

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
16 April 2009 (16.04.2009)

PCT

(10) International Publication Number
WO 2009/048906 A1

(51) International Patent Classification:
B65D 75/00 (2006.01)

(21) International Application Number:
PCT/US2008/079136

(22) International Filing Date: 8 October 2008 (08.10.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/978,314 8 October 2007 (08.10.2007) US
12/247,075 7 October 2008 (07.10.2008) US

(71) Applicant (for all designated States except US): ILLINOIS TOOL WORKS INC. [US/US]; 3600 West Lake Avenue, Glenview, IL 60026-1215 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): MARCO, Leslie, S. [US/US]; 5831 Raintree Lane, Westmont, IL 60559 (US). WALDO, George, E. [US/US]; 2933 North Clybourn, Apartment 302, Chicago, IL 60618 (US).

(74) Agents: ERICKSON, Kevin, D. et al.; Pauley Petersen & Erickson, 2800 West Higgins Road, Suite 365, Hoffman Estates, IL 60169 (US).

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

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

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

Published:

- with international search report

(54) Title: MULTIPACK FOR CUPS AND POTS

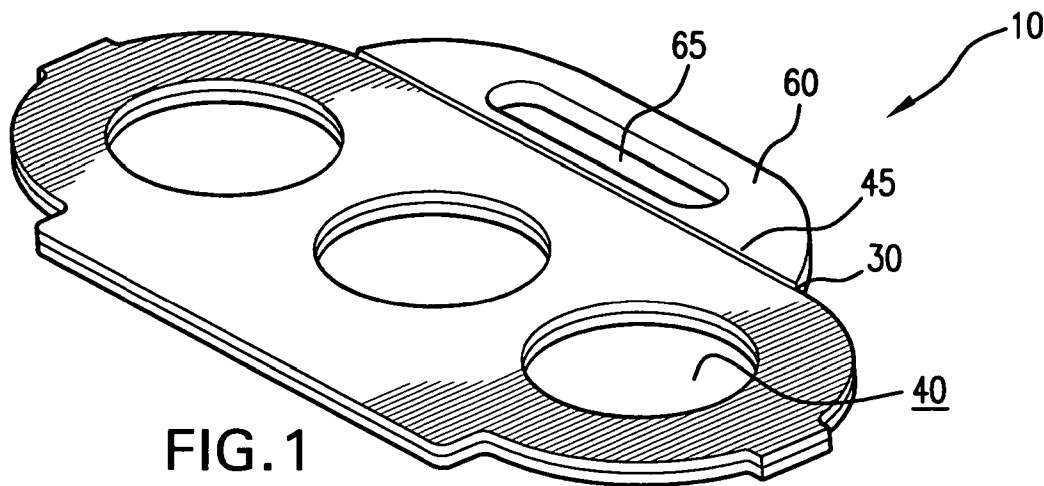


FIG. 1

(57) Abstract: This invention relates to a multipack that includes multiple containers positioned within two adjacent rows of apertures formed in a sheet having an integral handle, resulting in a package of two or more containers and a flexible handle extending therefrom.

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MULTIPACK FOR CUPS AND POTS

BACKGROUND OF THE INVENTION

FIELD OF THE INVENTION

This invention relates to a flexible multipack with an integral handle for
5 unitizing a plurality of containers, particularly cups or pots.

DESCRIPTION OF PRIOR ART

Conventional multipacks are generally paperboard sleeves, cartons or boxes into
which yogurt cups, cat food cans, tuna cans and similar such containers may be inserted to
unitize a group of two or more such containers.

SUMMARY OF THE INVENTION

According to a preferred embodiment of this invention, a multipack preferably
includes two layers of a generally planar flexible sheet having a plurality of apertures. An
integral handle is preferably formed along at least one side of the multipack.

Accordingly, multiple containers may be placed within the apertures of the
15 multipack and the sheet is folded to position an end portion of each container against an end
portion of an adjacent container. At least one edge of the sheet may then be sealed or
otherwise closed to enclose the containers within the multipack. The resulting package may
be displayed and carried using the integral handle and preferably clearly displays the enclosed
containers.

Further, the resulting multipack may include a geometry of containers that
20 permit a freestanding display of each multipack in the manner of an easel such that graphics
and/or product may face the consumer when the multipack is properly faced on a shelf.

BRIEF DESCRIPTION OF THE DRAWINGS

The above-mentioned and other features and objects of this invention will be
25 better understood from the following detailed description taken in conjunction with the
drawings wherein:

Fig. 1 is a top perspective view of a carrier according to one preferred
embodiment of this invention;

Fig. 2 is a top perspective view of the carrier shown in Fig. 1, including a
30 plurality of suitable containers;

Fig. 3 is a top perspective view of a multipack using the carrier shown in Fig. 1, following insertion of the suitable containers, according to one preferred embodiment of this invention;

Fig. 4 is a top perspective view of the multipack shown in Fig. 3 in assembled form;

Fig. 5 is a top perspective view of a carrier according to one preferred embodiment of this invention;

Fig. 6 is a top perspective view of the carrier shown in Fig. 5, including a plurality of suitable containers;

Fig. 7 is a top perspective view of a multipack using the carrier shown in Fig. 5, following insertion of the suitable containers, according to one preferred embodiment of this invention;

Fig. 8 is a top perspective view of the multipack shown in Fig. 7 in assembled form;

Fig. 9 is a top elevational view of a carrier according to one preferred embodiment of this invention;

Fig. 10 is a top perspective view of a multipack using the carrier shown in Fig. 9, following insertion of the suitable containers, according to one preferred embodiment of this invention;

Fig. 11 is a top elevational view of a carrier according to one preferred embodiment of this invention; and

Fig. 12 is a top perspective view of a multipack using the carrier shown in Fig. 11, following insertion of the suitable containers, according to one preferred embodiment of this invention.

