 350 secures the same five containers 60 to the first side 330a of the second extension 330 along an opposite side of each container 60. That is, the first and second sets 354a, 354b of adhesive formations 350 collectively secure the containers 60 between the second side 328b of the first extension 328 and the first side 330a of the second extension 330.

[0058] In the fourth example illustrated in FIGS. 10-12, the first set 354a of adhesive formations 350 disposed on the second side 328b of the first extension 328 and the second set 354b of adhesive formations 350 disposed on the first side 330a of the second extension 330 each include five total adhesive formations 350. In this example, the adhesive formations 350 in each of the first and second sets 354a, 354b are arranged in a 1x5 grid, although other examples of the disclosure are not so limited. Thus, it will be understood that, in alternative examples, the carrier could support more or less than five containers 60. As may be understood from FIG. 11

and FIG. 12, the adhesive formations 350 in each of the first and second sets 354a, 354b are arranged such that there is one row of adhesive formations 350 and five columns of adhesive formations 350 (i.e., with the columns spaced apart along the first direction 2). The adhesive formations 350 within each column are generally spaced apart from one another along the second direction 4 substantially perpendicular to the first direction 2. In this example, the adhesive formations 350 in each column secure a corresponding container to the body 324 of the carrier 300, such as is illustrated in FIG. 11 and FIG. 12. Put another way, in this fourth example, each container 60 is secured along multiple sides thereof. Put yet another way, in this fourth example, each container 60 is sandwiched between at least two opposing adhesive formations 350. In this fourth example, the containers 60 are positioned side-by-side along the first direction 2 and oriented such that they are elongate along the second direction 4. The containers 60 in this fourth example are arranged into a single row and five columns. Each column includes a single container 60 secured to the body 324 of the carrier 300 via two adhesive formations 350. The row includes five containers 60, each of which is secured to the body 324 of the carrier 300 via two adhesive formations 350. The containers 60 in this fourth example are positioned sideways when the pack 325 is being transported (refer to FIG. 12). However, when the pack 325 is placed at rest on a surface such that the carrier 300 is elongate along the first direction 2, the containers 60 in this fourth example are then positioned upright (refer to FIG. 10).

[0059] Turning now to FIGS. 13-15, a carrier 400 according to a fifth example may be seen. In FIGS. 13-15, similar reference numerals are used to denote similar functions to those with respect to carrier 300, and carrier 400 may generally operate similarly to carrier 300, except as described below.

[0060] The carrier 400 of this fifth example includes a body 424 having a base 420, a handle 432, and a plurality of adhesive formations 450 configured to secure a plurality of containers 60 to the body 424 of the carrier 400 to form a pack 425. In the carrier 400 of this fifth example, the body 424 is elongate along the first direction 2. In addition, each of the adhesive formations 450 is elongate along the first direction 2. The handle 432, however, is elongate along the second direction 4 substantially perpendicular to the first direction 2. In this fifth example, the handle 432 is positioned proximate a side edge (i.e., extending along the second direction 4) of the body 424 of the carrier 400.

[0061] In the fifth example illustrated in FIGS. 13-15, the body 424 includes a first member 428, a second member 430, and a third member 431, although other examples of the disclosure are not so limited. The first, second, and third members 428, 430, 431 are also

referred to herein as extensions. The first extension 428, the second extension 430, and the third extension 431 may each be elongate along the first direction 2. As may be seen in FIG. 14 and FIG. 15, the first, second, and third extensions 428, 430, 431 may be spaced apart from one another along the third direction 6 substantially perpendicular to the first and second directions 2, 4. In this fifth example, the carrier 400 includes three extensions 428, 430, 431 and one handle 432. The handle 432 may, in certain examples, be positioned substantially centrally between the extensions 428, 430, 431. In this particular example, the handle 432 is located in the same plane as the second extension 430, although other examples of the disclosure are not so limited.

[0062] The first extension 428 of the body 424 may define a first side 428a and a second side 428b. The first side 428a and the second side 428b of the first extension 428 may be spaced apart from and/or opposite one another. The second extension 430 of the body 424 may define a first side 430a and a second side 430b. The first side 430a and the second side 430b of the second extension 430 may be spaced apart from and/or opposite one another. The third extension 431 of the body 424 may define a first side 431a and a second side 431b. The first side 431a and the second side 431b of the third extension 431 may be spaced apart from and/or opposite one another. As may be seen in FIG. 14 and FIG. 15, in this fifth example, the first and third extensions 428, 431 of the body may be mirror images of one another, although other examples of the disclosure are not so limited. In this example, the first and second sides 428a, 428b of the first extension 428, the first and second sides 430a, 430b of the second extension 430, and the first and second sides 431a, 431b of the third extension 431 each define a generally planar surface. As may be seen in FIG. 14 and FIG. 15, the second side 428b of the first extension 428, the first and second sides 430a, 430b of the second extension 430, and the first side 431a of the third extension 431 may define generally planar surfaces against which containers may be secured. In particular, the second side 428b of the first extension 428 may face the first side 430a of the second extension 400, and one or more containers 60 may be secured therebetween. In addition, the first side 431a of the third extension 431 may face the second side 430b of the second extension 400, and one or more containers 60 may be secured therebetween. In further, non-depicted embodiments, it is contemplated that containers could also be secured to each of the first side 428a of the first extension 428 and the second side 431b of the third extension 431.

[0063] In the fifth example illustrated in FIGS. 13-15, the plurality of adhesive formations 450 includes a first set 454a of adhesive formations 450 disposed on the second side 428b of the first extension 428. The plurality of adhesive formations 450 may further include a

second set 454b of adhesive formations 450 disposed on the first side 430a of the second extension 430. The plurality of adhesive formations 450 may further include a third set 454c of adhesive formations 450 disposed on the second side 430b of the second extension 430. The plurality of adhesive formations 450 may further include a fourth set 454d of adhesive formations disposed on the first side 431a of the third extension 431. The first set 454a of adhesive formations 450 may generally secure one or more containers 60 to the second side 428b of the first extension 428, such as is illustrated in FIG. 14. The second set 454b of adhesive formations 450 may generally secure one or more containers 60 to the first side 430a of the second extension 430, such as is illustrated in FIG. 14. The third set 454c of adhesive formations 450 may generally secure one or more containers 60 to the second side 430b of the second extension 430, such as is illustrated in FIG. 14. The fourth set 454d of adhesive formations 450 may generally secure one or more containers 60 to the first side 431a of the third extension 431, such as is illustrated in FIG. 14. In this fifth example, the first set 454a of adhesive formations 450 secures a total of three containers 60 to the second side 428b of the first extension 428 along one side of each container 60, and the second set 454b of adhesive formations 450 secures the same three containers 60 to the first side 430a of the second extension 430 along an opposite side of each container 60. That is, the first and second sets 454a, 454b of adhesive formations 450 collectively secure a plurality of containers 60 between the second side 428b of the first extension 428 and the first side 430a of the second extension 430. Additionally, in this fifth example, the third set 454c of adhesive formations 450 secures a total of three containers 60 to the second side 430b of the second extension 430 along one side of each container 60, and the fourth set 454d of adhesive formations 450 secures the same three containers 60 to the first side 431a of the third extension 431 along an opposite side of each container 60. That is, the third and fourth sets 454c, 454d of adhesive formations 450 collectively secure a plurality of containers 60 between the second side 430b of the second extension 430 and the first side 431a of the third extension 431.