DESCRIPTION OF PREFERRED EMBODIMENTS

Figs. 1-12 show various preferred embodiments of a multipack for unitizing a group of containers into a displayable and easily portable package.

Figs. 1-4 show multipack 10 for carrying two or more containers 80, according to various preferred embodiments of this invention. Containers 80, such as those shown in packages 90 in Figs. 4 and 8, are preferably short containers such as yogurt cups, pet food cans, tuna cans and similarly sized and proportioned containers. Such containers 80 preferably include tapered sidewalls and/or a flange or chime around an edge. According to two preferred

embodiments of the invention, pet food cans are shown in Figs. 1-4 and pudding cups are shown in Figs. 5-8. Any other similar containers 80 may also be used with multipack 10 according to this invention.

Containers 80 are preferably, though not necessarily as shown in Fig. 6, like-sized within a single multipack 10. Alternatively, complimentary containers 80 may be unitized within a single multipack 10. For instance, pudding containers may be unitized with containers of sprinkles or similar toppings or containers of salad may be unitized with containers of dressings.

Multipack 10 unitizes one or more containers 80 to create package 90, such as package 90 shown in Figs. 4 and 8. Multipack 10 preferably comprises sheet 15, preferably, though not necessarily, constructed from a flexible, resilient material such as, in one preferable embodiment, low density polyethylene. For some preferred applications, sheet 15 may have a thickness of about 5-30 mils, commonly about 10-20 mils.

According to a preferred embodiment of this invention, sheet 15 used to form multipack 10 is extruded from a polymer composition which includes a high pressure low density polyethylene polymer. The composition provides the multipack 10 with improved recovery after stretch, improved elongation and strength at break, and improved resistance to tearing when the multipack is notched or scratched. The low density polyethylene polymer may have a density of about 0.910-0.950, grams/cm³, suitably about 0.920-0.940 grams/cm³, desirably about 0.925-0.935 grams/cm³. In other words, the term "low density polyethylene polymer" includes polyethylene polymers commonly considered as having medium density, as well as polyethylene polymers commonly considered as having low density.

Alternatively, sheet 15 may be formed of a higher density plastic, paperboard, or any similar material having desirable strength and flexibility properties.

According to a preferred embodiment of this invention, sheet 15 is preferably cut, using means known to those skilled in the art, such as a stamping die, to form a perimeter of multipack 10. Multipack 10 is preferably formed with a plurality of apertures 40 arranged in two parallel rows extending longitudinally across sheet 15. Each aperture 40 preferably accommodates a container 80 resulting in two parallel rows of containers 80. Apertures 40 are preferably configured to accommodate a perimeter of container 80, as such Fig. 2 shows generally circular apertures 40 accommodating generally circular containers 80 and Fig. 6 shows generally rectangular apertures 40 accommodating generally rectangular containers 80.

Foldline 30 preferably extends between the two parallel rows of apertures 40. Foldline 30 permits the two parallel rows of containers to be folded onto each other, preferably such that an end portion or lid of each container abuts an adjacent end portion of each transversely adjacent container.

5 Following folding along foldline 30, the two layers of sheet 15 may additionally be joined across a top and bottom of multipack 10 using lower weld 45 and/or upper weld 50, as best shown in Fig. 1 and 4, extending longitudinally across multipack 10. Welds 45, 50 may comprise any suitable reinforcement that joins two or more layers of sheet 15 together. “Weld” as used in the specification and claims may be defined as a hot weld, cold weld,
10 lamination or any other manner of connection that joins two sheets of material known to those having ordinary skill in the art.

 As a result of the preferred placement of foldline 30 and/or one or more welds 45, 50 along edges of sheet 15, multipack 10 is formed into two “halves” that are foldable onto each other. Containers 80 are preferably loaded into apertures 40 of multipack 10 such as
15 shown in Figs. 2 and 6. As a result of the taper of the sidewalls of the respective containers 80 and/or a chime or flange extending from an end of containers 80, such containers are securely positioned within respective apertures 40 in one direction. Following loading of containers 80 within apertures 40, sheet 15 is folded onto itself such that one end of each container abuts an adjacent container in the parallel rows of containers 80.

20 Containers 80 may be dropped into apertures 40 and snugly engaged with a taper, a chime, a lid and/or an alternative physical feature of the container 80. Alternatively, sheet 15 may be stretchingly engaged with containers 80 by placement of container 80 within a respective undersized aperture 40 thereby creating a snug, engaged fit between container 80 and multipack 10.

25 According to one preferred embodiment of multipack 10, containers 80 are inserted into apertures 40 so that lids are upwardly facing prior to folding sheet 15 across foldline 30. As a result, following folding, multipack 10 is arranged so that a bottom end of container 80 protrudes and is visible from multipack 10. As a result, it may be preferable to include decorative markings and/or container information on the bottom end of container 80
30 to provide effective display of multipack 10 and the corresponding unitized containers 80.

 As shown in Figs. 1-12, handle 60 is preferably positioned on multipack 10, for instance, adjacent to one of welds 45, 50, for example, upper weld 45. Handle 60 is preferably

positioned on multipack 10 to provide an ample area for a purchaser to grab by inserting his hand or fingers through and still maintain the integrity of multipack 10.

Handle 60 may comprise finger aperture 65 positioned within an extension of at least one layer of plastic sheet 15, such as shown in Figs. 1 and 2. Handle 60 may be formed in both layers of sheet 15 or in only one of two layers of sheet 15. According to one preferred embodiment of this invention, handle 60 is preferably centered over containers 80 within multipack 10.

As described, multipack 10 is preferably arranged in such a geometry so as to permit a freestanding package suitable for placement on a store shelf or hanging from a peghook style display. Because of the arrangement of the adjacent containers 80, whereby an end of each container, such as a lid, abuts an end of an adjacent container, multipack 10 is configured to freely stand on a surface thereby permitting access to the upwardly extending handle 60 and permitting prominent display of portions of the outwardly extending containers 80.

According to a preferred embodiment of this invention, at least one line of weakness 70 may extend across at least one layer of sheet 15 of multipack 10. For example, two spaced and generally parallel lines of weakness 70, forming a "zipper," may extend across an upper portion of multipack 10. A pull tab may be positioned on one or both sides of the zipper to facilitate pulling and opening.

Line of weakness 70 may comprise perforations, serrations, slits, reduced thickness or combination thereof formed in sheet 15 and are preferably tearable or frangible to permit separation of sheet 15 along a defined line. Following such separation, containers 80 are preferably readily accessible within package 90.

According to embodiments of the invention best shown in Figs. 2 and 3 and Figs. 6 and 7, a method of packaging containers 80 preferably includes inserting two or more containers 80 into apertures 40 in multipack 10. Sheet 15 may then be folded over to abut end portions of adjacent containers 80 in package 90. The resulting package 90 preferably includes a sealed multipack 10 containing multiple containers 80 that is portable and/or displayable with handle 60.

According to a preferred embodiment of this invention, multipack 10 is formed of generally transparent plastic sheet 15. However other materials and compositions of sheet 15 may be used. For instance, one layer of sheet 15 may be formed of a generally opaque

pigmented material and another layer of sheet 15 may be transparent, tinted, printed or similarly configured to best display the included containers 80 within package 90. Any other similar configurations may be combined that result in an aesthetically pleasing and/or functional package 90.

5 Figs. 9 and 10 show one preferred embodiment of this invention having a single row of apertures 40. According to this preferred embodiment of multipack 10, containers 80 are inserted into a single row of apertures 40 so that lids are upwardly facing prior to folding cover sheet 35 across foldline 30 and over the top of the aligned lids of containers 80. As a result, following folding, multipack 10 is arranged so that a bottom end of container 80 protrudes and is visible from multipack 10 and cover sheet 35 provides ample billboard area for decorative markings and/or container information, such as shown in Fig. 10.

10 Figs. 11 and 12 show one preferred embodiment of this invention having a single row of apertures 40 and an adjacent row of cover apertures 55. Preferably cover apertures 55 do not engage containers 80 but instead provide visual and/or physical access to lids and/or other portion of containers 80. According to this preferred embodiment of multipack 10, containers 80 are inserted into a single row of apertures 40 so that lids are upwardly facing prior to folding cover sheet 35 across foldline 30 and over the top of the aligned lids of containers 80. As shown in Figs. 12, an additional row of containers 80 may be inserted on top of containers 80 in apertures 40 and cover sheet 35 may be folded over and around such additional row of containers 80. As a result, following folding, multipack 10 is arranged so that a bottom end of container 80 protrudes and is visible from multipack 10 and cover sheet 35 encloses and surrounds an additional row of containers 80 and yet still provides ample billboard area for decorative markings and/or container information, such as shown in Fig. 12.

25 While in the foregoing specification this invention has been described in relation to certain preferred embodiments thereof, and many details have been set forth for purpose of illustration, it will be apparent to those skilled in the art that multipack 10 and the related method of manufacture are susceptible to additional embodiments and that certain of the details described herein can be varied considerably without departing from the basic principles of the invention.

30

I CLAIM:

1. A multipack for unitizing a plurality of containers, the multipack comprising:

a sheet having a plurality of apertures arranged in two parallel rows extending longitudinally across the sheet, each aperture accommodating a container of the plurality of containers resulting in two parallel rows of containers; and

a foldline extending between the two parallel rows of apertures permitting the two parallel rows of containers to be folded onto each other, a lid of each container abutting an adjacent lid of each transversely adjacent container.

2. The multipack of Claim 1 further comprising:

a handle formed in the sheet between the two parallel rows of containers.