[0064] In the fifth example illustrated in FIGS. 13-15, the first set 454a of adhesive formations 450 disposed on the second side 428b of the first extension 428 and the second set 454b of adhesive formations 450 disposed on the first side 430a of the second extension 430 each include three total adhesive formations 450. Similarly, the third set 454c of adhesive formations 450 disposed on the second side 430b of the second extension 430 and the fourth set 454d of adhesive formations 450 disposed on the first side 431a of the third extension 431 each include three total adhesive formations 450. In this example, the adhesive formations 450 in

each of the first, second, third, and fourth sets 454a-d are arranged in a 1x3 grid, although other examples of the disclosure are not so limited. As may be understood from FIG. 14 and FIG. 15, the adhesive formations 450 in each of the first, second, third, and fourth sets 454a-d are arranged such that there are three rows of adhesive formations 450 (i.e., with the rows spaced apart along the second direction 4) and three columns of adhesive formations 450 (i.e., with the columns spaced apart along the first direction 2). The adhesive formations 450 within each row are generally spaced apart from one another along the first direction 2. The adhesive formations 450 within each column are generally spaced apart from one another along the second direction 4 substantially perpendicular to the first direction 2. In this example, the adhesive formations 450 in each column secure a corresponding container to the body 424 of the carrier 400, such as is illustrated in FIG. 14 and FIG. 15. Put another way, in this fifth example, each container 60 is secured along multiple sides thereof. Put yet another way, in this fifth example, each container 60 is sandwiched between at least two opposing adhesive formations 450. In this fifth example, the containers 60 are positioned side-by-side along the first direction 2 and one above another along the second direction 4. In this fifth example, the containers 60 are oriented such that they are elongate along the second direction 4. The containers 60 in this fifth example are arranged into two rows and three columns. Each column includes two containers 60, each of which is secured to the body 424 of the carrier 400 via two adhesive formations 450. Each row includes three containers 60, each of which is secured to the body 424 of the carrier 400 via two adhesive formations 450. The containers 60 in this fifth example are positioned sideways when the pack 425 is being transported (refer to FIG. 15). However, when the pack 425 is placed at rest on a surface such that the carrier 400 is elongate along the first direction 2, the containers 60 in this fifth example are then positioned upright (refer to FIG. 13).

[0065] Turning now to FIG. 17, a carrier 700 according to a sixth example may be seen. In FIG. 17, similar reference numerals are used to denote similar functions to those with respect to carrier 400, and carrier 700 may generally operate similarly to carrier 400, except as described below.

[0066] The carrier 700 of this sixth example includes a body 724 having a base 720, a handle 732, and a plurality of adhesive formations 750 configured to secure a plurality of containers 60 to the body 724 of the carrier 700 to form a pack 725. In the carrier 700 of this sixth example, the body 724 is elongate along the first direction 2. In addition, each of the adhesive formations 750 is elongate along the first direction 2. The handle 732, however, is elongate along the second direction 4 substantially perpendicular to the first direction 2. In this

sixth example, the handle 732 is positioned proximate a side edge (i.e., extending along the second direction 4) of the body 424 of the carrier 400.

[0067] In the sixth example illustrated in FIG. 17, the body 724 includes a first member 728, a second member 729, a third member 730, a fourth member 731, and a fifth member 733, although other examples of the disclosure are not so limited. The first, second, third, fourth, and fifth members 728, 729, 730, 731, 733 are also referred to herein as extensions. The first extension 728, the second extension 729, the third extension 730, the fourth extension 731, and the fifth extension 733 may each be elongate along the first direction 2. As may be seen in FIG. 17, the first, second, third, fourth, and fifth extensions 728, 729, 730, 731, 733 may be spaced apart from one another along the third direction 6 substantially perpendicular to the first and second directions 2, 4. In this sixth example, the carrier 700 includes five extensions 728, 729, 730, 731, 733 and one handle 732. The handle 732 may, in certain examples, be positioned substantially centrally between the extensions 728, 729, 730, 731, 733. In this particular example, the handle 732 is located in the same plane as the third extension 730, although other examples of the disclosure are not so limited.

[0068] The first extension 728 of the body 724 may define a first side 728a and a second side 728b. The first side 728a and the second side 728b of the first extension 728 may be spaced apart from and/or opposite one another. The second extension 729 of the body 724 may define a first side 729a and a second side 729b. The first side 729a and the second side 729b of the second extension 729 may be spaced apart from and/or opposite one another. The third extension 730 of the body 724 may define a first side 730a and a second side 730b. The first side 730a and the second side 730b of the third extension 730 may be spaced apart from and/or opposite one another. The fourth extension 731 of the body 724 may define a first side 731a and a second side 731b. The first side 731a and the second side 731b of the fourth extension 731 may be spaced apart from and/or opposite one another. The fifth extension 733 of the body 724 may define a first side 733a and a second side 733b. The first side 733a and the second side 733b of the fifth extension 733 may be spaced apart from and/or opposite one another. As may be seen in FIG. 17, in this sixth example, the first and fifth extensions 728, 733 of the body may be mirror images of one another, although other examples of the disclosure are not so limited. As may also be seen in FIG. 17, in this sixth example, the second and fourth extensions 729, 731 of the body may be mirror images of one another, although other examples of the disclosure are not so limited. In this example, the first and second sides 728a, 728b of the first extension 728, the first and second sides 729a, 729b of the second extension 729, the first and second sides

730a, 730b of the third extension 730, the first and second sides 731a, 731b of the fourth extension 731, and the first and second sides 733a, 733b of the fifth extension 733 each define a generally planar surface. As may be seen in FIG. 17, the second side 728b of the first extension 728, the first and second sides 729a, 729b of the second extension 729, the first and second sides 730a, 730b of the third extension 730, the first and second sides 731a, 731b of the fourth extension 731, and the first side 733a of the fifth extension 733 may define generally planar surfaces against which containers may be secured. In particular, the second side 728b of the first extension 728 may face the first side 729a of the second extension 729, and one or more containers 60 may be secured therebetween. In addition, the second side 729b of the second extension 729 may face the first side 730a of the third extension 730, and one or more containers 60 may be secured therebetween. In addition, the second side 730b of the third extension 730 may face the first side 731a of the fourth extension 731, and one or more containers 60 may be secured therebetween. In addition, the second side 731b of the fourth extensions 731 may face the first side 733a of the fifth extension 733, and one or more containers 60 may be secured therebetween. In further, non-depicted embodiments, it is contemplated that containers could also be secured to each of the first side 728a of the first extension 728 and the second side 733b of the fifth extension 733.

[0069] In the fifth example illustrated in FIG. 17, the plurality of adhesive formations 750 includes a first set 754a of adhesive formations 450 disposed on the second side 728b of the first extension 728. The plurality of adhesive formations 750 may further include a second set 754b of adhesive formations 750 disposed on the first side 729a of the second extension 729. The plurality of adhesive formations 750 may further include a third set 754c of adhesive formations 750 disposed on the second side 729b of the second extension 729. The plurality of adhesive formations 750 may further include a fourth set 754d of adhesive formations disposed on the first side 730a of the third extension 730. The plurality of adhesive formations 750 may further include a fifth set 754e of adhesive formations disposed on the second side 730b of the third extension 730. The plurality of adhesive formations 750 may further include a sixth set 754f of adhesive formations disposed on the first side 731a of the fourth extension 731. The plurality of adhesive formations 750 may further include a seventh set 754g of adhesive formations disposed on the second side 731b of the fourth extension 731. The plurality of adhesive formations 750 may further include an eighth set 754h of adhesive formations disposed on the first side 733a of the fifth extension 733. The first set 754a of adhesive formations 750 may generally secure one or more containers 60 to the second side 728b of the first extension

728, such as is illustrated in FIG. 17. The second set 754b of adhesive formations 750 may generally secure one or more containers 60 to the first side 729a of the second extension 729, such as is illustrated in FIG. 17. The third set 754c of adhesive formations 750 may generally secure one or more containers 60 to the second side 729b of the second extension 729, such as is illustrated in FIG. 17. The fourth set 754d of adhesive formations 750 may generally secure one or more containers 60 to the first side 730a of the third extension 730, such as is illustrated in FIG. 17. The fifth set 754e of adhesive formations 750 may generally secure one or more containers 60 to the second side 730b of the third extension 730, such as is illustrated in FIG. 17. The sixth set 754f of adhesive formations 750 may generally secure one or more containers 60 to the first side 731a of the fourth extension 731, such as is illustrated in FIG. 17. The seventh set 754g of adhesive formations 750 may generally secure one or more containers 60 to the second side 731b of the fourth extension 731, such as is illustrated in FIG. 17. The eighth set 754hf of adhesive formations 750 may generally secure one or more containers 60 to the first side 733a of the fifth extension 733, such as is illustrated in FIG. 17. In this sixth example, the first set 754a of adhesive formations 750 secures a total of three containers 60 to the second side 728b of the first extension 728 along one side of each container 60, and the second set 754b of adhesive formations 750 secures the same three containers 60 to the first side 729a of the second extension 729 along an opposite side of each container 60. That is, the first and second sets 754a, 754b of adhesive formations 750 collectively secure a plurality of containers 60 between the second side 728b of the first extension 728 and the first side 729a of the second extension 729. Additionally, in this sixth example, the third set 754c of adhesive formations 750 secures a total of three containers 60 to the second side 729b of the second extension 729 along one side of each container 60, and the fourth set 754d of adhesive formations 750 secures the same three containers 60 to the first side 730a of the third extension 730 along an opposite side of each container 60. That is, the third and fourth sets 754c, 754d of adhesive formations 750 collectively secure a plurality of containers 60 between the second side 729b of the second extension 730 and the first side 730a of the third extension 730. Additionally, in this sixth example, the fifth set 754e of adhesive formations 750 secures a total of three containers 60 to the second side 730b of the third extension 730 along one side of each container 60, and the sixth set 754f of adhesive formations 750 secures the same three containers 60 to the first side 731a of the fourth extension 731 along an opposite side of each container 60. That is, the fifth and sixth sets 754e, 754f of adhesive formations 750 collectively secure a plurality of containers 60 between the second side 730b of the third extension 730 and the first side 731a of the fourth

extension 731. Additionally, in this sixth example, the seventh set 754g of adhesive formations 750 secures a total of three containers 60 to the second side 731b of the fourth extension 731 along one side of each container 60, and the eighth set 754h of adhesive formations 750 secures the same three containers 60 to the first side 733a of the fifth extension 733 along an opposite side of each container 60. That is, the seventh and eighth sets 754g, 754h of adhesive formations 750 collectively secure a plurality of containers 60 between the second side 731b of the fourth extension 731 and the first side 733a of the fifth extension 733. In the sixth example illustrated in FIG. 17, the first set 754a of adhesive formations 750 disposed on the second side 728b of the first extension 728 and the second set 754b of adhesive formations 750 disposed on the first side 729a of the second extension 729 each include three total adhesive formations 750. Similarly, the third set 754c of adhesive formations 750 disposed on the second side 729b of the second extension 729 and the fourth set 754d of adhesive formations 750 disposed on the first side 730a of the third extension 730 each include three total adhesive formations 730. Similarly, the fifth set 754e of adhesive formations 750 disposed on the second side 730b of the third extension 730 and the sixth set 754f of adhesive formations 750 disposed on the first side 731a of the fourth extension 731 each include three total adhesive formations 730. Similarly, the seventh set 754g of adhesive formations 750 disposed on the second side 731b of the fourth extension 731 and the eighth set 754h of adhesive formations 750 disposed on the first side 733a of the fifth extension 733 each include three total adhesive formations 730. In this example, the adhesive formations 750 in each of the first, second, third, fourth, fifth, sixth, seventh, and eighth sets 754a-h are arranged in a 1x3 grid, although other examples of the disclosure are not so limited. As may be understood from FIG. 17, the adhesive formations 750 in each of the first, second, third, fourth, fifth, sixth, seventh, and eighth sets 754a-h are arranged such that there are three rows of adhesive formations 750 (i.e., with the rows spaced apart along the second direction 4) and three columns of adhesive formations 450 (i.e., with the columns spaced apart along the first direction 2). The adhesive formations 750 within each row are generally spaced apart from one another along the first direction 2. The adhesive formations 750 within each column are generally spaced apart from one another along the second direction 4 substantially perpendicular to the first direction 2. In this example, the adhesive formations 750 in each column secure a corresponding container to the body 724 of the carrier 700, such as is illustrated in FIG. 17. Put another way, in this sixth example, each container 60 is secured along multiple sides thereof. Put yet another way, in this sixth example, each container 60 is sandwiched between at least two opposing adhesive formations 750. In this sixth example, the containers 60 are positioned side-

by-side along the first direction 2 and one above another along the second direction 4. In this sixth example, the containers 60 are oriented such that they are elongate along the second direction 4. The containers 60 in this sixth example are arranged into four rows and three columns. Each column includes four containers 60, each of which is secured to the body 724 of the carrier 700 via two adhesive formations 750. Each row includes three containers 60, each of which is secured to the body 724 of the carrier 700 via two adhesive formations 750. The containers 60 in this sixth example are positioned sideways when the pack 725 is being transported (refer to FIG. 17). However, when the pack 725 is placed at rest on a surface such that the carrier 700 is elongate along the first direction 2, the containers 60 in this sixth example are then positioned upright.

[0070] Though the body in this example is illustrated as generally having four extensions to which containers may be secured, it is to be understood that the body could have more or less extensions. For example, in certain embodiments, the body may have one extension (refer to the first, second, and third examples illustrated in FIGS. 1A-3, FIGS. 4-6, and FIGS. 7-9, respectively), two extensions (refer to the fourth example illustrated in FIGS. 10-12), three extensions (refer to the fifth example illustrated in FIGS. 13-15), four extensions (refer to this sixth example illustrated in FIG. 17), five extensions, or more than five extensions. With reference between the fourth example having two extensions (illustrated in FIGS. 10-12), the fifth example having three extensions (illustrated in FIGS. 13-15), and the sixth example having four extensions (illustrated in FIG. 17), it can be understood how additional extensions could be added to the body. The body can be formed with as many or as few extensions as desired to suit a particular application. In addition, the extensions may be sized and/or shaped as desired to suit a particular application, and the extensions need not necessarily be the same size or shape or to have the same type, number, and/or layout of adhesive formations disposed thereon and/or the same type, number, and/or layout containers secured thereto.

[0071] In the examples illustrated in FIGS. 1A-15, the carriers may generally be considered to be in “sheet” form.

[0072] It should be noted that the illustrations and descriptions of the examples shown in the figures are for exemplary purposes only, and should not be construed as limiting the disclosure. One skilled in the art will appreciate that the present disclosure contemplates various examples. Additionally, it should be understood that the concepts described above with the above-described examples may be employed alone or in combination with any of the other examples described above. It should further be appreciated that the various alternative examples

described above with respect to one illustrated example can apply to all examples as described herein, unless otherwise indicated. While the above-described nozzles, applicators, and dispensing systems are described with reference to fluids, it is to be understood that a wide variety of fluids and that, in addition or alternatively thereto, a wide variety of materials can likewise be used.

[0073] Unless explicitly stated otherwise, each numerical value and range should be interpreted as being approximate as if the word “about,” “approximately,” or “substantially” preceded the value or range. The terms “about,” “approximately,” and “substantially” can be understood as describing a range that is within 15 percent of a specified value unless otherwise stated.

[0074] Conditional language used herein, such as, among others, “can,” “could,” “might,” “may,” “e.g.,” and the like, unless specifically stated otherwise, or otherwise understood within the context as used, is generally intended to convey that certain examples include, while other examples do not include, certain features, elements, and/or steps. Thus, such conditional language is not generally intended to imply that features, elements, and/or steps are in any way required for one or more examples or that one or more examples necessarily include these features, elements and/or steps. The terms “comprising,” “including,” “having,” and the like are synonymous and are used inclusively, in an open-ended fashion, and do not exclude additional elements, features, acts, operations, and so forth.

[0075] While certain examples have been described, these examples have been presented by way of example only and are not intended to limit the scope of the inventions disclosed herein. Thus, nothing in the foregoing description is intended to imply that any particular feature, characteristic, step, module, or block is necessary or indispensable. Indeed, the novel methods and systems described herein may be embodied in a variety of other forms; furthermore, various omissions, substitutions, and changes in the form of the methods and systems described herein may be made without departing from the spirit of the inventions disclosed herein. The accompanying claims and their equivalents are intended to cover such forms or modifications as would fall within the scope and spirit of certain of the inventions disclosed herein.

[0076] It should be understood that the steps of the exemplary methods set forth herein are not necessarily required to be performed in the order described, and the order of the steps of such methods should be understood to be merely exemplary. Likewise, additional steps may be

included in such methods, and certain steps may be omitted or combined, in methods consistent with various examples of the present invention.

[0077] Although the elements in the following method claims, if any, are recited in a particular sequence with corresponding labeling, unless the claim recitations otherwise imply a particular sequence for implementing some or all of those elements, those elements are not necessarily intended to be limited to being implemented in that particular sequence.

[0078] It will be understood that reference herein to “a” or “one” to describe a feature such as a component or step does not foreclose additional features or multiples of the feature. For instance, reference to a device having or defining “one” of a feature does not preclude the device from having or defining more than one of the feature, as long as the device has or defines at least one of the feature. Similarly, reference herein to “one of” a plurality of features does not foreclose the invention from including two or more, up to all, of the features. For instance, reference to a device having or defining “one of a X and Y” does not foreclose the device from having both the X and Y.