3. The multipack of Claim 1 further comprising:

a weld positioned between the handle and the two parallel rows of containers.

4. The multipack of Claim 1 further comprising:

a weld positioned along the foldline.

5. The multipack of Claim 1 further comprising:

a panel extending from an edge of the sheet opposite of the handle.

6. A package of containers comprising:

a flexible sheet having an array of apertures arranged in two rows;

a plurality of containers arranged in the array of apertures;

a foldline positioned in the flexible sheet across which half of the plurality of containers are folded over on to the remaining half of the plurality of containers so that a lid of each container is positioned against a lid of an adjacent container; and

a integral handle extending from the flexible sheet.

7. The package of Claim 6 wherein the flexible sheet is formed in two corresponding halves, each half including a row of apertures and a handle, the foldline dividing the halves between each handle.

8. The package of Claim 6 wherein the containers each include a tapered sidewall.

9. The package of Claim 6 wherein the containers each include a chime or flange around at least one end.

10. The package of Claim 6 wherein the flexible sheet is constructed from a flexible plastic material.

11. A multipack comprising:
a sheet having a plurality of apertures arranged in a row;
an integrated cover sheet positioned parallel to the row of apertures
a foldline positioned between the row of apertures and the cover sheet;
a plurality of containers positioned within the apertures so that the cover sheet is folded over onto the plurality of containers containers; and
a handle positioned between the row of containers and the cover sheet.

12. The multipack of Claim 11 further comprising:
a weld sealing at least one longitudinal edge of the sheet opposite the foldline.

13. The multipack of Claim 11 wherein each container includes a bottom end having product information that is outwardly displayed from the multipack.

14. The multipack of Claim 11 wherein the cover sheet is positioned over lids of the containers.

15. The multipack of Claim 11 further comprising:
a row of cover apertures positioned within the cover sheet, the cover apertures corresponding with respective lids of the containers.

16. The multipack of Claim 11 further comprising:
an additional row of containers positioned on the row of containers and enclosed by the cover sheet.

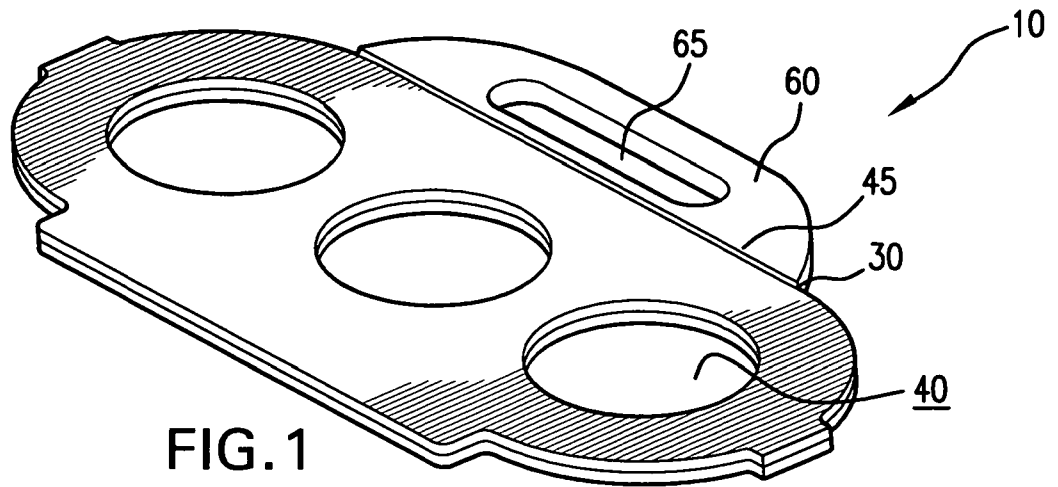


FIG. 1

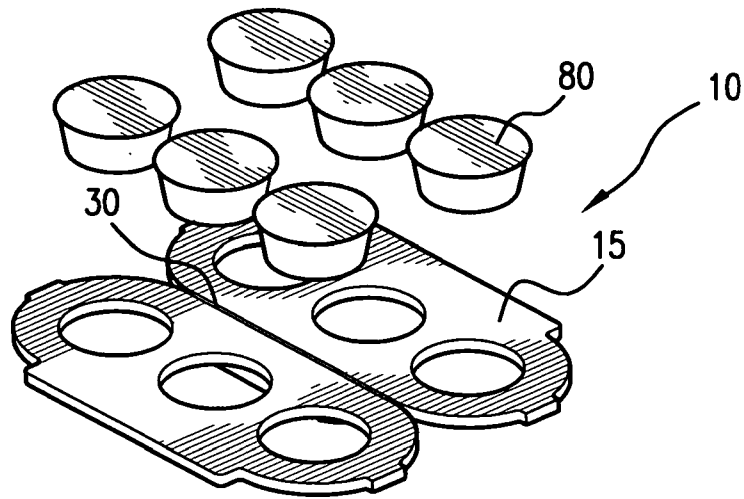


FIG. 2

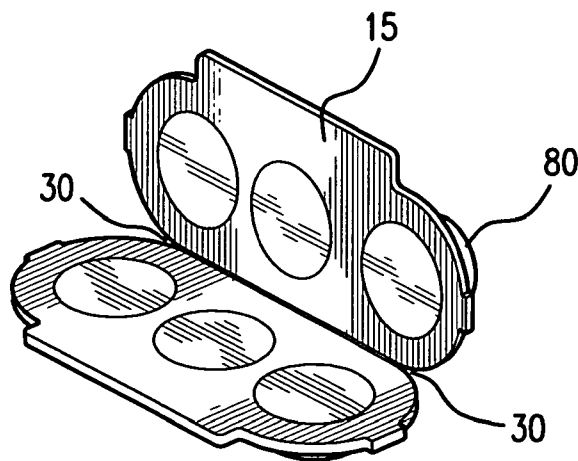
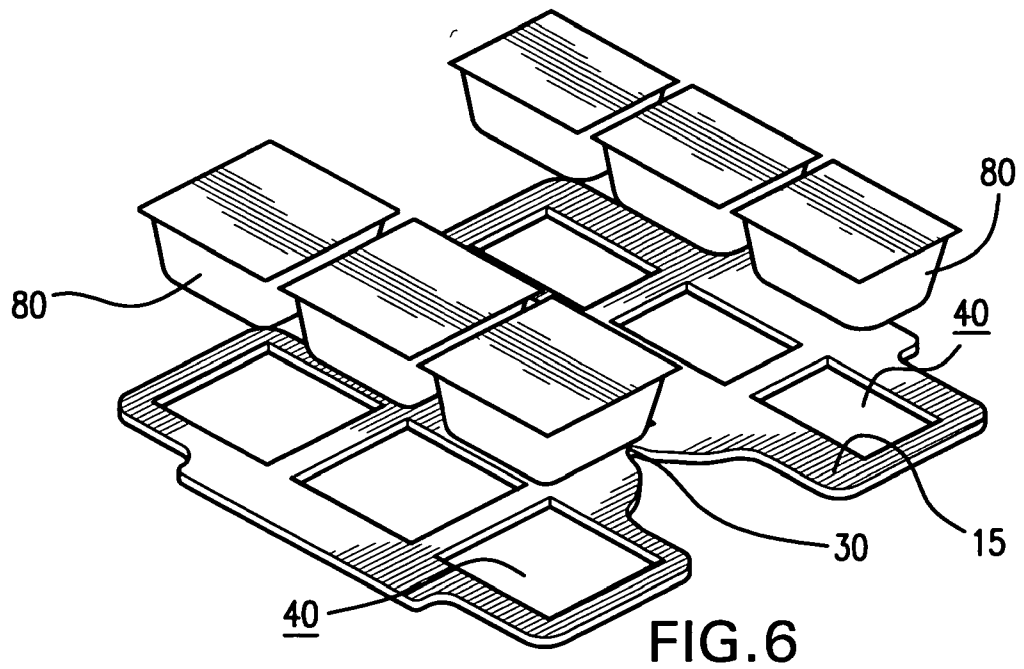
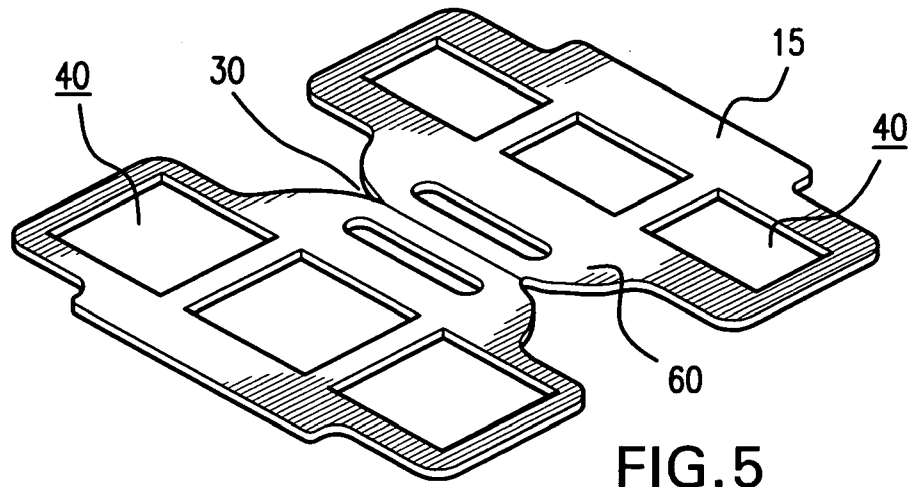
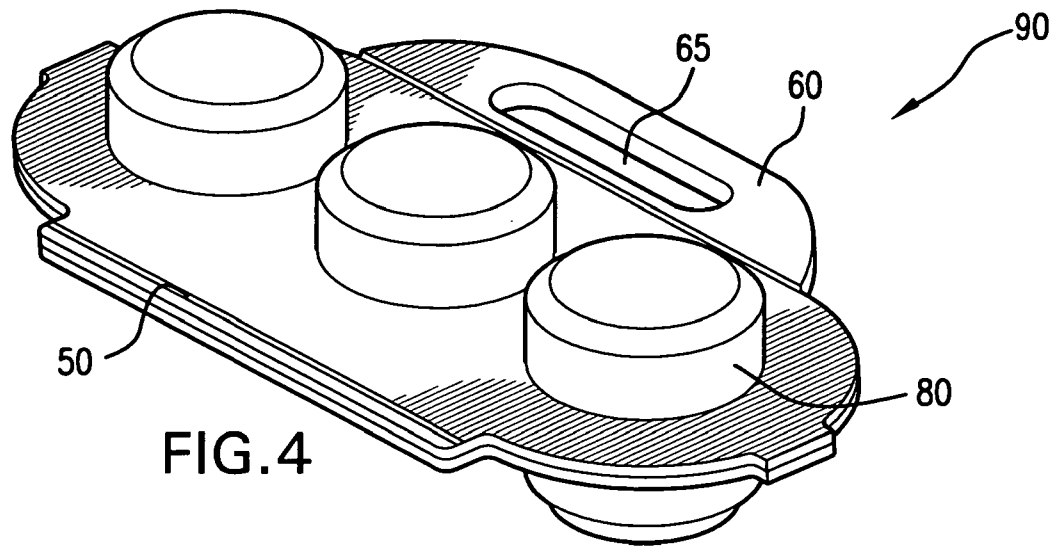