What is Claimed:

1. A carrier, comprising:
a body; and
a plurality of adhesive formations disposed on the body, the plurality of adhesive formations configured to secure a plurality of containers to the body.
2. The carrier of claim 1, wherein the body defines a handle that is elongate along a first direction and the body is elongate along the first direction.
3. The carrier of claim 1, wherein the body defines a handle that is elongate along a first direction and the body is elongate along a second direction substantially perpendicular to the first direction.
4. The carrier of claim 1, wherein the body defines a handle that is elongate along a first direction and at least one of the plurality of adhesive formations is elongate along the first direction.
5. The carrier of claim 1, wherein the body defines a handle that is elongate along a first direction and at least one of the plurality of adhesive formations is elongate along a second direction substantially perpendicular to the first direction.
6. The carrier of claim 1, wherein the plurality of adhesive formations includes:
a first adhesive formation spaced apart from a second adhesive formation along a first direction, the first and second adhesive formations configured to secure a first one of the plurality of containers to the body; and
a third adhesive formation spaced apart from a fourth adhesive formation along the first direction, the third and fourth adhesive formations configured to secure a second one of the plurality of containers to the body;
wherein the third adhesive formation is spaced apart from the first adhesive formation along a second direction substantially perpendicular to the first direction and the fourth adhesive formation is spaced apart from the second adhesive formation along the second direction.

7. The carrier of claim 1, wherein the body defines a first side and a second side opposite the first side and the plurality of adhesive formations includes:

a first set of adhesive formations disposed on the first side of the body, the first set of adhesive formations configured to secure at least a first one of the plurality of containers to the first side of the body; and

a second set of adhesive formations disposed on the second side of the body, the second set of adhesive formations configured to secure at least a second one of the plurality of containers to the second side of the body.

8. The carrier of claim 1, wherein the body defines:

a first member having a first side and a second side opposite the first side; and

a second member having a first side and a second side opposite the first side, the second member spaced apart from the first member such that the second side of the first member faces the first side of the second member;

wherein the plurality of adhesive formations includes a first set of adhesive formations disposed on the second side of the first member and a second set of adhesive formations disposed on the first side of the second member, the first and second sets of adhesive formations configured to secure the plurality of containers between the first and second members.

9. The carrier of claim 8, wherein the body further defines:

a third member having a first side and a second side opposite the first side, the third member spaced apart from the second member such that the second side of the second member faces the first side of the third member;

wherein the plurality of adhesive formations further includes a third set of adhesive formations disposed on the second side of the second member and a fourth set of adhesive formations disposed on the first side of the third member, the first and second sets of adhesive formations configured to secure a first set of the plurality of containers between the first and second members and the third and fourth sets of adhesive formations configured to secure a second set of the plurality of containers between the second and third members.

10. The carrier of claim 1, wherein the body is made from corrugated board.

11. A pack of containers, the pack comprising:

the carrier of claim 1; and
a plurality of containers secured to the body of the carrier via the plurality of adhesive formations.

12. The pack of claim 11, wherein the body is elongate along a first direction and each of the plurality of containers is elongate along a second direction substantially perpendicular to the first direction.

13. The pack of claim 11, wherein the body is elongate along a first direction and each of the plurality of containers is elongate along the first direction.

14. A method of securing a plurality of containers to a carrier, the method comprising:
applying a plurality of adhesive formations to a body of the carrier, to the plurality of containers, or to both the body of the carrier and the plurality of containers; and
securing the plurality of containers to the body via the plurality of adhesive formations.

15. The method of claim 14, wherein the applying step includes applying at least one of the plurality of adhesive formations in the form of an elongate strip.

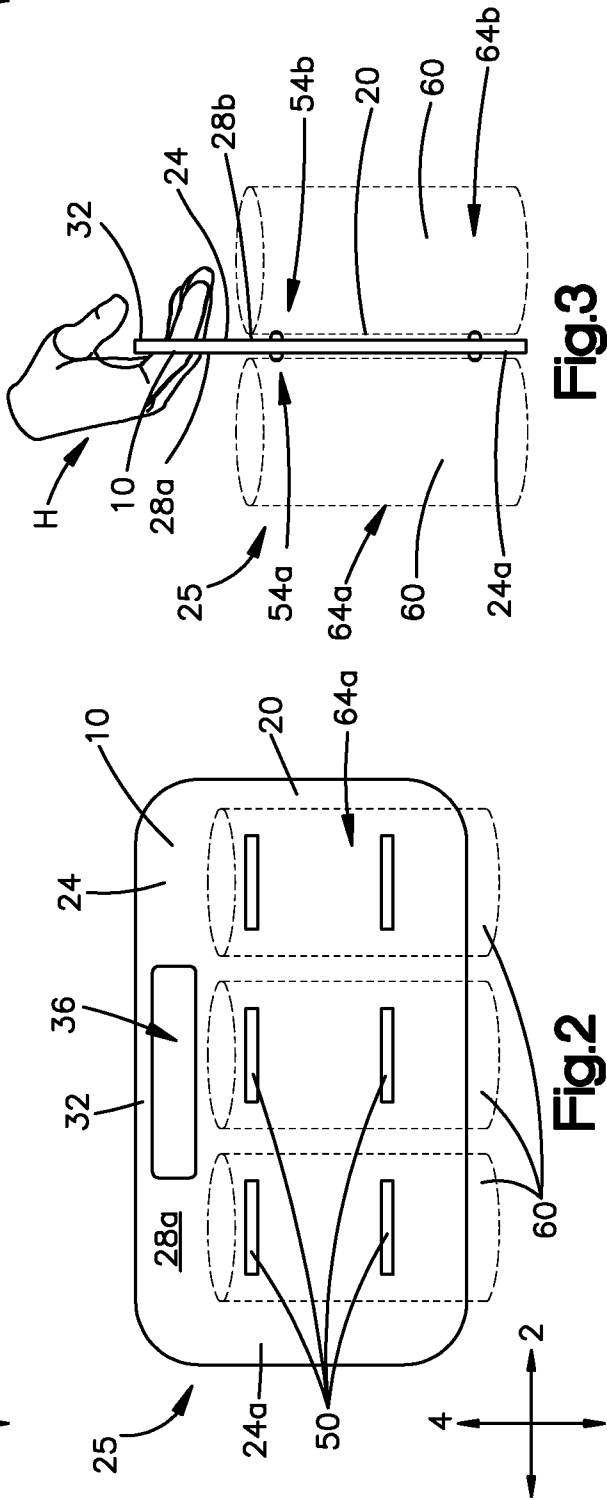
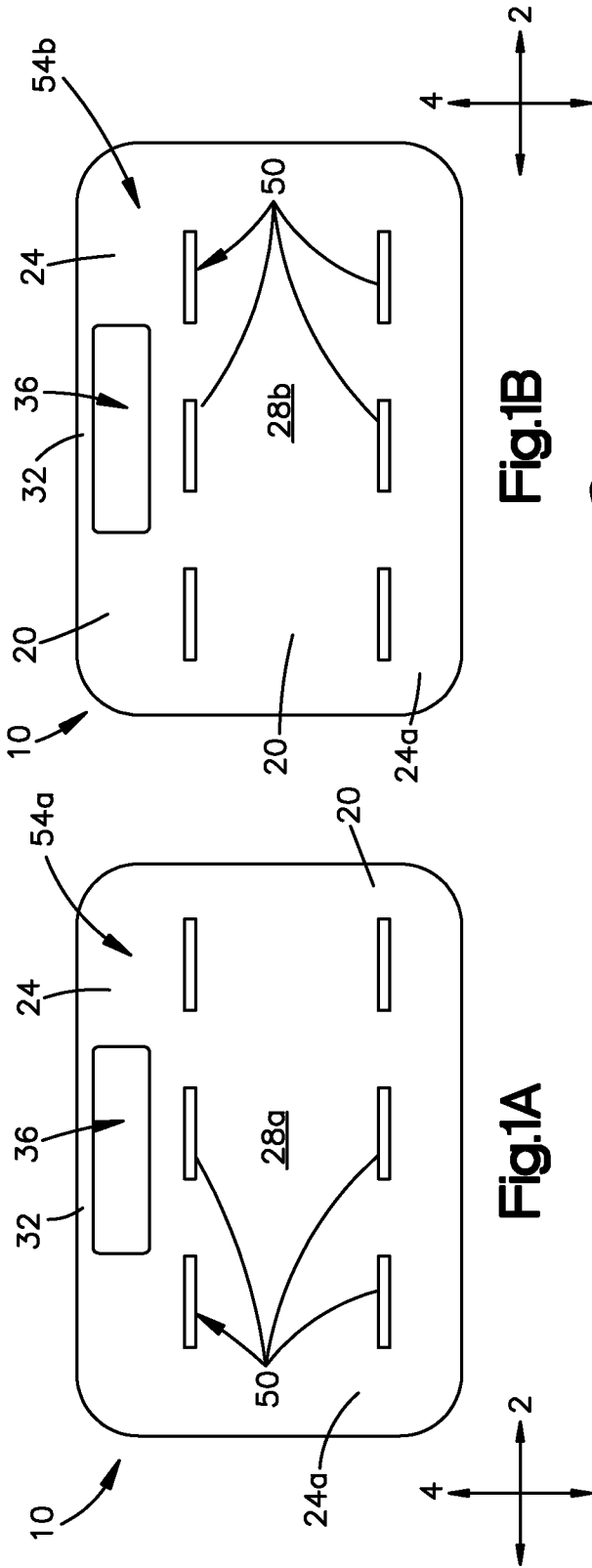
16. The method of claim 14, wherein the applying step includes applying at least one of the plurality of adhesive formations in the form of a plurality of dots.