FIG. 3

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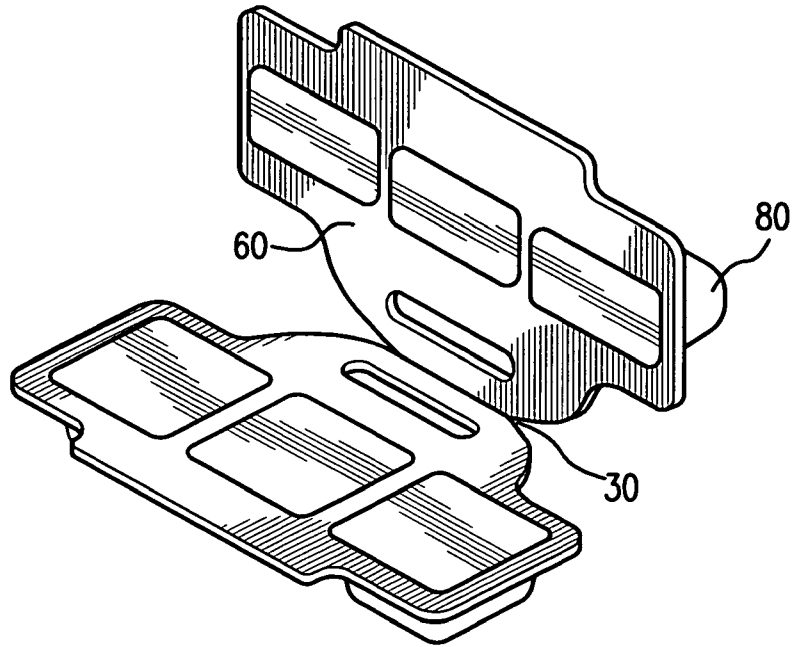


FIG. 7

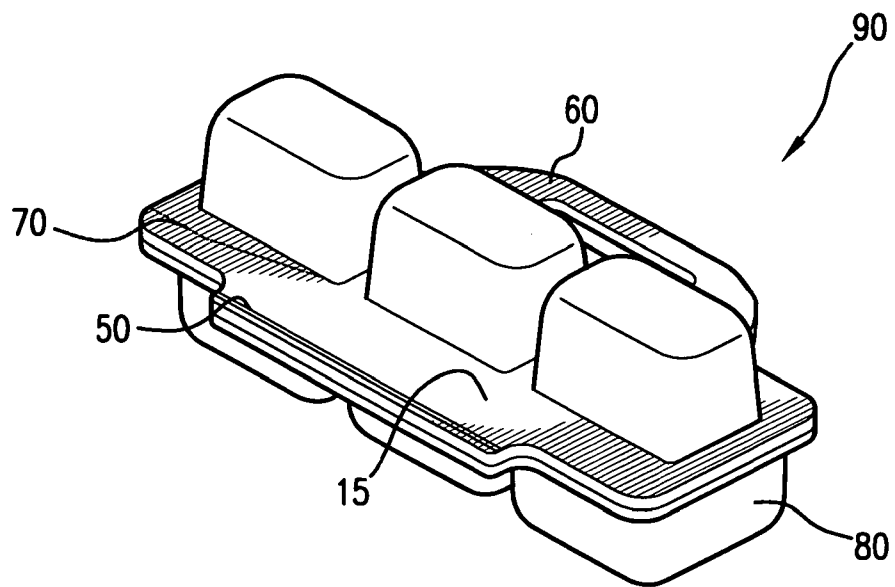


FIG. 8

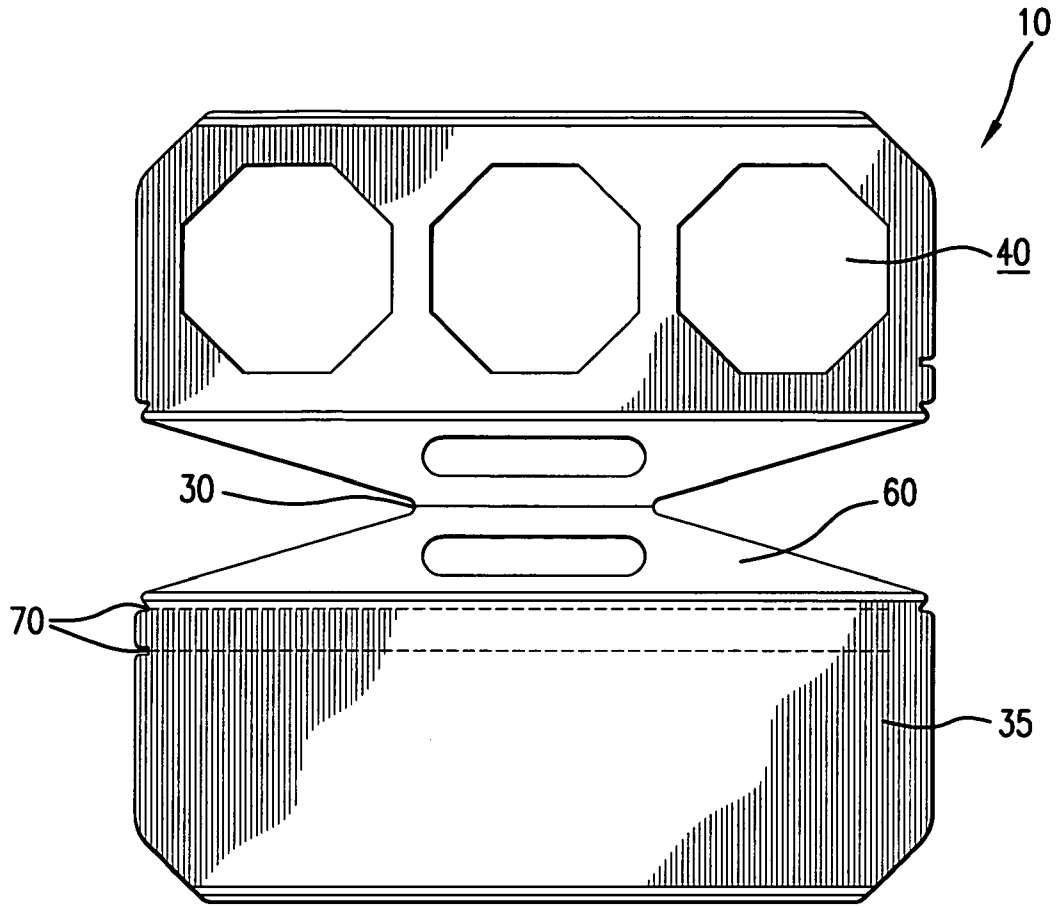


FIG. 9

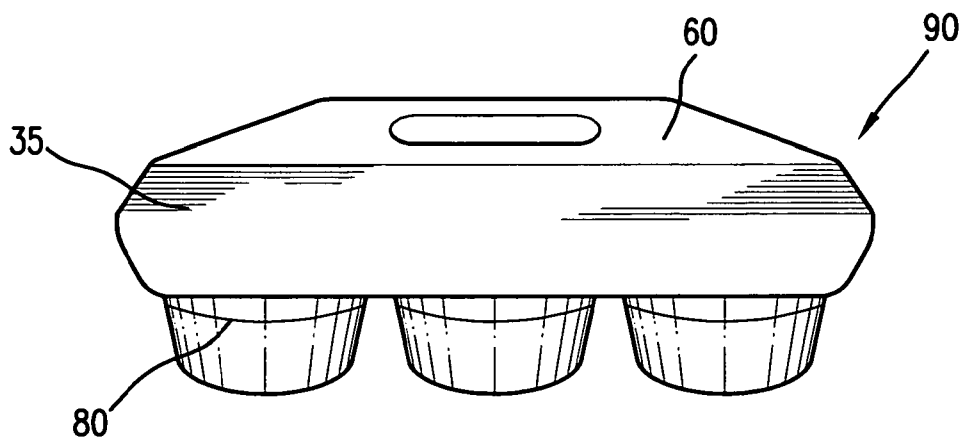


FIG. 10

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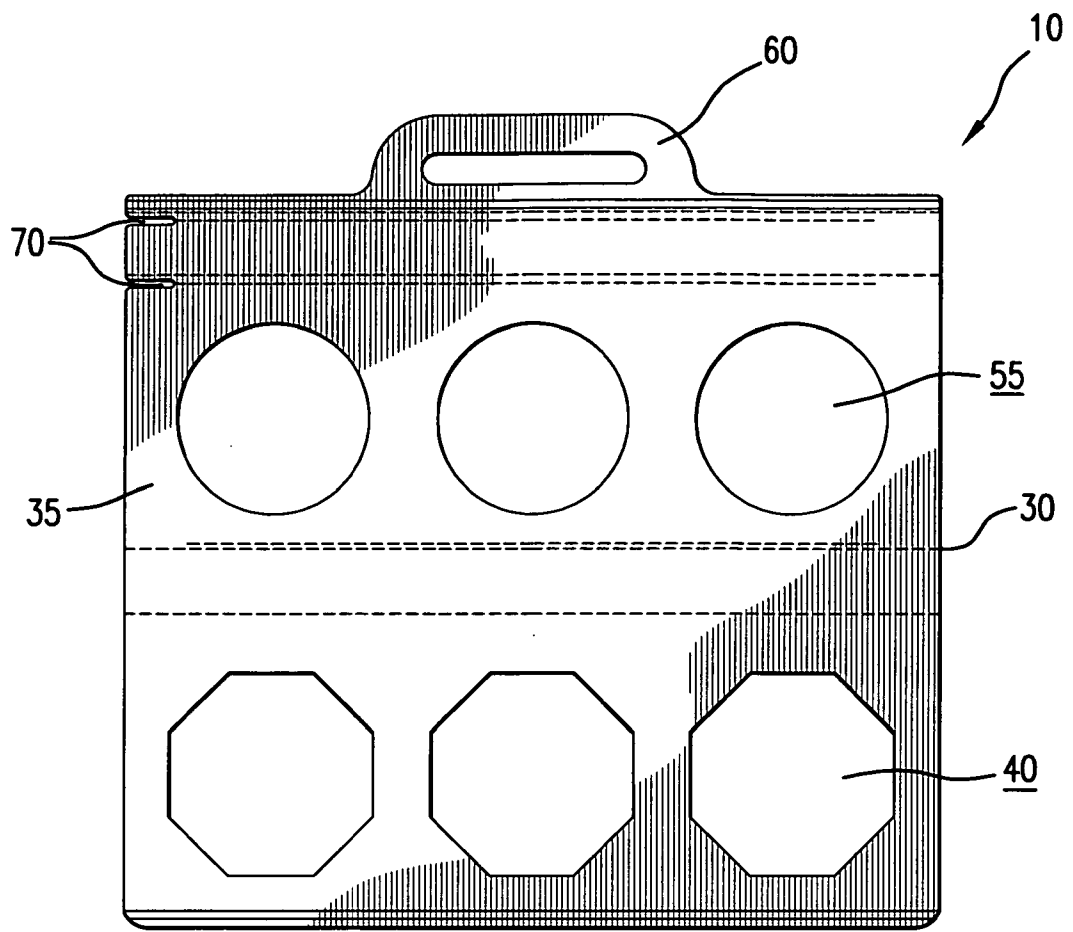


FIG. 11

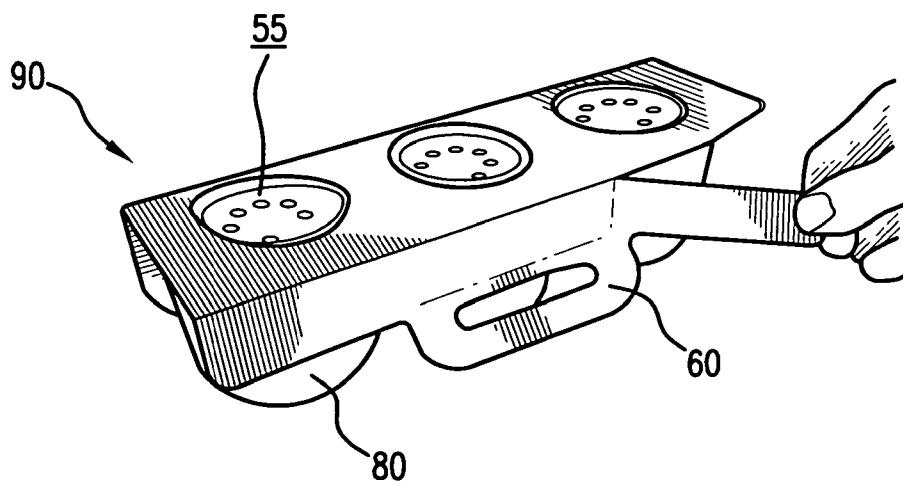


FIG. 12

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 08/79136

A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - B65D 75/00 (2008.04) USPC - 206/147 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) USPC - 206/147 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched USPC - 206/139, 141, 145, 148, 149, 150, 151, 152, 153, 154, 156, 157, 158 (text - see terms below) Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) PubWEST (PGPB, USPT, EPAB, JPAB), Google, Google Scholar Search Terms: multipack, unitiza, paperboard sleeve, container, cup, pot, flange, chime, handle, fold line, plastic, carrier, two tier		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2006/0196782 A1 (Olsen et al.) 07 March 2005 (07.03.2005), entire document	1-10
Y	US 3,292,810 A (Schechter) 20 December 1966 (20.12.1966), Fig1; col 2, ln 3-7	1-10
X	US 3,661,417 A (Inman) 09 May 1972 (09.05.1972), Fig 1-3; col 1, ln 16-40	11, 12, 14
Y		8, 9, 13, 15, 16
Y	US 5,526,925 A (Bernstein) 18 June 1996 (18.06.1996), Fig 1; col 2, ln 40-43	7
Y	US 5,921,392 A (Davis) 13 November 1997 (13.11.1997), Fig 1; col 1, ln 16-21; col 2, ln 36-38	13, 15
Y	US 5,429,239 A (Baxter) 08 April 1994 (08.04.1994), Fig 7; abstract	16
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/>		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search 19 November 2008 (19.11.2008)		Date of mailing of the international search report 05 DEC 2008
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201		Authorized officer: Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774