17. The method of claim 14, wherein the applying step includes applying the plurality of adhesive formations to the body of the carrier.

18. The method of claim 14, wherein the applying step includes applying the plurality of adhesive formations to the plurality of containers.

19. The method of claim 14, wherein the body is elongate along a first direction and each of the plurality of containers is elongate along a second direction substantially perpendicular to the first direction.

20. The method of claim 14, wherein the body is elongate along a first direction and each of the plurality of containers is elongate along the first direction.



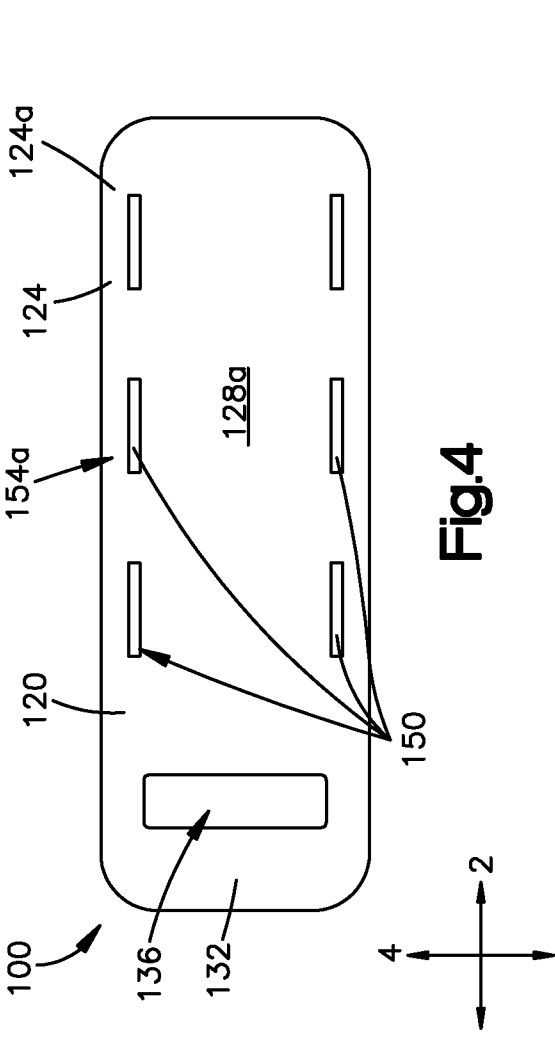


Fig. 4

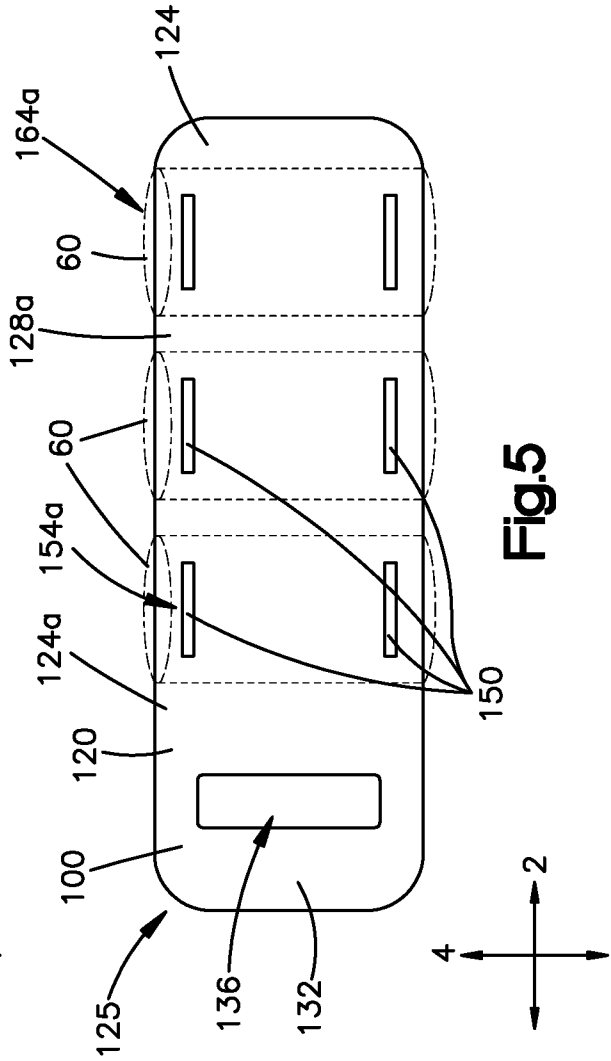


Fig. 5

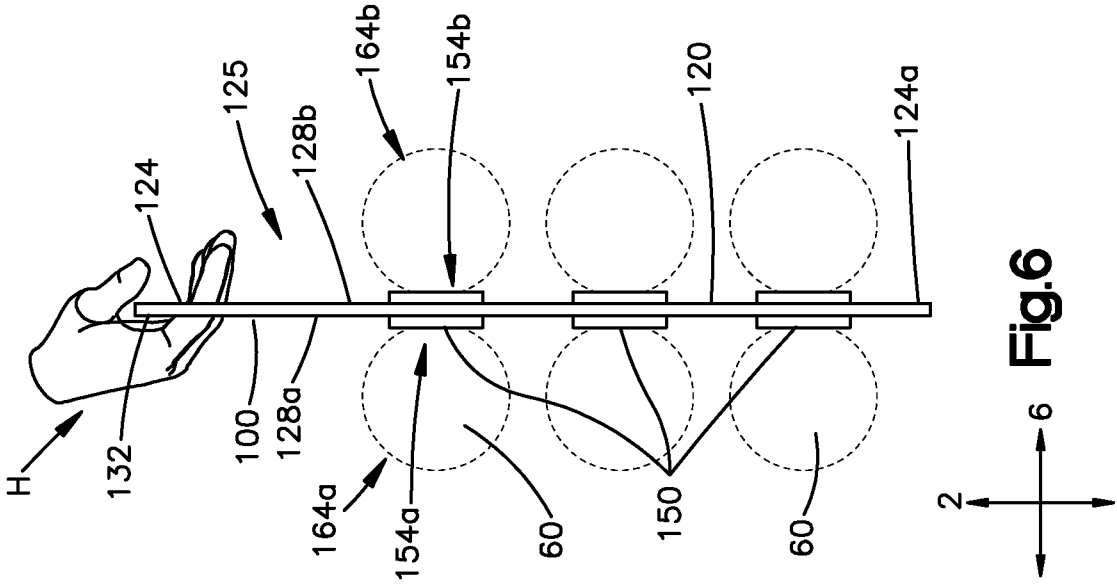


Fig. 6

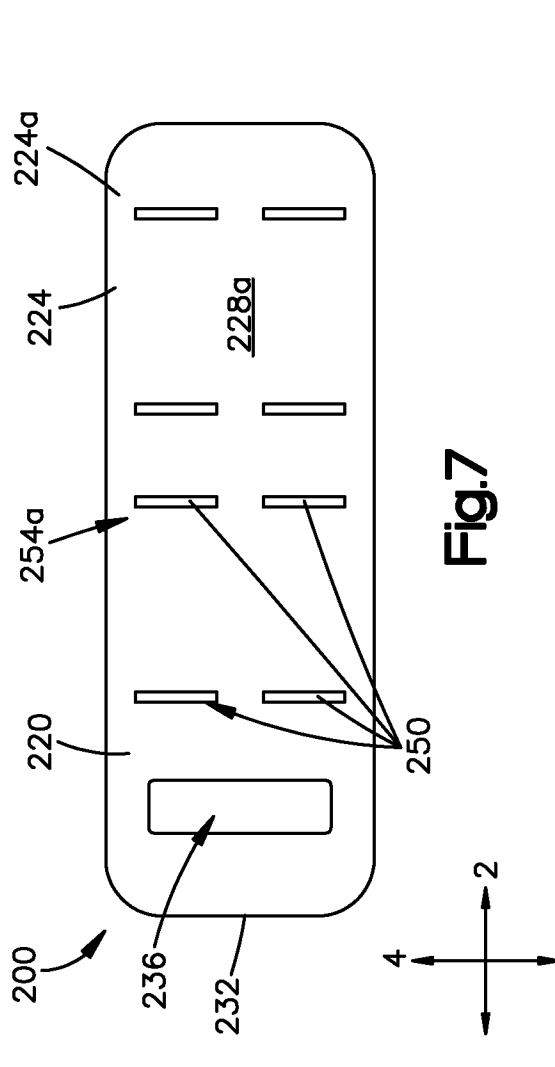


Fig. 7

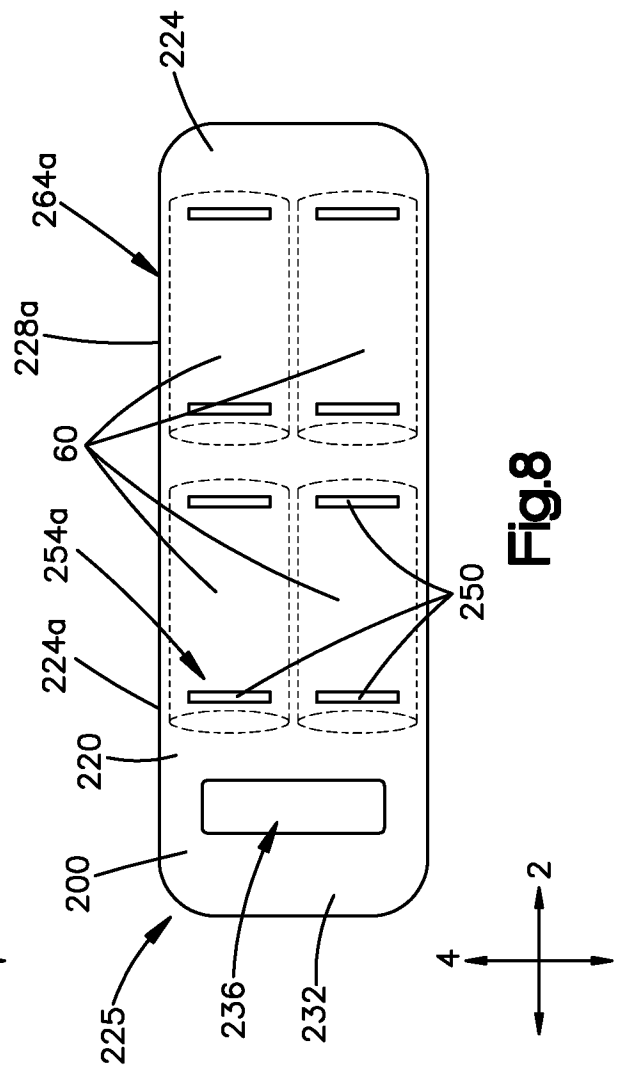


Fig. 8

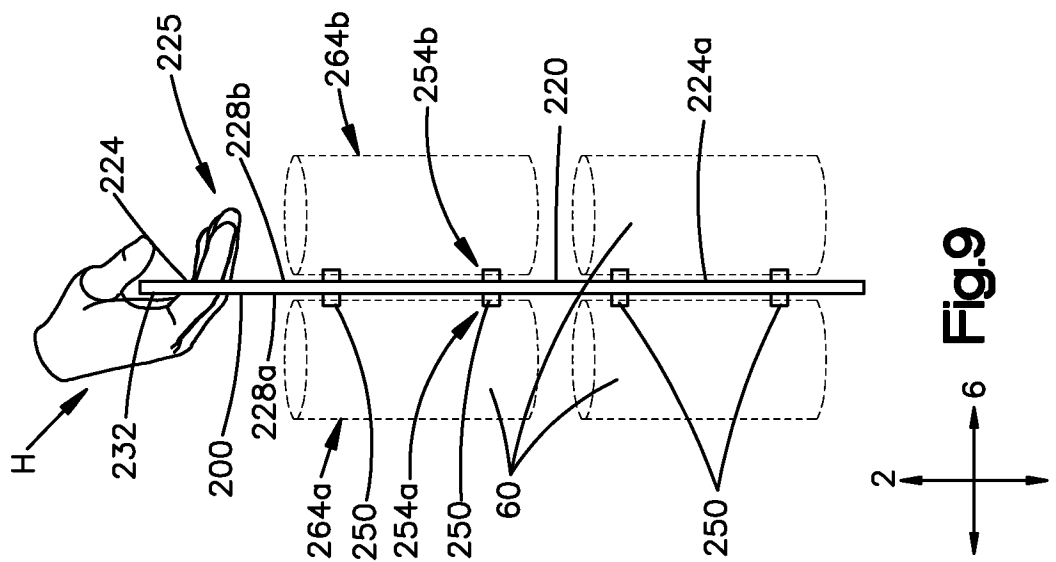
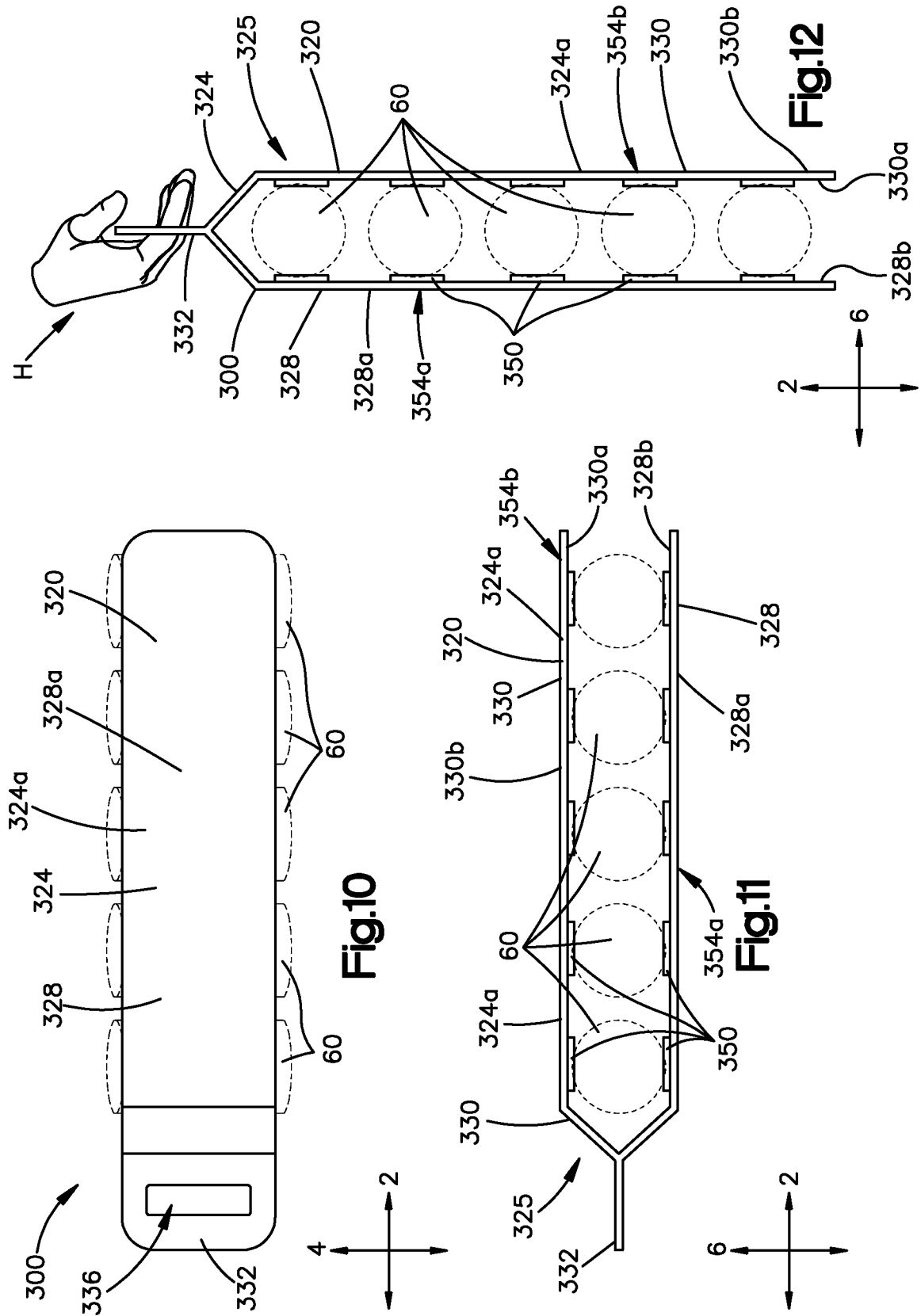
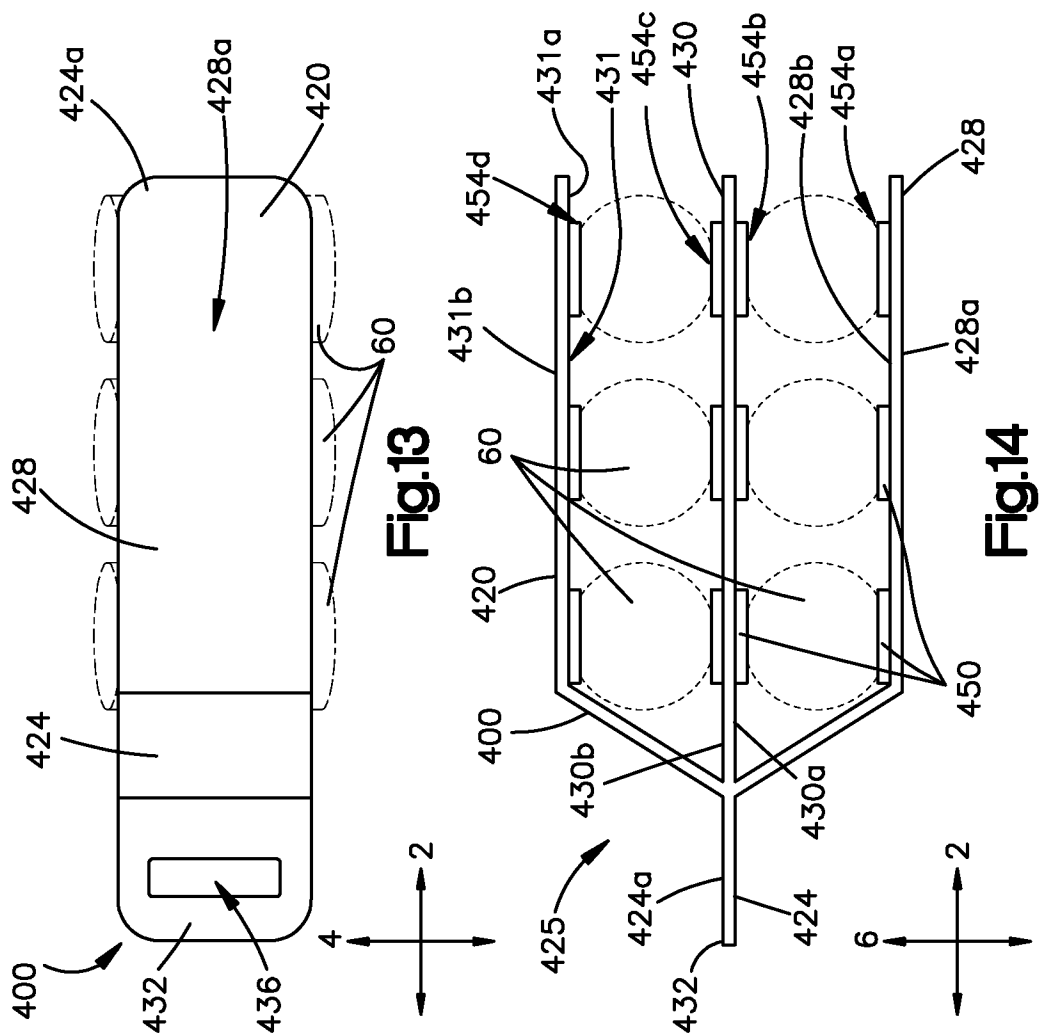
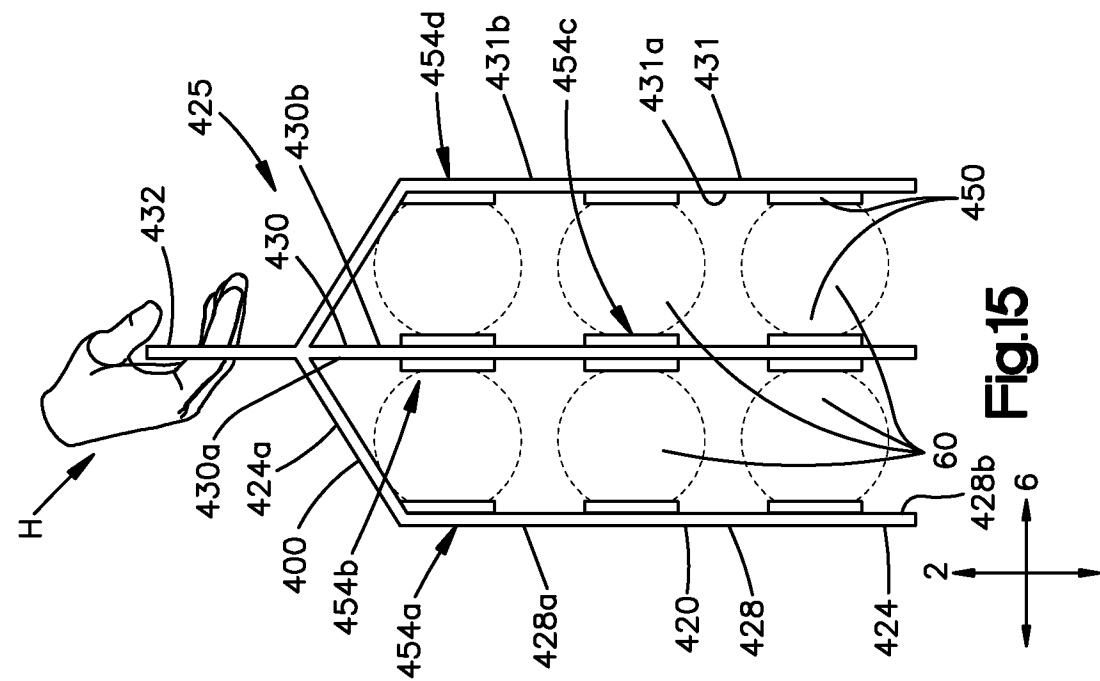


Fig. 9





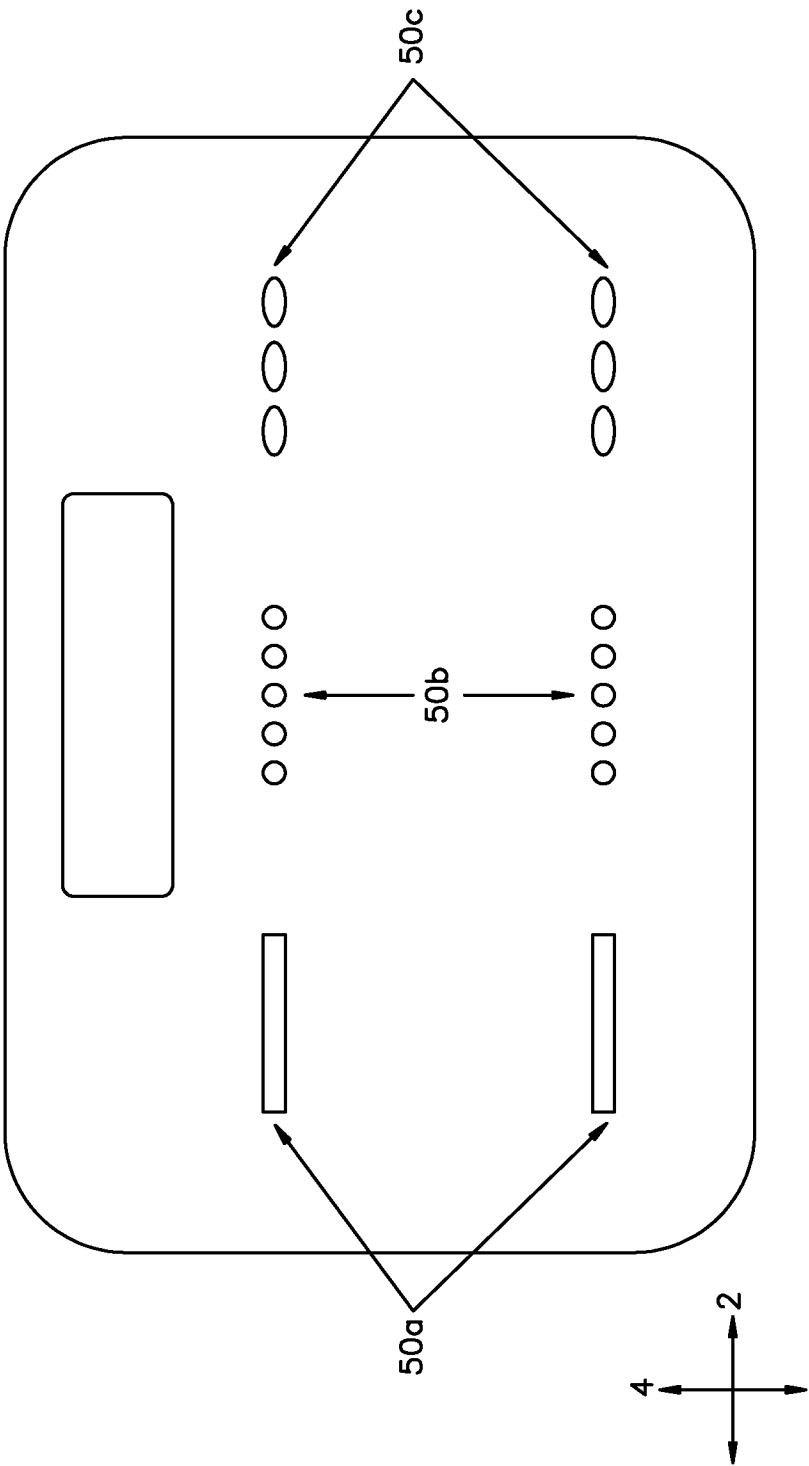


Fig.16

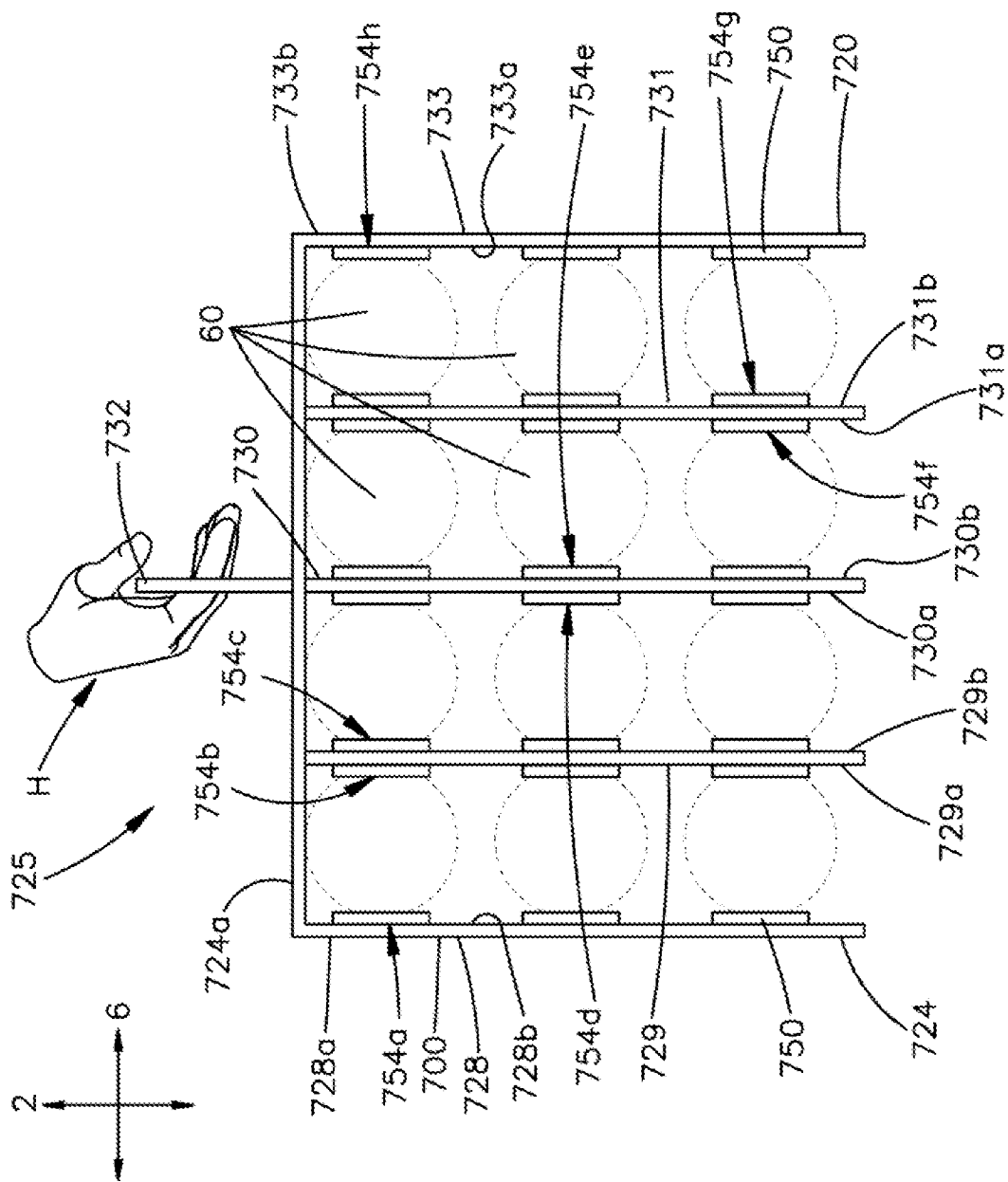


Fig.17

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2020/038611

A. CLASSIFICATION OF SUBJECT MATTER
INV. B65D71/00
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)
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)

EPO-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.
X	DE 10 2010 011208 A1 (VITA PAK UG [DE]) 15 September 2011 (2011-09-15) paragraphs [0090], [0129], [0130], [0137]; figures 8-11 -----	1,2,4,6, 7,10-12, 14-19
X	DE 44 29 253 A1 (MEURER MASCHINEN GMBH & CO KG [DE]) 22 February 1996 (1996-02-22) column 4, line 26 - column 5, line 38; figures -----	1-3,6,7, 10-14, 16,17, 19,20
X	GB 2 136 760 A (WADDINGTONS LTD) 26 September 1984 (1984-09-26) page 1, line 93 - page 2, line 18; figures ----- -/-	1,2,5, 10,11, 13-15, 17,20



Further documents are listed in the continuation of Box C.



See patent family annex.

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"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

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Date of the actual completion of the international search

30 September 2020

Date of mailing of the international search report

09/10/2020

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INTERNATIONAL SEARCH REPORT

International application No

PCT/US2020/038611

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 060 504 A2 (MULTI PACKAGING SERVICES MPS [IT]) 22 September 1982 (1982-09-22) page 3, line 15 - page 6, line 12; figures -----	1,6-12, 14,16, 17,19
X	GB 1 061 995 A (ANHEUSER BUSCH) 15 March 1967 (1967-03-15) page 2, line 53 - page 3, line 76 -----	1,3,4,6, 7,10,11, 13-17,20

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2020/038611

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 102010011208 A1	15-09-2011	DE 102010011208 A1	15-09-2011
		EP 2544959 A1	16-01-2013
		US 2013233912 A1	12-09-2013
		WO 2011110334 A1	15-09-2011

DE 4429253 A1	22-02-1996	NONE	

GB 2136760 A	26-09-1984	NONE	

EP 0060504 A2	22-09-1982	AT 10474 T	15-12-1984
		EP 0060504 A2	22-09-1982
		ES 276892 U	16-06-1984
		IT 1136923 B	03-09-1986
		US 4441611 A	10-04-1984
		ZA 821599 B	23-02-1983

GB 1061995 A	15-03-1967	NONE	
